

HANK Speaks Again... So Listen By Hank

Having attended a few brew offs recently I did notice a few things that I wanted to write about with the belief that everybody has their own spin and sometimes we all have the same spin when we brew.

1) Using oxygen. I think this is terrific and since oxygen was available I did get a one or two minute blast. Hey, if Sam's Club is giving out samples I'll try one. But although I could do so fairly easily, I do not own an oxygen setup. Remember that the atmosphere is 20% oxygen and a vigorous stir - I don't mean with a spoon but a motorized whisk such as I have courtesy of Katrina throw out piles will not only aerate the wort if done for more than 5 minutes but will also distribute the proteins and distribute the yeast which is been added. Just something to think about. Now whisking while adding O₂ would be the ULTIMATE two minute drill - a stir plate on steroids!!

2) Wort temperature control. We are often fearful that the discharged wort would be too warm especially with a lager which requires a fermentation range lower than the 70 + water temperature we often experience here. There is a school of thought, whose classroom I sit in, that says one should start a lager at ambient temperature - even as high as mid seventy's to energize the yeast and once one gets activity demonstrated, then cool it to what will be right for the long haul - remember LAGER is from LAGERN - keep or store something in a cool/dry place...and by implication, for a long time. Others trust the yeast is ready so want to begin with the fermentation temperature set correctly right away. So how to get there? A common suggestion to slow the pump discharge which is great because half the rule in a counter flow chilling process is the slower the wort, the closer it can approach the coolant temperature. (An aside, CFCs will get within a couple of degrees of coolant temperature whereas ICs will not be able to get closer than a dozen degrees above coolant temperature) So even with a CFC the wort will never get below that coolant temperature so if you don't know what temperature water the hose is delivering you are just guessing as to what will happen to the wort temperature so don't slow the pump and assume that alone takes care of everything. Then there is the idea of putting the chiller in an ice bath. I have looked at the cross sections of a number of plate chillers and at coil - in - coil CFCs which is what I use (a Chillzilla which I got on eBay for about what the copper parts cost! Always better to be lucky than smart.) Both styles have all, if not part of, the circuit containing the coolant on the outside so that immersion will affect the COOLANT totally or at least significantly. NO chiller except one in which the wort runs on the outside makes chiller immersion a significant step. I do NOT know of one built like that unless someone were to do what I once considered which is to make a CFC with the coolant the external tube. Remember "half the rule in a counter flow chilling process is the slower the wort the closer it can approach the coolant temperature." The other half is "the FASTER the coolant, the more heat is removed".

OLD TRUTH - SLOW WORT, FAST COOLANT - why? Visit the internet or research the archives that Mike R has been so kind to arrange and you can see a nice article on hot weather brewing. OK, you now agree with SLOW WORT, FAST COOLANT but wasn't it also mentioned that if the coolant is too warm then we can't deliver cool wort. TRUE - scratch your heads and analyze what I have just written: the slower the wort, the closer it can approach the coolant temperature.... Stop scratching, wash that scalp grunge off your hands and you might have come to the conclusion... LOWER the coolant temperature!

TWO Ways

A) sump pump in ice bath so begin with hose water and send wort back to boil pot NOT fermenter until wort temp drop curve has flattened out then connect ice water pump and run that through CFC. OR

B) create a post chiller so that you are using a different coolant. Attach end of wort discharge tube to hose---->copper coil in ice bath---->valve----> fermenter and monitor temperature and adjust valve as needed. I like building contraptions and have both and find that the post chiller takes less time to setup since sump pump in ice bath takes a lot of time to setup/ breakdown.

3) How much run off from the mash tun should we use? Some say:

a) they stop when they have reached the volume they need and throw away the extra runoff and others
b) use ALL runoff if over 1.018 View a) may be wasting some sugar whereas View b) may be spending more boiling time to concentrate the wort. Good note keeping will have shown a brewer how much volume he has in his liquor tank and the usual evaporation rate of the boil pot so at the end of the boil one can know how much of volume will be in the boil pot. Also, before beginning to boil one has taken the specific gravity so at the end of the boil as the volume percentage decreases the gravity will increase and it's a simple calculation to know what the likely specific gravity will be after the boil. How much extra sugar will you gain? How much runoff should you use? I have my own view.... Does that surprise anyone? I know those volumes and rates and I remember in the batch sparge approach usually used the last ounces of the runoff is about the same SG as the first runoff of that batch. So I mash with half the needed pre-boil volume then 3/4 of that same number for the first batch sparge and continue batch sparging a volume equaling that last 1/4 until I reach 1.018-1.020. There is a variability as to what the final volume is. I have, of course, already started the boil pot after the first batch is in so total time is the same. I consider a good brew hitting my desired pre-fermentation SG, NOT any particular volume since any extra can be used as a starter base and any deficit made up by adding water/DME and sugar. I'm not talking about major deficits or major excesses but probably within a ten percent range either way.

That's my story and I'm stickin' to it and your story may be better so if you have any disagreements, discussions or suggestions on any of the above or on anything else... I will not accept criticism of the way I dress because "I will not submit to the tyranny of fashion"... they should be sent to the Hopline or discussed with me after a meeting where I sit in the back waiting for my grateful public to bring me free beer!

Thanks, Hank