Future of oystering on Delaware Bay at risk
Sunday, April 6, 2003

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MIDDLE TOWNSHIP

Walking in rubber boots across a mud flat exposed by the rapidly falling tide, James Tweed checks on wire racks he hopes will salvage the future of oystering on Delaware Bay.

In mesh bags lashed to the racks with strips of inner tube are hundreds of thousands of oysters coming out of dormancy - and a hard winter.

"From now on, it's easy-street," Tweed said Thursday, dumping a bag containing scores of the knob-shelled bivalves onto the wet, rippled sand. "The freezing's done, the water's going to start warming up. They'll grow pretty quick."

Tweed manages the racks for Atlantic Capes Fisheries, a Cape May-based fishing company that is the largest of only three or four businesses growing oysters this way on Delaware Bay.

The oyster once ruled the bay - before microscopic parasites decimated traditional harvesting by boat.

The industry, which has seen more than its share of hardships, heartaches and dashed hopes as a result of the parasites MSX and Dermo, is finally on the verge of a rebound, say Rutgers University researchers developing oysters resistant to the diseases.

But Gov. James E. McGreevey's proposed budget threatens this, say the researchers, who work at Rutgers' Haskin Shellfish Research Laboratory. Funding cutback

A series of proposed cuts to the Rutgers Agricultural Experiment Station and the state's Commission of Science and Technology would result in a loss of about $370,000 to laboratory programs, said Haskins director, Eric Powell.

The cuts, amounting to half the state's total support for the laboratory, would "critically impair" efforts to develop oyster aquaculture along the bay, he said.

Furthermore, the cutbacks would force the closure of one of three field research labs Rutgers runs along the bay and would likely result in staff reductions, Powell said.

Perhaps most important, the lab faces cutting all aquaculture research and development, he said.

This means Rutgers, which has the state's only facilities for growing oyster seed stock - tiny oysters smaller than a pinkie nail - may no longer be able to supply Tweed or anyone else.

McGreevey spokesman Micah Rasmussen defended the cuts as necessary to help the state close its $5 billion budget gap without raising taxes.

"Only very essential services are being spared. Unfortunately there are very worthwhile programs that provide excellent economic results that we simply can't fund," Rasmussen
said. "That's not to say they won't be funded again."

Bradley M. Campbell, the commissioner of the Department of Environmental Protection, said the state did not directly decide to cut the lab's funding.

That decision was made by Rutgers based upon state funding cuts to the university, he said.

"The notion that this will have a direct adverse affect on aquaculture is absurd," he said, declining to elaborate. **An aquaculture zone?**

Ironically, the budget dispute comes as the state is considering a program to expand oyster aquaculture.

An advisory council is considering proposing a special aquaculture development zone just south of Tweed's racks, which are near farms and campgrounds about six miles north of Cape May Point.

This zone will make it easier for others to get state and federal permits needed to conduct similar operations, said James W. Joseph, chief of the state's bureau of shellfisheries.

Technically, Tweed is operating his racks without permits, but the state has not taken any enforcement action, Joseph said.

Six to eight people have expressed an interest in using the 100-acre zone, Joseph said.

"As is usually the case with these things, other guys are watching to see how they make out," he said.

The irony is not lost on Powell.

"The (state is) working pretty hard to establish this kind of aquaculture," he said. "At the same time, the science infrastructure needed to support it is going to disappear."

During the prime of the state's oyster industry in the 1940s, hundreds of boats, many powered by sail, harvested a million or more bushels of oysters from the bay each year.

Today, oystermen are lucky to pull up 10,000 bushels. **Disease resistance**

Rutgers has been working for decades to breed oysters with natural resistance to MSX and Dermo that can be placed back into the bay to grow to market size.

The parasites are harmless to people who eat oysters but kill oysters before they reach marketable size.

This technology is still impractical to revive, on any large scale, the traditional method of using boats to dredge up oysters, said Gregory DeBrosse, a Rutgers scientist who breeds the oysters in a lab not far from Tweed's racks.

But it's beginning to show great promise in development of aquaculture technologies such as Tweed's "rack-and-bag" system, he said.

This system, modeled after methods used on Cape Cod and in Europe, uses ladder-like racks made of metal rods to raise the bags of oysters a few feet above the beach tidal zone.

The racks and bags protect the oysters from predators such as oyster drills (a type of marine
snail) and whelks. By allowing them to be exposed to the rise and fall of tides, the system also allows the oysters to develop a tighter shell as they mature, Tweed said.

"When they end up in the market and you open them up, because of that tight shell they hold all their moisture," Tweed said. "They're a real fresh oyster."

The system also saves money because the company does not have to use boats, Tweed said. **Making them salty**

Atlantic Capes Fisheries has been using the system to raise oysters for sale to restaurants in Cape May and New York City for the past four years.

The company turned a profit on oysters for the first time last year, Tweed said.

The oysters are marketed under the name Cape May Salt Oysters for their briny flavor prized by raw oysters lovers, Tweed said.

They get this flavor because they are grown in salty water just a few miles from the mouth of the bay, Tweed said.

Traditionally, oysters have been harvested in state-owned beds farther up the bay where the water is less salty.

Sheets of ice that formed along the bay over the winter pushed many of Tweed's 300 racks down into the mud.

Tweed and his workers have been spending the spring pulling them back up before the oysters leave winter dormancy and need to begin filtering water for food and oxygen.

Over the decades, oysters have been intensively managed, moved from seed beds farther up the bay to market beds farther south, where they grow to harvest size - usually about 3 to 4 inches long.

But the beds produce very few oysters anymore because of MSX and Dermo.

MSX struck first, killing more than 90 percent of the bay's oysters between 1957 and 1958.

By the latter 1980s, Rutgers developed oysters that can survive MSX.

Then Dermo appeared in 1990, with equally devastating results.

By 2001, Rutgers developed oysters with a 75 percent survival rate against both diseases - a rate high enough to make aquaculture viable, DeBrosse said.

The budget cuts disappoint Tweed, who may be forced to try to develop his own system for rearing seed oysters.

"This is a viable enterprise," he said. "Everything we've done out here is a direct result of the research they've done in the lab."

**More information**

Cape May restaurants will feature Atlantic Capes' salt oysters during the Cape May Oyster Festival May 3-4. For more information, call the Mid-Atlantic Center for the Arts at (609) 884-