Innovative Research and Technology for Healthy Oceans

atlantic marine aquaculture center

ATLANTIC HALIBUT

Once abundant in the Gulf of Maine, the Atlantic halibut fishery has declined significantly in the past century, primarily due to fishing pressure. In June 2004, the University of New Hampshire's Atlantic Marine Aquaculture Center harvested one-and-a-half tons of farm-raised halibut, perhaps the largest regional haul of this once common groundfish since the 1950s.

HALIBUT RETURNS

June 2004 marked the culmination of a successful offshore culture of Atlantic Halibut (*Hippoglossus hippoglossus*). The halibut were raised in a submerged cage in the pristine waters of the Gulf of Maine, six miles off the coast of New Hampshire.

While there is interest in halibut culture in North America, available space limits the development of this practice in nearshore waters. An offshore halibut culture experiment was recently completed by the Atlantic Marine Aquaculture Center at the University of New Hampshire. Created in response to the need for increased domestic seafood production, the Center develops technology and methods to produce native, cold-water species of finfish and shellfish in exposed oceanic environments.

Selected for its disease resistance, cold-water tolerance, and high market value, Atlantic halibut was the first of three, native finfish species researchers have raised to market size. This harvest followed the successful development and transfer of technology to raise blue mussels on submerged longlines. A haddock harvest followed in the fall of 2005, and a cod harvest spanned winter 2005/06.

RAISING HALIBUT OFFSHORE

Halibut were purchased from a commercial fish hatchery in Digby, Nova Scotia. As three-inch juveniles, they were stocked in a Sea Station fish cage, manufactured by Nets Systems, Inc.

They were fed a chemical-free, formulated diet delivered from a support vessel to the cage, 30 feet below the surface. Initially, they were fed by hand, and later by an automated system that pumped feed from a surface buoy into the cages below. A rigorous monitoring program detected no measurable impact on the surrounding environment during the project.

HARVEST

After two-and-a-half years, the halibut were delivered to market at weights ranging from seven to nine pounds. Regulated, automatic feeding from the time fish are placed in offshore cages until their harvest will likely improve their growth rate in the future. The total harvest was approximately one-and-a-half tons, and was well-received by consumers, who praised its firm texture and delicate, ocean-fresh flavor.

FUTURE PROSPECTS

The halibut project is part of an overall goal to stimulate the further development of open ocean commercial aquaculture in New England, thereby increasing seafood production, creating new employment opportunities, and contributing to economic and community development.

Fish raised near the surface are exposed to more turbulence, bright sunlight, and seasonally high water temperatures. Research results from this first crop of Atlantic halibut indicate that submerged, offshore cage culture is a viable alternative.

LEARN MORE

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