Research to develop first mainland US offshore aquaculture industry underway

SAN ANTONIO, Texas -- Although no licenses have yet been issued for offshore aquaculture in the US Gulf of Mexico, research to develop fish for it is well underway.

Last year, the US approved the development of offshore aquaculture off the coast of the Gulf of Mexico, a first for the US outside of Hawaii.

In January 2016, the US revealed its plan, which allowed for a maximum of 20 permits to be handed out, and around 300,000 metric tons to be farmed.
In response to the potential for a new industry, research facilities like Mote Marine Laboratories and Aquarium -- a private, not-for-profit research lab based in Florida that works on developing aquaculture-related applied research -- began researching suitable species almost immediately.

Kevan Main, a director and senior scientist of the lab, told Undercurrent News, during Aquaculture America 2017, that the lab is currently working to develop almaco jack fish for offshore aquaculture in the Gulf of Mexico.

Main said her team chose the species because it's a federally-managed species, which are the only species currently approved for offshore aquaculture and it has a high price point, among other reasons.

If everything goes to plan, Main said it will take roughly three years before the first fish are in the water, and possibly four before those fish go to market.

Main is confident offshore aquaculture will move forward eventually and she said red drum will likely be one of the early species grown.

"The technology is fully developed for red drum fingerling production," she said. "That will be the first species to go out once permits are issued."

Whereas the technology around species like almaco jack will take some time, red drum could be in offshore cages a year after license issuance.

The price point of red drum, however, is not well-understood. Once it becomes mass-produced offshore, it's hard to guess where price will settle.

**Controversy over offshore aquaculture**
The move to permit offshore aquaculture has not been met without opposition. Like aquaculture more generally, the practice has been met with controversy.

In February 2016, fishermen and environmentalists filed a lawsuit against the National Oceanic and Atmospheric Administration in response to its approval of offshore aquaculture.

The Center for Food Safety filed the lawsuit on behalf of the Gulf Fishermen’s Association, Gulf Restoration Network, Charter Fisherman’s Association, Florida Wildlife Federation and others.

Main said that so far no permits have been issued, likely the result of uncertainty surrounding the lawsuit.

"There's so much misinformation out there," she said. "We can get the message to consumers as long as their minds are open."

Despite this, Main said she predicts aquaculture will eventually see growth in the US.

"I see it growing...there is a lot of resistance, that's one of the reasons it hasn't grown already," she said.

Beyond general consumer and public resistance, Main said the availability of cheaper products from overseas has made it difficult to compete.

But Main said that is likely to change soon.

With the middle class in China and southeast Asia growing, Main said seafood imported from there will eventually lose its competitive advantage as input costs grow.

"We are headed toward a crisis...we're seeing increased consumption of seafood in China," she said. "We're going to see a big shortage of seafood supply...people are beginning to talk about that."

One of the main barriers for aquaculture in general in the US, Main said, was a tough regulatory environment.
Main also said she sees huge potential for aquaponics and the development of sea vegetables as fresh water becomes sparser.

There isn't a very large market for it in the US for sea vegetables, but Main said she thinks it would be easy to develop one.

"I think it's got great potential," she said, adding that in the efforts she's made selling her own sea vegetables, she's seen quick acceptance of it.

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