



2020 Sustainability Report

2020 was a challenging year on many fronts. Until April, we were a “draft only” brewery. COVID-19 forced us to rapidly shift our business model because kegs are mostly consumed at bars and restaurants. We knew that we had to add a take-home package in order to survive the COVID related shutdowns. Canning is a resource intensive process and we knew that our sustainability benchmarks would suffer from adding cans to our beer packaging process. While we continued to beat industry averages in all 5 of our sustainability benchmarks, a couple of our benchmarks stumbled slightly due to packaging related usage.

In other news, we continued to increase the amount of Riggs grown grain used in our beer, this year by 43%. Between 2016 and 2020, we have used 98,877 pounds of Riggs grown grain in our beers, making us Illinois’ #1 user of locally grown brewing ingredients.

We believe in transparency and accountability. Previous years’ sustainability reports and all supporting documentation are available upon request. Our sustainability report is broken into four categories: **Benchmarking Performance**, **Local Grain & Sustainable Agriculture**, **Last Year’s Efforts**, and **This Year’s Efforts**.

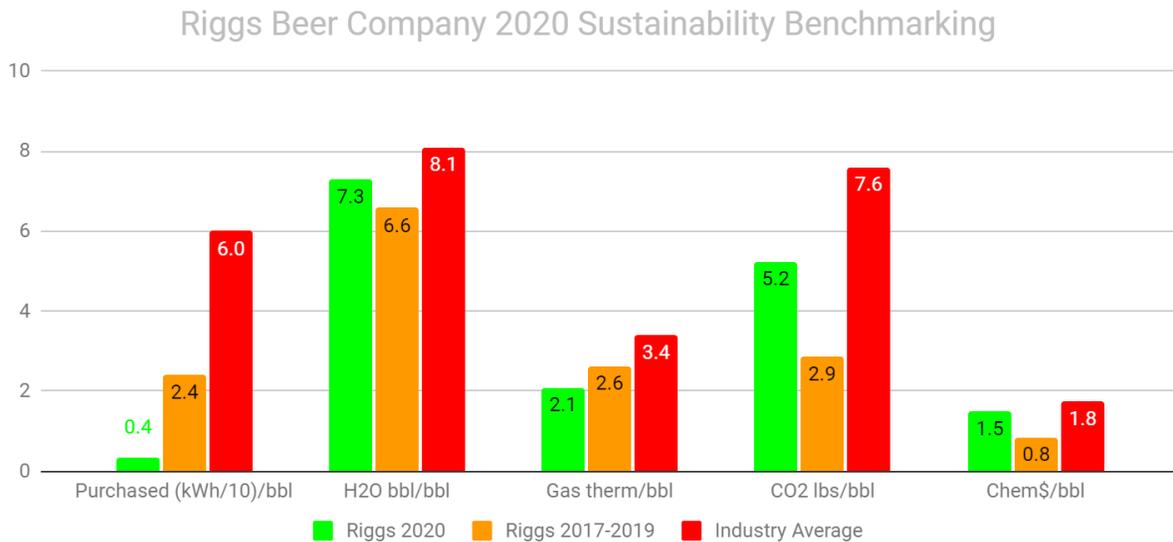
Benchmarking Performance

For the fourth year in a row, Riggs Beer Company outperformed industry standards in all five benchmarking categories. 2020 saw improvements in our gas therm usage.

Each of these categories will be examined more closely below. “Industry Averages” were taken from the most recent publicly available edition of the Brewers Association “2017 Sustainability Benchmarking Update”, which is available for download on their website: ([2017 BA Benchmarking Report](#))

The “Industry Averages” that we used to benchmark our performance against were the median values taken from page 45 of the report, from breweries that produced between 1,000 and 10,000 barrels per year. Riggs Beer Company’s production volume in 2020 was 2,136 barrels.

Industry average chemical use data is compiled by our chemical supplier. They survey several breweries in our region to establish the benchmark.



Electricity Use

At 75.9 kilowatts, we have the largest brewery solar array in the State of Illinois. This array allowed us to make each barrel of Riggs Beer with 93% less purchased electricity than the average brewery of our size. In total, our solar array offset over 92% of the electrical power that was used by the tap room and brewery in 2020.

The data in the Brewers Association report does not differentiate between electricity usage and purchased electricity, so we asked them for details regarding brewery-generated, renewable energy. They informed us that only 14% of the

reporting breweries produced electricity on-site. Within that subset of breweries, the average offset rate was only 3% of their total usage.

Our electrical usage was reduced by over 15% in 2020, largely due to the reduction in days of indoor seating due to COVID-19 and the resultant reduction in HVAC costs. However, we also replaced an older rooftop HVAC unit for the taproom with a newer, more efficient version. We believe this will help us reduce HVAC costs even once indoor seating has returned to normal.

Gas (Therm) Use

We saw a slight decrease in our gas use per barrel. This is likely also due to the large reduction in HVAC and hot water needs for the taproom.

Water Use

We saw a slight increase in our water use per barrel compared to last year. The major factor for this is our shift to canning our beer. Canning lines require extra cleaning in place (CIP) cycles, washdown cleaning while running, more frequent chemical refreshing, water to operate can rinsers while in operation, and--most significantly--more beer loss than when only kegging beer. Not only does beer loss reduce the barrels produced (lowers the denominator), but the water it took to brew that beer still counts against the total water usage (raises the numerator). However, we are still below the industry average in this benchmark.

Going forward, we have purchased an upgraded Reverse Osmosis water system which will reduce the amount of water lost during the process.

CO2 Use

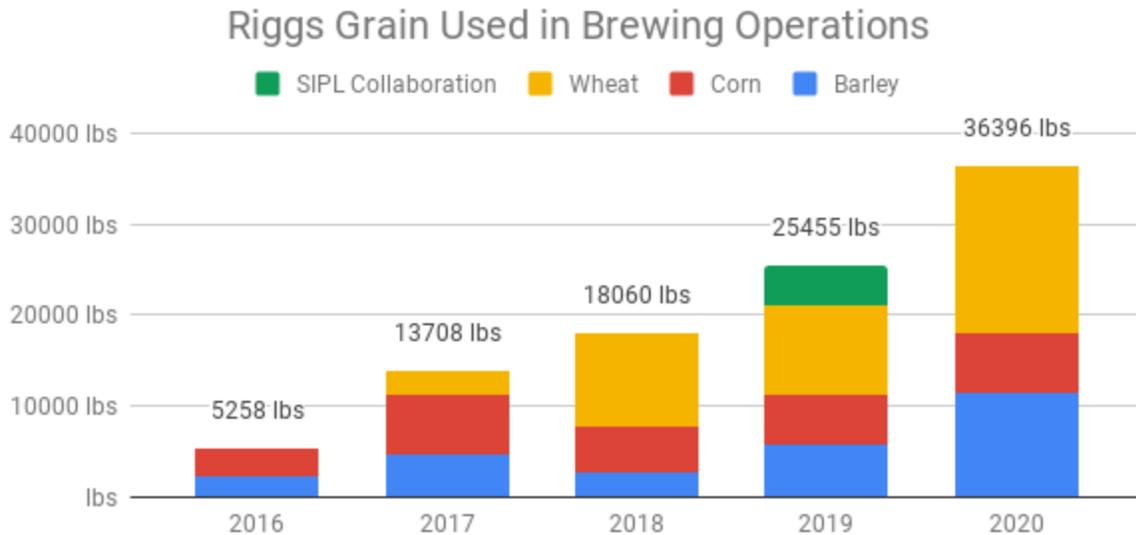
In 2020, CO2 use per barrel increased significantly, though still remaining below the industry average. The increase over last year can mostly be attributed to packaging our beer in cans. Much more CO2 is lost when purging cans prior to filling than with kegging. As the market trends back to more in-person dining and draft beer consumption, this number will improve. We are also actively searching for opportunities to reduce this usage.

Chemical Use

To accurately benchmark our chemical use, we rely on a survey conducted by our chemical supplier. For this year's survey, they compiled data from 20 breweries in Illinois and Indiana that produce at least 1000 barrels of beer per year. In 2020, Riggs Beer used 17% less chemical than the region's average amount of chemical per barrel of beer produced.

Local Grain & Sustainable Agriculture

As shown in the chart below, we're committed to using more Riggs grown grain each year. In 2020, we quadrupled our brewing grain acreage from 16 acres to 65 acres. Locally grown grain greatly reduces the carbon footprint from the transportation of grain from farm to malthouse to brewery.



Each year, we compile data about our farming practices and how they ultimately impact our beer's quality. One characteristic that we look for in brewing grain is a low protein content. A grain's protein content is influenced in part by how much nitrogen the plant has access to in the field. We are now convinced, based on 5 years of agronomic data and corresponding lab analysis, that our best practice is to apply no nitrogen fertilizer to our wheat and barley crops. We've found that our wheat and barley, when planted in a crop rotation with a legume, receive the optimal amount of nitrogen from the residual that is left over from the previous crop. Eliminating nitrogen fertilizer application is a win-win-win: reducing costs, improving beer quality, as well as improving water quality downstream.

2020 marked the third year of our participation in Champaign County Soil and Water Conservation District's "STAR" program. STAR is a conservation evaluation system that evaluates a farm's practices at conserving soil resources. Last year, the wheat field adjacent to the brewery improved from a 3 to a 5 star rating, with 5 stars being the highest possible classification. Our improvement was due to our omission of applied fertilizer and our implementation of soil sampling.

Last Year's Efforts

I think that we can all agree that 2020 was a rough year. Quickly shifting our business model to include canning negatively impacted three of our sustainability benchmarks. The good news is, despite our canning related resource use increases, all of our numbers still stayed well below industry norms.

Where we could, we even made improvements by closely monitoring and minimizing HVAC usage when indoor seating was prohibited.

Last year we planned to focus on increasing the amount of Riggs grown grain in our beer. We were quite successful at that, increasing 43% compared to the year before. That adds up to a massive 98,877 lbs of Riggs grown grain used since 2016. This makes us far and away the Midwest's leader in farm to beer ingredient use.

This Year's Efforts

Our biggest opportunity to improve in 2021 is to try and improve in our benchmark areas where the addition of canning operations set us back. We are confident that we can reduce our water usage by being more careful with can rinsing. Canning related CO2 and Chemical use will be more challenging to reduce, but we'll give it our best shot!

Continuing to increase our use of vertically integrated, locally grown grain will remain a top priority in 2021. The 2020 harvest year provided us with 128,891 pounds of the highest quality brewing grains that we've ever grown (see, 2020 wasn't **ALL** bad). Due to the success of last year's crops, we've been able to adjust many of our recipes to include even higher percentages of Riggs grown grains.

2021 will be the first year that we will try to grow some of our wheat without a fungicide application. We've already been growing all of our wheat and barely without nitrogen fertilizer, herbicide, or pesticide. Central Illinois' hot and wet late spring weather makes fungicide application almost mandatory for small grains. After growing our locally developed "Erisman" winter wheat for 5 years, however, we feel pretty confident that we can grow a disease-free crop without the use of fungicide.

Lastly, in 2021 we will enroll all of our family's farm fields in the STAR conservation program. This will include non-brewing grain fields.