Cape fish farmer expanding into county

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MIDDLE TOWNSHIP — Most aquaculture operations grow fish or shellfish to give seafood lovers an alternative to stocks caught in the wild.

Pierces Point fish farmer Paul Waterman has taken it to another level. Waterman raises bait fish that anglers can use to go catch a fish in the wild.

“The future? It’s minnows and spot, the preferred striped bass bait. There’s much more money in bait. I’m the only one in the state interested in the bait aspect, as far as I know,” Waterman said.

Waterman, 56, has tanks full of mummichug minnows at one of his facilities in the

[Image]

Paul Waterman, 56, uses phragmites in the filtering of his fish tanks, in which he raises pond goldfish and saltwater minnows for commercial sale. In Newport, he will raise spots, another saltwater bait fish.

[Staff photo by Dave Gerhard]

Fish

(Continued from Page C1)

Green Creek section of the township. He grows them in saltwater tanks to sell to fluke anglers. He is also starting up an operation in the Newport section of Downe Township, Cumberland County, to grow spot, also called croakers, which he intends to sell as live bait to striped bass and tuna fishermen.

Waterman said he is one of about 15 state-licensed fish farmers but the only one growing saltwater finfish as far as he knows.

“These minnows were born and raised here,” said Waterman, as the tiny mummichug seem to follow his movements around the tank.

It’s taken Waterman five years of trial and error to grow the minnows. Success stories include the eight-inch mummichug he called “Godzilla” that was big enough to be filleted.

“She was big enough to eat,” Waterman joked.

Defeats included a fungus that attacked the minnow eggs almost immediately after the females deposited them. Nothing worked to kill the fungus. He figured that one out by accident when he was on a marsh and a full-moon high

[Staff photo by Dave Gerhard]

Waterman checks his stock of mummichugs, or saltwater minnows.
tide and witnessed thousands of the minnows depositing eggs on saltwater cordgrass at the waterline. He realized that the wild mummichogs don't deposit eggs directly into the water. They incubate in the air using the moisture from the cordgrass. This is the natural control for the fungus. He replicated the natural method, and the fungus disappeared.

It is not the first time a common-sense approach saved the day. He noticed when tanks were cleaned, the fish would die. He realized that they need the bacteria growing on the walls of the tanks. With the goldfish he grows for the backyard pond market, he even found the tannins released by decaying leaves were like "fish medicine."

"We had sick fish and put them in a tank with decaying leaves, and they got better," Waterman said.

It helps that Waterman spent years as a mechanic fixing Volkswagen Beetles and then ran companies that installed septic systems and did environmental remediation by digging up oil tanks. Waterman said Rutgers University biologist John Kraemer once told him he needed four things to be successful in aquaculture. The first two, being a mechanic and knowing plumbing, he already had. The second two, a knowledge of chemistry and biology, he had to learn. He also seeks advice from experts at Rutgers and Cumberland County College whenever necessary.

Being tuned into the natural world also helps. It was one of the oil remediation jobs that convinced him to use phragmites marsh reeds to clean the water in his aquaculture operation.

"We had an oil spill on Route 47 one day. We got the job to clean it up, but we couldn't find the oil. One of my workers broke a phragmite stalk off and oil flowed out of it. It had sucked up the oil. What could have been a monstrous catastrophe wasn't."

Fish waste includes feces and ammonia. He uses one type of bacteria to convert the ammonia to nitrates and another type to turn the nitrates into nitrites. The phragmites plants, known for being able to take contaminants out of the environment, are used to eat up the nitrates. The solid fish waste is composted or landfilled.

Waterman also follows the industry carefully for lessons he could learn before making the same mistake.

"One guy used galvanized pipe and killed $50,000 worth of striped bass with zinc poisoning," Waterman said.

He will not be using galvanized pipe.

Another thing he has learned is how important it is to pay strict attention to details. The first sign of a problem is the fish stop feeding. He religiously checks pH levels and does other chemical tests on the circulating water.

High real estate prices in Cape May County along the water helped Waterman make the decision to move to a marina he bought on Beaver Dam Road in Newport, where he landed 2.5 acres on the water for just $325,000. "This is a clean industry. It belongs in Cape May County, but I don't think it can survive due to real estate prices," Waterman said.

Newport is where he hopes to get the spot operation going. While a female mummichug only lays about 100 eggs at a time, he notes a spot produces sets of as many as 80,000 eggs. It takes about six months to produce a spot for stripers and nine months for the larger ones. Tuna fishermen seek the hard part is getting the product through the first few weeks from larval to fry stage. He hopes it will be well worth it.

"Live spots sell for $2.50 to $3.50 depending on how many you buy," Waterman noted.

With wife Linda and sons Scott, 8, and Scott, 10, helping him, Waterman has high expectations for the bait market but will still run the marina and continue doing environmental remediation this year to make ends meet.

Waterman, meanwhile, has learned fish have much more intelligence than people suppose. The fish actually break water to greet him and shy away from strangers near the tanks. They know when it's feeding time and jam the sides of the tank waiting for the pellets.

"They are not dumb at all. They ride the bubbles. They like to play. They take turns floating in the vortex of the drain. They flip up on the edge of the tank and lie out of water for awhile and then flip back in."

Paul Waterman throws feed to the pond goldfish he is raising at the commercial fish farm he operates in the Pierces Point section of Middle Township, Cape May County.