THE BREW NOTE

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Style of the Month
German Ales

Kölsch
Mark and Luanne Naski



Who would have thought? The first written document about beer drinking came from Cologne. It's a sad tale, but it does mention the beer! Toward the end of the 11th century, the 12-man honor guard for the late archbishop was rewarded with bread, bacon and the golden barley juice we call Kölsch. The deathwatch record goes on to mention the local monastery were accepting donations for their hospital on the site of the current train station; it also says the monks had to drink a ½ Ohm of beer daily. *If you believe the document and subsequent translations, that means the monks had to slug more than 5.5 liters of beer per day.* It may lack in accuracy, but this document is one of the first papers to record the existence of beer in Cologne, and more specifically, Kölsch.

The Brew Note

The Brew Note is published monthly for members and friends of the St. Louis Brews Homebrewers Club. The Club's purpose is "the appreciation and study of beer styles and brewing methods and techniques."
Membership in the St. Louis Brews is $25 annually and includes a subscription to The Brew Note. Send inquiries, address changes, and all correspondance to:

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Letters, articles, announcements,and other pertinent contributions are welcome at either of the addresses above.

The brotherhood of St. Peter of Milan celebrated its 600th anniversary in 1996. The brotherhood connects beer and the church in this ancient city, as St Peter is the patron saint of Cologne. In the Middle Ages, a brewer held the same respect as the "Schutzpatron", the city protectors.

When the Reinheitsgebot became law, the citizens of Cologne were proud that their beer had been brewed that way for 100 years. Beer drinking is, and has always been serious business in this Catholic town: In 1603, if you were late for a beer session, you were fined 1 shilling. If you missed the Patronfest, you paid a price of a ½ pound of candle wax!

Only 30 miles south of the famous alt-producing area of Düsseldorf, the city of Cologne (or

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The Many Faces of Altbier
John Sullivan

What is an Altbier? In trying to define this, I looked into several sources but finally settled on the styles identified by a homebrewer, Tim Dawson. Both the AHA and the BJCP seemed to be a bit limited in their accepted interpretations of Alt. Tim Dawson, on the other hand, put together his own compilation of styles built upon his own studies from many sources including brewing magazine articles, books such as Michael Jackson's "Beer Companion" and "New World Guide to Beer" and an analysis of winning published recipes. After accepting Mr. Dawson's descriptions as a foundation, I then tried to verify his assertions by reviewing some of the recent literature on the style, double-checking his descriptors against Jackson's findings and incorporating my own general

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Köln as the locals call it) is located on the Rhine River. The landmark is the twin spires of the Dom cathedral, located between the main train station and the old city's numerous Kölsch bars. When you get off the train, just walk around the church and there you are, in Alt Köln! Once the thrill subsides and your heartbeat returns to a more normal pace, you realize you have a problem: which *Kölsch do you try first?* The best way to solve that problem is to start at the first bar and proceed slowly into the city, since you must change bars in order to taste a different Kölsch!

There are about 26 breweries in Cologne and it's neighboring city, Bonn. As I mentioned before, this beer is taken very seriously: it is jealously protected and only the beer brewed in the region can be (legally) called Kölsch. Kölsch is also an "alt" beer, as it is ale, with the top-fermenting strains of yeast. But it is so different from its northern cousin. It is light in body, but not in palate. Kölsch is extremely pale in color and very delicate in character. There is also some fruitiness in the flavor, especially in the brands produced with a 10 – 20% wheat grain bill. In the first half of this century, this beer style was hardly known outside of Cologne. When the Allies arrived, they dubbed Kölsch the "National drink. " After WWII, the beer became thinner, accentuating the CO2 accent! Kölsch brewers like to say that *Kölsch is spicier than export, but not as bitter as Pils!*

There is a great demand for this beer in Cologne, since it is the city that consumes the most beer per capita in Germany! We already know about the monks and their daily consumption, and we also know that Kölsch was hardly known outside of the city in the first half of this century, but, in 1907 the per capita consumption of Kölsch was 170 liters per person, a whopping 50 liters more than the national average!

Kölsch is served in narrow, tall glasses called "Stanges." The waiter is called a "Köbe" and he carries a round tray with a handle in the middle full of fresh glasses of Kölsch and empty



slots for the dead soldiers! The beer will keep on coming until you tell the waiter "NO!" Meanwhile, back at the bar, the bartenders are busy filling more glasses of Kölsch, as it takes a little longer to fill the glasses since the beer is well carbonated and Germans let the foam settle, they NEVER pour it off the sides!



Technical information:

Original Gravity:	1.040 – 1.045
Bitterness:	16 – 30 IBU
Color:	4 – 10 SRM
Alcohol content	4 – 5% volume

Commercial examples:

Küppers	Mühlen	Bönnsch
Gilden	Garde	Sion
Cölner	Gaffel	Früh
Pfäffgen		

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knowledge of the style. In doing this, I discovered that Mr. Dawson's descriptions remove much of the mystery of Altbier by defining four Altbier substyles: Dusseldorf Alt, Sticke, North German Alt and Muenster Alt.

In reviewing these substyles, the following common characteristics can be identified:

* All are top fermented employing specially selected ale yeast
* All are cold conditioned following fermentation (i.e., they are lagered)
* Diacetyl (butter/butterscotch) is not present or very low
* Esters (fruitiness) are not present to very low
* German malt and German/Czech hops are traditionally used
* Historically, decoction mashing was employed

What makes describing an Altbier difficult is the differences in the substyles. Those descriptors that vary from substyle to substyle are:

* Maltiness level
* Grain bill composition
* Color
* Bitterness level
* Hop flavor level

Dusseldorf Altbier is a style recognized by both the AHA and BJCP. It lacks hop aroma and has low hop flavor but has medium to high bitterness, especially in the finish. It exhibits a dry, clean, bittersweet flavor. The maltiness is medium to high but is not an overpowering perception due to the counterbalancing effect of the high bitterness levels. A light DMS aroma may be perceived and in some cases a mild degree of toastiness contributed by Munich style malts. The body is light to medium while the color is bronze to dark brown. Commercial examples include Widmer Alt and Zum Uerige.

Norm Hardy in a recent issue of Brewing Techniques also makes a distinction between what he describes as the Dusseldorf Alt variants (Zum Uerige, Fuchschen and Schumacher) and a typical Dusseldorf Alt. Hardy contends that the hops must balance with the malt, while the variants, though malty, are really aggressively bitter, giving you an Alt that is atypical to what is truly the norm in Dusseldorf.

According to Michael Jackson, Sticke is a form of Dusseldorf Altbier that the brewpubs in that city brew on an infrequent basis as a reward for their regular customers. It is released without much fanfare. As a result, it is somewhat of a secret or "sticke" not only in regard to its release schedule but also in its strength, hop flavor and aroma. Sticke is brewed much like a typical Dusseldorf Alt except to a higher original gravity. Hop bitterness is high while the hop flavor and aroma is low to medium. In some cases, the beer is dry hopped. No fruitiness, esters or diacetyl is present, though a light DMS flavor and aroma can be perceived. Like Dusseldorf Alt, the color is bronze to dark brown. There are no known commercial examples available in the United States, though Zum Uerige Sticke and Latzenbier are available in Dusseldorf. I am sure that thorough research would turn up an example or two brewed by brewpubs in the United States. Sticke is not recognized by either the AHA or BJCP.

Northern German Altbier is recognized by the BJCP but not the AHA. It is lighter, less robust and less bitter than Dusseldorf Altbier. It has medium malt flavor, no hop aroma or hop flavor. The bitterness perception is usually medium but some examples are actually quite low. Due to the lower bittering levels, medium maltiness provides a sense of balance to the style. The color is typically amber to brown. Most Alts produced in America and other countries are of the North German style. Some are marketed as Amber Ales. Commercial examples include DAB Dark, Broyhan Alt, Alaskan Amber, Grolsch Amber, Harpoon Alt and August Schell Schmaltz Alt.

Muenster Altbier is a light, pale version of Altbier and is the least bitter of the four substyles. This style is not recognized by either the AHA or BJCP. These beers have low to medium malt flavor, no hop aroma, no hop flavor and low bitterness. They are pale to light amber in color. In addition to color and bitterness, Muenster Alts differ from the North German Alts in that a significant portion (20% - 40%) of malted wheat is used giving the beer a wheat tartness and spiciness. Some Muenster Alts have been known to exhibit a degree of lactic sourness. Commercial examples include Pinkus Mueller and Otter Creek Helles Alt.

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Altbier Ingredients

What I have tried to do in this section is discuss the ingredients for making the beers described in this article.

Fermentables: Grains and Extracts

Though traditionally the grains for the Alt variations have been of Germanic origin, there are some exceptions that can be made. For the pils malt additions, you can expect good results with Belgian as well as U.S. malts. Munich style malts, which in some cases serves as the base malt, should be continental European in origin. Avoid U.S. Munich style malts and any grain type that is of 6-row origin. A wide variety of crystal malts can be used, but best results will be obtained using continental European varieties.

Extracts on the other hand can bit problematic. Your chances for success are greatly increased if you are partial mashing as opposed to just steeping grains. In any case, you should avoid hopped extracts. You will also find that your extract beer will in many cases be less malty as well as darker than that which can be brewed using all-grain recipes.

In the case of Dusseldorf Alt, Sticke and North German Alt, I think that it can be very difficult to brew an authentic tasting beer using extract and steeping grains. The maltiness necessary for these styles is not attainable from most commercially available extracts. If you increase the crystal content when you steep your grains, your beer will be more authentic tasting, but you may overshoot your color target. If you are not concerned about the color, by all means proceed with higher crystal content in particular with combinations of caramunich, caravienne and carafoam. Thorough research of available extracts is necessary to find those that contribute the required maltiness. Marie's Munich Extract from St. Patrick's of Texas could be an appropriate substitute, as may some extracts of Germanic origin. You may also wish to consider the use of an imported German malt extract.

On the other hand, using extract to brew Muenster Alt can result in reasonable examples of the style. Stick with a light malt extract. Most commercial weizen extracts are 60% barley and 40% wheat, which would work well for this Westphalian specialty.

Hops:

Hops to be used for the Alt variations should typically be of continental European origin but there are some exceptions to consider. Hallertauer variations, Tettnanger, Saaz and Spalt may be used for bittering. Where large hop charges are required for bittering, good results can also be obtained using strong, clean bittering hops such as Perle (U.S. or German) or Galena. Though any of the continental German hops may be used, hop flavor and aroma additions (where permissible) are perhaps best expressed using Spalt or Hallertauer variations. While some examples of alt exhibit some grassiness from Saaz or spiciness from Tettnanger, they are the exception rather than the rule. Good results may also be obtained by substituting the American Hallertauer clones of Mt. Hood, Crystal and Liberty.

Yeast:

I can only speak with confidence with the yeast that I have actually used for Altbier. I have also listed those other commercially available yeasts that are recommended by the vendors for these particular Alt substyles.

Wyeast 2565 (Kolsch), Wyeast 1338 (European Ale) and Wyeast 1007 (German Ale) are those with which I am familiar. Most homebrewers, rightly or wrongly, are typically led to Wyeast 1007 as the yeast of choice for brewing Altbier. While I believe that 1007 has merit for Muenster Alt, I think that 1338 and especially 2565 hold greater promise for brewing most Alts. Wyeast 2565 and 1338 are both clean fermenters that accentuate a malty finish. Wyeast 1007, on the other hand, can often be overattenuative and create a low degree of spicy tartness. My personal favorite is Wyeast 2565, which I believe to be more appropriate for Alt as opposed to Wyeast 1007, which I believe to be more appropriate for Kolsch. Other commercially available yeasts that can be used for Altbier include BrewTek CL-40 (Old German Ale), Yeast Culture Kit A04, Yeast Culture Kit A37 and Yeast Lab A06 (Dusseldorf Ale). In a pinch, Wyeast 1056 (Chico Ale) and BrewTek CL-10 (American Microbrewery #1) may be used for Alts due to their clan finish and restrained ester levels. Our own club's TomCoghill and Jerry Scheel make a credible alt using Wyeast Scottish Ale yeast.

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Water:

I will not delve into the waters of Dusseldorf and Westphalia here but will just say that St. Louis water will work well for most of the recipes here. While most St. Louis area waters may be used "as is" for mashing, if a pH adjustment is required, it should be accommodated using a food grade acid such as phosphoric or lactic acid. Avoid gypsum additions in your Alt as it may contribute a harshness that is uncharacteristic of this style. You are brewing Alt, not Pale Ale. As with any beer, the optimal pH for your mash is expected to be 5.2 to 5.5. If you find that your mash pH is settling below 5.2 due to your crystal additions or improper acid adjustment, calcium carbonate can be used in small amounts to raise the pH. Calcium carbonate has a tendency to contribute a smoothness to such beers that would be a nice touch for an Altbier. Sparge water treatments should be limited to the good-grade acids mentioned above to a level typically not less than 5.4 pH nor higher than 5.8 pH.

Altbier Recipes

The recipes that follow are based upon my own personal research and experience. I believe that with proper technique, each of these recipes will provide you with a representative, if not an outstanding example of each style. Remember that the information here is designed to build upon your current experience. The intent is not to provide a primer on any particular aspect of homebrewing.

Recipes General

Each of the recipes whether they be extract, partial, infusion or decoction are designed to provide you with similar results. There are some characteristics and ingredients that will be roughly standard no matter which method you use. These are covered in the following table.

	Dusseldorf	N. G. Alt	Muenster	Sticke
Hop Choices by Preference	Spalt	Hallertauer	Hallertauer	Spalt
	Hallertauer	Saaz	Tettnanger	Hallertauer
	Saaz	Tettnanger	Saaz	Saaz
Yeast by Preference	Wyeast 1338	Wyeast 2565	Wyeast 1007	Wyeast 1338
	Wyeast 2565	Wyeast 1338	Wyeast 2565	Wyeast 2565
	Wyeast 1007	Wyeast 1007	Wyeast 1338	Wyeast 1007
IBU Target	40 - 55	25 - 40	12 - 25	45 - 65
HBU Target	9 - 12.5	5.5 - 8.5	3 - 5.5	9.5 - 13.5
% Total AAU's @ 60 min	75%	75%	75%	70%
% Total AAU's @ 20 min	25%	25%	25%	15%
% Total AAU's @ 10 min				15%
Hop Quantity @ Knock Out				1 oz
Hop Quantity Dry Hops				1 oz
Target Original Gravity	1.047	1.047	1.046	1.066
Target Final Gravity	1.012	1.012	1.011	1.016
Fermentation Temperature	65F - 68F	65F - 68F	65F - 68F	65F - 68F
Lagering Time @ <40F	3 - 4 weeks	3 - 4 weeks	3 - 4 weeks	4 - 5 weeks

Where these recipes will differ is in the grains and extracts used, the technique employed and the final color of the beer. The remaining information is provided in the detail below.

Extract Recipes

All recipes are for 5 1/2 gallons and employ malt extracts with the steeping of specialty grains.

	Dusseldorf	N. G. Alt	Muenster	Sticke
Extract Light DME	6.5 lb.	6.5 lb.		9 lb.
Extract Weizen Syrup			6.6 lb.	
Caravienne	1 lb.	.5 lb.		1.25 lb.
Belgian Carapils		.5 lb.	1 lb.	
Caramunich	1 lb.	.75 lb.		1 lb.
Approx. Color (SRM)	19	15	8.5	22

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Monthly Beer Styles

Apr	German Ales
May	Bock*
Jun	Brown Ales
Jul	Wheat/ Wit
Aug	Mead*/ Wild Card
Sep	German Lagers
Oct	Porter* /Stout
Nov	Scottish
Dec	English Old Ales*

St. Louis Wine & Beermaking
251 Lamp & Lantern Village
Chesterfield, MO 63017
314.230.8277
Monday 12-7, Tues-Fri 12-6, Sat 9-3

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1. Add approximately 1/3 of your malt extract to your water and ensure that it is completely dissolved. If possible, place your crushed grain in an oversized grain bag. Raise the temperature of the diluted wort and crushed grain to 160F - 170F and hold for 30 minutes.
2. Remove the grain, add your remaining malt extract and raise to boiling. Be aware of the potential for scorching.
3. Add your first hop charge at the start of the boil.
4. At 40 minutes into the boil, add Irish moss (2 tbsp.) and your next hop charge.
5. Add any remaining hop charges at the prescribed intervals.
6. Chill, aerate and pitch your yeast as you are accustomed.

Partial Mash Recipes

All recipes are for 5 1/2 gallons. Partial mash efficiency was estimated at 50%. You will need a lautering device large enough to hold approximately 4 lbs. of grain for each recipe.

	Dusseldorf	N. G. Alt	Muenster	Sticke
Extract Light DME	5 lb.	5 lb.		7.5 lb.
Extract Weizen Syrup			5 lb.	
Light Munich Malt	2 lb.	2 lb.	2 lb.	1.5 lb.
Dark Munich or Aromatic	1.5 lb.	.5 lb.		1.5 lb.
Caravienne		.5 lb.		.5 lb.
Belgian Carapils			1 lb.	
Caramunich	.5 lb.	.5 lb.		.5 lb.
Approx. Color (SRM)	18	16	10	20

1. Add crushed grains to 1.25 gallons of heated mash water. Adjust the mash temperature to 158F - 160F. If you can, ensure the mash pH is 5.2 to 5.5.
2. Heat 2.5 gallons of sparge water treated with food grade acid to a pH of 5.4 to 5.6 and a temperature of 170F.
3. Quickly sparge the mashed grains. Minimize the husk and particle carryover by recirculating until clear. If you cannot recirculate, allow your wort to settle in a carboy or other container for 10 or 15 minutes and then rack the clearer wort off the mash debris.
4. Add water to your partial mash wort until you have the volume necessary for the boil.
5. Dissolve your extract and bring to a boil. At the onset of the boil, add your extract first hop charge.
6. At 40 minutes into the boil, add Irish moss (2 tbsp.) And your next hop charge.
7. Add any remaining hop charges according to the prescribed intervals.
8. Chill, aerate and pitch your yeast as you are accustomed.

Alt Infusion Mash Recipes

All recipes are for 5 1/2 gallons. Infusion mash efficiency was estimated at 75%.

	Dusseldorf	N. G. Alt	Muenster	Sticke
Pilsener Malt	5 lb.	5 lb.	3 lb.	6 lb.
Light Munich Malt	3.5 lb.	3.5 lb.	2 lb.	6 lb.
Dark Munich or Aromatic	1 lb.	1 lb.		2 lb.
Wheat Malt			3.5 lb.	
Caravienne	.5 lb.	1 lb.	.5 lb.	.5 lb.
Belgian Carapils			.5 lb.	
Caramunich	.5 lb.			
Approx. Color (SRM)	19	15	7	21

1. Mash on one of the following schedules with your pH in the 5.2 to 5.5 range. Use approximately 1.1 to 1.25 quarts of water per pound of grain.

   Alt Single Temp Mash: 148F to 150F until conversion is complete

   Alt Step Mash:

   a) 132F protein rest for 15 minutes

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The Open Fermenter
Bob Boland

This edition presents several stray thoughts that rose to the surface this month – a semi-intellectual kreusen (partial brain-mash?).

Horror Story of the Day: Q: What's blue and green and wears a white fur? A: I don't know, but it's growing in my secondary fermenter! Help! I was brewing a Belgian pale ale, and was looking for some of the "Belgian" character, but this is ridiculous. It was my first attempt at repitching yeast, and a family of wild things must have seen an opportunity, taken up residence, and started making babies by the millions. Better put this carboy down the drain (ouch!), reevaluate my cleaning and sanitation practices, and chalk this one up to experience. But… wait! That white stuff might just be polyclar on top of the foam, and I really don't see anything other than several big bubbles, and it's not blue/green in good light, and it tastes pretty good. Hope springs eternal! Let's keg it and see what happens over the next few weeks. After all, it is a Belgian. Anything to keep from pouring it out – what a waste!

The Executive Committee

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On to more pleasant topics. I'm pleased to report that the Brews made a good showing at the Birmingham competition. Mike Ries took home second place in Northern Brown Ale, third place in Southern Brown Ale, and third place in Sweet and Oatmeal Stouts. Congratulations, Mike! Your President got third place in American Pale Ale. As I said last month, enter and the awards will come. Thanks also to Mark and Luanne Naski for hand-carrying the entries to B'ham on their way to the Crescent City.

Our next targets are the First Annual Tulip Festival Homebrew and Wine Competition in Owensville, MO on April 10 (entries due April 4) and the Memphis Bluff City Brewers Homebrewers Extravaganza on April 17 (entries due April 9). Bring your beers to the April meeting and the club will get them to the competitions. The Owensville guys particularly need our support, both in entries and judges. You may recall that four of them were stewards at our last competition to learn the ropes. Let's return the favor and give them both Brews entries and judges. We'll circulate a judging sign-up sheet at the April meeting.

With last month's vote the Brews decided to keep the Happy Holiday Homebrew Competition in December this year and to reevaluate moving it again next year. Thanks John Sullivan and your committee. The Clayton Community Center has been reserved for Saturday, December 11, so mark your calendars now. The real work is yet to be done, however. We need a volunteer to organize HHHC99. The club is pretty good at putting it on, and you'll get plenty of help. It is also a good opportunity to obtain BJCP experience points. Please let me or any other officer know if you're interested in taking the helm.

Peri Paulton hosted Brauritters in March. Thanks Peri and David. We enjoyed your hospitality and your basement bar. Now, that is what a basement bar should look like – six stools in front, a refrigerator and triple stainless steel sink behind, and a pool table nearby. Heaven. Peri can also show us how to make a great extract beer.

Last month, John Sterling reported that the Lift for Life Gym is sponsoring the St. Louis Microfest at the World's Fair Pavilion in Forrest Park on Saturday, May 15. This fundraiser supports the Gym's programs to provide body and character building activities for inner-city kids. It als0 gives us an opportunity to showcase the homebrewing hobby. The Brews will put on a beer competition again, so we need both beers and judges, though many more of the former than the latter. We would also like to repeat the homebrewing demonstration (or something close) and provide samples of our efforts to those attending. We went through five or so Corny kegs last year and can expect the same this year. So, we need folks to brew the beer. To encourage you to do so, the club will buy or provide the ingredients. Let us know what you want to brew at the April

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   b) 146F beta amylase rest for 30 minutes
   c) 158F alpha amylase rest until conversion is complete
2. Mash out is recommended but optional.
3. Recirculate and sparge as you are accustomed (170F @ pH 5.4 - 5.6).
4. Bring to a boil. 15 to 30 minutes after the onset of the boil, add your first hop charge.
5. Add any remaining hop charges according to the prescribed intervals.
6. Chill, aerate and pitch your yeast as you are accustomed.

Alt Decoction Recipes

All recipes are for 5.5 gallons, employing a single decoction-mashing schedule. Decoction mashing efficiency was estimated at 80%.

	Dusseldorf	N. G. Alt	Muenster	Sticke
Pilsener Malt	3.5 lb.	5 lb.	3 lb.	6 lb.
Light Munich Malt	4 lb.	3.5 lb.	2 lb.	6 lb.
Dark Munich or Aromatic	2 lb.	1 lb.		2 lb.
Wheat Malt			3.5 lb.	
Caravienne or 20L	.5 lb.	.5 lb.	.5 lb.	
Approx. Color (SRM)	18	13	7	19

1. Measure your evenly mixed crushed grain into two lots; one representing 60% - 65% of the total (main mash) and the other 35% - 40% of your total (decoction portion).
2. Add 1 quart of heated mash water per pound of grain to your decoction portion and rest at 132F for 15 minutes. Ensure that your pH is in the 5.2 to 5.5 range.
3. Add an additional .25 quart of water per pound of grain and rest at 146F (15 minutes) and then 158F (20 minutes).
4. Add an additional .25 quart of water per pound of grain and raise the decoction portion to boiling. If your decoction is still too thick, add additional water until it is easy to manage. Hold at boiling for 20 to 30 minutes.
5. Add 1 quart of water per pound of grain to your main mash and rest at 132F for 15 minutes. Ensure that your pH is in the 5.2 to 5.5 range.
6. Slowly add the decoction portion back to the main mash, ensuring that you mix well for even temperature distribution. When the main mash temperature reaches 146F hold for 20 minutes. If there is remaining decoction portion to be remixed, hold it for the next mashing step.
7. Mix any remaining decoction mash back into the main mash and raise the temperature to 158F until conversion is complete.
8. Raise to mashout temperature.
9. Recirculate and sparge as you are accustomed (170F @ pH 5.4 - 5.6).
10. Bring to a boil. 15 to 30 minutes after the onset of the boil, add your first hop charge.
11. Add any remaining hop charges according to the prescribed intervals.
12. Chill, aerate and pitch your yeast as you are accustomed.

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meeting and we'll figure out how to get stuff to you. Speaking of brewing in public, we decided at the March meeting to do the 1999 National Homebrew Day Big Brew at Worm's Way Garden and Home Brew Center. That's Saturday, May 1, 1999, folks, and it will coincide with the new Worm's Way location's grand opening. If I recall correctly, Darrell will also be donating some of the ingredients. Mark your calendars and figure out haw to get your brewing equipment to Worm's way. We'll discuss details at the April meeting.

Thanks to Mark Naski for February's tech topic on base malts. Had enough talk for awhile? Want some action? Well then, the April meeting will be just what you're looking for. Keith Reding will give a demonstration of kegging, filtering, and counter-pressure filling techniques, or a reasonable facsimile thereof. Be there and learn how to avoid the time, trouble, and variability of bottle carbonation.

Let me remind you to pay your dues if you haven't already and to contact John Benson if you're bringing homebrew or commercial examples to the April meeting. Enough talk. I'll see you on 4/1, April Fool's Day. Now, let's brew some beer!

Growing and Using Your Own Hops

By Darrel M. Cox
Worm's Way

Hops are interesting and fun to grow. Virtually all varieties will do well in Missouri clay and climate. To begin, choose an area that either allows for very tall vines or that might even benefit from the same. Depending on variety, soil, and sun, hops can grow over twenty feet high. If your primary goal is to produce hop flowers, then you would want plenty of organic phosphorus in the soil. If creating ornamental and subsequently productive vines were your goal then more nitrogen would be beneficial. There are numerous techniques that allow you to trellis and subsequently harvest the hop flowers, which you may know as "Whole Hops". These flowers are aromatic, flavorful, and, when picked at just the right time, contain the "highway yellow" resin known as Lupulin that is the bittering agent used in bittering beer.

If twenty-foot vines are desired, run cables across two end posts and run cords down from this cable to the ground (do not use electrical poles!). The horizontal cables should be raised in such a way that they can be lowered for easier access for harvesting, using pulleys, for example.

You can purchase hop starts in a couple of ways. Most buy hop rhizomes. These are root divisions taken from huge hop farms in March and April when the roots start sending off new vine shoots. They are taken out of the ground, shipped immediately to home brewing centers and garden centers to be placed into your soil. The process needs to be done in a timely fashion so the little shoots don't even realize that they have been uprooted and transported. Less common is the use of hop cuttings. The reason that these two methods are used is because it is imperative that the hops you grow all be female! It is in the female hop's quest to reproduce that the Lupulin is produced. I will say again, despite the backlash last time I said this, when the females can't reproduce they get bitter!

Most homegrown hops are used for flavoring, preservation, and to add aroma to beers. If you intend to produce bittering hops, it is possible with some special care and attention. Mainly, to assure consistent results in bittering the grower must pursue even and consistent drying so that adding an ounce now is the same as adding an ounce later. More moisture in the hop flowers means that an ounce added would supply less IBU's, and the use of dryer hops might tend to supply too much bitterness. Consistency is the key! There are different ways to dry the hops: using the sun or electric heat sources; on trays, hanging from the rafters. Whichever, the most important thing is consistency!

Secondly, for bittering the grower would necessarily need to attempt to calibrate his or her own hops with those of a known bitterness. Brew a pilot brew with known alpha acid hops, brew a second with the home grown hops and attempt to ascertain whether the beer is equally bitter, less bitter, more bitter, etc. If you find that the same amount of the home grown hops are more bitter, make a pilot brew with a higher alpha acid hop until you believe that equal bittering is being achieved and assume the alpha acid of the home grown hops to be equal to that of the controlled (known) hop variety. Remember the scientific method and keep all other variables equal (boiling time, specific gravity of the wort, etc.)

Hops are perennials: with proper care they come back year after year. Plant the rhizome with plenty of organic nutrition. High light areas are best. Consistent watering is important whether just mulching or with drip irrigation or, at the very least, diligence. Top-dress the vines with organic nitrogen throughout the growing season. It is not uncommon for hop vines to grow a foot per week, or inches per day. This requires plenty of "food", water, and light. If you would prefer that the vines be less tall and for more of the vines to come in (for fullness or because you can't have 20 foot vines), cut the top of the vines when they get to the desired height and allow more of the upshooting vines to come in. The upshooting starts are usually trimmed out in commercial hop farms where they prefer single tall vines.

A few interesting notes: hops are probably the last uncontrolled/controlled substance. Brewers know them as bittering agents, flavor and aroma enhancers, and even as natural preservatives. Herbalists and natural health persons know that hops are a mild sedative. Hops are used in teas to encourage relaxation. "Hop pillows" have long been used to encourage restful sleep and hops are thought to be mildly addictive. Ask any "hop head" and he or she will tell you this is true!

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Look Inside for...The Brew Note

The
Mailing
Address
Goes
Here

St. Louis Brews
c/o Jack Baty
4615 Tower Grove Place
St. Louis, MO 63110

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The flowers are not the only productive component of the hop plant by the way. The vines can be woven and dried for use in crafts as wreaths. They are superior to the wild grapevine wreaths that you see sold in craft stores. The adult hop plant is going to continue to reproduce its species below the ground. This means that every spring, you too can harvest the rhizomes (or root divisions) for sale or to enlarge your own or someone's hop garden.

This really is where gardening and brewing overlap. Everything in beer is cultivated, and adding the remnants from your brewing materials back to the soil will certainly benefit the soil and the environment.

St. Louis Brews Minutes
March 4, 1999

- A request was made to get your dues paid so we know how many members we have.
- Some members had trouble accessing the newsletter over the members-only section of the web page.
- A good percentage of beers brought were called in: eleven out of thirteen.
- John Sullivan presented a proposal on moving the HHHC competition date. Of the three options presented, the membership voted to keep the December date for 1999 and reevaluate the timing for the year 2000. A new committee will be formed to select the possible new date.
- Mark Naski gave a tech topic on base malts. April topic will be hops.
- Bob Boland went to the first MCAB competition that was just held. He tells us there is a great opportunity to learn a lot from master/grand master judges.
- Competitions: The goal is to get more club beers to regional competitions. Beers brought to the April meeting can be entered in the Memphis, TN and Owensville, MO competitions. The organizers are looking for judges and stewards at the Owensville competition.
- John Sterling gave us information on this years Lift for Life beer tasting /competition to be held May 15th at the World's Fair Pavilion at Forest Park. He is looking for people to help serve beers, people to judge beers, and entries for the competition.
- The Wine Merchant in Ellisville will have a beer tasting on May 22nd.
- National Homebrew Day is May 1st. A small brewing session will be held at Worms Way.
- The hunt is on for a location for our Spring Picnic.