

Mussel Bound

PEI's Success Yields Lessons

By Aaron Porter

ELLSWORTH — The coast of Maine is one of this country's leading mussel production areas. According to state fisheries statistics, the hard-shelled little mollusks were a \$4.5 million fishery in 2003. Of the 4.2 million pounds of Maine mussel meat harvested that year, only 875,000 pounds came from cultivated mussels. The majority came from bottom-dragged wild stocks.

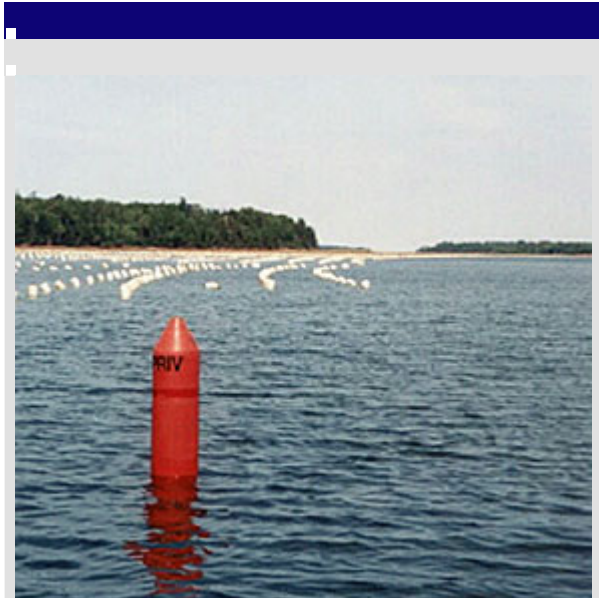
Questions about how aquaculture should fit in along the Maine coast have spurred growing public debate over the past five years. During that time, many applications for specific aquaculture leases have become venues for broader debates about the state's aquaculture lease program. In spite of the notoriety, and increased public awareness of Maine aquaculture, the active mussel leases comprise 228 acres of sea bottom leased from the state.

That's a paltry sum compared to Prince Edward Island's mussel lease inventory of 10,000 acres. The island province is Canada's juggernaut, when it comes to cultivated mussel production. In the North American market place, PEI has become synonymous with high-quality, rope-grown mussels. According to the PEI Aquaculture Alliance, the province's leases account for more than 80 percent of the mussels produced in North America. A glance at PEI's mussel industry makes Maine's seem insignificant. It also gives a taste of what Maine's nascent industry could be like when it grows.

According to Richard Gallant, aquaculture section manager for the province, 2003 mussel landings totaled 37.1 million pounds, with a value of \$23.6 million in Canadian dollars.

The mussel leases are spread among 123 different leaseholders, some of them companies, some individuals. There is no limit to the total amount a single grower can lease.

The industry supports seven processing plants on the island, as well as numerous



A new navigation marker helps boats get around some of the many mussel farms in Prince Edward Island bays.

PHOTO COURTESY OF THE PRINCE EDWARD ISLAND AQUACULTURE ALLIANCE

support industries. According to the aquaculture alliance, mussel farming creates about 2,000 direct jobs in the province.

Those numbers are impressive to many, but growth, especially on an island, is finite.

Most all of the province's usable mussel-growing waters are being used, Gallant said. That means the industry is growing elsewhere. Predictably, Nova Scotia, New Brunswick and Newfoundland have seen significant growth in mussel aquaculture in the last few years. With the majority of the Canadian mussels feeding the U.S. market, Maine is well positioned to meet some of that demand. Likewise, it is well positioned to learn a few lessons by watching how PEI made their mussel industry.

Building the PEI Industry

Mussel farming was introduced to PEI in the late 1970s on an experimental basis. The suspended-rope culture seemed to work well in the shallow bays of the island's north shore. The next important step was taken by provincial and federal fisheries departments to help plan and fund development of the industry.

"It did not start with fishermen," recalled John MacLeod, who started mussel farming in Tracadie Bay about 16 years ago. "They used to laugh at us." The first mussel farmers were entrepreneurs who had to show the skeptical fishing community that growing what had been considered junk shellfish, was a good business, he said.

There were a number of things the government did in the early days of island mussel growing, that were essential to development, MacLeod said. Most importantly, there was grant money available for research and development through the Atlantic Canada Opportunities Agency. MacLeod recalled that much of that money was used to experiment with efficient systems for setting, tending and harvesting the buoyed longlines of mussels from the bays. In addition there were loans available for new boats and mussel-specific gear. Those programs are gone, he said, but they were essential to get the industry started.

Gallant said there also was

considerable technical assistance from federal and provincial governments in the early days. He pointed to research into the best ways to collect mussel spat, moor longlines and eventually market the mussels. He said there's still a government effort assisting the industry in marketing and in monitoring biotoxins in island shellfish. However, the programs designed to get the industry started have done their work and been phased out, he said.

Now PEI's industry is flying on its own.

Conflict Resolution

Of course there is still government involvement since farming is done in public waters. And like Maine, PEI had some user conflicts to work through as aquaculture moved out onto the water.

MacLeod said there was what amounted to a “zoning” effort on the bays in the early days of the industry. He recalled how the federal fisheries department and growers who were just starting out in the province classified each bay in the province based on suitability for growing mussels or oysters and the historical uses of each body of water. Recreational or commercial fishing uses were considered, he said, and some areas were designated for no aquaculture, while others were given specific designations allowing bottom- or suspended-culture of shellfish, whichever is most appropriate.

Planning alone wasn't enough.

As the industry grew, bays got choked with gear.

MacLeod, who sold out of mussel farming three years ago, recalled a time when there were used plastic jugs being used as floats, sandbags used to hold down lines, and lines run so thick that navigation in some bays was difficult. The density of mussel gear vexed some waterfront property owners in Tracadie, he said.

The solution was local. There was a meeting of growers and residents to address the issue. “We met with the local people and we came to a compromise,” MacLeod said.

According to Gallant, that was how many local disputes were resolved in the early days of the industry. Growers, he said, “live in the community and work in the local community.” That means that many conflicts can be resolved among neighbors.

That said, Gallant and MacLeod agreed that the industry is consolidating as some independent growers sell out to larger companies.

As accountability moves from the immediate community dispute, resolution at the local level will change. However, a recently completed review of the industry and the rules governing it specifies how mussel longlines will be moored and how channels among them will be marked with navigational buoys. MacLeod said the changes carved channels through some mussel leases, but will be better for boaters trying to pass through bays.

Even with those changes, the mussel growing bays in PEI are far more crowded with gear than anything with which Maine boaters or mussel farmers must cope.

While dense farming crowds the waters of a bay, unchecked, it can have a

negative impact on the mussel farms, as well. MacLeod said in the middle of some bays, where currents aren't strong to start with, farmers have seen impeded growth when the natural food source of plankton in the water doesn't meet the demands of the mussels placed there.

"You can reach a point where you can start to go backward," he said. To avoid a situation where more work yields fewer marketable mussels, MacLeod said, growers have agreed to density limits in their mussel farms.

Lessons for Maine

In general, the longline-farming methods used on PEI are very different from the raft culture preferred by Maine growers. In the island's shallow bays, the suspended mesh socks the mussels grow on are about nine feet long. In Maine, the socks hung from rafts are as much as 40-feet long, depending on lease depths.

However, longline techniques using deeper lines could be a key to a more prosperous mussel aquaculture industry in Maine. Sebastian Belle, executive director of the Maine Aquaculture Association, said longline growing, such as that proposed by Erick Swanson for Blue Hill Bay, could be a dramatic change in the industry. He said the potential for automation on longline farms is significant, but there are wrinkles to be worked out.

In general, it's not a surprise that Maine's industry is behind the Canadian competition, Belle said. Government support was a crucial part of their success, he said.

"They got in early with what were essentially block grants, and that was huge," he said. It was a rural development program that seems to have worked.

Belle says some moves certainly can be taken from the Canadian playbook.

He said Maine would do well to prioritize tracts of sea bottom for aquaculture development, allow shared tenancy on leases, assist with mussel seed collection and distribution, and help provide some specialized equipment for independent farmers to share as they develop Maine's industry.

One of the keys to success for PEI, is the consistency of the product, Gallant said.

"The consumer is pretty well assured the mussels that comes out of PEI are the same," he said. That's because there is no bottom cultured or wild harvested mussels that go to market from the island.

Mussels from Maine can be anything from dragged wild mussels to thin-shelled raft cultured beauties, or some bottom-cultured varieties in between — a range of

mussels very different from the single variety upon which PEI's industry thrives.