

## Chateau Hough: The World's First Biocellar

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When race riots swept through the country in the mid-1960s, the Hough neighborhood in Cleveland, Ohio, experienced some of the most devastating violence, resulting in a tragic loss of life and property. These events exacerbated the already-heightened divestment and job loss that was affecting the Rust Belt, and it wasn't until the late 1990s that the neighborhood began to slowly bounce back. Today, entrepreneurs and "urban pioneers" are starting to move into previously vacant and abandoned properties, playing a key role in the city's urban renewal.

Driving down Hough Avenue today, you'll pass a very unlikely sight. Nestled behind an established vineyard is the world's first biocellar — a term coined by plant biologist Jean Loria in 2006 to describe the result of carefully tearing down an abandoned house, reinforcing the existing basement, and

covering it with a slanted, greenhouse-like roof that enables crop production inside. Both the vineyard and biocellar are managed by the nonprofit Neighborhood Solutions and run by resident Mansfield Frazier, who is out to challenge assumptions and change what people expect to see in this neighborhood. This is just the beginning of what his vision entails.

Frazier started growing wine grapes on this lot in 2010, under the moniker Château Hough. A lifelong resident of the neighborhood, his motivation was broader than food production — he was seeking social justice in his own backyard. His goal is to create steady jobs for the area’s formerly incarcerated and marginalized populations, and, according to Frazier, wine grapes produce one of the highest dollar yields per acre of any crop grown in the US.

As predicted, a vineyard in the inner city breeds curiosity. A couple of years after Frazier started his vineyard, Jean Loria designed plans to convert an abandoned three-story house next door into a biocellar for year-round growing. Loria and Frazier partnered with the Cleveland Urban Design Collaborative and architect Ron Donaldson, and after deconstructing the above-ground structure, they built a three-sided roof above the sandstone basement and added south-facing windows.

Past the frost line, which in northwest Ohio is about 42 inches below ground level, the temperature stays a constant 60 to 65 degrees Fahrenheit. This enables the growth of several cold-hardy plants such as shiitake mushrooms, kale, spinach, and nutrient-dense African moringa. Compared to a greenhouse, a biocellar is more secure and requires much less energy due to the natural insulating properties. The ultimate goal is to grow hops and sell them to the local breweries, continuously reinvesting revenue into the mission of creating jobs.

Presently, the biocellar at Château Hough remains a learning center for testing the viability of growing various crops, so it is not a production facility yet. Still, the success of its design is a testament to the potential for transforming the urban landscape in cities that are fighting an uphill battle against urban blight. There are currently an estimated 15,000 abandoned houses in Cleveland, many of which are slated to be torn down; Frazier would like to see at least 10 percent of those converted into biocellars that support urban agriculture projects.

Frazier’s next goal is to raise enough money to turn the brick warehouse across from the vineyard into a fully operational winery providing a number of full-time jobs. With the biocellar as proof of his community organizing power and entrepreneurial vision, it is just a matter of getting his plans in front of the right people.

“When urban revitalization initiatives start from the top down — meaning someone at a foundation has an idea and they want to help — they generally don’t know enough about the field,” said Frazier in regard to the value of personal experience. “Most good ideas bubble up from the grassroots. We need their money, but they need our expertise.”

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