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The Greater Everett Brewer's League Journal

The purpose of The Greater Everett Brewers League is to promote and educate homebrewers in the production of craft-style homebrewed beers. As an AHA social club we improve members brewing skills by providing mentoring and networking to fellow brewers, promote BJCP judging, evaluation and competition entry, as well as promoting the local craft beer movement.

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Meeting is on Zoom tonight and picnic is cancelled at this time due to virus concerns and safety.

The Club

Hopefully this finds everyone well and brewing away. If you have any information or articles or recipies you would like to submit please send them in. If there is anything you are interested in (about homebrewing) I would be happy to look this up.

I managed to do Jim's Bodhizafa clone and I think it came out well. Lots of hops as you can see by the trub. It really did match the original pretty well when tasting it. Thanks Jim for always helping out with supplies.

Marysville Brew and Cider Fest

The Festival is looking for some support and would enjoy the knowledge our club can provide. Robin has been working with them. They would like to have member's volunteer. Here is the link to register for shifts: https://forms.gle/6nKrhDMZHPWnkMWw5

If anyone is interested in being at the event as a Brew or Cider Vendor, here is the link for registration: https://forms.gle/kyFnGhtfhfyzTZ4X7

Why does my homebrew taste like homebrew?

by Shawn Williams May 6, 2021

I see this question come up a lot. And to be honest I've often asked myself the same question numerous times. The truth is there are a tremendous amount of factors that go into producing really high-quality beer. Brewing commercial quality beer is easier than you think, but at the same time, it's really difficult! In order to reach the next level of brewing beer, we really need to take a good hard look at the cold side of the equation.

Most of us compare our homemade concoctions to some of the best commercial examples on the market…beer we already know and love. Just think about this scenario for one second. Now I KNOW you can make good beer in a plastic bucket, but I don't think it's completely fair to compare bucket beer to one made with state-of-the-art commercial equipment and practices. The only way to really get homebrew to not taste like homebrew is to treat it like it's not homebrew. What exactly does that mean? Let me dive into some common pitfalls I've experienced below.

Neglecting Fermentation Temp Control
Great beer is made during the fermentation process, not the hot side. This mindset was an area I neglected as a beginner. I cannot stress this one enough. By far the biggest improvement in my homebrew came from both proper pitching temps and temperature-controlled fermentation. It seems counterintuitive but yeast both thrive and produce more esters at higher temps. Keeping your fermentation temp in the suggested manufacturer range will produce higher quality beer.

Some yeast strains will really thrive at hotter temps and produce phenomenal results. The truth is most ales should fall in the 66-72°F range. See two common off-flavors that haunted my homebrew.

You're Probably Underpitching Yeast
Underpitching (not pitching enough yeast) is a huge factor in producing off-flavors in beer. In some of the big IPAs I brew (OG 1.070), I pitch close to 400 billion cells. That's 4 standard liquid yeast packs or 2 double pitch packs. It's a lot of yeast (and money), but it ensures a strong healthy fermentation. If you use brewing software, it will help you to calculate how much yeast you should actually pitch. If you want to save some money, you should make a yeast starter.

I also invested in a wort aeration system using pure oxygen. Yeast needs adequate oxygen to do its job well. More oxygen in your wort will lead to better overall fermentation and is also said to increase attenuation. Stressed yeast or subpar fermenting conditions will inevitably lead to off-flavors in your final beer. Shaking a carboy will only go so far in terms of oxygenating wort. I could argue that it's simply not enough if I were to be really picky.

Remember, happy yeast=good beer.

Oxidation
All beer suffers from oxidation to some degree, however, some styles do so more than others. Commercial breweries take extreme precautions to not expose beer to oxygen. As soon as your yeast is pitched your wort should be treated as beer. In the commercial world, beer moves from vessel to vessel in a completely closed oxygen-free system. Receiving tanks and tubing are purged of oxygen before being filled with beer. This ensures delicate flavors/aromas are retained and beer remains as fresh as possible. That's right, beer is not sloshed around or exposed to open air at any step of the process.

I started implementing closed transfers on the cold side after I starting really getting into brewing NEIPAS. Oxidation

is the number one killer of NEIPAs, however, it's also a factor for all beer, just not quite as extreme. That being said, I treat all my beers as if they're as delicate as NEIPAS. Adopting closed pressure transfers for all styles is basically adding another level of quality control to your process. The difference may be subtle, but it's the little things that separate good beer from great beer.

I recently canned a few pints of a homebrewed west coast IPA to see how it would hold up over time. I intentionally did a poor job canning this particular beer to see how the beer evolved. I STILL purged the can with CO2 but not as completely as I should have. I let this beer sit in my fridge for a few weeks and then did a side-by-side comparison between my canned beer and a fresh pour from the exact same keg. Guess what…I could taste a difference in overall hop aroma and flavor. The difference was very subtle, but nonetheless, the fresher beer had noticeable fresher hop flavor.

Now if you're saying to yourself, well, of course, Shawn, that's obvious. Think if I had hastily kegged this entire batch to begin with (minimum if any purging and used an auto-siphon to rack through the lid of the keg). The whole batch would likely taste like my canned experiment. I'd probably think it was pretty good, not having any sort of yardstick to compare. The beer didn't taste or look oxidized, BUT IT WAS…just enough. So before you tell me or yourself oxidation is overblown, maybe you have no idea what the true potential of your craft really is.

Kegging your homebrew can make avoiding oxidation easier

No Water Treatment
Did you guys know that beer is 90% water? (of course, you do that was a joke). There's a common piece of advice out there that you've likely heard before. "If your tap water tastes good, it's good enough to brew with." Well, the truth is that's not 100% true. Good tasting tap water is the absolute minimum threshold for success. Very soft water (low in mineral content and alkalinity), which tastes good, and is free of chlorine/chloramines, is the best water to START with. See removing chlorine/chloramines with Campden tablets.

To confuse you even more, good brewing water is actually quite hard (high in mineral content), but as brewers, we want to add that hardness ourselves with salts, giving us complete control over the final water profile. The best option is to start with distilled or RO water (essentially free of minerals) and build up hardness from there.

Water treatment is a pretty advanced topic and takes some practice to understand. If you cook, you understand how salt enhances flavor and gives body to food. Salt does the same thing to beer. We salt our beers to highlight complex flavors and nuances. It's fascinating and can actually change a beer's character.

The two big minerals brewers focus on are sulfates and chlorides. Calcium sulfate (gypsum) tends to promote drier, crisper, more hop-forward beers, while calcium chloride tends to promote fuller, sweeter, softer, and more malt-forward beers. I'm constantly experimenting with finding the right amount and ratio between using these two salts, depending on what I'm brewing. Here is a really good overview for learning more about brewing water in a little more detail. It's honestly not an area I'm qualified to talk about at a technical level.

I would recommend anyone trying to perfect their brews to get a detailed water report from Ward Labs so you understand the mineral makeup of your source water. With a water report, you can use brewing software to build specific water profiles for the style you're brewing. If your water sucks, you can buy RO water and start from scratch. It's a good way to eliminate variables and determine what could be the cause of your troubled brew. Understanding your water is also going to help you dial in your mash pH as well.

Experiment with adding salts and see what you like. See how different levels of sulfates and chlorides impact your beer. To get a feel for it, you can experiment with adding very small amounts to a glass of finished beer and see how it impacts overall taste.

Poor Cleaning and Sanitation
Breweries can't afford to dump batches due to infection, off-flavors, or dirty fermenters. This is why they take pharmaceutical-grade cleaning practices to clean equipment. While this may be overkill to you, the homebrewer, it produces phenomenal consistent results for pro brewers. Improperly cleaned cold side equipment can slowly degrade your product over time. It may not present itself in batch 1 or 2, but it may start to slowly show up in batch 3 or 4.

I recently did a blind tasting between one of my beers against two commercial NEIPAS. While mine certainly held its own, I noticed the commercial examples smelled cleaner and crisper. This could be a lot of things (even just the yeast choice or mineral makeup), but for whatever reason, my beer smelled a little like my fermenter. Maybe I could have done a better job cleaning it?

It's incredibly important to both clean and sanitize the hell out of all of your equipment. Rinsing stuff with water only is not cleaning, even if it looks clean. Sanitizing equipment without properly cleaning will also do you no good. Invest in a high-quality alkaline-based brewery wash and do long hot soaks of all equipment in between batches. I switched over all of my equipment to stainless and eliminated as much plastic as possible. Although this is not a requirement, it's the superior material to use.

I also like to use a few different forms of sanitizers. Star San is a very common acid-based cleaner that works well against most contaminants in the brewery. When it comes to sanitizing my fermenter, I like to use a no-rinse iodine-based sanitizer. Iodine sanitizers, used in the proper dosing, can be used as a non-foaming, no-rinse sanitizer. It works better against killing yeast, mold, bacteria, bugs, you name it. I think in general it's a more potent sanitizer for cold side gear. If you're trying to clean up after using wild yeast or an infected batch, Iodine-based sanitizers are your best bet. Just to reiterate, sanitizer does not replace cleaners.

Wrong Ingredients
Ingredients are incredibly important when it comes to producing great beer. That being said, you can toss it all out of the window without proper technique. In my opinion, extract brewing will only get you so far with certain styles. I've made some nice extract beers, but you're of course limited to what and how you can brew. A lot of homebrewers swear extract has a very specific taste. I tend to agree to some extent but it can be hard to pinpoint.

All grain brewing will give you the same level of control and access to brewing ingredients as commercial brewers. If you're hesitant to jump into all-grain brewing, BIAB is the easiest way to get started. You can use all of your extract equipment and only need to invest in a high-quality grain bag! If you're really trying to clone a specific commercial beer, stick to all-grain for best results.

Outside of that, I would encourage you to look at Yakima Valley Hops for hop selection. In my opinion, these guys make the best hops and I trust the quality more when I buy direct. I won't go any other route.

Final Thoughts
So much of brewing great beer is doing all of the little nuances right. Half-assing any part of the process is only going to diminish your success. Brewing great beer is a lot of work. It's not easy and there are no shortcuts. If you find yourself cutting corners, rushing, or winging it, you're only doing a disservice to yourself. It's taken a lot of years of brewing and researching to flip my mindset of what I was actually doing. When I look back at some of the things I tried to get away with, it's no wonder my beer sucked.

Homebrewing is a fun hobby but it's also a dedicated and really sophisticated craft. If it was easy, there wouldn't be people like me writing about topics like this. And no, I will not relax and have a homebrew—I'm too crazy.

How to Force Carbonate Your Beer

Jeff Flowers on May 8, 2014

You've got your homebrew in the keg but there's just one more step before you can pull the tap handle — carbonation. Though, unlike carbonating beer in bottles, you can carbonate beer that's in a keg at a much faster rate.

What is Force Carbonation?
Instead of feeding the leftover yeast additional sugars to naturally create CO2 within the bottle, you can directly infuse CO2 into the beer from a gas cylinder. This is referred to as force carbonation or the act of "force-carbing", and is an overall faster process than bottle carbonation with less room for error.

WHAT YOU WILL NEED:
1. Gas cylinder filled with CO2
2. Gas regulator
3. Proper keg post liquid & gas line fittings
4. Unpressurized, homebrew-filled keg
5. Kegerator

There are two main methods for force carbonating a homebrew keg, both of which are very similar with the main difference being the amount of time it takes to carbonate.

With both methods, we'll assume that you are using a standard homebrewing-type Cornelius keg that is fitted with ball lock-style liquid and gas posts. This type of keg is by far the most common and recommended serving vessel for homebrewers when it comes to kegging their own beer.

Preparation
First, you must install a ball lock conversion kit to your existing kegerator lines. This is a simple procedure that allows you to connect the liquid and gas lines to your kegerators existing lines without sacrificing the ability to connect to standard ball bearing style kegs. Once you have installed the ball lock conversion kit, you'll need to prepare the gas line for attachment to the keg.

5 Gallon Ball Lock Homebrew Keg
A Cornelius keg is built with two posts—one for gas and one for liquid. The liquid post is attached to a dip tube that goes all the way to the bottom of the keg. As gas flows in from the top of the keg, it helps build pressure within the keg to dispense liquid from the bottom of the dip tube all the way out the top and through the liquid line.

In carbonating, you want to do the opposite and directly send CO2 gas down through the dip tube so it will rise up through the beer. This will increase the surface area between the CO2 bubbles and beer for a more efficient carbonation process.

To prepare the keg, first remove the gas socket from the gas line and set it aside in a safe place. Then, remove the black liquid socket from the liquid line and attach it to the gas line. The sockets are only designed to attach to their respective posts so doing this allows you to direct gas through the liquid post.

Once you have done this, slowly turn on the gas cylinder to 5 psi and check for any leaks in the line, at the liquid post or around the lid of the keg. The next step is where the methods differ.

Force Carbonation Methods

Method 1:

In the first method you will use a lower level of CO2 pressure and carbonate for a longer period of time.

How to Force Carbonate Your Beer

With the gas line free of leaks, use the keg's pressure release valve to briefly bleed off some gas to ensure that gas is flowing through the entire keg as it should. In addition to hearing the release of gas as it exits the keg you should also listen for bubbling, which will indicate that CO2 is properly running from the gas cylinder, through the regulator and gas line, down through the dip tube, and up through the beer.

Once you have confirmed that the entire system is working properly, adjust the regulator to raise the pressure to 20 PSI. Allow the keg to carbonate for 7-10 days, and then check the carbonation levels.

Remember to switch and reattach the gas and liquid sockets to their proper lines and to lower the gas supply to serving pressure before doing testing.

Method 2:

The other force-carbing method is similar but will carbonate at a faster rate. However, it's important to note that it involves more effort.

First, attach the gas supply to the keg in the same manner as the first method. Once the system is hooked up, turn the gas supply up to 30 PSI.

Then, gently shake the keg to stir up the beer inside. You should immediately hear bubbling within the keg. Agitating the keg increases the contact area between CO2 and beer even further, promoting faster diffusion of CO2 into the beer.

Continue to shake the keg for 20-30 minutes then lower the pressure to 20 PSI and allow the keg to carbonate for 2-3 days. Check the carbonation levels and enjoy!

Other Things to Consider

While the PSI levels mentioned in the previously explained carbonation methods are good recommendations, it's important to fully understand that temperature plays a part in how proper CO2 volumes can be achieved when carbonating. The lower the temperature the faster the CO2 dissolves into the beer, therefore less CO2 pressure is needed to carbonate to the desired volume.

The chart illustrates this concept and will help you get the CO2 pressure and volume exactly right in your brew. Find the temperature at which you will be carbonating, and then find the desired volume of CO2 within that column. To achieve the right level of carbonation, supply the corresponding amount of gas pressure, found in the first column.

FORCE CARBONATION CHART:							
	30° F	35° F	40° F	45° F	50° F	55° F	60° F
5 PSI	2.23	2.02	1.83	1.66	1.50	¤	¤
10 PSI	2.82	2.52	2.30	2.08	1.90	1.75	1.62
15 PSI	¤	3.02	2.75	2.51	2.30	2.12	1.95
20 PSI	¤	¤	3.19	2.94	2.70	2.47	2.27
25 PSI	¤	¤	¤	¤	3.10	2.83	2.60
30 PSI	¤	¤	¤	¤	¤	3.18	2.92

As a reference, the following are general volumes of CO2 that are typical of popular beer styles:

1.50 – 2.00: Stout, Barleywine, most English ale
2.01 – 2.60: Porter, Lager, most American ale
2.61 – 3.10: Most Belgian and German ale

Keep in mind that you should not simply crash the temperature of your beer to carbonate it in the least amount of time. You should store it at a temperature that is appropriate for the style and simply adjust carbonation pressure levels accordingly.

Also, a mistake that homebrewers often make is to begin the carbonation process immediately after transferring the homebrew from the fermenter to the keg. This often involves lowering the temperature of the beer while introducing CO2 to make for a more efficient carbonation effort. The issue with this is that diacetyl, which is a natural byproduct of the fermentation process, does not have ample time or the proper temperature environment to reabsorb into the yeast.

If you fail to let your beer a rest time of two days at room temperature after final gravity has been reached, the presence of diacetyl will be much more noticeable in your beer in the form of unwanted buttery, popcorn-like flavors.

Greater Everett Brewers League

Events, Tasting Calendar and Club Presentations

Club Calendar and Information

CLUB SCHEDULE

September 9: Dick Cantwell (dickcantwell30@gmail.com) Review of Brew Like a Monk book
December 9: Jamil Zainasheff jzainasheff@hereticbrewing.com Recipe formulation; Brewing classic styles book

CLUB SAME BREWS

November: Double IPA

EVENTS

September 19, first day of Octoberfest
September 20- Sour beer day
September 28- Drink a beer day
October 14: Homebrewing Legalization Day
October 27: National American Beer Day
November 3: Learn How To Home-brew Day
December 5: National Repeal Day
December 10: National Lager Day

Membership Drive: We are always looking for new members. Please let us know if you have anyone interested. As suggested by one of our members, wearing your GEBL gear helps start a conversation. If you have any ideas please let us know.

If you would like to be added to the GEBL email list send your request to: ed_andresen@hotmail.com**:**
The GEBL Elected Club Officers for 2121 are:

- President: Jesse Free (president@gebl.org)
- Vice President: Todd Johnson (vicepresident@gebl.org)
- Treasurer: Pete Stachowiak (treasurer@gebl.org)
- Secretary: Will Fredin (secretary@gebl.org)
- Librarian: Robin Sparks (library@gebl.org)
- Newsletter: Bryan Collazo (editor@gebl.org)
- Membership Coordinator: Randy Neumaier (membership@gebl.org)

Our website is at http://www.gebl.org/

Our correspondence address is: GEBL PO Box 13392 Everett, WA 98206

If you would like to be added to the GEBL email list send your request to: ed_andresen@hotmail.com