

THE VITAL ROLE OF THE COLLEGE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES IN HAWAII'S AGRICULTURE AND COMMUNITIES

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The Present Situation

Three urgent and overlapping needs in Hawaii today are (1) to revitalize the state's economy and diversify its base, (2) to protect the state's fragile ecosystem, and (3) to strengthen the state's communities, particularly those rural communities thrown into turmoil by the closures of sugarcane plantations and the need of commodity groups to respond quickly to competitive forces. The College of Tropical Agriculture and Human Resources (CTAHR) of the University of Hawaii at Manoa, with its mandate to engage in research, instruction, and outreach, can and must take the initiative to help the state meet these needs.

A way to address all three needs simultaneously is to reinvigorate the state's agriculture industry. Agriculture offers an economic base that can expand significantly. Furthermore, farmers and ranchers are traditionally stewards of the land. CTAHR, the original academic unit in the University of Hawaii system, has a 93-year history of supporting Hawaii agriculture, particularly in the development of diversified crops. The college also has a tradition of caring for the environment, assuring that crops and farming practices are conducive to enhancing and sustaining the state's ecosystem. Finally, community development and service, for example in 4-H and Family Community Leadership programs, have been among the college's major research and extension thrusts since the early 1920s. In short, CTAHR's mission and activities from the beginning have been and continue to be in exactly the areas of need.

We have impressive evidence that the state's agriculture industry has already begun a renaissance. Figures just released by the Hawaii Agricultural Statistics Service show that the farmgate value of agriculture in 1999 increased three percent to \$528 million. Of that total, fully 64% (\$339 million) was from diversified crops—that is, crops other than sugarcane and pineapple. In 1980, diversified crops (\$172 million) accounted for only 27% of the total. The value of diversified agriculture has increased by 97% in 19 years. Clearly, it is growing steadily more valuable to the state, and the rate of growth can be increased significantly with strategic investment. This opportunity should not be squandered.

CTAHR's Contributions

The challenge before the state is to capitalize on and expand the development of this resurgent agriculture while at the same time dealing with the equally important needs of protecting the environment and strengthening the state's communities. CTAHR has already taken up that challenge. An October 26 Honolulu Star-Bulletin front-page story illustrates the point.

The story deals with the Waialua Farmers' Cooperative, a successful program aimed at encouraging former Waialua Sugar Co. workers to take up farming. A CTAHR extension agent provided the original impetus for the program. Today, CTAHR is providing expertise in leadership issues, food safety, post-harvest handling, and food processing, among others. Jeanne Vana, president of the WFC, credits these CTAHR representatives with providing the technical assistance that leads to self-reliance on the part of the farmers. On a day-to-day basis, a private consulting firm assists the farmers. Two CTAHR graduates run the firm.

On the environmental front, the Waialua program with assistance from CTAHR is building on the national Sustainable Agriculture Research and Education program. It intends to set up demonstrations for established farmers in the area to teach best farming practices, especially those that will help the farmers to meet increasingly stringent Federal environmental regulations. The Environmental Protection Agency is assisting the WFC and using it as a model for similar programs not just in Hawaii but in other locations around the United States.

The Waialua community is strengthened in a number of ways. Some people who moved away when the mill closed have returned to take advantage the program, thus renewing community ties. Families are participating at all ages in cultivating the farms, contributing not only to the success of the farm but also to the cohesiveness of the family unit. Young people who never thought of farming as a career are now pursuing the possibility of maintaining and expanding the families' farms into commercial enterprises when their parents are no longer able to do the work.

This is only the most immediate example of CTAHR's contributions and value.

Examples abound of past and present contributions. Among them:

- CTAHR agents encouraged farmers in the Kamuela area to try high-value crops and helped them develop niche markets for those crops.
- CTAHR researchers looked at taro farming practices and encouraged wetland taro farmers on Kauai to alter fertilization practices, thereby saving money and reducing disease incidence.
- CTAHR's Center of the Family studied the qualities of resilience in families affected by the closing of sugar plantations to assist businesses around the state in providing support to any families faced with loss of jobs.
- CTAHR researchers developed a transgenic papaya resistant to virus, thereby saving the papaya industry from almost-certain demise.

- CTAHR specialists and agents teach farmers how to use crop chemicals safely and economically.
- CTAHR agents teach individuals and families to use money wisely to provide for present needs and a secure retirement.
- CTAHR specialists devised hot water treatments that permit Hawaii cut flowers to pass quarantine and be shipped to U.S. mainland markets.
- CTAHR agents have helped Big Island ranchers develop markets for range-fed beef and value-added products.
- CTAHR agents provide low-income families with advice on how to prepare nutritious meals on a budget.
- CTAHR breeding researchers have provided a steady stream of anthurium and orchid varieties to keep Hawaii flower growers competitive with global markets.
- CTAHR programs in former sugarcane communities are encouraging the development of leaders to increase community stability and using local schools as focal points for education and community development.
- CTAHR's Agricultural Diagnostic Research Center provides soil analyses and fertilizer recommendations.

Note that these contributions to the State occurred during the period when the college's general fund budget and faculty FTE were reduced by 25%.

Looking to the Future

For Hawaii to be competitive globally, it must diversify its economic base. Agriculture can be a major player in this process by developing high-value products that take advantage of Hawaii's brand identity. "Made [or Grown] in Hawaii" should be a mark of excellence and quality that people all over the world will seek out. To succeed in this, we must identify high-value niche products and then always stay ahead of our competitors by supplying new, improved varieties of those products on an ongoing basis. Here is where CTAHR researchers and extension experts can be invaluable to the agricultural community and the state.

As much as CTAHR has accomplished over the years, much more needs to be done. Agricultural biotechnology will be a growing force internationally in the coming years. Hawaii has the potential for becoming a hub of activity in this area and stands to reap substantial financial rewards as a result. CTAHR must play a pivotal role for the state to realize this goal. CTAHR also has a major responsibility to address and allay the fears of the public with regard to biotechnology and to assure that the products of such technology are safe for consumption and for the environment.

Some areas in which CTAHR needs to work in the future include:

- Help growers and ranchers develop new markets.
- Identify new high-value niche products.
- Help to strengthen the state's apparel industry. (Apparel and apparel merchandising are programs within CTAHR.)

- Train growers in best farming practices to maximize their chances of success and to protect the environment.
- Enhance CTAHR's role as an information resource and improve its information delivery system.
- Continue to assist the development of the agricultural biotechnology industry in the state.
- Increase research and extension to fight against tropical pests and diseases.
- Conduct research that will assist the state to formulate visionary land and water use policies.
- Develop a stronger forestry industry and assist with reforestation efforts.
- Train people who can work with local communities to ensure that conservation efforts are acceptable to them and in accord with local values and traditional land uses.
- Improve outreach to families and communities for the purposes of creating leaders, protecting children, and building stability.

Conclusion

Revenues today from agriculture are relatively low by comparison to those from the Federal government or tourism. Consider this, however: the Federal government's contribution to the state's economy will diminish over time; tourism can be allowed to grow only so much before the quality of life is threatened. Diversified agriculture, on the other hand, has the capacity for enormous growth. Encouraging agricultural development not only will pay financial dividends to the state but will pay environmental and social dividends as well. Green space will be preserved and rural communities will come alive.

The time was never better for CTAHR to realize its vision to be the premier resource for tropical agricultural systems and resource management in the Asia-Pacific region. And realizing that vision should begin at home. CTAHR must be the premier resource of the growers, ranchers, and communities of Hawaii. CTAHR's goal is help revitalize the state of Hawaii by fostering the continued growth of a viable agricultural industry and strengthening the state's human and natural resources.