Ask the Experts with Denny Conn
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Question:

I know I have seen a few threads on this question - "do you do multiple batch sparges if you have so much grain that the mash tun can't fit the extra water?" (Generally, the answer is yes). But what if your mash tun allows for a lot more water? Are you hurt by not measuring the water added after the first mash (at say, initially 1.5 quarts per pound of grain and adding upwards of one-half the total liquid to be collected) and then running it off in uneven batches with the first run off greater than the second? Are there any potential problems with that? (I don't have sight gauges and would prefer not having to measure my hot liquor additions - although I may just get a stick and make marks on it for my various vessels if necessary).

Denny:

Generally, you will not experience too much of a drop in efficiency if your batch sparges are of unequal size. But if your mash tun allows you to add all your sparge water at once, that's what I recommend. My experience is that doing multiple sparge additions in order to increase efficiency results in little gain over doing a single sparge. Personally, I've found that it's not worth the effort to do multiple sparges unless I can't fit all the sparge water in the cooler at once. As to measuring your sparge water, I simply use a bucket marked in 1/2 gal. increments to measure how much water I heat up for the sparge. I've found that to be the easiest, most pragmatic solution. Whatever method you use to measure, the goal is to end up with no wort left in the mash tun at the end of the sparge runoff.

Question:

I'm a big fan of the Cheap 'n' Easy Batch sparge method. Does the length of the stainless steel braid have any effect on efficiency? I have seen examples of setups that have had the whole length of the cooler covered and some that only had a few inches. Also when sparging, is there any advantage to letting it sit for 10-15 minutes before running off or should I just stir it up, vorlauf, and run off immediately?

Denny:

Glad to hear "Cheap'n'Easy" is working well for you! I have experimented with different lengths of braid, from completely encircling the cooler to just a few inches long. I have found that it has no effect on efficiency. As a matter of fact, a longer braid can potentially cause problems by getting tangled. Keep in mind that the braid is porous and the wort flows through it all along its length. It's not like wort enters the braid and then flows down it to the valve. All the filtering and draining is done in the last couple of inches by the outlet of your mash tun.

I've also experimented quite a bit with letting the wort sit or running if off immediately and found that there is no advantage to letting the wort sit before running off. All conversion should be done at the point of sparging, so you're really just trying to drain the sugars out. I stir in the sparge water, vorlauf (usually a couple cups, never more than 2 qt. needed), and start the runoff. Some people find that letting the grain sit for a few minutes to set the grain bed for filtering is beneficial, but I've found that if I simply start the runoff slowly for the vorlauf, I can speed it up after the vorlauf wort is returned to the tun and have a nice grain bed for filtering.

Question:

My question is about making the move to all-grain brewing. I have been brewing with extracts and specialty grains for about 5 years now and want to go all-grain, but I am on the fence regarding which way to go in regards to equipment: coolers or kettles for the HLT and Mash Tun. I plan on sticking with 5 gallon batches for the next few years (I have a hard time getting through my 5 gallon batches as it is - need more friends to drink my beer). Living in Florida, I brewed a partial mash recipe last weekend and found it difficult to maintain a temp in the 150's so I was leaning toward the converted Rubbermaid cooler. What do you feel are the pros and cons of coolers vs. kettles; and which do you prefer?

Thanks in advance for your guidance!

Denny:

My preference is definitely to coolers. They're inexpensive, work great, and maintain heat very well. About the biggest drawback of a cooler is the inability to directly heat it if you want to do a step mash. I rarely do step mashes (I have yet to be convinced of their benefits), but when I do want to do one, I simply stir boiling water in to the mash while I check the temp. My advice would be to start with a cooler setup while you learn the basics of all grain brewing. After you master the technique, you'll have enough experience to make a decision about a more complex system. I can tell you that after 14 years and 408 batches in the same cooler, I haven't felt the need to go to a different system.

Question:

My two main questions in contemplating moving to batch sparging to save time over fly sparging are:

- when starting off with batch sparging, is there a general "guestimate" to an efficiency you can expect compared to your fly-sparging efficiency?

- when batch sparging, how quickly/slowly should you drain the wort from the mash/lauter tun into the kettle?

Thanks in advance for the help.

Denny:

You should probably figure on about the same efficiency as fly sparging. I've actually heard from people whose efficiency has improved when moving from fly sparging to batch sparging. That's usually due to the fact that their lautering system was not designed for even wort flow in fly sparging. Because batch sparging drains sugar from the mash, as opposed to rinsing them out as in fly sparging, batch sparging removes lauter design as a factor. But in general, with a well designed batch sparge system (little to no dead space to leave wort behind) and proper techniques, there's no reason for a batch sparge system to not be comparable to a fly sparge system in terms of efficiency. These days, after fine tuning my equipment and technique, I average about 85% efficiency for most batch sparged beers.

You can drain the wort as fast as your system will allow without a stuck runoff. Again, since fly sparging relies on rinsing the grain, you want to go slowly to make sure there is no channeling and that you rinse the grain effectively. When you batch sparge, you stir in the sparge water before runoff, which get the sugars into solution in the liquid. This allows you to simply drain them out. Although it will differ depending on your own system (and to some degree, recipe), for my system it takes me about 15 minutes from the time I start the mash runoff until the time I end the sparge runoff to collect about 7.5-8 gallonsof wort. That includesvorlaufing the mash runoff, getting it in the kettle, stirring in the sparge water, vorlaufing again, and running off the sparge.

Question:

After all the sterilization of everything that comes in contact with the brew, why are the dry hops (pellets) added straight from the package? Are they supposed to be sterile? Should they be boiled first? Thanks for any insight on this.

Denny:

There are several reasons. Hops have long been cited to have antibacterial properties, which helps protect the beer. In fact, it's been said that hops were originally added to beer to help prevent spoilage. In addition, by the time you add dry hops to a beer it's fermented. At that point, the alcohol content and low pH help protect the beer even further.

Question:

I live in an apartment that is always above 70 degrees so I can not ferment properly. Are there any ways that I can properly ferment and keep a cooler temperature? Thanks

Denny:

There are a couple ways. The preferred method is to use a refrigerator or chest freezer with a temperature control to maintain fermentation temperature. The "Cheap'n'Easy" method, which I use, utilizes a tub or cooler full water that you set your fermenter in. You can add ice packs to cool things down, or put an aquarium heater in the water to warm it up if necessary. The mass of the water helps buffer thermal swings pretty effectively. It does take a bit more effort than a fridge or freezer, but it's considerably less expensive.