



BREWERS

JOURNAL

TRACEABILITY

7 BENEFITS OF BEER TRACEABILITY – IT'S MORE THAN JUST COMPLIANCE!

AS CANADA'S REGULATION BECOMES MORE FOCUSED ON THE TRACEABILITY OF INGREDIENTS, ALL ASPECTS OF ONE-STEP-FORWARD AND ONE-STEP-BACK CAN ABSOLUTELY BE TRACKED VIA PAPER LOGS AND SPREADSHEETS. COMPLIANCE IS JUST ONE KEY ASPECT OF PRODUCT TRACEABILITY, AND THERE ARE ACTUALLY SEVEN ADDED BENEFITS THAT COME WITH BEER TRACEABILITY, EXPLAINS PULKIT K. AGRAWAL, FOUNDER & CEO, THE 5TH INGREDIENT

Product recall. Those words send shivers down my spine too. It feels like it's straight out of a brewery horror flick – and a term that everyone wants to avoid at all costs!

Unfortunately, product recalls are a very real part of the brewing industry. If you've been fortunate enough to avoid having products recalled – that's awesome! But if you have had to do a product recall, you'll understand the logistical nightmare it can cause for your brewery.

Whether it stems from moldy grain from a supplier or an action that went wrong during your brewing process – they happen.

The Safe Food for Canadians Regulations (SFCR) requires manufacturers of alcoholic beverages that contain 0.5% or more alcohol by volume, to have a traceability system in place.

We've heard the government will begin doing surprising inspections at Canadian breweries in the near future. While beer traceability is necessary to stay compliant, there are 7 additional benefits of beer traceability! Here at The 5th Ingredient, we actually depict these steps as part of our "True Traceability Cycle".

Basic traceability can be implemented using spreadsheets with pivot tables and linked sheets, or you can get the most value out of the process by using a brewery management software like Beer30 by The 5th Ingredient, to track this information.

Let's dive in on the 7 Benefits of Beer Traceability - It's More than Just Compliance!

PRODUCTION PLANNING AND MATERIAL FORECASTING

In order to properly trace resources, you need to first plan and properly allocate those resources! The key areas to manage correctly:

- ♦ Tank utilization
- ♦ Work schedules
- ♦ Equipment availability (including brewhouses, tanks, centrifuges and filtration, and packaging lines)
- ♦ Availability of raw materials
- ♦ Availability of package supplies
- ♦ Yeast management
- ♦ Product demand and current rate of sale

If you have a process in place to monitor all these variables, you have a good understanding of your raw materials and can forecast production in advance. If you're not doing this, you could end up being short on inventory.

This in turn can lead to an array of issues, in regard to a product recall. If you're improvising, to use what's at your disposal to make your beer, you'll end up swapping out ingredients. This may mean that your beer may not be true-to-brand, and that it's deviating from the consistency your customers are expecting. The lack of availability could also result in increased costs as you may have to overnight ingredients, or potentially hold beer in the tank for longer durations.

For each ingredient that arrives, you want to make sure that you are tracking the vendor and the vendor provided lot number. This ensures you're able to track your ingredients through production, which we'll cover in the next section.

TRACKING RAW MATERIALS AND YEAST USED IN BEER PRODUCTION

The second aspect of staying compliant entails performing true inventory management.

As you brew, add in fermentation or BBT ingredients, you and your team need to always annotate on the materials that were added to that beer. If you're using a spreadsheet, it needs to track the date, brand, batch, ingredient name, quantity, vendor, and lot number.

It's also vital that you track all substitutions, to ensure you have recorded what went into that brew, in the case of a product recall.

For packaging, you want to break the information down into bottling, canning and kegging, along with different items and costs, such as branded labels for cans vs pre-printed cans.

On the yeast side, it's also critical to understand the interconnection between yeast genealogy. This allows you to understand what is happening with yeast that is pitched, harvested, propagated, and all the data sets that are tied in together, such as vitality, viability,

and lot number. This is imperative to understanding the way your yeast connects on a per batch basis, and super vital in case of stalling fermentation or secondary fermentation due to yeast. Genealogy trees also help predict what may go wrong in future brews and fermentation processes. As an added bonus, if you're using this data set correctly, you'd also be able to pro-rate the yeast costs that tie in with multiple generation splits and harvest.

By implementing a one-stop brewery management system, you should be able to streamline the entire workflow of receiving in the raw materials (grains, hops, adjuncts, yeast) and then tracking their depletions within a few clicks, as opposed to manually journaling thousands of ingredient additions and depletions monthly.

These features are super handy for day to day operations of the business. But – they are also vital in the event of a product recall.

KNOWING BATCH COSTS – RAW MATERIAL TRACEABILITY, PACKAGING MATERIALS, AND BATCH COSTS

As indicated in step 2, by properly tracking lot numbers, you will be one step closer to achieving a compliant status.

The next step here is to also use that data to also incorporate the costs per lot number. This is crucial to understand the true Cost of Goods Sold (COGS) and Work in Process (WIP) for each particular tank and final beer.

Paying attention to this data will mean you can really understand the true cost of goods sold, for each brand, and more importantly, for each batch number. Since your beer is focused on remaining true-to-brand, the costs should not fluctuate from batch-to-batch, and when you start analyzing the data further, you may even find some savings.

And most importantly, if you are faced with a product recall from a supplier – you will know exactly what lot numbers went into which brew. You will know every single beer that was tied in to that ingredient, making it easy to understand the value of beer inventory that the supplier may even need to reimburse you for on a batch-by-batch cost.

BEER DISTRIBUTION AND SALES – UNDERSTANDING AGING REPORTS AND KEY ACCOUNTS

When you track your beer sales to ensure traceability, you are also collecting a lot of valuable sales data. But how often do you break down your sales reports? Weekly? Monthly? Quarterly? Your sales report should piece together all your data points. You can then answer the really important questions:

- ♦ How much did it cost you to make this beer?
- ♦ What are your revenue streams?
- ♦ How are your sales reps performing?
- ♦ How are your accounts and distributors doing?
- ♦ What is the profit margin for each case of beer - whether in bottles, cans, or kegs?

Basically – what's happening in your business?

The more frequently you assess this data, the more you will understand what's happening in your day to day operations... effectively, where you are making money and where you can save. From a traceability point of view, this is the first step of understanding which beer brands are going to each account, in what packaging format (kegs / bottles / cans), and on what days.



SALES TRACEABILITY – FOCUS WHERE IT MATTERS

Sales traceability of your beer will help assess product locations in the event of a product recall. If you're not properly tracking these batch numbers, the most that you know is that a particular brand went to a location, but you would need to reach out to each account to see if they have that actual batch number. By having the team assign batch numbers to each order as it's loaded, you will be able to assess immediately the extent of damage in case of a product recall. And without this valuable information readily available, you could incur significant extra distribution costs and lost sales while the problematic batch is tracked down.

If you're not using brewery management software, you can definitely track these batch numbers onto a spreadsheet, or even hand write them onto the official print-out copy!

The key here is knowing the batch code and the package date for each product that goes out into the market.

KEG TRACKING – KNOW THE HISTORY OF WHAT'S IN A KEG

Another aspect that comes in with traceability is getting as granular as knowing the history of all beer that has ever entered a particular keg. This involves diving in further into the serial numbers for each keg.

This becomes particularly powerful if you have your own fleet of kegs and want to see exactly which location has had that serialized keg number.

Keg Tracking is also powerful to understand exactly what's been in the kegs and for how long — and can help validate that you're properly sterilizing kegs as you brew and package different styles of beers. A great example of this applies to breweries that keep their sour beer kegs separate from their clean beer kegs, in order to make sure there aren't any inadvertently created cross-contaminations.

PRODUCT RECALL – KNOWING THE STEPS TO TRACE YOUR BATCH HISTORY

Let's say you've been notified of a product recall. If you have taken the steps you need to do in order to prepare for this moment, you now have a gameplan in place in order to track this information.

Here are the steps to take, in the event of a product recall:

- Identify the ingredients or processes that led to issue
- Understand all batches that would be impacted by ingredients
- Identify each account and locations where the batch number was sold and when it was delivered
- Notify appropriate parties and customers
- Retrieve and dispose of products

The more detailed you've kept your record keeping, the more likely you'll have a successful product recall.

WHAT COMES NEXT?

As Canada's regulation becomes more focused on the traceability of ingredients, all aspects of one-step-forward and one-step-back can absolutely be tracked via paper logs and spreadsheets. Compliance is just one key aspect of product traceability, and there are actually 7 added benefits that come with Beer Traceability!

However, if you're currently looking for an alternative to paper logs and spreadsheets and want to streamline your entire processes, a brewery management software like Beer30 by The 5th Ingredient could be just what you need. Beer30 is a proprietary Software-as-a-Service that allows breweries to track data from grain-to-glass. Learn more by visiting: www.The5thIngredient.com.

ABOUT THE AUTHOR

Pulkit K. Agrawal (PK) is the Founder and CEO of The 5th Ingredient®, a leading brewery operations management software company dedicated to helping breweries improve beer quality and consistency. After graduating from Harvard College, Agrawal began working in the beer industry as a Process Engineer for Ballast Point Brewing, where he focused on packaging lines and nitrogen beer. He soon discovered a need in the market for software that expanded beyond standard inventory management systems, where there would be an emphasis on the brewing process and quality, not just inventory tracking.

In January 2018, Agrawal launched Beer30®, a brewery data management system that offers grain-to-glass process data tracking. Beer30 focuses on real-time brewing data input, raw material inventory, cost of goods analysis, quality and sensory tracking, sales and distribution and accounting integration. Beer30 is currently in over 300 breweries globally, helping to #BrewMoreBeer and #BrewBetterBeer across the nation. In his free time, Agrawal enjoys traveling, and speaking about entrepreneurship and using data to improve brewery efficiency and quality.

