Baron Mind

A Monthly Publication for the Beer Barons of Milwaukee
Dedicated to the Education and Enjoyment of Fermented Malt Beverages

March 1995

March Meeting

The March monthly meeting is at 7:30 PM on March 22nd, at Clifford's (10418 W. Forest Home Avenue, Hales Corners). As usual, the meeting is $5.00 per person.

Meeting Programs

March 22nd	**Irish and Irish Style Stouts and Ales**
April 26th	**TBA**
May 24th	**John Hammacher from Beer Capitol Distributors**

Calendar of Events

March 27th	**Bock is Best Club-Only Competition.** Entries due March 20th. Contact James Spence at (303) 447-0816, Ext 121
April 22nd	**Bidal Society of Kenosha Competition,** Kenosha, Wisconsin. Entries due April 15th. Contact Carol DeBell at (414) 654-2211
April 23rd/26th	**Institute for Brewing Studies' Microbrewers and Pubbrewers Conference and Trade Show,** Austin Texas. Contact Nancy Johnson at (3030 447-0816
April 28th/30th and May 5th/7th	**AHA 1995 National Homebrew Competition First Round Judging.** Entries due April 3rd. Call the AHA at (303) 447-0816
May 6th	**National Homebrew Day**. Contact Lori Tullberg-Kelly at (303) 447-0816, Ext 106
May 13th	**Ninth Annual Big and Huge Homebrew Competition**. Madison, Wisconsin. Entries due May 6th. Contact MHTG, Box 1365, Madison, WI 53701
May 29th	**Rauchbier Roundup Club-Only Competition**. Ithaca, New York. Entries due May 22nd. Contact James Spence at (303) 447-0816, Ext 121

What's Hoppening!

A Monthly Column
by Peter McMullen

I would like to thank Dennis Davison and Brian North for their fine presentation of Brewing High Gravity Beers at the February meeting. The information was as easy to digest as were the beers we sampled. Perhaps this will inspire some to brew some for the club next year. At this month's meeting we will be sampling Irish and Irish style stouts and ales. We hope to have about seven different brews, of which Killian's Red *will not* be one.

The next AHA club-only competition is the Rauchbier Roundup, with entries due in May. Anyone that would like the club to enter their brew must bring it to the April meeting for pre-judging.

Rumor has it that a Scotch Ale study group is forming. Anyone wishing to join should speak with Rich Grzelak.

The Stout was of superior quality, soft against the tongue but sharp upon the crifice of the throat, softly efficient in its magical circulation through conduits of the body.

- Flann O'Brien,
At Swim Two Birds

Miller Bullish On Beer

by *Baron Mind* Editorial Staff

For those of you who don't habituate the business sections of Milwaukee's papers, you may have missed the beer story of the month. The February 28th issue of the Milwaukee Journal carried the story that Miller Brewing Company had purchased a majority interest in the Celis Brewery, Inc., of Austin Texas, through its newly created subsidiary American Specialty/Craft Beer Company, or "Specialty Beers" for short.

Many of you already know that Celis is a highly respected microbrewer even though it has only been in business since 1992. Pierre Celis, the founder, had previously been the brewmaster at the Hoegaarden (pronounced *Who-Garden*) brewery in Belgium, which is famous for its Wit (pronounced *White*) beer. Celis produces a white style beer in Texas, as well as four other European styles.

In a joint statement, the two brewers said that Celis would remain "an independent company with control over all of its brewing activities."

According to the *Milwaukee Journal* article, the alliance will give Miller further entry into the specialty beer market, and will also give Celis a national distribution platform.

"The alliance will allow us to focus on what we do best, which is to brew specialty beers," Pierre Celis said in a prepared statement. Miller "brings to our relationship the resources, experience and business systems that will help us to meet the growing demand for our uniquely brewed beers."

The transaction "represents another step in Miller's initiative to make sure it's offering its customers and distributors a fully rounded portfolio," Scott Barnum, general manager of Specialty Beers, said in a telephone interview with Eric Gunn, of the *Journal* staff.

According to the *Journal*, the rapid growth among specialty beers (about 2 million barrels in 1994) represents about 1% of the beer market, and has forced market leaders (who measure their growth in the single digits or less) to sit up an take notice.

As most of us know, Miller bought Leinenkugel Brewery, Inc., in Chippewa Falls in the late 1980's, which has proved to be a profitable venture for Miller and has given us several fine beers to appreciate.

Miller isn't the only major brewery getting into the micro market, with Anheuser-Busch, Inc., acquiring a 25% stake in Redhook Ale Brewery (Seattle, Washington) last year.

AHA Announces Pull Out from Joint Beer Judge Program

by *Baron Mind* Staff Reporters

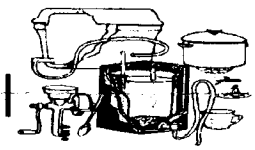
In a letter which caught some beer judges by surprise, the American Homebrew Association (AHA) announced that it had given notice to the Home Wine and Beer Trade Association (HWBTA) that it intended to pull out of it's joint beer judge certification program.

Citing a difference in long term vision, the AHA letter to its judges, explained that it believed it had outgrown the joint agreement and that more resources should be allocated to increase participation in the program.

The AHA also included a questionnaire to judges in which they were asked their opinion on the direction and scope of the certification program, as well as their views on the examination process. Brought up in the questionnaire was also the possibility of having beer judges certified by beer style - a point that has surfaced at some competitions where entrants have had low scores which they attributed to judges inexperienced in the style. Additionally, the questionnaire also asked if judges should be re-tested periodically to insure their judging skills continued to meet the requirements of judging in competitions.

Judges were told in the letter that their test scores and judging points from previous competitions would still be honored during the transition to a strictly AHA judge certification program.

Chlorine Bleach and Stainless Steel



by John Palmer, Metallurgist

Chlorine (aqueous) is highly corrosive to austenitic stainless steels, which includes the 304 alloy most commonly used for Food Grade containers. The mechanism of corrosion homebrewers mostly have to be concerned with is Pitting Corrosion. This is caused by localized concentration of chlorine ions. Those ions become concentrated by evaporation of water containing chlorine. The corrosion is manifested as tiny pits which, due to increased relative concentration of the chlorine in the pit to the surrounding environment, quickly put pinholes in your tanks.

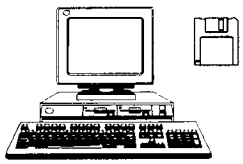
To prevent this type of corrosion, the key is good rinsing of the bleach water from the steel. First off, let me say that the 1+ tablespoon bleach per gallon (4ml/liter) is not much in the context of the industrial corrosion that the Metals Handbook is written to. Most of what I read dealt with continuous flow through pipes, etc. Anyway, If you rinse with warm boiled water until you don't really smell it, and then prevent water droplets on the sides by either filling the keg with beer or drying them out with a towel, you will not have the localized concentration necessary to induce pitting.

One other thing that can be done with Stainless Steel is passivation. A 20% by volume solution of (HNO3) Nitric Acid will ensure a uniform oxide film which will prevent the localized concentration/activity difference which initiates this form of galvanic corrosion. But I don't think this should be necessary.

Additional information: Storing bleach water for more than a couple hours is not advised. One brewer experienced thru-pinholes at the waterline of his stainless pot when he let is sit for several days. The corrosion rate is not lightening fast, but any pinhole that starts to form will only get deeper with repeated exposure. When left to sanitize, the keg should be as full as possible so that there is no waterline or other surface energy transition that will set up the corrosion reaction. Corrosion attack is dependent on concentration, so do not exceed the 1-2 tablespoons per gallon of bleach concentration. I believe I read that these concentrations are effective sanitizers for a 20 minute period.

Reading over this, I realize it is not the most favorable commentary; so let me pose this parallel: Your local community swimming pools have at least as much chlorine smell to the water as this concentration, and the stainless steel ladders submerged in those pools last for years. So, Sanitize, rinse with boiled water, and you should have zero problems.

Submitting Articles



by Jeff Brown, *Editor*

The question has been asked by no small number of members anxious to submit articles, "How does one submit an article to Baron Mind". The answer is that there are quite a few options.

Easiest is to have the author save his work to a either a 3.5" or 5.25" floppy disk. The format should be pure ASCII, with no indentations of paragraphs, no spaces between paragraphs. For best transfer, the carriage return should only be added at the end of the paragraph. Sentences should follow each other without interruption (except for two spaces between sentences) until the end of the paragraph. That will allow my word processor to automatically justify the type. Often I hear the question that "if I don't use a carriage return at the end of each ASCII line (usually 80 characters wide) then it won't look good in the file." Not to worry..... The program I use for typesetting prefers to have the carriage return only at the end of paragraphs, even if the line goes for many hundreds of characters. Carriage returns at the end of each line force me to remove them 1 at a time, which could result in missing the newsletter deadline (Don't want to do that). If you can't submit in ASCII (some word processors won't allow it) then submit using the format for Lotus Ami-Pro (which is what the newsletter is typeset in), or your word processor format. I can read files in several dozen formats, including Microsoft Word, Word Perfect, and Word Star.

The next easiest is electronic mail/BBS. You can send me ASCII format messages via either Exec PC E-Mail or the Internet. For E-Mail through Exec PC, my address is "Jeffrey Brown". To send E-Mail via the Internet, my address is "jbrown@earth.execpc.com". You can rest assured that I will look for articles posted to me just prior to sitting down to lay out the newsletter.

Lastly, if you just don't have access to a computer (or are not inclined to use one) you can give me your article on a typewritten page. Yes.... I will still accept typed articles at any meeting for inclusion in the next newsletter.

Baron Mind *is published by the Beer Barons of Milwaukee, a nonprofit organization. Club officers are President* - Brian McManus, *545-2838, Vice President* - Peter McMullen, *962-6834, Treasurer* - Bill Myers, *769-0732, and Newsletter Editor* - Jeff Brown, *961-2084. The* ***Baron Mind*** *is published monthly for members of the Beer Barons of Milwaukee thanks to the efforts of Jeff Brown, Rich Grzelak, and other club members who contribute articles. The permanent mailing address is Beer Barons of Milwaukee, PO Box 27012, Milwaukee, WI 53227.*

Dry Hopping

Secret of Adding Hops Flavor to Your Brew

Anonymous from the Internet

Dry hopping can be defined as adding hops to a cooled wort at sometime during the fermentation process. It adds a fresh hops aroma/flavor to the beer which cannot be matched with hop additions into hot wort. It is not to be confused with finish/aroma hopping, which is done on the hot wort while still in the kettle. The use of a hop-back, where hot wort is passed through the hops, is another form of finish hopping; it is not dry hopping. Dry hopping gives little or no alpha acids to the wort, so it contributes little or no bitterness to the final product.

There are several ways to dry hop, if one considers the variations of making hop teas, etc. The best time to dry hop is generally considered to be after primary fermentation has slowed and little CO2 is being driven off the wort. Dry hopping earlier than this point is inefficient as the volatile hop oils are scrubbed away by the exiting CO2. Also, if using pellets, dry hopping early in the fermentation phase may result in the hops (which will sink to the bottom) being covered with yeast and inefficient extraction of aroma.

The proper length of time for dry hopping is dependent on the temperature. At ale temperatures, 7-14 days of contact time is widely used. At lager temperatures, although little data is available, it seems obvious that longer contact times, on the order of 14-21 days, are called for. It is common to use 0.5 - 2.0 oz. or more in a 5 gallon batch, but as always it is up the individual's preferences.

Fuggles, Northern Brewer, Saaz, Cascades, all Hallertau variants, and many other hops have been used successfully. It should be noted that the aroma of the beer greatly influences the profile, and that the "correct" aroma hop should be used to match the style (i.e. English hops for English ales, German hops for German lagers, etc.). American brewers have traditionally used hops from all over the globe so European hops, for example, can be used without much fear of an ungodly mismatch.

The first and foremost way to dry hop is to simply put the hops into the fermenter. The most common worry with this method is about infecting a beer which is nearly ready to bottle/keg. Hops are natural preservatives, and infections from this method are unheard of. If loose hops or plugs are used, they will float, and many use a sanitized hop bag and marbles to sink the hops for maximum contact. If pellets are used they will sink, but may be difficult to avoid when bottling/kegging. Also, the pellet hops can be easily covered by yeast falling out of suspension, so they should be added after virtually all fermentation activity has ceased, and a good amount of the yeast has fallen.

Another method used to dry hop is to steep the hops in a warm white alcohol (grain, vodka, etc.) and sometimes water solution for hours or days, then pour this solution into the fermenter. This is a common practice among those who want to protect against the remote possibility of infection with normal dry hopping. It should be noted that as the temperature of the alcohol/water/hops mixture is raised, the effect approaches that of finish hopping, as the most volatile hop oils are driven off.

Adding hop oil, a product recently introduced to the homebrewing market, is another way of "dry-hopping". It should be done after primary fermentation has slowed for the same reasons.

These dry hopping methods, and others, will produce different results, mainly because the desired compounds are so volatile. The variety of reactions taking place duration processing and fermentation will affect the results. The "best" method is the one which gives the desired result to the individual homebrewer.

A final note about dry-hopping: the volatile hop compounds will react quickly with oxygen. For this reason, extra measures should be taken to avoid mixing with air during bottling, in order to retain the hop aroma in the bottle for extended periods of time. These extra measures may include the use of CO2 purging the bottling vessel, very quiet siphoning, oxygen scavenging caps, and possibly delayed capping (up to one hour). This method allows any CO2 coming out of solution during the bottling process to push the oxygen out of the bottle before the caps are secured. This method is used by some homebrewers but the results are inconclusive. The simplest method is to use the oxygen scavenging caps, which requires no extra effort and little extra cost. For further reference, the Summer 1993 Zymurgy contains an article by Mark Garetz on this subject.

Growing Your Own Hops

GREEN THUMB

Anonymous from the Internet

Hops for beer-making grow from the rhizomes of female hop plants. Rhizomes look like root cuttings but have buds growing from them that will become new vines. Rhizomes also contain stored nutrients to support initial growth.

Hops grow vertically as one or more vines that spiral up a twine or other support. Depending on latitude, location, and variety, they sprout from March or April and grow through the summer and early fall. A single plant can easily grow 40 feet tall when it is mature but growth in the first year is usually much less. In most instances by the second or third year the plants will exhibit full growth. Height is very closely linked to the amount of sunshine the plant gets.

Hops grow best in full sun and you should pick a spot with the best possible southern exposure. Hops grow best in loose, well drained soil. Blended peat moss and sand make a good growing environment. In cases of poor soil drainage, it can be helpful to create a mound of soil a foot or so tall which will aid drainage.

Hops need lots of water. As they grow be sure to give them a very good soaking at least once a week. There are reports that once-a-day waterings (up to 6.5 gallons per mound) give greater growth and yield. Mulch in the summer helps with weed control and also holds water. Hops also have big appetites; composted cow manure is an excellent well-balanced fertilizer for them.

Once a bed has been prepared the rhizomes are planted about 4 inches below the soil surface with any obvious buds coming from the rhizome oriented to point upward.

After several inches the new vines should be thinned so that just the most healthy and vigorous three vines are left to continue growing. This will be an ongoing process as new shoots may show up later, but the initial thinning is important. It's been reported that the young shoots that are culled may be steamed and eaten like asparagus. On the other hand, some growers espouse cutting the new shoots at all, allowing all vines to grow to full height.

As the vines grow over a foot tall they should be trained to grow up a twine. This can be done by twisting the vine around the line. This may have to be repeated for a few days before the vine gets the idea. Hops will have a natural tendency to wrap clockwise looking down.

The most common hops trellis consists of strings running from the roof of a building down to stakes driven into the soil near the plants. Another option, often used by commercial growers, consists of a large central pole, with strings running from the top of the pole down to the foot of each plant, similar to the spokes on a wheel. Expect the string or twine to hold a lot of weight as the vines grow tall. A 25+ foot plant may weigh 20+ pounds.

Hop blossoms start out looking like large sand burrs, and then take on a characteristic cone shape as they grow in size. The size of a fully developed cone depends on the variety, varying from 1 to 2 inches long by 1/2 to 1 inch in diameter.

The hops are fully mature and ready for picking when two changes take place. First, immature hops have a damp, soft feel and when squeezed slightly tend to stay compressed. Mature hops feel more like paper, spring back when squeezed, and feel noticeably lighter. The second key test is to pick an average example hop and cut it lengthwise down the center with a knife. When ready to pick, the yellow powder (the lupulin sacs containing the essential oils and bitter compounds) will be a dark shade of yellow, like the stripes on a highway, and it will be pungent. If a light shade of yellow then its likely the hops are immature.

When ready to pick it is best to snip the stems of the cones with scissors or a knife to avoid jarring the hops and knocking lupulin powder out or worse, pulling the center of the cone out with the stem, causing a great loss of lupulin. Touching hops plants can cause skin irritation in some people; gloves and long sleeves can help in this matter.

Just-picked hops are roughly 80 percent water; if left alone they spoil rapidly. For proper storage most of the water is removed by drying. A good drying method is to lie the hops on a card or screen in an attic. Just a few hours during the heat of summer or a few hours more in cooler weather is enough to dry the hops. Use a before and after weighing (and trial and error) to try to achieve about 7-10 percent residual moisture after drying.

After drying, hops keep best at low temperatures and away from oxygen. A kitchen freezer easily takes care of temperature but to get the hops away from oxygen is difficult. Tightly packing hops in canning jars will minimize the trapped air but be careful not to use too much force and break the all important lupulin sacs since this accelerates oxidation. Purging the canning jar of oxygen by blowing in carbon dioxide from a kegging system will also help prolong freshness.

It's common to get 4 or 5 harvests per year by picking the biggest, most mature hops every 2 weeks or so as the flowers ripen. Patience and judgment are important since cones left on the vine too long turn brown and begin to oxidize and spoil, while immature hops have little lupulin to give.

At the end of the growing season when the leaves have fallen or turned brown, cut the vines at the surface of the soil and if possible remove the twine. After cutting back the vines a layer of 3 or 4 inches of mulch and composted manure can be put over the exposed vines for insulation and nutrition during the winter.

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Membership Information

Annual membership dues are ten dollars. This just barely covers the cost of producing and mailing this newsletter. In addition, we charge a $5.00 fee for each meeting attended. This pays for the cost of the beer we taste that night. Membership dues can be paid at the monthly meetings or you can send a check for $10 to the Treasurer, Milwaukee Beer Barons, PO. Box 27012, Milwaukee, WI 53227.

We mail the newsletter free of charge to prospective members for three months. The date that appears on your newsletter address label is the end of the three month period. For current club members, it is up to you to remember to renew -- we do not send out reminders, so check the date on your address label to see if it's time to ante up.

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1st Class Mail

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