Hoping to grow fish in a barrel

An aquaculture project in Cape May County sets out to make the fisherman of the future more of a farmer.

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LOWER TOWNSHIP — The fisherman of the future may not have to risk the dangers of the open sea to make a living.

Heck, the future fisherman may not even have to own a boat to bring seafood to market.

That is the promise behind a $7 million aquaculture facility going up on the banks of the Cape May Canal. The Multispecies Aquaculture Demonstration Facility, a joint venture between Rutgers University and Cumberland County College, bankrolled by several government agencies, is supposed to provide answers on just how viable aquaculture is.

One goal of the new facility, which is about half completed and heading toward a summer opening, is to boost aquacul-

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ture on the New Jersey shore. It will also provide training for college students and commercial fishermen, covering fish farming from the experimental stage right to larger commercial activities.

"It's to show people how to do things," said John Kraeuter, a Rutgers University biologist involved with getting the project off the ground.

Back in 1994, the New Jersey Commission on Science and Technology contributed $2 million while Rutgers is funding $1.5 million and Public Service Electric & Gas anted up $200,000. The Delaware River and Bay Authority, which owns the nearby Cape May-Lewes Ferry, supplied the land for the project.

A large, prefabricated metal building going up on the site will be used mainly for bivalves, including oysters and clams, Kraeuter said. An assortment of fishponds will be constructed outside the building and they could be used for growing valuable finfish, such as a hybrid striped bass.

Kraeuter said the venture is not going to compete with the aquaculture industry but will try to boost it. One example could be supplying disease-resistant seed oysters. There are private companies selling seed clams, but nobody is producing commercial supplies of seed oysters that can survive Delaware Bay diseases.

"There are no oyster hatcheries. We can get disease-resistant strains and hopefully jumpstart the industry," Kraeuter said.

The key to a fishing future where fishermen don't have to go to sea: It's bringing the sea to land. The facility is tapping the seawater in the Cape May Canal.

"Maximum flow would be 5,000 gallons a minute," Kraeuter said.

Three 28-foot-high tanks, each with a capacity of 65,000 gallons, are already up next to the canal. Two of the tanks will handle seawater, which has enough natural algae and nutrients in it to grow shellfish once they have passed the larval stage. The third tank will be used to supply water to grow algae and larval-stage shellfish. This water will be heated and treated with ultraviolet light to reduce the predators that eat the larvae.

The treated water would leave the large tank and go inside the building to 10,000-gallon tanks used to grow algae and larval shellfish. Once the shellfish get to about 1 millimeter, they could be transferred to tanks with straight seawater, with minimal treatment to reduce predators.

Kraeuter said the same water would continue being useful as it then gets pumped into inside tanks and outside ponds to grow fish. Brine shrimp will also be grown inside as a primary food for the fish. The facility may even experiment with growing freshwater fish and macro algae, also known as seaweed.

Remesco Construction of Lakewood, Ocean County, is the general contractor. There are not exactly a slew of companies building aquaculture facilities, but Remesco is familiar with all the piping work that is being done.

"We specialize in treatment plants. We're putting in five layers of different types of pipes," said John Purwin, the project manager for Remesco Construction.

The pipes will bring in canal water with a salt content that ranges from 22 to 32 parts per thousand. The salt content
Three water storage tanks stand on the canal side of the new Multispecies Aquaculture Demonstration Facility under construction next to the Cape May Canal on Johnathan Hoffman Road in Lower Township.

Staff photo by Dale Gerhard

depends on the tides, since they can move from both the ocean and the Delaware Bay into the waterway. Straight seawater is 32 parts per thousand of salts.

Kraeutner said an existing swale would be used to send the water back to the canal when the plant is done with it. The key is what that water does in between leaving the canal and going back into it. If all goes according to plan, that water could help usher in a new industry where fishermen become more like farmers.

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