

The Worthouse News



A PUBLICATION OF THE EDMONTON HOMEBREWERS GUILD

October 2002

**Our Next Meeting is at Alley Kat Brewing, 9929-60 Ave, Edmonton
Monday – October 7th - 7:30 pm**

The Edmonton Homebrewers Guild Executive *(Sept 2002 to June 2003)*

President.....Roxy Hastings
Vice-President.....Neil Herbst
Secretary.....Boyd Oberhoffner
Treasurer..... Robert Carminati
Competition Chair.....needed
Newsletter..... Günther Trageser

Club Meetings

EHG meetings are held on the first non-holiday Monday of a month, from Sept. to June, at Alley Kat Brewing, 9929-60 Ave, Edmonton. Meetings start at 7:30 pm. A few meetings for this season are planned to be held at local beer establishments well known for the quality of the beer they serve.

Contributions

The Worthouse News is a monthly publication of EHG, mailed to paid members, club sponsors and sister Brew Clubs.

Articles in the Worthouse News may be used in other homebrewing newsletters providing credit is given to the author and EHG.

Submissions to the Worthouse News may be sent to the editor/publisher.

Anyone who has not yet renewed his/her membership, please do so at the next meeting.

Membership fees are due and are still at a bargain price of \$25.00. Please bring a cheque or cash.

View from the TOP

I wrote most of my view in last months newsletter so I am not going to write a long one this time. For those of you who missed the AGM, all of my proposed motions were passed. We now have a program for each member to send a six pack to major out of province homebrew competitions. We have a BJCP exam in place, subsidized by the Guild, and have 8 members and 1 guest from Calgary signed up to take the course. We have a styles night tasting session and a group brew plan in place. All said and done - we are moving. We even have an executive, well we almost have an executive. We are lacking a competition chair. Given that we are running the largest and most important homebrew competition in Canada it is stunning that no one has stepped forward for the honour of running this event. This position gains you mega points towards advancing in the BJCP program and it is almost beyond belief that someone will not take the opportunity to grab this chance and get about 3 years worth of experience points in one go. Previous competition chairs have all volunteered to help anyone coming forward. If you are a BJCP judge or in our BJCP training program, we ask you to seriously consider taking on this position.

Meetings to Start at 7:30 SHARP!!

Given the amount of tastings and business planned by the new executive, it was announced at the September meeting that doors would open at 7:00 PM and the meeting would start promptly at 7:30 PM. We will organize the glasses and pour the beers for judging at 7:30 to 7:45 so if you want to participate you must be at Alley Kat by 7:30 or you will most likely not be served. Judges should be especially diligent as we need your participation to make these events a success. If you are entering beers they must be at the brewery and recorded by Neil by 7:30.

We hope the more disciplined approach to the meetings will match those we had in the past and create an atmosphere conducive to both learning and fun for all members.

Cane Exchange

In the last few months a few of our more experienced brewers noted that a number of members were bringing in beers that had a distinct if yet subtle lactic infection. This is almost certainly due to brewers not

diligently replacing their racking canes on an annual basis. To combat this problem we have made arrangements for a cane exchange for current EHG members with two of our prominent sponsors. Both **South Side Brew Crew** and **Harvest Brewing Company** have agreed to give EHG members a brand new racking cane in exchange for your old cane and a purchase \$10.00 worth of brewing product (that's about the cost of a bag of DME). I highly recommend that all members participate in this generous offer and toss your old canes.

BJCP Course

It is not too late to sign up for the BJCP training course. The cost is \$50.00. We will be taking on participants until at least the October meeting, catching up after that point will prove to be progressively more difficult. In the first meeting we covered American Pale Ales and Amber and Dark European Lager, with a discussion on the basics of judging beer and on mashing techniques. On Saturday October we will hold session number two. We will be tasting Stouts Porters and Bocks as well as tasting astringent vs bitter, sweet vs worty and oxidized beers. The discussion will cover topics related to profiling beers, why we boil wort and on the major malt varieties. Contact Roxy Hastings to register for this course.

Donations needed of Stout, Porter and Bocks for the October BJCP tastings. A single bottle would be greatly appreciated. Score sheets evaluating your beer will be returned to you. Bring donations to the October meeting and give to either Neil or Roxy.

October Tastings

Fruit Beers and other specialty beers

The Fruit Beer style is sponsored by the AHA and so the best Fruit Beer (BJCP Class 21) will be sent on to compete in the AHA Club only competition. Bring 3-4 bottles for the tastings and 3 more bottles in case your beer wins. Note - Lambics are not included in this class. Keg entries are fine as long as you can provide counterpressure filled bottles or bottle primed equivalents. Be prepared to discuss your beer with the members. Winning recipe to appear in next months Worthouse News.

Group Brews

Brewers needed for:

Stout/Porter – November

English Bitter/Pale Ale - December - AHA sponsored event

Belgian Ale – January

What's Hopping?

ed.

It appears typos are making their way into the editorial headlines (a wrong letter or the right letters in the wrong order), and the typo seems to make the word have something to do with beer. My resolution for this year as re-elected newsletter guy is to find a new one for each month's newsletter. Do you think I'll succeed?

So, it looks, after all, that it'll be another while until you can expect the last newsletter from me – just couldn't say no under all that **pressure!** Unfortunately, the turnout at the AGM could have been better, and thus the executive is short one member: the competition chair. As Roxy and Martin said at the last meeting, this position would be great for a BJCP judge who wants to accelerate his/her progression to the next judging level, since there is no faster way to accumulate judging points than by being the organizer of a competition.

What I would hope for this year's newsletter is to really have a **Dear Editor** column. I think we can expect a very interesting series of articles this year. The idea is that all participants in the BJCP program contribute at least one article over the year. Since there is none to be expected for this month, I have taken it upon myself to start the series off with some thoughts on **First Wort Hopping** and **Mash Hopping**. Please feel free to send me your opinions or comments on anything you read in the *Worthouse News*. It's your newsletter – make it interesting!

Those who were at the AGM will know that we are thinking of adding a malt order to our annual hop order. Since it was yours truly who suggested it, it is also yours truly who was asked to organize it. We all know how difficult it is here in Edmonton to get anything else than Westcan 2row and some crystal and dark malts for which it is hard to find any other details than their name. Paddock Wood (www.paddockwood.com), a homebrew supply store in Saskatoon and also a valued sponsor of the ABC/MCAB qualifier, carries a whole range of Great malts from Europe and North America. The prices may be a bit higher than you are used to, but you get great authentic malt in return which will make your brews just that much better.

I was thinking of buying all malts only in 25kg sacks so that we do not need to pay the per kg price. The

minimum amount you can order for each malt is 5kg. If you need less of some specialty malt, you may want to get together with someone else in order to make it a full 5kg order. I have been in contact with Steve at Paddockwood, and the shipping cost is a killer. I know that some of our members do, on occasion, have to travel to Saskatoon. If they have a vehicle that can hold our complete order, maybe we could ask that person, for remuneration, of course, to bring the order back to Edmonton.

The following are the malts I was thinking of:

(UK) Beeston's Golden Promise (36 PPG, 2.6 SRM)

Considered the traditional Scottish malt, Golden Promise is made from fully modified two-row grain grown in Scotland and low box malted for an extra touch of quality and tradition. Produces a mellow wort equally suited to the production of both ales and lagers, particularly pale and Scottish ales.

(UK) Beeston's Maris Otter (38 PPG, 2.5 SRM)

Made from fully modified two-row winter Maris Otter. This malt has a wide optimum temperature and pH range, making it very forgiving in the brewery and popular with small-scale brewers. Small batch malted in low boxes for superior consistency. The classic British ale malt, prized by the finest brewers in Britain. Very low protein (9.5%), high flavour malt, perfect for lower gravity Bitters

(Germany) Meussdoerffer Pilsner Malt (38 PPG, 1-2 SRM)

(Germany) Weyermann Dark Munich (34 PPG, 8-10 SRM)

Enhances the body and aroma of dark beers, Bocks, festival beers, and stouts.

(Czechoslovakia) Moravian Undermodified Budvar (39 PPG, 1-2 SRM)

St. Pats of Texas has provided us with the Canadian exclusive on an extremely hard to obtain malt.

Czechoslovakian Budvar Undermodified Pilsner malt is considered essential by connoisseurs wishing to brew **Budejovicky Budvar** (the original **Budweiser**). Careful attention to pH is essential. Not suited for single infusion mash systems. Decoction or slow ramp direct heat step mashing recommended.

(Germany) Weyermann Carahell® (33 PPG, 8-12 SRM)

Imparts a fuller, rounder flavor and a deep, saturated color to pale ale, festival beer, Maibock, Hefeweizen, Schankbier, light and reduced-alcohol beers. Try instead of Carapils. Use 10-30%.

(Germany) Weyermann CaraRed (34 PPG, 20 SRM)

For a fuller body, improved malt aroma, deep, saturated color red color. Use in Red Ale, Red Lager, Scottish Ale, Amber Wheat, Bock Beer, Brown Ale, Alt Beer. Use up to 25%.

(Germany) Weyermann Caramunich II (34 PPG, 42-50 SRM)

Best used to create Bocks, dark beers, festival beers, malt beers, nourishing beers, and Oktoberfest beers. Increased fullness, heightened malt aroma, fuller, rounder flavour, and deep, saturated colour. Use 5-10% for dark beer, 1-5% for light beer, pale ale.

(Germany) Weissheimer Dark Caramel (33 PPG, 110-150 SRM)

Adds toffee and hints of nuts with shades of red

(Germany) Weyermann Beechwood Smoked Malt (Rauchmalz) (37 PPG, 1.3-2.3 SRM)

Best used to create smoked beers, Lagerbier, and Kellerbier. Derived from Alexis, Steffi, and Krona varieties. Smoked with beechwood. 20% in the grist is a good starting point to deliver a unique smoky flavour. Can use up to 100% for a strongly smoky Rauchbier. (Rauchmalz) (37 PPG, 1.3-2.3 SRM)

(UK) Hugh Baird Peat Smoked malt (38 PPG, 2.8 SRM)

Kilned over peat fires for a unique flavour. (Also known as distilling malt) This malt has the enzymatic power of normal ale malt, and can in theory be used as a base malt for 100% of the grist. Most brewers use 10% or less to avoid overly phenolic notes. Smoke levels are approximately 4 - 6 PPM. Try up to 10% in the grist of a Porter.

The Golden Promise, Maris Otter, Pilsner and Munich malts will be approximately \$3/kg and all others approximately \$4/kg. That will include shipping.

Before I finish, I thought I'd show you my most recent toy.



e-Bay is a great invention when you are looking to get some odd stuff at a reasonable price, just don't place any bid until about 15 seconds before an auction closes.

Shipping can be expensive, though. In my case it was just as much as the cost of the beer engine. So one day as I was on e-Bay, I decided to search for *Beer Engine* and... voila! Now, I thought such a fine piece of equipment does call for a proper mount, and for about another 30 bucks I built me a cabinet (faux-oak). What do you think?

Monthly Tastings - Minicompetitions

1. Enter as many as you like -- no entry number restrictions.
2. You need at least 3-4 bottles of each entry for the club tastings. For AHA events you will need an additional 3 bottles of beer, if your beer is selected to go on to the AHA event. Please try to bring these extra bottles with you on the night of the competition.
3. Keg entries are fine as long as you can produce bottled versions or counter-pressured from keg.
4. In- the event that a winner cannot produce the 3 bottles for the AHA events, the second place entrant will go on to the AHA finals.
5. Please sign up in advance of the monthly tastings, not on the night of the competition. Bonus points will be awarded to brewers who sign up before the tastings night.
6. We will start pouring beer at 7:30 on the night of the competition. You must have your beers ready to go by 7:30, late entries will not be accepted. Doors open at 7:00, please come early.
7. Points awarded as follows. 1st - 3 points, 2nd - 2 points, 3rd - 1 point. Sign up in advance - 1 point.
8. Beers will be judged by a panel of 2 BJCP judges and 2 apprentice judges.
9. After the beers have been formally judged the panel will lead the other members through a tasting session, discussing the qualities of all the entries.
10. Brewers should be prepared to discuss their beers at the end of the tasting session to provide feedback to the judges and to help everyone learn brewing techniques. Bring your recipes to the event.
11. Entrants will receive the score sheets from the

judging panel.

12. Winning recipes will be published in the next issue of Worthouse News.
13. The vice president, assisted by the president, will supervise, delegate and otherwise conduct the tasting sessions.
14. EHG will pay shipping and entry fees for the winning beer to compete in AHA club competition.

Monthly Styles: October- Fruit/Vegie (AHA) + other fruit. November- Stout/Porter. December-Bitter/English Pale Ale (AHA). January - Belgian Ale. February - Brown Ale (AHA). March -Euro Pale, Amber and Dark Lager. April - English and Scottish Strong Ale (AHA). May - American Pale Ales - all three varieties.

What will they think of next?

As every brewer knows, hops are added to the brew during the boil in up to three additions, and in some cases also to the beer in the secondary fermentor or in the keg... or... are you sure? Now read this:

First Wort Hopping

David Draper, <http://hbd.org/ddraper/beer.html>
 In the latter part of 1995, Dr. George Fix posted to the Home Brew Digest about a process he had recently come across described in the brewing literature. Since then much interest in the procedure has arisen. The process is called *First Wort Hopping* (FWH), and it refers to the practice of adding hops to the brew kettle, into which sparged runnings are collected, at the beginning of sparging. The idea is that the hops soak in the collecting wort (which usually runs out of the lauter tun at temperatures ranging from 60 to 70C depending on one's setup) for the duration of the sparge, and the volatile hop constituents undergo very complicated reactions, producing a complexity of hop bitterness and aroma that is obtainable no other way. In general, this procedure, which originated in Germany, has been used in Pils type beers. However, it is possible that the procedure might also be beneficial for other styles as well; this remains to be determined.

The original article on which Dr. Fix reported appeared in the brewing journal *Brauwelt International*, by Preis, Nuremberg, and Mitter; vol IV, p. 308, 1995. In this write-up, it is my intention to summarize the main points of this article so that brewers can at least get some idea

what the basic data look like, and from here the experimentation at the homebrew scale will undoubtedly provide more insight on how this process might best be used for our beers.

I will do this in two parts: first, straight reportage, in outline form, on the contents of the article (any errors or omissions are mine); and second, some commentary elicited from various brewers in the HBD during March 1996. This is not intended by any means to be a comprehensive treatment of this topic; it is only a summary.

Summary of the Article

1. Introduction. First wort hopping was used extensively at the start of the century but mainly in order to enhance bitterness rather than aroma. It was recognized that the higher pH of the *wort* (as opposed to later in the boil) had a positive effect on utilization, combatting the effects of losses from coagulation on break material. The higher pH of the first runnings enhances isomerization of alpha acids. Other attempts were made to actually hop the mash (!); other early efforts involved running the sparged wort through a hop filter-- a "hop front" instead of a hop back, I guess...DeClerk steeped the hops in 50C water before adding to the wort (to remove "unpleasant" stuff); a later worker used 70C water. Both reported enhanced aroma qualities.

2. Experimental Procedures. Two different breweries produced the test brews, Pils types, that make up the subject of this article. The two breweries make a slightly different version of Pils. No mention was made in the article whether the beers were products of decoction or infusion mashes (see comments below). At each brewery, the FWH beer was brewed with a reference beer alongside. The FWH and Reference beers at each brewery were done under controlled conditions, identical ingredients, pitching rates, etc., and differed only in the way they were hopped. The reference beers were hopped in the customary fashion for the two breweries under consideration, namely with two late-kettle additions. For the FWH beers made in both test breweries, the hops that would have been used in these late-kettle additions were instead dumped into the boiler once its bottom was covered with wort; no stirring--they just sat there while wort was sparged on top of them. Brew A (total hopping: 13.0 g alpha acid per hectolitre of cast wort) was first-hopped with 34% of the total amount added--Tettnang and Saaz that were typically used in aroma additions at the end of the boil under normal conditions. Brew B (total hopping: 12.2 g alpha acid per hl wort) used only Tettnang, but 52% of the total hop amount

was used as First Wort Hops. No late-kettle aroma hopping was done in either brew. Brew A was boiled for 90 minutes and Brew B for 80 minutes, both at atmospheric pressure.

3. Tasting panel results: the FWH beers were overwhelmingly preferred over the reference beers in triangular taste tests (i.e., each taster was given three beers, two of either the reference beer or the FWH beer, and one of the other, and had to correctly identify which two were alike before their preference results were incorporated in the database). 11 of 12 tasters of each beer preferred the FWH beer. The main reasons given for the preference: "a fine, unobtrusive hop aroma; a more harmonic beer; a more uniform bitterness."

4. Analytical results--bitterness: The FWH beers had more IBUs than did the reference beers. Brew A: Ref beer was 37.9 IBU, FWH beer was 39.6 IBU. Brew B: Ref beer was 27.2 IBU, FWH beer was 32.8 IBU. This should come as no surprise, since more hops were in the kettle for the boil in the FWH beers than in the Reference beers. Prior to fermentation, the worts from both breweries showed the following features: the FWH wort had substantially more isomerized alpha acids, but less non-isomerized alphas. This was particularly true of Brew B, which had a higher proportion of first-wort hops. Nevertheless, the bitterness of the FWH beers was described as more pleasing than the (slightly weaker) bitterness of the reference beers.

5. Analytical results--aroma: For the aroma compounds, very distinct differences were measured (gas chromatography) in both the identities and concentrations of the various aromatic compounds between the FWH beers and the reference beers. Because the precise nature of the effects of aromatic compounds on beer flavor are very complicated, it cannot be said with certainty just why the various measurements resulted in the overwhelming tasting preference, but clearly something is going on here. Even though the reference beers had higher *absolute amounts* of most of the aroma compounds, again the FWH beers got higher ratings for overall pleasure.

6. Final comments: each brewery needs to experiment with its own setup for determining what sort of first-wort hopping is best for it. But the alpha-acid quantity should *not* be reduced, even if one gets more bitterness than one would get in the usual way. The tasting panel results seem to indicate that the bitterness in the FWH beers was fine, and mild--i.e. there is little harshness that can appear in a highly bittered beer. If the hops are reduced to compensate for the extra IBUs one gets from the first-wort hops, then the whole benefit of doing it might be lost. The recommendation is to use at least 30% of the total hops as first- wort hops--basically, this means

adding the aroma hops as first-wort hops rather than late kettle additions.

To quote the article:

"...But we recommend that first wort hopping be carried out with at least 30% of the total hop addition, using the later aroma additions. [New paragraph] As far as the use of hops is concerned, the alpha-acid quantity should not be reduced even in the case of an improved bitterness utilisation. The results of the tastings showed that the bitterness of the beers is regarded as very good and also as very mild. A reduction of the hop quantity added [to compensate for the presence of more hops early in the boil--this note added by Dave, it is clear from the context of the preceding paragraphs] could result in the bitterness being excessively weakened, and the good "hop flavor impression" could be totally lost."

But wait... there's more to come...

Marc Sedam alechemist@homebrew.com.

Every brewer knows when to add hops in the wort. You need some for the long boil to bitter the beer, some between 10-20 minutes from the end of the boil for flavor, and a handful at the end of the boil to get the intoxicating aroma into the beer. The hopheads among us even dry hop beer for that extra something in many pale ales. Oh, and of course you can add hops to the mash.

The mash?

Hops in the mash have a history in brewing. I first came upon this concept while trying to make the ultimate Berliner Weiss. Eric Schneider's article on Berliner Weiss in *Brewing Techniques* a few years back mentioned that aged leaf hops were often placed in the mash to aid in filtration. My attempt at the recipe came out well, but the concept of adding some hops to the mash was intriguing. What would hops do in the mash? Could you use pellets?

My first mash-hopped brew was a simple lager made using 10 pounds of pilsner malt, two ounces of Hallertauer Hersbrucker in the mash, and an ounce of Bullion in the boil for bittering. The resulting beer was shocking. It had hop aroma and flavor that I'd never been able to get in a beer before. When the beer was warmed up a bit, one whiff put me closer to a hop field than any glass ever before.

I continued to experiment with the amounts of hops to use in the mash, trying to make recipes I knew so I could

subjectively predict the bitterness contributed. Pilsners, brown ales, barleywines, and pale ales - all of these styles seemed to benefit from mash hopping. A few postings to the Homebrew Digest (<http://www.hbd.org>) led me to Paddock Wood Brewing Supplies, a homebrew shop in Canada run by Stephen Cavan. Little did I know that Stephen had been dabbling in mash hopping as well and had some information up on his website. I began to share what I was doing with other homebrewing web groups and convinced a few people to give it a shot. Many were impressed with the result. Some were not. I encouraged people to write me with their experiences and asked for as much detail on the brewing process as they could remember. Several e-mails were swapped over the next few months and some "best methods" began to emerge.

HOW DO YOU MASH HOP?

Not all beers are worth mash hopping. But those beers that are characterized by hop flavor or aroma certainly seem to benefit. My Classic American Pilsner really shines when mash hopped. Others have tried it in a decoction and, other than a slightly increased bittering contribution of the mash hops, enjoyed the results. I have a few simple rules for converting a normally hopped beer to a mash hopped brew:

Replace the amount of late addition flavor and aroma hops with 1.5x the amount of mash hops. For example, if your recipe calls for an ounce of Saaz as a flavor addition and another ounce for the aroma addition, you would add three ounces of Saaz to the mash. Hops are added directly to the mash at dough-in.

Use pellets. I have mash hopped with leaf and with pellets and the pellets give much better results. This could be because the hop oils are more exposed in the pellets through processing.

Add slightly more bittering hops. Current observations indicate that mash hopping provides almost no bitterness to the finished beer. Thus when you move hops from the boil to the mash, you must compensate for the bitterness that is lost. I do this by calculating the IBUs that would have been contributed to the original recipe by the flavor and aroma hops and then increasing the bittering hop addition accordingly.

Sparge, boil, chill, ferment, enjoy! That's it. After adding hops to the mash, the rest of the brewing cycle proceeds as normal. Surprisingly, the hops do not get in the way of lautering. I always start the lauter slowly, but have never had a stuck mash since starting mash hopping.

WHY DOES IT WORK?

The short answer is that I don't know. Traditional beers generate hop flavor and aroma through late hop additions because the volatile oils that provide these properties are driven off in the boil. Mash hopping is targeting the aromatic oils and not the bittering oils. Mash hopped beers have plenty of hop flavor and aroma, yet the wort is boiled for over an hour. My main theory is that the otherwise volatile hop oils are stabilized during extended periods at mashing pH (5.2-5.5). A reason to believe this theory is found in Jean DeClerck's classic Textbook of Brewing (1957). DeClerck states that hop aromatic oils form chemical bonds at higher pH values and lower temps than found in boiling wort. The bonds which are formed are not broken during the boil; hence the permanent aromatic profile. DeClerck even suggested steeping hops in warm water. So the mash provides an attractive temperature and pH profile to allow the hop aromatic oils to form permanent bonds and making them less volatile. Even the eventual boil of the wort isn't enough to drive off the aromas. Again, this is my theory that seems to have a toehold in previous scientific observation. But this is far from the definitive answer.

I have done ten mash-hopped beers and the other feedback I've received gives a sample size of over 50 batches. Most folks report achieving a smoother hop flavor and aroma. In addition, of course, everyone gets less debris in the kettle since the hops are added to the mash and not the boil. This helps to increase wort yield and I've eked out an extra quart of wort on each batch due solely to this effect.

I have received other feedback on mash hopping from personal e-mails and public postings on the HBD. Some people have not seen a great effect from trying the process. Most of these were attributed to using too few hops in the mash. But there are still others who don't have an explanation. Other factors such as water chemistry and mash pH may play a role, but these would require further exploration.

SUMMARY

Mash hopping isn't for every beer and it may not be financially sound for commercial breweries. But home brewers should certainly try the process once to test it out for themselves. As most of what is presented here has come from experimentation by myself and others, I'd be happy to hear about your experiences. I always appreciate feedback from those who have tried it and

someday hope to have a mash-hopped beer analyzed for content to empirically determine what's happening.

ABOUT THE AUTHOR

Marc Sedam, a.k.a. "The Alechemist", lives in Chapel Hill, NC. He is a frequent contributor to online brewing communities and previously wrote for Brewing Techniques, winning a 1999 Quill and Tankard Award for an article on water chemistry. He can be reached at alechemist@homebrew.com.

Beer boosts Sex Life

A Czech doctor is advising men to drink beer every day to keep their sex lives active. Dr. Pavel Zemek is telling men that if they drink two beers a day, they can stave off impotence. "on the basis of clinical tests, " said Dr. Zemek, "we can say moderate amounts of beer lessen arterial sclerosis, one of the cause of erectile dysfunction." (www.ananova.com)