

Vol. 22 No. 1 Jan./Feb. 1999 Published by the American Homebrewers Association

ZYMURGY

FOR THE HOMEBREWER AND BEER LOVER

Save This Issue!

Kegging Basics

**Schwarzbier:
Paint It Black!**

**CULT BEER:
Thomas Hardy's
Literate Brew**

**Winter Warmer
Food & Beer Tips**

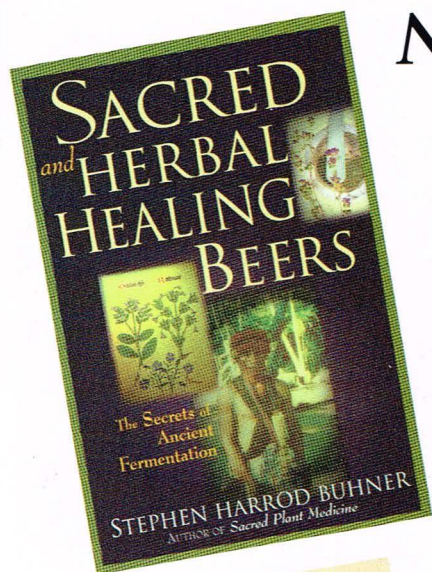
**Our Award-
Winning Recipes**

Easy Grain To Extract Conversions



U.S. \$5.50 Can. \$8.00

New from Brewers Publications!

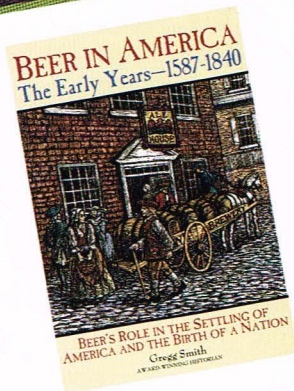


Sacred and Herbal Healing Beers: *The Secrets of Ancient Fermentation*

BY STEPHEN HARROD BUHNER

Share the secrets of the ancients in this groundbreaking book. For the first time, the sacredness, folklore, and healing power of ancient fermentation are explored through 200 plants and hive products. Includes 120 recipes for ancient and indigenous beers and meads from 31 countries on six continents.

Trade paper • 552 pages • illustrations/photos • 6 x 9 • ISBN 0-937381-66-7 • \$19.95 (\$27.95 Canada)



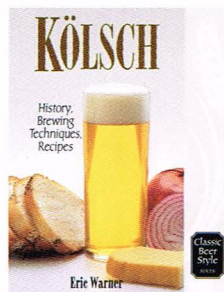
BEER IN AMERICA: THE EARLY YEARS—1587-1840

Beer's Role in the Settling of America and the Birth of a Nation

BY GREGG SMITH

Few Americans realize that beer played a major role in the founding and formative years of the United States. Gregg Smith's narrative of American history begins with the pre-colonial era and ends with America's emergence as an industrial power. This book is a fresh and swiftly flowing adventure, divulging historical details ranging from why the *Mayflower* really landed at Plymouth rock, to how the Constitution was forged after hours over beer.

Trade paper • 480 pages • illustrations • 6 x 9 • ISBN 0-937381-65-9 • \$16.95 (\$23.95 Canada)



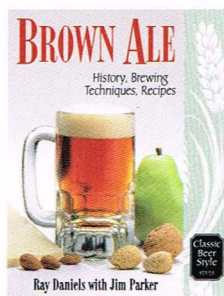
Numbers 13 and 14 in the Classic Beer Style Series!

KÖLSCH: HISTORY, BREWING TECHNIQUES, RECIPES

BY ERIC WARNER

Discover how this golden ale, known as "Cow Mouth" and "Gut Rot" in the Middle Ages, shed its dismal reputation to become the pride of Cologne (Köln in German). *Kölsch* offers in-depth information on the history, flavor profile, brewing methods, and ingredients of this quintessential beer. Recipes included.

Trade paper • 192 pages • illustrations/photos • 5 $\frac{3}{4}$ x 7 $\frac{1}{2}$ • ISBN 0-937381-58-6 • \$14.95 (\$19.95 Canada)



BROWN ALE: HISTORY, BREWING TECHNIQUES, RECIPES

BY RAY DANIELS WITH JIM PARKER

"The beer we now know as brown ale is kind of the Rodney Dangerfield of beer styles—it rarely gets the respect it deserves. . . . It's like that steady, dependable, sensible sedan in a world of racy sports cars."

—From the Introduction

While brown ale is all but extinct in England, its popularity is on the rise in the United States. This classic style presents a brewing challenge for homebrewers and a delicious respite for beer drinkers. Packed with recipes and filled with historical information and brewing tips, *Brown Ale* is a fascinating read and an invaluable reference.

Trade paper • 192 pages • illustrations/photos • 5 $\frac{3}{4}$ x 7 $\frac{1}{2}$ • ISBN 0-937381-60-8 • \$14.95 (\$19.95 Canada)

Available at leading homebrew supply shops and book stores.



Order toll free 1-888-822-6273

(U.S. and Canada only)

Telephone (303) 546-6514 • orders@aob.org • <http://beertown.org>

BPfall

WHO SAID YOU CAN'T TEACH AN OLD DOG NEW TRICKS.

PLAIN & HOP
FLAVOURED

Light Malt Extract

Dark Malt Extract

Amber Malt Extract

PLAIN

Crystal Malt Extract

Roasted Malt Extract

Diastatic Malt Extract

Wheat Syrup



~ YOU CAN! ~

At John Bull we have retained the very best of the old added some exciting new qualities to bring to you:-

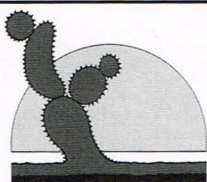
JOHN BULL
Bulldog Blends

Distributors in U.S.A.

L.d. Carlson Co Ltd. 463 Portage Boulevard Kent Ohio 4420	Crosby Baker 999 Main Road Westburr Mass. 02790	Brewaster 2315 Verna Court San Leandro California 94577a	F.H. Steinbart 234 S.E. 120th Ave. Portland Oregon 97214
--	--	---	---

Canadian Distributors

Lindstrom Beer & Wine Making Supplies Ltd 190 Brodeley Drive Hamilton Ontario L8E 3C5	Divin Distribution 3220 1ère Rue St Hubert Quebec J3Y 8YZ	W.H. Brown 105 Akerley Blvd. Dartmouth Nova Scotia BJB JRJ
--	--	---



St. Patrick's of Texas BREWERS SUPPLY

Customers in 51 countries and 50 states.

5% discount to AHA members

FREE World's largest and most comprehensive
homebrewer's catalog.

800-448-4224

12922 Staton Drive • Austin • TX • 78727

www.stpats.com

with on-line ordering

Exclusive importer and distributor of

Czech Malt

world's most renowned malt from the heart of Moravia

"(Czech) barleys are considered the finest malting barleys in the world."

J. De Clerck, *A Textbook of Brewing*

5 Gallon Kegs 6/\$75, 12/\$120 Complete Kegging System \$143

Briess Extract \$1.85/lb, 7.5 gal S/S Pot \$75, Wort Chiller \$27, 8 gal Pot \$35
Temp Controller \$49, Counter Pressure Filler \$49, S/S Wort Chiller

Czech, German, Briess Malt as low as \$.60/lb

ZYMURGY®

FOR THE HOMEBREWER AND BEER LOVER

Journal of the American Homebrewers Association®

THE AMERICAN HOMEBREWERS ASSOCIATION® MISSION STATEMENT

To promote public awareness and appreciation of the quality and variety of beer through education, research and the collection and dissemination of information; to serve as a forum for the technological and cross-cultural aspects of the art of brewing; and to encourage responsible use of beer as an alcohol-containing beverage.

Publisher American Homebrewers Association

Editor Michael Bane

Associate Editor Kathy McClurg

Technical Editor Paul Gatz

Editorial Advisers Charlie Papazian

Art Director Stephanie Johnson

Graphics/Production Director Tyra Shearn Segars

Marketing Art Director Wendy Lyons

Assistant Art Director Brenda Gallagher

Advertising Manager Linda Starck

Circulation Coordinator JoAnne Carilli

AMERICAN HOMEBREWERS ASSOCIATION

Director Paul Gatz

Administrator Brian Rezac

AHA Board of Advisers

Ed Busch, N.J.; Kinney Baughman, N.C.; Steve Caselman, Calif.; Ray Daniels, Ill.; Fred Eckhardt, Ore.; Michael L. Hall, N.M.; David Houseman, Pa.; Dave Logsdon, Ore.; David Miller, Tenn.; Randy Mosher, Ill.; John Naegle, N.Y.; Charlie Olchowski, Mass.; Alberta Rager, Kan.; Ken Schramm, Mich.; and board member emeritus Michael Jackson, England

The American Homebrewers Association is a division of the Association of Brewers. Membership is open to everyone. *Zymurgy* is the journal of the American Homebrewers Association and is published six times a year. Annual memberships which include subscriptions (payable in U.S. dollars) are \$33 U.S., \$38 Canadian and \$51 international. Changing your address? Let us know in writing, please.

Zymurgy welcomes letters, opinions, ideas, article queries and information in general from its readers. Correspondence and advertising inquiries should be directed to *Zymurgy*, PO Box 1679, Boulder, CO 80306-1679, (303) 447-0816, FAX (303) 447-2825, <http://beertown.org>. Via e-mail contact *Zymurgy* Editor Michael Bane at michael@aoab.org. All material ©1999, American Homebrewers Association. No material may be reproduced without written permission from the AHA.

(ISSN 0196-5921,

Publication Mail Agreement #0987441)

The opinions and views expressed in articles are not necessarily those of the American Homebrewers Association and its magazine, *Zymurgy*.

Printed in the USA by Brown Printing, Waseca, Minn. For newsstand distribution information contact Ingram Periodicals, Inc., 1226 Heil Quaker Blvd., LaVergne, TN 37086.



NEW HOME BREW MILL

Produce a superior grist for award-winning brew!

Brewmasters around the world rely on Automatic malt mills to produce high-quality grist needed to create some of the very best brews. Don't settle for anything less in your home. The Home Brew Mill offers microbrew quality in a convenient, home brew size.



- Uniform reduction for consistent grist
- Microbrew quality design and construction with knurled steel rolls
- Easy-turning hand crank or 3/8-inch power drill attachment for automatic operation

Call 800-336-4336 for more information.

Dealer inquiries welcome.

Automatic

Automatic Equipment Mfg. Co. • One Mill Road, Industrial Park
Pender, Nebraska 68047 • (402) 385-3051 • FAX (402) 385-3360

ZYMURGY®

Zymurgy \ zī'mar jē \ n: the art and science of fermentation, as in brewing.

C O L U M N S

IT'S THE BEER TALKING 5
By **Paul Gatza**

HOMEBREW COOKING 8
Winter Warmers for the Cold Months Ahead, by **Tim Schafer**

FOR THE BEGINNER 20
Easy Grain to Extract Conversions, by **Ken Schwartz**

WORLD OF WORTS 38
Charlie Papazian's Heart of the Tide Imperial Porter

SURVEY
Readers respond. Now it's your turn!

D E P A R T M E N T S

DEAR ZYMURGY 6

BREW NEWS 11

SPONSORS 15

CALENDAR 16

DEAR PROFESSOR 18

WINNERS CIRCLE 41

HOMEBREW CONNECTION 44

ADVERTISER INDEX 62

CLASSIFIED 63

LAST DROP 64

COVER PHOTOGRAPHY
BY **BOB GOLDMAN**

F E A T U R E S

1998 GREAT AMERICAN BEER FESTIVAL XVII MEDAL WINNERS 13

Once again, here's the best of the best. For those of you who missed a sample, better luck next year.

CULT CLASSICS: THOMAS HARDY'S ALE 24

The Cult Beer series continues with **Greg Kitsock's** look at the rich history of a very rich beer—Thomas Hardy's Ale. Bet you wish you had a cellar full of this stuff.

KICKING THE BOTTLE HABIT 28

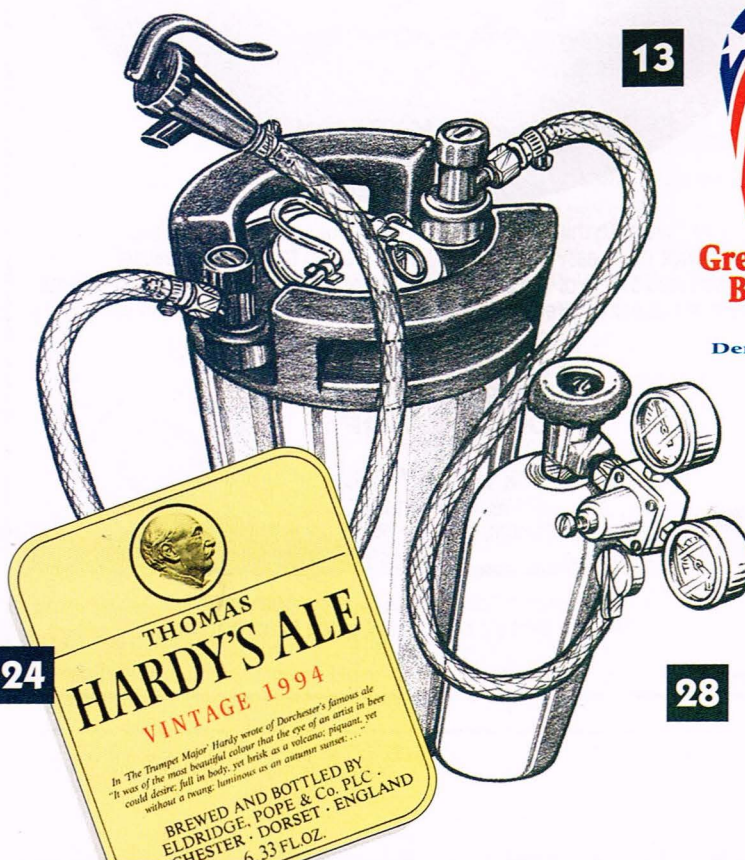
Isn't it about time you stopped hassling with all those bottles and get serious about kegging? Let **Amahl Turczyn** show you how.

SCHWARZBIER: FADE TO BLACK 32

Our resident Style Guy, **Jim Dorsch**, delves into the little known world of one of Germany's darker brews.

CLONING 53

No, this isn't about Dolly the Cloned Sheep, or the super secret experiment to clone Charlie Papazian...

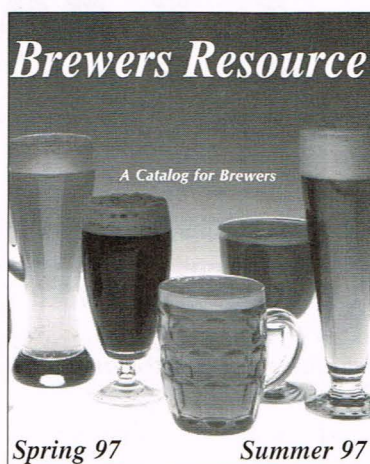


Great American Beer Festival 1998
Denver, Colorado

*There's one
tool no
dedicated
brewer
should be
without...*

*...it's the
Brewers Resource Catalog!*

It's the most complete catalog in the industry, and regardless of brewing experience, there's something in it for everyone. It's on-line, or free for the asking, so call the good folks at Brewers Resource, we'll be happy to rush you a copy.



1-800-8-BrewTek (827-3983)

Don't wait for the mail, see our catalog now! www.brewtek.com

409 Calle San Pablo, Suite 104 Camarillo, CA 93012

WINE HOBBY USA



We have everything you need to create your own beer and wines at a price that's easy to swallow. With 22 years in the "Home Brewing" business, we stand as one of the largest suppliers of quality products and ingredients on the east coast, offering over 200 malts, a wide variety of fresh hops, and a large selection of liquid and dry yeast.

For our free catalog, call:
1-302-998-8303 or
1-800-847-HOPS

or write:
WINE HOBBY USA
2306 West Newport Pike
Stanton, Delaware 19804



"The bitterness of poor quality is remembered long after the sweetness of low price is forgotten"

ASSOCIATION OF BREWERS INC.

The Association of Brewers Inc. is a Colorado non-profit corporation for literary and educational purposes to benefit brewers of beer and all those interested in the art of brewing. The Association of Brewers is exempt from Federal Income Tax under Section 501(c)(3) of the Internal Revenue Code. All gifts, grants and contributions are tax-deductible.

The Association of Brewers has three divisions — American Homebrewers Association®, Institute for Brewing Studies, Brewers Publications — and one affiliate, Brewing Matters, dba the Great American Beer Festival®.

ASSOCIATION OF BREWERS

President _____ Charlie Papazian
Vice President _____ Cathy L. Ewing
V.P., Finance _____ Gayle St. John
Marketing Director _____ Karen Tacy
Operations Director _____ Robert Pease

AMERICAN HOMEBREWERS ASSOCIATION®

Director _____ Paul Gatzka

INSTITUTE FOR BREWING STUDIES

Director _____ David Edgar

BREWERS PUBLICATIONS

Publisher _____ Toni Knapp

GREAT AMERICAN BEER FESTIVAL®

Director _____ Sharon Mowry

AOB Board of Directors

Marlin Buse, Jim Christoph, Harris Faberman, Sandi Genova, Stuart Kingsbery, Charles Kirkpatrick, Charles Matzen, Charlie Papazian, Loran Richardson, Liz Weimer

For information on the Association of Brewers or any of its divisions, write PO Box 1679, Boulder, CO 80306-1679; call (303) 447-0816, FAX (303) 447-2825, aob@aob.org or <http://beertown.org> on the World Wide Web.

GRAPE AND GRANARY

- ◆ 150 Malt Extracts
- ◆ 40+ Malted Grains
- ◆ 30 Hop Varieties
- ◆ 35 Yeast Strains
- ◆ Bulk Pricing
- ◆ Free Grain Crushing
- ◆ Same Day Shipping
- ◆ Kegging Systems
- 3, 5, 10 gal. Soda Kegs

The Grape and Granary

1302 E. Tallmadge Ave.
Akron, OH 44310

Free Catalog 800-695-9870

Fax 330-633-6794

<http://www.grapeandgranary.com>

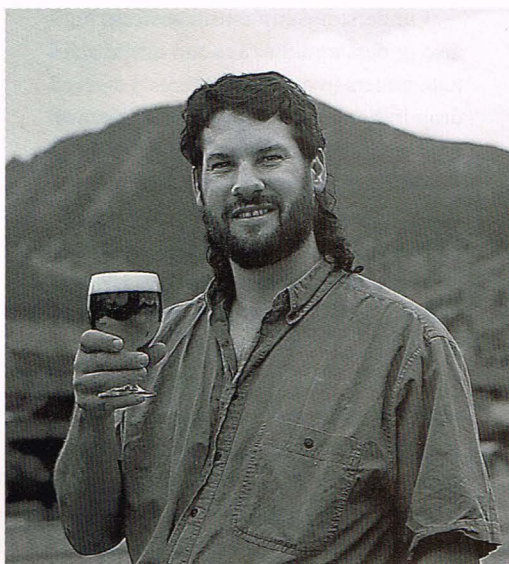
BY PAUL GATZA

"Please come over to my house and help me drink barley wine; I have too much."

I could barely believe the words were coming out of my mouth as I said them. I was going to be moving for the first time in five years, and it's amazing how much beer, mead, wine, cider and saké one can accumulate in such a short period. I stared at the barchives and started the task of consolidating bottles and boxes. Through gifts, annual purchases of some of my commercial favorites and my own brewing, I had accumulated seven cases of barley wines. The barchives totaled 30 cases, which I was not looking forward to moving. Twenty assorted carboys and jugs and all of my other equipment took several trips just for one of my hobbies.

A couple of nights of readying for the move involved racking my long-term mead projects into kegs. "Oh, here's where that '94 Prickly Pear Mead ended up." Some of the beverages I should have kegged or bottled long before now had to be completed—my back was to the wall. For one month of my summer (what summer?) I worked my eight to 10 hours at the AHA, then another five or six on readying for the move or painting the new place.

As my deadline neared, I had to admit I was not "relaxing" about finding the time to rack the last 12 carboys. The night of sanitizing, kegging and cleanup finally could not be delayed. After I finished about midnight, I felt great. The act of racking overcame the small burden and instilled in me a sense of accomplishment. I also used the opportunity to sample the many fine beverages I had brewed over the years. In a month where I felt I had no time to brew I found six hours, which resulted in 15 kegs.



I moved to a fixer-upper, which occupied a healthy portion of my normally free time. After a full day at the AHA, I could not relax, not worry, and have a homebrew. Instead I "paint, don't worry, and have a homebrew." Between the demolition, painting, moving and housework, I found time to add fruit to several of the meads I racked the month before and make up a batch of black raspberry wine. Another two hours of brewing time did not set me back on the house that much; in fact, I needed a break anyway—and what better way to take a break than to climb back into one of the hobbies I love.

The most common reason people state as to why they no longer homebrew is that they do not have the time. I believe that as the economy surges and individuals are working more hours, the hobby of homebrewing suffers. When brewers stop brewing, homebrew supply shops have a more difficult time surviving and quality ingredients become harder to find locally. There are two answers for the homebrewer. He or she can make the time to brew, or we can all wait

for the economic growth to slow. Then we'll all have more free time, some of which can be dedicated to brewing.

One way to make more time for brewing is to brew simpler, such as doing the occasional extract kit batch or intermediate batch instead of brewing all grain all the time. When I brew for large parties, I often will brew as much as possible in as short a time as possible. I can brew four separate batches in two-plus hours by using extract kits. When I brew all grain, I refill my converted keg mash tun after my first sparge for a second batch, allowing me to brew 26 gallons and have the cleanup done within eight hours.

Another way to create more time for brewing is to keg your homebrews instead of bottling. I can sanitize a keg, fill it with homebrew and carbonate it in less than 20 minutes. Not only is kegging easier and faster than bottling, but you have clearer beer (no bottling sugar to sediment out) and you have control over the carbonation—if it's too low, turn up the CO₂; if it's too high, turn it down and the beer will equilibrate at a lower pressure. If I'm going to a party or a ball game, I put a foot-long length of 3/8-inch-ID tubing over my cobra head faucet, fill my bottle and I'm out the door. The only times I bottle in the traditional way are when I am entering competitions or shipping gifts. This issue of *Zymurgy* highlights kegging systems.

We are all busy people and we have to make time to brew. There are ways to reduce the time commitment involved in homebrewing. If you want to talk about it some more, come on over for a barley wine. I still have too much and I'm not going to move it again.

Homebrewer and homebrew shop owner Paul Gatza is the Director of the AHA. 

Self-Inflicted Wounds

Dear *Zymurgy*,

As an employee at a homebrew supply shop I have access to information other brewers may not be privy to. I know, for example, that the past year has been a slow one for everyone involved in the homebrewing industry, from wholesalers on up. I know, too, that the homebrewing boom of the last few years has been picked up by retail outlets outside of the homebrewing "mainstream," meaning that liquor stores, general stores, discount stores, department stores, etc., have begun selling supplies in a small scale way.

It has come to my attention that more and more homebrewers are turning to these outlets, particularly liquor stores ("package stores," "party stores," etc.), for their supplies, patronizing homebrew specialty shops only when they need supplies that are out of the ordinary in these alternative distributors.

The effect this has on the specialty stores is to reduce their sales to the point where they can no longer support the business.

The effect it has on individual brewers is to reduce the variety of ingredients conveniently available to them.

I know of three homebrew shops that have gone out of business in the last year, and all of the owners attribute their loss of income to the undercutting of liquor stores in their respective areas.

Homebrewers are, in short, shooting themselves in the foot.

Without these specialty shops we would no longer have competent advice (especially the novice brewer), an ample supply of specialty items, ranging from grains to kegging supplies to different varieties of yeast, personal service and knowledgeable sales people.

I understand capitalism at work, but I also understand that as soon as the alternate outlets (read "liquor stores") detect a drop in homebrew supply sales they will drop whatever minimal lines they carry.

Without putting too fine a point on it: Homebrewers are killing their own hobby.

In summary, I can only urge any homebrewer who reads this letter to SUPPORT YOUR LOCAL HOMEBREW STORE.

Sincerely,
Mark J. Glinski
Buzzards Bay, MA

Amen—Ed.

Plated!

Dear *Zymurgy*,

I'm sure you've heard the expression "What goes around, comes around"? Well, we at Island Brewing Products want to ensure that this old axiom holds wort. As a token of appreciation for your exposure of our Wort Wizard kit to the homebrewing market in *Zymurgy* Spring 1998 (Vol. 21, No. 1) we decided to reciprocate the advertising favor by choosing this license plate to affix to our company vehicle. Naturally, this official Florida plate is one of a kind, the only one issued and we are proud to be the ones to display it.

I would hope this letter finds its way to print in the next issue of *Zymurgy* so that

we may challenge homebrewers in the other 49 states to show support as well and send in their photo. Perhaps, when photos of all 50 plates are collected, you could print a collage in a future issue.

Thank you for your support. It is appreciated!

Sincerely,
Jim Brady
Island Brewing Products

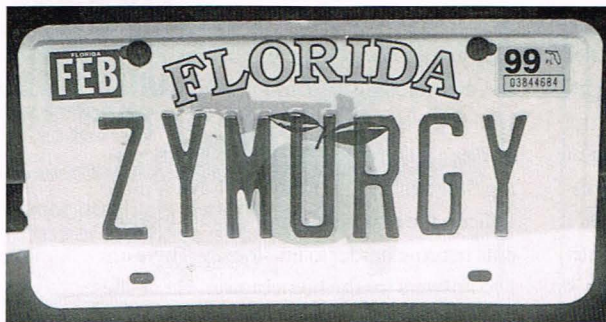
May the Florida Highway Patrol always ignore you! And, yes folks, by all means send us some plate pixs.—Ed.

Food Fight

Dear *Zymurgy*,

I am writing in regard to the letter to the editor, "Food Snobs," from *Zymurgy* Spring 1998 (Vol. 21, No. 1). In this article, the recent columns on cooking with homebrew are criticized. In fact, the suggestion is to simplify and use ingredients more readily available. The comeback from the editors jumps right on the bandwagon and essentially recommends rot-gut whiskey as a marinade. Let's step back and look over these suggestions.

Most of us got into homebrewing for the diversity; we can brew up flavors and styles that ARE NOT readily available (in fact, some that don't exist unless we brew them). For most of us, we take pride in the efforts needed to produce quality beer. As a beer enthusiast AND a food enthusiast, I take pride in both. I seek out the exceptional in both beer and food. I live in a small town in rural southwest Virginia; rural America is not known for abundant gourmet shops (or homebrew shops). I



seek out quality and diversity on both, and why should I compromise? My background in cooking does not include any culinary institutes as does the author or the editor in "Food Snobs." But, my background in brewing doesn't include the Siebel Institute either—and I brew some pretty fine beers and create some excellent culinary experiences.

If we follow the logic in "Food Snobs" we should all go out and buy beanie-weenies and trade in our brew kettles for non-returnable quart bottles full of mediocre brews. Let's stick to the quality aspects in our endeavors — sure, some recipes for food (or beers) don't appeal to everyone, but keep the diversity and quality coming.

Stewing (more than beanie-weenies), but relaxing:

Chris Pierce
cpierce@naxs.net

Rot-gut whiskey?!? Rot-gut whiskey?!? We're talking Jack Daniels here! Pray the Tennessee branch of our family doesn't see this letter. Besides, we like beanie-weenies here at the AHA. They go well with saison.—Ed.

Can Anyone Channel Muddy Waters?

Dear Zymurgy,

I would like to submit the following song to your magazine. I am a homebrewer from Austinburg, OH, and I enjoy your magazine very much.

Homebrewers Blues

I got bottles in my bathtub,
Fermenters in the hall.
My only problem is I want to drink it all—
I got the homebrewers blues,
I drinks 'em fast as I can brew 'em.

I got cases in my basement,
Carboys in the den.
They say someday you'll quit this,
but I don't know when—
I got the homebrewers blues,
I drinks 'em fast as I can brew 'em.

There's whole new worlds to conquer,
New flavors to explore;

Pilseners, lagers, porters—
Give me more, more, more!!!

I'm gonna shout for my stout,
I'm gonna wail for my ale.
I'll do the shim-sham-shimmy
for my India pale ale.
Well it ain't my fault that I love my malt,
You got to savor that flavor,
That's what it's all about.
I got the homebrewers blues
I drinks 'em fast as I can brew 'em.

Sincerely,
Cat Lilly
Austinburg, OH

Well, we're at a loss for words...The future's uncertain, but the beer is always here.—Ed.

Carboy Fires?

Dear Zymurgy,

Check this out. As an avid brewer of 10+ years now and a firefighter, I just made a very sobering discovery. In the summertime my assortment of glass carboys is kept on the deck when not in use filled with either bleach and water or just water. I just finished an all-grain pale ale boil, chilled and reached for a 6.5 gallon primary to find a burnt ring of deck under the glass bottom. Yes, I guess up here in New Hampshire the sun is strong enough to set a fire if the conditions present themselves. One spot had "smoldered" a hole 1/2 inch deep. You can edit/print/modify/embellish this as you see fit but my carboys will not be outside again EVER!

Lt. Bob Sabeen AKA dogbeer@aol.com
Barrington Fire Department
Barrington, NH.

Bob, that's a new one on us. But, hey, be careful out there.—Ed.

Link Us Up

Dear Zymurgy,

First let me start off by saying you have a great magazine going. I have enjoyed it for some time now. It holds a vast amount of information I use every time I pick up any issue.

I do have one suggestion, though. With a lot of people on the Web these days I would love to see a page dedicated to homebrewing links. I think I spend more time on the Web looking for recipes, information, equipment than I do actually working. :) A lot of the advertisements in the magazine do contain links to their individual site but beyond that you are on your own. I believe this will be another great resource for your subscribers.

Thank you
Jeff Oleyar
joleyar@cannet.com

That's a good idea. We'll try to get that in soon.—Ed.



A Sweet Lemon

Dear Zymurgy,

I would like to submit to you for publication the enclosed label. My brother Jeff and I recently crafted a batch of homebrew in celebration of our cousin's wedding. We were aided in our design and printing by Label Solutions of St. Paul, MN. The whole project was made especially fun because of our cousin's last name: Lemon.

Zestfully yours,
Jack Petruso
Meadville, PA

Dare we say, "Pucker up?"—Ed.

Winter Warmers

for the Cold Months Ahead

As Father Winter is welcomed once again, so are those wonderful beers known as “winter warmers.” Many beer styles, both lagers and ales, and flavors fall into the category of “winter warmers.”

One ale that comes to mind is Buffalo Bill's Pumpkin Ale from California, via Dubuque, Iowa. Commonly enjoyed during October and November, some bottles may still be found on the holiday table.

And speaking of lagers, how about Samichlaus, “The World's Strongest,” weighing in at 11-13% alcohol. This bottom-fermented brew has a deep garnet color, malty character, firm, forward and brandy-like finish. It is excellent as an aperitif, or as an accompaniment to rich meats such as venison, along with decadent desserts such as my Double Chocolate Pate. Samichlaus is brewed every year on St. Nicholas Day, which falls on December 6 (coincidentally the day after my birthday). It's lagered until ready for bottling, then released on the same day the following year—one of my most anticipated holidays.

Cooking with Samichlaus can be very challenging, however. Over the years, I have come up with some wonderful concoctions using this triple hopped semisweet brew. Although not intensely hoppy, there are so many other bold flavor characteristics that one must respect these nuances cautiously—in other words, go easy.

Chocolate Stout

For those of you familiar with the Brooklyn Brewing Co. (I know there are many), you must have tasted Garret Oliver's Black Chocolate Stout, 12 ounces of drinking pleasure. Assuming, of course, you can stop after just one. A limited bottling is released every winter. I am fortunate enough to always have a six-pack

or two on hand, all year round. Proper planning, I guess!

The Black Chocolate Stout is made in the style of imperial stout, a brew especially prepared for the czar of Russia, strong in color, character, flavor and alcohol, compared to other stouts. This beer involves black chocolate and other roasted malts in its preparation. It is excellent with everything, with the exception of delicate fish such as flounder. This stout pairs well with shellfish, especially oysters on the half shell. The subtle sweetness works very well with the briny flavor of oysters.

You can also make an excellent Mignonette Sauce with malt vinegar, Black Chocolate Stout, minced shallots, garlic, cracked black pepper, chopped parsley or chives and a pinch of salt.

Try that one next time you're throwing back some freshly shucked mollusks; just keep your eyes open for a pearl! A few years

ago one of my customers actually found a beauty worth over \$500.

I hope everyone enjoys making the following recipes with some of the wonderful “winter warmers” and holiday beers. Try pairing the same beer used in the recipe with the dish itself, or get crazy and use your favorite beer.

The Brew Chef's BBQ Pulled Pork with Brooklyn Brewery's Black Chocolate Stout

Makes 6 servings

Cowboy beer cuisine, yahoo! Braising is the best cooking technique for preparing tough cuts of meat such as pork butt used in this recipe. Beef brisket, venison or wild boar are excellent alternatives! This imperial-style stout adds depth and a deep coffee-like, bittersweet flavor to the BBQ sauce.



Pumpkin Ale BeeRisotto with Roasted Shallots and Toasted Pumpkin Seeds

Ingredients

- 10 oz bacon (283 g), sliced and diced
- 1 lb boneless pork butt (.45 kg), sliced in 1-inch steaks
- 2 Spanish onions, peeled and thinly sliced
- 1 tbsp garlic, chopped (14.8 mL)
- 1 cup tomato paste (237 mL)
- 1 cup tomato purée (237 mL)
- .5 cup brown sugar (118 mL)
- .5 cup apple cider vinegar (118 mL)
- 1 cup Black Chocolate Stout (237 mL)
- 32 oz crushed tomato (.91 kg)
- 1 tbsp barbecue spice (store bought or homemade) (14.8 mL)
- .5 tsp Liquid Smoke (optional) (2.5 mL)
- 1 tbsp fresh sage leaves, sliced (14.8 mL)
- 1 tbsp Worcestershire sauce (14.8 mL)
- 1 tsp Tabasco sauce (4.9 mL)
- 1 tsp kosher salt (4.9 mL)
- cracked black pepper to taste

Heat a heavy-bottom stockpot, add bacon and cook until slightly crispy. Season the pork with kosher salt and cracked black pepper, place in the hot bacon fat. Sear the meat until dark brown on all sides. Remove the pork from the pot and set aside.

Add the sliced onions to the pot and cook, stirring occasionally until caramelized and golden brown. Add the garlic, cook for an additional minute, then add the tomato paste and purée, stir well to incorporate.

Continue to cook for three minutes until the tomato product is slightly browned. Add the brown sugar, vinegar, stout, crushed tomato and BBQ spice, stir and bring to a simmer. Return the pork to the pot, along with the remaining ingredients and cook covered at a medium simmer for one hour, stirring every 10 minutes to prevent scorching and to shred the pork.

After one hour, taste and season if necessary. Serve hot, topped with cheese or on a soft potato roll along with a chilled Black Chocolate Stout.

Pumpkin Ale BeeRisotto with Roasted Shallots and Toasted Pumpkin Seeds

Makes 6 servings

This dish, known as risotto, is made from arborio rice, which comes from a small town in Italy by the same name. A very versatile rice, the recipe variations are endless. Wine is usually used when preparing risotto, but, of course, beer is better. When squash is out of season, try other vegetables, meats and seafood and of course different beers. Here I use my friend Bill Owens' Buffalo Bill's Pumpkin Ale.

Ingredients

- 1-3 lb pumpkin (.45-1.4 kg)
- or
- 2 lb butternut squash, roasted and peeled (.91 kg)
- or
- 1 can unsweetened pumpkin purée can be substituted
- 1 pinch nutmeg

- 1 pinch cinnamon
- 1 pinch allspice
- 1 pinch cloves
- 1 tsp kosher salt (4.9 mL)
- cracked black pepper to taste
- 3 tbsp unsalted butter (44.4 mL)
- 1 small Spanish onion, peeled and finely diced
- 3 garlic cloves, minced
- 1 lb arborio rice (.45 kg)
- 4 shallots, roasted, peeled and sliced
- 2 pints chicken or vegetable stock, warm (.95 L)
- 1 pint Pumpkin Ale (.47 L)
- 1 tbsp Pecorino Romano, shaved (14.8 mL)
- 1 tbsp chives, sliced thin (14.8 mL)
- 1 tbsp salt (14.8 mL)
- cracked black pepper to taste
- toasted pumpkin seeds

To Roast Pumpkin or Butternut Squash

Preheat oven to 400 degrees F. Split the squash in half, remove all the seeds and pulp, which you'll reserve for later. Place

Everything you need for fruit and herb beers— see your local shop.



OREGON FRUIT PRODUCTS

BREWER'S GARDENS



- Seedless puree that is commercially sterile
- Can be added directly to your fermenter
- Convenient three pound size
- Now available in raspberry, cherry, blueberry, blackberry, peach and apricot.
- Web address: www.oregonlink.com/fruitbeer/

A complete line of exotic herbs, spices and Belgian sugars including: orange peel, ginger, cardamom, licorice root, sarsaparilla, juniper berries, paradise seed, sweet gale, wintergreen, rose hips, wormwood, woodruff, mugwort, elderberries, elderflowers and lite, amber and dark candi sugar.

Direct wholesale inquiries to: Steinbart Wholesale 1-800-735-8793 or L.D. Carlson 1-800-321-0315

on a lightly oiled baking tray, skin side up and bake for one hour, or until skin is brown and blistered and the meat is very soft and slightly caramelized.

Remove from the oven, transfer to another pan and set aside to cool. Peel off the skin and mash, purée or pass the squash through a ricer or food mill. Season the purée with the spices, salt and pepper.

To Toast Pumpkin Seeds

Preheat oven to 375 degrees F. Wash the seeds thoroughly and remove all of the pulp. Season the seeds with salt and cracked black pepper, place on a cookie sheet lined with parchment and bake for 15-20 minutes, tossing occasionally until golden brown.

To Roast Shallots

Preheat oven to 375 degrees F. Toss the shallots (skins on) in a little olive oil and season with salt and cracked black pepper. Place the shallots on a baking sheet and roast them in the oven for approximately 30 minutes, until the skin is dark golden brown. Remove the shallots and let them cool. Peel off the tough skin and slice them or simply use them whole.

To Make the BeeRisotto

In a heavy-bottom 2-quart saucepan, melt the butter, add the onion and garlic and sauté for 4-5 minutes over moderate heat. Add the roasted shallots and the rice, stir until all of the rice has been coated with the butter mixture. In another pot, mix the beer and the stock and bring to a simmer.

Add the liquid and pumpkin purée, one pint at a time, to the rice mixture, stirring almost constantly until creamy and the rice is cooked, but still slightly firm (approximately 20 minutes), finish by adding the cheese.

Serve the risotto garnished with chopped chives and toasted pumpkin seeds. Enjoy with a wonderful Buffalo Bill's Pumpkin Ale.

Probably the most popular "winter warmer" is from Samuel Smith's. The old brewery in Yorkshire, England, also produces an excellent imperial stout, as well as a delicious Nut Brown Ale and a tasty Taddy Porter. These all rate very highly in the Brew Chef's beer ratings. The "winter warmer" is a strong ale with an almost barley winelike character and full body.

I really enjoy this beer after dinner with a semisweet chocolate dessert or with fruit poached in the beer itself. Here is an easy recipe for Poached Pears in Samuel Smith's Winter Warmer.

Hope you enjoy!

Pears Poached in a Spiced Winter Warmer Broth Enhanced with Toasted Walnut Vanilla Cream Cheese

Makes 4 servings

Ingredients for the Poached Pears

- 4 Bartlett pears
- 1 bottle Samuel Smith's Winter Warmer (enough to cover the pears)
- .5 cup sugar (118 mL)
- 4 cloves
- 8 peppercorns
- 1 cinnamon stick
- 1 bay leaf

Ingredients for the Cream Cheese Filling

- 3 oz cream cheese (85 g)
- 1 tbsp powdered sugar (14.8 mL)
- 2 tbsp walnuts, chopped (29.6 mL)
- .5 tsp vanilla (2.5 mL)
- 1 pinch nutmeg
- 1 pinch ginger
- 1 pinch allspice
- 1 pinch cinnamon

To Poach the Pears

Peel the pears and remove the core, entering from the bottom, leaving the stem intact. In a two-quart saucepan, mix the sugar, beer, cloves, peppercorns, cinnamon stick and bay leaf, then, place the pears in the liquid (add more beer, if necessary, to completely cover the pears).

Bring the poaching liquid to a simmer, cover the pot and simmer an additional 7-10 minutes, depending on the size of the pears. To check, pierce a pear with a toothpick. If the pear is tender, it is done cooking.

Remove the pears with a slotted spoon. Strain the liquid over the pears and chill thoroughly. Serve the pears in the broth.

For a variation try making a beer syrup by returning the poaching liquid to a small saucepan and gently boiling until reduced to

1 cup. If the sauce doesn't thicken enough, whisk in 1 tsp. cornstarch mixed with 1 tsp. beer or water, then chill thoroughly.

To Make the Cream Cheese Filling

Blend the cream cheese with the walnuts, vanilla, powdered sugar and spices until soft and smooth.

To Fill the Pears

Place the cream cheese mixture in a plastic pastry bag filled with an open end tip. Insert the tip into the hole in the pear and fill it completely, you can also use a small spoon, if you don't have a pastry bag.

To Serve the Pears

Simply spoon some of the broth into a small bowl, place the pear upright on the broth and garnish with a few strawberries, raspberries, orange segments and fresh mint leaves.

Enjoy with a chilled Samuel Smith's Winter Warmer!

I sure hope everyone has a healthy and "Hoppy" Holiday season this year and warms up with a couple of cold ones!

Tim Schafer, The Brew Chef™, is the chef/proprietor of THE NEWLY EXPANDED Tim Schafer's Cuisine in Morristown, NJ, a restaurant and catering operation specializing in New American Cuisine.

A graduate of the Culinary Institute of America, Tim's passion for cooking is transcended through his many cooking classes, seminars and demonstrations in the restaurant and through a variety of adult schools and organizations.

A nationally recognized beer personality, Tim has appeared demonstrating on the QE2 Cruise Ship, numerous times on the TV Food Network, and on many local cable channels, sharing his enthusiasm for cooking with beer. His first cookbook on cooking with beer will be hoppenin' soon. The Brew Chef Hoppenings Hotline is (973) 538-7500.

If you would like to receive "The Brew Chef Hoppenings - Calendar of Events" and join Tim's mailing list, please send your name, address, phone & fax numbers with a SASE to: Tim Schafer's Cuisine "Brew Chef Hoppenings," 82 Speedwell Ave., Morristown, NJ 07960 (973) 538-3330, Fax (973) 538-5550.

MICHAEL BANE

Beer Drinkers United

Once again, thousands of people thronged to Denver, CO, to sample the very best from brewers around the country. Billed as a "Celebration of American Brewing," Great American Beer Festival XVII more than lived up to its name, with hundreds of microbrews from across the country there for the sampling.

One of the biggest buzzes of the festival, however, was not about microbrews but, instead, about homebrewing.

AHA Homebrewer of the Year Ichiri ("Hino") Fujiura once again made the long trip from Japan with five gallons of his award-winning Smoked Coconut Porter. On opening night of the GABF, word of the amazing beer began filtering through the hallways. Pretty soon there was a line at the AHA booth for a one-ounce sample of Ichiri's brew. Interestingly enough, most of those waiting in line were professional microbrewers, eager to try the beer. Ichiri (whose English is good, but not great), Paul Gatza and Brian Rezac spent a lot



of time answering the question, "Now what, exactly, is in this?"

By the second day we were down to a single gallon, which disappeared as soon as the doors opened. For the rest of the Festival, we booth slaves became experts at saying, "Sorry. You're too late!"

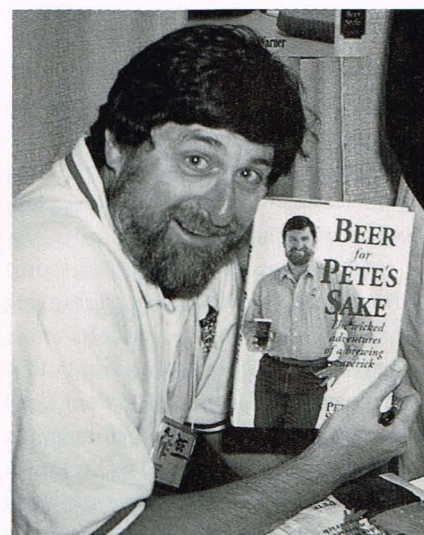
While there was the usual selection of world-class brews, one that caught our eye was Collaborator Milk Stout, a joint effort between Widmer Brothers Brewing Co., Maletis Beverages and the Oregon Brew

Crew homebrew club. The Milk Stout is part of an effort to keep older, less-well-known beer styles in circulation. Homebrewers in the area brew their interpretations and the Oregon Brew Crew and Widmer pick the outstanding ones. With the help of homebrewers, Widmer brews these "exotic" beers. For every barrel sold, the Crew donates \$4 toward a scholarship at the Oregon State University Department of Fermentation Science. Widmer and Maletis also donate their funds to charities.

Milk stout, by the way, was created in 1907 to combine the reputed "curative" powers of stout with the healthy nature of milk. It's slightly sweet and very smooth, without the heavy roastiness of, say, Guinness or the oatmeal stouts.

If you'd like to try milk stout, you're probably going to need to plan a trip to Portland. Or keep your first week of October open for the 1999 GABF!

Michael Bane is the editor of *Zymurgy* magazine.



Above, pomp & circumstance at the GABF. . . Plus, the ubiquitous Pete Slosberg. Gordon Maness signs up for an AHA lifetime membership at the GABF.



Great American
Beer Festival
1998
Denver, Colorado

1998 Great American Beer Festival XVII Medal Winners

October 1-3, 1998, Denver, Colorado

CLASSIC ENGLISH-STYLE PALE ALE

GOLD: Stoddard's Pale Ale, Stoddard's Brewhouse, Sunnyvale, CA
SILVER: Urban Wilderness Pale Ale, Snow Goose Restaurant & Sleeping Lady Brewing Co., Anchorage, AK

INDIA PALE ALE

GOLD: Pike IPA, Columbine Mill Brewery, Littleton, CO
SILVER: Two Hearted Ale, Kalamazoo Brewing Company Inc., Kalamazoo, MI
BRONZE: Scarlet Fire IPA, Big Time Brewing Company, Seattle, WA

AMERICAN-STYLE PALE ALE

GOLD: Sharptail Pale Ale, Montana Brewing Co., Billings, MT
SILVER: Addison Pale Ale, Big Horn Brewing Co. of Texas, Arlington, TX
BRONZE: Piranha Pale Ale, BJ's Pizza, Grill & Brewery, Portland, OR

AMERICAN-STYLE AMBER ALE

GOLD: Boont Amber, Anderson Valley Brewing Company, Boonville, CA
SILVER: Biltmore Red, San Jose Tied House, San Jose, CA
BRONZE: Oregon IPA, Oregon Ale and Beer Company, Lake Oswego, OR

ENGLISH-STYLE BITTER

GOLD: Red Lady Ale, Crested Butte Brewery & Pub, Crested Butte, CO
SILVER: Alien Ale, Il Vicino Brewing Co., Salida, Salida, CO
BRONZE: Phillips Ave Pale Ale, Sioux Falls Brewing Co., Sioux Falls, SD

ENGLISH-STYLE (EXTRA SPECIAL) STRONG BITTER

GOLD: Tower E.S.B., Bull and Bush Pub, Brewery, Denver, CO
SILVER: Boundary Bay Best Bitter, Boundary Bay Brewing, Bellingham, WA
BRONZE: Houston Brewery IPA, The Houston Brewery, Houston, TX

SCOTTISH-STYLE ALE

GOLD: Buckhead Scots Ale, John Harvard's Brew House, Cambridge, MA
SILVER: High Point Rapids Red Ale, High Point Brewing Corporation, Denver, CO
BRONZE: Scottish Amber, Four Peak's Brewing Company, Tempe, AZ

GOLDEN ALE/CANADIAN-STYLE ALE

GOLD: Typhoon Golden Ale, Typhoon Brewery, New York City, NY
SILVER: Eureka Golden Ale, Sophisticated Otter Brewing Co., Johnson City, TN
BRONZE: Alaskan Pale, Alaskan Brewing Company, Juneau, AK

KÖLSCH

GOLD: Skinny Atlas Light, Empire Brewery of Rochester, Rochester, NY
SILVER: Tire Biter, Flying Dog Litter of Ales, Denver, CO
BRONZE: Kolsch, Brewer's Alley, Frederick, MD

ENGLISH-STYLE BROWN ALE

GOLD: Marblehead Mild, Salem Beer Works, Salem, MA
SILVER: Birdman Brown Ale, Alcatraz Brewing Co.-Littleton CO, Littleton, CO
BRONZE: Downtown Brown, Empire Brewing Co. of Syracuse, Syracuse, NY

AMERICAN-STYLE BROWN ALE

GOLD: Sweet Magnolia Brown, Big River Breweries, Inc., Chattanooga, TN
SILVER: Doryman's Dark Ale, Pelican Pub and Brewery, Pacific City, OR
BRONZE: Hogan's Park Ave Ale, Custom BrewCrafters Inc., Honeoye Falls, NY

GERMAN-STYLE BROWN ALE/DÜSSELDORF-STYLE ALTBIER

GOLD: Otis Alt Bier, Elk Grove Brewing Co., Elk Grove, CA
SILVER: Copper Mesa Amber Ale, Wolf Canyon Restaurant & Brewpub, Santa Fe, NM
BRONZE: Spalty Alt, Red Rock Brewing Co., Salt Lake City, UT

GERMAN-STYLE WHEAT ALE

GOLD: Gudenteit Hefe-Weizen, Mickey Finn's Brewery, Libertyville, IL
SILVER: Gudendark Dunkel-Weizen, Mickey Finn's Brewery, Libertyville, IL
BRONZE: Leinenkugel's Hefeweizen, Leinenkugel's Ballyard Brewery, Phoenix, AZ

ROBUST PORTER

GOLD: Old Globe Porter, Jupiter Beverage Company, Berkeley, CA
SILVER: Portage Porter, Snow Goose Restaurant & Sleeping Lady Brewing Co., Anchorage, AK
BRONZE: Porter, Russian River Brewing Company, Guerneville, CA

BROWN PORTER

GOLD: Coffee Porter, Wolf Tongue Brewery, Nederland, CO
SILVER: Flying Armadillo Porter, Sweetwater Tavern and Brewery, Centerville, VA
BRONZE: Black Butte Porter, Deschutes Brewery 2, Bend, OR

CLASSIC IRISH-STYLE DRY STOUT

GOLD: Bearbottom Stout, Rocky River Brewing Co., Sevierville, TN
SILVER: Hortons Irish Stout, Cottonwood Brewery, Boone, NC
BRONZE: Tahoe Stout, Lake Tahoe Brewing Co., Tahoe City, CA

FOREIGN-STYLE STOUT

GOLD: Houston Brewery Stout, The Houston Brewery, Houston, TX
SILVER: Winter Warlock Oatmeal Stout, Bristol Brewing Co., Colorado Springs, CO
BRONZE: Tsunami Stout, Pelican Pub and Brewery, Pacific City, OR

SWEET STOUT

GOLD: Samuel Adams Cream Stout, Samuel Adams Brew House, Philadelphia, PA
SILVER: Eight-Ball Cream Stout, River Market Brewing Co., Kansas City, MO
BRONZE: Grainbarrel Stout, Elk Grove Brewing Co., Elk Grove, CA

OATMEAL STOUT

GOLD: Black Widow Stout, Yellowstone Valley Brewing Co., Billings, MT
SILVER: Devil's Back Stout, Walnut Brewery, Englewood, CO
BRONZE: Humboldt Oatmeal Stout, Humboldt Brewing Co., Arcata, CA

ENGLISH OLD ALE/STRONG ALE

GOLD: Resolution Ale, Village Brewery and Restaurant, Houston, TX
SILVER: Special Old Ale, Commonwealth Brewing Co. LTD, Boston, MA
BRONZE: Curmudgeon's Nip, Odell Brewing Co., Ft Collins, CO

STRONG SCOTCH ALE

GOLD: Prescott's Wee Heavy, Bitter End Bistro and Brewery, Austin, TX
SILVER: Smoked Scotch Ale, Westwood Brewing Co., Los Angeles, CA
BRONZE: Wee Heavy, Iron Hill Brewery and Restaurant, Newark, DE

IMPERIAL STOUT

GOLD: Imperial Stout, Diamondback Brewery, Cleveland, OH
SILVER: Inkwell Extra Stout, Offshore Ale Company, Oak Bluffs, MA
BRONZE: Moylan's Imperial Stout, Moylan's Brewery and Restaurant, Novato, CA

OTHER STRONG ALES

GOLD: Hearthside Wheatwine, Steelhead Brewing Co., Eugene, Eugene, OR
SILVER: Richardo's Red Rocket, Bear Republic Brewing Company, Healdsburg, CA

BARLEY WINE

GOLD: Bearded Pat's Barley Wine, Bluegrass Brewing Company, Louisville, KY
SILVER: Code Blue, Pacific Coast Brewing Company, Oakland, CA
BRONZE: Old Bouncer Barley Wine Ale, Boundary Bay Brewing, Bellingham, WA

BELGIAN-STYLE ALES

GOLD: Grand Cru Ale, Celis Brewery Inc., Austin, TX
SILVER: Belgian Strong Ale, AleSmith Brewing Company, San Diego, CA
BRONZE: Abbey Belgian Style Ale, New Belgium Brewing Company, Fort Collins, CO

BELGIAN & FRENCH-STYLE SPECIALTY ALES

GOLD: Celis White Beer, Celis Brewery Inc., Austin, TX
SILVER: Framboise Lambic, Diamondback Brewery, Cleveland, OH
BRONZE: Jenna Grace Wit, Barley Brothers Brewery & Grill, Lake Havasu City, AZ

GERMAN-STYLE PILSENER

GOLD: Paulina Pils, Deschutes Brewery 1, Bend, OR
SILVER: Sunfest Ale, Pyramid Ales, Berkeley, CA
BRONZE: Local Color Smooth Talker Pilsner, Local Color Brewing Company, Novi, MI

BOHEMIAN-STYLE PILSENER

GOLD: Samuel Adams Boston Lager, Boston Beer Company, Boston, MA
SILVER: Baderbrau Pilsner, Goose Island Beer Co., Chicago, IL
BRONZE: Prairie Dog Pils, Waterloo Brewing Co., Austin, TX

MÜNCHENER HELLES

GOLD: Penn GOLD, Pennsylvania Brewing Co., Pittsburgh, PA
SILVER: Glasscock Helles, Glasscock Brewing Co., L.L.C., Edinburg, TX
BRONZE: Sudwerk Helles, Sudwerk Privatbrauerei Hubsch, Davis, CA

EUROPEAN-STYLE PILSENER

GOLD: Tabernash Golden Pilsner, Tabernash Brewing Co., Longmont, CO
SILVER: Prescription Pils, Thunder Canyon Brewery, Tucson, AZ
BRONZE: Zig Zag River Lager, Portland Brewing Co., Portland, OR

AMERICAN-STYLE LIGHT LAGER

GOLD: Coors Light, Coors Brewing Co., Golden, CO

SILVER: Pabst Genuine Draft Light, Pabst Brewing Company, Tumwater, WA

BRONZE: Gluek Golden Light, Gluek Brewing Company, Cold Springs, MN

AMERICAN-STYLE LAGER

GOLD: Rainier, Rainier Brewing Company, Seattle, WA

SILVER: Old Milwaukee, The Stroh Brewery Company, Detroit, MI

BRONZE: Schlitz, Jos. Schlitz Brewing Co., Detroit, MI

AMERICAN-STYLE PREMIUM LAGER

GOLD: Special Export, Heileman Brewing Company, La Crosse, WI

SILVER: Miller Genuine Draft, Miller Brewing Co., Milwaukee, WI

BRONZE: Leinenkugel's Original Premium Lager, Jacob Leinenkugel Brewing Co., Inc., Chippewa Falls, WI

EUROPEAN-STYLE DARK / MÜNCHENER DUNKEL

GOLD: Pious Monk Dunkel, Church Brew Works, Pittsburgh, PA

BRONZE: DeGroen's Dunkles, Baltimore Brewing Company, Baltimore, MD

BOCK

GOLD: Red, Boiler Room Brewpub, Laughlin, NV

SILVER: Saxer Helles Bock, Saxer Brewing Co., Lake Oswego, OR

BRONZE: Goat Maibock, Backcountry Brewery and Restaurant, Frisco, CO

VIENNA-STYLE LAGER

GOLD: Wagner Valley Dockside Amber Lager, Wagner Valley Brewery, Lodi, NY

SILVER: Rattlesnake Kate's Vienna Lager, Union Colony Brewery, Greeley, CO

BRONZE: Acadian Vienna Amber, Acadian Brewing Company, New Orleans, LA

AMERICAN-STYLE AMBER LAGER

GOLD: Climax California Classic, Eel River Brewing Co., Fortuna, CA

SILVER: Black Star Amber Export, Great Northern Brewing Co., Whitefish, MT

BRONZE: Sequoia Amber Lager, Sarasota Brewing Co., Sarasota, FL

MÄRZEN / OKTOBERFEST

GOLD: Oktoberfest, Norwester Beer Co., Lake Oswego, OR

SILVER: Atwater Bloktoberfest, Atwater Block Brewery, Detroit, MI

BRONZE: Franklinfest, Independence Brewing Co., Philadelphia, PA

AMERICAN-STYLE DARK LAGER

GOLD: Michelob Amber Bock, Specialty Brewing Group of Anheuser-Busch, Inc., St. Louis, MO

SILVER: Point Bock, Steven's Point Brewery, Steven's Point, WI

BRONZE: Scottsdale Gulch Water, Hops! Bistro and Brewery of North Scottsdale, Scottsdale, AZ

SMOKE-FLAVORED BEERS

SILVER: Smoke Rogue Ales, Newport, OR

BRONZE: DeGroen's Rauchbock, Baltimore Brewing Company, Baltimore, MD

GERMAN-STYLE SCHWARZBIER

SILVER: Schwarzbier, Three Needs, Burlington, VT

BRONZE: Soma Swarz, Twenty Tank Brewery, San Francisco, CA

FRUIEERS**(OTHER THAN RASPBERRY)**

GOLD: Bees 'n Berry, Thunder Canyon Brewery, Tucson, AZ

SILVER: Cherry Bomber, Golden City Brewery, Golden, CO

BRONZE: Apple Ale, New Glarus Brewing Co., New Glarus, WI

DOPPELBOCK

GOLD: Hogback Doppel Bock, Mountain Sun Pub & Brewery, Boulder, CO

SILVER: Blue Ridge Sublimator Doppelbock, Frederick Brewing Company, Frederick, MD

BRONZE: Samuel Adams Double Bock, Boston Beer Company, Boston, MA

AMERICAN-STYLE LAGER / ALE OR CREAM ALE

GOLD: Ma Barker, Big House Brewing Co., Albany, NY

SILVER: Mt. Uncanoonuc Golden Cream Ale, Stark Mill Brewery And Restaurant, Manchester, NH

BRONZE: Lodgepole Light, Prescott Brewing Company, Prescott, AZ

HERB / SPICE BEERS

GOLD: Mocha Maddness, Copper Tank Brewing Co., Dallas, TX

SILVER: Rye Patch Ale, Great Basin Brewing Co., Sparks, NV

BRONZE: Pancho Verde Chile Cerveza, Rio Grande Co., Albuquerque, NM

NONALCOHOLIC MALT BEVERAGES

GOLD: Pabst NA, Pabst Brewing Company, Tumwater, WA

SILVER: O'Doul's Amber, Specialty Brewing Group of Anheuser-Busch, Inc., St. Louis, MO

AMERICAN-STYLE WHEAT ALE OR LAGER

GOLD: Widmer Hefeweizen, Widmer Brothers Brewing Co., Portland, OR

SILVER: Leinenkugel's Honey Weiss, Jacob Leinenkugel Brewing Co., Inc., Chippewa Falls, WI

BRONZE: Sierra Nevada Wheat, Sierra Nevada Brewing Company, Chico, CA

RASPBERRY BEERS

GOLD: Oregon Trail Raspberry Wheat, High Noon Saloon & Brewery, Leavenworth, KS

SILVER: Dr. Hops Raspberry Wheat Ale, Idaho Brewing Co., Idaho Falls, ID

BRONZE: Arrowhead Red Dark Berry Ale, Pony Express Brewing Company, Olathe, KS

SPECIALTY

GOLD: Blind Date Ale, Four Peak's Brewing Company, Tempe, AZ

SILVER: Pullman Nut Brown Ale, Flossmoor Station Brewing Co., Flossmoor, IL

BRONZE: Hallertau Rye, Watson Brothers Brewhouse, Cincinnati, OH

SPECIALTY HONEY ALES OR LAGERS

GOLD: Lobo Dorado Honey Ale, Wolf Canyon Restaurant & Brewpub, Santa Fe, NM

SILVER: Fall Fest Honey Rye Ale, Copper Tank Brewing Co., Dallas, TX

BRONZE: Double Honey Mailbock, Linden's Brewing Company, Fort Collins, CO

EXPERIMENTAL BEER (LAGER OR ALE)

GOLD: Imperial Eclipse Stout, Flossmoor Station Brewing Co., Flossmoor, IL

SILVER: Southampton Saison, Southampton Publick House, Southampton, NY

BRONZE: Brimstone Stone Beer, Brimstone Brewing Co., Frederick, MD

AMERICAN-STYLE SPECIALTY LAGER

GOLD: Schlitz Malt Liquor, Jos. Schlitz Brewing Co., Detroit, MI

SILVER: New World Pilsner, Phantom Canyon Brewing, Colorado Springs, CO

BRONZE: St. Ides, St. Ides Brewing Co., Detroit, MI

Professional Panel Blind Tasting judges award medals to excellent examples of a particular style. If the judges believe no beer in a category meets the quality and style-accuracy criteria, they may elect not to award medals. For example, judges may recognize a beer with a silver or a bronze medal and not award a gold medal. For information about the Great American Beer Festival call the association of Brewers at (303) 447-0816, or write PO box 1679, or <http://beertown.org> on the Web.

The Market Basket

has a superior selection of quality homebrew ingredients & supplies all at excellent prices

NOBLE HOP SPECIAL! For every lb. of imported Czech Saaz or German Hallertau Hersbrucker Hop pellets you purchase at \$14.95, we'll send a second lb. absolutely FREE! mix or match / no limit

Buy a Pound get a Pound Free! +SH.

HOP PELLET SAMPLER! 8 oz Each of Hallertau ~ Cascade ~ Eroica ~ Willamette ~ Clusters ~ Fuggles

\$19.95 +SH.

MALT EXTRACT & HOP COMBO

TEN - 3.3 LB. NORTHWESTERN EXTRACT, MIX OR MATCH UNHOPPED

GOLD, AMBER, DARK, OR WEIZEN PLUS THE HOP SAMPLER!

\$68.95 +SH.

NEW! 30 LB. HEDPACK N.W. MALT EXTRACT ~ \$39.95

VISIT OUR ON-LINE CATALOG AT:
<http://www.glaci.com/market/brewing/homepage.html>

Call Free! 1-800-824-5562 24hr. Fax. (414)783-5203
14835 W. Lisbon Rd. Brookfield, WI. 53005-1510



AMERICAN HOMEBREWERS ASSOCIATION

DIAMOND

Brew City Supplies Inc.—Milwaukee, WI
 Carlen Company LLC—Littleton, CO
 NCX Polled Herefords—Brosseau, AB, Canada
 Jack Adkins—Lansing, MI
 Kevin Anderson—Fairbanks, AK
 Rodger Ashworth—Sacramento, CA
 McCoy J Ayers—Vallejo, CA
 John D Ayres—Eau Claire, WI
 Patrick G Babcock—Canton Township, MI
 Daniel Bangs—Cher-Dan's SSS—Enid, OK
 David Barlow—Davis, CA
 Scott T Bartmann—Barzona Brewing Co—Ahwatukee, AZ
 Norm Bauer—Fenton, MO
 Roger William Bauer—Dog Lips Brewhaus—Tukwila, WA
 Kinney Baughman—Brewco—Boone, NC
 Tim Beauchot—Albion, IN
 Bill Benjamin—Benjamin Machine Products, Modesto, CA
 Matt Berg—Medfield, MA
 Thomas Bergman—Jefferson, MD
 Tom Bertson—Salem, OR
 Scott Berres—Mesa, AZ
 Jerry Black—Springfield, OH
 Don Bockelmann—Sergeant Bluff, IA
 Jeff Bonner—Allentown, PA
 Gary Brown—Dayton, OH
 Terry J Brown—Daphne, AL
 Alan Burkholder—Columbus, OH
 Ben Campbell—Dawson, IL
 Alberto Cardoso—Alcatec Sprl—Brussels, Belgium
 Rand Carrothers—Paulsbo, WA
 Jacob Chackes—Atlanta, GA
 Calvin Chiang—Rochester, NY
 Bill Chirnside—Lakewood, CO
 LA Clark—Portland, ME
 Robert Clarkon Coleman—Germantown, MD
 Dana B Colwell—Warwick, RI
 Robert Cooke—Springfield, VA
 Edward Corn—Agua Dulce, CA
 Sean Cox—Greenwich, CT
 Carman E. Davis—Nemrac Marketing Co—Cuyahoga Falls, OH
 Tim Deck—McEwen, TN
 Michael Demchak—Rocky River, OH
 Steve Dempsey—Chandler, AZ
 Robert Devine—Riverton, UT
 Maj Scott Dick—Europe
 Mark Dills—Seattle, WA
 Michael S Drew—Aloha, OR
 Randy Drwings—Chandler, AZ
 Lease Duckwall—Abilene, KS
 Karl Josef Eden—Lauingen, DO, Germany
 Timothy J Egan—Medford, OR
 Arthur R. Eldridge—Esko, MN
 J. Rob Ellnor IV—New Albany, IN
 Robert Elmer—Portsmouth, RI
 Douglas Faynor—Woodburn, OR
 Lee Fellenberg—Tacoma, WA
 Matthew Floyd—Bardstow, KY
 Kevin L. Fluharty—Elgin, IL
 Bob Frank—The Flying Barrel—Frederick, MD
 Roy Fuentes—San Antonio, TX
 David Gagnon—South Berwick, ME
 Mark Gealy—Palo Alto, CA
 Mindy & Ross P. Goeres—Albuquerque, NM

Christopher Gould—New York, NY
 Dana Graves—Newark, DE
 Victor Grigorieff—Redwood City, CA
 Bill Gwinn—Waxhaw, NC
 Joseph N. Hall—Chandler, AZ
 Mike & Mary Hall—Los Alamos, NM
 Steve Hamburg—Chicago, IL
 Alan A. Harlow—Reading, MA
 Stuart Harms—Portland, OR
 Joseph P. Harrington—Dayton, OH
 James Haughey—Silver Spring, MD
 John Hewett—Petersburg, PA
 Tom Hildebrandt—Greensboro, NC
 Marc & Susan Hinck—Edmond, OK
 Gary E. Huff—Gresham, OR
 James Hendrik Hulskamp—Keokuk, IA
 Allan Hunt—Nashville, TN
 Wayne Jameson—Hartford, CT
 Arydas K Jasmantas—Logansport, IN
 Art Jeyes—Odenton, MD
 Ray Johnson—Lansing, MI
 Robert Kapusinski—Arlington Heights, IL
 Charles Kasicki—Port Angeles, WA
 Jim Kaufmann—Cafe Mozart—Budapest, Hungary
 Kevin L. Kline—Charlotte, NC
 Hirao Kohno—Yawata, Japan
 John E. Kollar—Baltimore, MD
 Gregory M Komarow—Madeira Beach, FL
 Brian Kotso—Yuma, AZ
 Kraig Krist—Annandale, VA
 Thomas C. Kryzer—Wichita Ear Clinic—Wichita, KS
 Steve La Rue—Ogden, UT
 Andrew Lamorte—Denver, CO
 Steven Landry—Boston, MA
 Tom Larrow—Oklahoma City, OK
 Jeff Legerton—Santee, CA
 Tyrone Lein—Fort Atkinson, WI
 Emily Leone—Newark, NY
 Daniel Litwin—Blue And Gold Brewing Co, Arlington, VA
 Kurt Loeswick—San Jose, CA
 Charles Lutz—Walden, NY
 Keith A MacNeal—Worcester, MA
 David Manka—Jersey City, NJ
 Frank Matalitis—Owings Mills, MD
 Larry Matthews—Raleigh, NC
 Paul McClure—Uncasville, CT
 Kevin McKee—Oceanport, NJ
 Dan McLaughlin—Bohemia, NY
 Timothy McManus—Haskell, NJ
 Charles McMaster—Tyler, TX
 Richard Molnar—Lexington, MA
 Darron Morris—Bent River Brewing Company—Davenport, IA
 Fred Morris—Lynchburg, VA
 Robert K. Morris—Whitehouse, OH
 Lawrence (Red) Mrozek—Depew, NY
 Hillel Norry—New York, NY
 Shawn Nunley—Tracy, CA
 Ryouji R Oda—Japan Craft Beer Association—Ashiya City, Japan
 Gordon L. Olson—Los Alamos, NM
 John Orosz Sr—Bridgeview, IL
 Robert Park—Sweeny, TX
 Don Peteisen—Bloomfield Hills, MI
 Bruce Peterson—Finlayson, MN
 Bill Pfeiffer—Cork And Cap—Brighton, MI
 Robert Pocklington—Houston, TX
 Mark Powell—San Angelo, TX

Frank Pruyne—Lakeville, MA
 Alison Quiros—New York, NY
 John W Rhymes II—Homewood, AL
 Darryl Richman—Crafty Fox—Bellevue, WA
 Dan Robison—Salt Lake City, UT
 Chuck Roosevelt—Denver, CO
 Dwight Rose—Brighton, CO
 Richard P. Ross—Woburn, MA
 John Roswick—Bismarck, ND
 Daniel J Ryan—Menlo Park, CA
 Joseph F Rzepka Jr—Burtonsville, MD
 Lance Saucier—Willimantic, CT
 Dan J Schaeffer—Sandbury, OH
 Michael Schiavone—Lewiston, NY
 Edward R. Schill—Glendale Heights, IL
 Kim Scholl—Xtract Xpress—Kernersville, NC
 Paul Schroder—Batavia, IL
 Mike Simmons—Iuka, IL
 Mike Simon—Ft Atkinson, WI
 Carl Singmaster—Columbia, SC
 Tom Smith—Columbia, MO
 Tony Smith—New Orleans, LA
 Joseph Snyder—Worth, IL
 Thomas Spangler—Winston Salem, NC
 Roger St Denis—San Jose, CA
 Eric D. Steele—Milwaukee, WI
 James A. Steenburgh—Rochester, MN
 John Strantzen—Bundoora, Australia
 Raymond Sullivan—Denver, CO
 Peter Swift—Manassas, VA
 John Tallarovic—Berwyn, IL
 Alexander C Talley—Edinburg, TX
 James B Thompson—Okemos, MI
 Richard Todd—Raleigh, NC
 Richard Tomory—Anchorage, AK
 Richard Trouth—Sulphur, LA
 William Tucker—Fort Huachuca, AZ
 Les Uyeji—Vancouver, WA
 D. L. Van Dame—Churubusco, IN
 Mark & Mary Vehr—Smithfield, VA
 Steve Vilter—Anchorage, AK
 Christopher R Wagstrom—Palo Alto, CA
 Harvard C Waken II—Albuquerque, NM
 Adam B Walker—Cathedral City, CA
 Bud Wallace—Merced, CA
 Wade Wallinger—Kingwood, TX
 Larry Weaver—Gaithersburg, MD
 Robert J Weber Jr—San Diego, CA
 Ed Westemeier—West-Tech—New Richmond, OH
 Sabine Weyermann-Krauss—Weyermann, Mich GmbH—Bamberg, Germany
 Lee Scott Wiberg—Roseau, MN
 Robert Wikstrom—Derby, KS
 Thomas G Wilk—San Antonio, TX
 Steven Willey—Parker, CO
 David G Williams—Port Orchard, WA
 Peter F Wilson—Auburn Hills, MI
 Kevin Winden—Anacortes, WA
 Henry Wong—Rexdale, ON, Canada
 Donald Wood—Stanton, CA
 Kent Woodmansey—Pierre, SD
 Lowell D. Yeager—Canterbury, CT

GOLD

Yeasty Brew Unlimited—Mill Valley, CA
 Brian Baber—ParrotHead Brewing—Temecula, CA
 Chris Brauning—Zanesville, OH
 Andrew Fee—Nantucket, MA

Bill Garrard Jr—Coyote Springs Brewing Co—Phoenix, AZ
 Allen Goebel—Petersburg, IL
 William Hassler—Pearl City, HI
 David Hayes—Los Alamos, NM
 David Hutchinson—Hopkinsville, KY
 Steve McDowell—Reno, NV
 Robert J. Miller—San Luis Obispo, CA
 Allan W Murfitt—Anchorage, AK
 Ian & Jake Quinn—Glen Echo, MD
 Franklin Radcliffe—Las Vegas, NV
 Joel Rea—Corvallis Brewing Supply—Corvallis, OR
 Thomas Rhoads—Chicago, IL
 Michel Rousseau—Distrivin Ltd—Longueuil, PQ, Canada
 George Santini—Cheyenne, WY
 Thomas C Weeks—Denville, NJ

PEWTER

Russell M Arakaki—Kailua, HI
 Harry K Bailey—Oak Harbor, WA
 Jay Berman—Vista, CA
 Hugh Bynum—Portland, OR
 Mark Caspary—O & S Bag Company—Idaho Falls, ID
 Leon Chichester—Herdon, VA
 Michael Cron—Monsey, NY
 Mark Duffield—Cambridge, MA
 Kevin Fitzpatrick—Maple Grove, MN
 Doug Griffith—Sewell, NJ
 Bill Hallett—Rochester, MN
 Nancy Hambacher—Pantano Creek Brewer Supply—Tucson, AZ
 Byron Holston—Buffalo Grove, IL
 David J Hummel—Baltimore, MD
 Douglas J Jenkins—Wilmington, NC
 Neal Kaufman D.D.S.—Westlake, OH
 Melvin Kelly—Crawfordsville, IN
 Rob Kreiger—North Brunswick, NJ
 Calvin Lee—Fairfield, CT
 Ethan Magdovitz—Chicago, IL
 Brian Matthews—Woodhaven, MI
 Charles Murray—Golden, CO
 Jeffrey G Nameth—Arden, NC
 Chris Neikirk—Roanoke, VA
 Frank Pedroni—Concord, CA
 Steven C Pettyjohn—Lynchburg, VA
 Mark Tomko—Oreland, PA
 Robert Wood—Pearland, TX

PINT

Miami Area Soc of Homebrewers—Miami, FL
 Chris Ahlberg—Fairfield, CT
 Tanner Andrews—Deland, FL
 Russ Clayton—Slidell, LA
 Larry Copeland—Smryna, GA
 Ara Derderian—Rancho Cucamonga, CA
 Kris Kucera—Freepoint, ME
 Tom Reed—Trenton, NJ
 Parrish Silbernagel—Pulath, MN
 Will Smith—Louisville, CO
 Dan Turczyn—Eastpointe, MI
 Charles A Watson—Hillsboro, OR

For Information about AHA Sponsorship, call
 (303) 447-0816.

JANUARY

- 30** 2nd Annual Eastern Connecticut Homebrew Competition, **AHA SCP**, Willimantic, CT. Sponsored by Willimantic Brewing/Main St. Café. Entries due 1/23/99 with \$5 entry fee. Contact Paul T. Zocco at (860) 742-7879 or (860) 666-6951, ext 6244, e-mail: ptzocco@snet.net.

FEBRUARY

- 13** You're Special to Me AHA Club Only Competition, **AHA SCP**, Entries due 2/8/99. Contact Brian Rezac at (303) 447-0816, ext. 121, email: brian@aob.org, http://beertown.org.
- 19-20** Kansas City Bier Meisters 16th Annual Regional Homebrew Competition, **AHA SCP**, Roeland Park, KS. Entries due 2/6/99. Entry fee: \$6 ea./1-6 entries, \$5 ea./7 or more entries. Contact Steven Ford at (913) 432-6109. http://kcbiermeisters.org.
- 20** 4th Annual MASH Homebrew Competition, **AHA SCP**, San Rafael, Calif. Entries due 2/6/99 with a \$6/entry fee. Contact Mike Riddle at (415) 472-3390 (h), e-mail: jadeeds@sonic.net, http://www.sonic.net/~jadeeds/beer/mash.htm.
- 20** 1st Annual South Gasconade Brewing Society Homebrew & Wine Competition, **AHA SCP**, Owensville, MO. Entries due 2/1/99 thru 2/15/99 with \$5 entry fee. Contact Bill Leasure at (573) 437-6172 (h) or (888) 650-9939 (w).
- 27** Salt City Homebrew Competition, **AHA SCP**, Syracuse, NY. Entries due 2/12/99. Contact Andrew F. Moon at (315) 656-8917 or John A. Barnes at (315) 474-8731, e-mail: jabarnes@aol.com.

- 27** The Best of Brooklyn '99 Homebrew Competition, **AHA SCP**, Brooklyn, NY. Entries due 2/9/99 thru 2/20/99. (See entry packet for entry fee schedule). Contact Bob Weyersburg at (212) 989-4545, e-mail: triage@mind-spring.com.

MARCH

- 5-6** 6th Annual America's Finest City Homebrew Competition, **AHA SCP**, San Diego, CA. Entries due 2/15/99 thru 2/26/99 with \$6 entry fee. Contact Greg Lorton at (760) 943-8280 or (760) 635-0528, e-mail: glorton@cts.com, http://www.softbrew.com/afchbc.
- 13** 4th Annual Hurricane Blowoff Homebrew Competition, **AHA SCP**, West Palm Beach, FL. Sponsored by The Palm Beach Draughtsmen. Entries due 3/6/99 with a \$6/entry fee. Contact Mel Thompson at (561) 471-2634, e-mail: Melwpb@aol.com, http://www.maco.net/homebrew/pbd/.
- 20** 13th Annual Bluebonnet Brew-Off, **AHA SCP**, Irving, Texas. Entries due 2/26/99 thru 3/5/99 with \$6 entry fee. Contact Spence Mabry at (817) 249-4789 (h) or (817) 415-4126 (w), e-mail: smabry@flash.net, http://www.flash.net/~smabry/blue.htm.
- 20** NetWort IV, **AHA SCP**, Across the U.S.. Sponsored by the Virtual Village Homebrew Society. Entries due 3/6/99. Results will be posted live over the Internet. Contact Mark McAndrews by e-mail at NetwortIV@compuserve.com, http://www.cmg.net/belgium/clubhub.

- 27** Why Don't We Do It In The Robe/Belgian Styles AHA Club Only Competition, **AHA SCP**, Entries due 3/22/99. Contact Brian Rezac at (303) 447-0816, ext. 121, email: brian@aob.org, http://beertown.org.

APRIL

- 26-May 8** Upstate New York Homebrewers Association's 21st Annual Competition & 10th Annual Empire State Open, **AHA SCP**, Rochester, NY. Entries due 3/10/99 thru 4/17/99. Contact Turk Thomas at (716) 637-9441, e-mail: tbcolin@kodak.com, http://ggw.org/unyha.

MAY

- 15** Green Bay Rackers 5th Annual Titletown Open Homebrew Competition, **AHA SCP**, Green Bay, WI. Entries due 5/10/99 with \$7.50 for 1st entry and \$5/each additional entry. Contact Mike Conard at (920) 388-2728 or (920) 388-3747 (fax), email: mconard@itol.com, http://www.rackers.org.
- 15-16** Elizabethan Homebrew Competition, **AHA SCP**, San Bernardino, CA. Entries due 5/1/99 thru 5/4/99 with \$10 entry fee. Contact Laurie Poel at (909) 880-6211.
- 21-22** The 17th Annual Oregon Homebrew Festival, **AHA SCP**, Corvallis, OR. Entries due 5/19/99. Entry fee is \$5 ea/\$4 entries 4 and up. Contact Lys Buck at (541) 928-3531, e-mail: yoone@ucs.rost.edu, http://www.mtsw.com/hotu/fest.html.

AHA SCP = American Homebrewers Association Sanctioned Competition Program

The Calendar of Events is updated weekly and is available from the Association of Brewers: info@aob.org or http://beertown.org on the web.

To list events, send information to **Zymurgy** Calendar of Events. To be listed in the March/April Issue (Vol. 22, No. 2), information must be received by Dec. 28, 1998. Competition organizers wishing to apply for AHA Sanctioning must do so at least two months prior to the event. Contact Brian Rezac at brian@aob.org; (303) 447-0816 ext. 121; FAX (303) 447-2825; PO Box 1679, Boulder, CO 80306-1679.

• **KUDOS** •

AHA SANCTIONED
COMPETITION PROGRAM

• **JULY 1998** •

**Pontiac Brewing
Tribe's Brew-Wow**

Pontiac, Mich., 138 entries - Thomas Plunkard of Warren, Mich. won best of show.

• **SEPTEMBER 1998** •

**Santa Cruz County Fair
Homebrew Competition**

Watsonville, Calif., 35 entries - Ed Show of Watsonville, Calif. won best of show.

**Tulare County Fair
Homebrew Contest**

Tulare, Calif., 40 entries - Andy Ramm of Hanford, Calif. won best of show.

**Firkin Homewracker's
Homebrew Competition**

Williamston, Mich., 31 entries - David Birney of Mason, Mich. won best of show.

Barley Literate Oktoberfest

San Marcos, Calif., 90 entries - Brian Jones of Vista, Calif. won best of show.

**5th Annual Derby Brew Club
Homebrew Competition**

Wichita, Kans., 134 entries - Robert Wikstrom of Derby, Kans. won best of show.

**5th Annual Sin City Sudzzers
Homebrew Competition**

Sheboygan, Wis., 29 entries - Paul Kerchefske of Manitowac, Wis. won best of show.

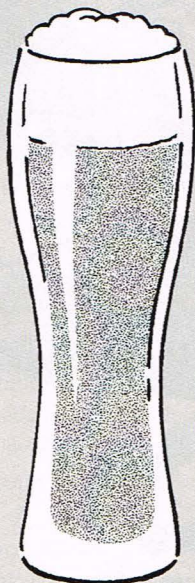
Cactus Challenge

Lubbock, Texas, 64 entries - Russ Bee of Rockwall, Texas won best of show.

• **OCTOBER 1998** •

**1998 AHA Best of Fest
Club-Only Competition**

Stockton, Calif., 23 final round entries - Tim M. Dugan of Davenport, Iowa won best of show.



**WILLIAM'S
BREWING**

P.O. Box 2195-Y9
San Leandro, CA 94577

HOME BREWERS!

Since 1979, William's Brewing has been the leader in catalog home brewing sales. We feature a huge line of exclusive home brewing equipment and supplies.

Request our free catalog today, and find out why we are the leader!

Phone Requests: 800-759-6025

Fax Requests: 800-283-2745

**Request
Your Free
Catalog
Today!**

Web Catalog: <http://www.williamsbrewing.com>

Knowledge: the most important brewing equipment.



Even the most modern, sophisticated systems require someone to run them. Expertise in the areas of operation and maintenance is crucial.

The Siebel Institute is America's oldest, largest and most respected brewing school. Nearly all the beer brewed in America—from micros to industrial giants—comes from breweries with Siebel graduates on the brewing staff.

Our classes cover every aspect of the art and science of brewing. Call us today for a complete course catalog. A Siebel education—an investment that won't depreciate.

HANDS-ON AND INTRODUCTORY SHORT COURSES

EIGHT-WEEK PROFESSIONAL BREWERS PREPARATION PROGRAM

MICROBIOLOGY AND QUALITY CONTROL LABORATORY COURSES

OVER 75 WEEKS OF SCHEDULED COURSES EACH YEAR



For more information, write or call the registrar

SIEBEL INSTITUTE OF TECHNOLOGY

4055 W Peterson, Chicago, IL 60646
Phone 773/279-0966 Fax 773/463-7688
<http://www.siebel-institute.com/welcome>
siebelinstitute@worldnet.att.net

Sex, Lies and Wayward Wit Wort

Dear Professor,

Two of my last three homebrews have had very low specific gravity readings prior to fermentation. The first was an olde ale containing six pounds of malt extract syrup and two pounds of DME. My wort after brewing was only 1.030, far short of my 1.075 target. I just tossed out a failed attempt at a wit beer, which registered only a 1.020 after brewing. It contained 6.6 pounds (4 kg) of weizen syrup extract and three pounds (1.36 kg) of honey. I used the exact same recipe a month ago and recorded a 1.070 after brewing. I'm stumped as to the problem. Can you offer any advice?

Thanks,
Dave Erickson (tomorydae@aol.com)

Dear Dave,

It just doesn't seem right, does it? Life is cruel, but never this cruel. Now, let me get this right. You put a total of eight pounds of malt extract syrup and dried powder into a five-gallon batch, and you get an original gravity of 1.030? If you used a typical malt syrup—that is 15% water and 85% solids—then, by my calculations, you should have achieved an original gravity of 1.061 to be sure! And your wasted wayward wit wort would've willingly weighed way more than 1.020. Actually 1.069 by my calcs.

Now, if I was regular, the first thing I'd suggest is that your hydrometer is off. But nope, not this time, because the first time it's off by 50% and the second time by about 70%. So that ain't the problem. But I'll tell you, Dave, the same thing has happened to me on occasion. My estimations and calculations are usually right on, and whenever my hydrometer doesn't jive with what I expected I know I just got lazy. What I'm telling you is that you've got to shake that puppy wort a

lot. Now, don't tell me (like I tell myself), "Hell, I did shake it a lot!" Do it more and make sure you shake it in a way that mixes the bottom with the top, the warm with the cold and the denser with the lighter. That's what it is. Even after all these years of brewing, I too end up shaking more than once when my readings are bizarre.

I can only weep for your wasted wit wort. You had it, but you didn't flaunt it enough.

Oh, the pain, the agony, the memory!

*Dumb witted,
The Professor, Hb.D.*

Be Cheap but Be Careful

Dear Professor,

I'm old to homebrewing, but new to kegging. Having bought a 20-pound (9.08-kg) CO₂ tank (full and complete with regu-



lator) for \$2, the time for kegging had come. The extra fridge that came with our new house helped, too.

OK, so I got two used kegs and five gallons in the carboy. I couldn't wait—so five gallons of birch beer soda (for the kids and when you can't partake) went in the other keg. Awesome....easy...best bottle I've ever seen. Anyone with an inclination to keg should not wait (best \$2 I've ever spent)!

Now I want two kegs going at once. What's the deal with manifolds and such? Can I just use a "gas T" and run it into both kegs? I mean, the quick-disconnect is essentially leakproof, and as long as I want both kegs at the same pressure, what's the problem? I know that if one keg goes up in pressure, so does the other, but a \$2 gas T is a whole lot cheaper than the manifold.

Getting gassed waiting.
Dr. Christopher Pierce (cpierce@naxs.net)

Dear Chris,

You've just about said it all, man. What you say will work, and you're right, the pressures between the three ends will equalize. Now that ain't a bad thing in theory, BUT be careful! Be very careful in the beginning, because if your "in" tube is long enough to be immersed into your brimming-full yet-to-be-tapped beer and your two kegs are not exactly at the same pressure, you're going to end up with one of the beers being drawn into the other brew (and possibly back into your CO₂ regulator if your gas pressure out of the tank is less than the initial pressure into your kegs).

I'd bleed off a pint or two of beer into the ole mug and chug it down, leaving some head space in the keg before attaching the gas-in hoses. Here's another word of caution. If you're going to do dueling kegs, with one being a birch beer, you might want to think twice. Root and birch beer flavors are mighty tenacious things, and if you get gas flowing out of the soda pop and evolving into your beer, well, then you're going to get root beer-tasting Pilsener. Not exactly what you had in mind, is it?

You saved yourself a bundle of money with the tank, gas and regulator. You aren't me, but if I were you I'd spring for a manifold

with a antireverse flow valve. One tainted batch of Pilsener root beer and you've blown one-third of your savings.

Call me a splurger,
The Professor, Hb.D.

Steep by Steep

Dear Professor Surfeit,

I am wondering about the proper procedure for steeping specialty grains in an extract/specialty grain recipe. Specifically, I have read some folks suggest you simply put the grains in cold water, heat and remove

them just before the boil starts. Others have said to remove them at a lower temperature—say 175 degrees F (79 degrees C). Still others have recommended you let them steep at a given temperature from 10-45 minutes. Then there is the question of sparging—how much water and at what temperature? I assume each technique has advantages and disadvantages. Please advise!!

Steeply confused,
Sean Drummond
(drummond@rohan.sdsu.edu)

(continued on page 61)

SABCO INDUSTRIES, INC.

Offering a
'KEG FULL OF GREAT IDEAS'
**HOME BREW EQUIPMENT
SPECIALISTS**



- Automated Brewing Systems
- Mash & Boil Kettles
- Fermentors & Burner Stands
- 5 Gallon Ball Lock Containers
- Parts and Components
- Custom Stainless Vessels

4511 South Ave., Toledo, OH 43615
Phone: (419) 531-5347/ Fax: (419) 531-7765
email: sabco@kegs.com
Website: <http://www.kegs.com>



Serving the Trade
Since 1963

Wholesale Only

COMPLETE LINE OF HOME BEER AND WINE MAKING SUPPLIES

PREMIER MALT PRODUCTS
Drums - Pails - Cans - Dry Malt

CROWN CAPS BY THE:
Pallet - Case - Gross Box

Home of the Famous Jet Bottle Capper

7024 NE Glisan Street
Portland, Oregon 97213 U.S.A.
Phone (503) 254-7494 • Fax (503) 251-2936

Write for our
detailed
list of items.

Converting All-Grain Recipes to Extract/Partial Mash

Intermediate brewing—combining simple extract techniques with the richness of real grain—is common ground shared by a large segment of the homebrewing population. As such a brewer, you're well-served with truly great homebrew while unencumbered by the long hours and bulky equipment required for all-grain brewing. But how many times have you passed up a tasty-looking all-grain recipe because you "don't do all grain?" The good news is there's a simple conversion procedure that will let you brew a wide variety of all-grain recipes using intermediate/partial mashing techniques.

The conversion method presented here is based on the fact that a large percentage of styles use a single base malt for the majority of their grain bill. By substituting extract for this portion of the recipe, the grain requirement is reduced to steeping or small-scale minimashing. Moreover, some of the remaining specialty grains can also be substituted with extract, further simplifying the conversion.

And because your recipe is extract-based, you can use the same stove-top brewing methods you're accustomed to. The high quality of today's extracts ensure results that let you compete head-to-head with the best all-grain brewers.

The Procedure

The "all-grain to intermediate" conversion procedure goes like this:

1. **Break up the grain bill** into one to four groups or types based on the characteristics of each grain in the recipe.
2. **Decide whether a steep or a partial mash** is needed/desired and separate those grains.
3. **Substitute extract** for the remaining grains.
4. **Write down** the "new" extract-based recipe.
5. **Brew** the beer!

What we are doing is separating the part of the recipe that can be converted easily to extract from the part that cannot, then planning a strategy to deal with both parts. Let's look at the basic elements of

the recipe conversion process in detail. I'll work an example as we go along to illustrate the process.

Example: Amber Ale

- 7 lb two-row malt (3.18 kg)
- 1 lb Munich (.45 kg)
- 1 lb wheat malt (.45 kg)
- 1 lb CaraPils (.45 kg)
- 2 oz roasted barley (57 g)

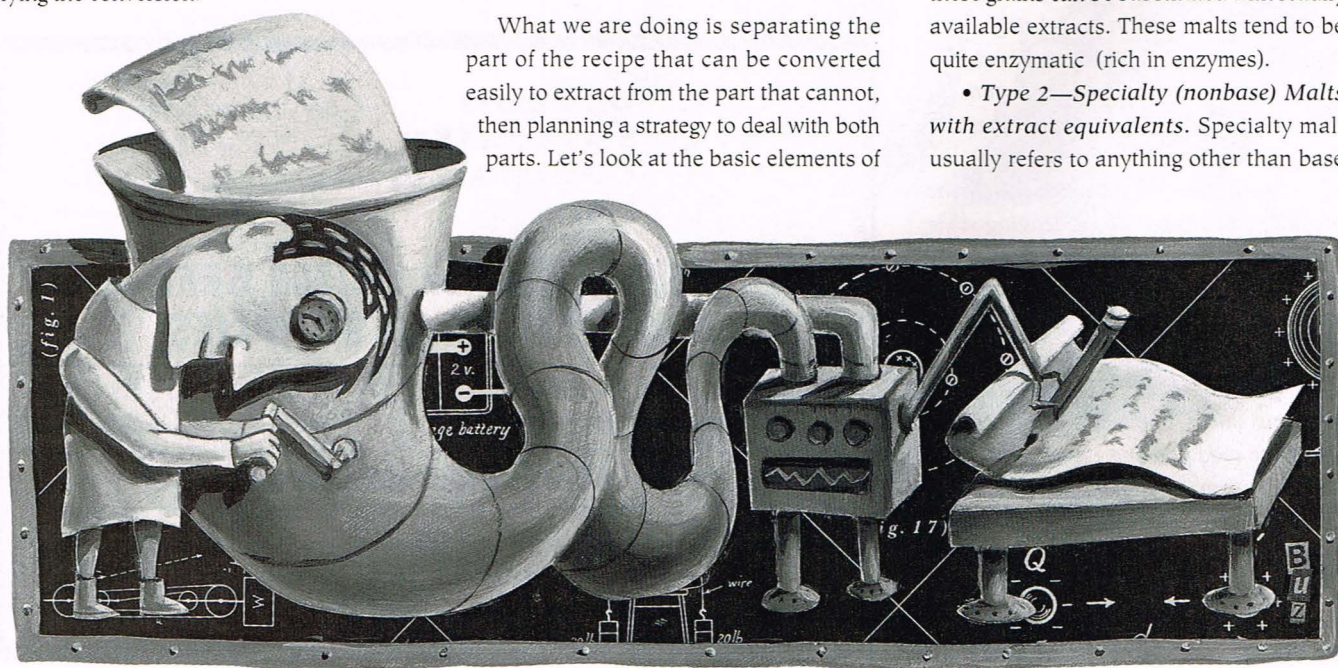
1. Classify the Grains

The first step in the conversion process is to break down the grain bill into types of grain based on their characteristics. This will help you identify which ingredients can be converted to extract, which can be simply steeped and which may need to be mashed.

There are four groups or types I propose:

- **Type 1—Base Malt.** This is the malt that makes up the majority of the grain bill. Usually it's a pale malt like two-row, Pilsener, wheat or pale ale malt. Most or all of these grains can be substituted with readily available extracts. These malts tend to be quite enzymatic (rich in enzymes).

- **Type 2—Specialty (nonbase) Malts with extract equivalents.** Specialty malt usually refers to anything other than base





bulk-packaged dry extract is not obvious, so ask your supplier. On the plus side, dry extract will last longer and any desired amount can be measured out without wasting the leftover as you would with a can or bag of liquid extract. Or you can combine liquid and dry extracts to reach the exact amount required for your recipe.

Grain to Extract Conversion To convert grain to extract, use 0.75 pounds (.34 kg) of liquid extract for each pound of grain being substituted, or 0.67 pounds (.30 kg) dry extract. That means that it takes more liquid extract to equal dry extract, but in practice you can usually use either conversion factor, even if you plan to mix dry and liquid extracts, without being too far off. My suggestion is to convert the grain entirely to liquid extract, subtract off whole cansful (3.3 lb/1.5 kg increments, or other whole package size), and convert the remainder to dry extract. You can convert leftover liquid extract to dry by multiplying by 0.89.

For example, if you are converting 6 pounds (2.72 kg) of pale ale malt to extract, you would need $6 \times 0.75 = 4.5$ pounds (2.72 \times 0.75 = 2.04 kg) of liquid extract. Since you're buying a 3.3-pound (1.5-kg) can of extract, this leaves 1.2 pounds (.54 kg) to make up as dry extract. To be precise, you'd really only need one pound (.45 kg) dry extract (multiply the remaining 1.2 pounds of liquid extract required by 0.89), but as you can see the difference is probably small enough to ignore.

You should also take into account any Type 1 grain you might have borrowed for adding enzymes and/or husks to your partial mash. In fact, if your partial mash tun is not yet full, you might as well add more of your Type 1 malts as grain to maximize the grain recipe emulation. I suggest always mashing at least three pounds (1.36 kg) of grain. This makes temperature control easier because the larger mass of grain will hold the heat better.

In our amber ale example, first multiply 7 pounds (3.18 kg) of two-row by 0.75 to get 5.25 pounds (2.39 kg) liquid extract. You can also multiply by 0.89 to get 4.7 pounds (2.13 kg) dry extract. Or use one 3.3-pound (1.5-kg) can of liquid and convert the remaining 1.95 pounds (.89 kg) to dry, which would convert to 1.7 pounds (.79 kg) dry malt extract (DME).

If you use specialty extracts such as wheat or Munich that are blends of two or

more grains, you must take that into consideration when converting. In our example you might choose to use wheat extract in place of wheat malt. One pound (.45 kg) of wheat malt grain converts to 0.75 pounds (.34 kg) liquid extract. However, wheat extract is only 60% wheat, so you would divide the 0.75 pounds (.34 kg) by 0.60 (60%) to get 1.25 pounds (.57 kg) total wheat extract required. The one pound (.45 kg) of Munich grain converts to 0.75 pounds (.34 kg) extract, then you need to divide by 0.50 (50%) to get 1.5 pounds (.68 kg) total Munich extract required.

Next, remember that the remainder of these extract blends is pale malt, which you need to subtract from the 5.25 pounds (2.39 kg) of pale extract we originally got from the 7 pounds (3.18 kg) of two-row. One and one-half pounds (.68 kg) of Munich extract contains 50% or 0.75 pounds (.34 kg) of pale extract, and 1.25 pounds (.57 kg) wheat extract contains 40% or 0.5 pounds (.23 kg) pale extract, for a total of 1.25 pounds (.57 kg) pale extract. Deduct this 1.25 pounds (.57 kg) from the 5.25 pounds (2.39 kg) to get 4 pounds (1.81 kg) liquid. This could be further converted to DME by multiplying by 0.89 to get 3.6 pounds (1.61 kg), or you can use a 3.3-pound (1.5-kg) can of liquid and convert the remaining 0.7 pounds (.31 kg) to 0.62 pounds (.28 kg) DME.

Now you should have two groups of ingredients—one or more extracts and a grain bill ready to be steeped or (preferably) mashed.

4. Write down the New Extract-Based Recipe

As you saw there were several ways to convert this recipe. First, using extract and steeping only, we have

- 4 lb pale liquid malt extract (1.81 kg)
- or
- 3.6 lb Briess pale DME (1.61 kg)
- or
- 3.3 lb can Alexander's pale liquid extract (1.5 kg)
- 0.62 lb (10 oz) Briess pale DME (.28 kg),
- plus
- 1.5 lb liquid Munich malt extract (50/50) (.68 kg)



Hours: (cst) M,T,F 9:30 am to 6:00 pm
W,Th 9:30 am to 8:00 pm
S 9:30 am to 5:00 pm
FAX/WWW 24 hours a day

Don't compromise on quality, we don't.

Visit our virtual store and catalogue at
<http://www.bacchus-barleycorn.com>

or contact us at

Bacchus and Barleycorn, Ltd.

6633 Nieman Road Shawnee, KS 66203
(913) 962-2501 Phone ~ (913) 962-0008 FAX

If we don't have what you're looking for... Just ask. We'll get it!

**Fast, Friendly,
Personalized
Service**



Why not to you?

- 1.25 lb liquid wheat malt extract (60/40) (.57 kg)
- 1 lb CaraPils (.45 kg), steeped
- 2 oz roasted barley (57 g), steeped

For the minimashed version:

- 5.25 lb pale malt liquid extract (2.39 kg)
or
- 4.7 lb Briess pale DME (2.13 kg)
or
- 3.3 lb can Alexander's pale liquid extract (1.5 kg)
- 1.7 lb Briess pale DME (.79 kg),
plus minimash the following:
 - 1 lb Munich malt (.45 kg)
 - 1 lb wheat malt (.45 kg)
 - 1 lb CaraPils (.45 kg)
 - 2 oz roasted barley (57 g)

5. Brew the Beer!

...which is the whole point!

Conclusion

Though the many conversion options you might confront may seem to complicate matters, look at it as having creative license without compromising the authenticity of the conversion. By thinking in terms of making substitutions for each ingredient one at a time, it becomes more simple and intuitive. And, finally, if you have to perform a minimash anyway, add more Type 1 grain to fill the mash tun for the most all-grain authenticity!

References

- Gruber, Mary Anne. Briess Malting Co., personal communication, 5/22/98.
- Papazian, Charlie. *The New Complete Joy of Homebrewing*, Avon Books, Second Edition.
- Daniels, Ray. *Designing Great Beers*, Brewers Publications, 1996.
- Gudmestad, Neil C.; Taylor, Raymond J. "Malt: A Spectrum of Colors and Flavors," *Zymurgy*, 1995 Special Issue (Vol. 18, No. 4).
- Niggemeyer, Jeff. "Partially Interested? Try Partial Mashing," *Zymurgy*, 1995 Special Issue (Vol. 18, No. 4).
- Dixon, Brian. "Tools for Recipe Conversion; All-Grain to Extract, Extract to All-Grain," *Brewing Techniques*, March/April 1998 (Vol. 6, No. 2), New Wine Press, Inc.

Korzonas, Al. *Homebrewing Vol. I*, Sheaf & Vine, 1997.

Miller, Dave. *The Complete Handbook of Homebrewing*, Storey Communications, 16th Printing, 1994.

<http://triton.cms.udel.edu/~oliver/firststate/tips/maltext.html>, comprehensive list of extracts and their characteristics

<http://home.elp.rr.com/brewbeer>, author's Web page

<http://www.morgansbrewing.com.au>,

Morgan's Brewing

<http://www.briess.com>, popular American

maltster, lots of data on various grains <http://www.brewsupply.com>, malt analysis data (see "Grain Profiles").

<http://www.conbev.com/index.html>, Moray Firth / Beeston Malting Co.

<http://www.paulsmalt.co.uk>, Paul's Malts

<http://www.EDME-beer.com>, Edme

<http://www.nwextract.com>, Northwestern

<http://brewery.org>, The Brewery, homebrewing information site

This article is based on veteran homebrewer Ken Schwartz' talk at last year's National Homebrew Conference.

MARCON FILTERS

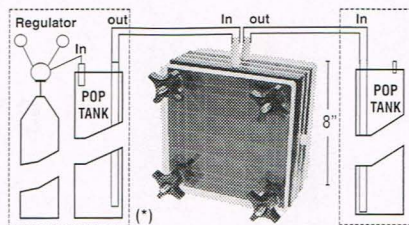
produces Filters for homebrewers, pilot breweries, microbreweries, winemakers, wineries & laboratories

All models can use pads or reusable membranes
D.E. plates available

(*) "Carosello Pressurized Filter" for Draft Beer
3 Plates Reinforced - Size 8" x 8"



<http://www3.sympatico.ca/marcon.filters>
E-MAIL: marcon.filters@sympatico.ca



Marcon Wines & Filters - 1428 Speers Rd., Unit 9
Oakville, Ontario L6L 5M1
Tel (905) 825-8847 Fax (905) 825-8404

ELLIOTT METAL FABRICATING, INC.



Specializing in
2, 4, 7, 10 & 15
Barrel Systems

Elliott Bay Metal Fabricating, Inc.

P.O. Box 777 • Monroe, Washington 98272 (425) 788-5297

The Most Literate Beer

BY GREG KITSOCK

Beer has always been a favorite topic of prose, poetry and song. Few breweries, however, are more steeped in Western literature than Eldridge, Pope & Co. of Dorchester, Dorset County, England—and few brands more so than Thomas Hardy's Ale.

It all dates back to the early 17th century. England had locked horns with the Sun King, Louis XIV of France, in the War of the Spanish Succession. The causes are no longer relevant for today's world, but the conflict had lasting consequences for the English brewing industry. With the wine trade disrupted, the brewers of Dorset in southwestern England learned to produce ales known for their complexity, clarity and strength.

Chalk deposits in the water table yielded a mineral-rich water perfect for brewing strong pale ales that would come into vogue in the late 18th century. Surrounding fields produced barley that was excellent for malting. A military barracks in Dorchester provided plenty of thirsty customers, but the local brew was available as far away as

London, and Admiral Nelson is supposed to have enjoyed Dorchester beer to such a degree that he had the British fleet supplied with it.

Into the Future

Fast forward to 1968. That year the citizens of Dorchester held a festival to commemorate their most famous native son, novelist and poet Thomas Hardy (1840-1928). In a series of works set in the fictitious Wessex County, Hardy had celebrated the people and landscape of the Dorset area. The Eldridge Pope brewery decided to do its part by brewing a strong ale of the type that would have been enjoyed in the author's heyday. Recreating a 19th century beer is a near-impossible task: few recipes survive from that era, and the ingredients available—not to mention brewing equipment and techniques—have changed radically. So the brewers let themselves be guided by a



"The masses worshipped it,
the minor gentry loved it
more than wine, and by the
most illustrious county families
it was not despised."



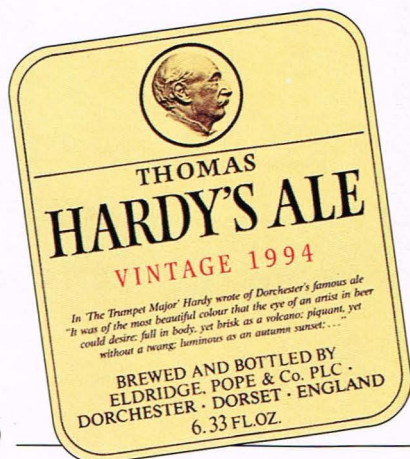
description of the local beer that appeared in Hardy's 1879 novel, *The Trumpet Major*:

"It was of the most beautiful colour that the eye of an artist in beer could desire; full in body, yet brisk as a volcano; piquant, yet without a twang; luminous as an autumn sunset; free from streakiness of taste; but, finally, rather heady. The masses worshipped it, the minor gentry loved it more than wine, and by the most illustrious country families it was not despised."

The result, Thomas Hardy's Ale, would become a regular product of the brewery and its chief export to America. When it first appeared in 1968, it was listed in the *Guinness Book of World Records* as the world's strongest commercial beer, with an alcohol by volume content of 11.58%. Thomas Hardy's Ale has long since lost this distinction, but its complexity and longevity—30 years and counting for the earliest vintage—have earned it a pedestal among the world's great beers.

Malt Secrets

Thomas Hardy's Ale is produced in 50-gallon batches between five and 10 times a year. The grist, according to brewery manager Roger Wharton, consists entirely of Pipkin pale ale and lager malts. A little maltose sugar is added during the boil, but no specialty malts are involved. The beer's amber color is a result of the sheer density of the wort (original gravity is an amazing 1.125) and caramelization during the boil. The original kettle hops were Fuggles, but the brewery has replaced them with the higher alpha varieties Northdown and Challenger. "We're looking at 60 BUs," says Wharton.



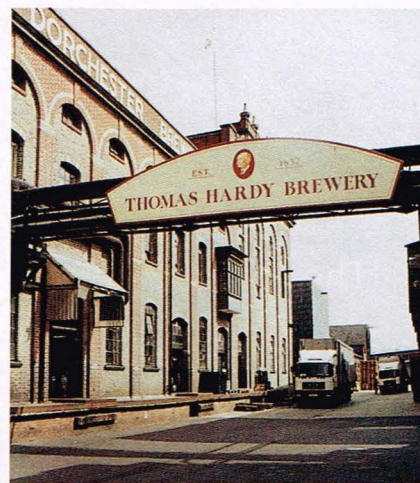
Thomas Hardy's Ale is pitched with a bottom-fermenting yeast strain chosen for its high tolerance for alcohol. Primary fermentation lasts two weeks in traditional copper-lined, open fermenters. At this point, the alcohol content is 8-9% by volume. The beer is then transferred to closed, stainless steel conditioning tanks, where it will sit for six months at ambient temperatures (about 15 degrees C or 59 degrees F). During the transfer, the beer receives a fresh shot of yeast, as well as an intense dry-hopping with East Kent Goldings (about five pounds per barrel). By the end of the secondary, the ABV content will have increased to at least 12%, sometimes as much as 13%. Occasionally, notes Wharton, an especially vigorous fermentation will bump the beer into a higher tax bracket for purposes of British law. The brewery responds by blending it with a less potent batch. *Michael Jackson's Beer Companion* gives a figure of 12.48% ABV for the end product.

Finally, the Thomas Hardy's Ale is chilled down to -2 degrees C (29 degrees F) for several weeks to allow the sated yeast cells to settle out just before bottling. However, the beer receives a light reyeasting with fresh cells, to achieve a final count of a million cells per milliliter. The purpose, explains Wharton, is not to kick up the alcohol further, but to impart a lively carbonation through fermentation in the bottle. No CO₂ is injected into the beer; bottles plucked from the assembly line before the yeast has had a chance to do its thing will strike the drinker as rather flat.

No Kegging!

Thomas Hardy's Ale is packaged exclusively in 11.15 ounce (330 mL) bottles. An earlier nip bottle, containing 6.33 ounces, was discontinued in 1996. There is no draft version. Kegging the ale, maintains Wharton, would yield an entirely different product. Besides, Thomas Hardy's Ale is not a beverage meant to be consumed by the pint. "It's best to sit down by the fireside and enjoy this beer out of a brandy balloon," Wharton recommends.

Promotional material promises that if stored correctly (in a dark place at about 55



The home of Thomas Hardy's.

degrees F or 13 degrees C), Thomas Hardy's Ale "will mature gracefully like a fine red wine, for 25 years or more." At one time the brewery recommended that purchasers allow the bottles to mature at least five years. For Wharton, however, it's all "a matter of personal opinion, quite honestly." Young Thomas Hardy's Ale tends to be intensely fruity and yeasty, with a sweetness almost to the point of being syrupy. Oxidation and yeast autolysis produce more complex flavors over time; the beer becomes more acidic and winelike, and picks up nuances of sherry, raisins, apricots, caramel, chocolate, coffee, even tobacco. The color also darkens. The 1968 vintage, notes Wharton, has assumed a "rich ruby" hue.

Different vintages age at different rates, some more gracefully than others. This is partly a result of the brewery tweaking the ingredients and brewing methods (some of the 1987 supply was aged in sherried oak to commemorate the brewery's 150th anniversary). This is partly due to the unpredictability of the yeast. Rather than obtain a fresh culture every few batches, "the brewery's philosophy is to repitch and repitch and repitch," states Wharton. He believes the yeast must have mutated significantly since the original vintage was brewed in 1968.

There is another factor. Because Thomas Hardy's Ale is unpasteurized, each bottle will contain a small amount of *lactobacillus*. The alcohol and high hopping rate are sufficient to prevent unchecked growth, Wharton believes, but the bacteria can make its presence known. In a 1993 tasting of seven vintages conducted

by *Malt Advocate* magazine, publisher John Hansell found the 1982 and 1984 versions excessively tart and unbalanced.

Poetry in a Bottle

The better years can practically inspire beer writers to poetry. "Aroma transcends normal bounds with herbs, spices, flowers, smoke, leather, and tobacco" (James Robertson on the 1986 vintage in *The Beer Taster's Log*). "Endless road tar, licorice, herbal finish" (F. Paul Pacult in reference to a pre-1996 vintage in *The Beer Essentials*). "A library of old leather-bound books" (Roger Protz in *The Ale Trail* in regard to an unspecified vintage). And finally, "a waltz on the tongue" (John Hansell rating the 1968 vintage in *The Malt Advocate*).

Like fine old wines, dwindling supplies of early vintages can command premium prices. "I've heard stories of the 1968 Thomas Hardy's Ale going for \$1,000," says George Saxon, American importer for Eldridge Pope. At charity auctions held by the Brickskeller Restaurant in Washington, DC, bottles of the 1983 vintage have brought high bids in excess of \$100. (Incidentally, Saxon's firm, Phoenix Imports, is currently offering a sampler pack containing five vintages of Thomas Hardy's Ale: years 1994 through 1998. Beer lovers who lack the willpower to start their own cellars can contact Phoenix at 800-700-4ALE.)

Stylistically, Wharton would classify Thomas Hardy's Ale as a barleywine because of its exceptional strength. Jackson, however, groups it with the old ales. Beers in this some-

what nebulous category tend to be "dark, rich and sweet," he writes, with hints of currants and blackstrap molasses. Ray Daniels, in his book *Designing Great Beers*, attributes these characteristics to higher mash temperatures, which produce a "more dextrinous wort that results in a lower degree of apparent attenuation." Old ales, as the name suggests, also are aged much longer than most top-fermented beers. Alcohol content varies greatly. Jackson mentions some examples as low as 4.2% ABV, but most of the better known brands are respectable if not formidable. Old Peculier from T&R Theakston in Masham measures 5.6% ABV; Prize Old Ale from George Gale & Co. in Portsmouth clocks in at 9% ABV; and Hibernation Ale from Denver's Great Divide Brewing Co., one of the better American interpretations, achieves a level of 8.1% ABV.

The Nostalgia Factor

The term "old ale" has a nostalgic ring, connoting a beer brewed the way it was in great-grandfather's day. If tradition is a necessary ingredient, then Thomas Hardy's Ale overflows with it. The brewery was founded in 1837, three years before Thomas Hardy the novelist was born. It began as an appendage to the Green Dragon tavern run by Charles and Sarah Eldridge. Long before that date, however, Sarah was brewing beer for her customers in a back room of the pub...a common state of affairs at the time. Her husband Charles was an experienced wine steward. For both, it was their second marriage; inasmuch as their professions complemented each other so well, it's possible the union resulted from economic reasons rather than romantic love.

The two left no photographs or portraits, nor is there any surviving recipe for the beer Sarah brewed. In his book *Thomas Hardy's Brewer: The Story of Eldridge, Pope & Co.*, John Seekings speculates that the beer "would have been heavy, sweet and dark. It would usually have been drunk out of pewter or ceramic pots used by the town's twenty-three taverns and inns....By modern standards the beer would have either been strong, or very strong, with the most potent brews being kept for special occasions such as harvest suppers or weddings." (continued on page 47)



Bottling a legendary brew.



Specialty Malting Company

since 1879
Bamberg - Germany

**A full line of superb quality
2-row Bavarian Malts including:**

PILSNER MALT	VIENNA MALT
	MUNICH MALT
RYE MALT	ROASTED RYE MALT
	MELANOIDIN MALT
WHEAT MALT:	
PALE - DARK - ROASTED	
CARAMEL WHEAT MALT	
SMOKED MALT	
ACIDULATED MALT	

Caramelized Malt:
CARAFOAM®, CARAHELL®, CARAMUNICH® and CARAFA® are registered trademarks for Mich. Weyermann Specialty Malting Company, Bamberg

CARAFOAM®	CARAHELL®
CARAMUNICH®	CARAFA®

CARAFA® SPECIAL
(roasted malt from dehusked barley, gives the beer a smooth taste without burnt flavor)

Roastmalt Beer SINAMAR®

 ...gives your beer
special taste and color,
without burnt flavor! 

Meet the Weyermanns at the
Phoenix MicroBrewer's show '99
- booth # 2503 -
and get free samples !

For more information contact:
 e-mail: info@weyermann.de
 Fax: 01149-951-35604

US-Distributor:
 Crosby & Baker Ltd., MA
 Phone: 1-800-999-2440

Come visit our web site:
<http://www.weyermann.de>
 ... and browse through our plant !

Kicking the

Why use kegs, anyway? Well, one of the most common complaints people have when they begin making beer is that they hate bottling. Both the cleaning and filling of bottles demands a huge amount of time, as does dealing with priming sugar so the beer will carbonate evenly and to the proper level. In fact, bottling is such an ordeal that I've heard several people say that was the one thing that turned them off to the hobby more than anything else. But luckily, relief from the bottling crisis is easy. It's time to start kegging.

Many homebrewers think that using their own kegging system is too complicated and expensive. In fact, once you step up to kegging with a Cornelius keg, you'll probably end up brewing a lot more, just because it is so easy to use. Just think: you only have one container to clean, rather than 50; you can rack your finished beer into it as easily as you would rack into another carboy and, with forced carbonation, there are no hassles with priming and no two-week wait for the beer to carbonate.

You'll also be able to pour yourself just as much beer as you need at any time, so you'll waste less. Of course, with the convenience of having a keg of great beer at home, you'll probably go through a batch much faster, but you can always brew more...

As for the expense, it will cost a bit to get started—probably just over \$150. After that though, your only expense will be refills of CO₂, which, for a five-pound tank, are between \$10 and \$20 for several month's worth of gas. For many brewers, the opportunity to escape the bottling headache makes it well worth the expense.

The Necessary Equipment

The Cornelius Keg

The stainless-steel Cornelius keg comes in a convenient five-gallon size which, with its built-in handles, makes it much easier to carry than even a quarter-barrel commercial keg. Originally used for dispensing soda syrups, it is pressure rated to 130 psi, which (unless you plan on building a water cannon out of it) is far higher than the homebrewer would ever need. Luckily, Cornelius kegs are also very common, making used ones very easy to come by at a discounted price.

Many beverage distribution companies and homebrew supply outlets sell used kegs for around \$25, or around \$35 if all the gaskets have been replaced. Many times the kegs won't need fresh parts unless they've

been sitting in a warehouse for years. If you buy used kegs, though, take along a crescent wrench to disassemble them and inspect the kegs carefully before you pay. Here are a few things to look for:

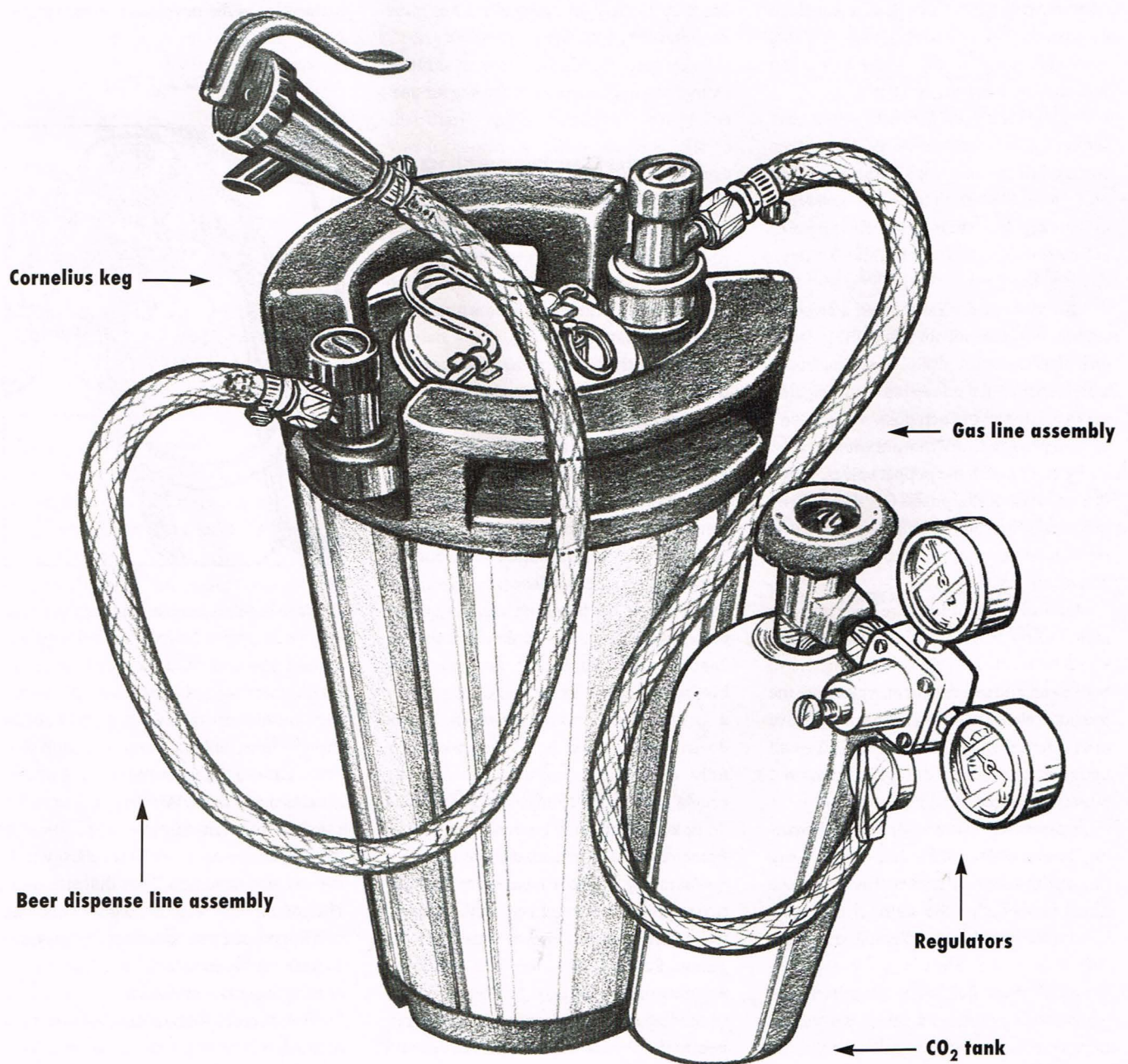
Check to see what type of Cornelius keg it is. The older design is called a pin-lock and is distinguished by the small metal pegs protruding from each of the two posts (also sometimes called body connects); the gas inlet post has two and the beer outlet post has three. Ball-lock kegs don't have these pins. Both designs are fine but you'll need different connection equipment for each, so it's more convenient to choose one type and stick to it. Pin-lock kegs are a bit more common in the soda industry and are therefore easier to get for less money.

Make sure all the rubber gaskets are smooth and elastic, without any cracks. These include the ones on the outside of each post, at the top of each steel dip tube—you'll need to remove the poppet valves first and take out the tubes to check these—and the main lid O-ring gasket. Any old-looking gaskets should be replaced.

Check to make sure the keg holds pressure. Corny kegs are pretty standardized, but certain parts like lids and poppet valves don't always jibe from keg to keg, and if parts were swapped along the way it may leak. Also check to see that the springs in each poppet valve close the valves tightly.

By Amahl Turczyn

Bottle Habit



Old or unseated valve springs may also cause leaks.

A pressure release valve on the lid, allowing you to vent head pressure without having to fiddle with the poppet valves, is a very handy feature for the homebrewer. Given the option, choose kegs with this feature.

Cleaning Cornelius Kegs

Don't worry if the used keg is dirty inside when you buy it. A good soak with hot water or PBW solution should clean up even the worst-looking gunk. Once you have it clean it's a good idea to keep it that way. And that means cleaning not only the places you can see, but also the ones you can't.

Many brewers just give their kegs a good scrub and rinse between uses, but a deep clean of all the parts, inside and out, will prevent bacteria from taking up residence in your keg and endangering the quality of your brew. Here's one method for deep cleaning the Corny:

Disassemble the Corny with a crescent wrench, being careful not to strip the posts or, on a pin-lock, bend the pins. Some homebrew retail outlets sell a handy ratchet fitting that fits over the top of each post, so you don't have to struggle with awkward wrenches.

Be careful with the poppet valves, which fit into each of the posts. On some of the older kegs they are difficult to remove and replace, so you may want to leave them in and clean around them.

After disassembling the keg, boil the main O-ring, lid and two valve assemblies for 15 minutes. This is usually sufficient to both clean and sanitize them. Make sure the pressure release valve on the lid, if you have one, is left open. The shorter dip tube can usually be scrubbed out with a test tube brush and boiled as well.

Meanwhile, using a wire-handled carboy brush, clean out the inside of the keg thoroughly, then inspect it. The two valve holes can be cleaned using a test tube brush or a toothbrush. Make sure you get up inside the opening of the keg, especially around these holes. For stone build-up, which will appear as a rough whitish or brownish coating on the steel when it's dry,

use a nylon scouring pad or phosphoric acid to remove.

Scrub the outside of the long dip tube with a scouring pad. The inside is a little more difficult. Clip the hook from a nylon-coated coat hanger and bend it as straight as you can to make one long piece. Cut a small corner off your scrub sponge and cram it into one end of the dip tube. It should be snug, but not so tight you won't be able to get it out again. Then, using the coat hanger wire, push it through. This is a much easier procedure, obviously, with straight dip tubes than bent ones, but will work in either case. Inspect the inside of the dip tube by holding it up to the light and make a few more passes with the sponge if necessary.

Now you should be ready to sanitize everything and reassemble the keg for use.

Force Carbonating in a Cornelius Keg

Cold, finished beer is best to force carbonate, because the CO₂ absorbs much more quickly and easily into it than into room-temperature beer.

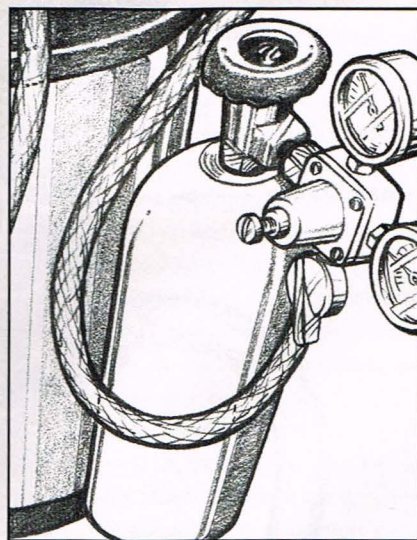
Transfer the cold beer into your keg gently, leaving the cover on, but ajar, so that any airborne bugs can't fall into it. The beer will push any remaining air out the top as it fills, leaving only CO₂ in the head space. Leaving an inch or two of head space is helpful for faster carbonation, but not necessary. Then replace the cover tightly and crank your regulator up to 30 psi. You'll hear the gas charging your keg; the fuller the keg, the quieter this charge will be. The lid should seal tightly at this time; if it doesn't, and gas comes hissing out, reseal the gasket on your lid in a sanitary fashion and try again. If that doesn't work, inspect the lid and gasket carefully. There may be a chunk of something caught in there preventing a good seal, or the lid or keg mouth may be bent somewhere. Rarely, there may be a crack in the lid.

Assuming you have head space of one or two inches above the beer, shake the keg vigorously for two to three minutes with the gas on. Room-temperature beer or a fuller keg may take a little longer to carbonate, depending on how carbonated you like your beer to be. Then disconnect the gas line and

let the keg sit at serving temperature to absorb the rest of the CO₂. You can actually vent out whatever pressure is on top of the beer and dispense it right then, but it may foam considerably at first. For the CO₂ to really absorb well and stay in solution, you should let the charged keg chill for a day or so, then check the head pressure.

Once the beer is carbonated, you'll want to keep about 10 psi on it while storing and serving it, charging when necessary. Leaving the CO₂ hooked up to your keg and relying on your regulator to maintain that constant pressure is fine, but I prefer to charge the kegs only periodically, shutting off the main valve of the tank between chargings.

The CO₂ Tank



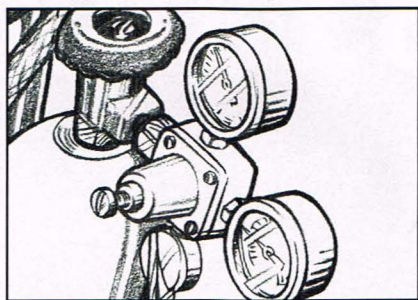
Here brewers have a couple of options: Buy your own new five-pound tank for around \$50 and have it refilled, or get an account with a gas supply company and use one of their tanks. Many homebrew supply shops will refill your tank with CO₂ if you choose the first option, but it usually takes a few days. Welding supply or fire safety equipment supply shops are also good alternatives to get CO₂ refills, which usually cost around \$20 for that size tank. The good thing about doing this is that you can keep your own personal lightweight aluminum tank, which is easier to lug around to parties and such.

The second option, getting your own gas account, is better for brewers who do a lot of

kegging and need a quick turn around when they run out. You simply bring the old empty tank in and they'll replace it with a prefilled one on the spot. Refills usually cost a bit less this way, between \$12 and \$17 for a five pounder. Unfortunately they usually only have steel tanks, so if you bring your new aluminum one in, you're probably not going to see it again. As beat up as the replacement looks, however, you can rest assured that it has been pressure tested, so unless you drop it down the basement stairs—which is *not recommended!*—don't worry about it exploding.

Remember that any pressurized container is a potential bomb, so try not to drop it, damage the main valve or leave it in a very hot place (like a car trunk) for extended periods of time while it's under pressure.

Regulators



The next bit of equipment you'll need for your home draught setup is the regulator. This connects and adjusts the main flow of CO₂ from your tank to a length of high-pressure line which, in turn, connects to your keg. You have the option of getting one, two or no gauges on your regulator, but the gauges do come in handy.

One gauge tells you how much gas you have left in your tank. Usually, for all but the very last bit of gas, it will hover around 800 psi. The CO₂ is in liquid form in the tank, so the pressure valve doesn't really give you a very good indication of how much volume of liquid you have left; it only tells you when the last of that liquid is vaporizing so you can make sure to get a refill soon. Beyond that convenience (which can also be indicated by simply weighing an empty tank and subtracting the difference) and the old "the-more-gauges-the-better" appeal, it really isn't necessary.

The other gauge serves the more important purpose of indicating how much pres-

sure is flowing from the regulator to the keg. It is very handy to be able to set your regulator flow rate at 10 psi for dispensing, or at 30 psi for force carbonating. You probably could guess at these pressure settings and not be far off the mark, but this gauge makes it much more precise.

You want to make sure your regulator has a check valve. This prevents beer from backing up into the regulator and gumming things up. Cleaning a regulator or gauge is something you probably would need the manufacturer to do, and that would probably be quite expensive.

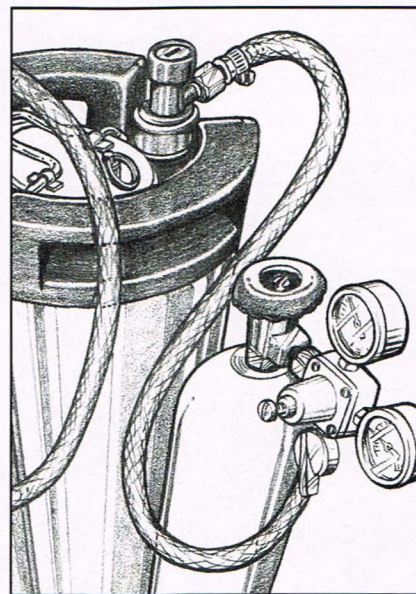
Another necessary and often overlooked little part is the gasket between your tank's main valve and the regulator. This will prevent CO₂ from leaking out slowly. If you find your new filled tank mysteriously empty in less than a week, chances are this gasket was forgotten. It's always a good idea to check a fresh tank for leaks at all junctures by opening it up so that everything down the line to your keg connect is pressurized, then spraying it all down with soapy water. Any leaks will show bubbles.

A shut-off valve just below the regulator is also a very convenient feature, as it allows you to fine-tune the flow rate without adjusting the main regulator flow valve. You can, for example, fill your sanitized Corny with a bed of CO₂ with a very gentle flow rate using this shut-off valve, even if the regulator is set to 30 psi.

One other convenience is a cage for the regulator and its gauges. This prevents them from being damaged if you happen to knock the thing over. The gauges are particularly susceptible to damage and will stick or, at best, lose their accuracy if jarred too hard. Cages go for another \$10 to \$15, but are a sensible precaution.

Gas Line Assembly

Running from the hose barb on your regulator to your keg is the gas line assembly. Its parts include a length (usually three to six feet) of 5/16-inch heavy-gauge hose, a two-piece threaded hose barb, two hose clamps, a nylon gasket and the gas-in connection to the keg. Make sure you get hose that can handle high pressures; some supply outlets



sell regular vinyl tubing, which will burst at the higher pressures necessary for forced carbonation. Try to purchase removable hose clamps instead of permanent ones. You want the kind that are screw tightened.

Normally you'll not have to disassemble this line assembly, but you should be able to if need be, for either cleaning or hooking up a counter-pressure bottle filler. It's always good to purchase extra nylon gaskets for this assembly, especially for your beer line. Alternately, you can use the newer CO₂-in connections that have the gaskets built in. Loose gaskets are so small, they always seem to get lost, so get in the habit of making sure they're there.

Beer Dispense Line Assembly

This consists of a tap, several feet (usually four to eight feet) of 3/16-inch heavy-gauge hose, a two-piece threaded hose barb, a nylon gasket and the beer-out connection from the keg. The ideal length and type of dispense hose is an issue upon which one could easily write a full-length dissertation. Factors like restriction, viscosity, temperature, line material, tap type and volume of dissolved CO₂ all play important roles in the condition of your beer as it travels from keg to glass.

For a thorough explanation of the science behind dispensing (*continued on page 50*)

THE LARGEST HOMEBREW COMPETITION IN THE WORLD!

It's time for the American Homebrewers Association® 1999 National Homebrew Competition!

In 1998, more than 400 judges evaluated 3,489 homebrewed beverages. We expect approximately 4,000 entries for the 1999 Competition. The Competition is an enormous undertaking, and we thank all of the sponsors and volunteers whose determination and enthusiasm for homebrewing has made the Competition a success over the years. A total of 30,675 homebrews have been judged in the 20 years of competition.



PART I – HOW TO ENTER THIS COMPETITION

1. What kind of bottles are required?

Every bottle must be 10 to 14 ounces in volume, brown or green glass, and be free of raised-glass or inked brand-name lettering and paper labels. Raised "No Deposit" or bottle manufacturing codes (e.g. p m 00 H 4328) are acceptable. Obliterate any lettering or graphics on the cap with a permanent black marker. Bottles with Grolsch-type swing tops are not allowed. Corked bottles meeting the above restrictions are acceptable; however, you must crimp a crown cap over the cork. Bottles not meeting these requirements will be disqualified.

2. How many bottles do I need?

Send one (1) bottle for each BEER and MEAD entry competing in the first round. Reserve a total of four (4) bottles of each entry: one (1) for the first round of the Competition and three (3) for competing in the second round of the Competition should your beer or mead advance. For CIDER, send all at once, three (3) bottles for each entry by the first-round deadline.

3. What are the entry fees?

AHA members pay \$8 per entry. Non-members pay \$12 per entry. Make checks payable (in U.S. funds) to American Homebrewers Association (or A.H.A.) and include your membership number (if applicable) on the check. Canadian entrants may send Canadian checks. Canadian checks should be payable to the American Homebrewers Association (or A.H.A.) and have Canadian funds equivalent to U.S. funds at the current exchange rates. (See entry form for details.)

4. When are the entry deadlines?

First-round entries must be received at the appropriate site between Monday, March 29 and 5 p.m. on Friday, April 9, 1999. Second-round entries must be received at the appropriate site between Monday, June 14, and 5 p.m. on Friday, June 18, 1999. Notification will be mailed by May 21 with additional instructions if your entry advances to the second round.

5. How do I enter?

(a) For each entry, fill out an entry form (last part of this brochure) in its entirety. For complete instructions on filling out the entry form, see Part II. Judges do not see your entry form. For more than one entry, please make copies of the entry form.

(b) Fold your check or money order with one of your entry forms. On your check write the number of entries the check or money order pays for and the names of the entrants if they are not all the same.

(c) Fold and rubber band each entry form to each bottle. Your entry will be disqualified if you use glue or tape to secure the form to the bottle.

(d) Pack your bottles carefully. (See Part III, Section J.)

(e) Ship your box to the appropriate address given on the Site Locator Map in the March/April *Zymurgy*. Sites cannot acknowledge receipt of entries – arrange for a return receipt with your shipping company if you wish to confirm delivery of your package. Packages with postage due or C.O.D. charges will be returned to sender.

6. Which category do I enter?

It is entirely your decision. You should try to enter your brew in the category and subcategory where you feel it will perform best. Judges do not see your entry form. Judges or organizers will not classify or reclassify your beer. Your entry will not be disqualified if it falls outside of a category's parameters– the descriptions are guidelines to help you enter your beer. Judges use the guidelines to guide them while judging your beer.

7. Are there entry limitations?

(a) You may not submit more than one entry per subcategory.

(b) Your homebrew must not have been brewed at any place that brews beverages for any commercial purpose, whether for commercial research, production or any other purpose, including brew-on-premise establishments.

(c) You must give the names of all brewers who helped in the brewing.

PART II – INSTRUCTIONS FOR COMPLETING THE ENTRY/RECIPE FORM

Entry Form Section A: Brewers Information

Please print clearly or type. In Item 1 fill in the name of the brewer who is responsible for receiving mailings and results. In Item 2 fill in the full names of all other brewers who participated in brewing the entry. In Items 3 through 6 write the address where mailings and results should be sent. Fill in Items 7 through 11 as applicable.

Entry Form Section B: Entry Information

In Item 12 write out the full names of the category and subcategory you are entering. In Items 13 and 14 write the category number and subcategory letter you are entering. Directors, judges or registrars will not classify or reclassify your entry under any circumstances. For item 16 circle the appropriate item for your mead or cider entry.

Important information for Item 17

If you enter 3b, 3c, 20b, 20c, 21, 22, 23, 25, 26, 27, 28c, 28d, please follow the instructions below very carefully to give information for Item 17. LEAVE ITEM 17 BLANK IF YOU HAVE NOT ENTERED THE ABOVE CATEGORIES. The information in Item 17 is necessary for accurate judging of entries in these categories. In all cases do not give brand names, geographic names or any proper names of special ingredients indicating the origin or identity of the brewer. For example, if you used Premier Malt Extract, Briess pale malt, Washington apples or Idaho clover honey, only enter malt extract, pale malt, apples or clover honey, respectively. Judges use this information for evaluating entries in these categories.

Entries in 3b and 3c:

Give the type(s) of herb(s) and fruit(s) you used.

Entries in 20b and 20c:

If you enter 20b, give the emulated classic style and the type of smoking wood or liquid smoke used (for example: birch-smoked porter, apple-smoked Scottish ale, etc.). If you enter 20c, give the special ingredients used and the type of smoking wood or liquid smoke used.

Entries in 21: If you enter 21a, list the fruit(s) or vegetable(s) used.

If you enter 21b, list the fruit(s) you used and give the emulated classic style (for example: raspberry stout, blueberry Pilsener, plum India pale ale). If you used any other special ingredient in addition to the fruit, enter your beer in category 23: Specialty and Experimental Beer.

Entries in 22:

If you are entering 22a, list the herb(s) you used. If you are entering 22b, list the herb(s) you used and give the classic style you have emulated. For example: nutmeg stout, chili Pilsener, coriander India pale ale. If you have used any other special ingredients in addition to the herbs, enter your beer in category 23: Specialty and Experimental Beer.

Entries in 23:

If you enter 23a, write the special technique or ingredients used. If you used both fruit and herbs, list them. If you enter 23b, give the emulated classic style (for example: honey Pilsener, cinnamon maple stout or fennel seed porter).

Entries in 25:

Give the type of honey used.

Entries in 26:

Give the fruit(s) or vegetables and the type of honey used.

Entries in 27:

Give the herb(s) or spice(s) and the type of honey used.

Entries in 28c and 28d:

In 28c indicate whether your entry is still or sparkling New England-style cider. In 28d give the special ingredients and/or special yeast used.

PART III – THE FINE PRINT

A. General

This Competition is open to all homebrewers, AHA members and non-members. No employee of the Association of Brewers may enter. Persons under contract and/or persons volunteering their services to the Association of Brewers are eligible. First-round registrars, site directors and judge directors who enter must enter at a site other than the one they host. Judges may not judge a category they have entered. Applicable entry fees and limitations shall apply.

It is the sole responsibility of the entrant to complete all registration and recipe forms, enclose the proper entry fee and designate the category and subcategory in which he/she wishes his/her entry to be judged. Under no circumstances will registrars, judges or directors categorize entries.

Beer, mead and cider will be judged only in terms of the categories and subcategories listed in the Category Descriptions. Entries must be referred to by category NUMBER and subcategory LETTER. Dry, medium or sweet must be designated for all mead and cider entries.

If a category does not have at least 20 entries in 1999, it will not be included in the 2000 Competition.

B. First Round Awards and Prizes

(1) First, second and third place will be awarded in each category at each first round site. Entries must score 30 or better to place in the first round and advance to the second round, although scoring a 30 does not guarantee entry into the second round—only three entrants per category per site will advance. These winners will also contribute points for their respective clubs. Six points will be awarded for a first place, three for a second place and one point for a third place. These club points will be included in determining the Homebrew Club of the Year award. See Part III Section C.

(2) Certificates will be awarded to first round brewers whose achievements are outstanding based on judges' scoring and the following standards: Gold-Award winners have scores of 38-50, Silver-Award winners have scores of 30 to 37; Bronze-Award winners have scores of 21 to 29.

(3) At the discretion of Competition organizers and/or judges, awards may not be given if the quality of an entry is not deemed deserving of an award.

C. Second Round Awards and Prizes

(1) Prizes will be awarded after second-round judging. First-, second- and third-place winners in each category will receive a gold, silver or bronze medal, respectively, and a commemorative stein. Steins will be mailed to second round medalists early in September 1999. Gold medal winners of the second round of the 1999 National Homebrew Competition may also receive category sponsor-donated prizes for their outstanding brewing efforts.

(2) First-place winners of each beer category will compete in a best-of-show judging. The winner will be awarded Homebrewer of the Year.

(3) First-place winners of each mead category will compete in a best-of-show judging. The winner will be awarded Meadmaker of the Year.

(4) The first-place winner of the cider category will be awarded Cidermaker of the Year.

(5) The Ninkasi Award will be given to the brewer(s) who accumulate(s) the most points in the 24 beer categories in this Competition. Six points are awarded for a first place, three points for a second place and one point for a third place. Individual members of a group of brewers do not earn points on an individual basis. For example, if Brewer A and Brewer B enter individually, they earn points individually, but if they enter as a team, they earn points as a team. Entry forms must list each member of the team of brewers to count toward the point total. There will be only one Ninkasi winner. In case of a tie, the AHA will use a tie-breaking system. The 1999 Ninkasi award is generously sponsored by Boston Beer Company, Boston, Mass.

(6) The Homebrew Club of the Year award will be awarded to the club that accumulates the most points in all categories of beer, mead and cider. Six points are awarded for a first place, three points for a second place and one point for a third place. Points will be awarded according to the same point scale for the six annual AHA Club-Only Competitions (1998 Weiss is Nice, 1998 Best of Fest, 1998 If it's Not Scottish, . . ., 1999 You're Special To Me, 1999 Why Don't We Do It In The Robe, and 1999 Bockanalia.) and added into the tally. In addition, points are earned under the same 6, 3, 1 system from first round award winners. For your club to receive credit, you must have the club listed on the entry form AND the club must be registered with the AHA by April 1, 1999. These points will be counted toward the Homebrew Club of the Year Award.

(7) At the discretion of Competition organizers and/or judges, awards may not be given if the quality of an entry is not deemed deserving of an award.

D. Judging

- (1) First round judging of all beer and mead entries will be done in closed sessions at the AHA National Homebrew Competition first-round sites on April 17 and 18, April 24 and 25 and May 1 and 2.
- (2) Second round judging of qualifying beer and mead entries will be done at the AHA National Homebrewers Conference in Overland Park, Kansas, June 24 and 25, 1999.
- (3) Best of show judging of qualifying beer and mead entries will be done at the AHA National Homebrewers Conference in Overland Park, Kansas, June 26, 1999.
- (4) All rounds of judging for cider entries will be completed at the appropriate National Homebrew Competition site April 17, 18, 24, 25 and/or May 1 and 2.
- (5) Judges and stewards are needed for first and second rounds. Qualified and interested individuals are encouraged to contact the AHA after March 1, 1999.
- (6) All decisions by Competition organizers are final.

E. AHA Membership

Non-members can join the AHA today by calling toll free (888) UCAN BREW and qualify for discounted entry forms.

F. Recipe Requirement

A recipe is not required to enter the first round. However, if your entry advances to the second round, you must submit a recipe. Upon entering this Competition, entrants agree to allow (at no cost) publication of their recipe by the Association of Brewers or any of its divisions in any AOB/BP publication. Entrant will receive all due credit.

G. Information and Fees Requirement

All entry fees, names of competitors, address, phone number, category and subcategory entered, and recipes must accompany entries when submitted. No entries will be returned whether received late or otherwise. All entries become property of the AHA.

H. Disqualifications

At the discretion of the AHA and volunteer Competition organizers, entries will be disqualified for eligibility or entry requirement infractions. These entries may still be judged, but will be ineligible for awards or prizes.

I. Results and Qualifying for the Second Round

All entrants will receive the score sheets with judges' comments for his/her entries. Results will be mailed via first-class mail by June 4, 1999. The first-, second- and third-place winners scoring at least 30 in each category from each first-round site will advance to the second round of the Competition. If your beer or mead qualifies for the second round judging, the AHA will mail you notice by first-class mail by June 2, 1999. You will be instructed on how, when and where to send three (3) additional bottles for judging, to be received in the Kansas City area between Monday, June 14, and 5 p.m. Friday, June 18, 1999. Contestants are advised to refrigerate or properly store potential second round entries to minimize changes in character. Second round brewers must also submit a recipe form with their entries.

J. Packing and Shipping Hints

Carefully pack your entries in a sturdy box. Line the inside of your carton with a plastic trash bag. Partition and pack each bottle with adequate packaging material. Do not over pack! Write clearly: "Fragile. This Side Up." on the package. Your package should weigh less than 25 pounds.

Every reasonable effort will be made to contact entrants whose bottles have broken to make arrangements for sending replacement bottles. We strongly recommend reusable shipping containers or the kind of shipping containers used by beer-of-the-month clubs. These containers help ensure your beer will arrive safely and will significantly reduce the amount of packaging waste. Please refrain from using packing "peanuts" if possible. Use bubble wrap or newspaper instead. Sites make efforts to recycle packaging material whenever possible. Refer to the article on "How to Pack Your Beer," in *Zymurgy* Spring 1991 (Vol. 14, No. 1) for excellent advice on how to save time, money and avoid broken bottles. A product review in *Zymurgy* Spring 1993 (Vol. 16, No. 1) of reusable containers specially designed for shipping homebrew is also available. Also refer to an article about entering competitions in *Zymurgy* Spring 1996 (Vol. 19, No. 1). Copies of these articles are available for free upon request if accompanied with a self-addressed stamped envelope or call the AHA, (303) 447-0816.

It is not against any Bureau of Alcohol, Tobacco and Firearms regulations or federal laws to ship your entries via a privately owned shipping company for analytical purposes. However, it is illegal to ship alcoholic beverages via the U.S. Postal Service. Private shipping companies may refuse your shipment if they are informed that the package contains glass or alcoholic beverages. Be aware that entries mailed internationally are often required by customs to have proper documentation. These entries might be opened and/or returned to the shipper by customs' officials at their discretion. It is solely the entrant's responsibility to follow all applicable laws and regulations.

PART IV – ENTRY LOCATION INFORMATION

One of the lessons we learned from the 1998 Competition is that several ship-to sites changed between production of this document and April. The site locator guide will be published in the March/April *Zymurgy* and will be available at <http://beertown.org>.

PART V – SPONSORS

There are many fine companies who support homebrewing and homebrewers by donating resources to the AHA National Homebrew Competition. Once finalized, the 1999 sponsors will be listed in *Zymurgy*. Thanks again to the following sponsors:

AWARD SPONSORS

Boston Beer Co.
Madhava's Mountain Gold Honey
Munton's p.l.c.
Coopers Brewery
Southern Stainless

SITE SPONSORS

Admiralty Beverage Co.
Bacchus & Barleycorn Ltd
Barley Malt & Vine
Broadway Brewing Co.
Brooklyn Brewery
F.H. Steinbart Co.
Goose Island Brewing Co.
Holy Field Vineyard & Winery
Magnotta Brewery Ltd.

Mill City Brewing Co.
Sierra Moonshine Homebrew Supply
Sweetwater Brewing Co.

CATEGORY SPONSORS

1. Pike's Brewery
2. Manneken-Brussel Imports Inc.
3. New Belgium Brewing Co.
4. Premier Malt Products
5. Wynkoop Brewing Co.
6. Northwestern Extract Co.
7. Deschutes Brewery
8. Yakima Brewing Co.
9. Left Hand Brewing Co.
10. Rogue Ales/Oregon Brewing Co.
11. Alternative Garden Supply D/B/A Brew & Grow
12. Washington Hop Commission

13. Saxer Brewing
14. Briess Malting Co.
15. Red Ass Brewing
16. Jacob Leinenkugel's Brewing Co.
17. F.H. Steinbart Co.
18. H.C. Berger
19. Tabernash Brewing Co.
20. Jim's Homebrew Supply
21. The Purple Foot
22. Marin Brewing Co.
23. Great Western Malting Co.
24. Anchor Brewing Co.
25. Bacchus & Barleycorn Ltd.
26. U-Brew Corp.
27. Colorado Spice, Inc.
28. Widmer Brothers Brewing Co.

PART VI – CATEGORY DESCRIPTIONS

Carefully read each style description before selecting a specific category for your entry. Category numbers have been changed in some cases.

There are 24 categories of lager, ale or mixed-style beers; three categories of mead; and one category of cider. All have subcategories that use small-letter designations. If a beer is entered, for example, as “10b) Strong Scotch ale” it will be judged as a Strong Scotch Ale against the other entries in the English and Scottish Strong Ale category.

The following section gives more detailed information about each category and subcategory. Use this information to decide how to enter your homebrew. Please note that when a style characteristic is designated “OK,” this means it does not have to be apparent but it is permissible in amounts indicated. When the term “noble-type” hops is used, it refers to European continental-type hops: Saaz, Hallertau, Tettnang and Spalt.

Categories are designated by numbers. Subcategories are designated by letters. Please note the Style Guidelines Chart and the instructions for entering.

ALES

Ales are distinguished by the use of top-fermenting *Saccharomyces cerevisiae* yeast strains. These strains perform at warmer temperatures, the ferments are faster, and fermentation by-products are generally more evident. Ales tend to have a very complex palate where esters and fruity qualities are part of the character.

1. Barley Wine

a) *English-Style Barley Wine*—English-style barley wines range from tawny copper to dark brown in color and have a full body and high residual malty sweetness. Complexity of alcohols and fruity-ester characters are often high and counterbalanced by the perception of low to assertive bitterness and extraordinary alcohol content. Hop aroma and flavor may be minimal to very high. Low levels of diacetyl may be acceptable. A caramel and vinous (sometimes sherrylike) aroma and flavor are part of the character. Chill haze is allowable at cold temperatures.

b) *American-Style Barley Wine*—American-style barley wines range from tawny copper to dark brown in color and have a full body and high residual malty sweetness. Complexity of alcohols and fruity-ester characters are often high and counterbalanced by the perception of medium to assertive bitterness and extraordinary alcohol content. Hop aroma and flavor may be medium to very high. Low levels of diacetyl may be acceptable. A caramel and vinous (sometimes sherrylike) aroma and flavor are part of the character. Chill haze is allowable at cold temperatures.

2. Belgian- and French-Style Ale

a) *Belgian-Style Flanders/Oud Bruin Ale*—This light- to medium-bodied deep copper to brown ale is characterized by a slight to strong vinegar or lactic sourness and spiciness. A fruity-estery character is apparent with no hop flavor or aroma. Flanders brown ales have low to medium bitterness. Very small quantities of diacetyl are acceptable. Roasted malt character in aroma and flavor is acceptable at low levels. Oaklike or woody characters may be pleasantly integrated into overall palate. Chill haze is acceptable at low serving temperatures. Some versions may be more highly carbonated and, when bottle conditioned, may appear cloudy (yeast) when served.

b) *Belgian-Style Dubbel*—This medium- to full-bodied, dark amber to brown-colored ale has a malty sweetness and nutty, chocolate-like, and roast malt aroma. A faint hop aroma is acceptable. Dubbels are also characterized by low bitterness and no hop flavor. Very small quantities of diacetyl are acceptable. Yeast-generated fruity esters (especially banana) are appropriate at low levels. Head retention is dense and mousseline. Chill haze is acceptable at low serving temperatures.

c) *Belgian-Style Tripel*—Tripels are often characterized by a complex, spicy, phenolic flavor. Yeast-generated fruity banana esters are also common, but not necessary. These pale/light-colored ales usually finish sweet. The beer is characteristically medium to full bodied with a neutral hop/malt balance. Its sweetness will come from very pale malts. There should not be character from any roasted or dark malts. Low hop flavor is okay. Alcohol strength and flavor should be perceived as evident. Head retention is dense and mousseline. Chill haze is acceptable at low serving temperatures.

d) *Belgian-Style Pale Ale*—Belgian-style pale ales are characterized by low, but noticeable, hop bitterness, flavor, and aroma. Light to medium body and low malt aroma are typical. They are golden to deep amber in color. Noble-type hops are commonly used. Low to medium fruity esters are evident in aroma and flavor. Low caramel or toasted malt flavor is okay. Diacetyl should not be perceived. Chill haze is allowable at cold temperatures.

e) *Belgian-Style Pale Strong Ale*—Belgian pale strong ales are pale to golden in color with relatively light body for a beer of its alcoholic strength. Often brewed with light colored Belgian “candy” sugar, these beers are well attenuated. The perception of hop bitterness is low to medium, with hop flavor and aroma also in this range. These beers are highly attenuated and have a perceptively deceiving high alcoholic character—being light to medium bodied rather than full bodied. The intensity of malt character should be low to medium, often surviving along with a complex fruitiness. Very little or no diacetyl is perceived. Herbs and spices are sometimes used to delicately flavor these strong ales. Chill haze is allowable at cold temperatures.

f) *Belgian-Style Dark Strong Ale*—Belgian dark strong ales are amber to dark brown in color. Often, though not always, brewed with dark Belgian “candy” sugar, these beers can be well attenuated, though medium to full bodied. The perception of hop bitterness is low to medium, with hop flavor and aroma also in this range. Fruity complexity along with the soft flavors of roasted malts add distinct character. The alcohol strength of these beers can often be deceiving to the senses. The intensity of malt character can be rich, creamy, and sweet with intensities ranging from medium to high. Very little or no diacetyl is perceived. Herbs and spices are sometimes used to delicately flavor these strong ales. Chill haze is allowable at cold temperatures.

g) *Belgian-Style White (or Wit)*—Belgian white ales are brewed using unmalted wheat and malted barley and are spiced with coriander and orange peel. These very pale beers are often bottle conditioned and served cloudy. The style is further characterized by the use of noble-type hops to achieve a low to medium bitterness and hop flavor. This beer has low to medium body, no diacetyl, and a low to medium fruity-ester level. Mild acidity is appropriate.

h) *French-Style Bière de Garde*—Beers in this category are golden to deep copper or light brown in color. They are light to medium in body. This style of beer is characterized by a toasted malt aroma, slight malt sweetness in flavor, and medium hop bitterness. Noble-type hop aromas and flavors should be low to medium. Fruity esters can be light to medium in intensity. Flavor of alcohol is evident. Earthy, cellarlike, musty aromas are okay. Diacetyl should not be perceived but chill haze is okay. Often bottle conditioned with some yeast character.

3. Belgian-Style Lambic

a) *Belgian-Style Lambic*—Unblended, naturally and spontaneously fermented lambic is intensely estery, sour, and often, but not necessarily, acetic flavored. Low in carbon dioxide, these hazy beers are brewed with unmalted wheat and malted barley. Sweet malt characters are not perceived. They are very low in hop bitterness. Cloudiness is acceptable. These beers are quite dry and light bodied. Versions of this beer made outside of the Brussels area of Belgium cannot be true lambics. These versions are said to be “lambic-style” and may be made to resemble many of the beers of true origin.

b) *Belgian-Style Gueuze Lambic*—Old lambic is blended with newly fermenting young lambic to create this special style of lambic. Gueuze is always refermented in the bottle. These unflavored blended and secondary fermented lambic beers may be very dry or mildly sweet and are characterized by intense fruity-estery, sour, and acidic aromas and flavors. These pale beers are brewed with unmalted wheat, malted barley, and stale, aged hops. Sweet malt characters are not perceived. They are very low in hop bitterness. Diacetyl should be absent. Cloudiness is acceptable. These beers are quite dry and light bodied. Versions of this beer made outside of the Brussels area of Belgium cannot be true lambics. These versions are said to be “lambic-style” and may be made to resemble many of the beers of true origin.

c) *Belgian-Style Fruit Lambic*—These beers, also known by the names framboise, kriek, peche, cassis, etc., are characterized by fruit flavors and aromas. The color reflects the choice of fruit. Sourness is an important part of the flavor profile, though sweetness may compromise the intensity. These flavored lambic beers may be very dry or mildly sweet and range from a

dry to a full-bodied mouthfeel. Versions of this beer made outside of the Brussels area of Belgium cannot be true lambics. These versions are said to be "lambic-style" and may be made to resemble many of the beers of true origin.

4. Mild and Brown Ale

- a) *English-Style Pale Mild Ale*—English pale mild ales range from light amber to light brown in color. Malty sweetness dominates the flavor profile with little hop bitterness or flavor. Hop aroma can be light. Very low diacetyl flavors may be appropriate in this low-alcohol beer. Fruity-ester level is very low. Chill haze is allowable at cold temperatures.
- b) *English-Style Dark Mild Ale*—English dark mild ales range from deep copper to dark brown (often with a red tint) in color. Malty sweetness and caramel are part of the flavor and aroma profile while, licorice and roast malt tones may sometimes contribute to the flavor and aroma profile. These beers have very little hop flavor or aroma. Very low diacetyl flavors may be appropriate in this low-alcohol beer. Fruity-ester level is very low.
- c) *English-Style Brown Ale*—English brown ales range from deep copper to brown in color. They have a medium body and a dry to sweet maltiness with very little hop flavor or aroma. Fruity-ester flavors are appropriate. Diacetyl should be very low, if evident. Chill haze is allowable at cold temperatures.
- d) *American-Style Brown Ale*—American brown ales range from deep copper to brown in color. Roasted malt caramel-like and chocolaty characters should be of medium intensity in both flavor and aroma. American brown ales have an evident hop aroma, medium to high hop bitterness, and a medium body. Estery and fruity-ester characters should be subdued; diacetyl should not be perceived. Chill haze is allowable at cold temperatures.
- e) *Irish-Style Red Ale*—Irish-style red ales range from light red-amber-copper to light brown in color. These ales have a medium hop bitterness and flavor. They often don't have hop aroma. Irish-style red ales have low to medium candy-like caramel sweetness and a medium body. The style may have low levels of fruity-ester flavor and aroma. Diacetyl should be absent. Chill haze is allowable at cold temperatures. Slight yeast haze is acceptable for bottle-conditioned products.

5. English-Style Pale Ale

- a) *Classic English Pale Ale*—Classic English-style pale ales are golden to copper colored and display English-variety hop character. Medium to high hop bitterness, flavor, and aroma should be evident. This medium-bodied pale ale has low to medium malt flavor and aroma. Low caramel character is allowable. Fruity-ester flavors and aromas are moderate to strong. Chill haze is allowable at cold temperatures. Diacetyl (butterscotch character) should be present at very low levels or not perceived.
- b) *India Pale Ale*—India pale ales are characterized by intense hop bitterness with a high alcohol content. Hops from a variety of origins are used to contribute to a high hopping rate. The use of water with high mineral content results in a crisp, dry beer. This pale gold to deep copper-colored ale has a full, flowery hop aroma and may have a strong hop flavor (in addition to the hop bitterness). India pale ales possess medium maltiness and body. Fruity-ester flavors and aromas are moderate to very strong. Chill haze is allowable at cold temperatures.

6. American-Style Ale

- a) *American-Style Pale Ale*—American pale ales range from golden to light copper in color. The style is characterized by American-variety hops used to produce high hop bitterness, flavor and aroma. American pale ales have medium body and low to medium maltiness. Low caramel character is allowable. Fruity-ester flavor and aroma should be moderate to strong. Diacetyl should be absent or present at very low levels. Chill haze is allowable at cold temperatures.
- b) *American-Style Amber/Red Ale*—American amber/red ales range from light copper to light brown in color. They are characterized by American-variety hops used to produce high hop bitterness, flavor, and aroma. Amber ales have medium-high to high maltiness with medium to low caramel character. They should have medium to medium-high body. The style may have low levels of fruity-ester flavor and aroma. Diacetyl can be either absent or barely perceived at very low levels. Chill haze is allowable at cold temperatures. Slight yeast haze is acceptable for bottle-conditioned products.
- c) *American-Style Wheat*—This beer can be made using either an ale or lager yeast. It can be brewed with 30 to 75 percent wheat, and hop rates may be low to medium. Fruity-ester aroma and flavor are typical but at low levels; however, phenolic, clove-like characteristics should not be perceived. Color is usually straw to light amber, and the body should be light to medium in character. Diacetyl should not be perceived. Yeast flavor and aroma should be low to medium but not overpowering the balance and character of malt and hops.

7. English-Style Bitter

- a) *English-Style Ordinary Bitter*—Ordinary bitter is gold to copper colored with medium bitterness, light to medium body, and low to medium residual malt sweetness. Hop flavor and aroma character may be evident at the brewer's discretion. Mild carbonation traditionally characterizes draft-cask versions, but in bottled versions, a slight increase in carbon dioxide content is acceptable. Fruity-ester character and very low diacetyl (butterscotch) character are acceptable in aroma and flavor, but should be minimized in this form of bitter. Chill haze is allowable at cold temperatures.
- b) *English-Style (Special) Best Bitter*—Special bitter is more robust than ordinary bitter. It has medium body and medium residual malt sweetness. It is gold to copper colored with medium bitterness. Hop flavor and aroma character may be evident at the brewer's discretion. Mild carbonation traditionally characterizes draft-cask versions, but in bottled versions, a slight increase in carbon dioxide content is acceptable. Fruity-ester character and very low diacetyl (butterscotch) character are acceptable in aroma and flavor. Chill haze is allowable at cold temperatures.
- c) *English-Style (Extra Special) Strong Bitter*—Extra special bitter possesses medium to strong hop qualities in aroma, flavor, and bitterness. The residual malt sweetness of this richly flavored, full-bodied bitter is more pronounced than in other bitters. It is gold to copper colored with medium bitterness. Mild carbonation traditionally characterizes draft-cask versions, but in bottled versions, a slight increase in carbon dioxide content is acceptable. Fruity-ester character and very low diacetyl (butterscotch) character are acceptable in aroma and flavor. Chill haze is allowable at cold temperatures.

8. Scottish-Style Ale

- a) *Scottish-Style Light Ale*—Scottish light ales are light bodied. Little bitterness is perceived and hop flavor or aroma should not be perceived. Despite its lightness, Scottish light ale will have a degree of malty, caramel-like, soft and chewy character. Yeast characters such as diacetyl (butterscotch) and sulfuriness are acceptable at very low levels. The color will range from golden amber to deep brown and may sometimes possess a faint smoky character. Bottled versions of this traditional draft beer may contain higher amounts of carbon dioxide than is typical for mildly carbonated draft versions. Chill haze is acceptable at low temperatures.
- b) *Scottish-Style Heavy Ale*—Scottish heavy ale is moderate in strength and dominated by a smooth, sweet maltiness balanced with low, but perceptible, hop bitterness. Hop flavor or aroma should not be perceived. Scottish heavy ale will have a medium degree of malty, caramel-like, soft and chewy character in flavor and mouthfeel. It has medium body, and fruity esters are very low, if evident. Yeast characters such as diacetyl (butterscotch) and sulfuriness are acceptable at very low levels. The color will range from golden amber to deep brown and may sometimes possess a faint smoky character. Bottled versions of this traditional draft beer may contain higher amounts of carbon dioxide than is typical for draft versions. Chill haze is acceptable at low temperatures.
- c) *Scottish-Style Export Ale*—The overriding character of Scottish export ale is sweet, caramel-like, and malty. Its bitterness is perceived as low to medium. Hop flavor or aroma should not be perceived. It has medium body. Fruity-ester character may be apparent. Yeast characters such as diacetyl (butterscotch) and sulfuriness are acceptable at very low levels. The color will range from golden amber to deep brown and may sometimes possess a faint smoky character. Bottled versions of this traditional draft beer may contain higher amounts of carbon dioxide than is typical for mildly carbonated draft versions. Chill haze is acceptable at low temperatures.

9. Porter

- a) *Brown Porter*—Brown porters are mid to dark brown (may have red tint) in color. No roast barley or strong burnt malt character should be perceived. Low to medium malt sweetness is acceptable along with medium hop bitterness. This is a light- to medium-bodied beer. Fruity esters are acceptable. Hop flavor and aroma may vary from being negligible to medium in character.
- b) *Robust Porter*—Robust porters are black in color and have a roast malt flavor but no roast barley flavor. These porters have a sharp bitterness of black malt without a highly burnt/charcoal flavor. Robust porters range from medium to full in body and have a malty sweetness. Hop bitterness is medium to high, with hop aroma and flavor ranging from negligible to medium. Fruity esters should be evident, balanced with roast malt and hop bitterness.

10. English- and Scottish-Style Strong Ale

- a) *English Old Ale/English Strong Ale*—Amber to mid-range brown in color, English strong ales are medium to full bodied with a malty sweetness. Hop aroma should be minimal and flavor can vary from none to medium in character intensity. Fruity-ester flavors and aromas can contribute to the character of this ale. Bitterness should be minimal but evident and balanced with malt and/or caramellike sweetness. Alcohol types can be varied and complex. A distinctive quality of these ales is that they all undergo a prolonged aging process (often for years) on their yeast either in bulk storage or through conditioning in the bottle, which contributes to a rich, often sweet and complex estery character. This process often softens the perceived bitterness. Chill haze is acceptable at low temperatures. (This style may often be split into two categories, strong and very strong.)
- b) *Strong Scotch Ale*—Scotch ales are overwhelmingly malty and full bodied. Perception of hop bitterness is very low. Hop flavor and aroma are very low or nonexistent. Color ranges from deep copper to brown. The clean alcohol flavor balances the rich and dominant sweet maltiness in flavor and aroma. A caramel character is often a part of the profile. Dark roasted malt flavors and aroma may be evident at low levels. Fruity esters are generally at medium aromatic and flavor levels. A peaty/smoky character may be evident at low levels. Low diacetyl levels are acceptable. Chill haze is allowable at cold temperatures.

11. Stout

- a) *Classic Irish-Style Dry Stout*—Dry stouts have an initial malt and caramel flavor profile with a distinctive dry-roasted bitterness in the finish. Dry stouts achieve a dry-roasted character through the use of roasted barley. Some slight acidity may be perceived but is not necessary. Hop aroma and flavor should not be perceived. Dry stouts have medium body. Fruity esters are minimal and overshadowed by malt, high hop bitterness, and roasted barley character. Diacetyl (butterscotch) should be very low or not perceived. Head retention and rich character should be part of its visual character.
- b) *Foreign-Style Stout*—As with classic dry stouts, foreign-style stouts have an initial malt sweetness and caramel flavor with a distinctive dry-roasted bitterness in the finish. Some slight acidity is permissible and a medium- to full-bodied mouthfeel is appropriate. Bitterness may be high but the perception is often compromised by malt sweetness. Hop aroma and flavor should not be perceived. The perception of fruity esters is low. Diacetyl (butterscotch) should be negligible or not perceived. Head retention is excellent.
- c) *Sweet Stout*—Sweet stouts, also referred to as cream stouts, have less roasted bitter flavor and a full-bodied mouthfeel. The style can be given more body with milk sugar (lactose) before bottling. Malt sweetness, chocolate, and caramel flavor should dominate the flavor profile. Hops should balance sweetness without contributing apparent flavor or aroma.
- d) *Oatmeal Stout*—Oatmeal stouts include oatmeal in their grist, resulting in a pleasant, full flavor and a smooth profile that is rich without being grainy. A roasted malt character which is caramellike and chocolatelike should be evident — smooth and not bitter. Bitterness is moderate, not high. Hop flavor and aroma are optional but should not overpower the overall balance if present. This is a medium- to full-bodied beer, with minimal fruity esters.
- e) *Imperial Stout*—Dark copper to very black, imperial stouts typically have a high alcohol content. The extremely rich malty flavor and aroma are balanced with assertive hopping and fruity-ester characteristics. Perceived bitterness can be moderate and balanced with the malt character or very high in the darker versions. Roasted malt astringency and bitterness can be moderately perceived but should not overwhelm the overall character. Hop aroma can be subtle to overwhelmingly floral. Diacetyl (butterscotch) levels should be very low.

12. Bock

- a) *Traditional German-Style Bock*—Traditional bocks are made with all malt and are strong, malty, medium- to full-bodied, bottom-fermented beers with moderate hop bitterness that should increase proportionately with the starting gravity. Hop flavor should be low and hop aroma should be very low. Bocks can range in color from deep copper to dark brown. Fruity esters may be perceived at low levels.
- b) *German-Style Helles Bock/Maibock*—The German word helles means light colored, and as such, a helles bock is light straw to deep golden in color. Maibocks are also light-colored bocks. The malty character should come through in the aroma and flavor. Body is medium to full. Hop bitterness should be low, while noble-type hop aroma and flavor may be at low to medium levels. Bitterness increases with gravity. Fruity esters should be minimal. Diacetyl levels should be very low. Chill haze should not be perceived.
- c) *German-Style Doppelbock*—Malty sweetness is dominant but should not be cloying. Doppelbocks are full bodied and deep amber to dark brown in color. Astringency from roast malts is absent. Alcoholic strength is high, and hop rates increase with gravity. Hop bitterness and flavor should be low and hop aroma absent. Fruity esters are commonly perceived but at low to moderate levels.
- d) *German-Style Eisbock*—A stronger version of doppelbock. Malt character can be very sweet. The body is very full and deep copper to almost black in color. Alcoholic strength is very high. Hop bitterness is subdued. Hop flavor and aroma are absent. Fruity esters may be evident but not overpowering. Typically these beers are brewed by freezing a doppelbock and removing resulting ice to increase alcohol content.

13. German-Style Dark Lager

- a) *Munich-Style Dunkel*—These light brown to dark brown beers have a pronounced malty aroma and flavor that dominates over the clean, crisp, moderate hop bitterness. A classic Münchner dunkel should have a chocolatelike, roast malt, breadlike or biscuitlike aroma that comes from the use of Munich dark malt. Chocolate or roast malts can be used, but the percentage used should be minimal. Noble-type hop flavor and aroma should be low but perceptible. Diacetyl should not be perceived. Fruity esters and chill haze should not be perceived.
- b) *Schwarzbier*—These very dark brown to almost black beers have a roasted malt character without the associated bitterness. Malt flavor and aroma are low in sweetness. Hop bitterness is low to medium in character. Noble-type hop flavor and aroma should be low but perceptible. There should be no fruity esters. Diacetyl is acceptable at very low levels.

14. German-Style Light Lager

- a) *Munich-Style Helles*—This beer has a relatively low bitterness. It is a medium-bodied, malt-emphasized beer; however, certain versions can approach a balance of hop character and maltiness. There should not be any caramel character. Color is light straw to golden. Fruity esters and diacetyl should not be perceived.
- b) *Dortmunder/European-Style Export*—Dortmunder has medium hop bitterness. Hop flavor and aroma are perceptible but low. Sweet malt flavor can be low and should not be caramellike. The color of this style is straw to deep golden. The body will be medium bodied. Fruity esters, chill haze, and diacetyl should not be perceived.

15. Classic Pilsener

- a) *German-Style Pilsener*—A classic German Pilsener is very light straw or golden in color and well hopped. Hop bitterness is high. Noble-type hop aroma and flavor are moderate and

quite obvious. It is a well-attenuated, medium-bodied beer, but a malty residual sweetness can be perceived in aroma and flavor. Fruity esters and diacetyl should not be perceived. There should be no chill haze. Its head should be dense and rich.

b) Bohemian-Style Pilsener—Bohemian Pilseners are slightly more medium bodied, and their color can be as dark as light amber. This style balances moderate bitterness and noble-type hop aroma and flavor with a malty, slightly sweet, medium body. Diacetyl may be perceived in very low amounts. There should be no chill haze. Its head should be dense and rich.

c) American-Style Pilsener—This classic and unique pre-Prohibition American-style Pilsener is straw to deep gold in color. Hop bitterness, flavor and aroma are medium to high, and use of noble-type hops for flavor and aroma is preferred. Up to 25 percent corn in the grist should be used, and some slight sweetness and flavor of corn are expected. A low level of DMS is acceptable. Malt flavor and aroma are medium. This is a medium-bodied beer. Fruity esters and citrusy flavors or aromas should not be perceived. Slight diacetyl is acceptable. There should be no chill haze.

16. American Lager

a) American Lager—Light in body and color, American lagers are very clean and crisp and aggressively carbonated. Malt sweetness is absent. Corn, rice, or other grain or sugar adjuncts are often used. Hop aroma is absent. Hop bitterness is slight, and hop flavor is mild or negligible. Chill haze, fruity esters, and diacetyl should be absent.

b) American-Style Light Lager—According to the United States' FDA regulations, when used in reference to caloric content, "light" beers must have at least 25 percent fewer calories than the "regular" version of that beer. Such beers must have certain analysis data printed on the package label. These beers are extremely light colored, light in body, and high in carbonation. Flavor is mild and bitterness is very low. Chill haze, fruity esters, and diacetyl should be absent.

c) American Lager/Ale or Cream Ale—A mild, pale, light-bodied ale, made using a warm fermentation (top or bottom) and cold lagering or by blending top- and bottom-fermented beers. Hop bitterness and flavor range from very low to low. Hop aroma is often absent. Sometimes referred to as cream ales, these beers are crisp and refreshing. A fruity or estery aroma may be perceived. Diacetyl and chill haze should not be perceived.

d) American-Style Premium Lager—This style has low malt (and adjunct) sweetness, is medium bodied, and should contain no or a low percentage (less than 25%) of adjuncts. Color may be light straw to golden. Alcohol content and bitterness may also be greater. Hop aroma and flavor is low or negligible. Chill haze, fruity esters, and diacetyl should be absent.

e) American Dark Lager—This beer's malt aroma and flavor are low but notable. Its color ranges from a very deep copper to a deep, dark brown. Its body is light. Non-malt adjuncts are often used, and hop rates are low. Hop bitterness, flavor, and aroma are low. Carbonation is high. Fruity esters, diacetyl, and chill haze should not be perceived.

17. Vienna/Märzen/Oktobertfest

a) Vienna—Beers in this category are reddish brown or copper colored. They are medium in body. The beer is characterized by malty aroma and slight malt sweetness. The malt aroma and flavor may have a dominant toasted character. Hop bitterness is clean and crisp. Noble-type hop aromas and flavors should be low or mild. Fruity esters, diacetyl, and chill haze should not be perceived.

b) German-Style Märzen/Oktobertfest—Märzens are characterized by a medium body and broad range of color. Oktoberfests can range from golden to reddish brown. Sweet maltiness should dominate slightly over a clean, hop bitterness. Malt character should be toasted rather than strongly caramel (though a low level of light caramel character is acceptable). Breadlike or biscuit-like malt character is acceptable in aroma and flavor. Hop aroma and flavor should be low but notable. Fruity esters should not be perceived. Diacetyl and chill haze should not be perceived.

18. German-Style Ale

a) German-Style Kölsch/Köln-Style Kölsch—Kölsch is warm fermented and aged at cold temperatures (German ale or alt-style beer). Kölsch is characterized by a golden color and a slightly dry, subtly sweet and sometimes, but not always, wine-like (chardonnay-like) palate. Caramel character should not be evident. The body is light. This beer has low hop flavor and aroma with medium bitterness. Wheat can be used in brewing this beer that is fermented using ale yeast, though lager yeast is sometimes used in the bottle or final cold conditioning process. Fruity esters should be minimally perceived, if at all. Chill haze should be absent or minimal.

b) German-Style Brown Ale/Düsseldorf-Style Altbier—Copper to brown in color, this German ale may be highly hopped (although the 25 to 35 IBU range is more normal for the majority of altbiers from Düsseldorf) and has a medium body and malty flavor. A variety of malts, including wheat, may be used. Hop character may be low to high in the flavor and aroma. The overall impression is clean, crisp, and flavorful. Fruity esters should be low. No diacetyl or chill haze should be perceived.

19. German-Style Wheat Beer

a) Berliner-Style Weisse—This is very pale in color and the lightest of all the German wheat beers. The unique combination of a yeast and lactic acid bacteria fermentation yields a beer that is acidic, highly attenuated, and very light bodied. The carbonation of a Berliner weisse is high, and hop rates are very low. Hop character should not be perceived. Fruity esters will be evident. No diacetyl should be perceived.

b) German-Style Hefeweizen/Hefeweissbier—The aroma and flavor of a weissbier with yeast is decidedly fruity and phenolic. The phenolic characteristics are often described as clove- or nutmeglike and can be smoky or even vanillalike. Bananalike esters are often present. These beers are made with at least 50 percent malted wheat, and hop rates are quite low. Hop flavor and aroma are absent. Weissbier is well attenuated and very highly carbonated, yet its relatively high starting gravity and alcohol content make it a medium- to full-bodied beer. The color is very pale to a pale amber. Because yeast is present, the beer will have yeast flavor and a characteristically fuller mouthfeel. If this is served with yeast, the beer may be appropriately very cloudy. No diacetyl should be perceived.

c) German-Style Dunkel Weizen/Dunkel Weissbier—This beer style is characterized by a distinct sweet maltiness and a chocolatelike character from roasted malt. Estery and phenolic elements of this weissbier still prevail. Color can range from copper-brown to dark brown. Dunkel weissbier is well attenuated and very highly carbonated, and hop bitterness is low. Hop flavor and aroma are absent. Usually dark barley malts are used in conjunction with dark cara or color malts, and the percentage of wheat malt is at least 50 percent. If this is served with yeast, the beer may be appropriately very cloudy. No diacetyl should be perceived.

d) German-Style Weizenbock/Weissbock—This style can be either pale or dark (golden to dark brown in color) and has a high starting gravity and alcohol content. The malty sweetness of a weizenbock is balanced with a clovelike phenolic and fruity-estery banana element to produce a well-rounded aroma and flavor. As is true with all German wheat beers, hop bitterness is low and carbonation is high. Hop flavor and aroma are absent. It has a medium to full body. If dark, a mild roast malt character should emerge in flavor and to a lesser degree in the aroma. If this is served with yeast the beer may be appropriately very cloudy. No diacetyl should be perceived.

20. Smoked Beer

a) Bamberg-Style Rauchbier—Rauchbier should have smoky characters prevalent in the aroma and flavor. The beer is generally toasted malty sweet and full bodied with low to medium hop bitterness. Noble-type hop flavor is low but perceptible. Low noble-type hop aroma is optional. The aroma should strike a balance between malt, hop, and smoke. Fruity esters, diacetyl, and chill haze should not be perceived.

b) Classic-Style Smoked Beer—Any classic style of beer can be smoked; the goal is to reach a balance between the style's character and the smoky properties. Brewer should specify classic style.

c) Other Smoked Beer—Any beer to which smoke flavors have been added.

21. Fruit and Vegetable Beer

a) *Fruit and Vegetable Beer*—Fruit and vegetable beers are any beers using fruit or fruit extracts or vegetables as an adjunct in either primary or secondary fermentation, providing obvious (ranging from subtle to intense), yet harmonious, fruit qualities. Fruit or vegetable qualities should not be overpowered by hop character. If a fruit or vegetable (such as juniper berry or chili pepper) has an herbal or spice quality, it is more appropriate to consider it in the herb and spice beers category. Acidic bacterial fermentation characters would not be appropriate for this style.

b) *Classic-Style Fruit and Vegetable Beer*—Any classic-style beer using fruits or vegetables as part of the flavor profile and providing obvious, yet harmonious, fruit or vegetable qualities. Brewer should specify classic style.

22. Herb and Spice Beer

a) *Herb and Spice Beer*—Herb beers use herbs or spices (derived from roots, seeds, fruits, vegetable, flowers, etc.) other than or in addition to hops to create a distinct (ranging from subtle to intense) character, though individual characters of herbs and/or spices used may not always be identifiable. Underhopping often, but not always, allows the spice or herb to contribute to the flavor profile.

b) *Classic-Style Herb and Spice Beer*—Any classic-style beer using herbs or spices as part of the flavor profile and providing obvious, yet harmonious, herb and spice flavor. Brewer should specify classic style.

23. Specialty and Experimental Beer

a) *Specialty and Experimental Beer*—These beers are brewed using unusual fermentables other than, or in addition to, malted barley. The distinctive characters of these special ingredients should be evident either in the aroma or flavor of the beer, but not necessarily in overpowering quantities. For example, honey, maple syrup or potatoes would be considered unusual. Rice, corn, or wheat are not considered unusual.

b) *Classic-Style Specialty Beer*—Any classic-style beer to which special ingredients have been added or a special process has been. Brewer should specify classic style.

24. California Common Beer

a) *California Common Beer*—Light amber to copper. This beer has a medium body, toasted or caramellike maltiness in aroma and flavor, and medium to high hop bitterness. Hop flavor is medium to high. Aroma is medium, and fruitiness and esters are low. Low diacetyl is OK. Uses lager yeast. This beer is fermented at warm temperatures but aged at cold temperatures.

MEAD

Mead is produced by the fermentation of honey, water, yeast and optional ingredients such as fruit, herbs and/or spices. The final gravity roughly determines whether the mead is: dry—less than 1.010, medium—1.010 to 1.025 or sweet—1.025 and higher. Final gravity is only a guide. The final flavor character of the product should be used to determine the perceived level of sweetness. The sweetness level must be designated on the entry form. Wine, champagne, sherry, mead, ale or lager yeast may be used. In all categories the honey character must be apparent in both the aroma and flavor, and an overall balance between sweetness, acidity and ingredients should be achieved. Honey should make up greater than 50 percent of fermentable ingredients. Meads should be free of harsh or stale characteristics.

25. Traditional Mead and Braggot

a) *Sparkling Traditional Mead*—Effervescent. Dry, medium or sweet (designate on entry form). Light to medium body. No flavors other than honey. Honey character in aroma and flavor. Low to medium fruity acidity. Color depends on honey type.

b) *Still Traditional Mead*—Not effervescent. Dry, medium sweet or very sweet (designate on entry form). Light to full body. Honey character in aroma and flavor. Low to medium fruity acidity. Color depends on honey type.

c) *Sparkling Braggot*—Effervescent. Made with malt and honey. Dry, medium or sweet (designate on entry form). Light to medium body. Honey flavors predominate.

d) *Still Braggot*—Not effervescent. Made with malt. Dry, medium or sweet (designate on entry form). Light to medium body. Honey flavors predominate.

26. Fruit and Vegetable Mead

Melomel is made with any fruit or vegetable except apples or grapes. Cyser is made with apples and/or apple juice. Pyment is made with grapes. Ingredients should be expressed in aroma and flavor. Color should represent ingredients. Honey character apparent in aroma and flavor. Absence of harsh or stale character. Can be dry, medium or sweet, which must be designated on entry form.

a) *Sparkling Melomel*—Effervescent. Light to medium body.

b) *Still Melomel*—Not effervescent. Light to full body.

c) *Sparkling Cyser*—Effervescent. Light to medium body.

d) *Still Cyser*—Not effervescent. Light to full body.

e) *Sparkling Pyment*—Effervescent. Light to medium body.

f) *Still Pyment*—Not effervescent. Light to full body.

27. Herb and Spice Mead

Metheglin is made with any herbs or spices. Hippocras is made with spices and grapes (spiced pyment). Ingredients should be expressed in aroma and flavor. Color should represent ingredients. Honey character must be apparent in aroma and flavor. Absence of harsh or stale character. Can be dry, medium or sweet, which must be designated on entry form.

a) *Sparkling Metheglin*—Effervescent. Light to medium body.

b) *Still Metheglin*—Not effervescent. Light to full body.

c) *Sparkling Hippocras*—Effervescent. Light to medium body.

d) *Still Hippocras*—Not effervescent. Light to full body.

CIDER

Ciders are produced by the fermentation of apple juices and optional ingredients such as fruits and spices. Wine, champagne, ale, lager or wild yeasts may be used.

28. Cider

Cider made with honey as an adjunct (cyser) should be entered in category 26: Fruit and Vegetable Mead.

a) *Still*—Not effervescent. Less than 5.5 percent alcohol by weight (7 percent by volume). Can be dry or sweet. Pale yellow color, must be clear or brilliant. Apple aroma. Light-bodied and crisp apple flavor. Sugar adjuncts may be used.

b) *Sparkling*—Effervescent but not foamy. May be force carbonated. No head. Less than 6.3 percent alcohol by weight (8 percent by volume). Dry or sweet. Pale yellow color, must be clear and brilliant. Light to medium body, crisp apple taste. Sugar adjuncts may be used.

c) *New England-Style*—Still or sparkling dry cider. Carbonation must be natural. Between 6.3 and 11 percent alcohol by weight (8 and 14 percent by volume). Pale to medium yellow color. Pronounced apple aroma. Medium to full body. Balanced by drying tannins but never hot because of excess alcohol. Adjuncts include white and brown sugars, molasses or raisins. Wild or wine yeasts only.

d) *Specialty Cider*—Any and all adjuncts and yeasts may be used. Alcohol content must be below 11 percent alcohol by weight (14 percent by volume). At least 75 percent apple juice must be used in the must.

PART VII

Entry Form

Please read the instructions in PART II of the rules and regulations brochure

Section A: Brewer Information

1. Name _____
2. Additional Brewer(s) _____
3. Address _____
4. City _____ State/Province _____ Zip/Postal Code _____
5. Country _____ Phone (H) (_____) (W) (_____) _____
6. E-mail _____
7. Are you a member of an AHA Registered Homebrew Club? ☐ Yes ☐ No
If "yes," what is the name? (Please spell out full name. Do not abbreviate.) _____
8. AHA Membership Number _____
9. New Member ☐ Yes (separate \$33 check enclosed) ☐ Non-Member
10. Entry Fees Enclosed. AHA members pay \$8 per entry : _____ no. of entries x \$8 = \$ _____ total
Non-members pay \$12 per entry: _____ no. of entries x \$12 = \$ _____ total
Canadian members use current exchange rate or 1.4 (i.e., \$8 x 1.4 or \$12 x 1.4).

11. This is the _____ time I have entered the AHA National Homebrew Competition

Section B: Entry Information

12. Category and Subcategory (Print full names) _____
13. Category (1-28) _____
14. Subcategory (a-h) _____
15. Name of Brew (optional) _____
16. For Mead and Cider (check one): ☐ Dry ☐ Medium ☐ Sweet

17. SPECIAL INGREDIENTS:

If you have entered in any of the following categories 3c, 20b, 20c 21, 22, 23, 25, 26, 27, 28c, 28d refer to section I of the Rules and Regulations for instructions on filling out this table. The judges will use this important information for evaluating entries in these categories. Leave this table blank if you have not entered the above categories.

Classic Style (if applicable) _____

Special Ingredient(s) _____

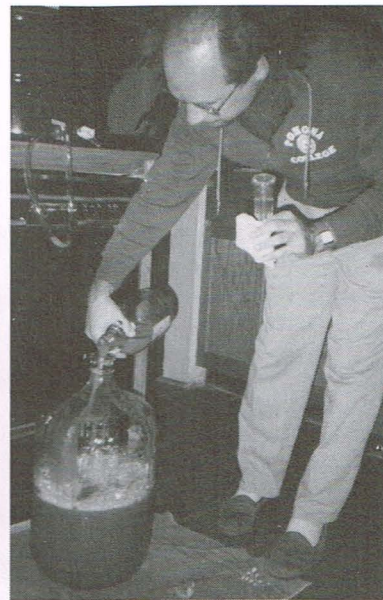
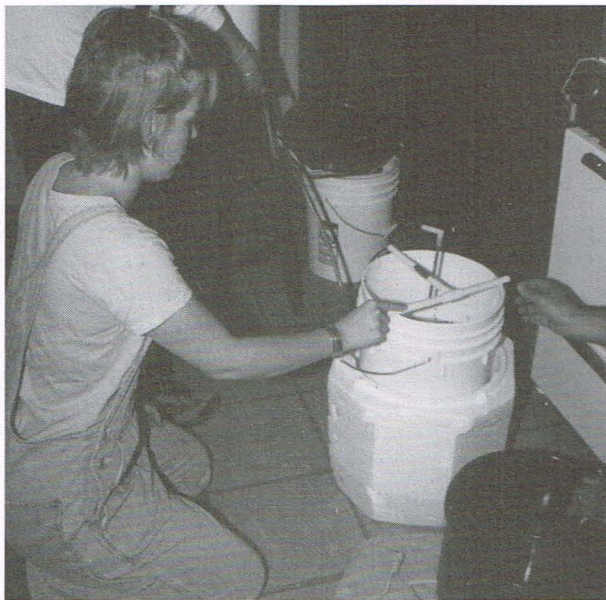
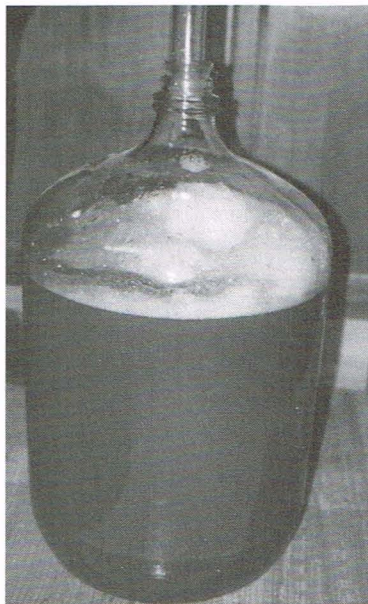
1999 STYLE GUIDELINES CHART

	OG (°P) Original Gravity (Balling/Plato)	FG (°P) Final Gravity (Balling/Plato)	Percent Alc./Wgt. (Alc./Vol.)	Int'l Bittering Units	Color SRM (EBC)
Ale					
1. Barley Wine					
a) English-Style Barley Wine	1.085-120 (21- 30.0)	1.024-32 (6-8)	6.7-9.6 (8.5-12.2)	50-100	14-22 (28-43)
b) American-Style Barley Wine	1.085-120 (21- 30.0)	1.024-32 (6-8)	6.7-9.6 (8.5-12.2)	50-100	14-22 (28-43)
2. Belgian- and French-Style Ale					
a) Belgian-Style Flanders Brown/Oud Bruin	1.044-56 (11.0-14.0)	1.008-16 (2-4)	3.8-4.1 (4.8-5.2)	15-25	12-18 (24-35)
b) Belgian-Style Dubbel	1.050-70 (12.5-17.5)	1.012-16 (3-4)	4.7-5.9 (6.0-7.5)	18-25	14-18 (28-36)
c) Belgian-Style Tripel	1.060-96 (15.0-24.0)	1.016-24 (4-6)	5.5-7.9 (7.0-10.1)	20-25	4-6 (7-11)
d) Belgian-Style Pale Ale	1.044-54 (11.0-13.5)	1.008-14 (2-4)	3.2-4.9 (4.1-6.2)	20-30	4-12 (7-24)
e) Belgian-Style Pale Strong Ale	1.064-96 (16.0-24.0)	1.012-24 (3-6)	5.5-8.8 (7.0-11.0)	20-50	3.5-7 (7-14)
f) Belgian-Style Dark Strong Ale	1.064-96 (16.0-24.0)	1.012-24 (3-6)	5.5-8.8 (7.0-11.0)	20-50	7-20 (14-40)
g) Belgian-Style White (Wit)	1.044-50 (11.0-12.5)	1.006-10 (2-3)	3.8-4.1 (4.8-5.2)	15-25	2-4 (4-8)
h) French-Style Bière de Garde	1.060-80 (15.0-20.0)	1.012-16 (3-4)	3.5-6.3 (4.5-8.0)	25-30	8-12 (16-24)
3. Belgian-Style Lambic					
a) Belgian-Style Lambic	1.044-56 (11.0-14.0)	1.000-10 (0-3)	4.0-5.0 (5.1-6.4)	11-23	6-13 (12-26)
b) Belgian-Style Gueuze Lambic	1.044-56 (11.0-14.0)	1.000-10 (0-3)	4.0-5.0 (5.1-6.4)	11-23	6-13 (12-26)
c) Belgian-Style Fruit Lambic	1.040-72 (10.0-18.0)	1.008-16 (2-4)	4.0-5.5 (5.1-7.0)	15-21	n/a
4. Mild and Brown Ale					
a) English-Style Light Mild	1.030-38 (7.5-9.5)	1.004-8 (1-2)	2.7-3.2 (3.4-4.1)	10-24	8-17 (16-33)
b) English-Style Dark Mild	1.030-38 (7.5-9.5)	1.004-8 (1-2)	2.7-3.2 (3.4-4.1)	10-24	17-34 (33-67)
c) English-Style Brown	1.040-50 (10.0-12.5)	1.008-14 (2-4)	3.3-4.7 (4.2-6.0)	15-25	15-22 (30-43)
d) American-Style Brown	1.040-55 (10.0-13.8)	1.010-18 (3-5)	3.3-4.7 (4.2-6.0)	25-60	15-22 (30-43)
e) Irish-Style Red	1.040-48 (10.0-12.0)	1.010-14 (2.5-3.5)	3.2-3.6 (4.0-4.5)	22-28	11-18 (22-36)
5. English-Style Pale Ale					
a) Classic English-Style Pale Ale	1.044-56 (11.0-14.0)	1.008-16 (2-4)	3.5-4.2 (4.5-5.4)	20-40	5-14 (10-28)
b) India Pale Ale	1.050-70 (12.5-17.5)	1.012-18 (3-5)	4.0-6.0 (5.1-7.6)	40-60	6-14 (12-28)
6. American-Style Ale					
a) American-Style Pale Ale	1.044-56 (11.0-14.0)	1.008-16 (2-4)	3.5-4.3 (4.5-5.5)	20-40	4-11 (8-22)
b) American-Style Amber/Red Ale	1.048-58 (12.0-14.5)	1.012-18 (3-4.5)	3.5-4.8 (4.5-6.0)	30-40	11-18 (22-35)
c) American-Style Wheat	1.030-50 (7.5-12.5)	1.004-18 (1-5)	2.8-3.6 (3.6-4.6)	12-17	2-8 (4-16)
7. English-Style Bitter					
a) English-Style Ordinary Bitter	1.033-38 (8.2-9.5)	1.006-12 (2-3)	2.4-3.0 (3.1-3.8)	20-35	8-12 (16-24)
b) English-Style Best (Special) Bitter	1.038-45 (9.5-11.3)	1.006-12 (2-3)	3.3-3.8 (4.2-4.8)	28-46	12-14 (24-28)
c) English-Style Strong (Extra Special) Bitter	1.046-60 (11.5-15.0)	1.010-16 (3-4)	3.8-4.6 (4.8-5.9)	30-55	12-14 (24-28)
8. Scottish-Style Ale					
a) Scottish-Style Light Ale	1.030-35 (7.5-8.8)	1.006-12 (2-3)	2.2-2.8 (2.8-3.6)	9-20	8-17 (16-33)
b) Scottish-Style Heavy Ale	1.035-40 (8.7-10.0)	1.010-14 (3-4)	2.8-3.2 (3.6-4.1)	12-20	10-19 (20-37)
c) Scottish-Style Export Ale	1.040-50 (10.0-12.5)	1.010-18 (3-5)	3.2-3.6 (4.1-4.6)	15-25	10-19 (20-37)
9. Porter					
a) Brown Porter	1.045-60 (11.3-15.0)	1.008-16 (2-4)	3.5-4.7 (4.5-6.0)	20-30	20-30 (39-59)
b) Robust Porter	1.045-60 (11.3-15.0)	1.008-16 (2-4)	4.0-5.2 (5.1-6.6)	25-40	30+ (59+)
10. English- and Scottish-Style Strong Ale					
a) English Old Ale/English Strong Ale	1.055-125 (13.8-31.5)	1.010-40 (2.5-10)	4.2-8.9 (5.3-11)	24-80	8-21 (16-42)
b) Strong Scotch Ale	1.072-85 (18.0-21.3)	1.016-28 (4-7)	5.2-6.7 (6.6-8.5)	25-35	10-25 (20-49)
11. Stout					
a) Classic Irish-Style Dry Stout	1.038-48 (9.5-12.0)	1.008-14 (2-4)	3.2-4.2 (4.1-5.4)	30-40	40+ (79+)
b) Foreign-Style Stout	1.052-72 (13.0-18.0)	1.008-20 (2-5)	4.8-6.0 (6.1-7.6)	30-60	40+ (79+)
c) Sweet Stout	1.045-56 (11.3-14.0)	1.012-20 (3-5)	2.5-5.0 (3.2-6.4)	15-25	40+ (79+)
d) Oatmeal Stout	1.038-56 (9.5-14.0)	1.008-20 (2-5)	3.0-4.8 (3.8-6.1)	20-40	20+ (39+)
e) Imperial Stout	1.075-90 (18.8-22.5)	1.020-30 (5-8)	5.5-7.0 (7.0-8.9)	50-80	20+ (39+)
Lager					
12. German-Style Bock					
a) Traditional German-Style Bock	1.066-74 (16.5-18.5)	1.018-24 (5-6)	5.0-6.0 (6.4-7.6)	20-30	15-30 (30-59)
b) German-Style Helles Bock/Maibock	1.066-70 (16.5-17.5)	1.012-20 (3-5)	5.0-6.0 (6.4-7.6)	20-35	4-10 (8-20)
c) German-Style Doppelbock	1.074-80 (18.5-20.0)	1.020-28 (5-7)	5.2-6.2 (6.6-7.9)	17-27	12-30 (24-59)
d) German-Style Eisbock	1.092-116 (23.0-29.0)	n/a	6.8-11.3 (8.7-14.4)	26-33	18-50 (35-99)
13. German-Style Dark Lager					
a) Munich-Style Dunkel	1.052-56 (13.0-14.0)	1.014-18 (4-5)	3.8-4.2 (4.8-5.4)	16-25	17-20 (33-39)
b) German-Style Schwarzbier	1.044-52 (11.0-13.0)	1.012-16 (3-4)	3.0-3.9 (3.8-5.0)	22-30	25-30 (49-59)

	OG (°P) Original Gravity (Balling/Plato)	FG (°P) Final Gravity (Balling/Plato)	Percent Alc./Wgt. (Alc./Vol.)	Int'l Bittering Units	Color SRM (EBC)
14. German-Style Light Lager					
a) Munich-Style Helles	1.044-50 (11.0-12.5)	1.008-12 (2-3)	3.8-4.4 (4.8-5.6)	18-25	4-5.5 (8-11)
b) Dortmunder/European-Style Export	1.048-56 (12.0-14.0)	1.010-14 (3-4)	4.0-4.8 (5.1-6.1)	23-29	3-5 (6-10)
15. Classic Pilsener					
a) German-Style Pilsener	1.044-50 (11.0-12.5)	1.006-12 (2-3)	3.6-4.2 (4.6-5.4)	30-40	3-4 (6-8)
b) Bohemian-Style Pilsener	1.044-56 (11.0-14.0)	1.014-20 (4-5)	3.2-4.0 (4.1-5.1)	35-45	3-7 (6-14)
c) American-Style Pilsener	1.045-60 (11.3-15.0)	1.012-18 (3-5)	3.9-4.7 (5.0-6.0)	20-40	3-6 (6-12)
16. American-Style Lager					
a) American-Style Lager	1.040-46 (10.0-11.5)	1.006-10 (2-3)	3.2-3.8 (4.1-4.8)	5-17	2-4 (4-8)
b) American-Style Light Lager	1.024-40 (6.0-10.0)	1.002-8 (1-2)	2.8-3.5 (3.6-4.5)	8-15	2-4 (4-8)
c) American-Style Lager/Ale or Cream Ale	1.044-56 (11.0-14.0)	1.004-10 (1-3)	3.4-4.5 (4.3-5.7)	10-22	2-5 (4-10)
d) American-Style Premium Lager	1.046-50 (11.5-12.5)	1.010-14 (3-4)	3.6-4.0 (4.6-5.1)	13-23	2-6 (4-12)
e) American-Style Dark Lager	1.040-50 (10.0-12.5)	1.008-12 (2-3)	3.2-4.4 (4.1-5.6)	14-20	14-25 (28-50)
17. Vienna/Märzen/Oktobertfest					
a) Vienna-Style Lager	1.046-56 (11.5-14.0)	1.012-18 (3-5)	3.8-4.3 (4.8-5.5)	22-28	8-12 (16-24)
b) German-Style Märzen/Oktobertfest	1.050-56 (12.5-14.0)	1.012-20 (3-5)	4.0-4.7 (5.1-6.0)	18-25	5-15 (8-30)
Mixed Style					
18. German-Style Ale					
a) German Style Kölsch/Köln-Style Kölsch	1.042-48 (10.5-12)	1.008-12 (2-3)	3.8-4.2 (4.8-5.2)	20-32	3-5 (6-10)
b) German-Style Brown Ale/Düsseldorf-Style Altbier	1.044-48 (11.0-12.0)	1.008-14 (2-4)	3.6-4.0 (4.6-5.1)	25-48	11-19 (22-37)
19. German-Style Wheat Beer					
a) Berliner-Style Weisse	1.028-32 (7.0-8.0)	1.004-6 (1-2)	2.2-2.7 (2.8-3.4)	3-6	2-4 (4-8)
b) German-Style Weizen/Weissbier	1.046-56 (11.5-14.0)	1.008-16 (2-4)	3.9-4.4 (5.0-5.6)	10-15	3-9 (6-18)
c) German-Style Dunkelweizen	1.048-56 (12.0-14.0)	1.008-16 (2-4)	3.8-4.3 (4.8-5.5)	10-15	16-23 (32-45)
d) German-Style Weizenbock	1.066-80 (16.5-20.0)	1.016-28 (4-7)	5.5-7.5 (7.0-9.6)	10-15	5-30 (10-59)
20. Smoked Beer					
a) Bamberg-Style Rauchbier	1.048-52 (12.0-13.0)	1.012-16 (3-4)	3.4-3.8 (4.3-4.8)	20-30	10-20 (20-39)
b) Classic-Style Smoked Beer	refer to individual Classic Styles				
c) Other Smoked Beer	vary widely				
21. Fruit and Vegetable Beer					
a) Fruit and Vegetable Beer	1.030-110 (7.5-27.5)	1.006-30 (2-8)	2.0-9.5 (2.5-12.1)	5-70	5-50 (10-99)
b) Classic-Style Fruit Beer	refer to individual Classic Styles				
22. Herb and Spice Beer					
a) Herb and Spice Beer	1.030-110 (7.5-27.5)	1.006-30 (2-8)	2.0-9.5 (2.5-12.1)	5-70	5-50 (10-99)
b) Classic-Style Herb and Spice Beer	refer to individual Classic Styles				
23. Specialty and Experimental Beer					
a) Specialty Beer	1.030-110 (7.5-27.5)	1.006-30 (2-8)	2.0-9.5 (2.5-12.1)	0-100	1-100 (2-197)
b) Classic-Style Specialty Beer	refer to individual Classic Styles				
24. California Common Beer					
a) California Common Beer	1.040-55 (10.0-13.8)	1.012-18 (3-5)	2.8-3.9 (3.6-5.0)	35-45	8-17 (16-33)
25. Traditional Mead and Braggot					
a) Sparkling Traditional Mead	1.050-100 (12.5-25.0)	n/a	3.9-8.6 (5.0-11.0)	n/a	n/a
b) Still Traditional Mead	1.090-140 (22.5-35.0)	n/a	8.6-11.8 (11.0-15.0)	n/a	n/a
c) Sparkling Braggot	1.050-100 (12.5-25.0)	n/a	3.9-8.6 (5.0-11.0)	n/a	n/a
d) Still Braggot	1.090-140 (22.5-35.0)	n/a	8.6-11.8 (11.0-15.0)	n/a	n/a
26. Fruit and Vegetable Mead					
a) Sparkling Melomel	1.050-90 (12.5-22.5)	n/a	3.9-8.6 (5.0-11.0)	n/a	n/a
b) Still Melomel	1.090-140 (22.5-35.0)	n/a	8.6-11.8 (11.0-15.0)	n/a	n/a
c) Sparkling Cyser	1.050-90 (12.5-22.5)	n/a	3.9-8.6 (5.0-11.0)	n/a	n/a
d) Still Cyser	1.090-140 (22.5-35.0)	n/a	8.6-11.8 (11.0-15.0)	n/a	n/a
e) Sparkling Pymment	1.050-90 (12.5-22.5)	n/a	3.9-8.6 (5.0-11.0)	n/a	n/a
f) Still Pymment	1.090-140 (22.5-35.0)	n/a	8.6-11.8 (11.0-15.0)	n/a	n/a
27. Herb and Spice Mead					
a) Sparkling Metheglin	1.050-90 (12.5-22.5)	n/a	3.9-8.6 (5.0-11.0)	n/a	n/a
b) Still Metheglin	1.090-140 (22.5-35.0)	n/a	8.6-11.8 (11.0-15.0)	n/a	n/a
c) Sparkling Hippocras	1.050-90 (12.5-22.5)	n/a	3.9-8.6 (5.0-11.0)	n/a	n/a
d) Still Hippocras	1.090-140 (22.5-35.0)	n/a	8.6-11.8 (11.0-15.0)	n/a	n/a
28. Cider					
a) Still Cider	1.045-53 (11.3-13.3)	n/a	5.5 (7.0)	n/a	n/a
b) Sparkling Cider	1.045-61 (11.3-15.3)	n/a	6.3 (8.0)	n/a	n/a
c) New England-Style Cider	1.061-105 (15.3-26.3)	n/a	6.3-11.0 (8.0-14.0)	n/a	n/a
d) Specialty Cider	1.045-105 (11.3-26.3)	n/a	4.6-11.0 (5.9-14.0)	n/a	n/a



AMERICAN HOMEBREWERS ASSOCIATION
PO Box 1679
Boulder, CO 80306-1679





All Grain to Extract

1. CLASSIFY THE GRAINS Remember, there are always exceptions, depending on how the grain is used. For example, wheat malt can be considered an adjunct at 5% of the recipe or a major component at 70%. Also, choose a category based on whether you wish to use extracts, steeping, or mini-mash.

TYPE 1 Base Malt, Extract Equivalent	TYPE 2 Spec. Malt, Extract Equivalent	TYPE 3 Can Be Steeped (Non-Enzymatic)	TYPE 4 Must Be Mashed	
Lager Malt Mild Ale Pilsener Six-Row Pale Two-Row Pale Two-Row Pale Ale Wheat Malt*	Chocolate(d) Crystal(b) Munich(a) Roast Black(c)	Black Barley Black Malt Cara-Munich Cara-Vienne Cara-Wheat* Carafa Carahell CaraPils Carastan Chocolate Crystal/Caramel Roasted Barley Roasted Rye* Roasted Wheat* Special-B	Amber(2) Biscuit(2) Brown(2) Flaked Barley(2)* Flaked Corn(2)* Flaked Oats(2)* Flaked Rice(2)* Flaked Rye(2)* Flaked Wheat(2)* "Honey" Malt(2) Melanoidin(2) Munich(1) Peated(2) Rye Malt(1) Smoked(1)	Special Roast(2) Toasted(2) Victory(2) Vienna(1) Other Raw Grain(3)*

(a) "Marie's Munich," St. Patrick's Homebrew Supply, 50% Munich 50% "Lager"; (a) "German Gold," William's Brewing, 50% Munich, 50% Pilsner; (b) "Caramalt," Morgan's Brewing, 60% light to medium crystal, 40% pale malt; (b) "Dark Crystal," Morgan's Brewing, 60% dark crystal, 40% Vienna malt; (c) "Roasted Black Malt," Morgan's Brewing, 12% roasted black malt, 88% Munich malt; (d) "Chocolate Malt," Morgan's Brewing, 15% chocolate malt, 85% Munich malt; (1) "Enzymatic" (can convert itself in a mini-mash); (2) "Non-Enzymatic" (little or no enzyme power; mash with equal or greater amount of "borrowed" Type 1 grain); (3) "Non-Enzymatic" and must be boiled ("gelatinized") 30 minutes before adding to mash; equal or greater amount of "borrowed" Type 1 grain needed for both enzymes and husks

* = huskless, must be mashed with equal or greater amount of "borrowed" Type 1 grain

2. DETERMINE IF STEEP OR MINI-MASH IS REQUIRED If, after Step 1, you have any Type 3 grains, these can be steeped without mashing. However, if you have any Type 4 grains, you will need a mini-mash. "Borrow" enough Type 1 grain to (a) equal or exceed the total amount of non-enzymatic Type 3 and Type 4 grains PLUS enough more to (b) equal or exceed the amount of huskless grain (you only need to "borrow once" against huskless, non-enzymatic grain!).

Also, instead of steeping Type 3 grains, treat them as Type 4, borrow an equal or greater amount of Type 1 grain, and mini-mash for even better results! And whenever you mini-mash, "borrow" as much Type 1 grain as will fit in your mash kettle for best all-grain authenticity!

3. SELECT YOUR EXTRACTS AND CONVERT Use pale, unhopped extract made from the same grain variety you are substituting (pale ale, Pilsener, etc).

(A) Convert amount of each Type 1 and Type 2 grain to liquid extract by multiplying by 0.75. Remember to deduct any amount you might have "borrowed" before you do the conversion.

(B) If you are converting a grain to a Type 2 extract (or using wheat malt extract), divide the grain-to-liquid conversion in step (A) by the percentage of the "target" in decimal form (e.g., multiply by 0.75 in step (A), then divide by 0.60 if converting wheat malt grain to 60% wheat malt liquid extract).

(C) If you used any Type 2 extracts (or wheat malt extract), determine how much "pale extract" is contained in them by multiplying by the percentage of pale malt contained, in decimal form (e.g., multiply by 40% if using wheat extract that's 60% wheat and 40% pale malt). Subtract the total from the amount in step (A) above.

(D) The pale malt extract requirement from step (C) can be made up with all liquid extract, or converted to all dry extract by multiplying by 0.89. Or, use liquid extract in "whole" increments of 3.3 pound (1.53 kg), or whatever whole package size you have, and convert the remainder to dry extract by multiplying by 0.89.

4. WRITE DOWN THE NEW EXTRACT-BASED RECIPE Compile the results from Steps 2 and 3 into your converted recipe.

5. BREW THE BEER! Steep or mini-mash your grains, add extracts, then add hops and any other ingredients per the original all-grain recipe.




SCHWARZBIER: Fade to Black

"Goethe has no appetite, he lives on buns and beer,

discussing with his servant whether to drink

Köstritzer beer of dark or light brown color."



Like the beer itself, Schwarzbier's origins are shrouded in blackness. Some believe this dark lager is related to Münchener dunkel; others think it developed independently.

Regardless of its past, Schwarzbier today is a lager that is darker, drier, more bitter and lower in gravity than a Münchener dunkel.

Schwarzbier's Past

Schwarzbier is usually associated with the East German town of Bad Köstritz, but the style may have developed independently elsewhere.

Michael Jackson cites references to brewing in Köstritz as early as 1505. And Austrian writer Conrad Seidl notes that Theodor Grässe, in his book *Bierstudien* (Dresden, 1872), dates a "Colberger Black" to 1722.

Seidl provides quotations in his book, *Bier. Deutsche und europäische Braukunst*:

- The philosopher Wilhelm von Humboldt visited Johann Wolfgang von Goethe's home in Weimar on November 17, 1823, and wrote, "Goethe has no appetite, he lives on buns and beer, discussing with his servant whether to drink Köstritzer beer of dark or light brown color."

- Anton Friedrich Buesching, a teacher from Berlin, wrote in the late 18th century that beer from Bad Köstritz was served at the earl's table: "It had such a color that I mistook it at first sight for red wine and wondered that this should be served in beer glasses."

These early beers presumably were top fermented; Jackson believes Köstritzer Schwarzbier has been a lager since at least 1878.

Schwarzbier Rediscovered

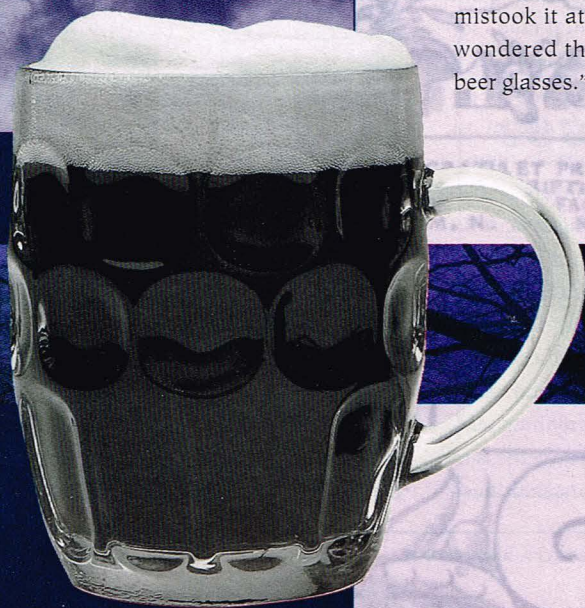
Interest in Schwarzbier was rekindled when Michael Jackson visited and wrote about the Köstritzer Schwarzbierbrauerei in Bad Köstritz, in the former East Germany.

Before unification, the brewery produced two versions of Köstritzer Schwarzbier. One was brewed to a gravity of 12° Plato (1.048) from 80% Munich malt and 20% roasted malt. Alcohol was 3.5% by volume and bitterness was 40 IBUs.

A second version was made by adding white sugar to the basic beer, raising the gravity to 14° Plato (1.056). Like the primary product, this beer was pasteurized before it had completely fermented.

To comply with the Reinheitsgebot, the brewery changed to a single beer with gravity 12.5° Plato (1.050). This product is made from pale, Munich and roasted malts, and hopped with Hüller for bitterness and Hallertau Mittelfrüh for aroma. Bitterness is 35 IBUs and alcohol is 4.6% by volume. Color is 35° SRM.

How did preunification Köstritzer relate to the past? "The Schwarzbier in East Germany was probably pretty much the way it was," opines Delano Dugarm, a homebrewer in Arlington, VA. "The Communists were pretty bad at innovation."



By Jim Dorsch

Style Guidelines for German-Style Schwarzbier

These very dark brown to almost black beers have a roasted malt character without the associated bitterness. Malt flavor and aroma are low in sweetness. Hop bitterness is low to medium in character. "Noble-type" hop flavor and aroma should be low but perceptible. There should be no fruity esters. Diacetyl is acceptable at very low levels.

Original Gravity: 1.044-1.052 (11-13° Plato). Final gravity: 1.012-1.016 (3-4° Plato). Alcohol is 3.8-5 percent by volume, or 3-3.9 percent by weight. Bitterness is 22-30 IBUs, and color is 25-30 SRM.

Source: North American Brewers Resource Directory 1997-1998 (Brewers Publications, 1997)

More than a Darker Dunkel

"There has been an effervescence of beers in Germany called Schwarzbier. They're still just dark lagers," says Dugarm. A true Schwarzbier, he maintains, has more of a roasted flavor than a Münchener dunkel, while one finds more toasty, Munich-malt flavors in the latter.

"The style is ill-defined and hard to come by," says Chas Peterson, a brewer from Laytonsville, MD, who won the gold medal for German Dark Lager in the 1996 National Homebrew Competition. Peterson learned of the style on a business trip to Berlin, where he "had a bunch of it." In the name of research, of course.

"There's a big difference between the German interpretation and what you find in most [American] brewpubs," says Peterson. "The American version is bigger and hoppier."

Schwarzbier, according to Peterson, is "sort of a cross between a porter made with lager yeast and a dunkel. Porter is stronger flavored than the Schwarzbiers I tasted in Germany. Schwarzbier is more sweet than roasty, but roastier than a dunkel, and hoppier."

Grain Bill

Fred Scheer, vice president of malting, quality assurance and technical services at Malt Montana, grew up with Schwarzbier. A 15-year-old Scheer stole draughts of Schwarzbier from his grandfather's brewery,

the Paque Brewery in Saarland, near the French border. "I became fascinated with the rainbow of flavors," says Scheer. "The balance was terrific." Working from his grandfather's recipe, in 1987 Scheer developed Frankenmuth Dark, a Schwarzbier that won several medals at the Great American Beer Festival for the Frankenmuth Brewing Co. in Frankenmuth, MI.

Using several malts can get you to the end of the rainbow. Delano and Katy Dugarm used seven malts and one unmalted grain in their Black Heart Schwarzbier, an NHC bronze medal winner in 1995. And Chas Peterson had 13 malts in his Blackcat Schwarzbier II.

"I really like aromatic malt (a higher-kilned Munich malt). It really adds to the malt aroma," says Delano Dugarm. And in his view, Pils malt is *de rigueur*. "It's a Kraut beer; you have to use Pils malt." The Dugarms prefer DeWolf-Cosyns Belgian Pilsener malt, but Delano says a brewer could do perfectly well with domestic malt.

While he prefers continental malts for the bulk of the mash, Peterson includes a pound or two of domestic two-row malt for its enzymes, particularly in a decoction mash. "With a little bit of Klages in there," he says, "there's a lot more conversion."

Peterson recommends using at least 50 percent Munich malt. "It lends a kind of nutty flavor, and it seems to add more body than Pils or domestic pale malt," he says.

CaraVienne malt, which is basically a crystal malt at about 30° Lovibond, adds sweetness. "You don't want anything really sweet, but you want a little sweetness to bring out the flavor. You want maltiness

#37 Black Lager

Schwarzbier

Fred Wills

Londonderry, NH

Ingredients for 5 U.S. gal (19 L)

- 6.3 lb Munton & Fison lager malt (2.9 kg)
- 2.1 lb Munich light malt (.95 kg)
- 6.7 oz 40 °L crystal malt (190 g)
- 5.0 oz chocolate malt (142 g)
- 1.7 oz black patent malt (48 g)
- 1.7 oz Mt. Hood hops, 4.7% alpha acid (48 g) (90 min.)
- 0.4 oz Mt. Hood hops, 4.7% alpha acid (11 g) (20 min.)
- 0.4 oz Mt. Hood hops, 4.7% alpha acid (11 g) (5 min.)
- Wyeast No. 2112 California Common liquid yeast culture in a 24-oz (0.7-L) starter

- Original specific gravity: 1.054
- Final specific gravity: 1.014
- Boiling time: 90 min.
- Primary fermentation: 12 days at 60-65 degrees F (16-18 degrees C) in glass
- Secondary fermentation: 8 days at 60-65 degrees F (16-18 degrees C)
- Bottle conditioning: 2 weeks at 60 degrees F (16 degrees C) followed by 2-6 weeks at 45 degrees F (7 degrees C).

Brewer's Specifics

Two-step infusion mash at 130 degrees F (54 degrees C) and 155 degrees F (68 degrees C). Mash-out at 165 degrees F (74 degrees C). Collect 7.5 gallons of runnings (28.4 L).

For this brew, the mash yielded nearly 31 points of original gravity per pound of grain. Brewers should adjust the grain bill based on their mashing efficiency.

Prime with .75 cup cane sugar (177 mL) and bottle. Condition for at least one month, and preferably two months.

Big Black's Revenge

Schwarzbier
Tony Steenkolk
Boise, ID

From *A Year of Beer* (Brewers Publications, 1997, \$14.95)

Ingredients for 5 U.S. gal (19 L)

- 4 lb amber malt extract (1.8 kg)
- 3.3 lb dark malt extract (1.5 kg)
- 1.3 lb 80 °L crystal malt (.59 kg)
- 0.3 lb chocolate malt (.14 kg)
- 0.3 lb black patent malt (.14 kg)
- 2.2 oz Hallertauer hop pellets, 3.5% alpha acid (62 g) (60 min.)
- 0.8 oz Hallertauer hop pellets, 3.9% alpha acid (23 g) (30 min.)
- 0.8 oz Tettnanger hop pellets, 3.4% alpha acid (23 g) (15 min.)
- Wyeast No. 2206 Bavarian Lager liquid yeast culture in a 1-qt (0.95-L) starter

- Original specific gravity: 1.063
- Final specific gravity: 1.025
- Boiling time: 60 min.
- Primary fermentation: 2 weeks at 55 degrees F (13 degrees C) in glass
- Secondary fermentation: 4 weeks at 45 degrees F (7 degrees C) in stainless steel

Brewer's Specifics

Steep grains at 170 degrees F (77 degrees C) for 30 minutes.

more than sweetness," says Dugarm. Peterson also uses CaraMunich and Special "B", which are types of crystal malt.

Munich malt, says Dugarm, "increases body, malty flavors and toasty, bready flavors." Peterson cites the slightly darker color of Czech Munich malt, which he thinks adds more Munich character.

Chocolate malt leaves behind coffee-chocolate notes. "Use an eighth to a quarter pound for five gallons—no more," Peterson

Bubble Bath

Author Conrad Seidl relates the story of Klosterbrauerei Neuzelle, which brews a "traditional" East German Schwarzbier—with added sugar in the style of preunification Köstritzer Schwarzbier.

Adding sugar to bottom-fermenting beers is illegal under the *Reinheitsgebot*, so the brewer sells the beer as an additive for bathing—beer is said to be beneficial to the skin.

"If you decide to drink it instead of pouring it into the bathtub, this is fine too," says Seidl.



Premium Food & Beverage Ingredients

Here's a simple equation...

**New, easy to find, arctic white,
seal tight packaging featuring
our dynamic new logo**

plus...

(turn page)

stresses. He also likes light chocolate malt, citing its lack of harshness.

The Dugarms use black patent malt "basically to be sure the beer turns out black." Dugarm, who is well-known for his adjunct experiments, used a small amount of roasted barley, which is *verboten* according to the *Reinheitsgebot*. "It brings out more roasty, coffee flavors, making the high-kilned malt character more complex."

Extract Alternatives

It's possible to brew a Schwarzbier with an extract base, but an all-extract effort is unlikely to capture the complex malt character of this beer.

"Any all-extract version of this recipe would be a pale shadow of how this beer should taste," says George Hummel, owner of the Home Sweet Homebrew shop in Philadelphia, PA.

Extract brewers should consider a minimash. Mash two pounds (0.9 kg) of pale malt with an equal amount of specialty

Commercial Examples

Commercial Schwarzbiers aren't easy to find. Among the few commonly available are:

Köstritzer Schwarzbier, imported by B. United International, Elmsford, NY

Latrobe Black Beer, from the Latrobe Brewing Co., Latrobe, PA

Sapporo Black Beer, imported by Sapporo U.S.A., Irvine, CA

grains, then add malt extract and additional water if necessary to the collected wort.

Hops

For bittering, "I use what I have in the freezer," says ever-practical Delano Dugarm. "Perle is a nice, clean bittering hop. It gives bitterness but not a lot of flavor."

Dugarm is more serious about flavor and aroma additions. "You can use a variety of finishing hops, as long as they're noble," he says. Dugarm rattles off some names: Crystal, Ultra, Mount Hood, Liberty. These domestic hops, which are related to various noble varieties, "have better fla-

vor a lot of times than German hops, just because they're fresher." Of course, classics like Hallertauer and Tettnanger will work just fine.

Brewers often add a small amount of hops toward the end of the boil, but Schwarzbier shouldn't have a pronounced hop flavor or aroma. Dugarm recommends a half-ounce of hops with 15 minutes remaining, and perhaps another half-ounce at kettle knockout, "just to give a little bit of hop aroma and flavor." For Black Heart, the Dugarms added an ounce of Crystal hops with 10 minutes remaining, and another ounce of Crystal at knockout, but they opted to eliminate the latter addition in future brews.

Blackcat Schwarzbier II

Schwarzbier
Chas Peterson
Laytonsville, MD

Ingredients for 5 U.S. gal (19 L)

- 1.6 lb Great Western Klages malt (.73 kg)
- 1.6 lb Czech Pilsener malt (.73 kg)
- 2.0 lb Durst Munich malt (.91 kg)
- 2.0 lb Czech Munich malt (.91 kg)
- 0.2 lb Dewolf-Cosyns CaraMunich malt (.9 kg)
- 0.2 lb Durst Vienna malt (.9 kg)
- 0.2 lb CaraPils malt (.9 kg)
- 0.25 lb Beeston 90 °L crystal malt (.11 kg)
- 0.8 lb Beeston 29 °L crystal malt (.38 kg)
- 0.3 lb Dewolf-Cosyns biscuit malt (.14 kg)
- 0.2 lb Dewolf-Cosyns aromatic malt (.9 kg)

- 0.2 lb Dewolf-Cosyns Special "B" malt (.9 kg)
- 0.15 lb Briess chocolate malt (.68 kg)
- 0.1 oz Hallertauer hops, 4.1% alpha acid (3 g) (60 min.)
- 0.3 oz Columbus hops, 16.3% alpha acid (9 g) (50 min.)
- 0.4 oz Tettnanger hop pellets, 3.1% alpha acid (11 g) (20 min.)
- 0.4 oz Liberty hop pellets, 4.1% alpha acid (11 g) (20 min.)
- 0.5 tsp Irish moss (10 min.)
- 0.4 oz Crystal hop pellets, 3.2% alpha acid (11 g) (end of boil)
- Wyeast No. 2206 Bavarian lager liquid yeast culture in a 0.5-gal (1.9-L) starter

- Original specific gravity: 1.056
- Final specific gravity: 1.017
- Boiling time: 60 min.
- Primary fermentation: 16 days at 45 degrees F (7 degrees C) in glass

- Secondary fermentation: 2 days at 66 degrees F (19 degrees C), 15 days at 52 degrees F (11 degrees C), 5 days at 62 degrees F (17 degrees C)

Brewer's Specifics

Mash 40 percent of grist at 132 degrees F (56 degrees C) for 15 minutes. This is achieved by adding approximately 1 gallon of water (3.8 L) at 145 degrees F (63 degrees C). Raise to 160 degrees F (71 degrees C), hold for 30 minutes, then boil for 30 minutes.

Mash remaining grist at 135 degrees F (57 degrees C) for 15 minutes. This is achieved by adding approximately 1.5 gallons of water at 150 degrees F (66 degrees C).

Combine the two mashes and hold at 158 degrees F (70 degrees C) for one hour. Pull the thinnest three quarts (2.8 L) of the mash and boil for 20 minutes. Raise to 170 degrees F (77 degrees C) and hold for 10 minutes.

Black Heart

Schwarzbier

*Delano and Katy Dugarm
Arlington, VA*

Ingredients for 5 U.S. gal (19 L)

- 9 lb DeWolf-Cosyns Pilsener malt**
(4.1 kg)
- 1 lb aromatic malt** (.45 kg)
- 1 lb Munich malt** (.45 kg)
- 0.5 lb Dewolf-Cosyns chocolate malt**
(.23 kg)
- 0.33 lb CaraPils malt** (.15 kg)
- 0.25 lb DeWolf-Cosyns roasted barley**
(.11 kg)
- 0.25 lb black patent malt** (.11 kg)
- 0.25 lb CaraVienne malt** (.11 kg)
- 1 oz Perle hops, 7.5% alpha acid**
(28 g) (60 min.)
- 1 oz Crystal hops, 4.2% alpha acid**
(28 g) (10 min.)
- Wyeast No. 2007 Pilsen lager**
liquid yeast culture in a 0.5-gal
(1.9-L) starter

- Original specific gravity: 1.060
- Final specific gravity: 1.025
- Boiling time: 90 min.
- Primary fermentation: 7 days at
48 degrees F (9 degrees C) in
glass
- Secondary fermentation: 7 days
at 48 degrees F (9 degrees C) in
glass
- Tertiary fermentation: 35 days at
32 degrees F (0 degrees C) in
glass

Brewers' Specifics

Mash grains at 154 degrees F (68 degrees C) for 60 minutes.

Wort Production

The Dugarms use a single-stage infusion mash at 154 degrees F (68 degrees C). "There's a bit less fermentables. I'm not looking for something as dry as an American light lager, but I don't want it as thick as an IPA," says Delano.

Peterson prefers decoction. "You will make a different beer with decoction," he says. "There's a complexity you don't get with infusion."

Soft water works best for a dark beer like Schwarzbier. "Harder water will emphasize bitterness," says Peterson. "My water supply is rich in sulfates, so I use distilled water."

Peterson adjusts his water with acid blend to a pH of 5-5.1. He tests frequently with Colorfast pH strips. There are cheaper test strips, but Peterson believes Colorfast strips are worth the extra expense.

Fred Wills of Londonderry, NH uses a step-infusion mash, starting at 130-132 degrees F (54-56 degrees C). "It's at the high

end of a protein rest," says Wills. "A lot of people want to hit 122 degrees F (50 degrees C), but that typically creates heading problems. With well-converted malt you don't need a 120-degree-F rest." The 130-degree-F rest gives Wills the clarity he's looking for. "You could do a single infusion at 155 degrees F (68 degrees C), but you're not going to get the clarity." Wills acidulates his sparge water to a pH of six to avoid extraction of tannins that cause astringency.

(continued on page 52)



Premium Food & Beverage Ingredients

**The same guaranteed fresh,
premium malt extracts we
have offered year after year**

equals...

(turn page)

Heart of the Tide Imperial Porter

My latest quest has been to discover a way to make a 10-minute beer. My first attempt has failed miserably. I'm determined to use all my experience and knowledge and apply it to a formulation that indeed results in a more-than-just-drinkable 10-minute homebrew. But in the meantime (and for this column), I've had to fall back on "The Heart of the Tide."

Two years ago I was dumbstruck with pleasurable awe at tasting one of the most exquisite beers I've ever had. It wasn't a gold medal winner, but had come in perhaps a close second in the Imperial Stout category of the 1996 World Beer Cup. The silver medal beer was from Denmark and the Wiibroe's Brewery in Helsingør. The label on the bottle proclaimed "Imperial Stout," while in a bit of schizophrenic afterthought a second label, close to where a neck label could have been, second-guessed the contents with the proclamation: "Porter." Thus, my own attempt at replicating this wonderful smooth, velvety rich brew has begun with a first essay titled, "Heart of the Tide Imperial Porter."

Is there such a thing as Imperial Porter? In my own mind, yes, with the major distinction being that the assertiveness of roasted barley is almost altogether lacking, while the overall rich, velvety character enjoys a smoothness that I'd attribute to cool lagering. Yes—I used a lager yeast.

Here are my tasting notes of two years ago (excerpted from my book *Home Brewers Gold*, Avon 1997):

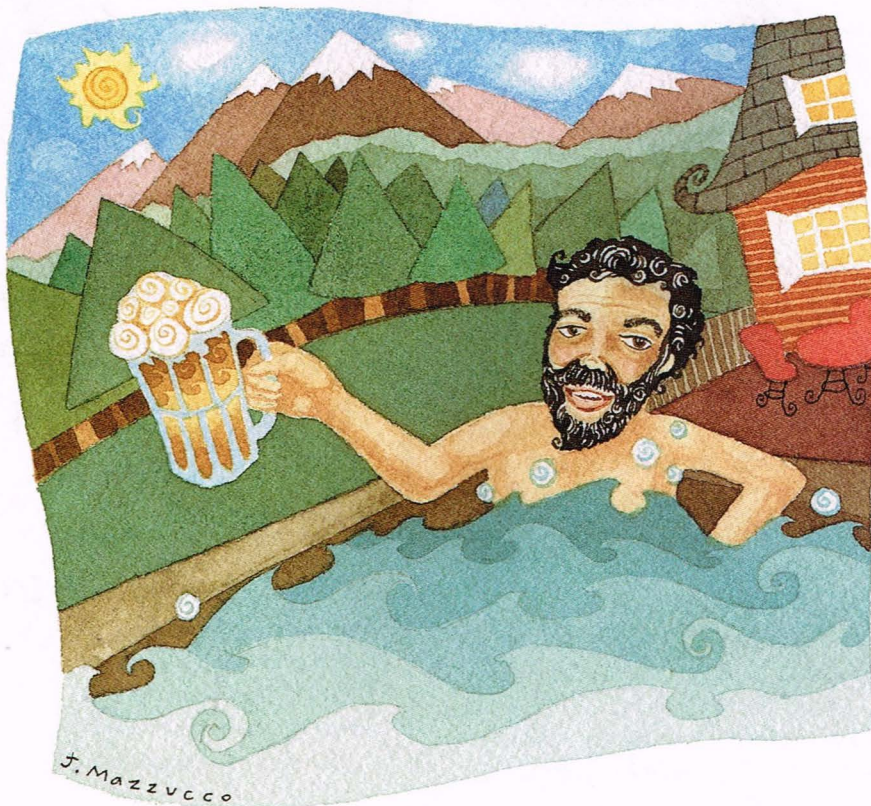
"Rich, light brown head secures a deep, dark black imperial stout. Bubbles languidly rise to the surface suggesting a full body. Beautifully aromatic mild roast coffee/ chocolate malt intensifies as smoothness. Also woven into this rich and malty stout is a fleeting suggestion of floral hops, but one can't be quite sure with

such a rich, roast malt character. Flavor impression is immediately alcoholic accompanied by a remarkable clean dryness followed by an amusingly astringent roasted malt and simple balance of hop bitterness. Bitterness is straightforward with no flavor overtones. Full-bodied, well-attenuated and cleanly brewed high-gravity stout (also called Wiibroe Porter). An Imperial Stout in a classic European sense, it is not complicated with floral and flavor hops, but rather relies on clean bitterness, controlled fermentation and a complexity of roasted malts to create a complementing dryness. The initial impression of the full body continues in the aftertaste in a devious way as one set-

ties down with this refreshingly clean, strong and wonderfully deceiving stout. A very reflective and friendly beer. My thoughts become one with Wiibroe. (Omigosh, I drank the whole bottle. No more tasting today)."

After tasting, I later learned that the brewery formulation uses Danish Pilsener, German Colour, Munchener and Karamel malts with German Hallertauer hops for bitterness. The brew is bottom fermented with lager yeast.

- Original specific gravity: 1.081 (19.5) indicated by the brewery
- Final gravity: 1.019 (4.8) indicated by the brewery



- Alcohol by volume: 8.2% indicated by the brewery
- Color: 30+ SRM (60+ EBC)
- Bittering Units: 40-45 (43 indicated by the brewery)

So, from these tasting notes, my memory and a little help from the brewery, my Heart of the Tide goes a long way toward recreating a beer not commercially available in the United States.

So let's cut the shuck and jive and get on with the recipe:

Ingredients and recipe for a 5.5 U.S. gal (21 L)

This is an advanced brewing partial mash and malt extract recipe.

Malt

- 6 lb two-row pale malt (grain) (2.7 kg)
- 3 lb Munich malt (1.4 kg)
- 1.5 lb English crystal malt—75 °L (0.7 kg)
- .5 lb Belgian biscuit malt (.23 kg)
- .5 lb wheat malt (.23 kg)
- .75 lb German Caraaffe malt (or black patent as a substitute) (340 g)
- .75 lb roasted barley—English (340 g)
- .33 lb chocolate malt—English (150 g)
- 2.5 lb extra light dried malt extract (1.14 kg)

Hops

- 1.5 oz German Spalt (42 g) (7.5 HBUs/213 MBUs) whole hops—boil 60 min.
- .5 oz BOR-Czech [use Perle as a substitute] (14 g) (4 HBUs/114 MBUs) pellet hops—boil 60 min.
- .33 oz BOR-Czech [use Perle as a substitute] (10 g) (4 HBUs/114 MBUs) pellet hops—boil 30 min.
- 2 oz U.S. Strisselspalt [use half the amount of Mt. Hood as a substitute] (56 g) whole hops—5 minutes post-boil steep
- .25 tsp powdered Irish moss
- .75 cup corn sugar/glucose (180 mL) (priming)
- Lager yeast (I used Wyeast Bavarian 2206)
- Original gravity: 1.080-1.084 (20-21 °B)

- Final gravity: 1.016-1.020 (4-5 °B)
- IBUs: about 48
- Approximate color: 48 SRM (96 EBC)
- Alcohol: 8.4% by volume
- Apparent yeast attenuation: about 74%

A step infusion mash is used to mash the grains. Add 14 quarts (13 L) of 142-degree-F (61-degree-C) water to the crushed

grain, stir, stabilize and hold the temperature at 132 degrees F (53 degrees C) for 30 minutes. Add 6.5 quarts (6 L) of boiling water and add heat to bring temperature up to 154 degrees F (67.5 degrees C) and hold for about 30 minutes.

After initial rest, raise temperature to 157 degrees F (69.5 degrees C) and maintain for another 30 minutes. Then raise temperature to 167 degrees F (75 degrees C), laut and sparge with four gallons (15 L) of 170-degree-F (77-degree-C) water. Collect about



Premium Food & Beverage Ingredients

**The Very Best
Award-Winning Beer
You Can Brew!**

NORTHWESTERN...
we improve your product mix.™

For a retailer near you, contact:
3590 N. 126th Street • Brookfield, WI 53005

800-466-3034 • Fax: 414-781-0660

<http://www.nwextract.com>

six gallons (23 L) of runoff and add the malt extract and bittering German Spalt and .5 ounces (14 g) of BOR-Czech hops. Bring to a full and vigorous boil.

The total boil time will be 60 minutes or long enough to end up with 5.5-gallons (21 L) of wort. When 30 minutes remain add .33 ounces (10 g) of BOR-Czech hops. When 10 minutes remain add Irish moss. After a total wort boil of at least 60 minutes—5.5 gallons (20.8 L) should remain—turn off the heat and add two ounces (57 g) of Strisselspalt. Now you must cool all of the wort. Use an immersion cold water bath or heat exchanging coils. Then strain and sparge into a sanitized fermenter.

Pitch a good dose of healthy active lager yeast and primary ferment at temperatures at about 55 degrees F (12.5 degrees C); make sure that nearly all of the fermentation is complete before lagering. Rack from the primary to the secondary. Your net yield will be five gallons (19 L) to the secondary. Lager between 35 and 40 degrees F (2 and 4.5 degrees C) for one month.

Prime with sugar and bottle when fermentation is complete.

Here is an alternate recipe using more malt extract and simpler procedures:

Malt

- 1 lb two-row pale malt (grain) (0.5 kg)
- 3 lb Munich malt (1.4 kg)
- 1.5 lb English crystal malt-75° L (0.7 kg)
- .5 lb Belgian biscuit malt (.23 kg)
- .5 lb wheat malt (.23 kg)
- .75 lb German Caraffe malt (or Black Patent as a substitute) (340 g)
- .75 lb roasted barley—English (340 g)
- .33 lb chocolate malt—English (150 g)
- 6 lb extra light dried malt extract (2.7 kg)

Hops [note: more hops are used in this version due to more concentrated wort boil]

- 1.75 oz German Spalt (50 g) (8.8 HBUs/246 MBUs) whole hops—boil 60 min.
- .66 oz BOR-Czech [use Perle as a

substitute] (19 g) (5.3 HBUs/148 MBUs) pellet hops—boil 60 min.

- .5 oz BOR-Czech [use Perle as a substitute] (14 g) (4 HBUs/114 MBUs) pellet hops—boil 30 min.

- 2 oz U.S. Strisselspalt [use half the amount of Mt. Hood as a substitute] (56 g) whole hops—5 minutes post-boil steep

- .25 tsp powdered Irish moss

- .75 cup corn sugar/glucose (180 mL) (priming)

Lager yeast (I used Wyeast Bavarian 2206)

A step infusion mash is used to mash the grains. Add eight quarts (7.5 L) of 142-degree-F (61-degree-C) water to the crushed grain, stir, stabilize and hold the temperature at 132 degrees F (53 degrees C) for 30 minutes. Add four quarts (3.8 L) of boiling water and add heat to bring temperature up to 154 degrees F (67.5 degrees C) and hold for about 30 minutes.

After initial rest, raise temperature to 157 degrees F (69.5 degrees C) and maintain for another 30 minutes. Then raise temperature to 167 degrees F (75 degrees C), laut and sparge with three gallons (11.5 L) of 170-degree-F (77-degree-C) water. Collect about 4.5 gallons (17 L) of runoff and add the malt extract and bittering German Spalt and .5 ounces (14 g) of BOR-Czech hops and bring to a full and vigorous boil.


The total boil time will be 60 minutes or long enough to end up with 3.5 gallons (13.5 L) of wort. When 30 minutes remain add .33 ounces (10 g) of BOR-Czech hops. When 10 minutes remain add Irish moss. After a total wort boil of at least 60 minutes—3.5 gallons (13.3 L) should remain—turn off the heat and add two ounces (56 g) of Strisselspalt. Cool the pot of wort in a cold water bath for 20 minutes, then strain and sparge into a sanitized fermenter to which you've added two gallons (7.6 L) of water. It helps to prechill (33 degrees F [1 degree C]) the water added to the fermenter rather than simply adding warmer tap water.

When the wort is below 60 degrees F (15.5 degrees C) pitch a good dose of healthy active lager yeast and primary

ferment at temperatures at about 55 degrees F (12.5 degrees C); make sure that nearly all of the fermentation is complete before lagering. Rack from the primary to the secondary. Your net yield will be five gallons (19 L) to the secondary. Lager between 35 and 40 degrees F (2 and 4.5 degrees C) for one month.

Prime with sugar and bottle when fermentation is complete.

Soon you, too, will know what I mean by "The Heart of the Tide."

World traveler Charlie Papazian is the founding president of the Association of Brewers and the author of numerous best-selling books on homebrewing. His most recent books are *Home Brewers Gold* (Avon, 1997), a collection of prize-winning recipes from the 1996 World Beer Cup Competition, and *The Best of Zymurgy* (Avon, 1998) a collection of the best articles and advice from 20 years of *Zymurgy*. 

HOMEBREW BITTERING UNITS (HBUs)

are a measure of the total amount of bitterness in a given volume of beer. Homebrew Bittering Units can easily be calculated by multiplying the percent of alpha acid in the hops by the number of ounces. For example, if 2 ounces of Northern Brewer hops (9 percent alpha acid) and 3 ounces of Cascade hops (5 percent alpha acid) were used in a 10-gallon batch, the total amount of bittering units would be 33: (2 x 9) + (3 x 5) = 18 + 15. Bittering units per gallon would be 3.3 in a 10-gallon batch or 6.6 in a five-gallon batch, so it is important to note volumes whenever expressing bittering units.

INTERNATIONAL BITTERNESS UNITS (IBUs)

are a measure of the bitterness of a beer in parts per million (ppm), or milligrams per liter (mg/L) of alpha acids. You can estimate the IBUs in your beer by using the following formula:

$$\text{IBU} = \frac{(\text{ounces of hops} \times \% \text{ alpha acid of hop} \times \text{utilization})}{\text{gallons of wort} \times 1.34}$$

Percent utilization varies because of wort gravity, boiling time, wort volume and other factors. Homebrewers get about 25 percent utilization for a full one-hour boil, about 15 percent for a 30-minute boil and about 5 percent for a 15-minute boil. As an example, 1 ounce of 6 percent alpha acid hops in five gallons of wort boiled for one hour would produce a beer with 22 IBUs:

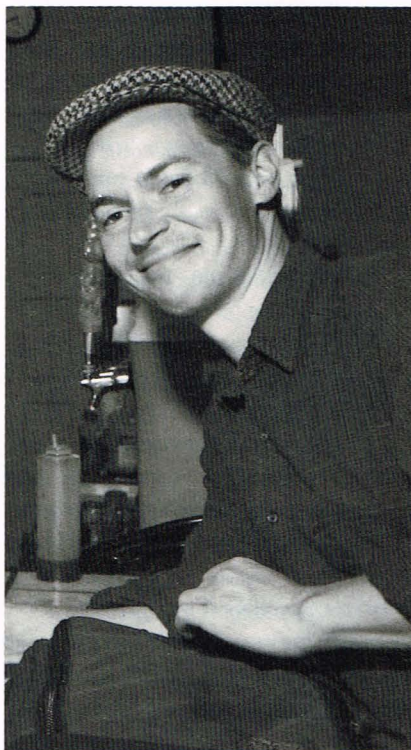
$$\text{IBU} = \frac{1 \times 6 \times 25}{5 \times 1.34} = 22 \text{ IBUs.}$$

METRIC BITTERNESS UNITS (MBUs) are equal to the number of grams of hops multiplied by the percent alpha acid.

It's a new year of brewing, so on your list of resolutions be sure to include some really great recipes to brew while the weather is nice and cold. Now is the time to get a German-Style Bock brewed for the coming spring festivities, and George Dietrich's award-winning Maibock, with its double-decoction mash schedule, is the perfect combination of crisp, clean hops and full, rich malt. Or for a really strong smoky treat, try Bradley Maxfield's Red Tartan Scotch Ale and tuck it away in the cellar for some meditative sipping next winter.

One can never have enough English-Style Pale Ale on hand, and veteran NHC champion Dave Schaffer's Mullethead Ale is an English hop lover's delight. With the short days and long nights of winter, nothing gets you going in the morning better than a coffee stout, and Tom Stelman's Hava Java is a real eye-opener.

Extract brewers will love the pure and simple approach multiple medal winner Tom Ierardi has taken for his Carpetbagger Common, and Invitational Brew-Off winner Gunther Jensen shares the secrets of his beautifully balanced cinnamon metheglin. I don't know about you, but just reading these recipes makes me want to brew.



Congrats to former AHA Project Coordinator Amahl Turczyn (shown here) and former AHA Director Jim Parker for their Gold Medal win at this year's GABF with Coffee Porter, Wolf Tongue Brewery.

California Common Beer



SILVER MEDAL

AHA 1998 NATIONAL HOMEBREW COMPETITION

Tom Ierardi, Skaneateles, NY

"Carpetbagger Common"

California Common Beer

Ingredients for 5 U.S. gal (19 L)

- 6.5 lb light dry malt extract (3 kg)
- .5 lb pale malt (.23 kg)
- 1.5 oz Cascade pellet hops, 5.4% alpha acid (43 g) (90 min.)
- .5 oz Cascade pellet hops, 5.4% alpha acid (14 g) (80 min.)
- .5 oz Cascade pellet hops, 5.4% alpha acid (14 g) (10 min.)
- Wyeast No. 2112 California lager yeast
- 1.25 cup corn sugar (296 mL) (to prime)

- Original specific gravity: 1.055
- Final specific gravity: 1.015
- Boiling time: 90 min.
- Primary fermentation: Four days at 68 degrees F (20 degrees C) in glass
- Secondary fermentation: 24 days at 68 degrees F (20 degrees C) in glass

Brewer's Specifics

Steep grains at 150 degrees F (65 degrees C) for 45 minutes. Remove grains and boil with extract for 90 min.

Judges' Comments

"Touch of fruitiness; creamy. Could be crisper on the finish to even the balance."

"Nice malt, a bit much in body/sweetness/balance—needs more hop flavor and bitterness to balance."

German-Style Bock



BRONZE MEDAL

AHA 1998 NATIONAL HOMEBREW COMPETITION

George Dietrich, Shelby Township, MI

"Third Bock From The Sun"

German-Style Maibock

Ingredients for 6 U.S. gal (22.7 L)

- 7 lb Pilsener malt (3.18 kg)
- 7 lb Munich malt extract (3.18 kg)
- 3.25 oz Liberty whole hops, 3.8% alpha acid (92 g) (60 min.)
- 1 oz Hallertauer whole hops, 4.5% alpha acid (28 g) (finish)
- Wyeast No. 2206 Bavarian lager yeast
- forced CO₂ to carbonate in keg

- Original specific gravity: 1.167
- Final specific gravity: 1.017
- Boiling time: 90 min.
- Primary fermentation: 10 days at 50 degrees F (10 degrees C) in glass
- Secondary fermentation: 8 weeks at 32 degrees F (0 degrees C) in glass

Brewer's Specifics

Mash grains using a standard double decoction mash schedule.

Judges' Comments

"Good, clean malt aroma. Very clean-tasting helles. Excellent."

"Clean malt backed up with low levels of hop aroma. Wonderful brew; suggestion would be to increase body ever so slightly. Thanks!"

Brewer's Comments

Dietrich says this was the first bock he has brewed that has ever won in the Nationals, and it was also the first time he'd tried a double decoction mash. Coincidence? Probably not.

Specialty Beer



BRONZE MEDAL

AHA 1998 NATIONAL HOMEBREW COMPETITION

Tom Stelman, Utica, MI

"Hava Java Stout"

Classic Style Specialty Beer

Ingredients for 5 U.S. gal (19 L)

- 12 lb pale malt (5.4 kg)
- 1 lb crystal malt (.45 kg)
- 1 lb brown malt (.45 kg)
- 1 lb roasted barley (.45 kg)
- 2 oz Kent Golding whole hops, 4.3% alpha acid (56 g) (60 min.)
- 12 tbsp ground roasted coffee (177 mL)
- Wyeast No. 1084 Irish ale yeast

- Original specific gravity: 1.065
- Final specific gravity: 1.015
- Boiling time: 60 min.
- Primary fermentation: 14 days at 65 degrees F (18 degrees C) in glass
- Secondary fermentation: 30 days at 40 degrees F (4 degrees C) in glass

Brewer's Specifics

Mash grain at 158 degrees F (60 degrees C) for one hour. Brew coffee in 48 oz (1.42 L) of water—add at bottling.

Judges' Comments

"Coffee and roast barley blend well and dominate. Medium to high hop bitterness. Some fruitiness (coconut) as well."

"Quite nice. A very good, drinkable beer with the coffee blending well with the roasted barley."

Brewer's Comments

Stelman suggests that the secret to brewing a great coffee stout is to take care not to brew the coffee too hot. He recommends using a coffee machine for this, since the temperature is automatically regulated for the optimum temperature. Adding the brewed coffee at bottling is also a great way to keep all the coffee flavor and aroma in the beer.

English-Style Pale Ale



SILVER MEDAL

AHA 1998 NATIONAL HOMEBREW COMPETITION

Dave Schaffer, Lafayette, CO

"Mullethead Ale"

Classic English Style Pale Ale

Ingredients for 10 U.S. gal (19 L)

- 13 lb pale malt (5.9 kg)
- 4 lb Vienna malt (1.8 kg)
- 3 lb pale ale malt (1.81 kg)
- 1 lb Victory malt (.45 kg)
- 1 lb wheat malt (.45 kg)
- 1 lb Munich malt (.45 kg)
- .75 lb 40 °L crystal malt (.34 kg)
- 6 oz special roast (170 g)
- 4 oz 90 °L crystal malt (.11 kg)
- 1.75 oz Centennial pellet hops, 8.7% alpha acid (50 g) (75 min.)
- 1 oz East Kent Golding pellet hops, 5.6% alpha acid (28 g) (25 min.)
- 1 oz Fuggle pellet hops, 4.5% alpha acid (28 g) (25 min.)
- 1 oz East Kent Golding pellet hops, 5.6% alpha acid (28 g) (15 min.)
- 1 oz Fuggle pellet hops, 4.5% alpha acid (28 g) (15 min.)
- 2 oz East Kent Golding pellet hops alpha acid (56 g) (3 min.)
- 2 oz East Kent Golding pellet hops alpha acid (56 g) (dry)
- 2 oz Fuggle pellet hops, 5.6% alpha acid (56 g) (dry)
- Wyeast No. 1056 American ale yeast
- .75 cup corn sugar (177 mL) (to prime)

- Original specific gravity: 1.056
- Final specific gravity: 1.015
- Boiling time: 90 min.
- Primary fermentation: 15 days at 61 degrees F (16 degrees C) in glass
- Secondary fermentation: 11 days at 61 degrees F (16 degrees C) in glass

Brewer's Specifics

Conduct a protein rest at 130 degrees F (52 degrees C) for 30 min. Raise temperature to 154 degrees F (68 degrees C) for 75 min. Mash out at 164 degrees F (73 degrees C) for 5 min.

Judges' Comments

"Nice light malt/hop flavors. Balance good. What a nice beer—good job! Send more!"

"The malt comes straight on, underpinned by solid hop flavor. Great balance. Dry, bitter finish. A tremendous amount of flavor for the body. A little more breadiness would help even more. Very well done, old chap! This is a great English ale—full flavor, crisp hopping, yet dry and easy to drink. Thank you!"



Every gold-medal winning recipe from the AHA 1998 National Homebrew Competition was printed in the 1998 Nov/Dec *Zymurgy* (Vol. 21, No. 4) "Winners Circle."

English- & Scottish- Style Strong Ale



SILVER MEDAL

AHA 1998 NATIONAL HOMEBREW COMPETITION

Bradley Maxfield, New Berlin, WI

"Red Tartan Scotch Wee Heavy"

Strong Scotch Ale

Ingredients for 5 U.S. gal (19 L)

- 8.5 lb Pilsener malt (2.72 kg)
- 1.5 lb smoked pale malt (.68 kg)
- 1 lb smoked 90 °L crystal malt (.45 kg)
- 1 lb Belgian Cara-Vienne malt (.34 kg)
- 1 lb Munich malt (.45 kg)
- 5.5 oz roasted barley (156 g)
- 5.5 oz chocolate malt (156 g)
- 2 oz Fuggle whole hops, 5.5% alpha acid (56 g) (60 min.)
- 1 oz East Kent Golding whole hops, 5% alpha acid (28 g) (10 min.)
- Wyeast No. 1728 Scottish ale yeast
- .66 cup corn sugar (156 mL) (to prime)

- Original specific gravity: 1.092
- Final specific gravity: 1.035
- Boiling time: 60 min.
- Primary fermentation: seven days at 65 degrees F (20 degrees C) in glass
- Secondary fermentation: 14 days at 65 degrees F (20 degrees C) in glass

Brewer's Specifics

Mash grains at 154 degrees F (68 degrees C) for 60 minutes.

Judges' Comments

"Very smoky, alcoholic and caramelly. Lingering caramel—smoke finish very pleasant. I like smoke beers but this one will knock most people over. Otherwise, good recipe formulation; no fermentation problems—dangerous beer if you like this style. Good job."

"Outstanding beer, maybe on the edge for smokiness, but I love it. Make lots more."

Herb and Spice Mead



BRONZE MEDAL

AHA 1998 NATIONAL HOMEBREW COMPETITION

Gunther Jensen, Kagel Canyon, CA

"Cinnamon Girl"

Still Metheglin

Ingredients for 1 U.S. gal (3.79 L)

- 3 lb orange blossom honey (1.36 kg)
- 1 tsp yeast nutrient (4.9 mL)
- 1 tsp acid blend (4.9 mL)
- 2 cinnamon sticks
- 1 tbsp coriander seeds (14.8 mL)
- .5 tsp fennel seeds (2.5 mL)
- 5 whole cloves
- Red Star Champagne yeast

- Original specific gravity: 1.112
- Final specific gravity: 1.024
- Boiling time: n/a
- Primary fermentation: 3 months at 65 degrees F (19 degrees C) in glass
- Secondary fermentation: 5 months at 65 degrees F (19 degrees C) in glass
- Tertiary fermentation: 4 months at 65 degrees F (19 degrees C) in glass

Judges' Comments

"Clove and cinnamon flavors, some harsh hot alcohol flavor, medium sweetness, could possibly use a little more aging. Some honey flavor trying to get through. Nice balance of spices."

"Very smooth, rich and complex. Not too overwhelming. Nice work with the clove; this is a difficult spice to handle!"

Brewer's Comments

Jensen uses no more than .25 oz (7 g) of spice per gallon of mead, and only uses raw honey, directly from the beekeeper. He treats his meads like wines, using sulphites and avoiding any sort of heat treatment or pasteurization of the must.

Amahl Turczyn is a 1998 GABF Gold Medal-winning professional brewer and the former AHA Project Coordinator.

HOMEBREW CONNECTION

THESE FINE RETAIL SHOPS ACROSS NORTH AMERICA OFFER HOMEBREWING INGREDIENTS AND SUPPLIES. PLAN TO VISIT THEM WHEN YOU ARE IN THE AREA.

ALABAMA

Home Wine & Beer Makers
2520 Old Shell Road
Mobile, AL 36607
(334) 478-9387

ARIZONA

GunnBrew Supply Co.
16627 N. Cave Creek Rd.
Phoenix, AZ 85032
(602) 788-8811;
gunnbrew@treknet.net;
http://www.gunnbrew.com

ARKANSAS

Simple Pleasures Home Wine & Beermaker's Supply
115 North 10th St.,
Suite C 103
Fort Smith, AR 72901
(501) 783-2500

CALIFORNIA

Brewer's Rendezvous
11116 Downey Ave.
Downey, CA 90241
(562) 923-6292; FAX (562) 923-7262; bob@bobbrews.com;
http://www.bobbrews.com

Home Brew Mart
731 South Hwy 101, Ste 1B2
Solana Beach, CA 92075
(619) 794-2739;
brewmart@connectnet.com;
http://homebrewmart.com

Home Brew Mart
5401 Linda Vista Rd., #406
San Diego, CA 92110
(619) 295-2337;
brewmart@connectnet.com;
http://homebrewmart.com

Beer, Beer & More Beer
PO Box 4538
Walnut Creek, CA 94596
(510) 939-BEER; (800) 600-0033;
beerx3@ix.netcom.com;
http://www.morebeer.com

Beer + Brew Gear
218 East Grand
Escondido, CA 92025
(760) 741-BREW (2739);
http://www.beer-brewgear.com

The Beverage People
840 Piner Rd. #14
Santa Rosa, CA 95403
(707) 544-2520; (800) 544-1867

Culver City Home Brewing Supply
4358 1/2 Sepulveda Blvd.
Culver City, CA 90230
(310) 397-3453; (800) 382-7394;
FAX (310) 397-6913;
info@brewsupply.com;
http://www.brewsupply.com

Doc's Cellar
855 Capitolio Way, Suite #2
San Luis Obispo, CA 93401
(805) 781-9974

HopTech
3015 Hopyard Rd., Suite E
Pleasanton, CA 94588
(925) 426-1450; (800) DRY-HOPS;
FAX (925) 426-9191;
info@hoptech.com;
http://www.hoptech.com;

Murrieta Homebrew
24710 Washington Ave., #3
Murrieta, CA 92562
Ph (909) 696-9967; FAX (909) 600-0411; (800) 879-6871;
http://www.beer-brewgear.com

Portable Potables
1011 A-41st Ave.
Santa Cruz, CA 95062
(408) 476-5444

Ruud-Rick's Homebrew Supply
7273 Murray Dr. #17
Stockton, CA 95210
(209) 957-4549; ruudrick@aol.com

San Francisco Brewcraft
1555 Clement St.
San Francisco, CA 94118
(415) 751-9338;
sfbrew@sirius.com;
http://www.sirius.com/~sfbrew

Stein Fillers
4180 Viking Way
Long Beach, CA 90808
(562) 425-0588

COLORADO

Beer at Home
3157 S. Broadway
Englewood, CO 80110
(303) 789-3676; (800) 789-3677;
FAX (303) 781-2388;
beer@boulder.earthnet.net;
http://www.beerathome.com/~beer

The Brew Hut
16883 E. Iliff Ave.
Aurora, CO 80013
(303) 752-9336; (800) 730-9336;
http://www.thebrewhut.com

Highlander Home Brew Inc.
151 W. Mineral Ave., Suite 133
Littleton, CO 80120
(303) 794-3923; (800) 388-3923;
highlander@csn.net;
http://www.highlander-brew.com;

The Homebrew Hut
555 I Hwy. 287
Broomfield, CO 80020
(303) 460-1776

The Homebrew Store
1002 East Rainbow Boulevard
Salida, CO 81201
(719) 530-0825;
grunner@chaffee.net

Liquor Mart Inc.
1750 15th St.
Boulder, CO 80302
(303) 449-3374; (800) 597-4440

**My Home Brew Shop-
Homebrew Supplies and
Brew-On-Premise**
1822 Dominion Way
Colorado Springs, CO 80918
(719) 528-1651; FAX (719) 528-1651; myhomebrew@hotmail.com

CONNECTICUT

Appy's Homebrew Supply
7 Marion Dr.
East Lyme, CT 06333
(860) 691-1473

**Great American Home Brew
Supplies at Geremia Gardens**
1720 West St. (RT 229)
Southington, CT 06489
(860) 620-0332; (800) 94-UBREW

Wine and Beer Art
(of Smith-Tompkins)
1501 E. Main St., Route 202
Torrington, CT 06790
(860) 489-4560

FLORIDA

Brew Shack
4025 W. Waters Ave.
(Waterside Plaza)
Tampa, FL 33614
(813) 889-9495; (800) 646-BREW;
FAX (813) 889-7677;
http://www.wp.com/brewshack

**Heart's Home Beer and Wine
Making Supply**
5824 North Orange Blossom Trail
Orlando, FL 32810
(800) 392-8322; (407) 298-4103;
FAX (407) 298-4109;
http://www.Heartshomebrew.com

Sunset Suds, Inc.
PO Box 462
Valparaiso, FL 32580-0462
(800) 786-4184; SunsetSuds@aol.com;
http://members.aol.com/SunsetSuds/
Index.htm

GEORGIA

Brew Your Own Beverages Inc.
20 E. Andrews Dr. N.W.
Atlanta, GA 30305
(404) 365-0420; (800) 477-BYOB;
http://www.OnlineSU.com/BYOB\

Wine Craft of Atlanta
5920 Roswell Rd.
Parkside Shopping Center
Atlanta, GA 30328
(404) 252-5606

ILLINOIS

**Bev Art Homebrew & Mead
Making Supply**
10033 S. Western Ave.
Chicago, IL 60643
(773) 233-7579; FAX (773)
BEER579; bevart@ameritech.net

The Brewer's Coop
30W114 Butterfield Rd.
Warrenville, IL 60555
(630) 393-BEER;
FAX (630) 393-2323;
http://www.TheBrewersCoop.com

Chicagoland Winemakers Inc.
689 W. North Ave.
Elmhurst, IL 60126-2132
(630) 834-0507; (800) 226-BREW

Crystal Lake Health Food Store
25 E. Crystal Lake Ave.
Crystal Lake, IL 60014
(815) 459-7942

Home Brew Shop
1434 E. Main St.
St. Charles, IL 60174
(630) 377-1338

Old Town Liquors
514 S. Illinois Ave.
Carbondale, IL 62901
(618) 457-3513

INDIANA

Beer & Wine by U
1456 N. Green River Rd.
Evansville, IN 47715
(812) 471-4352; (800) 845-1572

Great Fermentations of Indiana
1712 East 86th St.
In the Northview Mall
Indianapolis, IN 46240-2360
(317) 848-2501; (888) HME-BREW
(463-2739)

IOWA

Heartland Homebrew Supply
7509 Douglas Ave., Ste 19
Urbandale, IA 50322
(515) 252-0979;
HeartlandHBS@msn.com

KANSAS

Bacchus & Barleycorn Ltd.
6633 Nieman Rd.
Shawnee, KS 66203
(913) 962-2501; FAX (913) 962-0008; http://www.bacchus-barleycorn.com

KENTUCKY

New Earth Homebrewing & Hydroponics
9810 Taylorsville Rd.
Louisville, KY 40299
(502) 261-0005; (800) 462-5953;
newearth@newearth.com;
<http://www.the-coop.com/newearth/>

Winemakers Supply & Pipe Shop

9477 Westport Rd.
Westport Plaza
Louisville, KY 40241
(502) 425-1692

LOUISIANA

Alfred's Brewing Supply
PO Box 5070
59125 Carroll Rd.
Slidell, LA 70469-5070
(800) 641-3757; (504) 641-2545;
save@home-brew.com;
help@home-brew.com;
<http://www.home-brew.com>

MARYLAND

Four Corners Liquors and Homebrew Supply House
3439 Sweet Air Road
Phoenix, MD 21131
(410) 666-7320;
FAX (410) 666-3718;
4corners@homebrewsupply.com;
<http://homebrewsupply.com>

The Flying Barrel
103 South Carroll St.
Frederick, MD 21701
(301) 663-4491; FAX (301) 663-6195; <http://www.flyingbarrel.com>

Maryland Homebrew
6770 Oak Hall Lane, Suite 115
Columbia, MD 21045
(410) 290-FROTH; FAX (410) 290-6795; (888) BREWNOW (toll free order line); <http://www.mdhb.com>

Midnight Homebrew Supply
11 Liberty St., Ste G
Westminster, MD 21157
(410) 876-6999; FAX (410) 876-7954; midnight@qis.net;
<http://www.qis.net/~midnight>

MASSACHUSETTS

Barleymalt & Vine
26 Elliot St.
Newton, MA 02161
(800) 666-7026; (617) 630-1015;
<http://www.bm-v.com>

Beer and Wine Hobby
180 New Boston St.
Woburn, MA 01801
(781) 933-8818; (800) 523-5423;
shop@beer-wine.com;
<http://www.beer-wine.com>

The Modern Brewer Co.
2304 Massachusetts Ave.
Cambridge, MA 02140
(617) 498-0400; FAX (617) 498-0444; info@modernbrewer.com;
<http://modernbrewer.com>

NFG Homebrew Supplies
72 Summer St.
Leominster, MA 01453
(978) 840-1955;
FAX (978) 840-1955

Strange Brew Beer & Winemaking Supplies
197 Main St.
Marlboro, MA 01752
(508) 460-5050; (877) 460-5050;
stbrew@tiac.net

MICHIGAN

Brew & Grow
33523 W. 8 Mile #F-5
Livonia, MI 48152
(248) 442-7939; (800) 734-4195

Brew-it Yourself Center
13262 Northline Rd.
Southgate, MI 48195
(734) 284-9529;
brewyourself@earthlink.net

The Homebrew Shop At Music Express
5049 West Main
Kalamazoo, MI 49009
(616) 342-1239

Things Beer "Home of the Fermentation Station"
100 E. Grand River
Williamston, MI 48895
(517) 655-6701; (800) 765-9435;
FAX (517) 655-3565;
thingsbeer@voyager.net;
www.thingsbeer.com

Wine Barrel Plus
30303 Plymouth Rd.
Livonia, MI 48150
(313) 522-9463; Fax (313) 522-3764; <http://www.winebarrel.com>;
marc.george@worldnet.att.net

MINNESOTA

Lake Superior Brewing Co.
600 E. Superior St.
Duluth, MN 55802
(218) 720-3491; (800) 720-0013;
FAX (218) 720-6459;
lsbrew@cpinternet.com;
cpinternet.com/~lsbrew

Midwest Homebrew Supplies
4528 Excelsior Blvd.
St. Louis Park, MN 55416
(612) 925-9854; (888) 449-2739;
FAX (612) 925-9867;
<http://www.midwestsupplies.com>;
dave@midwestsupplies.com

Von Klopp Brew Shop
Highway 52, Box 386
Pine Island, MN 55963-0386
(800) 596-2739; FAX (800) 320-5432; vonklopp@means.net;
<http://www.hps.com/vonklopp>

WindRiver Brewing Co. Inc.
7212 Washington Ave. S.
Eden Prairie, MN 55344
(612) 942-0589; (800) 266-HOPS;
FAX (612) 942-0635;
windrvr@bitstream.net;
<http://www.windriverbrew.com>

MISSOURI

Home Brew Supply LLC
3508 S. 22nd Street
St. Joseph, MO 64503
(816) 233-9688; (800) 285-4695;
homebrew@msc.net;
<http://www.msc.net/homebrew/>

St. Louis Wine & Beermaking
251 Lamp & Lantern Village
St. Louis, MO 63017
(314) 230-8277; FAX (314) 527-5413; (888) 622-WINE;
www.wineandbeermaking.com

NEBRASKA

Kirk's Do-It-Yourself Brew
1150 Cornhusker Hwy.
Lincoln, NE 68521
(402) 476-7414

NEVADA

Beer & Brew Gear (formerly known as Mr. Radz Homebrew Supply Shop)
4972 S. Maryland Pkwy. #4
Las Vegas, NV 89119
(702) 736-8504; Outside NV; (800) 465-4723; FAX (702) 736-7942;
mrradzhb@aol.com

NEW HAMPSHIRE

Beer Essentials
611 Front St.
Manchester, NH 03102
(603) 624-1080; (800) 608-BEER

Hops & Dreams
PO Box 914
Atkinson, NH 03811
(888) BREW-BY-U;
<http://www.hopsanddreams.com>

NEW JERSEY

BEERCRAFTERS Inc.
110A Greentree Rd.
Turnersville, NJ 08012
(609) 2 BREW IT; FAX (609) 227-0175; drbarley@aol.com

Hop & Vine
11 DeHart St.
Morristown, NJ 07960
(973) 993-3191; FAX (973) 993-3193; (800) 414-BREW;
<http://www.hopandvine.com>

Perrines Farm-Homebrewing and Winemaking Supplies
610 Little York-Mt. Pleasant Rd.
(Route 631)
Milford, NJ 08848
(908) 996-4001; FAX (908) 996-6468; katydid@sprintmail.com

Princeton Homebrew
148 Witherspoon St.
Princeton, NJ 08542
(609) 252-1800; FAX (609) 252-1800; schd@pluto.njcc.com

NEW YORK

At Home Warehouse Distributors
PO BOX 185
Clarence, NY 14031
(800) 210-8585 (Mail Order/Retail);
(716) 685-2306; FAX (716) 681-0284; ahwd@commtech.net;
<http://www.ahwd.com>

The Brew Shop @ Cornell's
310 White Plains Rd.
Eastchester, NY 10707
(800) 961-BREW; FAX (914) 961-8443; brewshop@cornells.com;
<http://www.cornells.com>

Brewers Den
75 Smithtown Rd.
Smithtown, NY 11787
(516) 979-3438; (800) 499-BREW;
<http://www.brewersden.com>

The Brews Brothers at KEDCO-Beer & Wine Supply Store
564 Smith St.
Farmingdale, L.I., NY 11735-1168
(516) 454-7800; (800) 654-9988
(outside N.Y. only); FAX (516) 454-4876

D.P. Homebrew Supply
1998 E. Main St., Route 6
PO Box 625
Mohegan Lake, NY 10547
(914) 528-6219

E.J. Wren Homebrewer Inc.
Ponderosa Plaza (behind Heids)
off Old Liverpool Rd.
Liverpool, NY 13088
(315) 457-2282; (800) 724-6875
(free catalog)

Homebrew & Grow-East Coast Hydroponics Inc.
439 Castleton Ave.
Staten Island, NY 10301
(718) 727-9300; FAX (718) 727-9313

Homebrew & Grow-East Coast Hydroponics Inc.
146-49 Horace Harding
Expressway
"Service Road of L.I.E."
Flushing, NY 11367
(718) 762-8880

The Homebrew Experience
94 Ridge Rd.
Ridge, NY 11961
(888) BREW-GUYS (toll free);
brewguys@brewguys.com;
<http://www.brewguys.com>

New York Homebrew
221 Old Country Rd.
Carle Place, NY 11514
(800) YOO-BREW; (516) 294-1164; FAX (516) 294-1872;
info@yoobrew.com; sales@yoobrew.com;
<http://www.yoobrew.com>

Niagara Tradition Homebrew
1296 Sheridan Drive
Buffalo, NY 14217
(716) 877-8767; (800) 283-4418;
FAX (716) 877-6274;
ntbrew@localnet.com;
<http://www.nthomebrew.com>

Party Creations
RD 2 Box 35 Rokeby Rd.
Red Hook, NY 12571
(914) 758-0661

NORTH CAROLINA

Alternative Beverage
114-O Freeland Lane
Charlotte, NC 28217
(704) 527-2337; (800) 365-BREW;
altbev@e-brew.com;
http://www.e-brew.com

OHIO

The Grape and Granary
1302 E. Tallmadge Ave.
Akron, OH 44310
(330) 633-7223; (800) 695-9870;
http://www.grapeandgranary.com

HoMade Brewing Supplies
505 Superior St.
Rossford, OH 43460-1246
(419) 666-9099; (888) 646-6233;
homade@primenet.com;
http://www.primenet.com/~homade

JC Homebrewing Co.
8306 State Route 43
East Springfield, OH 43925
(614) 543-4200; (800) 899-5180;
jcbrew@1st.net;
http://www.jchomebrew.com;

Portage Hills Vineyards
1420 Martin Rd.
Suffield, OH 44260
(800) 418-6493;
portage@ix.netcom.com;
http://www.portagehills.com/portage

**Shreve Home Brewing and
Wine Making Supply**
299 Jones St.
PO Box 17
Shreve, OH 44676
(330) 567-2149 (free catalog);
(877) 567-2149; bkr@valkyrie.net;
www.shrevebrewing.com/

OKLAHOMA

**Cher-Dan's SSS Wine & Beer
Supplies**
827 West Maine
Enid, OK 73701
(580) 237-6881; FAX (580) 237-
6880; cherdans@enid.com;
http://www.enid.com/cherdands/

OREGON

Homebrew Heaven
1292 12th St. S.E.
Salem, OR 97302
(503) 375-3521

PENNSYLVANIA

Home Sweet Homebrew
2008 Sansom St.
Philadelphia, PA 19103
(215) 569-9469; FAX (215) 569-
4633; homsweet@voicenet.com

Keystone Homebrew Supply
779 Bethlehem Pike
Montgomeryville, PA 18936
(215) 855-0100; FAX (215) 855-
4567; keystonehb@juno.com

Mr. Steve's Homebrew Supplies
4342 N. George St.
Manchester, PA 17345
(717) 266-5954; (800) 815-9599;
FAX (717) 266-1566;
brewmutt@aol.com;
http://home1.gte.net/mrstevens/

**Pennsylvania Homebrew
Market & Cigars**
1826 Broadhead Rd.-Cresmont
Shopping Center
Aliquippa, PA 15001
(888) 446-2739; (412) 375-4455

The Wine & Beer Barrel
The Olde Ridge Village Shoppes
Chadds Ford, PA 19317
(610) 558-2337 (BEER); FAX (610)
358-3752; cmc3375@aol.com

SOUTH CAROLINA

Happy Dog Brewing Supplies
401 West Coleman Blvd.
Mt. Pleasant, SC 29464
(843) 971-0805; wilk@nations.net;
http://www.catalog.com/happydog

U-BREW

1207 HWY 17 S.
N. Myrtle Beach, SC 29582
(803) 361-0092; (800) 845-4441

TENNESSEE

Allen Biermakens
4111 Martin Mill Pike
Knoxville, TN 37920
(615) 577-2430; (800) 873-6258

**New Earth Homebrewing
& Hydroponics**
139 Northcreek Blvd.
Metro Nashville, TN 37072
(615) 859-5330; (800) 982-4769;
newearth@newearth.com;
http://www.the-coop.com/newearth/

TEXAS

Brew Masters
426 Butternut
Abilene, TX 79602
(915) 677-1233; FAX (915) 690-
1205; prisc@camalott.com;
http://www.texasbrew.com

Canada Homebrew Supply
1998 C. Industrial Blvd.
Abilene, TX 79602
(915) 698-4744; FAX (915) 698-
5855; (888) 839-2739 (Toll Free);
william@canadahomebrew.com;
http://www.canadahomebrew.com

The Home Brewery
PO Box 308
3800 Colleyville Blvd.
Colleyville, TX 76034
(817) 281-7252; (800) 817-7369
(orders); FAX (817) 581-4335;
http://www.flash.net/~greg10

Homebrew Supply of Dallas
777 South Central Expwy., Ste 2G
Richardson, TX 75080
(972) 234-5922;
FAX (972) 234-5922;
jmorgan@primaview.com;
http://www.homebrews.com

**Homebrew Headquarters —
North**
1335 Promenade, Suite 1335
Richardson, TX 75080
(214) 234-4411;
(214) 699-1439; (800) 966-4144;
http://www.homebrewhq.com

**Homebrew Headquarters —
West**
900 E. Copeland, Suite 120
Arlington, TX 76011
(817) 792-3940; (800) 966-4144;
http://www.homebrewhq.com

Lubbock Homebrew Supply
1718 Buddy Holly Ave.
Lubbock, TX 79401
(800) 742-BREW; (806) 763-7480;
lubbock.homebrew@door.net;
http://door.net/homebrew/

**St. Patrick's of Texas Brewers
Supply**
12922 Staton Dr.
Austin, TX 78727
(512) 832-9045; (800) 448-4224;
FAX (512) 832-8552;
stpats@wixer.bga.com;
http://www.stpats.com

**St. Patrick's at Waterloo
Brewing**
401A Guadalupe St.
Austin, TX 78701
(512) 499-8544; FAX (512) 499-
8621; stpats@wixer.bga.com;
http://www.stpats.com

The Winemaker Shop
5356 W. Vickery Blvd.
Fort Worth, TX 76107
(817) 377-4488; (800) IT BREWS;
FAX (817) 732-4327;
brewsome@Onramp.NET;
http://winemakershop.com;

UTAH

The Beer Nut Inc.
1200 S. State
Salt Lake City, UT 84111
(801) 531-8182; FAX (801) 531-
8605; (800) 626-2739;
sales@beernut.com;
http://www.xmission.com/~beernut

VIRGINIA

The Brewmeister
1215G George Washington
Memorial Hwy.
Yorktown, VA 23693
(757) 595-HOPS; FAX (757) 596-
1034

Pints O' Plenty
Lower Level of Peddler Antiques
RT 854 At RT 221
Forest, VA 24551
(804) 385-0077

**Rocktown Brewers + Mid-At-
lantic Brewers Supply**
52 E. Market St.
Harrisonburg, VA 22801
(540) 432-6799; furges@rica.net;
http://home.rica.net/furges

Roanoke Homebrew Supply
1902-D Memorial Avenue, S.W.
Roanoke, VA 24015
Ph/FAX (540) 345-2789

**The WeekEnd Brewer-Home
Brew Shop**
4205 West Hundred Rd.
Chester, VA 23831
(804) 796-9760; FAX (804) 796-
9561; wkendbr@erols.com;
http://www.weekendbrewer.com

Vintage Cellar
1313 S. Main St.
Blacksburg, VA 24060
(540) 953-CORK; FAX (540) 552-
6258 (MALT); (800) 672-WINE;
sales@vintagecellar.com;
http://www.vintagecellar.com

WASHINGTON

Alchemy Brew & Wine
104 S. 4th Ave.
Pasco, WA 99301
(509) 545-4605; wesa1@gte.net

The Beer Essentials
2624 S. 112th St., #E-1
Tacoma, WA 98444
(253) 581-4288; (800) 685-2739;
robn2beer@thebeeressentials.com;
http://www.thebeeressentials.com

Brewers Warehouse
4520 Union Bay Place N.E.
Seattle, WA 98105
(206) 527-5047;
http://www.brewerswarehouse.com

The Cellar Homebrew
14411 Greenwood Ave. N.
Seattle, WA 98133
(206) 365-7660; (800) 342-1871;
staff@cellar-homebrew.com;
http://www.cellar-homebrew.com

**Homebrew Heaven (formerly
The Home Brewery)**
9109 Evergreen Way
Everett, WA 98204
(425) 355-8865; FAX (425) 290-
8336; (800) 850-2739 order line;
HmBrewery@aol.com

Kim's Place
Smokey Point Plaza
3405 172nd St. N.E.
Arlington, WA 98223
(360) 658-9577; (888) 658-9577;
kimsplace@tgi.net

Larry's Brewing Supply
7405 S. 212th St. #103
Kent, WA 98032
(206) 872-6846;
(800) 441-BREW; jtrent@aa.net;
http://www.brewingn.com/larrys;

WISCONSIN

Homebrew Market
520 E. Wisconsin Ave.
Appleton, WI 54911
(920) 733-4294; (800) 261-2337;
FAX (920) 733-4173;
http://www.homebrewmarket.com

Life Tools Adventure Outfitter
930 Waube Lane
Green Bay, WI 54304
(920) 339-8484;
http://www.Lifetls.com

CANADA

ONTARIO

Marcon Filters
1428 Speers Rd., Unit 9
Oakville, ON L6L 5M1
(905) 825-8847; FAX (905) 825-8404;
marcon.filter@sympatico.ca; http://
www3.sympatico.ca/marcon.filters/

To have your shop listed, please call Linda
Starck at (303) 447-0816 ext. 109 or (888)
822-6273 ext. 109.

Thomas Hardy's Ale (from page 27)

English playwright David Edgar, in his 1985 work *Entertaining Strangers*, tries to flesh out the historical record regarding Sarah and Charles. The play takes place over a span of 25 years, during which the Industrial Revolution overtakes the sleepy backwater town of Dorchester. Sarah Eldridge is one of the protagonists; the other is Henry Moule, a progressive but priggish minister who wants to put an end to the liquor trade. Charles Eldridge is portrayed—perhaps unfairly—as a dotty eccentric who makes his entrance wearing a pair of hand puppets. Charles is a bit of a bumbler. He loses his post as manager of the Antelope Hotel, one of the town's principal coaching inns, after he staggers into the banquet room and drunkenly addresses a group of the town's gentry. Edgar gives the impression that Sarah is using her husband as a front to get ahead in the business community, where women during the Victorian Age were uncommon and generally unwelcome.

Sarah Eldridge, on the other hand, comes off as a resilient woman and a visionary. Edgar is on firm ground here. Guessing correctly that the coming of the railroad would vastly expand her clientele, Sarah modernized her plant (renamed the Dragon Brewery), installing steam-driven equipment, and began acquiring a chain of pubs. She weathered more than her share of tragedies. Charles passed away in 1846. A 16-year-old son, also named Charles, died after contracting tetanus from a foot injury. Sarah herself died in 1856 at the age of 58, possibly poisoned by the lead pipes in her own brewery. The business was divided up among her daughters and their families.

The First Pope

The first Pope involved with the brewery was a prosperous landowner named John Allen Pope, who bought a minority interest in the brewery in 1871 to provide positions for his sons Edwin and Alfred. It was through Alfred that the brewery claims a relationship to Thomas Hardy. Alfred and Hardy attended the same school in Dorchester during the 1860s, and became the best of friends as adults. In his later years, Hardy

in fact wrote the foreword to *A Wessex Family and the Great War*, a vanity press publication detailing the World War I service records of Alfred's progeny.

According to legend, Hardy sought inspiration for his writing from Pope's strong ales. It's just as likely, however, that Hardy indulged to forget his writing for awhile. The novelist was keenly sensitive to human suffering, and his major works are often extremely gloomy. *The Trumpet Major*, cited earlier, concludes with the hero John Loveday marching off to meet his death on the battlefield during the Napoleonic Wars. Hardy called that novel "a cheerful story." *The Mayor of Casterbridge* opens with the title character, in a state of intoxication, selling his wife for five guineas at a barroom auction. In *Tess of the D'Urbervilles*, the heroine stabs to death the man she's living with, then is apprehended and executed. *Jude the Obscure* contains a scene in which a young child, concerned with overpopulation, murders his two siblings and then hangs himself.

Many poets have sought refuge in the beauty of nature. Not, however, Hardy. His poem "In a Wood" presents a Darwinian view of the forest in which its residents are all locked in a life-or-death struggle. ("Sycamore shoulders oak, Bines the slim sapling yoke, Ivy-spun halts choke elms stout and tall.")

Light reading it's not.

Editing Literature

Nevertheless, Hardy was not a cynic and believed that humankind was capable of uplifting itself. He probably benefitted greatly from his friendship with Alfred Pope. The two shared many interests. (Despite Hardy's jaded view of nature, he and Pope were avid tree planters, setting down tens of thousands of saplings in their lifetimes.) Pope also helped Hardy do some editing. The passage from *The Trumpet Major* quoted earlier, the one about the remarkable ale, originally contained an additional sentence:

"...But its whole army of brewers have passed away, its flavour is forgotten except by a few aged men, and the secret of its composition appears to have been completely lost as that of Falstaff's favourite beverage."



Inside the Thomas Hardy Brewery.

According to Seekings' book, Hardy deleted the sentence at the suggestion of Alfred Pope. It would hardly have been considerate of Hardy to suggest that his best friend was no longer capable of brewing good ale!

The 20th century brought ups and downs for Eldridge Pope. The aftermath of World War I was a hard time: three of Alfred's sons and one son-in-law never returned from the Great War. In 1922, a fire that started in the hop room spread to the other buildings, destroying the brewery. A new generation of Popes rebuilt the business, inaugurating the new plant in 1925.

In 1986, company chairman Christopher Pope, great-grandson of Alfred, began exporting his Thomas Hardy's Ale to the United States. The debut, at the North Star Pub in New York City, was a smashing success. However, the beer ran into labeling problems with the Bureau of Alcohol, Tobacco and Firearms. Because the word "strong" is taboo with the ATF, Thomas Hardy's had to refer to itself as "England's rarest ale." Although each label lists the year brewed, the ATF has prohibited the use of the word "vintage." "We provided all sorts of documentation, and talked to three or four agents and a supervisor," recalls Saxon. "But the ATF doesn't believe you can have a vintage beer."

In 1996, Eldridge Pope decided to concentrate on its core business of pub retailing. "The brewery was felt to have a negative impact on profits," notes Wharton. Management didn't want to close the historic plant, so they brought in consultant Peter Ward to find a way to make the business more profitable. Ward's solution was to spin off two independent companies: Thomas Hardy Brewery Ltd. and Thomas Hardy Packaging Ltd. Ward today is majority owner of both firms, with Eldridge Pope holding a minority stake.

Both are strictly contract operations, brewing and packaging other people's brands. The Thomas Hardy Brewery still brews Thomas

Vertical Sampling of Thomas Hardy's

BY PAUL GATZA

I deliberately scheduled the barley wine tasting an hour before I realistically expected any of the invitees to arrive. I assumed that homebrewers, like barley wine, would refuse to be rushed. I was wrong. The first group of attendees of the 1998 Great Barley wine Barchive Reduction were actually early. The task at hand was a box of nearly 50 barleywines, including six different years of Thomas Hardy's, three years of Old Knucklehead, four years of Old Crustacean, five years of Bigfoot, some Old Foghorns (the actual number of years is a little foggy), some Old Samiclaus, other commercial examples and a range of homebrewed barleywines.

The group consensed that after an ESB to get the palates prepared for hops, malt, yeast and alcohol, the Thomas Hardy's was the place to start. We started backwards from 1997, had no 1992 or 1991, and finished up with the 1990 vintage. We talked about the story of a 1968-vintage bottle of Thomas Hardy's selling for \$10,000. That buyer was far more serious about his/her barley wine than our group, and I doubt he/she played horseshoes while savoring it.

As the limitations of memory do not allow for long comments, here is a short recollection on the purchase of each vintage and the qualities of each:

1997

I purchased this bottle at Harvest Liquors in Boulder. This version had some sweet cornlike aromas, perhaps from DMS, and a lot of fruit. We agreed that it tasted nice now, but could use a few more years.

1996

I discussed with Harvest's staff person Jim (a winemaker who sold homebrew supplies in the early-80s in a past life) the possibility of finding older vintages. He had heard of some outside of Chicago that had been returned to the distributor because they were "too old." Those were all gone when he inquired, but he did bring in 1994, 1995 and 1996, set up a nice display and charged \$3.99 or more per bottle. The 1996 still had some fusel alcohols in the nose. While still a good beverage, it was unanimously voted the least favorite vintage by the group. Again, we agreed that it was too young.

1995

One sip of this vintage showed we had hit a major point of smoothness at three years old. This bottle, purchased at Liquor Mart in Boulder, CO, had a fullness, roundness and overall balance about it. In my mind, we found the definition of English

Barley Wine-Style Ale in this little 6.33-ounce bottle. The malt flavors and fruity esters combined to make this an enjoyable part of the experience. The proof was in the horseshoes, as the frequency of ringers and leaners measurably increased.

1994

This vintage served as the favorite by some on the panel. It had the same qualities as 1995, with one more year of smoothing out. Had I been judging this in a competition, I would have rated it around a 43 or 44. The only drawback was the small volume in the bottle (6.33 ounces). This bottle was also purchased at Liquor Mart.

1993

As one of our panel always says about the Telluride Bluegrass Festival, "I always know where I am; I just don't know what year it is." I was quite surprised to find a 25th Anniversary three-pack of bottles in the window. I asked the shopkeeper in Telluride if he had any of them that were not sitting in the window since 1993. He searched the upper room and found a three-pack that had not been light struck. (I figured two years of sunlight at 9,000 feet, with very little atmospherical blockage would be bad for the beer). While still a very good beer and smooth, it lacked the balance of the next two vintages.

1990

Longmont, as anyone who has worked on a project with the AHA's Brian Rezac knows, is the center of the brewing universe. Inside a smoke-filled Longmont liquor store that does most of its business through the drive-thru window I found a four-pack of 1990 Thomas Hardy's. The 6.33-ounce bottles had a better presentation than later vintages. The picture of Thomas Hardy that appears on the current packaging foil neck is a badge on red string that dangles around the neck of the bottle in the 1990 version. This beer was rated the top by the majority of the panel. It was very well-balanced with intense malt flavors, which more than compensated for a slight oxidation. The quality of this barley wine stopped the horseshoes as all participants crowded around the bottle.

Any homebrewers who wish to have other years of Thomas Hardy's from their collections evaluated should please send them to: Paul Gatz, American Homebrewers Association, 736 Pearl St., Boulder, CO 80302. Upon receipt, I'll pick up the horseshoes to give it the proper evaluation.

Hardy's Ale, Thomas Hardy's Country Bitter and Royal Oak Pale Ale for Eldridge Pope, but it has numerous other clients. The brewery makes lager and light ale for Carlsberg-Tetley; Reef, an alcoholic orange drink, for Bass; and the Baccardy Breezer line of fruit-flavored, rum-based drinks. The versatile operation even produces a sloe gin. The packaging company bottles whiskey, cognac, brandy and wine as well as beer.

Some beer connoisseurs may recoil at the thought of this fine old brewery turning out lager and alco-pop, but sidelines like these "keep the place open," asserts Wharton. "We're flexible in every sense of the word." In today's industry, just as in Sarah Eldridge's time, you do what you must in order to survive.

References

Daniels, Ray. *Designing Great Beers: The Ultimate Guide to Brewing Classic Beer Styles*, Brewers Publications, 1996.

Edgar, David. *Entertaining Strangers* (2nd edition), Methuen, 1988.

Hansell, John. "The First 25 Years: A Vintage Tasting of Thomas Hardy's Ale," *Malt Advocate*, Vol. 4, Number 1, 1995.

Jackson, Michael. *Michael Jackson's Beer Companion* (2nd edition), Running Press, 1997.

Pacult, F. Paul. *The Beer Essentials*, Hyperion, 1997.

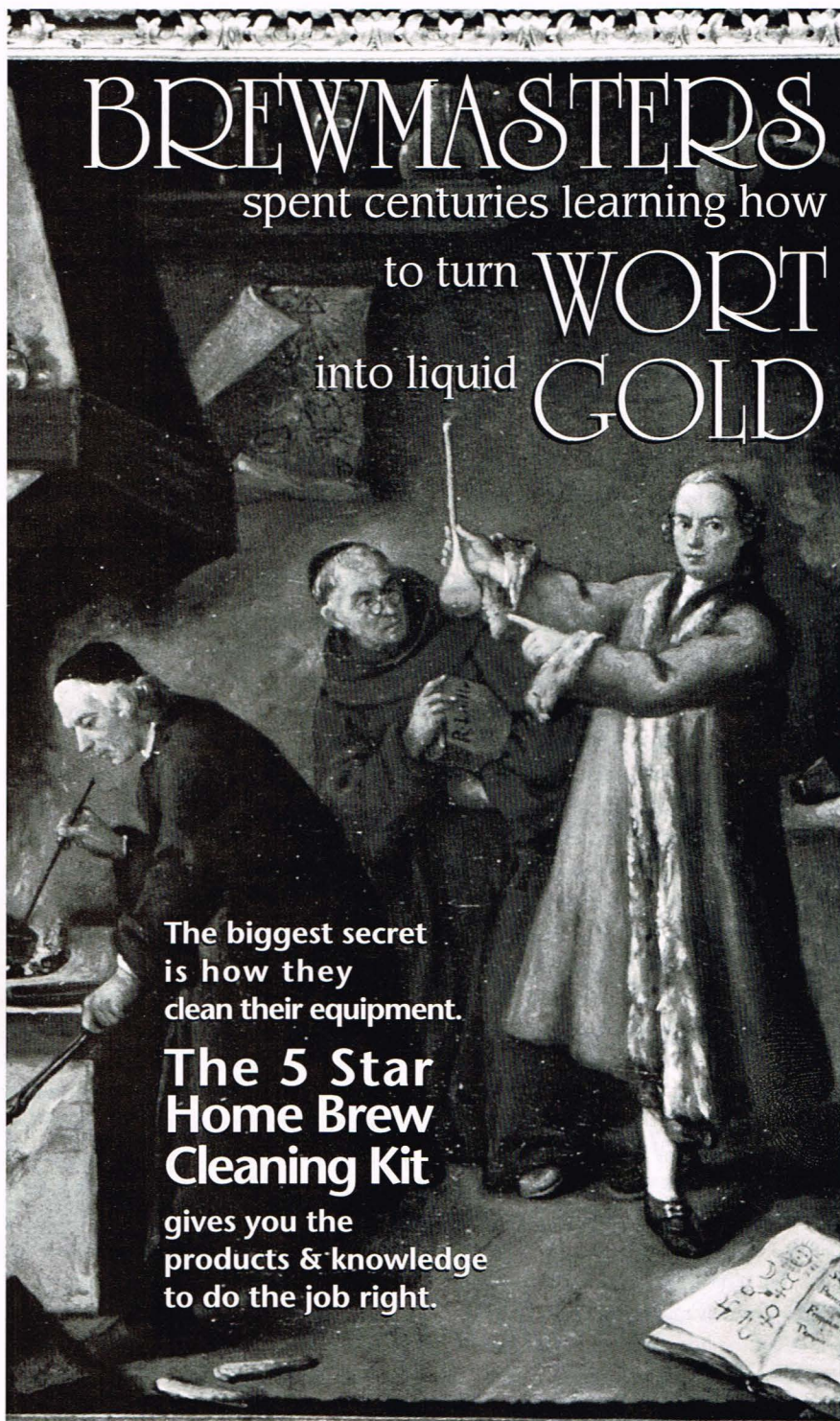
Protz, Roger. *The Ale Trail*, Eric Dobby Publishing, 1995.

Robertson, James D. *The Beer-Taster's Log: A World Guide to More Than 6,000 Beers*, Storey Communications, Inc., 1996.

Seekings, John. *Thomas Hardy's Brewer: The Story of Eldridge, Pope & Co.*, Dovecote Press, 1988.

Regular contributor Greg Kitsock seems to be in an U.K. rut—his last *Zymurgy* article was on the venerable Guinness Stout.

We need your help! Yes, there are clone recipes around for Thomas Hardy's, but none were related to us with, shall we say, any enthusiasm. We decided to ask the best homebrewers in the world—our members—for their recipes. If you've had any luck duplicating that great Thomas Hardy's taste, send the recipe to *Zymurgy*, and we'll publish them in an upcoming issue. Thanks!—Ed.



BREWMASTERS
spent centuries learning how
to turn **WORT**
into liquid **GOLD**

The biggest secret
is how they
clean their equipment.

**The 5 Star
Home Brew
Cleaning Kit**
gives you the
products & knowledge
to do the job right.

Five Star Products and Services, LLC
6731 E. 50th Ave, Commerce City, CO 80022

Questions? Call: 1-800-782-7019

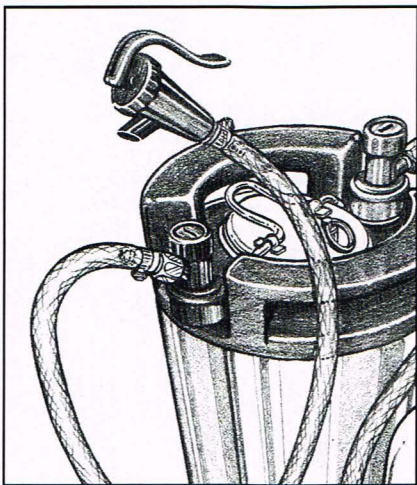
or visit <http://www.FiveStarAF.com>

Or ask for it at your favorite
Home Brew Supply Shop

East Coast Distributor - L.D. Carlson Company (800) 321-0315
West Coast Distributor- F.H. Steinbart Wholesale (800) 735-8793

Another Fine Product
From the Wizards at





beer, check out Dave Miller's article in *Beer and Brewing* Vol. 12 (Brewer's Publications 1992). Here are a few general comments and suggestions on the subject while leaving the technical reasons and specifics to the experts. The 3/16-inch vinyl hose seems to be the recommended line gauge for dispensing homebrew—it's available from supply stores and is usually transparent. At least six feet of it is recommended for your tap assembly. The length really depends on the amount of carbonation you want to remain in your beer as you dispense which, in turn, depends on the style. A highly carbonated weisse beer might be best with eight feet, and a low-carb English mild with four, but six feet seems to fit the bill for most styles falling within mid-range carbonation levels.

The cobra-head plastic-and-rubber tap is the standard for homebrewers, fairly cheap and easily disassembled for cleaning. You might have a little trouble getting the plastic hose barb on it inside your 3/16-inch hose, but a little heat from boiling water or a lighter usually makes the connection easier. (Heat the hose, not the barb!) Luckily, the assembly is fairly permanent and can be cleaned as one unit.

At the other end of the line is the metal hose barb and nut assembly, which allows you to screw on a pin- or ball-valve connector, sold as a unit. Use the same heating trick to get the metal barb in. Again, make sure you also invest in a few little nylon washers. Cleaning your beer line should be done every so often to prevent any buildup inside. If you have access to

a line cleaning compound, a good long soak should do the trick. If not, you can try forcing a small piece of soft sponge through the line with water pressure to clean it out.

Extra Goodies and Add-ons

Auxiliary Keg Storage and Keg Fridges

Keeping your keg in the household refrigerator takes up a lot of food space, but it really comes down to a question of priority. Some fridges have removable shelves on either side of the main enclosure, which is the ideal scenario. Once you eventually get several kegs (since there is no better feeling than having a variety of homebrew on tap at your home) you may want to invest in an auxiliary fridge for your food. Sometimes you can find an old model for next to nothing, so it's wise to keep an eye out in the classified section of the paper.

Chest freezers are a great option because you can usually fit several carboys or kegs in them and, with an external thermostat, you can not only serve cold beer from them but lager your beers as well. Thermostats usually cost about \$65 and allow you to set the internal temperature of the fridge. The temperature is maintained within four degrees or so by cycling the compressor on and off.

For the truly decadent, parts are available for building metal tap assemblies right into the door of the fridge with a dump tray below, so you don't even have to open the thing. "Kegorator" conversion kits are available for around \$75 and include all the various hoses and connectors to install one around your Cornelius draft system.

Carbonating Caps

One nice thing about bottling is being able to take a six-pack of your brew along to a friend's house without having to lug over a trunk load of equipment. One solution to this problem for keggers is the carbonator cap, which runs for about \$13. Basically, it allows you to hook up your gas-out connection to a two-liter soda bottle. You simply fill the bottle with beer from your keg, screw on the carbonating cap, pressurize it to 10 psi or so, and the beer will stay nice and lively until you are

ready to drink it, with no loss of carbonation. You can also carbonate flat beer in two-liter bottles this way by just hooking up the carbonating cap, bumping up the pressure on your regulator to 30 psi or so, and shaking it for about 30 seconds, depending on the beer's temperature, head space in the bottle and the vigor of your shake.

Beer Engines

These classy little devices are quite common in British pubs and can occasionally be found in catalogs and supply stores here for around \$250. They are designed for use with British-style ales of very low carbonation and can easily be used with Cornelius kegs. They work by means of a pump: when you pull the handle back, the suction draws beer up from your keg (which is usually situated below the bar in a cellar), through the pump chamber and out a swan-necked faucet. They may also be fitted with a device called a "sparkler," which sprays the beer more violently into the glass, introducing more air and forming more head.

There is some debate as to how appropriate this particular device is for some of the more delicately hopped beers of Britain. Homebrewers with a bar setup may wish to make this posh and rather costly addition to their home pubs, especially those with an affinity for English-style real ales.

Nitro Dispensing at Home

Imagine being able to pour the same creamy stout at home as you get down at the local Irish pub. Guinness uses a special dispensing system to serve their stout, called a "nitro" system, because it uses a mixture of nitrogen and CO₂. They also serve the beer at higher pressures (nearly 30 psi as opposed to 10) through a special tap. The tap contains a restrictor plate with tiny holes that cause the gas in solution to come out in the form of thousands of bubbles, giving the rolling "cascading" effect in the glass. The bubbles eventually rise for the classic nitro head.

Such a system is not impossible to set up at home, and all the parts for the tap itself are available, but there are a few drawbacks.

First, it requires a special mixture of gas: 75% nitrogen and 25% CO₂. Some beer equipment supply outlets sell the gas, but

homebrewers usually won't have the convenience of buying it in small five-pound tanks. Also, you have to be sure you want all your beers to be served as nitro beers. Second, it takes a lot of fine-tuning to get such a system to pour right. A few American breweries have spent several months and thousands of dollars to develop their own nitro systems and keep them from not foaming. Minute fluctuations in temperature or carbonation levels can throw off the delicate balance between having too many bubbles and too few. Finally, it is expensive. Apart from the cost of the special gas mix, the dispensing tap costs about three times what a normal brass or steel tap costs.


So unless you are a fanatical tinkerer with some extra cash, it may not be worth investing in a home nitro system, but once fine-tuned, it would be a most impressive method of serving homebrew.

For those who can't afford a home nitro system, there are still a few ways to simulate the cascading effect.

One of the secrets of a good Irish stout is using a good proportion (10 to 20%) of flaked unmalted barley. This really gives beers like Guinness the necessary body to form the dense, creamy head. Even if you want to just simulate the nitro beer character using the short cuts below, this is a great way to start.

Use an oral syringe purchased at a local drug store. Fill the glass about three-quarters full from your regular draft system, then fill the syringe with beer and jet it into the glass. You'll get a similar cascade effect with thousands of air bubbles that form a thick head on the beer.

You can actually pour a stout from a regular cobra-head tap that will cascade, if you have the right pressure and a little patience. Carbonate the beer only half as much as you normally would, then set the regulator between 15 and 20 psi. Tilting the glass, just barely squeeze the cobra-head tap, allowing just a trickle to fill it. What you are doing is forcing the beer through a tiny aperture in the tap head, causing the CO₂ to come out of solution as you pour. Especially when used with a flaked-barley beer, this technique should give you an impressive copy of the classic nitro pour.

Amahl Turczyn is a regular contributor to *Zymurgy*. 

Brewing Excellence

Discover for yourself the most comprehensive brewing education programs — and join our tradition of excellence.

The University of California at Davis is the only institution in the country that provides a university qualification in brewing science, technology and engineering. Through a combination of theoretical and practical study, our programs teach you everything you need to know to excel in the brewing field.

Master Brewers Program (22 weeks)

Professional Brewers Certificate Program (6 weeks)

Special Topics Courses

Brewing Internships

For more information about our programs, call toll free (800) 752-0881 and ask for dept. 3711, fax (530) 757-8634 or email droberts@unexmail.ucdavis.edu



UC DAVIS
UNIVERSITY EXTENSION
Professional and continuing education

ALEXANDER'S Sun Country

... for a natural homebrew

Premium Malt

*Pale, Wheat, Amber, Dark
Munich, Nut Brown,
& Dutch Lager*

1.4 lb. cans

4 lb. cans

5 gal. pails



18678 N. Hwy. 99 Acampo, CA 95220
(209) 334-9112; (209) 334-1311 fax

Fermentation

For Schwarzbier, "Any lager yeast will do well," says Delano Dugarm.

Peterson prefers Wyeast 2206 Bavarian lager yeast. "It's my favorite for this type of beer," he says. "It emphasizes the malt side of the beer."

It's OK to use ale yeast—hey, we're relaxing and not worrying here, right?—but

Delano Dugarm says, "You're going to make a porter." The Dugarms have won ribbons for such a beer in the robust porter category.

Wills used Wyeast 2112 California lager yeast in his #37 Black Lager because he didn't have the temperature control he wanted. "It doesn't have too many esters," he says. Now that he can hit the cold temperatures he wants, Wills says he'll use Wyeast 2308 Munich lager or 2206 Bavarian lager, because they're indigenous to the general area where Schwarzbier is made.

If you can't refrigerate your beer, you won't get the proper lager character. Delano Dugarm suggests Wyeast 1056 Chico ale yeast in this case, again realizing that you won't have a true Schwarzbier. Hummel recommends either Wyeast 1056 or its 1007 German ale for fairly lagerlike results.

Ways to a Winning Schwarzbier

There are various paths to success, but consider the following.

You're brewing a lager beer, which necessarily calls for cold fermentation. "Ferment cold," says Peterson. "This is very, very important." Peterson used to start his lagers at room temperature, but now he puts them right into the fridge. You may not see visible signs of fermentation for up to 36 hours. Don't worry. "Be patient and practice good sanitation. It'll be OK," counsels Peterson. The idea behind cold fermentation is to minimize ester formation, which he says largely occurs in the early stages. Peterson employs a diacetyl rest after a week or so.

Pitch plenty of yeast. Peterson suggests a half-gallon starter culture for five gallons of wort. It's a good idea, he says, to build up your starter at the temperature at which it will be working.

Dugarm suggests a light hand with caramel malt. Ditto for hops. "You don't want to brew a Pilsener," he says.

References

Hersh, Jay. "Bavaria's Dark Secret—Shedding Light on the Bavarian Dunkel Style," *Brewing Techniques*, January/February 1996.

Jackson, Michael. *Michael Jackson's Beer Companion*, 2nd ed. Philadelphia: Running Press, 1997.

Seidl, Conrad. personal communication.

Seidl, Conrad. *Bier. Deutsche und europäische Braukunst*, Seehamer Verlag, 1997.

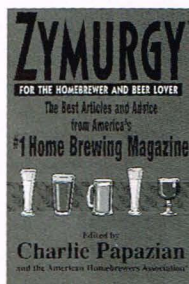
(For more information see www.buecher.de on the World Wide Web.)

Jim Dorsch last wrote about witbier for *Zymurgy*.

The BEST of the BEST

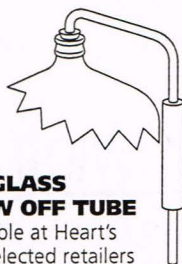
Wisdom for beginners and advanced homebrewers alike from America's #1 Homebrewing Magazine.

To order *Zymurgy: The Best Articles and Advice from America's #1 Homebrewing Magazine*, visit your local homebrew supply store or call toll free **1-888-U-CAN-BREW** (1-888-822-6273).

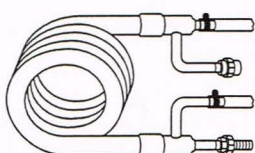


309 \$13.00 list price

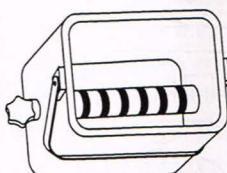
INCREDIBLE INNOVATIONS



JTS GLASS BLOW OFF TUBE
Available at Heart's and selected retailers nationwide



SUPER CHILLER
\$79.95
Cools boiling wort to within 5° of cooling water



HANDY MASHER
\$19.95
Partial masher, mashes up to 5 lbs. of grain

INCREDIBLE PRICES

1. Top Quality
Two Row Pale Malted Barley
\$21.95 / 50 lb.

2. Wyeast
Liquid Yeast
\$2.95 per pack

3. Cascade
Hops Raw or Pellets
\$5.95 per lb.

4. Complete
CO2 Keg System
\$139.95

5. Magnetic
Drive Pump
3.2 gal. per min.
\$79.95

OPEN LATE • LOW PRICES • CALL FOR FREE CATALOG



HEART'S HOME BREW SUPPLY

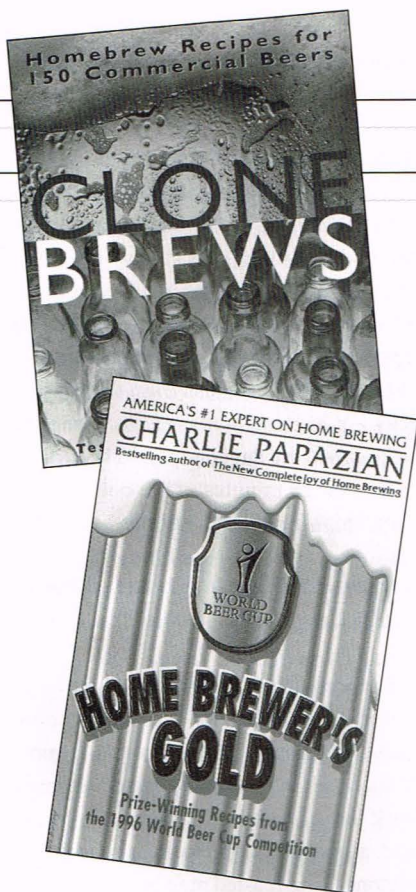
5824 North Orange Blossom Trail, Orlando, Florida 32810

tel: 1.800.392.8322

fax: 1.407.298.4109

online: <http://www.heartshomebrew.com>

HOURS: MON—THUR 9AM—11PM FRI—SAT 9AM—12 MID



Cloning

Recently, in our response forms from you readers, we've gotten a large number of requests for "clones," homebrewing formulas for well-know beers. While our Cult Beer series in *Zymurgy* remains popular, many readers have asked for even more information on less-than-cult beers.

Well, as always, we're happy to oblige. While at this year's GABF, we ran into Brad Ring from Storey Publishing who couldn't wait to tell us about their newest book dedicated to clone recipes. At the same time, our own Charlie Papazian mentioned that his latest book, *Home Brewer's Gold*, which includes prize-winning recipes from the 1996 World Beer Cup Competition, was selling great guns.

A light bulb went off in our collective heads. Here, then, for your edification are four recipes, two from *CloneBrews*, by Mark and Tess Szamatulski, and two from *Home Brewer's Gold*, by Charlie Papazian.

CloneBrews

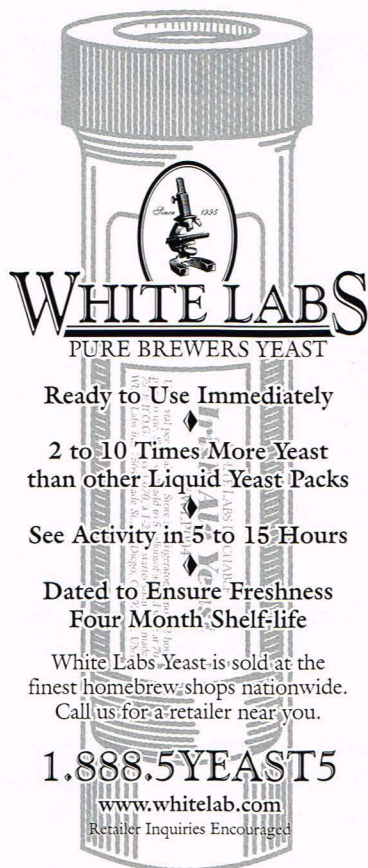
Cloning beer is much more fun than cloning sheep, and a lot easier! You will have to forgo that warm wool sweater and some nice juicy lamb chops, but you get something even better—five gallons of fresh, delicious clonebrew! The best part of this whole process is that you can make your clonebrew just like the commercial brew or you can adjust it to your own taste. For example, suppose you want to clone your favorite pale ale but lately have come to enjoy hoppier beers. The solution to your dilemma is to make a hoppier clone of your favorite commercial beer. Tweak the recipe to just the way you like it. That's the beauty of homebrewing—you are in charge.

We will provide information in this book to help you clone your favorite beers. It does take practice. Some of the world's great breweries have been brewing for hundreds of years. The more beers that you sample, evaluate, and research, the more experienced you become. Tough work, cloning. Soon you will be able to identify hops, specialty malts, yeasts, and even spices. The more information that you can acquire before you begin to clone, the more accurate you will be. It's best to concentrate on one style at a time. The art of cloning simply boils down to researching the beer and knowing your beer styles, hop varieties, grains, specialty ingredients, and yeasts. Remember that practice makes perfect. Drink up, and let the cloning begin . . .

[CLONEBREWS © 1998 by Tess and Mark Szamatulski; Story Books; Schoolhouse Books; Pownal, VT 05261. Available from better homebrew shops, bookstores or by calling (800) 441-5700.

HOME BREWER'S GOLD, © 1997 by Charles N. Papazian; Avon Books; 1350 Avenue of the Americas, NY, NY 10019. Available through better homebrew shops, bookstores, or by calling (888) 822-6273.

Both books used with permission.]



Dixie Blackened Voodoo Lager

*Dixie Brewing Co. Inc., New Orleans,
Louisiana, U.S.A.*

This lager has an aroma that is malty with light fruit overtones leading into a good body with toasted malt and a hint of hops.

- Yield: 5 gallons (18.9 L)
- Original gravity: 1.053-1.056
- Final gravity: 1.011-1.014
- IBUs 25
- SRM 27
- 5.4% alcohol by volume

Crush and steep in 1/2 gallon (1.9 L) 150-degree-F (65.5-degree-C) water for 20 minutes:

- 1/2 lb (.23 kg) US 80 °L crystal malt
- 1 oz (28 g) US black malt
- 2 oz (57 g) US chocolate malt

Strain the grain water into your brew pot. Sparge the grains with 1/2 gallon (1.9 L)

water at 150 degrees F (65.5 degrees C). Add water to the brew pot for 1.5 gallons (5.7 L) total volume. Bring the water to a boil, remove the pot from the stove, and add:

- 4 lb (1.8 kg) Superbrau light malt syrup
- 2.75 lb (1.25 kg) M&F light DME
- 1/3 lb (.15 kg) rice solids
- 1.5 oz (42 g) Mt. Hood @ 4.3% AA (6.5 HBU) (bittering hop)

Add water until total volume in the brew pot is 2.5 gallons (9 L). Boil for 45 minutes then add:

- 1/4 oz (7 g) Cascade (flavor hop)
- 1/4 oz (7 g) Mt. Hood (flavor hop)
- 1 tsp (5 ml) Irish moss

Boil for 10 minutes then add:

- 1/4 oz (7 g) Cascade (aroma hop)
- 1/4 oz (7 g) Mt. Hood (aroma hop)

Boil for 5 minutes, remove pot from the stove, and cool for 15 minutes. Strain the cooled wort into the primary fermenter and add cold water to obtain 5 gallons (18.9 L). When the wort temperature is under 80 degrees F (26.6 degrees C), pitch your yeast.

- 1st choice: Wyeast's 2035 American lager yeast (Ferment at 42-52 degrees F [6-11 degrees C])
- 2nd choice: Wyeast's 2007 Pilsen lager yeast (Ferment at 42-52 degrees F [6-11 degrees C])

Ferment in the primary fermenter 5-7 days or until fermentation slows, then siphon into the secondary fermenter. Bottle when fermentation is complete with:

- 3/4 cup (180 ml) corn sugar

Serve in a tumbler at 50 degrees F (10 degrees C).

Alternate Methods

Mini-mash Method: Mash 2.5 lb (1.1 kg) US two-row pale malt and the specialty grains at 122 degrees F (50 degrees C) for 30 minutes and 150 degrees F (65.5 degrees C) for 60 minutes. Then follow the extract

recipe omitting 2 lb (.9 kg) DME at the beginning of the boil.

All-grain Method: Grind 1/2 lb (.23 kg) rice, then boil for 20 minutes until soft. Mash 7.25 lb (3.3 kg) British two-row lager malt and 2 lb (.9 kg) US six-row pale malt with the specialty grains at 122 degrees F (50 degrees C) for 30 minutes and 150 degrees F (65.5 degrees C) for 60 minutes. Add 4.5 HBU (31% less than the extract recipe) of bittering hops for 90 minutes of the boil. Add the flavor hops and Irish moss for the last 15 minutes of the boil and the aroma hops for the last 5 minutes.

Sapporo Black Stout Draft

Sapporo Breweries Ltd., Tokyo, Japan

Sapporo uses ceramic cold filtration to filter their beers instead of pasteurization. The beer is slowly passed through ceramic filtration rods to remove the yeast. Sapporo's Black Stout Draft has a creamy, light tan head, a smooth roasted malt flavor with hop overtones, and roasted malt bitterness. Light in body, it finishes with a dry aftertaste and a big, toasted, roasted malt aroma.

- Yield: 5 gallons (18.9 L)
- Original gravity: 1.055-1.057
- Final gravity: 1.012-1.014
- IBUs 40
- SRM 80
- 5.5% alcohol by volume

Crush and steep in 1 gallon (3.8 L) 150-degree-F (65.5-degree-C) water for 20 minutes:

- 2/3 lb (.3 kg) 65 °L German dark crystal malt
- 1/2 lb (.23 kg) German Munich malt
- 2/3 lb (.3 kg) black malt

Strain the grain water into your brew pot. Sparge the grains with 1/2 gallon (1.9 L) water at 150 degrees F (65.5 degrees C). Add water to the brew pot for 1.5 gallons (5.7 L) total volume. Bring the water to a boil, remove the pot from the stove, and add:

- 6.5 lb (3 kg) M&F light DME
- 1.25 oz (35 g) Northern Brewer @ 9% AA (12 HBU) (bittering hop)

Add water until total volume in the brew pot is 2.5 gallons (9 L). Boil for 55 minutes then add:

- 1/2 oz (14 g) Czech Saaz (aroma hop)
- 1 tsp (5 ml) Irish moss

Boil for 5 minutes, remove pot from the stove, and cool for 15 minutes. Strain the cooled wort into the primary fermenter and add cold water to obtain 5 gallons (18.9 L). When the wort temperature is under 80 degrees F (26.6 degrees C), pitch your yeast.

1st choice: Wyeast's 2308 Munich lager yeast (Ferment at 47-52 degrees F [8-11 degrees C])

2nd choice: Wyeast's 2124 Bohemian lager yeast (Ferment at 42-52 degrees F [6-11 degrees C])

Ferment in the primary fermenter 5-7 days or until fermentation slows, then siphon into the secondary fermenter. Bottle when fermentation is complete with:

- 1 1/4 cup (300 ml) M&F extra-light DME

Serve at 55 degrees F (13 degrees C) in a pint glass or goblet.

Alternate Methods

Mini-mash Method: Mash 1.75 lb (.8 kg) British two-row pale malt and the specialty grains at 150 degrees F (65.5 degrees C) for 90 minutes. Then follow the extract recipe omitting 2 lb (.9 kg) DME at the beginning of the boil.

All-grain Method: Mash 8.75 lb (4 kg) British two-row pale malt with the specialty grains at 150 degrees F (65.5 degrees C) for 90 minutes. Use 9 HBU (25% less than the extract recipe) of bittering hops for 90 minutes of the boil. Add the aroma hops and Irish moss for the last 5 minutes of the boil.

Home Brewer's Gold

The mission of the World Beer Cup International Competition is to educate beer drinkers around the world about the stylistic traditions, beer cultures, quality and diversity displayed by the world's vast arrays of beers. The WBC is dedicated to

recognizing the traditions and innovations shared by the entire brewing industry as well as those customs unique to specific countries and regions.

More than 3,000 breweries worldwide were sent invitations to participate in the inaugural 1996 World Beer Cup International Competition. More than 250 breweries responded from every continent, entering a total of more than 600 beers.

The following World Beer Cup award criteria are the minimum standards of quality required for any beer considered for an award.

Gold

A world-class beer that accurately exemplifies the specified style, displaying the proper balance of taste, aroma and appearance...

Gold Cup Winner in the American-Style Lager/Ale or Cream Ale Category

California Blonde Ale

Coast Range Brewing Company
7050 Monterey St.

Gilroy, California USA 95020

Brewmaster: Peter Licht

Established 1995

Production 2,000 bbl. (2,300 hl.)

Beer and brewing are back in Gilroy, the garlic capital of the world. But there isn't any garlic in these beers. With the founding of the Coast Range Brewing Company, the Gilroy brewing tradition that began in 1868 and temporarily ended in 1919 was revived. Founded by Ron Erskine, Coast Range Brewing Company is located in a turn-of-the-century building in downtown Gilroy. It is fresh on the brewing scene but has won immediate acclaim, especially with its California Blonde Ale, which won the Gold in the World Beer Cup and received awards at the 1995 and 1996 California State Fairs. California Blonde was inspired by the New York State tradition of Genesee Cream Ale and Utica Club Cream Ale, both of which were former regional favorites of brewmaster Peter Licht. Peter was originally from Rochester, New York.

At this writing, Coast Range Brewing Company continues to expand with a bottling line. Other products produced are:

\$99^{u.s.}
(+shipping/handling)

The Valley Mill®




- Dual ball-bearing, 8" long, nickel-plated steel rollers
- Unique, locking, indexed, true parallel adjustment quickly allows roller gap settings from .015" to .070"
- Fast crushing time, 10lbs./min with included drill adaptor
- Large, sturdy ergonomic handle, or the 1/2" drive shaft easily accepts a pulley for permanent, motorized set-ups.
- All of these professional features for only \$99 makes owning your own roller mill an affordable reality.
- Optional mounting base for easy attachment to a plastic food pail. (\$12.00 extra)

Phone/fax/write for a **free** brochure/order form.
Browse our **Web Site** (web page contains order form)
We also have dealers, contact us for your area
Order by phone with VISA or mail/fax order form with cheque or money order to:

VALLEY BREWING EQUIPMENT
1310 Surrey Ave. Ottawa, ON, Canada K1V 6S9
Tel (613) 733-5241 • Fax (613) 731-6436
www.web.net/~valley/valleymill.html • valley@web.net
*Shipping handling \$19.50 u.s. Dealer prices may vary from price shown

BioriginalMALT

Certified Organic Malt & Extracts



Crafty Homebrewers are discovering enhanced satisfaction with Bioriginal Two-Row Malt and Extract—Certified Organic and as pure and promising as their high prairie origins. Brewing Integrity from our growers to the glass in your hand.

— To Order —

- Bulk Extract available
- 2 kg. (4.4 lbs.) Unhopped Extract (US \$11.95)
- 25 kg. (55 lb.) bags of Organic Barley Malt (US \$34.95)

In the U.S. call 1-800-447-2249
In Canada call (306) 975-1166, ext. 7
or fax (306) 242-3829

Bioriginal Malt is a Division of
Bioriginal Food & Science Corp.
1-411 Downey Road, Saskatoon, SK Canada S7N 4L8
business@bioriginal.com

Desperado Special Bitter, Blackberry Wheat Ale, India Pale Ale, Auld Lang Syne Holiday Ale, and Irish Stout.

Character Description of Gold Cup-Winning California Blonde Ale

Crystal-clear with a deep golden color without shades of amber-orange. Beer endears with a nonassaulting yet very assertive sweet hop aroma. Not citrusy. Malt sweetness hints at a vanillalike texture, with honey character emerging afterward. A low level of DMS (a sweet corn character) softens the malt character without being perceptible on its own. A cookie-like biscuit aroma evolves as the beer warms. A swirl of the beer brings out volatile sweet-floral hop aromas at any point during indulgence. First impression is full-flavored with a medium-body mouth feel, neither of which is assertive. Hop bitterness seems as though it might be of the Goldings or Fuggles type, being quite soft and earthy, but formulation indicates Perle, Cluster, Mt. Hood, and Liberty. Well balanced between malt and hop, sweet and bitter. Aftertaste has a memorable, lingering bitterness. Malt fades quickly in aftertaste.

Recipe for 5 U.S. gallons (19 liters) California Blonde Ale

Targets:

- Original Gravity: 1.046 (11.5)
- Final Gravity: 1.011 (2.7)
- Alcohol by volume: 4.6%
- Color: 6 SRM (12 EBC)
- Bittering Units: 20

All-Grain Recipe and Procedure

- 8 lbs (3.6 kg) American 2-row Klages pale malt
- 1/2 lbs (0.23 kg) English crystal malt-10 Lovibond
- 1/2 lbs (0.23 kg) American wheat malt
- 1/4 lbs (114 g) American Victory or other aromatic malt
- 9 1/4 lbs (4.2 kg) Total grains
- 2 HBU (56 MBU) American Perle hops (pellets)—90 minutes (bittering)
- 2 HBU (56 MBU) American Cluster hops (pellets)—90 minutes (bittering)

- 1 HBU (28 MBU) American Liberty hops (pellets)—30 minutes (flavor)
- 2 HBU (56 MBU) American Mt. Hood hops (pellets)—30 minutes (flavor)
- 1/2 oz (14 g) American Tettnanger hops (whole)—steep in finished boiled wort for 2 to 3 minutes (aroma)
- 1/4 tsp Irish moss
- 3/4 cup corn sugar for priming in bottles. Use 1/3 cup corn sugar if priming a keg.
- Wyeast 1056 American Ale yeast

A step infusion mash is employed to mash the grains. Add 9 quarts (8.5 L) of 140-degree-F (60-degrees-C) water to the crushed grain, stir, stabilize and hold the temperature at 133 degrees F (56 degrees C) for 30 minutes. Add 4.5 quarts (4.3 L) of boiling water, adding heat if necessary to bring temperature up to 152 degrees F (67 degrees C). Hold for about 60 minutes.

After conversion, raise temperature to 167 degrees F (75 degrees C), laut and sparge with 4 gallons (15 L) of 170-degree-F (77-degree-C) water. Collect about 6 gallons (23 L) of runoff, add bittering hops and bring to a full and vigorous boil.

The total boil time will be 90 minutes. When 30 minutes remain, add flavor hops. When 10 minutes remain add Irish moss. After a total wort boil of 90 minutes (reducing the wort volume to just over 5 gallons), turn off the heat, add aroma hops and let steep for 2 to 3 minutes. Then separate or strain out and sparge hops. Chill the wort to 70 degrees F (21 degrees C) and direct into a sanitized fermenter. Aerate the cooled wort well. Add an active yeast culture and ferment for 4 to 6 days in the primary at 65 degrees F (15 degrees C). Then transfer into a secondary fermenter, chill to 60 degrees F (15.5 degrees C), to age for two more weeks, then lager for two to four more weeks at 40 degrees F (4.5 degrees C).

When secondary aging is complete, prime with sugar, bottle or keg. Let condition at temperatures above 60 degrees F (15.5 degrees C) until clear and carbonated, then store chilled.

Mash-Extract Recipe and Procedure for California Blonde Ale

- 3 3/4 lbs (1.7 kg) English light dried malt extract
- 1 3/4 lbs (0.8 kg) American 2-row Klages pale malt
- 1/2 lbs (0.23 kg) English crystal malt-10 Lovibond
- 1/2 lbs (0.23 kg) American wheat malt
- 1/4 lbs (114 g) American Victory or other aromatic malt
- 3 lbs (1.4 kg) Total grains
- 2.5 HBU (71 MBU) American Perle hops (pellets)—60 minutes (bittering)
- 2.5 HBU (71 MBU) American Cluster hops (pellets)—60 minutes (bittering)
- 1 HBU (28 MBU) American Liberty hops (pellets)—30 minutes (flavor)
- 2 HBU (56 MBU) American Mt. Hood hops (pellets)—30 minutes (flavor)
- 1/2 oz (14 g) American Tettnanger hops (whole)—steep in finished boiled wort for 2 to 3 minutes (aroma)
- 1/4 tsp Irish moss
- 3/4 cup corn sugar for priming in bottles. Use 1/3 cup corn sugar if priming a keg.
- Wyeast 1056 American Ale yeast

A step infusion mash is employed to mash the grains. Add 3 quarts (2.9 L) of 140-degree-F (60-degrees-C) water to the crushed grain stir, stabilize and hold the temperature at 133 degrees F (56 degrees C) for 30 minutes. Add 1.5 quarts (1.5 L) of boiling water, add heat to bring temperature up to 152 degrees F (67 degrees C) and hold for about 60 minutes.

After conversion, raise temperature to 167 degrees F (75 degrees C), laut and sparge with 1.5 gallons (5.7 L) of 170-degree-F (77-degree-C) water. Collect about 2.5 gallons (9.5 L) of runoff. Add malt extract and bittering hops and bring to a full and vigorous boil.

The total boil time will be 60 minutes. When 30 minutes remain, add flavor hops.

When 10 minutes remain, add Irish moss. After a total wort boil of 60 minutes, turn off the heat, add aroma hops and let steep 2 to 5 minutes. Then separate or strain out and sparge hops, and direct the hot wort into a sanitized fermenter to which 2 gallons (7.6 L) of cold water have been added. If necessary, add additional cold water to achieve a 5-gallon (19-L) batch size. Chill the wort to 70 degrees F (21 degrees C). Aerate the cooled wort well. Add an active yeast culture and ferment for 4 to 6 days in the primary at 65 degrees F (15 degrees C). Then transfer into a secondary fermenter, chill to 60 degrees F (15.5 degrees C) to age for two more weeks, then lager for two to four more weeks at 40 degrees F (4.5 degrees C).

When secondary aging is complete, prime with sugar, bottle or keg. Let condition at temperatures above 60 degrees F (15.5 degrees C) until clear and carbonated, then store chilled.

Gold Cup Winner European-Style Pilsener Category

Dos Equis Special Lager

Cerveceria Cuauhtémoc Moctezuma S.A. de C.V. Ave. Alfonso Reyes 2202 Nte.

Apartado Postal 106

Monterrey, Nuevo Leon, Mexico 64442

Brewmaster: Adolfe Vallesteros

Established 1890

Production: 18.8 million bbl. (22 million hl.)

At the main brewery site in Monterrey, one immediately notes the monumental 60-meter-tall red brick tower, built in 1905 as a cornerstone of the proud American tradition of Cerveceria Cuauhtémoc Moctezuma. Carta Blanca was the first beer to be marketed in 1890 by the brewery. In 1908 King Alfonso XIII of Spain named Cuauhtémoc the official provider of the Royal House. Since then the original brewery, merged in 1985 with Moctezuma brewery, has grown into an expansive international presence.

Celebrating 100 years in 1990, the Cuauhtémoc Moctezuma brewery is adorned with beer awards. Recognized in 1893 for the purity and quality of the

brand Carta Blanca at the International Exhibition in Chicago, the brewery went on to win a Gold Medal in 1900 at the Universal Exhibition of Paris. The Cuauhtémoc brewery won another award in 1905 at the International Exhibition in Leija, Belgium, and in 1991 the beer Carta Blanca was recognized at the Monde Selection Prix in Paris. Most recently its Dos Equis Special Lager won the Gold in the 1996 World Beer Cup.

The brewery's other products, which are brewed and distributed worldwide, include Carta Blanca, Bohemia, Indio, Tecate, Chihuahua, Superior, Dark Superior, Dark Dos Equis, Sol, Noche Buena, Tecate Light and Tecate Twist.

Character Description of Gold Cup-Winning Dos Equis Special Lager

Light golden color. The beer is packaged in a green bottle and has a surprisingly pleasant, very subtle light-struck character (yes I said "pleasant"—and mean it) that accents the hop character. First aromatic impression is reminiscent of the aroma of the Czech Pilsner Urquell with its Saaz hop aroma. The brewery uses a combination of Galena and Cluster hops only for bittering and does not claim to use Saaz in this beer. (It does use Saaz in Bohemia Lager.) Mouth feel is light in body and exceptionally clean. Though brewed with corn and rice, the overall character suggests an all-malt character with high drinkability. Hop bitterness is very



HopTech

Homebrewing Supplies

The Homebrew Supplier with a Difference!

- * Brewing Equipment and Supplies
- * Award Winning Beer Kits
- * Unmatched Selection of Grains
- * The Best Hops, Guaranteed!
- * Liquid and Dry Malt Extracts

- * Extensive Yeast Selection
- * 100% Natural Fruit Flavors
- * 100% Natural Root Beer Extracts
- * Mail Order and Retail Store
- * Free, informative 40 page Catalog

Full, secure on-line ordering: www.hoptech.com

HopTech Homebrewing Supplies
3015 Hopyard Rd., Ste E
Pleasanton, CA 94588
www.hoptech.com

Orders: 1-800-DRY-HOPS (379-4677)
Advice: 1-925-426-1450 Fax: 1-925-426-9191
Hours: M, T, Th, F, Sat: 11am-7pm PT, Sun: 12-4pm PT, Closed Wednesdays

Live here?



Order here:



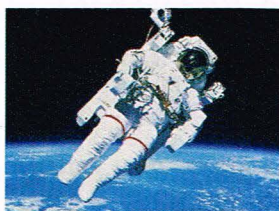
In the Midwest, nobody beats Northern Brewer's fast shipping, quality products, and low prices. Call or write for our free 52-page catalog!

(800) 681-2739
www.nbrewer.com
1106 Grand Avenue - St. Paul, MN 55105

HOMEBREWING.

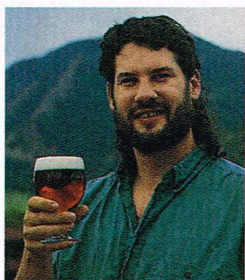
Ground Control to Major Homebrewer

Making great beer doesn't have to be as difficult as putting a man on the moon. You decide how much time and effort you want to spend on your homebrew. And whether you brew as easy as 1-2-3 pale ale or experiment with a Dark Side of the Moon Stout that you plan to enter in one of our hundreds of sanctioned homebrew competitions nationwide, the American Homebrewers Association® (AHA) is your Ground Control. We're there to help



The Guys in the Lab Wouldn't Leave Well Enough Alone

If you haven't taken a close look at AHA in recent months, now is the time. AHA members asked for more benefits, and the guys in our lab delivered. In each issue of *Zymurgy*® magazine — yours **FREE** when you become a member of AHA — we ask for your opinions on each homebrewing article. We also ask you for ideas on how we can do a better job of supporting you in your homebrewing quest. Then we do our best to give you what you want. (The guys in the lab wouldn't have it any other way.) Here's what we came up with...



Paul Gatz
Director, American Homebrewers Association

How to Avoid Alien Encounters

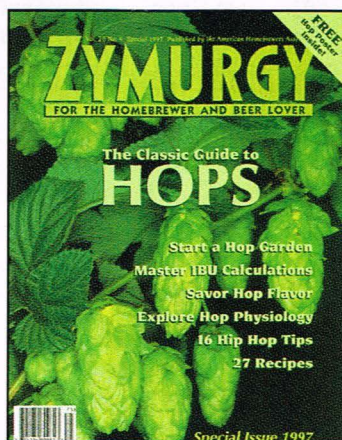


AHA Members-Only Benefits now include:

PUBLICATIONS

- **Zymurgy** magazine. **FREE** to AHA members — a \$35 value! The first and last word in homebrewing. You'll

receive six issues per year loaded with great articles, recipes and sound advice on ways to improve your brew whether you're making your rocket fuel from extracts or from your own secret source of Albanian six-row barley.



- **Beer Enthusiast News & Notes.** This newsletter keeps you in touch with the homebrewing community, includes terrific recipes, calendars of events and much more, and comes wrapped around our Beer Enthusiast catalog.
- **Maps On Tap.** Colorful, customized maps to brewpubs, microbreweries and homebrew supply shops.

MONEY-SAVING DEALS

- **Beer & Brewing Book Discounts.** Save money on great books about beer and brewing.

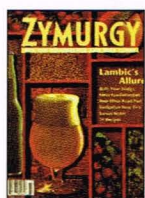
E-MAIL & WEB FORUMS

- **TechTalk.** Two e-mail brewing forums for the rocket scientist in all of us. Dedicated to technical talk on beer. Period. Special guests highlight these "all beer, all the time" forums for AHA members only.
- **Members-Only WEB Site.** Includes the "Talk Back" issues forum where AHA members provide ideas to the guys in our lab. You'll also find more AHA news and information here.

PLANETARY PURSUITS

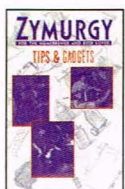
- **AHA Clubs Program.** Supports more than 700 registered homebrew clubs worldwide.
- **Homebrew Legalization Campaign.** Continues until homebrewing is statutorily recognized in all 50 states.
- **AHA National Homebrewers Conference.** Has become the world's largest educational homebrewers' gathering. Fun-filled and informative.
- **AHA Sanctioned Competition Program.** Sanctions hundreds of homebrew competitions throughout the country.
- **AHA National Homebrew Competition.** Judges thousands of beers every year. Enter your best brews!
- **Members-Only Tasting at the Great American Beer Festival®.** Join other AHA members and professional brewers at America's premier beer festival.





We Have a Lift-off Join the American Homebrewers Association® NOW!

Your one-year membership includes out-of-this-world benefits, **6 issues of Zymurgy magazine**—the first and last word in homebrewing—and a whole lot more!



FREE 48-page Tips & Gadgets booklet, a \$7.95 value! The best of Zymurgy magazine's popular

Tips & Gadgets column. **FREE** with your paid membership or renewal. Limited time offer.

**\$33 U.S. • \$38 Canadian
\$51 International**

**CALL TOLL FREE
1-888-U-CAN-BREW**

1-888-822-6273 (U.S. and Canada only)

Telephone (303) 546-6514, FAX (303) 447-2825,
Mail check or money order to American Homebrewers
Association, P.O. Box 1510, Boulder, Colorado 80306-
1510 U.S.A. Web site <http://beertown.org>



It isn't Rocket Science.



Unless you want it to be.

Join the **American Homebrewers Association®**



low but perceptible and balanced with a light touch of sweet malt flavor and aroma. A beer that does not obfuscate. Simple, clean and refreshing with a foundation of quality beer character.

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

Dos Equis Special Lager

Targets:

- Original Gravity: 1.060 (15)
- Final Gravity: 1.014 (3.5)
- Alcohol by volume: 6%

- Color: 14 SRM (28 EBC)
- Bittering Units: 60

All-Grain Recipe and Procedure

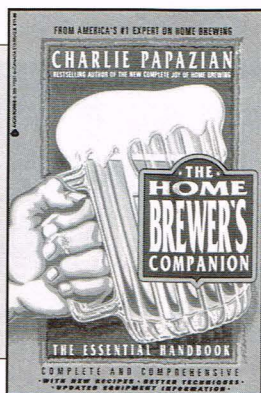
- 4 3/4 lbs (2.2 kg) American six-row pale malt
- 2 1/2 lbs (1.1 kg) rice
- 3/4 lbs (0.34 kg) flaked corn
- 8 lbs (3.6 kg) Total grains
- 1.5 HBU (43 MBU) American Cluster hops (pellets)—75 minutes (bittering)

- 2 HBU (56 MBU) American Hallertauer hops (pellets)—75 minutes (bittering)
- 2 HBU (56 MBU) Czech Saaz hops (pellets)—10 minutes (flavor)

- 1/4 tsp Irish moss
- 3/4 cup corn sugar for priming in bottles. Use 1/3 cup corn sugar if priming a keg.
- Wyeast 2007 Pilsen Lager yeast, which ferments dry with a malty finish. No sulfur, diacetyl or esters.

BREW YOUR OWN — WITH HELP FROM THE EXPERT!

Charlie Papazian, America's leading authority on home brewing, offers readers two comprehensive, in-depth guides to brewing everything from the lightest lager to the darkest stout.

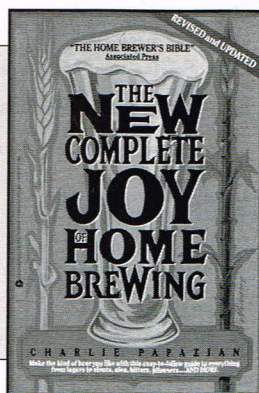


THE HOME BREWER'S COMPANION takes readers to the next level of home brewing expertise. It includes sections on:

- The effects of the water used (the amount of calcium, minerals, chlorine and salts present can completely change the taste and style of the beer being brewed)
- Hops varieties, mashes and grains
- Typical problems encountered during the brewing process and how to go about solving them
- Dozens of delicious new recipes and tips on how to create your own recipes
- Information on beer evaluation, handling and storage

THE HOME BREWER'S COMPANION

#0-380-77287-6
\$11.00 464 pages



THE NEW COMPLETE JOY OF HOME BREWING is the original home brewing bible. Perfect for the beginner, intermediate or advanced home brewer. It includes:

- Getting your home brewery together: the basics —hops, malt yeast and water
- Ten easy lessons to making your first bubbling batch of beer
- Brewing exciting world class styles of beer
- A fully illustrated guide including simple, easy-to-follow explanations of each step of the home brewing process
- And much more!

THE NEW COMPLETE JOY OF HOME BREWING

#0-380-76366-4
\$11.00 416 pages

*DEALER INQUIRIES INVITED: Room 286RB
1350 Avenue of the Americas, New York, NY 10019 Tel: 212-261-6882

AVON BOOKS
The Hearst Corporation

A rice-cooking regime along with a step infusion mash is employed to mash the grains. Crush and mill rice into small pieces. Add crushed rice to one gallon (3.8 L) of water and boil for 20 minutes. Add one more gallon of water to cooked rice mash to achieve a temperature of 130 degrees F (54.5 degrees C). Add flaked corn and malt; stabilize and hold the temperature at 122 degrees F (50 degrees C) for 30 minutes. Add 4 quarts (3.8 L) of boiling water, adding heat if necessary to bring temperature up to 150 degrees F (65.5 degrees C). Hold for about 60 minutes.

After conversion, raise temperature to 167 degrees F (75 degrees C), laut and sparge with 4 gallons (15 L) of 170-degree-F (77-degree-C) water. Collect about 6 gallons (23 L) of runoff, add bittering hops and bring to a full and vigorous boil.

The total boil time will be 75 minutes. When 10 minutes remain, add flavor hops and Irish moss. After a total wort boil of 75 minutes (reducing the wort volume to just over 5 gallons), turn off the heat, then separate or strain out and sparge hops. Chill the wort to 60 degrees F (15.5 degrees C) and direct into a sanitized fermenter. Aerate the cooled wort well. Add an active yeast culture and ferment for 4 to 6 days in the primary at about 55 degrees F (13 degrees C). Then transfer into a secondary fermenter, chill to 50 degrees F (10 degrees C) to age for two more weeks, then lager for two to four more weeks at 40 degrees F (4.5 degrees C).

When secondary aging is complete, prime with sugar, bottle or keg. Let condition at temperatures above 60 degrees F (15.5 degrees C) until clear and carbonated, then store chilled.

Malt-Extract Recipe and Procedure for Dos Equis Special Lager

- 3 lbs (1.4 kg) English extralight dried malt extract
 - 2 1/2 lbs (1.1 kg) rice extract
 - 0 lbs (0 kg) Total grains
 - 2 HBU (56 MBU) American Cluster hops (pellets)—60 minutes (bittering)
 - 2 HBU (56 MBU) American Hallertauer hops (pellets)—60 minutes (bittering)
 - 2 HBU (56 MBU) Czech Saaz hops (pellets)—10 minutes (flavor)
 - 1/4 tsp Irish moss
 - 3/4 cup corn sugar for priming in bottles. Use 1/3 cup corn sugar if priming a keg.
- Wyeast 2007 Pilsen Lager yeast, which ferments dry with a malty finish. No sulfur, diacetyl or esters.

Add the dried malt extract, rice extract and bittering hops to 2.5 gallons (9.5 L) of water and bring to a full and vigorous boil. The total boil time will be 60 minutes. When 10 minutes remain, add flavor hops and Irish moss. After a total wort boil of 60 minutes, turn off the heat, separate or strain out and sparge hops, and direct the hot wort into a sanitized fermenter to which 2 gallons (7.6 L) of cold water have been added. If necessary, add additional cold water to achieve a 5-gallon (19-L) batch size. Chill the wort to 60 degrees F (15.5 degrees C). Aerate the cooled wort well. Add an active yeast culture and ferment for 4 to 6 days in the primary at about 55 degrees F (13 degrees C). Then transfer into a secondary fermenter, chill to 50 degrees F (10 degrees C) to age for two more weeks, then lager for two to four more weeks at 40 degrees F (4.5 degrees C).

When secondary aging is complete, prime with sugar, bottle or keg. Let condition at temperatures above 60 degrees F (15.5 degrees C) until clear and carbonated, then store chilled.

Dear Professor (from page 19)

Yo Sean,

You got a bundle of information there, don't you? I think you must've read every book or got an earmail full on the Web. Time to clear the cobweb and figure out what's best for you. Simple dimple, no fuss, no muss is the "put it into cold water and take it out once it boils" method. That's essentially a no-brainer for those who are beginners and are easily intimidated about getting all those "things" straight the first time, worrying about doing something wrong and worrying about wrecking the wort. It ain't perfect, but it works.

The best way is to steep your grains in water at about 150 to 160 degrees F (65.5-71 C) for about 30 minutes. With a ratio of two quarts (2 L) of water to every pound (about half a kilogram) of specialty grain, you won't need much sparging. But why not strain and sparge your grain with enough water to end up with the amount of water you want to add your extract to? As an example, if you had two pounds (about a kilogram) of specialty grains (and never steep grains that require

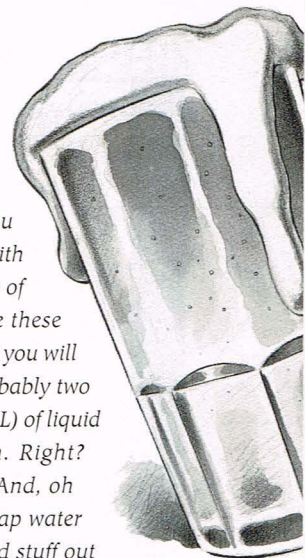
mashing to convert starches to sugars), you'd use about one gallon (about 4 L) of water for the steep. You could easily get away with using three quarts (3 L) of hot tap water to sparge these grains. But keep in mind you will want to end up with probably two to three gallons (7.5-11 L) of liquid to boil your extract in. Right? Don't sweat it. Relax. And, oh yeah, you can use hot tap water and get most of the good stuff out of your grains while sparging, but you'll get a little more if you have 160- to 170-degree F (71-76.5-degrees-C) water.

Do not disturb

The Professor, Hb.D. he is

Steep in thought (for maybe once in his life)

Send your homebrewing questions to "Dear Professor", PO Box 1679, Boulder, CO 80306-1679; FAX (303) 447-2825 or professor@aoab.org via e-mail.



NEW FROM LISTERMANN MANUFACTURING

CounterPhil

The Easy-to-Use Counterpressure Filler.

SINGLE VALVE DESIGN

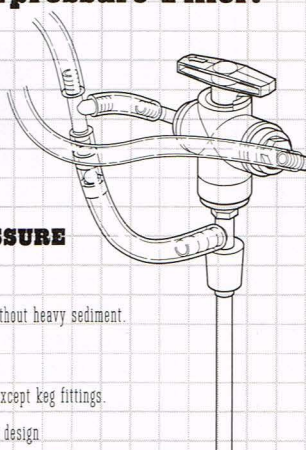
A simple twist of the wrist switches from liquid to gas.

ENJOY THE BENEFITS OF COUNTERPRESSURE FILLED BEER

- Ready to drink right away.
- Bottle crystal-clear beer without heavy sediment.

COMPLETE

Includes all hoses and parts except keg fittings.
Smooth flowing—low foaming design



THE PHILMILL
PHIL'S PHILLER
PHIL'S PHALSE BOTTOM
HEXTER FILTER
PHIL'S LAUTER TUN
PHIL'S SPARGE ARM

For information on These and Other Products, Call
(513) 731-1130. Wholesale Only
PO Box 12251 • Cincinnati, Ohio 45207
513-731-1130

ALSO NEW **PhilRack**
Stainless Steel Racking Cane



American Homebrewers Association	58
Automatic Equipment	2
Avon Books	60
Bacchus and Barleycorn Ltd.....	22
Bioriginal	55
Brew King.....	OBC
Brewers Publications	IFC
Brewers Resource	4
Brewers Warehouse	IBC
California Concentrate Co.	51
Elliott Bay Metal Fabricating.....	23
F.H. Steinbart Co.	9
Five Star.....	49
Foxx Equipment Co.	IBC
Grape and Granary, The	4
Heart's Home Brew Supply.....	52
Hop Tech.....	57
Jet Carboy	62
Listermann Mfg. Co.	61
Marcon Filters	23
Market Basket, The	14
Northern Brewer	57
Northwest Extract	35, 37, 39
Oregon Specialty	19
Paine's Malt.....	1
Quoin.....	62
Sabco.....	19
St. Patrick's of Texas	2
Siebel Institute of Technology	17
UC Davis.....	51
Valley Brewing.....	55
Weyermann, Mich.	27
White Labs	54
William's Brewing	17
Wine Hobby USA	4
Zymurgy.....	52



GET THE **JET**™

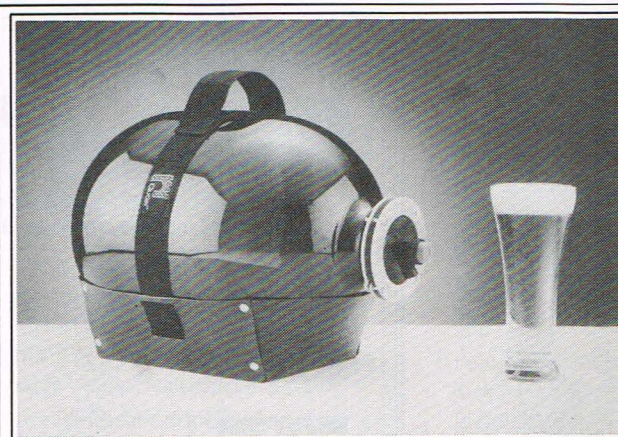
IT BLASTS

The Original and Incredible Carboy and Bottle Washer

- Automatic shutoff
- All brass construction
- Cleans your bottles fast
- Attaches easily to faucet

Lifetime Guarantee

Inquire at your local shop or call 616-935-4555
Jet Carboy and Bottle Washer Co.
 3301 Veterans Drive, Traverse City, MI 49684



Keg beer without a keg! Just PRESS, POUR & ENJOY!

- Easier to fill than bottles - No pumps or CO2 systems.
- Holds 2.25 gallons of beer - Two "**Pigs**" perfect for one 5 gal. fermenter.
- Patented self-inflating Pressure Pouch maintains carbonation and freshness.
- Perfect dispense without disturbing sediment.
- Simple to use - Easy to carry - Fits in "fridge".
- Ideal for parties, picnics and holidays.

Ask for the **Party Pig**® Beer Dispenser at your local homebrew supply shop and at your favorite craft brewer.

QUOIN (pronounced "coin")
 401 Violet St.
 Golden, CO 80401

Phone: (303) 279-8731
 Fax: (303) 278-0833
<http://www.partypig.com>

EQUIPMENT

USE A FERMOMETER

Monitor fermentation temperatures and prevent off flavors with ease. Visit Tkach Enterprises at www.sni.net/~sjtkach/index.html or call (303) 660-2297.

Make Dozens of Inexpensive reusable various bottle labels. Complete guide. Send \$9.00 to L.F.Y.B., PO Box 67091, Lincoln, NE 68506-9998

BREWING SYSTEMS

For Sale

2 barrel brewery complete. All stainless. Includes mashtun, brewkettle, 3-unit tank fermenters, pumps and fittings, and walk-in cooling system. Call (970) 669-8492, email: brouwerbrew@cybercell.net

INGREDIENTS

Paddock Wood Canada

Hops, grains, Wyeast, books; <http://www.quantumlynx.com/paddock/>; (888) 539-3622 (Toll-free); (306) 477-5632; 106-3120 8th St. E., Saskatoon, Saskatchewan, CANADA S7H 0W2.

THE PURPLE FOOT

We love to talk beer (and wine) and we know what we're talking about! Fast reliable friendly: The Purple Foot. Complete selection. Never out of stock. Free catalog: 3167 S. 92 St. Dept. Z, Milwaukee, WI 53227; (414) 327-2130; FAX (414) 327-6682.

LABEL SUPPLIERS

Cool Custom Labels

Finish your brew with a label, and reflect your good taste. Minimum of 25. Customized. Up to 4 colors. Call Label Solutions at (651) 415-9713 or tothelabel@aol.com

SUPPLIES

MAKE QUALITY BEERS

The Cellar Homebrew, Dept. ZR, 14411 Greenwood Ave. N, Seattle, WA 98133. Supplying home beer & wine-makers since 1971. FREE CATALOG/ Guidebook—Fast, Reliable Service (800)342-1871; Secure Online Ordering <http://www.cellar-homebrew.com>

BREWING SUPPLIES ONLINE

<http://www.brewguys.com> or call for color catalog: (888) BREWGUYS (toll free) or brewguys@brewguys.com or (914) 339-0966.

Draftsman Brewing Company

You'll love our prices! Call today for our free Homebrew Supply Catalog. 1-888-440-BEER; (440) 257-5880 <http://www.draftsman.com>; sales@draftsman.com.

Hops & Dreams

Homebrew and Winemaking supplies. Low prices. Large selection. Free catalog & free call (888) BREW-BY-U or <http://www.hopsanddreams.com>

NEW STORE

Wormtown Trading Co. in Worcester, MA. Thousands of beer and winemaking items available in 1 week or less! Call Strange Brew (toll free) (877) 460-5050 for details and free catalog.

WINEMAKING

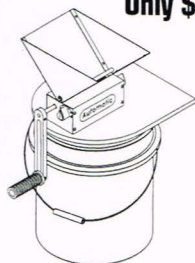
WINE-ART INC.

The innovator and leader in the home wine and beer industry. Family owned and operated with over 40 years of experience. Serving the amateur brewer. Let our experience benefit you. Call us direct at (888) 477-9463. Ask for Ralph Montone. www.wineart.com. In the USA call our distributor Crosby and Baker at (800) 999-2440.

YOUR AD HERE

Zymurgy Classifieds—The perfect place to buy or sell! Call Linda Starck at (303) 447-0816 ext. 109 or 1-888-822-6273 ext. 109.

New Roller Mill For Award-Winning Brew Only \$195!



- Uniform reduction for consistent grist
- Brew-pub quality, knurled steel rolls
- Easy-turning hand crank or 3/8-inch power drill attachment for automatic operation

Order Yours Today!
Call 888-860-1160

AGRI WORLD

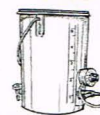
* Tax and shipping not included.

The BruChiller



- Unique, flat-coil design eliminates stirring of the wort during cooling process
- Install directly in boiler lid, allowing hop-back effect with finishing hops
- Both inflow and outflow hoses included

The Bruheat Boiler



- 7 gallon capacity
- 2750 watts, 220 volts
- Thermostat controlled
- Holds mash within 2°C
- Rapidly boils 6 gallons
- Guaranteed for one year

The BrewCap



The Original Inverted Fermentation System!

- Drains yeast directly from the bottom of the fermenter
- Eliminates racking to secondaries and priming tanks

Free Brochure

BrewCo
P.O. Box 94
Boone, NC 28607-0094
Tel. 704/297-7837

Call or write for a free brochure.

BrewCo

Fight For the Rights (of Barley)

To be shouted to the Beastie Boys tune *Fight For Your Right (To Party)*

You wake up late for work, man you
don't wanna go
You check your homebrew stash
and it's getting awfully low
You've got an empty carboy, you
know what you've gotta do
Get some malt and hops and yeast
and make yourself some brew

CHORUS: *You've got to fight for
the rights of barley*

You call your boss to say you're
sick, he tells you "You're a lout!"
The trouble with that dude is he don't know
what life's about
You pour yourself a breakfast stout you're
starting to feel fine
Today's the day you're gonna make an all-
grain barleywine

CHORUS: *You've got to fight for the
rights of barley*

You mash your grains and sparge and boil
you're having a good time
A hundred IBUs of hops the smell is so
sublime
Your honey calls you on the phone "Stud,
take me out to dinner."



CHORUS: *You've got to fight
for the rights of barley*

Within a couple hours your
brew's really in the swing
There's blowoff on the ceiling,
it's doin' the wild thing
Your neighbor's pounding on
your door, "Hey, what's that
bubbling noise?"
Aw, man you're just jealous, it's
the Yeastie Boys!

CHORUS: *You've got to fight for the
rights of barley*

Now listen up my brothers, pay attention
sisters too
I'm gonna set you straight about the pleasures
of homebrew
Don't you go be talkin' trash and tellin' me
I smell
Show me some respect 'cause I'm a home-
brewer from hell

CHORUS: *You've got to fight for the
rights of barley*

"I can't oblige you baby cause I'm brewin'
up a winner."

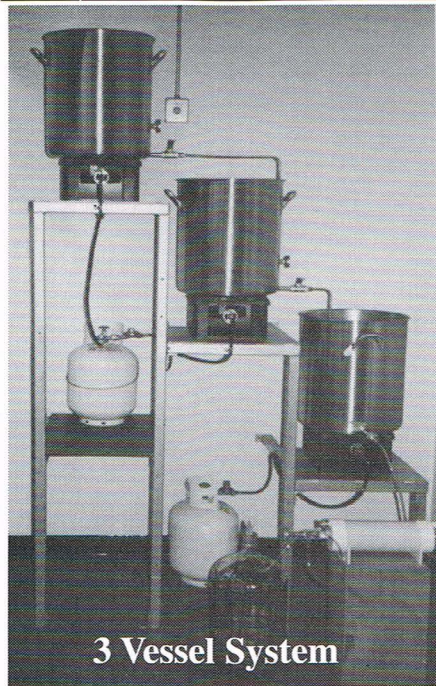
CHORUS: *You've got to fight for the
rights of barley*

You chill your wort and take a taste it's thick
and sweet and fruity
SG's a hundred twenty this stuff gonna kick
some booty
You pour it in your carboy and pitch some
nice thick slurry
You stand back in amazement as it takes off
with a fury

Dan Rabin is a regular contributor to
Zymurgy.



BREWERS Warehouse



3 Vessel System

Call for catalog!
(206)527-5047

4520 Union Bay Pl. NE Seattle Wa. 98105
<http://www.brewerswarehouse.com>

The 3 Vessel Gravity Feed Brewing System

* No lifting of heavy pots- gravity is our ally * Straight infusion or step mashing * Low pressure propane stoves, with plenty of fire power, good control, and may be jetted for natural gas. *All vessels are heavy gauge, food grade stainless including handles and lids *All welding guaranteed for life *Perforated stainless screens custom cut to fit each vessel *The BITOA wort chiller cools wort in seconds *Complete 10 gal, 15 gal, or 20 gal systems or components available

The One Half Barrel Fermenter

The only TRUE Half Barrel System!

* All 304 stainless construction with welds back-ground and polished * Lock down lid with pressure gauge, pressure relief valve, and Cornelius gas port fitting * Temperature controlled chill band with temperature sensor in a probe well in the cone * Seamless cone has 60° slope for yeast collection and propagation



*"brewing
is
the
only
answer!"*



Fermenter

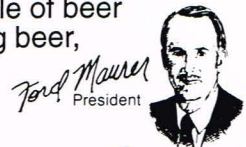
WE MAKE IT EASY FOR YOU!

Home Brew Kegs (3 or 5 gallons)

The Foxx Home Brew Keg allows you to dispense, store and cleanup with bulk efficiency. All components are heavy-duty, but simple to use.

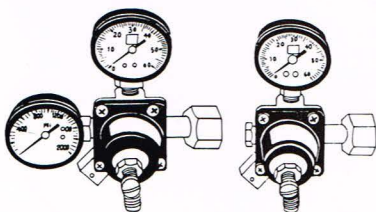
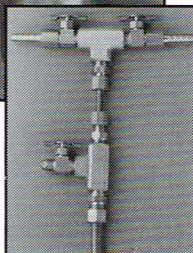
The Foxx Bottle Filter can be your easy way to bottle filling. By following simple instructions you can produce a sediment free bottle of beer with the same carbonation as keg beer, with no foaming!

P.S. We also specialize in soda keg parts, e.g. disconnects, fittings, faucets, taps and tubing.



Wholesale Only
Call for a nearby retailer

K.C. (800) 821-2254 FAX (816) 421-5671
Denver (800) 525-2484 FAX (303) 893-3028



CO₂ Pressure Regulators designed especially for home brewing

- COUNTER PRESSURE
 - BOTTLE FILLER: Saves Time & Money
 - WHOLESALE ONLY
- Dealer Inquiries Invited*



How to drastically reduce the number of steps it takes to make a great bottle of wine.

Vintners Reserve™ and Selection Premium Wine Kits offer home winemakers premium quality wine without the endless number of steps. Give us a call for the dealer nearest you and start your wine cellar today!



Available at specialty home brewing stores throughout the United States and Canada. For the dealer nearest you, contact:

Western Canada
Brew King
1622 Kebet Way,
Port Coquitlam, B.C.
V3C 5W9
(604) 941-5588

Western U.S.A.
F.H. Steinbart Co.
234 S.E. 12th Ave.,
Portland, Oregon
97214
(503) 232-8793

Ontario
Winexpert
710 South Service Rd.,
Stoney Creek, Ontario
L8E 5S7
1-800-267-2016

Eastern U.S.A.
L.D. Carlson
463 Portage Blvd.,
Kent, Ohio
44240
(216) 678-7733

Quebec
Distrivin Ltée.
950 Place Trans Canada
Longueuil, Quebec
J4G 2M1
(514) 442-4487