

## Latest Diatribe from Greg Hackenberg (4/2013)

Episode four: Great Expectations

The Corner Pin pub in Ramsbottom has closed, and I'd love to share a pint of 'Build a Rocket Boys!' with whoever gets the musical reference (I've spilled the beans with the link), but it will have to be someplace else. This is a recent band, and one of my favorites, worth checking out musically, and obviously for being fans of good beer.

Now everyone is going to expect it, so yes, I actually brewed up our recipe One Day Like This for this, the April Hopline. It is now dry hopped and carbing up. While I give you My Very Best and walk you through it, you can play along at home and pretend you have bought your pack or nice tube of WPL002. Because, this month is all about The Bones of You, the yeast. I've touched on it before, but the takeaway from this installment is that British yeasts do not respond well to stress or temperatures outside of a pretty narrow range. Avoid these pitfalls and you will have a beer the Leaders of the Free World would be proud of.

### **First up, keeping your yeast stress-free:**

Now please listen carefully: **MAKE A STARTER!** Yes, really. Starters would make a great topic just by themselves, so I will keep this brief. At least two days before you brew mix up a one quart starter using a ratio of 1 pint of water to ½ cup DME. Keep it as close to the temp you are going to ferment. This will give you the crop of nice healthy yeast you need.

Why? Lippy Kids would say "I pitch a pack/tube and everything is just fine." And I'm sure some of you Picky Bugger(s) might be thinking, "It's not important, I'll just let it ferment a little longer" or "It's too much work, why go through the trouble?" (Dear Friends, seriously, if you are making your own beer, you clearly are not concerned about a little work.)

So what happen when you pitch small quantities of these yeasts? First, yeast are not robots, they are, like humans, living creatures. And they work at their best under specific conditions. Too few yeast working through all that sugar and they get stressed, and that is Not a Job for British yeast. When stressed they have a nasty habit of acting like teenagers; they start to complain (long lag times and slow fermentation), they break out and smell awful (off flavors), and they don't pick up after themselves (unpleasant compounds are not fully reduced). Now this is pretty much true with almost all yeasts in degrees, but the Brits very susceptible to stress conditions. Commercially, these yeasts were always pitched in quantity and they have been bred for it.

On brew day keep your starter handy. When you've finished boiling your wort, cool it to as close to fermentation temp as possible, at least below 70 degrees, before pitching. The old thinking was anything below 80 was fine so long as you cooled it in the first 24 hours. Nope. Those kinds of temperature swings do what? Anyone? Anyone? Ding! That's right, they stress the yeast right when they need to get going and start reproducing, which means a lower quantity of less healthy yeast. And that initial warmth is enough for the yeast, like a Fallen Angel to start producing a particular off flavor I will discuss in just a bit.

### **Second, keeping your yeast cozy**

One particular thing the British Isles have that has shaped their brewing, are conditions that make it remarkably easy to maintain temperatures. This may not be great Weather to Fly, but these yeasts have been bred in and for this environment. In general you will want to ferment in the general range of generally 63-72°F, and keep it as consistent as you can.

What happens if you don't? In short, these yeasts go off the rails in a hurry. I mentioned a particular off-flavor, otherwise known as the dreaded "twang". British yeasts (and particularly the WPL002 English Ale selected for the recipe) notoriously start to produce it, and I believe it is a phenol, right past the top of

that 63-72°F range. This is without a doubt the most common issue with British style beers and what makes so many homebrewed examples less than British. Now, it might not be Grounds for Divorce, a lot of these beers may be quite pleasant and drinkable, but they will lack the balance and all important “British” character. You can also pick up excessive diacetyl (buttery flavor), acetaldehyde (green apple, grass), plus a number of less desirable phenols and esters.

Optimum temperatures for the WPL002 English Ale is listed as 65-68°F, shoot for that (at least the first few times you use it). As fermentation takes off the yeast will produce some heat, be ready for it. Those with temperature controlled refrigerators strap the probe to the fermentation vessel and keep a close eye on it. Those going au natural, you will need to keep an eye on the weather looking for a few days of cool temps, preferably a little cooler than you need. In either case, you need to nurse this one along. I would also recommend strolling around the house with a thermometer and check the temps while giving your S.O. another reason to question your sanity. Then haul the fermenter to alternately cooler and warmer spots in your house as needed to control the temps and give your S.O. and reason to get irritated with you. Okay, single types living with The Loneliness of a Tower Crane Driver can try that one.

You will get all sort of wonderful and not so wonderful aromas blowing off along the way. What you smell is not always what you’re getting, but you should be able to discern the key ester flavor of the yeast. Something else you’ll notice with some strains you’ll actually see globs of yeast buoyed up on top. Those are the yeasts known as “top croppers”, and in commercial brewing this floating yeast was harvested via skimming or a complicated system of overflow pipes in Neat Little Rows to be pitched into the next batch.

Now you want to let the yeast fully finish out. While it may appear the yeast is simply Switching Off, in the last few days it is still reducing some of the fermentation by-products. An old brewery adage says a good ale should be “touched by two Sundays” so roughly 7-12 days is about right.

So I’ll pretend you took my advice and pitched an adequate quantity and kept the temperature under control, because if you have, these yeasts are consistent performers. With similar pitching rates they will behave and taste the same way from batch to batch. Got that? Consistent results! But an interesting thing about those recommended ranges. In a number of these yeasts, you can get a greater range of flavors by pushing it a little over or under that ideal range. This is where you will need to experiment or do a little more research.

Now, if you’re not Asleep in the Back by now, here is how to finish off the beer for a perfect pint:

A bit on that wonderful word “Flocculation”. That is the ability of the yeast to clump and drop out of solution. The WPL002 English Ale is gets a “high” in Flocculation and you will find a dense gooey yeast cake you need a hose blast to loosen up. These “high” flocculators also clear faster. In contrast the Worthington’s yeast WLP013 London Ale/1028 London Ale is “low to Med” otherwise described as “powdery”. You will get a loose cake and potentially a bugger of a time getting that fine dust of yeast particles, hence the “powdery” description, to clear. This also leaves an overly yeasty flavor which is another common flaw. Don’t worry, you can deal with this, you just need to know which you’ve got and plan accordingly.

Have a low floccutator? First step is to cold crash it once fermentation is complete. On about day 12, refrigerate the beer as cold as you can get it and drop the temp fast. This will cause the yeast, proteins, and other bits to drop and solidify the yeast cake. If your beer is still cloudy after racking, or you are getting chill haze, the next step is to add finings.

Next, those finings, how to serve this puppy and off to the next challenge...