

Stolt, UMaine; Partners in Cod Farm

By Aaron Porter

FRANKLIN — Salmon aquaculture in Maine is far from a sure bet these days. Faced with litigation, new genetic standards, evolving regulations, super chill, infectious salmon anemia and low market prices, some salmon farmers have said they'll sell the farm and move on to other pursuits. Perhaps they will.

But not everyone is fleeing the faltering aquaculture sector. One of the major industry players, Norwegian-owned Stolt Seafarm Inc., has just entered into a partnership with the University of Maine's Center for Cooperative Aquaculture Research to try growing something other than Atlantic salmon.

The company's renewed faith in Maine aquaculture comes from cod, the same fish whose abundance off New England drove the earliest European settlement of the region. But those days and the fish that went with them are long gone. Now it is absence, not abundance that defines cod in Maine. Following basic market pressures, the relative scarcity of the fish, coupled with the well-developed traditions and taste associated with it, make it a prime candidate for farming.

"We know we can rear these fish," said Nick Brown, operations manager at the university's center in Franklin.

Brown explained that it was demonstrated years ago that young cod could be raised in captivity. However, at the time wild stocks were still strong and there was no incentive to raise them commercially. That has changed.

"Now it makes sense because they're such a scarce resource," Brown said. And while he conceded that the price issue would always be a bit of a gamble, he added that commercial cod farming has taken off in Europe.

Stolt, which Brown said has experience growing other species, such as turbot and tuna, is well positioned to take the lead in developing cod farming in Maine.

"They've got the sites, people and equipment and they're interested in expanding," Brown said.



Juvenile cod are reared at the University of Maine's Center for Cooperative Aquaculture Research in Franklin.

PHOTO BY DENISE FARWELL

The university research center started raising cod from fertilized wild brood stock eggs last March. Brown said the facility is now housing 20,000 fish in a series of tanks. While he had hoped to have them in an industry net pen in the fall, Brown said the project was delayed and he was forced to keep the young cod growing indoors through the winter.

He said he was surprised how well the fish have done living in the higher densities that have resulted from their rapid growth.

“We’ve got up to densities we wouldn’t have dreamed of having them at,” Brown said.

Some of the fish weigh in at 200 grams, and Brown expects that to be an average weight when they head to the net pen at one of Stolt’s Downeast aquaculture leases next month.

Part of the federal funding of the project will help pay University of Maine graduate student Bill Palmer to monitor the growth of the fish.

Brown said this experiment in commercial-scale cod farming will focus on feed conversion rates, environmental impacts of the cod pen, fish survival rates, flesh quality and marketing.

Firstly, the focus is on “what we need to do to salmon net pens to adapt them for cod,” Brown said. He noted that the groundfish have been known to nibble through frayed netting.

On the plus side, “we know that they don’t get ISA [Infectious Salmon Anemia],” he said. That means the fish could be grown near salmon pens without fear of infection.

Brown said the schedule of production that could be possible growing the young cod in a hatchery facility for nearly a year before stocking them in a net pen would allow the harvest to be coordinated with the salmon efforts.

Brown said he hopes the cod will be of a harvestable size of 6 pounds by summer 2005. While the fish can be grown larger past that time, research will indicate what size is best for the market and when growth rates taper off to an inefficient level for commercial purposes.

“If there’s a fish that’s going to do well as an aquaculture fish in Maine, it’s going to be cod,” he said.

That doesn’t mean there aren’t some threats and complications. Brown said the fish have been vaccinated for an array of diseases, including *Vibrio*, which is known to infect cod. He stressed that the fish have not been given antibiotics.

As for the feed, it's a little different from what salmon require. Cod need higher protein and lower fat, Brown said.

In terms of the possible effects a cod pen may have on the leased bottom it hovers over, Brown said the feces of cod are less dense than those of salmon and would be more likely to be dispersed by natural currents.

The project has received \$358,000 from the National Oceanic and Atmospheric Administration and will require nearly another \$200,000 from the company and university for completion.

Brown said the aquaculture center in Franklin will develop a quarantine system at the same time, with an eye to adding 50 new wild cod to the brood stock he has already.

"What we have here now is very valuable," Brown said, referring to the disease-free cod and halibut brood stocks in Franklin. The quarantine systems will allow for the safe addition of new wild fish to the facility's holdings.

The facility is being upgraded to meet the needs of industry partners who are looking to experiment with commercial quantities of halibut and cod. Sea worm, sea urchins and nori (seaweed) also are being experimented on for commercial production at the center.