

This New York Brewery Hopes To Revolutionize The Way Beer Is Made

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A glass of Cool Cousin beer, made with raw (unmalted) barley). JENNA ORY AND FRED MIDGLEY

New York's Cool Cousin Brewing is the first commercial brewing company

in America to make beer entirely from unmalted barley, saving water and carbon dioxide (CO₂) with each brew.

The fundamental ingredient in beer is grain, usually malted barley. That barley provides the carbohydrates that the yeast ferments into alcohol and CO₂. But those carbohydrates are usually in long chains that are undigestible to yeast unless the barley is first malted.

Malting is a process of steeping the barley, causing it to germinate. This activates enzymes within the barley to break down components in the barley, including the carbohydrates and proteins. At the right time, the germination is stopped by the application of heat. The repeated application of water (malting often requires multiple steeps) and then the application of heat is resource intensive. And that's not the end of it.

Once the malt is delivered to the brewery, the brewer must create a hot stew, known as the "mash" to activate more enzymes to create a sugary liquid, known as "wort" that is then boiled with hops, chilled and fermented.

"Malting is incredibly old school and inefficient," says John Midgley, founder and CEO of Cool Cousin Brewing, which is on a mission to make beer more environmentally-friendly. "The brewing industry has made improvements to water and energy use, but malting hasn't changed much over time."

Cool Cousin's solution is to make beer without malt at all. Instead, it uses raw (unmalted) barley and creates wort by adding an exogenous enzyme cocktail in the mash. By doing so, Midgley claims he is able to save 700 milliliters of water and 32 grams of CO₂ for every liter of beer he makes.

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“The enzymes are exactly the same as from malt,” says Midgley. The brewer steps the mash through four temperature stops to activate different enzymes as would occur in malting and traditional mashing to achieve the same results as other brewers, but having forgone the entire malting process.

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Midgley is quick to say that Cool Cousin beer tastes great - no one will drink the beer just because of the environmental savings. He likens his beer to Tesla TSLA -5.1%, which Midgley says is a great car that happens to be electric; Cool Cousin is great beer that happens to be made in a less resource intense way.

Cool Cousin beer is loosely in the style of a German-style Kolsch. It is gold in colour and features a light toastiness and a gentle fruitiness. Cool Cousin’s first customer was Dan Barber’s esteemed restaurant Blue Hill at Stone Barns which boasts two Michelin stars. “We were excited about the

prospect of a 'raw' beer, but also unsure of how that would translate to flavor,” says Hannah Williams, beverage director and Blue Hill at Stone Barns. “After tasting, we were surprised by how fresh, and truly grain-focused the style was. The aromas and flavors of the raw barley are reminiscent of all of the freshly milled grains in our bakery and of our grain tea program. It felt like a natural fit.”

Cool Cousin beer is currently available only in New York State and is made from locally-sourced barley, either from New York or Pennsylvania, which, though across a state line, is actually geographically closer to the brewery where the beer is made. The hops are of German lineage, but grown in New York.

Midgley does have plans to expand across America, but insists Cool Cousin will continue to source local ingredients. He hopes to enter the California market next and do so by brewing Cool Cousin in the state, from locally-sourced grains and hops.

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