

## How Old is Your Beer?

By Brad Probert

When you think about expiration dates, you probably think of grocery items like milk, yogurt, or meats. These all prominently communicate expiration dates on the packaging, but they aren't required to by law. They do it because the consumer expects it and makes purchasing decisions in the store based on those dates. Case in point, when was the last time you bought a gallon of milk and didn't look at the expiration date first? There are a handful of expiration dates which are required by law (infant formula, car seats, and drugs), but many dates are voluntarily placed on foods by the producer.

Beer follows suit with 'born on' dates, which are also voluntary. Their purpose on beer similarly is to protect the brewer's reputation by informing the consumer of the beer's freshness. With more and more breweries adopting date stamping, it can become a deciding factor when you're buying beer in the store. If beer freshness is important to you, you might skip over a 6-pack that has no date on it, and instead opt for one that includes a packaging date.

Several Michigan breweries have policies of pulling beer off the shelf at retailers or back from distributors if found to be old or out of date. Of course, to be able to put such a policy in effect, they have to first have a date on it. Of the Michigan breweries that distribute in bottles or cans, 2/3 of them put date stamps on their beer. There isn't a standard format for this date stamping. Some use Julian dates (day of the year), some use letters for months, etc. There's a good website [freshbeeronly.com](http://freshbeeronly.com) that tells you which brands carry date stamps, where to find them, and how to de-code them. One common practice I'll clue you in on is a lot of them put the date in black ink on the neck of the brown bottle, making it impossible to see without holding it up to the light.

Dan Scarsella, brewer and an owner of **Motor City Brewing Works**, states, "Our beer is unfiltered and unpasteurized, and is intended to be enjoyed fresh. That means consumed within 5-6 months after bottling, but ideally within 1.5 – 2 months." A survey of other Michigan breweries echoed the 5-6 month maximum. For Motor City, shelf life has been a somewhat controlling issue in their size



and growth. Until a recently installed new bottling line was in place, the old line didn't have the technology to bottle the beer and keep oxygen content to a minimum. One of the main chemical reactions of beer going stale is the oxidation reaction of the beer with oxygen molecules trapped in the bottle. Knowing that shelf life was limited for ideal taste of the beer, they kept distribution small and closely centered around the Detroit area. With the new line in place, they are starting to look to expand their distribution area.

**Founder's B, C.** also recently made an adjustment to their beer schedule based on shelf life. Red's Rye IPA used to be a year-round offering, but they changed it to a Seasonal beer (available Jan – Apr) in order to let the demand of a limited offering help drive quicker turnaround on retailer shelves. Mike Stevens, CEO of Founder's Brewing, described Red's Rye as "The best beer we make when it's fresh."

Tyler Glaze, Quality Manager at **Short's B, C.**, treated me to an inside look at their process of keeping tabs on shelf life. On a large shelf system in their cooler they have 6-packs of every batch of beer they've made over the last 8 months at Elk Rapids. They have a process of regularly sampling these beers in the Quality Department and taking meticulous tasting notes to ensure the flavor is holding up over time as expected. While I was there we sampled a Huma Lupa Licious that was 7 months old that was still very drinkable, but was also clearly no longer in its prime. However, it is important to note that this was 7 months in a cooler at about 40°F. We also sampled one that was just over 2 weeks old, but was kept in their "hot storage"- the boiler room for the production facility which is typically around 110°F. You only had to get your nose close to get a personal understanding of what the official definition for 'wet cardboard' aroma was. Tyler explained that the Arrhenius Equation, which relates chemical reaction rates to temperature, captured this storage tempera-

ture phenomenon. It shows that for every 10°C increase in temperature, chemical reaction rates increase by 2-3X. So even a short time in warm storage sends your beer much farther down the inevitable aging path than if it were always kept cold.

I did my own experiment to see the effect of storage temperature. I bought a 15-pack of All Day IPA in cans that was pretty fresh (~3 weeks old). I then left some in the fridge (36 °F), some in our cool basement (60 °F), and some in a warm room (70 °F). After 2 months, I put them all back in the fridge to cool for 3 days for tasting. I found the cool basement storage beer had a detectable level of that 'wet cardboard' aroma Tyler had trained my nose to, and the warm storage beer was definitely distinct both to the nose and to the tongue. Now not all beers are created equal for this type of experiment, as the high alpha acids of hops have a more significant oxidation reaction than something with less hops, and the sophistication of a particular brewery's bottling or canning line also plays a role with the amount of oxygen available to react. But this simple experiment will give me pause while deciding what beer to buy at the beer store. Armed with my Arrhenius Equation, I now know that the 6-pack of beer sitting on the floor at room temperature has aged about 5x as much as the one sitting in the cooler.

You might be thinking you don't want to be that beer snob eyeing up bottling dates and sorting through beers in the store. However, by doing so, you can use your consumer voice to make a difference. If you start to tell retailers they have expired beer on their shelves, and tell breweries you avoid their beers at retail because you can't tell how old they are, they might start to take notice. And distributors will follow suit as the key controller of getting fresh beer to you. If you're going to live by the adage 'Life's too short to drink bad beer,' paying attention to packaging date and storage temperature plays just as significant a role as deciding which beer you're going to buy.

**MBG**