Multiple Site Brewpub Operations

By Timothy Morse

Director of Brewing Operations, John Harvard's Brew House, Boston, MA.
This paper was originally presented at the MBAA 112th Anniversary Convention, Keystone, Colorado, 1999.

ABSTRACT

John Harvard’s Brew House, multiple site brewpub management involves 4 major areas: training and hiring, raw materials evaluation, production, and QC. We have a mix of commercially experienced brewers, as well as brewers that have been trained in-house. Head Brewer training takes place at our Framingham, MA location, with store level training for assistant brewers. Our regional and national meetings include off-flavor and QC methods seminars; these augment our formal training. Raw materials are evaluated by doing test brews at our Framingham facility. Brewing equipment and raw materials are reviewed annually, with decisions on purchasing handled by the Director of Brewing Operations.

Brewers follow the John Harvard’s Brew House Operations Manual. Breweries produce anywhere from 6 to 10 brands, depending upon equipment layout and capacity. A Head Brewer and a brewer staff each brewery. Brewhouses are 7 to 14 BBL capacity. Restaurant size and number of brands dictate the number of fermenters and serving tanks required.

A variety of QC tests are performed in-house and at the Framingham facility. Weekly tests are generally performed at store level, including sterile wort, yeast pH and HLP. Tests performed monthly or quarterly include beer analysis, yeast viability and contamination, and blind tastings of standard brands.

Keywords: brewpub, training, production, quality control

INTRODUCTION

To date, our organization operates thirteen brewery/restaurants around the Eastern United States. We have opened eleven stores, purchasing the equipment and building the facilities in existing structures. We have also purchased two other brewing operations, one that was still in production, and another that had been closed for several months. We opened our first facility in 1992 in Cambridge, MA. Since that time, we have expanded around New England, to the Mid-Atlantic, the Atlanta area, Pittsburgh and Long Island, NY. Expansion included a period during 1997 when we opened 8 stores.
The Brewing Operations department consists of a Director of Brewing Operations, 10 Head Brewers, and 13 Brewers, some of whom are part time. All Head Brewers are a part of their restaurant management team, working with the General Manager and the Executive Chef. Operational issues, materials and equipment purchasing are handled by the Director of Brewing Operations. Head Brewers and brewers are responsible for the daily production at their respective stores, keeping the correct number of brands available, as well as keeping the proper mix of brands. Brewers also assist in training front-of-house staff on beer styles, tasting, and the fundamentals of brewing.

Operating 13 locations spread around the country involves a combination of skill and a certain amount of luck. To ensure that skill is the main reason we are successful, brewing operations concentrates on 4 major areas: training and hiring; raw materials evaluation, production and quality control.

Our brewers are called upon to brew an array of beers on a regular basis. We brew ales, lagers, German-style wheat beers, Belgian-style beers, strong beers, light beers, fruit beers, smoked beers, dark beers, golden beers, and anything in between. The brewing ability of each Head Brewer in the company is key to the consistency within a range of styles and brands. Hiring a mix of brewers with previous commercial experience and training in-house employees has allowed the company to maintain a talented, creative staff. After an initial interview, or upon the recommendation of a Head Brewer, a candidate that is hired will be trained at our Framingham, MA facility. Outside hires are usually experienced brewers with 2-3 years commercial background. Preferred candidates have taken some brewing short courses, but this is not a prerequisite. By having experienced brewers work with our staff at the Framingham location, new staff members are exposed to brewing and sanitation methods that have worked well for the company.

In-house hires or promotions have involved bar staff and servers who have decided that brewing is an attractive career. To date, six members of the brewing staff came to us from front-of-house positions. Two of those in house candidates are now Head Brewers. Training for starting brewers consists of on the job instruction, with regional meetings and seminars to keep staff informed of production developments. Training for all brewers is treated as an on-going part of the job. Head Brewers meet as a group two times per year. During these meetings, we have introduced new QC methods, discussed production techniques and have also had Siebel Institute lead off-flavor seminars. New brewing materials and yeast strains have also been covered in these sessions.

Raw materials are evaluated at our Framingham facility. Test brews are performed with specific types of malt, hops, or yeast strains. Finished test batches are analyzed at Framingham State University for color, BU’s and alcohol. Yeast strains are monitored for attenuation, and viability. Process aids, filter pads and cleaning chemicals are tested in the field as well. Brewing systems and raw materials are reviewed annually, with final decisions on purchasing handled by the Director of Brewing Operations.

Once we’re happy with the results of the test brews, the materials are made available to the other breweries in the company. We have company wide contracts for pale malt, specialty malt, basic hop varieties, and special hop varieties for seasonals. We have a yeast strain program with a Chicago lab for the majority of our stores, as well as specialty strains available from a San Diego lab. Brewers have a reliable source for materials, with built in flexibility for seasonal and specialty brews.

Our breweries produce anywhere from 6 to 10 draught beer brands, depending upon equipment layout and capacity. Smaller systems dictate that fewer brands, with more rotation of beer styles help keep the line up interesting. Larger systems have the advantage of being able to maintain 3 or 4 core brands, while covering a greater range of styles. On premise production, without the time and investment of packaging, means more styles can be offered. Turn around times of a few days to a few weeks also leads to greater variety. We have a Brew House Operations Manual that indicates the range of styles that are suitable for every situation. To date, no one has decided to brew five black beers and one golden beer, but having the guidelines never hurts. Formulation guidelines are included in the manual. Spreadsheet programs that give projected BU's, OG's and color among other parameters are also available on the company network.

Breweries are 7 to 14 BBL capacity, (smaller than some large brewery pilot plants). The number of fermenters and serving tanks per site varies, depending upon restaurant size and the number of brands needed. Standard lay out consists of a single temperature, combination mash/lauter tun, and a combination kettle/whirlpool in the brewhouse. Our dish-bottomed fermenters are multi duty vessels, in that they can be used for either primary fermentation, or secondary fermentation. Fermenters are companion size to the brewhouse. Single pass sheet filtration with modified chill proofing is standard for the operation, although we have begun primary and polish filtration in one pass using a cross over plate at some locations. Servers are generally sized for half batches. While increasing the number of filtrations, smaller batches reduce the chance of oxidation, a problem more prevalent in smaller systems than many brewers are willing to admit. Bright beer is served directly to the bar, to a number of pouring stations. Bulk serving with one to two week turn around time on a batch allows us to eliminate sterile filtration, or flash pasteurizing for the final step of the process.

Even though on premise beer is usually gone in a few weeks, there are controls that we have introduced over the last few years to stay ahead of any possible problems. Tests that are performed at the breweries are designed to give the brewer assurance that they are delivering clean wort to the fermenter, and that they are pitching healthy yeast into that wort. These tests are taken weekly on brews, with results available in a matter of days. Brewers take sterile wort samples regularly. We are also introducing HLP media to the breweries. Brewers also record and compare yeast pH against fermented beer pH to monitor storage condition of their strain. They also maintain attenuation records of specific strains to determine the correct number of generations between propagations. The main ale strain used by the company is replaced quarterly. Specialty strains are propagated as needed.

Since space is limited and at a premium in on-premise breweries, much of the serious lab work required is performed off site. We have a working relationship with Framingham State University, in Framingham, MA. This allows us access to equipment that is usually beyond the budget of small breweries. Breweries ship samples to the Framingham store, and those are then taken to the lab at Framingham State for quarterly testing. The beers are then analyzed for pH, color, BU’s, apparent extract and alcohol.
Yeast viability and possible contamination is tested quarterly at the Chicago lab that supplies the propagation slurry to the stores. Company-wide blind tastings of standard brands are also conducted by the brewing staff at regional meetings.

In summary, the most important element to multiple site production has to be developing a team of brewers who will continue to push for excellent beer and consistent product. Given the right materials, in a reasonable setting, creative brewers make award-winning beers that are clean and drinkable.