

SCHEDULING FOR OPENING DAY: Timing of Start-up Beers

by Teri Fahrendorf

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Background:

There are so many details involved when it comes to starting up a brand new brewpub: financing, site location, picking a general contractor, selecting a brewer. Then the smaller details come into play: number of beers on tap, styles of beer for the initial line-up, and of course all the details associated with the front of the house, kitchen and the initial menu.

In my experience opening two new brewpub breweries for Steelhead in one year (1995), one of the questions that was on everyone's lips was, "When will you start brewing?" That date was often a moving target, but the next question, "When is Opening Day?" was never an issue, because everyone was well aware that Opening Day would be precisely a month after we began brewing. This kept the contractors and the owners focused in the right direction.

I have come in contact with other brewers in the process of setting up a new brewery, and invariably they are stressed out by their owner's focus on *OPENING DAY*, rather than *FIRST BREW DAY*.

Focusing on opening day disallows the brewer the time he/she needs to do his/her job properly, and sets up a recipe for potential disaster. Remember: You only get ONE *Opening Day*, and you only have ONE chance to make a good *first impression*.

These stressed-out brewers, attempting to work under an imposed deadline where *Opening Day* is only two weeks away tell me, "I don't know how I'm going to meet that deadline. I've told the owner(s) that this is beer, not Kool-Aid (R); that it takes time. But they won't listen to me. What am I gonna do? My reputation as a brewer is at stake!"

Guess what brewers: this set of schedules is for you! They are designed for an Ale brewery, and were designed to help me plan when setting up new Steelhead breweries.

Last fall I offered to send a copy to a brewer who had been put under an unrealistic time frame. Several months later another brewer wrote asking for a copy, saying he had talked to the first brewer. That tells me brewers need help with pre-start-up brew scheduling. (And convincing their owners of the importance of realistic schedules.)

The Test Batch:

I have my own theories about how a brand new brewery should be broken in, and these theories are incorporated into the schedules. In order that the first beers that go on tap are perfect (remember: no second chances), I require that every tank is tested or seasoned with a beer. I brew only one test batch and move it from tank to tank. I always assume I will dump that one

batch and no other. I use it to test my recipe, as well as the tanks and my sanitation and lab procedures.

Thus I have discovered leaky gaskets and even pin-hole leaks in stainless before the final beer hits the tank. And just before dumping it, I taste the beer, and if it tastes decent, I figure our sanitizing and lab procedures are pretty tight. I never put it on tap for sale though! It may taste good enough for some other brewery to sell, but after spending two days in each of 10 tanks, it has never been up to Steelhead standards!

I have seen brewers skip this one test batch when under pressure, thinking they will save time and make batch no#1 a final beer for sale. Then they'll have quality control problems and end up dumping three batches. In addition, their recipes may not be up to snuff. Since you brew on Day 1 and Day 4, you'll have a 3-day old beer to taste. Use this information to adjust the malt and hops on all your other recipes. You'll probably waste more time and materials by skipping this test batch, and you may regret it later. In addition, you'll find bugs in the system with your first batch. Take the proper time to have the contractors fix the problems properly.

The Beers: Our beginning beer line-up includes the following five ales:

Gold Ale: This could be an American Hefeweizen or Golden Ale.

The normal age at filtering/serving is 10 days.

The minimum aging time is 7 days.

Amber Ale: This could be an Amber or Red Ale.

The normal aging time is 14 days.

The minimum aging time is 12 days.

India Pale Ale: This is a slightly stronger ale. It could be any slightly stronger ale and wouldn't need to be an IPA.

The normal aging time is 21 days.

The minimum aging time is 15 days.

Dark Beer: We start with an Imperial Stout. The first dark beer you make will have plenty of aging time.

The normal aging time is 21 days.

The minimum aging time is 17 days.

Specialty Beer: A rotating seasonal and specialty beer.

The normal aging time is approximately 14 days.

The minimum aging time is approximately 12 days.

We open with a fruit beer because the aging time is a little shorter.

The normal aging time is 12 days.

The minimum aging time is 9 days.

These aging times come into play in the schedules.

Prior to First Brew Day:

Prior to the first brew, the three main vessels of the brewhouse (Hot Liquor Back, Mash Tun, and Kettle) and the hard piping and the heat exchanger would have been cleaned and sanitized properly. In addition, a Cold Water Brew Day, and a Hot Water Brew Day would have been successfully completed, as well as any other system test necessary. This will insure the safety and success of the first actual brew day. These tests will take you about a week because you will find bugs in the system for the tank manufacturers and/or contractors to work on. This week of system tests will give you the lead-time you need to set up yeast deliveries. Your first brew day should be a normal, relatively stress-free 7-9 hour day.

Legend:

Fermenter Number One = F1, etc.

Server (Serving Tank) Number One = S1, etc.

Batch A = Test Batch.

Acid = Rinse, caustic, rinse, acid, rinse, sanitize.

PRE-OPENING - BREW SCHEDULE #1

These schedules are based on Ale aging times, not Lagers.

It will take approximately 31 or more days to fill all your tanks, depending on how many fermenters and servers you have. If you have 5 fermenters and 5 servers, it will take a minimum of 31 days as outlined in the schedule below. Do not try to beat this estimate! It will allow the test batch to season all the tanks for two days, the beers will get the proper aging time before filtering, and it will ensure that your assistant brewer is trained in brewing and filtering by the time you open. And every beer will be backed up with another beer, ready to go, because of course the pub will be packed and you don't want to run out of beer: that would be a bad *first impression!*

Assuming you have 5 fermenters and 5 servers, your pre-opening brew schedule will look like this example. Special tasks are listed on the right:

OPTIMUM AGING BREW SCHEDULE (31 days)

Day #1:	Brew Amber (Batch #A) into F1	Acid F1
2:	Fix it day.	
3:	Move A → F2	Acid F2
4:	Brew Dark Beer (#1) → F1	1st regular brew day
5:	A → F3	Acid F3
6:	Brew IPA (#2) → F2	
7:	A → F4	Acid F4
8:	Brew Amber (#3) → F3	
9:	A → F5	Acid F5, Chill #A
10:	Brew 2nd IPA (#4) → F4	
11:	Filter A → S1	Acid filter & S1

12:	Brew Fruit Beer (#5) → F5	
13:	A → S2	Acid S2
14:	OFF	
15:	A → S3	Acid S3
16:	OFF	
17:	A → S4	Acid S4
18:	OFF	
19:	A → S5	Acid S5, Chill #3
20:	OFF	
21:	OFF	
22:	Filter Amber (#3) → S1	Chill #5, Close CO ₂
23:	Brew 2nd Amber (#6) → F3	Chill #1
24:	Filter Fruit Beer (#5) → S3	Close CO ₂
25:	Brew Gold Ale (#7) → F2	Chill #2
26:	Filter Dark Beer (#1) → S2	Close CO ₂
27:	Brew 2nd Gold Ale (#8) → F1	
28:	Filter IPA (#2) → S4	Chill #7, Close CO ₂
29:	Brew 2nd Special (#9) → F5	Taste #A for defects
30:	Dump A/ Filter Gold (#7) → S5	Close CO ₂
31:	Brew 2nd Dark Beer (#10) → F2	
32:	ALL TANKS FULL - OPENING DAY	Open CO ₂ to Servers

Note: Please remember to shut off the CO₂ in-line regulator to each Serving Tank after filtering. If you forget, the finished beers will be overcarbonated by opening day.

PRE-OPENING - BREW SCHEDULE #2

In case of an absolute necessity, and I mean necessity, five days can be shaved off of the above schedule, however, 3 of the 5 opening beers will be younger than their minimum aging times, as listed above. The beer will suffer, so you have to weigh that carefully.

MINIMUM TIME BREW SCHEDULE (26 days)

Day #1:	Brew Amber (Batch #A) into F1	Acid F1
2:	Fix it day.	
3:	Move A → F2	Acid F2
4:	Brew Dark Beer (#1) → F1	1st regular brew day
5:	A → F3	Acid F3
6:	Brew IPA (#2) → F2	
7:	A → F4	Acid F4
8:	Brew Amber (#3) → F3	
9:	A → F5	Acid F5, Chill #A
10:	Brew 2nd IPA (#4) → F4	
11:	Filter A → S1	Acid filter & S1

12:	Brew Fruit Beer (#5) → F5	
13:	A → S2	Acid S2
14:	A → S3	Acid S3
15:	A → S4	Acid S4,
16:	A → S5	Acid S5, Chill #3
17:	Filter Amber (#3) → S1	Chill #5, Close CO ₂
18:	Brew 2nd Amber (#6) → F3	
19:	Filter Fruit Beer (#5) → S2	Chill #2, Close CO ₂
20:	Brew Gold Ale (#7) → F2	
21:	Filter IPA (#2) → S3	Chill #1, Close CO ₂
22:	Brew 2nd Gold Ale (#8) → F5	
23:	Filter Dark Beer (#1) → S4	Close CO ₂
24:	Brew 2nd Special (#9) → F1	Chill #7
25:	Dump A/ Filter Gold (#7) → S5	Taste #A for defects
26:	Brew 2nd Dark Ale (#10) → F2	
27:	ALL TANKS FULL - OPENING DAY	Open CO ₂ to Servers

This is the minimum amount of time to fill these tanks. Notice, the brewers have just worked 26 days in a row, and the assistant brewer will not be trained very well.

The following beers had less than their minimum aging times:

Amber (#3)	9 days. Minimum = 12 days, Normal = 14 days.
Fruit Beer (#5)	7 days. Minimum = 9 days, Normal = 12 days.
Gold Ale (#7)	5 days. Minimum = 7 days, Normal = 10 days.

YEAST MANAGEMENT

Note: We have a 3.5-bbl yeast propagation tank. (A half-size Grundy.) If you don't have this you will have to either receive propagating quantities each time, or leave a little extra time in the schedule to pre-clean a tank and propagate into it a day before you will brew into it.

Pitching quantities of yeast will have to be procured. I recommend you arrange to pick up Cornelius cans of yeast from a friendly neighboring brewery whose cleanliness and procedures you trust. In addition, you will order yeast regularly from your preferred source.

There are three phases of brewing when you are opening a brewery, and you will need fresh yeast for each of them:

1. Test batch and regular batches #1-5.
2. Batches #6-10.
3. Beers brewed after opening day.

Yeast could be brought on a plane with a person. (We bring yeast from one of our other breweries.) Note a person can only carry two Corneliuses of yeast, one for each piece of "luggage", which means a carry-on bag only for personal gear. Yeast could also be air freighted

in from another brewery, counter-to-counter. In addition, new yeast ordered from your source of choice needs to be ordered a calculated time in advance, and then propagated in the yeast propagation tank. (**Author's Note:** *This paragraph was written in 1996. In this post-2001 era, you will not be able to bring a full Cornelius as a carry on, and air freighting a Cornelius may also not be allowed. Call your airline and find out before attempting these procedures.*)

Also, your yeast orders from the other breweries need to be calculated carefully in advance. The yeast needs to be both harvested and pitched by you within the 4 to 7 day window, and it needs to be lab-tested, and found clean by the donor brewery.

Labwork needs to be done nearly everyday during start up. (Download instructions at <http://terifahrendorf.com/Lab-Manual.pdf>.) Also, you won't be able to repitch the yeast out of your first two batches because one is a test batch, and the other is an Imperial Stout. Also, you want to make sure your procedures are tight and your labwork is squeaky clean for awhile before you start repitching. Although you only get to repitch newly propagated yeast once in Phase 1, it is worth it for the practice and experience. You will need to call your lab yeast source for 2-liters to be delivered one week in.

To give you an example, I will add yeast management to the Optimum Aging Brew Schedule shown above:

OPTIMUM AGING BREW SCHEDULE - Yeast Management

Day #1:	Brew Amber (#A)	Yeast brought from donor brewery#1.
2:		
3:		
4:	Brew Dark (#1)	Yeast brought from donor brewery#1.
5:	(Call brewery#2 to remind them - yeast tomorrow.)	
6:	Brew IPA (#2)	Yeast airfreighted from brewery#2, & propagate new yeast with IPA #2.
7:		
8:	Brew Amber (#3)	Pitch from yeast prop. tank (Gen.1)
9:		
10:	Brew IPA (#4)	Repitch from IPA #2 (brewery#2)
11:		
12:	Brew Fruit (#5)	Repitch from Amber #3 (Gen.2)
13:		
14:		
15:		
16:		
17:		
18:		
19:		
20:		

21:		
22:		
23:	Brew Amber (#6)	Yeast brought from brewery#1 & propagate new yeast with Amber#6.
24:		
25:	Brew Gold (#7)	Pitch from yeast prop tank (Gen.1)
26:		
27:	Brew Gold (#8)	Repitch from Amber #6 (brewery#1)
28:		
29:	Brew Special (#9)	Repitch from Gold #7 (Generation 2)
30:		
31:	Brew Dark (#10)	Repitch from Gold #7 (Generation 2)
32:	ALL TANKS FULL - OPENING DAY	

This is a best-case scenario, because I show the lab yeast packages arriving at the optimum time for yeast propagation. Week-by-week as the brew schedule unfolds itself, you will need to be in touch with the donor brewers to ensure your yeast supply.

Depending on your initial beer sales after opening, you will have to create your own Yeast Schedule. Just keep the donor brewers informed.

BREW SCHEDULE - ASSUMPTIONS (SIDEBAR)

1. Brand new equipment in a brand new location.
(If used equipment or a previously brewed-in location, possibly all tank cleaning, and more floor/wall scrubbing will need to be done before first batch is made.)
2. Find pitching-quantity donor yeast source (another brewery) that you trust.
(See sidebar on donor brewery qualifications.)
3. Use impeccable tank cleaning and sanitation procedures.
(It is beyond the scope of this article to teach a beginning professional brewer how to clean and sanitize his/her equipment properly.)
4. Good lab procedures.
We use HLP medium, available through Crosby & Baker. It is beyond the scope of this article to teach new brewers how to set up a lab and culture for bacterial contamination, however you can download the procedures at <http://terifahrendorf.com/Lab-Manual.pdf>.

DONOR BREWERY QUALIFICATIONS (SIDEBAR)

When choosing a donor brewery where you will get your pitching quantities of yeast from, ask yourself these questions:

1. Have I ever tasted an infected or wild yeast infested beer made by this brewery?
2. Do I know the brewer well enough to ask them this favor?
3. Is the brewer willing to share their (possibly proprietary) yeast with another brewery? Even as a personal favor to me?
4. Is the brewer willing to go the extra yard to make sure the yeast he/she gives me is clean yeast?
5. Is the brewer willing to go the extra mile to help get the yeast to me, even delivering Cornelius cans to the airport to airfreight yeast if necessary?

Postscript: Republishing this article online in 2010 is a favor to my beloved fellow professional brewers, especially the brave ones starting new breweries. I've told you what I know. Now you make the magic work for you.

Disclaimer: No guaranty of safety, or warranty of brewing performance is expressed or implied in this article.

*** THE END ***