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# Kent winemaker installs carbon capture system to reuse fermentation CO2

Defined Wine says it is the first British winemaker to capture fermentation CO2 for reuse on site

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A Kent wine producer has installed carbon capture equipment to collect the carbon dioxide released during fermentation, a move the company says will cut emissions and reduce its reliance on outside gas suppliers.

Defined Wine Ltd, based in Patrixbourne near Canterbury, said Monday, November 9, that it had begun using a system that captures CO2 produced as grapes ferment, then prepares the gas so it can be reused. The equipment was developed by Cork and Capture, a climate technology company based in Ashford.

Henry Sugden, chief executive of Defined Wine, said the company wanted to lower its environmental impact and make practical use of a gas that would otherwise be released into the atmosphere.

“We wanted to try it in order to not increase the pace of climate change,” Sugden said, adding that using the technology was “the right thing to do.”

The company plans to use the recovered gas at its own site and, if volumes allow, sell surplus CO2 to other producers. Defined Wine said it believes it is the first UK winemaker to adopt the technology.

The system is designed for businesses that generate CO2 through fermentation, including wineries and breweries. Cork and Capture says it collects the gas, compresses it, purifies it and makes it available for reuse on site.

Jemima Bland of Cork and Capture said the goal was to make carbon capture more practical for the drinks industry, where fermentation already produces a usable stream of biogenic CO2.

“We save breweries and wineries, and other businesses that ferment, money by capturing the CO2 from their production,” Bland said. “We compress it, purify it and make it available to them for reuse on site.”

While similar technology is already used in some other countries, it remains uncommon in Britain. Cork and Capture said it wants to build local networks in Kent and Sussex that can capture and reuse CO2 close to where it is produced and needed, before expanding into wider markets.

Bland said the company sees an opening in Britain’s younger wine sector and growing independent brewing industry. She said the business wants to bring “innovation and sustainability” to producers as they compete with more established wine regions in Europe.

The investment also comes after repeated concerns over the reliability of CO2 supply in the UK. In recent years, the country has faced shortages linked to rising energy costs and the shutdown of fertilizer plants, where carbon dioxide is produced as a byproduct. Those disruptions have affected food and drink businesses that depend on food-grade CO2 for packaging, carbonation and other uses.

That has given the technology a business case beyond climate goals. For wineries and breweries, capturing their own fermentation gas could offer a measure of independence from a supply chain that has proved volatile. It also points to a more circular production model, in which a waste stream is turned into a usable input rather than purchased again from outside suppliers.

The same system is already in use at Hepworth and Co Brewers Ltd in West Sussex. Andrew Hepworth, the brewery’s chairman, said the company adopted carbon capture to improve resilience after seeing swings in commercial CO2 supply.

“CO2 supply is quite volatile,” Hepworth said. “It can actually hurt our company if our commercial suppliers aren’t available to us. It’s far better for us to produce our own and have that security supply.”

Food-grade carbon dioxide has uses well beyond wine and beer. It is used in greenhouse growing, meat processing, food packaging and chilled transport, including in dry ice form. Because of those broad applications, any effort to produce and reuse CO2 closer to where it is needed could lower transport costs and ease pressure on supply chains.

Bland said those possibilities were among the most promising parts of the model, especially for regional clusters of food and drink businesses. For producers in southeast England, where wine and brewing have both expanded in recent years, the approach may offer a way to combine cost control with emissions reduction without changing the core process that generates the gas in the first place.