

WAI'ANAE BACKYARD AQUACULTURE PROJECT

Wai'anae Coast, Hawaii

The Wai'anae Backyard Aquaculture Project provides support to families interested in the small-scale production of Wai'anae sunfish as part of a community economic development project. Under a formal agreement, the project provides financial assistance to families for initial capital expenditures and first-year operating costs. It supports the development of a local market for sunfish and the formation of a family-run association of aquaculture producers.

The goals of the Backyard Aquaculture Project are: self-reliance in food production; the strengthening of social relationships; home-based income opportunities for Wai'anae Coast families; and improvement of the community's nutritional standards.

The project:

- selects, trains and provides technical support to families interested in backyard-scale fish production;
- arranges financial assistance for tank construction and first-year operating costs;
- coordinates a common marketing system for all participating families;
- develops local and external markets for the Wai'anae sunfish; and
- conducts research to improve the production of the backyard aquaculture system.

Families participating in the program:

- complete an intensive, hands-on training program designed to produce competent and confident backyard aquaculturists;
- construct a backyard aquaculture system and help other families do the same;
- participate in the project's coordinated marketing system; and
- become active members of the Wai'anae Backyard Aquaculture Family Association.

The project sponsor is the Wai'anae Coast Community Alternative Development Corporation (WCCADC). It was formed as a tax-exempt, non-profit organization in 1987. Its aim is to promote self-sufficiency and self-reliance for the Wai'anae Coast, and, in

the process, rebuild the community's self-esteem and strengthen community members identity as Native Hawaiians.

"Work is medicine"

The WCCADC developed out of a citizens movement in the late 1970s to challenge plans for construction of a \$3 billion luxury class tourist and residential project by West Beach Estates at the mouth of the Wai'anae coast community. Concerned residents formed an unincorporated association, the Wai'anae Land Use Concerns Committee (WLUCC). The residents saw that the development of the type and magnitude proposed at the mouth of the Wai'anae coast would deplete human and natural resources as well as cause environmental, social and spiritual problems in an already stressed community. There was 20 percent unemployment in the community and high rates of substance abuse and domestic violence. The WLUCC actively sustained its challenge of West Beach Estates' plan for more than ten years.

A mediated agreement was reached between West Beach Estates and the WLUCC on January 22, 1987. In the agreement, West Beach Estates formally recognized the need for the Wai'anae Coast Community to maintain stewardship of its own natural and human resources by developing an independent economic base to support the social, cultural and spiritual development of people and families in the community. West Beach Estates contributed funds to assist in the establishment of a community-based development organization. The Wai'anae Coast Community Alternative Development Corporation resulted. It represents the mature vision of many community members and organizations that have tried for more than two decades to solve the problems of rapid urbanization and ghettoization of one of the few remaining rural areas on the island of Oahu. It seeks to provide a cultural anchor for the people of the Wai'anae Coast, and to assure residents that there can be economic development that does not sacrifice the community's self-esteem and respect for Native Hawaiian culture. Its guiding philosophy is "work is medicine."

**One foot on land;
one in the ocean**

The Backyard Aquaculture Project is one of two WCCADC projects. The development process used by WCCADC in the project draws upon traditional Hawaiian values and principles of sustainable development, appropriate technologies, cultural compatibility and spiritual guidance.

The first two years of the project, 1989-90, were devoted to technical research and development using funds contributed by West Beach Estates. The pilot phase of the project began in 1991 with nine families. It was funded by a \$300,000 grant from the Hawaiian Department of Business, Economic Development and Tourism. The Growth Phase ending in June, 1995, was funded by a \$617,000 grant from the Administration for Native Americans.

Backyard aquaculture was chosen because the island people say they live with one foot on the land and one foot in the ocean. Historically, fish has been a key element in the diets of all Hawaiians. Present day consumption of fish has declined dramatically. This decline reflects a supply and demand situation that supports high prices for fresh, locally caught fish.

Fish farming provides an alternative means of supplying fresh fish to local markets. Backyard aquaculture is essentially a modern translation of the ancient practice of raising fish in enclosed ocean "ponds." In earlier times, raising fish ensured families of available food when oceans were rough or fish was not plentiful. The same thing is true today. A fish-raising family can have fresh, safe fish to eat even in times when fish are scarce, polluted or, because of high prices, prohibitive to buy.

Most Wai'anae families can master the technology of backyard aquaculture. It is not time, space or water intensive. The tasks of tank construction, management and harvesting of the fish can involve all members of the family.

A major long-term goal of the project—self-reliance through food production—is beginning to be met both for the family and the community. There are 28 families participating in the project, including five who are currently being trained. The families operate a total of 50 backyard aquaculture tanks. A family operating a single backyard system can produce 500 to 600 pounds of sunfish per year and are averaging approximately 235 pounds of market-sized fish per tank per six month production cycle. Collectively, the families in the project are able to produce about 20,000 pounds of sunfish per year.

Families work together

The project's focus on strengthening social relationships is based on an interpretation of the difference between work and employment. Work is considered to require passion and dedication and leads to building self-esteem for individuals, families and

communities. Employment is considered an activity that pays bills, but may not help self-esteem. The project promotes backyard aquaculture as family work. It supports the idea that families who work together will form strong bonds that can endure stress. And the project provides residents with a way to share the results of their work with friends and neighbors. Participating families have agreed to sell fish to community members at a discount (\$3.00 to \$3.25 a pound) in comparison with Oahu's market price (\$4.00 to \$4.50 a pound). The spirit of sharing success is valued in Hawaiian culture.

Another goal of providing home-based income opportunities for Wai'anae families can be met because the production of sunfish is profitable. The cost of production is between \$1.00 and \$1.30 a pound, well below the price to community members. A single tank may not generate much income, but additional tanks can be built by a family.

The project also has the potential to improve the community's nutritional standards. State Health Department statistics show that the Hawaiian population of the Wai'anae Coast has the greatest prevalence of chronic illnesses such as heart disease, diabetes and high blood pressure. Health officials link the problems to high fat diets. The Wai'anae Sunfish has one of the lowest fat contents of any species available to residents. As fish replaces other animal protein in the diet, people will benefit.

Next steps

The Backyard Aquaculture Project is entering into an expansion phase, planned to extend through June 1998. It will:

- Extend participation to include families dependent on public assistance programs;
- Double the number of families participating in the program to approximately 60;
- Enhance the capacity of current families to produce food by: 1) supporting the expansion of their aquaculture activities; and, 2) providing training and technical support for integration activities such as taro, vegetable, or fruit cultivation, and/or hydroponic plant production;
- Aggressively establish an expanded market for the sunfish;
- Broaden the product base by introducing new species of fish; and
- Establish a legally-defined family cooperative.

The community-based economic development approach and activities of the Wai'anae Backyard Aquaculture Project are well known within the community and

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Scope: Local, rural
Inception Date: 1987
Participants: Families and community residents
Project type: Community development, economic development, cultural preservation, food production
Methods used: Fish farming tank technology; family scale enterprise as a condition; subsidy at start-up with trainings; revolving loan aspect
Lessons learned: The "family-run" requirement gives powerful benefit to eroding traditional social structures; new home-based venture encourages other options to emerge. Initiatives based in community culture and values, gains supporters and participants; single initiatives lead to expanded opportunities.

throughout the state of Hawaii. The project has gained a number of supporters in state government, some of whom initially wrote the project off as "small-scale and insignificant." Agencies supporting the expansion include the Departments Agriculture, Hawaiian Homelands, the Housing Authority and Welfare Department.

The WCCADC has developed a formula that works—for the people, for their economy and for their environment—and it is replicable, in similar climates "state-side," or with protection in colder climates.

—Community Sustainability Resource Institute



UPDATE

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The Backyard Aquaculture Project's success led to the formation of a new organization in June 1997, the Wai'anae Alternative

Crop Cooperative (Co-op). In March 1996, the BAP participating families with WCCADC's support entered into a 17-month planning process, "Owning Our Sweat," to explore the idea of forming the cooperative. Working with consultants, they met on a regular basis to first examine options and then develop the organization.

WCCADC will continue to maintain its hatchery and will provide technical aquaculture services and fingerlings to the Co-op and family businesses.

The WCCADC has worked with residents of Nanakuli Housing public housing project to create the Nanakuli Homes Community Center. The release of one housing lot for the community center has been negotiated. WCCADC is developing an aquaculture program at the center.

These activities have intensified the need for space to expand operations. Backyard aquaculture has been an important first step in alternative economic development. WCCADC is now taking the second step: the development of an Integrated Aquaculture/Agriculture Park (IAAP).

The IAAP is being established as part of the Wai'anae Coast Community's long range socioeconomic development and will offer the opportunity for increased commercial production and income generation for community families.

Four objectives of the project are to:

- 1) create a center for research and development of relevant technology including new product lines and markets, resource-efficient production systems and the integration of aquaculture with hydroponics and terrestrial crops;
- 2) create a community center;
- 3) provide a location for the Wai'anae Alternative Crop Co-op; and
- 4) provide a location where families currently on welfare or in public assisted housing can become involved with aquaculture.

The IAAP will be established on a nine acre parcel of state agricultural land leased by the WCCADC for 45 years, ending July 31, 2038. Planning for the physical development of the site and for the family and community work that will take place at the IAAP has begun with funding from the Administration for Native Americans. A capital campaign is underway to raise the \$1.5 million needed to build the park. It will take a minimum of three years to raise funds.

—Community Sustainability Resource Institute