

P R I S O N C I T Y B R E W E R S

# SENTENCING

Volume 5 - Issue 11

G U I D E

November 2002

## Meeting Location!!

This month's meeting is at the Poison Frog Home Brewery... otherwise known as Phil's house. Map and directions are on the back page.



## Next Meeting is Tues., Nov 12th

The competitive beer style for the night will be Stout. This is a Club-Only Competition Style. It is also the Wine and Cheese meeting. I am hoping to get a number of wine folks in to talk about wine making and wine tasting.

If you have a beer you brewed bring two, if not, find one in style and bring it also.

By all means, bring any/all of your own homebrew to share.

Feel free to give and accept constructive criticism on beer/mead/cider you're sampling. Knowing what you did right and wrong is all part of making better beer.

Please observe good judgment when imbibing and don't drive while intoxicated.

## Meeting Date/Style 2nd Tuesdays 7:30

\*Denotes AHA Club-Only Competition

Nov. - Stout\* - Phil Wilcox

Dec. - Barleywine/Old Ales - Bill Saurbek

Jan. - Bitter&English Pale\* Troy Rerucha

Feb - Mar - Brown Ale\*

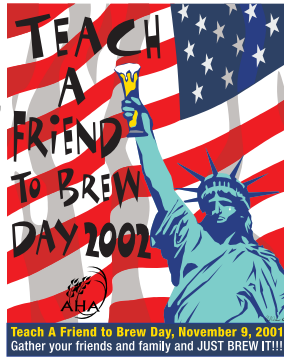
April - Alt -

May - Bock -

June- Koelsch -

July - Old Ale\* Competition

Aug. - European Pale Lager\*



AHA's 4th Annual Teach a Friend to Homebrew Day

Sat., Nov. 9, 2002 10 AM

Grab your brew kettle

and your non-brewing friends and join the fun! Teach a Friend to Homebrew Day is an event to introduce the joy of homebrewing to those unfortunate souls who haven't experienced the fun of brewing their own beer. We are Site #34. Jeff Gier is Hosting. 782-5905

## BEER TRAVEL

### MCAB V

Feb. 7-8, 2003 Hosted by BURP (Brewers United for Real Potables) in the Washington, DC area. Details to come!

### Real Ale Festival '03

The Seventh annual Real Ale Festival will be held February 27 through March 1, 2003 with the main festival events taking place at a newly contracted facility that will accommodate more beer and more people. The new site is the Finkel foundry---a specialty steel mill nestled in the middle of Chicago's teeming residential and nightlife districts.

At Finkel, festival goers will find ample parking, a beautiful roof-top deck and spacious indoor facilities where we'll be able to serve more than 200 cask-conditioned ales each year.

### 2003 AHA NHC

### Sweet HomeBrew Chicago

The homebrew clubs of the greater Chicago area cordially invite you to a grand celebration of the brewing arts, Thursday, June 19 to Saturday, June 21. At the Holiday Inn Chicago-O'Hare Intl.

## MONTHLY RECIPE

### All Rye-T Stout

This has to be the best stout I have ever made. Since I have made the move to all-grain, this will be the only stout recipe for me. The flavor is dry and what you would expect from a stout. The rye and the carapils has made it very thick, just like Guinness. If I have to adjust anything, I would add more hops...say about another 1/2 oz of Fuggles for the 1 hour boil. This stout is thick, very dark, overly smooth and won't stay in my glass for very long.

Ingredients:

8 lbs 2 row malt  
1.1 lbs flaked rye  
1/2 lb cara-pils malt  
3/4 lb roast barley  
1/4 lb black patent malt  
1/4 lb chocolate malt  
1/4 lb crystal malt [80L]

3 oz Fuggles leaf hops [4.2%- for 60 min. ->12.6 HBU]

1 oz Goldings leaf hops [5.2%- for 10 min.->0 HBU]

1 pinch Irish moss

WYeast London Ale [1028] + Starter

Procedure:

Grind all grains and place them into the mash. Mash in at 71C (160F). Temperature should drop to 66C (152F). Mash for 2.5 hrs at 66C (152F). Mash out for 5 min at 76C (169F). Sparge 6gal @71-76C (160F-169F). Boil for 1 hour. 3 oz of Fuggles for 60 minutes. 1 oz of Goldings and Irish moss for last 10 minutes. Cool, remove trub, and pitch.

Ferment at room temperature 20C (68F) until fermentation ceases. About 10 days. A single stage fermentation was used. Then bottle or keg as desired (I kegged it).

Specifics:

O.G.: 1.060

F.G.: 1.020

Primary Ferment: 10-14 days

## Styles - Stout

**G**uinness is always the first that comes to mind in this style of beer, but it is hardly the only good example. Some would even argue that it is not the best either! Among the die-hard dry stout fans there has become a widening rift between those Dubliners in the south preferring Guinness and those from the north who prefer Murphy's Dry Stout. Both are now available here in the U.S. and with a little luck we will try them both at the meeting.

For a complete copy of the new guidelines visit the BJCP Home Page at [www.bjcp.org](http://www.bjcp.org).

### 16A. Dry Stout

**History:** The style evolved from attempts to capitalize on the success of London porters, but originally reflected a fuller, creamier, more "stout" body. Modern versions are brewed from a lower OG and no longer reflect a fuller body than porters.

**Vital Statistics:** ABV: 3.2-5.5%  
OG: 1.035-1.050 FG: 1.007-1.011  
IBUs: 30-50 SRM: 35+

**Commercial Examples:** Guinness Draught Stout (also canned), Murphy's Stout, Beamish Stout.

### 16B. Sweet Stout

**Flavor:** Dark roasted grains and malts dominate the flavor as in dry stout, though there is medium to high sweetness. Hopping is moderate and tends to be lower than in dry stout, emphasizing the malt sweetness.

**Comments:** Gravities are low in England, higher in the exported product.

**Ingredients:** Lactose is sometimes added to provide additional residual sweetness. High carbonate water is all but essential.

**Vital Statistics:** ABV: 3-5.6%  
OG: 1.035-1.066 FG: 1.010-1.022  
IBUs: 20-40 SRM: 35+

**Commercial Examples:** Mackeson's XXX Stout, Watney's Cream Stout, Samuel Adams Cream Stout, Tennent's Milk Stout.

### 16C. Oatmeal Stout

**History:** A variation of sweet stout that is usually less sweet than the original.

**Comments:** Between sweet and dry stouts in sweetness.

**Ingredients:** Pale, caramel and dark roasted malts and grains. Oatmeal used to enhance fullness of body and complexity of flavor. Hops for bitterness only. Ale yeast. Water source should have some carbonate hardness.

**Vital Statistics:** ABV: 3.3-6.0%  
OG: 1.035-1.060 FG: 1.010-1.018  
IBUs: 20-50 SRM: 35+

**Commercial Examples:** Samuel Smith Oatmeal Stout, Young's Oatmeal Stout, Mclay's Oatmeal Stout

### 12C. Russian Imperial Stout

**Overall Impression:** An intensely flavorful beer. Roasty, fruity, and bitter-sweet, with a notable alcohol presence. Dark fruit melds with roasty, burnt, almost tar-like sensations.

**History:** Said to be popular with the Russian Imperial Court.

**Ingredients:** Well-modified pale malt, with generous quantities of roasted grain. Flavor and aroma hops should include English varieties for authenticity. Alkaline water would balance the abundance of acidic roasted grain in the grist.

**Vital Statistics:** ABV: 8-12+%  
OG: 1.075-1.095+ FG: 1.018-1.030+  
IBUs: 50-90+ SRM: 20-40

**Commercial Examples:** Samuel Smith Imperial Stout, Courage Imperial Stout, Brooklyn Black Chocolate Stout, Rogue Imperial Stout, North Coast Old Rasputin Imperial Stout, Victory Storm King, Bells Expedition Stout.



## COOKING WITH BEER

### Alaskan Amber Poached Salmon

Scammed off of  
<http://www.alaskanbeer.com>

Alaskan Amber Beer and wild king salmon, fresh from Alaska's icy waters, make a meal to remember. Try poached salmon with Hollandaise Sauce to highlight a festive meal!

1 quart water  
2/3 cup freshly squeezed lemon juice or white wine vinegar  
2 small onions, quartered  
3 carrots, chopped  
2 celery stalks, chopped  
3 or 4 sprigs of fresh parsley  
1 Tbsp minced fresh thyme, or 1 Tsp. dry bay leaf  
2 tsp salt (optional)  
1 1/2 tsp black peppercorns, cracked  
3 12 oz. bottles Alaskan Amber Beer  
1 1/2 lbs wild Alaska salmon fillet, skinned and cut into 4 equal pieces (about 6 ounces each)

Combine all the ingredients except Alaskan Amber Beer in a stockpot or large saucepan and bring to a boil over medium-high heat. Reduce the heat to low and simmer, partially covered, for about 1 hour. Strain and discard the vegetables and herbs. Add Alaskan Amber Beer and heat to simmering, then use immediately to poach salmon. (Note: this liquid, before or after poaching the salmon, makes a great stock for soups and bisques.) (Continued on back)

To poach salmon fillets: Quickly rinse the salmon under cold running water and pat dry with paper towels. Place the fish in a flameproof dish or skillet. Pour the simmering liquid over the fish to cover completely and place the pan over medium heat until fish is done, 2 to 3 minutes for thin pieces. Do not allow the liquid to boil; there should be only a few bubbles breaking on the surface. With a slotted spatula, remove the cooked salmon immediately. Serve at once with hollandaise sauce.

# An Introduction to Home Winemaking

There has never been a better time for home winemakers. Advances in winemaking increase the odds for early success. The modern era of winemaking began when the great French chemist Louis Pasteur discovered that yeast is responsible for fermentation. Pasteur's research and subsequent developments have taken the mystery out of fermentation. Winemaking is an exciting hobby that may be pursued at many levels. Experience gained as a home winemaker prepared me for a semi-retirement career, providing wineries with analytical and consulting services.

Here are some thoughts that will increase the odds of early success. Read at least one good book before you start. Several excellent texts are listed below. Talk to people who are knowledgeable. Seek out a good home winemaking shop for advice and supplies. Seek out a mentor. The rest of this paper will be devoted to items that I feel are of particular importance.

A first step is to acquire fruit or juice for fermentation. Good fruit is necessary for good wines. Cull out unripe or spoiled fruit. Unripe fruit is often tart with vegetative flavors. Spoiled or over ripe fruit may impart unpleasant flavors and result in off-fermentations. Grapes are often used, but many other fruits also make good wines. Fresh fruits are great if available, but frozen fruit or juices can give excellent results. Avoid juices or fruit that have preservatives added (except modest additions of sulfur dioxide), or fermentation may be unduly delayed.

Even good fruit or juice may benefit from adjustments. The most common adjustment is addition of sugar. Most of the dissolved solids are sugars, with the rest mainly organic acids and inorganic salts. Too little sugar and the wine will lack body and balance. A level of 20% solids will result in a light wine, good for many fruit wines and lighter grape wines. A level of 23% solids produces a more alcoholic and robust wine, suitable for many reds and full-bodied whites.

Dissolved solids are measured with a hydrometer, available from home winemaking shops. Wine hydrometers are calibrated in Brix (weight percent solids) or specific gravity. I recommend the Brix scale, as it is more intuitive and used in most winemaking books. A good rule of thumb is that 1/10 pound of sugar will raise 1 gallon of juice 1 Brix. This is expressed by the formula:  $(.1) \times (\text{Gallons of Juice}) \times (\text{Desired Brix} - \text{Starting Brix})$ . Say you have 5 gallons of the juice at 19 Brix and you want to raise it to 21 Brix. Using this formula gives  $0.1 \times 5 \times 2$ , or 1 pound of sugar. Stir in the sugar and then measure the resultant Brix with your hydrometer. Sometimes the Brix will not increase as much as you would expect because all the sugar has not dissolved. If you are confident of your calculations, don't add more sugar or you may end up with too much.

The next most common adjustment is acid. A desirable range for acid at fermentation is 0.6 to 0.9 weight percent. This is expressed as tartaric acid, the predominant acid of the grape. Acid is necessary for the wine to have a crisp, refreshing taste. There is a further need for acid to improve aging qualities and enhance resistance to wine microbes. Most local grapes have adequate acid. In contrast, many warm-climate grapes benefit from a judicious acid addition. Taste the juice and determine if it is tart enough. If the juice lacks crispness, consider a tartaric acid addition of 0.1 per cent (3.8 grams/gallon). This corresponds to  $\frac{1}{2}$  of a level-cooking teaspoon per gallon. What should do you do if the juice and/or resultant wine is overly tart? My suggestion is to make up a concentrated sugar/water solution and add the desired amount to the wine just before consumption. Bottling a sweet wine risks refermentation and exploding bottles.

The next step is to get the yeast fermentation under way. The sooner fermentation starts, the better. Delayed fermentations are likely to result in excessive amounts of acetic acid (vinegar) or other types of microbiological spoilage. Use wine yeast at the rate of 1 gram/gallon. One small packet contains 5 grams and so is enough for 5 gallons. Proper rehydration of the yeast results in a higher cell survival rate. For each 5-gram packet use two ounces of water at 100 to 105 degrees F. Slowly mix the yeast into the warm water. After 20 minutes it should be fully rehydrated and frothing. Add the yeast/water solution to the juice or crushed

fruit. Within a day or two there should be signs of active fermentation. Follow the progress with your hydrometer. As the sugar is consumed, the hydrometer reading drops. This is because the alcohol is less dense than sugar. When the hydrometer reading stabilizes, fermentation is probably complete. Dry (sugar free) red wines are about -1 Brix and whites about -2 Brix. Your Brix measurements may not be this low immediately after fermentation. This is because dissolved carbon dioxide from the fermentation clings to the side of the hydrometer, buoying the hydrometer up. With time, excessive carbon dioxide dissipates.

At times the fermentation does not go well because the yeast do not have enough nutrients. My preference is not to add nutrients or supplements unless they are necessary. If the fermentation stalls or quits before all the sugar is gone, there may be a nutrient deficiency. Sulfur-like aromas (rotten eggs) also suggest a lack of nutrients. Should you have either of these problems, consider adding a balanced yeast nutrient at the recommended rate. If you have a history of poor fermentations, consider adding a balanced yeast nutrient on a routine basis.

An important step in all winemaking is to periodically rack (siphon) the wine off the sediment, which is called lees. Racking prevents the wine from picking up off flavors from the sediment. The first racking should take place shortly after fermentation is completed. Then rack periodically as lees accumulate on the bottom of the container. Most wines benefit from three or four rackings before bottling.

The newly fermented wine will benefit from some time in a cool, dark cellar. Lower temperatures help settle grape particles and spent yeast. Another, but less apparent, advantage of a cool cellar is that it will expedite the dropping of excess cream of tartar. This has the beneficial effect of avoiding or reducing the precipitation of small white crystals after bottling. Another advantage is that cold stabilization will help lower acidity as the crystals contain acid. If you have a cool garage, place the new wine there for two to four weeks. Avoid temperatures much lower than 28 degrees F or the wine may freeze and break the carboys.

An important step is to minimize oxidation. Excessive oxygen pickup is the most common winemaking problem, even at the commercial level. Here are some ideas to help

minimize excessive oxidation. When racking, minimize exposure to air. The racking tube's outlet should be on the bottom of the container. Do not allow wine to flow down the sides of the container or fall to the bottom of the vessel. Keep all containers full. This is most easily accomplished by having an assortment of containers of various sizes. For example, I have 5, 3, and 2-gallon carboys, 4, 3, and 1-liter jugs, 750 ml and 375 ml bottles. The liquid level should be not more than 1" from the top of the stopper. Use a fermentation lock until excess gas dissipates. At that time you may use solid bungs in lieu of fermentation locks. I highly recommend the new "breathable" silicone bungs, which double as a fermentation lock and stopper.

Moderate use of sulfur dioxide is beneficial to all wines. It is the only preservative that I recommend. Used carefully and in moderate amounts, it poses little health risk. I am an asthmatic but have never had an adverse reaction from SO<sub>2</sub> in wine. Here are some ideas for a sulfur dioxide addition schedule. At the time of fermentation add 30 to 50 ppm (parts per million) SO<sub>2</sub> per gallon. This corresponds to 1/5 and 1/3 level teaspoon of potassium metabisulfite for the 30 and 50-ppm addition rate, respectively for a 5-gallon carboy. At each racking and at bottling add 20 ppm SO<sub>2</sub>, or 1/8 teaspoon potassium metabisulfite per 5 gallon carboy. You can see that a little "meta" goes a long way. For volumes less than 5 gallons, the quantities needed are almost infinitesimal. Before a metabisulfite addition, smell and taste the wine. If you can taste or smell sulfur dioxide (burnt match), skip the addition. You already have enough

Winemaking requires some specialized equipment and capital outlay. Good advice for new winemakers is to keep things simple and minimize initial purchases. If you decide that winemaking is something you want to do, acquire the things you need over time. Look for good used equipment at an attractive price. Estimate how much wine you want to ultimately make and size accordingly. A 5 to 10 gallon press basket is good for casual winemakers, whereas a 25 to 30 gallon basket is great for several partners or a big family.

If you start making wine in the fall, consider buying grapes that have already been partly processed. This may alleviate the need for a crusher if making red wines and both a crusher and press if making whites. These

are the two most expensive pieces of wine-making equipment.

Here are some items you will need to get started:

White wines from juice:

Containers, ranging from 5-gallon glass carboys down to a pint.

Fermentation locks fitted with bored stoppers to fit your containers.

Siphoning (racking) tube. Wine is not poured, lest the sediment be disturbed.

Hydrometer, preferably calibrated in degrees Brix (weight % sugar) and a jar to float it in.

Wine yeast (Pasteur Champagne, or supplier recommendation).

Yeast nutrient. Not always necessary but if in doubt, use it.

Potassium metabisulfite (a source of sulfur dioxide).

Corks and corker, or consider using screw-cap bottles for short-term storage.

Red wines from grapes. In addition to above:

Crusher. Consider a crusher-stemmer if the budget permits. Hand removing stems is not fun.

Press. Essential if you will be pressing unfermented grapes or fermented must.

Barrel(s) For red wines, especially. Twenty gallons is the minimum recommended size.

#### Advanced Topics & References

At times a wine is too tart, or too acid. This can be often resolved by a second fermentation, called the malo-lactic fermentation. It softens the wine by converting malic acid to lactic acid, and in the process halving the acid that is converted. This is best done by a commercial strain of freeze-dried lactic acid bacteria. This bacterium is considerably inhibited by sulfur dioxide. If you want to encourage malo-lactic fermentation, don't use more than 20 ppm of sulfur dioxide for whites or 40 ppm for reds at the time of fermentation. Don't add any more sulfur dioxide until malo-lactic fermentation is complete or you elect to abort the fermentation. At times malo-lactic fermentation can result in a dramatic drop in acidity and a substantial increase in pH. I suggest that if you decide to pursue malo-lactic fermentation, the pH should be monitored. It may be necessary to add tartaric acid to return the pH to a desirable level. Don't try malo-lactic fermentation on fruit wines. The acid will be substan-

tially reduced, there will be a considerable increase in pH, and the character of the wine will be dramatically changed, almost certainly for the worst. I don't recommend that you try malo-lactic fermentation until you have a year or two of winemaking experience and read about this topic in one of the recommended texts

Most red grape wines are enhanced by time in an oak barrel. This leads to a more rapid maturity and better balance. Barrels require care to keep them in good shape. Get a year or two of experience before progressing to barrels. Consider 20 gallons the minimum acceptable size. Small barrels lead to proportionately more loss from evaporation and more oxidation.

Some wines benefit from fining, that is adding selective materials that can aid in clarification and resolve some problems. The most commonly used fining agent is bentonite, a type of clay that will prevent white wines from depositing a white flocculent precipitate. I don't generally recommend fining unless you have access to filtration, as some finings may stay in solution.

The only way to insure that your wines will stay brilliant is by filtration. Good filtration equipment and filters are expensive. If you make winemaking a serious hobby, you might want to check into one of the wine cartridge filtration systems. Presque Isle Wine Cellars has a good one. You need to filter to a nominal 0.45-micron, or better still a nominal 0.2 micron to achieve lasting clarity.

During this presentation I have not gone into wine testing, except for adjusting sugar. However, wine testing is very important and one of the best ways to improve wine quality. If you decide to make winemaking a serious interest, I definitely suggest that you do some testing. The three I consider essential are pH, titratable acidity, and free sulfur dioxide (aeration/oxidation method). These and many other tests are well covered in the Zoecklein text.

Conclusion:

Hopefully this little primer has been helpful. Regretfully, space and time do not allow me to cover more topics or go into greater detail. Good luck and good winemaking!

Phillip E. DeVore

Revised September, 2002  
References on the back page:

References:

Konnerth, W. M., et al, *Beginner's Book of Winemaking*, Presque Isle Wine Cellars, 9440 W. Main Rd, North East, PA 16428. (800) 488-7492. This is a short but comprehensive primer (52 pages). Considering its price and ease of reading, this is the first book to read. Presque Isle is also a well-regarded source for general winemaking supplies.

Wagner, P. M., 1998, 15 th printing, *Grapes Into Wine*, New York, Alfred A. Knopf. This is a classic winemaking text, easy to read, and packed with good advice.

Zoecklein, B. W., et al, 1995, *Wine Analysis and Production*, New York, Chapman & Hall. This is a modern professional book. It has an excellent and extensive section on wine analysis. All the information you need for good wine analysis is here.

Boulton, R. B., et al, 1996, *Principles and Practices of Winemaking*, New York, Chapman & Hall. Like the Zoecklein book, this is part of the Chapman & Hall Enology Library, an extensive grouping of modern texts on wine and winemaking. This and the Zoecklein book are complimentary. The Boulton book covers more ground, but it does not go into wine analysis. Very good but expensive.

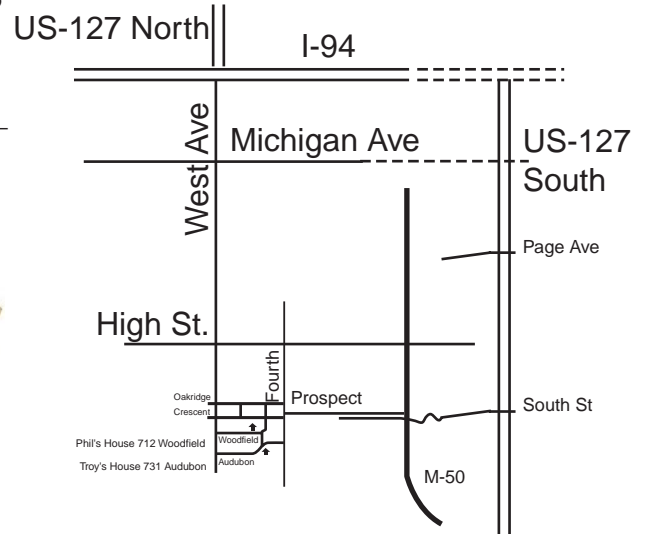
## This Month's Meeting is at Phil Wilcox's House

The easiest way to get to Phil's house is from West Ave. This is the main north/south street in town. From the north side of town or I-94/127N, take West Ave. all the way through town and hang a left on Woodfield. It's the fourth to last house on the left side of the only block. Feel free to park out front or on the side street. 712 Woodfield is the address. 796-0569 is the phone if you get lost. If you live south of town, you need to remember that Woodfield doesn't go through to Fourth. Take the left on Audubon and go down a block to Briarcliff and hang a right. This will take you to Woodfield—just four houses up from the corner is Phil's house.



Please bring your club *Zymurgy* magazines back to each meeting.

Others would like to read about what is going on in the beer world. If you just can't part with it, back issues are available through the AHA. Or see Phil for a discount on your own membership.



Visit us on the Internet: <http://hbd.org/prisoner!!!!!!!!!!!!>

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# BREWERS



# PRISON CITY

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