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# Kona lab is aquaculture central

## The Big Island facility pipes sea water from the deep for industry

By Karin Stanton  
Associated Press

KAILUA-KONA » It's where science meets business.

The Natural Energy Laboratory of Hawaii Authority has evolved into the premier site for Hawaii aquaculture, where marine life is raised in controlled conditions before ending up on dinner plates around the world.

"It really is research in collaboration with industry," said Jackie Zimmerman, general manager for Unlimited Aquaculture. "I enjoy being able to do the research and then apply it commercially. It's all about perfecting techniques and finding out if it's economically viable."

The lab at Keahole Point was founded in 1974 to explore thermal energy development from the ocean, but within 10 years it became apparent the pure, cold, nutrient-rich sea water being pumped up from a depth of 2,000 feet could be channeled into other uses, and the Big Island's aquaculture center was born.

Today, NELHA is landlord to nearly 30 thriving enterprises that generate between \$30 million and \$40 million per year in total economic impact, including tax revenues, more than 200 jobs, construction activity and high-value product exports.

Statewide the aquaculture industry tops \$20 million annually, with the Big Island's enterprises accounting for about 80 percent.

The hatcheries, fisheries and breeding tanks at NELHA -- the state's largest aquaculture center -- are fed by pipeline systems that constantly pump deep and surface sea water to shore, which offers a wide range of opportunities to companies interested in developing and sustaining food sources.

"Normally, to get this experience I'd have to go to the East Coast," Zimmerman said. "But here it certainly makes my job easier to have that access to the deep cold water ... and I can wear board shorts to work, which isn't bad."

Unlimited Aquaculture currently is working with halibut -- native to the colder waters of the Atlantic Ocean -- and sablefish, or butterfish, as well as locally caught moi.

"We're testing to see what is commercially viable as a U.S. crop, what species are going to be viable," Zimmerman said. "We're looking for consistency."

One of the most well-established companies is Kona Blue, which harvests 18,000 to 19,000 pounds of Kona kampachi, or yellowtail tuna, each week.

It is rapidly becoming a favorite of gourmet chefs from Honolulu and Las Vegas to Seattle and New York.

"Chefs go bonkers over it. It contains no mercury or contaminants. It's an extremely healthy fish and so delicious," said Kelly Coleman, vice president of marketing.

The breeding stock are caught off the coast of the Big Island and spawn naturally. The fish are then reared in the hatchery and fed on algae and zooplankton specially developed by Kona Blue.

Another successful company that has developed its own systems and techniques is the Big Island Abalone Corp.

Fifteen years of research have led to important findings about abalone habitat, innovations in farm feeding practices and a patented algae used to feed the abalone, said Al Salomon, maintenance manager.

The 10-acre site typically nurtures 3 million to 4 million mollusks at a time, he said, with expansion plans that would double that inventory.

The company harvests about 70 tons of Ezo, or Japanese northern, abalone each year and exports the bulk to Japan, although a fair chunk also stays in Hawaii.

The crop, prized by sushi aficionados, makes it the world's largest Ezo abalone farm outside of Asia.

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