BREWER'S GUILD NEWSLETTER

TWELFTH NIGHT
A.S. XXXIV

Brewers' Guild Ranking System

DEFINITIONS:
Style - beer, wine, mead, cordial, or non-alcoholic beverage.

Public Service Work - teaching a workshop, submitting articles or art to newsletters, holding a contest or tasting, etc.

Proficiency - competency in a style, as judged by fellow brewers from a sampling of at least four different brews.

RANKINGS:
Apprentice - Anyone who wants to play and participate in the Brewers' Guild activities. (Is entitled to wear the Guild badge on a green field.)

Journeyman - Someone who is proficient in at least one style of brewing and has performed at least one public service work. (Is entitled to wear the Guild badge on a blue field.)

Craftsman - Someone who is proficient in at least two styles of brewing, and had performed at least three public service works. (Is entitled to wear the Guild badge on a red field.)

Master Brewer - To achieve this rank you must have attained the previous rank of Craftsman, be nominated by your fellow Craftsmen, and be approved by the other Master Brewers. (Is entitled to wear the Guild badge on a purple field.)

All members of the Guild are encouraged to donate bottles of their beverages to the Guild for use as "taxes" given to the reigning Royalty during court presentations. Brewers outside of the central Kingdom, or in the more distant regions of the Marches, may achieve awards up through Craftsman by participating in their local events. Such individuals should write to the Guild Master to inform him or her of their level of participation.

The Guild badge is as follows: "Fieldless, A tun palewise Or charged with a laurel leaf vert.". The tun, as generally depicted, is a wooden barrel.

The Kingdom Brewer's Guild newsletter is an unofficial publication and is printed and published through donations and unofficial subscriptions. It is published at no cost to the Brewers' Guild or the SCA. Members who would like to have a newsletter mailed to their home (vice hoping to pick up a spare copy during Kingdom events) are welcome to donate $ 5.00 per year to the Guild Chronicler. Both stamps and suitable coins of the realm will be gleefully accepted!

West Kingdom Brewers Guild Contest List

2000

12th Night	Small beer/ weak meads
March Crown	Period gruits
Beltane A.S. XXXV	Infused/ flavored wines or meads " Maywine anyone?"
June Crown	Medievaloid soda - fizzy non-alcoholic drinks derived from period sources
A&S Tourney	Brewing Paraphernalia Attn: wood and metal workers! Please have documentation and picture of period source if available.
Purgatorio	Open Western European beverages
October Crown	Winter Warmers Brews over 12% alcohol. Please provide specific gravity measurements and details of process used.

2001

12th Night	Spiced Meads (metheglins and mead based cordials)
March Crown	Beverages served warm (caudles, mulled ciders, ales and wines)
Beltane A.S. XXXVI	Period beverages from any non-Western European country
June Crown	Fruit beers
A&S Tourney	Medical Medievallia - documented Medical cures using wine or ale as a component.
Purgatorio	Scented waters (Rose water, Orange Blossom, Jasmine, Sage water, etc.)
October Crown	Hyppocras or Clarrey made with at least two kinds of peppercorn.

The Brewers' Guild competitions for Mists Coronet level in A.S. XXXIV will be:
Spring Coronet (3/00) Cordials with medicinal properties
Spring Investiture (4/00) Non-alcoholics from European recipes

A Word From Your Chronicler

HELP!

The West Kingdom Brewer's Guild Newsletter is for all brewers. But it also needs information from you!

I am asking each of you to consider writing just one small article for the newsletter. We need articles on beginning brewing, brewing for upcoming competitions, meads, ciders, cysers, beer, sodas, information sources, brewing ingredients, and anything else that you can think of. Write your information on paper, send an e-mail, or use any other way except mental telepathy - I'm not good at that medium. If you want, I'll edit the article for you.

This issue includes a basic all grain beer brewing "how to" written to encourage beginning brewers. Please copy this and hand it out to other society members who are interested.

As a last word, for those of you with e-mail accounts, you can receive the newsletter in electronic form and help save the guild a few dollars. Let me know if you want to receive your issues electronically.

Yours in Service,

Henry an Eynhallow
Brewers' Guild Chronicler

An Introduction to All Grain Brewing
By
Henry an Eynhallow

To many beginning brewers the idea of "all grain brewing" is a scary thought. But it doesn't have to be scary. When I teach brewing to beginners I invariably begin with extract recipes since they are simple, quick to produce, and involve a minimal amount of "specialized" equipment. It is important to get some quick results that taste good. And extract recipes do just that.

Making the transition to all grain is a fairly easy one, but it does take some planning. First, it's important to remember that "it's just brewing." In period, brewers and brewsters attained perfectly reasonable results with no thermometers, hygrometers, special mash tuns, fermentation locks, and all manner of what-not. The lesson to be learned here is that while the modern goal of scientific perfection in brewing is one goal, there are other equally as valuable goals that don't include slavish attention to incredible amounts of minutia. Mind you, if you want to add more techniques to your brewing repertoire, you can do so. You can even control your wort boils, cooling, and fermentations to the nth degree. BUT, you don't need to. You CAN produce good beer without all of the fuss.

Let's get started. Brewing an all grain recipe starts with the grain bill and water.

You may recall an earlier article that I wrote on basic extract brewing. In extract brewing we begin with a concentrated malt extract. It typically comes in liquid form, but may be bought in dry form as well. These extracts are a concentrated form of wort.

Manufacturers of extract simply concentrate the wort so that all you have to do is dilute it to obtain a fermentable wort. All grain brewing cuts out the extract supplier by having you extract the sugar from malt. In the process, you'll find that your beer costs less to make, and you have a greater degree of control over the finished product.

Malted grains are the source of fermentable sugar for our wort. There are many different types of malt each with its own unique characteristics. But all of them have to be mashed to extract the sugar. It's this mashing process that sets all grain brewing apart from its close cousin extract brewing. Mashing is a simple process to understand. Malt is mixed with water and heated to a temperature that allows enzymes in the malt to convert starch in the malt to sugar. The temperature of the mashing process influences what type of sugar is produced - one that is fermentable or one that is not.

The basic malts in modern brewing are pale malt, European pilsner/lager malt, and American lager/brewer's malt. The beer made from each of these malts is very similar - the main difference is in the techniques used to mash them, since each one responds differently to mashing schedules. *Don't panic! Remember that good beer can be made without fancy equipment!*

The major flavor differences in beer come from specialty malts. These specialty malts control the "mouthfeel," aroma, and color of beer made using them. Roasted malts are kilned at higher temperatures and (possibly) for a longer time than the basic malts. Two specialty malts - Crystal and caramel, are heated while they are wet. This heating raises the temperature to the point of starch conversion. The kilning process continues until the malt dries out and is ready for use. When complete, these two malts are very sweet - kind of like miniature versions of rock candy, only with a husk around them.

Chocolate, brown, black patent, and any malts that include a lovibond rating (a rating of the degree of color) are base malts that have been kilned further. Generally speaking, we have little evidence of these kilned malts being purposefully created in period brewing. Instead, most sources sing the praises of light malts and the beers that they produce.

Extract Potential

Malts have different potentials for extract efficiency. What do I mean by extract efficiency? Well, each different type of base malt has different characteristics. And, each brewhouse has different abilities to extract the sugar. These factors go together to make up extract efficiency. *Don't panic! Remember that good beer can be made without fancy equipment!* The reason why we care about extract efficiency is because the efficiency determines how much malt we have to start with in order to create a specific amount of sugar in our wort. The actual efficiency doesn't matter as much to us as determining what it is. BUT, you can get started without knowing this number! Typical home brewing setups obtain extract efficiencies in the neighborhood of 60-70% Not to worry, we can correct for extract efficiency at boil time if we need to.

Mashing

To begin the mashing process you need crushed malt. Malt is crushed for several reasons. First, crushing the malt makes it easier for the enzymes to make contact with the starch granules during the mashing process. Second, the husk separates from the grain when it is crushed. This husk serves a very important purpose later on - it forms a filter bed through which the wort will flow out of the mash tun.

The trick to a good mash is to get a good grain crush. Malt that is ground too fine will create a gluey mess that won't let water flow through it. This is called a stuck sparge. On the other hand, a too coarse crush and the starch granules will be too big to allow proper conversion. In this case starch ends up in the wort. This is bad. Since starch is too complex for yeast to digest, bacteria take over. In time bacteria overwhelm the yeast and the batch goes bad. We know that this happened in period because there are procedures laid out for dealing with "ropey" or overly soured beer. Both of those conditions come from bacteria.

Starch gelatinizes at 149°F which allows enzymes to come into intimate contact with the starch granules. The exact temperature of the mash doesn't matter as long as all that you want to do is make beer. Starch will convert to sugar above 120°F but the process is very slow. Generally the mashing process calls for a Saccharification rest at 149-160°F for 45-90 minutes. This "rest" is simply a holding point for the mash while enzymes are busy converting the starch to sugar. Within this temperature range there are some preferred ranges to work with. As a guide, the amount of water that you mix with the grain coupled with the mash temperature dictates some of the beer's finished characteristics. 1.5 quarts per pound of malt and 150°F gives a dryer beer while 1 quart per pound of malt and 156°F gives a sweeter beer with more mouthfeel. I often try to achieve 153°F as my "strike" temperature as a good balance between the two.

It's simple to test for starch conversion. Just mix a drop or two of iodine with the few drops of the liquid from the mash tun. It's important to keep the sample free of any husks or grits. The color of the mixture is what you use to determine conversion completion. Use a white porcelain plate and drop one drop of wort onto it. Next to it place a single drop of iodine so that the two drops run together. A purple to blue color indicates that conversion isn't finished, violet indicates fermentability of about 60%, mahogany indicates a wort that will ferment to about 1/3 gravity, while a faint red or pink indicates fermentabilty of 70-75%. No

color change indicates that the wort will ferment out to 1/4 gravity or less. Keep in mind that minute particles of grain will make it into your sample. So, it's important to ignore the black dots that you see interspersed in the wort sample.

Once the mash is complete, the next step is sparging. The word simply means to wash the sugar out of the mash. The procedure is to drain the liquid from the grains until the liquid level is just above the surface of the grains. Next hot water is sprinkled onto the submerged grains and the whole amount of liquid is drained off. Stop your sparging when the specific gravity of the runoff drops to 1010.

Now on to the actual mashing! We will do an infusion mash like was common in England through out the period. This procedure is one proposed by Markham in "An English Housewife" scaled down to produce a 5 gallon batch of beer. You will need a mash tun (store bought or a picnic cooler modified to allow draining), a pot (bigger is better - 40 quarts is not too big!), spoons, and a 4 oz ladle. (Iodine to test for starch conversion if you wish - it isn't necessary for this mashing procedure.).

Crush:
10 lb pale malt
1 lb crystal malt
1 lb rolled oats

Heat 7 gallons of water to a boil. (Adjust the water with 3 tsp gypsum to mimic the English water if you wish) Place the grist in your mash tun after having rinsed it with hot water. Remove the water from the fire. Using a 4 oz ladle measure out 4oz additions of water for the mash tun. For each ladle full of water stir the mash four times. Take a total of 30 minutes to add the entire volume of water to the mash. Close the top on the mash tun and let it sit for 2 1/2 hours. Drain the wort (check the starch conversion first if you wish).

Boil the wort for 1 hour with 2 oz of hops - Goldings, Fuggles, etc. It's up to you.

While you are waiting for the boil, boil 2 gallons of water (with gypsum if you wish) to make a small beer. Stir the entire volume of water into the mash tun and let it sit while the boil completes.

Strain the hops out of the wort and cool it by whatever means. Pitch the yeast and you're done with the great beer. For the small beer, drain the wort off into the boiling kettle and add the used hops. Boil for 1 hour. Cool and pitch your yeast. I recommend one of the English ale yeasts as a good choice.

A word about carboys: if you chose to ferment your beer in a glass carboy you'll need to cover it in order to avoid skunking the beer. The oils from hops change into the skunk flavor when they are exposed to sunlight.

Ferment in a cool spot -say 65-70°F. Wait a week or so until the fermentation has stopped. You may bottle it as a still beer or prime the beer with 3/4 cup of sugar and bottle.

Now. There you're done! Wasn't that easy? And you made a period beer to boot using a period technique.

Wait a week and enjoy your period English Ale brewed with authentic techniques.

Brewers' Guild Leadership

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No peeking

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No peeking

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please...

This newsletter is an unofficial publication prepared by and for the members of the Brewers' Guild of the Kingdom of the West. The articles, opinions, and recipes published herein are strictly the responsibility of their authors and not of the SCA or the Kingdom of the West. (Now that the lawyers are happy... relax and have a home brew!)