

Fish breeder eyes solar winter

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TUCKERTON — After raising 200 African fish in a converted chicken coop on Wood Street, George Michallis came to a few conclusions about aquaculture.

Neither startup costs nor labor demands were a problem for Michallis, who teaches carpentry. He spent about \$3,000 in tanks and other equipment and another \$250 for stock. His 6-year-old son, Brent, helped him care for the fish.

The only real drawback was the cost of providing enough heat for the tilapia, a fish native to Egypt and Africa, Michallis said.

To tackle that problem, Michallis devised a solar heat-



Laura Lee Photo
Armed with a federal grant, George Michallis of Tuckerton checks on a large fish breeding tank in his garage, which he hopes to heat this winter with solar energy.

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ing system and secured a \$3,313 grant to buy equipment for it.

The Tuckerton man was one of 40 Northeastern farmers and growers who won grants from the U.S. Department of Agriculture's Sustainable Agricultural Research and Education (SARE) program this year.

The program is meant to encourage people to try to find new solutions to agricultural problems, said Frederick Magdoff, the Northeast Region SARE coordinator.

"We're asking for farmers' ideas and then providing an opportunity for them to take some chances and try them out," Magdoff said.

Projects can include research trials, educational activities and demonstrations, such as Michallis' solar heating system.

Preparing for this year's harvest, Michallis added a greenhouse to the converted chicken coop. Fans

have been installed to blow hot air from that section to the tanks.

Michallis also bought solar panels for the hot water heaters.

The solar panels and greenhouse should account for about 60 percent of the heat used to keep the tanks warm this winter, Michallis said.

He said he plans to raise about 400 fish this year.

His first harvest was about 200 fish. His family kept half and sold the other 100 to a limited clientele.

"It's pretty much just to friends at this point," Michallis said. "Production isn't at the point to really do commercial sales."

The Rutgers Cooperative Extension Service does not encourage closed-system tanks, such as Michallis' tilapia. "It may cost more to grow the fish than you can sell it for," extension agent Gef Flimlin said.

Tilapia were not Michallis' first choice.

"I had originally thought about growing clams in the bay," Michallis said.

After waiting years to find a good place for a clam bed, Michallis turned to home-based aquaculture.