

The Worthouse News



A PUBLICATION OF THE EDMONTON HOMEBREWERS GUILD

February 2003

**Our Next Meeting is at Alley Kat Brewing, 9929-60 Ave, Edmonton
Monday – February 3 - 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..... Glen Hannah
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

Well it's about time I actually wrote something and let Gunther have a break. It's good to report that the club is on a roll again. Firstly, membership is on the upswing. We had 3 new members at last months meeting. The membership was on good behaviour and managed to encourage them to join the gang. Of course it didn't hurt that last months tastings were a number of commercial Belgian style ales. The tastings were lead by 3 of our BJCP candidate judges, with some (considerable) assistance from the floor by our loveable and affable mouthpiece, Martin Langshaw. You candidates are soon going to have to be more assertive with the likes of Martin so you should get your licks in now!

A most excellent piece of good news is that MCAB has once again awarded us as Canada's host site. MCAB was very late in making the announcement this year so we are a wee bit behind. But with the capable talents of our Competition gang, lead by the multitalented Glen Hannah I am sure we will pull it off in style. Part of the reason for the delay was that MCAB had a big decision to make this year. They have decided to grant a number of clubs with long term successful records of hosting the MCAB qualifier automatic continuing status to host the competition. This will save these established competitions the hassle of having to reapply every year and will establish a regular schedule of events. I am pleased to say that the Edmonton Homebrewers Guild ABC competition was one of those chosen for continuing status. This is a great honour and we owe much to the hard work of all the guild members but most especially to Kevin Zaychuk who was our Competition Chair over the last few years, Neil Herbst who managed the entries and acted as head judge, and to Jim Whittome who designed and maintains our web page. We also owe thanks to Ken Nyback whose vision it was to capture the MCAB competition in the first place.

Because we will now be hosting an annual event the executive gave some consideration to holding a brewing conference along with the competition. It's just on the table and would not be this year but next. It would be nice because next year will be the 5th year that we have hosted the MCAB event. We will kick around some ideas at the meeting.

Speaking of competitions – that season is fast approaching. Starting in this issue we will be publishing all the Canadian competitions with as much entry information as is available. We will of course be printing the results as they come in. And don't forget our monthly mini-competitions.

We have had the privilege of tasting some truly fine brews at these events. Febrewary (gotcha Gunther) is Brown Ales including Northern Brown, Southern, Mild, and American. This is an AHA sponsored club competition so the winner will need to ship 3 bottles to somewhere in the USA Bring at least 2-3 bottles of beer or a keg to the meeting.

Also don't forget that the Guild is helping to defray shipping costs to several out of town competitions. So please take advantage of this great opportunity to represent the EHG in significant regional and national level competitions. You don't have to be an expert all grain brewer to be competing in these events. Far from it – they are a great learning experience no matter what level you are at. Regina sent in a whole bunch of extract entries into GCHC last year and did swimmingly well. We should too. Get Brewing!

And just to get you inspired to create those awesome award winning brews – the fresh leaf hops are in. They will be available at Febrewary's meeting.

Finally, just to inspire everyone to get brewing and to sort of level the playing field in a really fun way, we have created a new game, actually it's an in-club minicompetition. I've called it BURRP and it will be held at the May meeting. Details are inside. It is truly a ridiculous event, but you will have the opportunity to learn a bit about malt and a chance to compete in a fun, low-key brewing event.

See you at the Febrewary meeting. As always, come thirsty!

Roxy

And here it is from the horse's mouth

Greetings all:

First, an apology . . . I've been completely under water for a number of weeks with various business and family matters, and so I've been more than a bit derelict in responding to e-mails, not to mention tending to MCAB stuff.

As far as MCAB QE's for 2003 (and the years beyond)...

"If it ain't broke, don't fix it." Accordingly, unless the organizers of the individual competitions decline, the following will be the MCAB Qualifying Events ("QE's") for MCAB 6:

Boston Homebrew Competition

Kansas City Bier Meisters Competition

Regale and Dredhop

World Cup of Beer

Bluebonnet Brew Off

Drunk Monk Challenge

Sunshire Challenge

Spirit of Free Beer

BUZZ-Off

Aurora Brewing Challenge

Dixie Cup

Happy Holidays Homebrew Competition

Heart of the Valley Competition

Further, while the MCAB reserves the right to make additions or subtractions

to this list in the future,

the first twelve of these competitions will be

"presumptive" MCAB QE's in all future years (meaning, unless the MCAB decides to terminate a competition as a QE, it will remain a QE in all future years). The Heart

of the Valley Competition and Novembeerfest will similarly be considered "presumptive" QE's but we will

stick with our prior practice of alternating them . . . meaning the Heart of the Valley competition is a QE in

odd numbered years (2003, 2005, 2007, etc.) and Novembeerfest is a QE in even numbered years (2002,

2004, 2006, etc.).

Meanwhile, if you've not done so, check out the MCAB website (<http://hbd.org/mcab>) for details on MCAB 5, coming up in a couple of weeks in the Northern Virginia area. Looks like another killer beer geek weekend in the making! (Now if I can just get a certain case to settle so I can be there too . . .)

As always, lemme know if you have any questions, etc.

Louis K. Bonham

Brewing Under Really Ridiculous Parameters! (BURRP!)

Roxy Hastings

With due respect to BURP – Brewers United for Real Potables – the Edmonton Homebrewers Guild introduces BURRP! an in-house competition to see who can brew the best beer given a limited quantity of a single type of malt.

Not many years ago we were lucky to have a single source of good two row malt, a couple of lovibonds of crystal (often with nothing more than "crystal malt" on the label), and a few types of dark malt. Good Munich was virtually unknown. Now we are easily pushing a dozen 2 rows, tons of crystal types and all sorts of darks in multiple permutations of lovibond and character. Creative brewing now comes in choosing combinations of malts that are readily pulled off the shelf.

But you know, there were some really exciting brews created when we had limited resources. And historically, crystal malt was not invented until near the end of the 19th century. What did brewers do before they could buy 75 L Hugh Bards Crystal, or 15 L Weyerman

Carahell, or 120 L Beaston Brown? They made there own. And that's what BURRP is all about. Creating great and/or at least interesting homebrew with limited ingredients. So limited in fact that you are going to start off with one type of malt – Westcan 2 row. And you're only gonna get 10 lbs - total, that's it, no more.

Your mission, should you decide to accept this ridiculous challenge, is to take that 10 pounds of base malt, and we mean base, and attempt to create something wonderful with it. Try to make your own Munich, your own Crystal, your own black or brown or smoked. Or if your're a bit lazy, you can just take the malt and use it as it is – maybe for an old style Helles or IPA. Do whatever you want, brew big brew small. But you only got 10 lbs.

How do you start? Well at the Feb meeting we will have handouts from a recent issue of Zymurgy telling you how to make crystal, munich and smoked malts from 2 row. Take it from there. Trust me, if you've never tried toasting 2 row to make Munich you are in for a flavour sensation beyond all expectations.

EXTRACT BREWERS – You're in the game too, but the rules are a wee bit different for you. Instead of 10 lbs of 2 row you will start with 5 lbs of DME and 5 lbs of 2 row

Rules of the game:

- 1) Sign up at the Feb and March meetings. You can enter as many brews as you want. Team work is encouraged.
- 2) Go down to Harvest Brewing to get your malts – even if you have the malts at home. To ensure that we all start at as close to the same point as possible we have arranged for Harvest Brewing to supply the 2 row. From our list of names, Brian will package the malt in 10lb and 5 lb bags. It will cost you a buck a pound. Extract brewers, you can get the rest of your DME from where ever – as long as you only use pale DME. Please be honest and respect these basic rules – get all your 2 row from Harvest. Use only a maximum of 10 lbs (you can use less, but then why not just make more beer?).
- 3) Make up your own grain bill, create your own malts and brew to your hearts content. Go for any style you want. Classics are encouraged, but you're not limited to going for them. Hops, yeasts and whatever else is up to you as long as it is not fermentable grain product.
- 4) Keep some notes on what you did – particularly in how you created the malts.
- 5) Bring at least 4 bottles of the results to the May meeting – more is better, this should be a real hoot. We don't care how you package your brew – even

kegs are fine, heh, heh! We will hold a mini competition judged by our BJCP judges. Classes will be light ale, dark ale, light lager, dark lager and “I don't know what it is but I can drink it! – shortened to “just brew”” Except for “just brew,” ID the concoction to as close to a style as you can get it. Blondes and ambers go into pales, browns and blacks into dark.

- 6) Awards will be given to various as yet undefined categories of best BURRP! beer. You'll get a bonus if over half your hop bill is from homegrown hops (we'll trust you, depending on who you are that is)
- 7) Interesting brews will be published in the June newsletter – so re. point 4, keep some notes. Tell us what you tried to make and what you think you wound up with.
- 8) If you've got a real interesting beer, we encourage you to enter it in the ABC the following month.
- 9) This is a real, traditional, RELAX, DON'T WORRY, HAVE A HOMEBREW event. Don't get too anal with it – have some fun!

To help extract brewers who might want to take this as the opportunity to try all-grain, Neil and I will donate a Saturday to helping you brew. We will bring all equipment to Alley Kat. You bring your recipe, all your ingredients and a fermenter. We will help you do a single infusion mash and get the wort into your fermenter. You have to get your wort home after it's made – no fermenting at Alley Kat. To be fair, we will not advise you on how to create the recipe. Sign up at the meeting and Neil and I will arrange a Saturday to do the brews. We will do AM and PM runs with 2-3 people at a time.

Upcoming Out of Town Competitions

Werthogs Homebrew Competition

Where: Lethbridge

Entries Due: March 1st; judging March 8th

Ship to: Prairie Vintners and Brewers

231-13 street North

Lethbridge, Alberta

No other information available at this time.

Email Veryl Todd: toddvi@pop.telusplanet.net

A relatively new competition hosted by a small but enthusiastic club. Hopefully we will get information soon so we can ship some beers to them.

March in Montreal – CABA sponsored

Where: Montreal

Entries Due: March 15. Judging: by end of March
 Styles: Full BJCP/AHA except meads and cider.
 2 bottles per entry. Standard rules of 1 entry per subclass
 Fees: \$6.00 CABA members, \$9.00 non members. Fifth
 and additional \$5.00 CABA members.
 Website: <http://www.realbeer.com/caba>
 Ship to: Brasserie Le Chaudron
 5710 Garnier,
 Montreal, Quebec
 H2G 2Z7
 Phone: 1-514-276-0744

This is the first year MIM has gone for the full BJCP/AHA styles and 2 bottle entry. I encourage you to support this longstanding eastern competition. It's a great pretest for GCHC and ABC. The EHG will subsidize the cost of a group shipping of beers to this event.

Great Canadian Homebrew Competition – CABA sponsored – AHA qualifier

Where: Toronto
 Entries Due: 19 April
 Styles: Full BJCP/AHA including meads and cider.
 2 bottles per entry. Standard rules of 1 entry per subclass
 Fees: unknown but usually \$6.00 CABA members, \$9.00 non members. Fifth and additional \$5.00 CABA members. If you win and proceed to AHA there is an additional small charge levied by AHA for competing. (In turn AHA defers all 1st round fees to CABA – good deal for all Canadians)
 Website: <http://www.realbeer.com/caba>
 Ship to:

I highly encourage all members to compete in this national level competition. This is THE competition for clubs to gain points for the AHA brew club of the year. It is very important to the international stature of our competition for us to score high in the AHA standings. For a number of years we were the best club at this competition and ranked as the number one club in Canada. But last year Regina took it by storm – in part because only 2 EHG members competed instead of our usual 7-11. Time to recapture the crown boys. Get brewing for this one. It's a great pretest for Regina and ABC. Top 3 beers in each class go on to compete in AHA annual national competition in May. The EHG will subsidize the cost of a group shipping of beers to this event.

ALES Annual Open Homebrew Competition

Where: Regina
 Entries due: in early May.
 2 bottles per entry (I'm pretty sure). Standard rules of 1 entry per subclass
 Styles: Full BJCP/AHA including meads.
 Fees: unknown at this time.

I can't say enough good things about this most excellent brew club. These guys have worked hard and now host the second largest competition in Canada, with ours being the only larger one. Last year they had 133 entries and they are looking to break the magic 150 and move up 1 level in competition rank to get more judging points. The ALES have given ABC just fantastic support over the last number of years and I highly encourage Edmonton to return the favour. It would be awesome if we helped them break the 150 level. Besides, they need some friendly competition on their home turf ☺

It is interesting that Regina encourages lots of kit beer entries and attributes much of their success to encouraging non-all-grain brewers to compete. Apparently many of their wins in GCHC were not from grain brewers. So get brewing extract men – we need you!
 The EHG will subsidize the cost of a group shipping of beers to this event.

Marquis de Suds

Where: Calgary
 Entries Due: May
 No other information available at this time.
 Usually have 6-8 mixed styles groups with 3 bottles per entry.

More information on these and other competitions will be posted every month. If you have some solid information on these competitions please email me directly with the data. Email Roxy Hastings at: roxanne@netcom.ca

Wanted – A Few Good Beers – or even not so good

The BJCP exam is almost upon us and the candidates are gearing up for a writing and a tasting session. They've all come along marvelously, they're all worthy of the title beer judge. Now we need your help for that final push. We've consumed considerable supply of homebrew over the past few months and therein lies

the problem. We need some brew for the boys to judge for they're exam. Frankly they've consumed much of my stock and I am most reluctant to have them judge a beer that they're already had a good go at.

How can you help? Well if you have 3 bottles of brew that you can donate to a worthy cause we would like to use it for the exam. The beer can be wonderful, good or very poor. It doesn't matter. Obvious faults are most welcome. You don't have to know the fault – Neil and I will determine that before the exam. We would like to know, however, what style you think it is. In return you will receive no less than 8 judges opinions on your beer, including at least two from already ranking judges. That should give you lots of feedback and give you a good head start on the upcoming competition season.

Please bring any and all beers to the February meeting and pass them on to either Neil or Roxy. Thanks much.

Gold in AHA Club only Competition

A good way to kick off the new competition season. Roxy got a 1st in the club only competition for English Pale Ale. That's a few good points for our standings in the AHA rankings.

There were 51 entries in the AHA Club only competition for English Pale Ales and Bitters.

The following are the winners:

1st Place
4C Strong Bitter
Roxanne Hastings
Edmonton, Alberta, Canada
Edmonton Homebrewers Guild...

Leo Vitt
Rochester MN

IMPORTANT MEETING of Competition Exec Members

The next executive meeting of the Guild will be devoted almost entirely to getting the ABC-MCAB competition up and running. Due to the late response from MCAB we are a bit behind this year. We need to get most of the competition details done by the end of February. It is vital that the competition be on our WEB page ASAP.

If you are a member of the Competition Committee in any way it is important that you make every effort to attend the Feb exec meeting. All regular exec members should also be there. Kevin, if you can

make it that would be excellent. Come prepared to brainstorm and report on progress to date.

The meeting is on Wednesday, February 5 at Neil Herbst's residence 9524 –144 St. It starts at 7:30

Differentiate ale and lager yeast in fermentation characteristics and taste of beer.

Glen Hannah

Ale yeast is top fermenting (*Saccharomyces Cerevisiae*) that is best used in temperatures between 55-70 degrees F (13-21 C). Some strains of ale yeast will flocculate at the top of the beer during the first few days of fermentation before settling to the bottom of the fermenter. They form colonies which are supported by the surface tension of the wort and create a very thick, rich head. They ferment glucose, fructose, mannose, galactose, maltose, sucrose, xylulose, and maltotriose, and partially ferment the trisaccharide raffinose. They split off and ferment the fructose molecule from raffinose, leaving the disaccharide melibiose. Ales are typified by a rich, full-bodied profile with a fruity nose and taste. Each strain has unique characteristics, which can be enhanced or minimized depending on formulation and fermentation temperatures and variations in the pH.

Lager yeast is bottom fermenting (*Saccharomyces Uvarum* or *Carlsbergensis*) that is best used in temperatures between 32-50 degrees F (0-10 C). All yeast strains will flocculate and then settle to the bottom of the fermenter. Fermentation may take 3 weeks and last up to many months. The word "lager" in German means "storage". Bottom fermenting lager yeasts, which don't have as great an ability to cling together, form smaller colonies that make a thinner, less tenuous head and that sediment out on the bottom of the fermenter. They ferment all the sugars that the top fermenting yeasts do except they fully ferment raffinose. There are two distinct subdivisions of bottom fermenting yeast. The Frohberg type (F.U., dusty or powdery yeasts) ferment very strongly, and attenuation is very rapid. The Saaz type (S.U. or break yeasts) settle out of the ferment more satisfactorily than do the Frohberg type. Consequently, they are weak fermenters and reduce the extract very slowly. The taste will vary a great deal on the condition of the yeast and the temperature the beer was fermented at. Lager beers are typically lighter and dryer than ales with a crisp finish. Lager yeasts generally produce significant amounts of sulfur during cooler fermentation, that dissipates during aging which is an important profile in great pilsner beers.

Different yeast strains span the spectrum over these two classifications, producing different characteristics in beer including flavour, head, clarity, and body. The yeasts that ferment the quickest and most completely do not necessarily produce the best beer. Yeast strains are selected for the character of their fermentation, their ability to form colonies, and their ability to ferment without producing side effects such as flavour and aroma impairing esters, and their viability rather than their ability to ferment the wort rapidly.

Explain what happens during the mashing process. Discuss 3 different mashing techniques, their recommended usage and advantages and disadvantages of each.

Sean Cormican

The mashing process begins when crushed malted grains (grist) are added to heated water, or vice versa. Several things happen during the mash, the most important of which are due to enzymatic processes. The primary thing that concerns a brewer during mashing is the continued breakdown of the grain starches into simpler sugars (continued from the malting process). Additionally, pH changes occur, proteins are broken down, and some browning or darkening of the extract (the final product from the mash) can occur. There are traditionally four different ways of mashing including: infusion mashing, step mashing, decoction mashing, and double mashing. Of these, only the first three are usually used by home brewers; the last one is used by larger breweries, which also use large amount of adjuncts (un-malted grains) in their recipes.

The enzymatic processes that convert available starches to fermentable and unfermentable sugars are controlled by regulating the temperature and pH of the mash. Temperatures in the range of 52E-62EC promote activity by the enzyme beta-amylase. Beta-amylase breaks down starches by removing single glucose molecules from the ends of the long starch chains. When the temperature of the mash rests in the range 65E-67EC, activity by the enzyme alpha-amylase is encouraged. Alpha-amylase acts on starch chains by breaking them between the endpoints. The two enzymes work well together at temperatures between 63E-70EC. The starch converting enzymes are collectively known as diastatic enzymes, and work best when the mash pH is 5.2-5.8. Too far outside these specified temperature and acidity ranges and the enzymes cease to function, which is why a "mash-out" is performed by some brewers. Raising the temperature above 77EC effectively denatures the enzymes, stopping their activity.

At even cooler mash temperatures, 30E-53EC, the mash pH can be lowered due to the activation of phytase enzymes. These break down phytin into phytic acid. This "acid-rest" is sometimes required when using under-modified malts or to adjust the mash pH in preparation for diastatic enzymatic processes. In most cases however, chemical reactions when mixing grist and water will lower pH to a workable level and so the acid-rest is rarely required or used.

Proteins in the grains need to be broken down to provide nutrients for yeast and other desirable qualities in the finished beer (like head-retention). Proteolytic enzymes work at these proteins breaking them down when the mash temperature is in the range 50E-60EC. The preferred pH for optimum proteolytic enzymatic processing is 4.2-5.3. A mash pH of approximately 5.2 is probably ideal for both diastatic and proteolytic enzyme activity. This is where the brewer aims to have the mash after the acid rest or dough-in (if no acid rest is used), which happily enough is the usual acidity level achieved upon mixing of grist and water.

Browning reactions can occur with certain methods of mashing. In decoction mashing where a portion of the mash is removed and heated to boiling in a separate kettle, darker extract will be noticed. Additionally any process which involves direct heat added to the mash or a portion of it, will produce some browning (as in stepped-infusion mashing using heated mash vessels), though in most cases this is probably negligible.

The easiest mashing method is the infusion mash. The brewer simply adds grist to heated water so that the final mash temperature falls in the desired range. This method is most useful for recipes using well-modified malts or any traditional British style of beer. It has the advantage of needing a minimum amount of equipment; only one mash tun, kettle, and hot liquor tank are needed. This method does not allow for as much control over the enzymatic processes and so limits the variety of beers that can be made.

The next type of mashing to be discussed goes by many names: step-mashing, step-infusion mashing, multi-step mashing, etc. It is similar to the infusion mashing in that the grist and water are mixed to start, but after a rest period (there can be more than one rest temperature used) the mash temperature is increased by means of direct application of heat or addition of heated water. This method of mashing is better suited for less modified malts and allows the brewer more control over the

extract produced since the various enzymatic processes can be effectively turned off or on as required. The downside to this method is that it may require more equipment, a heated mashing vessel as well as more time.

The last method of mashing is the decoction mash. The mash process here consists of something similar to the step-mashing, but instead of direct heat or added hot water, a portion of the mash itself is removed and brought to a boil in a separate vessel, then returned to the main mash. In this way all of the various temperature rests can be achieved. This is most suitable for recipes using under-modified malts and most German beer styles. It takes a much longer time to do a decoction mash, as well as more equipment, however it usually results in higher extraction rates than when using infusion or step-mashing.

Describe and differentiate 4 distinctly different German bottom fermented styles. Give commercial examples.

Greg Wondga

The 4 distinctly different German bottom fermented styles (lagers) are the following:

Pale lagers; Pilsner, Dortmunder export, and Municher helles;
Amber lagers; Oktoberfest/Marzen, and Vienna lager;
Dark lagers; Munich Dunkel, and Schwarzbier
Bocks; Traditional bock, Helles bock/Maibock, Doppelbock, and Eisbock

The pale lagers all use Pilsener malt as the base malt (and perhaps the only malt in the entire grain bill) and therefore are made using a decoction mash. The Maillard reactions from boiling samples of mash induce a deeper gold colour in the beer than one would see in the American styles of pale lager. The way to differentiate German Pils, Dortmunder Export, and Municher Helles, is the malt/hop balance. The Pilsner, of course, has a hop dominant aroma and flavor. Unlike its Bohemian cousin, the German Pils uses the flowery noble German hops rather than the spicy Saaz (pronounced "zots") hop. Classic examples of this style are Bitburger, Kulmbacher Moenchshof Pils, Jever Pils, Holsten Pils, and Paulaner Premium Lager. Dortmunder export has an even balance between noble German or Czech hops and pilsner malt. These trademark of these beers is that neither hop nor malt stands out in aroma or flavor. This beer is evenly balanced right down to the lingering after-taste. Examples of Dortmunder Export are DAB Export, Dortmunder Union Export, Kronen

Export, and Saratoga Lager. Unlike the first two lagers, Municher Helles focuses on the pilsner malt aroma and flavor. There is just enough hop flavor to balance out the malt sweetness. Hacker Pschorr Munich Edelhell and Spaten Premium Lager are classic examples of this style.

The amber lagers include the Oktoberfest and the Vienna lager. The Oktoberfest is a style of lager first brewed in 1810 to celebrate the marriage of Prince Ludwig of Bavaria to Princess Theresa. The wedding party went down in history as one of the greatest shakers in German history – it lasted sixteen days – and so it has become a yearly tradition to keep the party alive. The reason the brewers invented a new style for this wedding was because the royals set the most difficult wedding date possible for brewing, September 15. In those days there were no refrigerators, and the brewing of lager beers required cold storage. Therefore, no good beer could be brewed between March and October. In fact, the law forbade summer brewing, so the brewers had to brew the beer in March (sometimes it is called 'Marzen' after the month it's brewed). This beer had to withstand storage from the end of March to September 15, therefore they had to make it high in alcohol. The Oktoberfest and the Vienna Lager were both invented around the same time by Anton Dreher and are made with a balance that favors a toasty Vienna malt aroma and flavor. However, the Vienna lager is more subdued. The Oktoberfest also favors the toasty Vienna malt aroma and flavor over the German hops, but it is more intense than the Vienna and slightly higher in alcohol. Commercial examples of Oktoberfest are Spaten Ur-Maerzen, Ayinger Oktoberfest-Maerzen, Paulaner Oktoberfest, Wuerzburger Oktoberfest, Hacker-Pschorr Oktoberfest, and our local Alley Kat Ein Prosit. Examples of Vienna lagers include Negra Modelo, Portland Lager, 150 Jahre, Augsburg Red, Leinenkugel Red, and Alley Kat's Buffalo beer.

The dark lagers are both made using Munich and Pilsner malts, are dark in colour, and have a balance that strongly smells and tastes of malt. The Munich Dunkel is an intense Munich malt experience with a wonderful full body and creamy head. The Schwarzbier (black beer) looks like a stout, but is extremely clean in flavor with no esters or diacetyl. Roasted malts and Munich malt dominate the aroma and flavor. Commercial examples of Munich Dunkel are Ayinger Altbairisch Dunkel, Hacker-Pschorr Alt Munich Dark, Paulaner Alt Muenchner Dunkel, Tabernash Munich Dark, and Weeping Radish Dunkel. Some Schwarzbiers are Kulmbacher Moenchshof Kloster Schwarz-Bier, and Ur-Koestritzer Schwarzbier.

The bocks include the styles Traditional, Hellesbock/Maibock, Doppelbock, and Eisbock. These lagers are known for their higher than average alcohol content (6.0 – 7.5% for ordinary bocks). The traditional bock is amber to brown in colour with a strong sensation of Munich and Vienna malts. Commercial examples include Aass Bock, Hacker-Pschorr Dunkeler Bock, Dunkel Ritter Bock, and Einbecker Ur-Bock. Helles is the German word for pale, and therefore the Hellesbock, as the name suggests, is, golden amber in colour, with a rich pale malt flavor just balanced by continental German hops. Commercial examples are Ayinger Maibock, Spaten Premium Bock, Pschorr Maerzenbock, Wuerzburger Maibock, Hacker-Pschorr Maibock, Augustiner Hellerbock, Fieders Bock Im Stein, and Forschungs St. Jacobus Bock. The word “doppel” means double and thus the Doppelbock has about double the strength of an ordinary bock, 7.5 – 12.0 % abv. A big beer like this is bound to have some plum-like esters in its aroma and flavor, but a well made doppelbock is clean, smooth, and warming. It is a difficult beer to produce indeed. These beers are dark in colour due to the Maillard reactions during decoction mashing and possess some roasty and toasted malt flavor. Commercial examples are Paulaner Salvator, Ayinger Celebrator, Spaten Optimator, Tucher Bajuvator, Augustiner Maximator, EKV Kulminator "28", Loewenbraeu Triumphator, Hacker-Pschorr Animator, and Old Dominion Dominator. The bock with the highest alcohol content is the Eisbock (ice bock) which is produced by freezing the water in the beer and removing the alcohol rich liquid. The resulting alcohol content is 8.6-14.4% abv. This beer is technically illegal for homebrewers to make because it falls under the same type of beverage as distilled spirits, due to the separation of alcohol from water. The freezing also creates a smoothness not evident in other higher alcohol beers. A commercial example is Niagara Eisbock.

Home Brewery For Sale, \$500

Two Tier Sankey Keg System, propane burner-heated.

- Hot Liquor Back has sight line, temperature probe and valve.
- Mash Tun has SS Perforated Plate false bottom.
- Kettle has SS Perforated Plate false bottom for hop and trub separation.
- Stands for vessels
- Magnetically-coupled centrifugal pump

- Counter-flow wort cooler
- Two 50lb propane cylinders (recently tested)
- Flash immersion heated RIMS heater included (system can operate using both RIMS and/or direct heat)
- Grist container on wheels
- "Valley Mill" grist mill
- Two 10gal plastic carboys, valves installed
- Vinyl covers for brewing vessels
- Digital thermometer
- Digital pH meter
- Hand-crafted wooden paddles
- Bottle capper and caps
- Various adjuncts
- Yeast propagator with aeration stone and compressor
- Books including "Classic Beers at Home"(Pratz), "Brewers' Handbook"(Noonan), "Handbook of Homebrewing"(Miller)

Contact: Blackie Blackburn
(250) 554 1631
 #19, 1105 Quail Drive
 Kamloops, BC
 V2B 8R4

By the way, that's Jason Meyer's granddad's brewery. Many of you will remember Jason as a former EHG president. Actually, Blackie has been a member of the EHG by remote for many years. Ray, tell us is this one even more elaborate than Jason's? For 500 bucks this is a steal. If I had a truck, I'd be on my way to Kamloops.