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# Florida's weatherbeaten clam farming community may be hanging by a thread, but it's a strong one

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By Jodi Helmer

**Cedar Key has been hit by four hurricanes in five years and clam farmers in the Florida community are struggling to keep the industry alive**



After three hurricanes in 14 months, Cedar Key clam farmers reckon with insurance claims, lost markets and a climate change's potential for more. Photos courtesy of Michael Presley Bobbitt.

When Hurricane Idalia made landfall in Florida in August 2023, it brought record-high storm surge that wreaked havoc on Florida Fresh Clams, an aquaculture business in Cedar Key, on the Gulf coast. Clam farmer Michael Presley Bobbitt lost 85 percent of his crop.

Bobbitt had just planted nursery clams in grow out bags and staked them with PVC stakes in the soft-bottom farm lease when Hurricane Helene made landfall in September 2024.

"The clams had no chance to withstand 11 feet of storm surge," Bobbitt told the *Advocate*. "I had a million-and-a-half clams picked up off my lease and deposited into the trees on a barrier island about a quarter mile away from my farm. I lost 100 percent of the crop."

More than **90 percent** (<https://shellfish.ifas.ufl.edu/clam-mortality/>) of the state's clam production is in Cedar Key. The barrier island in the Gulf of Mexico is home to 163 certified **leaseholders** (<https://shellfish.ifas.ufl.edu/wp-content/uploads/Clam-Growers-Survey-Results-FINAL.pdf>) who harvest an estimated 120 million clams annually, support 500-plus jobs and add an estimated \$45 million per year to the local **economy** (<https://shellfish.ifas.ufl.edu/cedar-key-everlasting/>). Natural disasters are taking a significant toll on the industry.

(<https://bspcertification.org/>).

"Storms and hurricanes are the No. 1 biggest threat," said Leslie Sturmer, extension agent in the Shellfish Aquaculture Extension Program at the University of Florida Institute of Food and Agricultural Sciences (IFAS) Extension. "We hear that with climate change, natural disasters are becoming more frequent [and] more severe but it's not changing anyone's mind about clam farming in Cedar Key."

## Maintaining a working waterfront

Cedar Key has always had a working-waterfront community and identity. Most residents made their living working for commercial fisheries until 1994 when the state passed **legislation** ([https://ballotpedia.org/Florida\\_Amendment\\_3\\_Limits\\_on\\_Fishing\\_Nets\\_Initiative\\_\(1994\)](https://ballotpedia.org/Florida_Amendment_3_Limits_on_Fishing_Nets_Initiative_(1994))) that outlawed gillnetting. The law led to economic decline in the region until federal funds for job retraining helped fishers transition to shellfish aquaculture that revitalized the local economy.

"They were able to use those water-related skills in a new industry – clam farming – and it worked very well here," Sturmer said. "It's the definition of resilience."

The small waterfront village rebuilt its seafood industry once and now natural disasters are forcing clam farmers to rebuild again and again. The island has been hit by five hurricanes in the last four years; three of those storms – Idalia, Debby and Helene – have hit Cedar Key in the past 14 months.

The statewide aquaculture losses due to Hurricane Idalia topped **\$34 million** (<https://www.fdacs.gov/News-Events/Press-Releases/2023-Press-Releases/Commissioner-Wilton-Simpson-Announces-34.1-Million-Aquaculture-Loss-from-Hurricane-Idalia>). Clam farmers were still struggling to recover when Hurricane Helene made landfall in October 2024 and the Category 4 hurricane brought storm surge and strong winds, causing "**complete and utter devastation** (<https://www.wusf.org/weather/2024-09-30/complete-devastation-cedar-key-assesses-hurricane-helene-impact-local-businesses>)" on the island. The losses from Hurricane Helene are still being calculated.

***It's hard for a farmer that just lost everything to sign a loan program...he'd much rather say, 'I'm done with this.'***

Timothy Solano, a second generation clam farmer and founder of Solano Sea Farms, ships upwards of 25,000 clams per week through the family wholesale operation, Cedar Key Aquaculture Farms. He has built a robust business, securing contracts with grocers from Miami to Massachusetts, but admits that the extreme weather is making it harder to meet the demand for Florida clams.

A marine heatwave in 2022 depleted oxygen levels in the water, causing Solano to lose 40 percent of his clams. Just months later, Hurricane Idalia hit the coastal community, resulting in a 90 percent crop loss. Now, Solano is trying to plan ahead for the next natural disaster and subsequent damage to his clam harvest.

"A lot of wholesalers closed their doors and a lot of small farmers got out of the industry; it was a big gut check for clam farming in Florida," Solano said. "We need to reach out, try to find some smaller farmers and say, 'Will you have any [clams] ready a year and a half from now?' We can maybe lock them in on a deal so that we have a comfortable safety net to make sure that we're not going to have to close our doors because we run out of product."



More than 90 percent of the state's clam production is in Cedar Key. The barrier island in the Gulf of Mexico is home to 163 certified leaseholders who harvest an estimated 120 million clams annually, support 500-plus jobs and add an estimated \$45 million per year to the local economy. Photo courtesy of Michael Presley Bobbitt.

## Addressing climate change

Bobbitt, who is also a playwright and author of *Godspeed, Cedar Key* started raising clams before what he calls "this historic run of hurricanes" and admitted that he wasn't tracking water temperatures in the Gulf of Mexico or aware of the existential threat that results from warming waters.

"I'm a conservative Southern guy and I had my blinders on...but once I became a farmer, I dug into the data and the data doesn't care about our political leanings," he said. "The Gulf of Mexico is getting hotter every year. And it's not just that our clams get stressed under the heat, but hot water is the principal ingredient to these giant storms. It would be impossible not to see the tie between the warming water and the bigger and more frequent storms."

In 2022, 75 percent of growers reported worse **clam mortalities** (<https://shellfish.ifas.ufl.edu/wp-content/uploads/Clam-Growers-Survey-Results-FINAL.pdf>) over the past five years and most cited temperature as a top cause of the declines. Many of the clam farmers in Cedar Key are "operating at the margins," according to Bobbitt, and can't afford to sustain a business after catastrophic losses from natural disasters.

"This was a great one of the last places in Florida where a blue collar person could make a living on the water," he adds. "The effects of the market forces and getting hit by these big storms – it's pushing those people out."

Disaster recovery initiatives aimed at helping clam farmers fall short. Clams are a non-insurable crop and programs like the U.S. Department of Agriculture's **Noninsured Disaster Assistance Program** ([https://www.fsa.usda.gov/sites/default/files/documents/cc0471\\_nap\\_bp\\_2020\\_and\\_subsequent\\_years.pdf](https://www.fsa.usda.gov/sites/default/files/documents/cc0471_nap_bp_2020_and_subsequent_years.pdf)) have failed to provide sufficient funding to cover losses.

In 2021, the USDA expanded the **Emergency Assistance for Livestock, Honey Bees and Farm-raised Fish** ([https://www.fsa.usda.gov/sites/default/files/documents/45000202105\\_01.pdf](https://www.fsa.usda.gov/sites/default/files/documents/45000202105_01.pdf)) (ELAP) program to include aquaculture. The program provides assistance to eligible producers who suffered losses due to adverse weather events and other conditions.

A Hurricane Idalia Dislocated Worker Grant helped cover wages after the storm and Gov. Ron DeSantis provided \$1 million in **funding** (<https://www.flgov.com/eog/news/press/2024/governor-ron-desantis-announces-investment-marine-infrastructure-support-recovery>) to the Fish and Wildlife Foundation of Florida through the Florida Disaster Fund to help rebuild fishing and aquaculture infrastructure – but the funds were a mere fraction of the \$34 million in losses from Hurricane Idalia alone.

The demand is so great that the Florida Department of Agriculture and Consumer Services, which offered interest-free **loans** (<https://www.fdacs.gov/Agriculture-Industry/Agriculture-and-Aquaculture-Producers-Natural-Disaster-Recovery-Loan-Program>), for clam farmers (and other growers of non-insurable crops), stopped accepting applications; the needs exceed available state funds.

“These natural disasters scare away good farmers, especially when we reach out to get help and we get a loan program,” said Solano. “It’s hard for a farmer that just lost everything to sign a loan program...he’d much rather say, ‘I’m done with this.’”



## Farmers trade Kansas cornfields for Florida clam beds

The Stones came to Florida without experience in clams and no ties to the fishing community. Their backgrounds in farming, however, are proving valuable.



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## Pushing forward

Bobbitt knows that natural disasters can reshape coastal communities. He points to Mexico Beach, a town near the Florida Panhandle, that experienced major damage when Hurricane Michael made landfall in 2018.

“At the time, it was one of the last few remaining blue-collar enclaves on the water where these were working watermen; they grew oysters, they were fishermen, they were shrimpers and after two, after that storm came through, it leveled everything,” Bobbitt said. “The only people that could afford to stay and rebuild were folks with outside money. In the span of six years, its entire identity is different: there are high rise condos, McMansions on stilts. Here in Cedar Key, there is a collective resolve to not let that happen.”

Clams could be the key to protecting the waterfront community. The bivalves provide important **ecosystem services** (<http://www.flaclams.com/environmental-benefits.html#:~:text=Clam%20Culture%20is%20GOOD%20for,a%20byproduct%20of%20clam%20farming.>), filtering water, removing nitrogen and storing carbon. In Florida, clams filter 544 gallons of seawater, removed 25,000 pounds of nitrogen and stored 760,000 pounds of carbon. Shellfish beds can also stabilize sediments and

help **protect shorelines** (<https://portal.ct.gov/doag/aquaculture1/aquaculture/environmental-benefits-of-shellfish-aquaculture#:~:text=Watch%20how%20oyster%20reefs%20form,shoreline%20from%20erosion%20and%20storms.>) from erosion and storms.

“This is a tight knit community [and] when there’s a disaster or crisis that affects the community, they come together and use whatever resources they can to prevail,” Sturmer said. “We can talk about community involvement, but we also have to have the science involved. We’re just getting to that in aquaculture. We really need to fast forward and we need long term commitment, research-wise, to address the issues.”

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