A million white bass later, aquaculture no longer a myth of the sea

by David Washburn

So what does an underwater cage full of white sea bass miles out in the ocean have to do with a sugar beet farm in northern Utah?

Everything, as far as Donald Kent is concerned.

AQUACULTURE AMBASSADOR - Donald Kent, president of the Hubbs-SeaWorld Research Institute, has led the nonprofit for more than a decade. CNS Photo by John Gibbins. It was a sugar beet farm that sustained Kent's father, Sidney Kent, and his family during the Great Depression. And though the elder Kent eventually left the farm and moved to San Diego to become a physical therapist, the farm never really left him.

"He loved working the land and taught us about food and sustenance," Kent said of his father, who died in 1982. "It's about self-reliance. Renewal. You can't destroy what you are dependent upon."

Kent likes to think that he took his father's teachings to heart and followed in his footsteps to a degree.

He went in a more westerly direction, away from the fields and to the sea, specifically to Hubbs-SeaWorld Research Institute where he has worked for more than 30 years, the past 11 as its president.

The nonprofit institute, which is based in Mission Bay water park in San Diego and employs 62 people, is known worldwide for its research on the effects of artificial sound on marine life, mass strandings of marine mammals and the migratory patterns of sea turtles.

But Hubbs-SeaWorld's main focus, and Kent's passion, is fish farming.

Two-thirds of the institute's $6 million budget is dedicated to its hatcheries, most notably a one-of-a-kind program that raises white sea bass for release into the ocean.

The program has put Kent and his fellow Hubbs-SeaWorld researchers at the forefront of one of the most important and contentious issues today: the depletion of the world's seafood stocks.

Population growth and a greater awareness of the nutritional value of seafood has led to a doubling of fish consumption worldwide since the late 1960s. The United Nations estimates that another 40 million tons of fish will be needed over the next two decades to satisfy world demand.

Meanwhile, the United Nations estimates that two-thirds of the world's fisheries are either fully exploited or over-exploited. In California, 19 species of fish, including seafood staples such as rockfish and sea bass, are seriously depleted.

An obvious solution to the vanishing wild fish population is more fish farms. And globally, that is exactly what has happened. Aquaculture is booming throughout Asia and in parts of South America and Scandinavia.

The number of hatcheries also has grown in the United States, but not at nearly the same rate as elsewhere because of resistance from environmental groups and commercial fishing interests. As a result, the United States imports about 80 percent of its seafood and has a trade deficit of $8 billion in seafood.

Badly managed aquaculture can contaminate coastal ecosystems. Antibiotics used to control disease in fish can pollute ocean waters; waste from large populations of farmed fish can damage the ocean floor; and the food chain can be disrupted because of the high amount of fish meal needed for the farms.

Aquaculture also threatens commercial fishing operations. Kent, who spends a fair amount of his time lobbying for aquaculture in Washington, D.C., said such concerns are valid. But he is rankled by the dearth of solutions being offered by commercial fishers and environmental groups.

He considers himself a scientist and conservationist first, but he said he is also a realist. And the reality, he said, is that the current situation - a combination of overfishing and loosely regulated farming operations in other countries - is doing more damage to the oceans than responsible fish farming would.

"The opportunity now is to create an industry that grows seafood by our standards, so it comes into our market, creating U.S. jobs and keeping U.S. money in the U.S.," Kent said.

"That is not me talking as a scientist; it is me talking as a U.S. citizen and a consumer."

Making good on this opportunity will take patience, persistence and the guts to be a trailblazer - qualities that those who know him say Kent has in spades.

"Don has a very self-deprecating sense of humor, likes to call himself a fish farmer who just fell into his position," said Pam Yochem, who heads the Hubbs-SeaWorld science program.

"But he has that perfect mix of a scientific background and business acumen. And he always had a vision that

the institute would grow to where it is today."

Although he largely lives the meeting-driven life of an executive, Kent, 55 - a big, tall man who bears a slight resemblance to actor Joe Don Baker - still likes to get his hands wet.

He shows off the aesthetically bland laboratories and pungent fish tanks of Hubbs-SeaWorld's main hatchery at Agua Hedionda Lagoon in nearby Carlsbad, Calif., with the enthusiasm that only a true science geek could muster.

"He'll be in a business suit in Washington, D.C., one day, and out working on a plumbing problem in one of the fish tanks the next," Yochem said.

Kent started as a researcher at Hubbs-SeaWorld during the 1970s while still a graduate student in San Diego State University's marine ecology program. After graduation, he was managing the institute's laboratories.

At the time, Hubbs-SeaWorld was a shoestring operation with a $200,000 annual budget and 3,000 square feet of lab space in Mission Bay. Kent and his fellow researchers and students essentially built the labs from scratch.

"It required a lot of hands-on, farmer type of work," said Kent, who became the institute's president in 1996. "Not only riding the tractor, but fixing it when it breaks down."

Kent's colleagues say his willingness to do the grunt work is one of the main reasons that the institute's largest program, which focuses on replenishing stocks of white sea bass, has been successful.

Decades ago, the Southern California coastline was thick with white sea bass, which are valued for their firm, white flesh. By the 1970s, the population had been decimated by overfishing and habitat destruction.

In 1982, Hubbs-SeaWorld established the Ocean Resources Enhancement and Hatchery Program and in 1995 opened the 20,000-square-foot hatchery in Carlsbad.

The hatchery program's goal was to do something that had never been done before: take white sea bass from the wild and spawn them in the hatchery. Then, with the help of sport fishermen, grow the juveniles in cages situated off the coast from Santa Barbara, Calif., to San Diego.

Tags that identify the fish as coming from Hubbs-SeaWorld, along with other data, are planted on each juvenile sea bass spawned in the hatchery. It's legal to catch sea bass longer than 28 inches, and sport fishermen are urged to turn in the heads of sea bass they catch to Hubbs-SeaWorld researchers.

Last year, the institute released its 1 millionth white sea bass. And though it is impossible to know exactly how much of Southern California's white sea bass population comes from Hubbs-SeaWorld, Kent estimates it at about 15 percent.

In June, Kent was awarded a Sustainable Fisheries Leadership Award from the National Oceanic & Atmospheric Administration largely because of his success with the white sea bass.

"Don has certainly been a pioneer in aquaculture," said Michael Rubino, manager of NOAA's aquaculture program. "And a good ambassador."

With word of his successful programs spreading, Kent has increasingly found himself being tapped for more national and state advisory boards on aquaculture and other marine ecology issues.

"As we go forward, trying to figure out how to feed ourselves, it's good to have somebody like Don spending the better part of his life trying to answer those questions," said Dave Gardner, president of the Hubbs-SeaWorld board.

Kent said he still has a lot of work to do and harbors no desire for an early retirement. But he does think about the long-term legacy of Hubbs-SeaWorld and eventually passing the torch.

"I'm waiting for the next generation of scientists to come through and take a leadership role," he said.

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