Revitalizing Hawai‘i’s Agriculture and Rural Communities

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Part I: The Importance of Agriculture to Hawai‘i

“Ua mau ke ea o ka aina i ka pono.” The life of the land is perpetuated in righteousness. Embodied in these words, the motto of the kingdom of Hawai‘i and now the motto of the State of Hawai‘i, is the timeless recognition by Hawai‘i’s people that a responsible society sustains its land and is sustained by it. It is to meet this responsibility that one of Hawai‘i’s most urgent priorities must be to create the conditions under which agriculture can resume its historical role as an integral part of the state’s priorities and economy. A thriving agriculture industry—agribusiness—is essential to the state’s economic, environmental, and social well-being.

From the time of the first human settlements in these islands until the latter half of the twentieth century, agriculture was Hawai‘i’s primary economic and social engine. Not only did it provide sustenance and employment, it also preserved the lush, green, rural aspect loved by local residents and valued by visitors. It has been only since the sugarcane industry faltered and increasing numbers of sugarcane and pineapple acres were withdrawn from cultivation that agriculture has lost its economic primacy, being supplanted by tourism and the federal government.

The effects of the decline of the sugarcane industry and the end of the plantation lifestyle it engendered were masked for years by the success of tourism. As it had once depended primarily on agriculture, the state again depended on one industry as its primary economic engine. It took the downturn of the 1990s, brutally punctuated by the terrorist attacks of 2001 and their devastating effects on tourism, to teach us that the state cannot concentrate all its effort in one industry. To regain and sustain prosperity, Hawai‘i’s economy must be diversified.

Revitalizing and expanding the agriculture industry is an obvious choice for economic diversification. Not only does agriculture have excellent potential for growth on the tens of thousands of acres no longer planted to sugarcane and pineapple, but also its development is essential for our long-term food security and the sustainability of tourism. In an increasingly unstable world, Hawai‘i must be able to assure a safe, adequate food supply for its citizens. In the words of the W. K. Kellogg Foundation, we should be developing “community-based food systems that are locally owned and controlled, environmentally sound, and health promoting.”

We must also preserve our unique lifestyle and the beauty of these islands, not only for our posterity but also to continue to attract millions of visitors to our islands. Both goals are achievable through the expansion of agriculture.
Preservation of our lifestyle means reviving and preserving our rural communities. Much of the ambiance of Hawai‘i is expressed in its rural character. Despite urbanization on all islands, it is still the case that the image of Hawai‘i, at least in the minds of residents, is one of close-knit rural communities and lush green fields. Those close-knit rural communities are slowly unraveling and the fields are giving way to roads and houses and strip malls.

As sugarcane plantations closed across the state, the resulting unemployment created a flood of social problems. In an effort to earn a living and maintain their homes, some people who did not have all the skills necessary to succeed were attracted to agriculture. Consequently, rural communities are experiencing agribusiness failures and decline of rural vitality. Youth are leaving old plantation areas rather than staying to take up the challenge of farming. Even the typical supporting institutions of a community—church, school, social outreach—have seen erosion of services. One way the people of Hawai‘i can save these communities and the lifestyle they represent is to develop agribusinesses and related jobs so people can live and work in their rural communities.

It is clear that the public recognizes the need for a healthy agriculture industry. In 1978, the Hawai‘i State Constitution was revised to add Article XI, Section 3, which mandates, “The State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency, and assure the availability of agriculturally suitable lands.” More recently, the People’s Pulse survey, sponsored by Enterprise Hawai‘i and the Hawaii Business Roundtable, showed that 90 percent of the people surveyed said the state should help agribusiness grow (Fig. 1).

**Figure 1**

<table>
<thead>
<tr>
<th>Which Sectors Should State Help To Grow?</th>
<th>% Rating Agree</th>
</tr>
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<tbody>
<tr>
<td>Agri-Business</td>
<td>33</td>
</tr>
<tr>
<td>Information Technology</td>
<td>33</td>
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<tr>
<td>Bio-Technology</td>
<td>36</td>
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Source: People’s Pulse, Spring-Summer 2002
Developing a profitable Hawai‘i agriculture industry will take ingenuity, entrepreneurial spirit, public and private investment, visionary legislation, and the consistent will of Hawai‘i’s citizens. The payoff will be that we will create capital and jobs for our children, stabilize our rural communities, assure our own food security, keep our islands attractive, and save our land and our water.

Agriculture should not be revitalized and expanded haphazardly. Success requires that we first establish a strategic plan for agriculture. We must then provide the means to implement the plan. Finally, we must vigorously pursue it. This discussion centers on establishing a process to create a strategic plan for agriculture. We begin by assessing the current status of the industry. We conclude by proposing a procedure to produce a strategic plan that, if endorsed and pursued diligently by a broad range of constituencies, will have the potential to double the value of Hawai‘i’s agriculture in five years.

Part II: An Assessment of the Status of Hawai‘i Agriculture in 2002

From time to time in any endeavor, a confluence of circumstances signals a time to act, a “tipping point” as writer Malcolm Gladwell describes in his recent book of the same title. We have reached that point in Hawai‘i agriculture, as evidenced by the following:

- All but two sugarcane plantations have closed and pineapple plantations have scaled back their acreages, freeing more than 150,000 acres of productive agricultural land.
- Governor Lingle’s “A New Beginning” document states that agriculture is an important factor in Hawai‘i’s economy and should be expanded to help further diversify the economy.
- The Hawai‘i Farm Bureau Federation has developed a strategic plan for agriculture.
- Legislative leaders have shown interest in addressing the constitutional mandate to protect agricultural lands.
- Leaders of the University of Hawai‘i recognize the university’s expertise in tropical agriculture as one of the strengths it must nurture and develop.
- A coalition of farmers and landowners has been formed to find mutually acceptable solutions to Hawai‘i’s vexing land use issues.
- The federal government is building a multimillion dollar tropical agriculture research center in Hilo.
- Hawai‘i’s regional cuisine, which promotes the use of Hawai‘i-grown products, has become famous throughout the world, putting Hawai‘i food products on the culinary map for the first time and attracting tourists for that reason.
• Recent national and international events have demonstrated the need for Hawai‘i to become more food self-reliant.
• Agricultural leaders from across the state recently met to demonstrate agriculture’s strength and to share ideas on solutions to some of the many problems that limit Hawai‘i agriculture.

It is clearly time for public and private interests to make a committed effort to build on and strengthen Hawai‘i’s agriculture industry. About 100,000 acres of former sugarcane and pineapple land are lying fallow, awaiting economically viable enterprises to make use of them. If all this land could be put to productive use in successful agricultural ventures, an additional $1.7 to $4.4 billion could be added to the state’s economy. For that to happen, however, concerned citizens, policy makers, and producers must identify the productive uses and remove the constraints to their implementation. Agriculture must be profitable so that landowners receive a reasonable return on their assets and growers, in turn, build long-lasting businesses that make enough money to sustain their families and those of their employees, allow for expansion, and contribute significantly to the economy of the state.

Some have argued that the decline of plantation agriculture means Hawai‘i’s agriculture is dying. One of Honolulu’s daily newspapers asserted as much in a prominent editorial as recently as January 2002. We cannot make the point emphatically enough: the death of Hawai‘i agriculture is a myth. A more appropriate statement is that “agriculture is not dead, it is just different.”

The value of diversified agriculture (a term frequently used to differentiate plantation agriculture—sugarcane and pineapple—from other types of agriculture) has more than doubled in the past 20 years (Fig. 2). For several years during the economic downturn of the late 1990s, diversified agriculture was the only industry in Hawai‘i that was actually growing. Agriculture and value-added products in Hawai‘i currently contribute $2.4 billion to the State’s economy and employ more than 38,000 people (Fig. 3). On all of our islands, successful, hardworking entrepreneurs are creating new markets and developing new products from awa to rambutan and fast-growing sectors such as aquaculture, for example. These individuals form a solid nucleus for expanding agriculture in the state. Agricultural tourism is expanding rapidly, enhancing visitors’ experiences and creating positive memories of Hawai‘i, helping to increase food sales, and encouraging longer stays by tourists. With the development of Pacific Rim cuisine, entrepreneurial local growers are catering to the needs of local chefs to provide them with fresh ingredients.
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**Figure 2**

![Graph showing sales trends](image)

**Figure 3**

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<thead>
<tr>
<th>Distribution Margins</th>
<th>Sales</th>
<th>Labor Income</th>
<th>Employment</th>
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<tbody>
<tr>
<td>Ground Transportation</td>
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<td>Water Transportation</td>
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<td>Air Transportation</td>
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<td>Wholesale Trade</td>
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<td>Retail Trade</td>
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<td>Ground Transportation</td>
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**Food Processing Sectors**
- Pineapple Processing
- Other Canned Vegetables and Fruits
- Sugar Processing
- Confectionery Products
- Salted and Roasted Nuts and Coffee
- Meat Products
- Milk Products
- Grain and Bakery Products
- Beverages
- Other Food Products

**SALES**
- $2.4 Billion (4% of HI Total)

**LABOR INCOME**
- $.74 Billion (3% of HI Total)

**EMPLOYMENT**
- 38,350 Jobs (5% of HI Total)

**Farm Production**
- Sugarcane
- Tree Nuts
- Pineapple
- Coffee
- Other Fruits
- Flowers, Ornamentals and Nursery Plants
- Dairy Farm Products
- Poultry and Eggs
- Cattle and Calves
- Hogs
- Misc. Livestock (goats, sheep etc.)
- Aquaculture
- Other Agricultural Products
- Forestry and Forest Products
- Commercial Fishing
- Agricultural, Forestry and Fishery Services
- Landscape and Yard Care Service
Looking to the future, we expect to read the following description of Hawai‘i in a travel or food publication:

*Hawai‘i agricultural products are of exceptionally high quality and produced in a manner that protects the beauty and integrity of the tropical paradise in which they are grown. Consumers recognize this and are willing to pay high prices for these exceptional products. Visitors to Hawai‘i are increasingly drawn to agricultural attractions to purchase an impressive array of products, tastefully packaged and designed to make wonderful gifts for any occasion. The agtourism destinations are interesting and attractive and managed to the highest standards in customer service, visitor and worker safety, accessibility, and environmental protection. Dine at night at your choice of many fine restaurants whose chefs compete to outdo each other in developing new Hawai‘i Regional Cuisine dishes, all based on fresh, local produce. Whether traveling independent or in groups, don’t miss the opportunity to experience tropical agriculture in a graceful ambience only Hawai‘i can provide.*

Exciting, encouraging change is in process today throughout the state’s agriculture industry. But maintaining this momentum requires that we do much more to remove constraints to success in at least the following two major areas: expansion and creation of agribusinesses, and infrastructure issues related to land, water, and transportation.

**Expansion and Creation of Agribusinesses**

The encouraging signs in Hawai‘i agriculture ironically are happening against an often discouraging backdrop. Many obstacles impede agricultural development. Ways must be found to make new and existing agribusinesses more efficient. Producers should be encouraged to lower production costs, use modern technologies where appropriate and diversify. When it is feasible, they should consider diversifying via vertically integrated operations that will provide opportunities for profit at several steps along the way. Hawai‘i agriculture has a tendency to be production driven rather than market driven. That is, some of our producers often grow what they want to grow or traditionally have grown, not what today’s consumers want to buy. In a recent Toronto Globe and Mail article (May 21, 2002), Robert Wilson, a professor at Olds College in Alberta made the following observation that is true for growers everywhere: “Farmers who are prepared to focus on producing what people want to buy, as opposed to what they feel they have a right to produce, will be the success stories of the future.” A quick look at the successful farms in Hawai‘i demonstrates the truth of that statement.
Major factors in the failure of new agribusinesses, other than high input costs of water, land, labor, and transportation, are: lack of capital, unrealistic marketing objectives, poor management skills, lack of knowledge of technical and regulatory requirements, and isolation from other entrepreneurs and professionals. Getting started as a grower or rancher and then staying in business are expensive, risky propositions. Ways must be identified to provide adequate financing for new and existing agribusinesses. Lending institutions and government agencies must cooperate to develop strategies that will encourage agribusiness entrepreneurs to stay the course. One way to encourage new agribusinesses is to establish a statewide agribusiness incubator program. We envision incubators on all islands that would provide space, land, technology, technical and business expertise, and financial incentives to help entrepreneurs establish a foothold with minimal risk before spinning off into independent businesses. Nationally, 87 percent of incubator graduates remain in business after five years, compared to only 25 percent of those developed without incubator assistance (source: National Business Incubator Association).

**Infrastructure Issues**

**Land use:** A 1971 report issued by the Hawai‘i Department of Planning and Economic Development includes this statement: “To allow a helter-skelter urbanization of Hawai‘i’s prime agricultural lands would be almost sacrilegious.” Little has been done to protect those lands since those words were written. Hawai‘i’s small size and geographical isolation make questions of land use particularly thorny. The state must identify and protect agricultural lands and assure their availability, as is acknowledged in the state constitution, but it also must take into account the legitimate interests of landowners and their right to realize reasonable returns on their assets while it formulates land use policies. How do we balance those interests with the tenant’s need for affordable land and leases that encourage the long-term tenure required for agriculture ventures? Are there incentives—taxes or purchase of development rights, for example—the state can provide to encourage private and public landowners to keep their land in agriculture? What kinds of incentives will encourage lessees and landowners to act as good stewards of their land? Are there marginal lands now classified as agricultural that should be removed from that category so they can be put to other uses? These and many other similar questions must be resolved if agriculture is to have a chance to grow.

**Water management:** To grow, plants must have water. The inescapable corollary to that basic principle is that agriculture cannot succeed without access to reasonably priced, dependable water supplies. The state must develop a comprehensive water plan that takes into account the often
competing needs of agriculture and commercial or residential development and provides not only for upgrading existing irrigation systems, but also creating new ones. Many of the elaborate irrigation systems built and maintained by sugarcane plantations have fallen into such disrepair that in some cases they are useless or, worse, are actually wasting precious water. It is time that state and federal government agencies take more responsibility for Hawai‘i’s agricultural water infrastructure, as is the case in most of the continental United States. We must find ways to increase retention of our surface waters. All the islands are beginning to see water as a critical resource, and our aquifers clearly must be continually recharged. For example, estimates suggest that withdrawals from the Pearl Harbor aquifer, from which Honolulu gets its water, will exceed recharge rates before 2020. In the days of sugarcane cultivation, aquifers were recharged by the percolation of irrigation water. Now, however, without crops growing on our prime agricultural lands, much of our water is simply running out to sea. As water resources grow increasingly scarce, we must develop safe, economical, and reliable ways to recycle wastewaters.

**Transportation:** On the Mainland, agricultural goods can be transported by road or rail. In Hawai‘i, movement of nearly all agricultural commodities, whether for in-state or out-of-state consumption, requires air or sea transportation. Both modes of transportation are expensive, thus one of our first priorities must be to find ways to reduce shipping costs for agricultural products. If our agriculture industry is to expand, airport and harbor produce handling and storage facilities for perishable goods must be enlarged and improved. We must also work with carriers to increase lift capacity and ensure consistent and dependable shipping schedules.

**Part III: Creating the Initiative for Change**

As has already been noted, many positive changes have occurred in diversifying Hawai‘i’s agriculture and many more are in process now. The most significant among them is that diversified agriculture has doubled in value over the past 20 years. In fact, most of the essential elements of a strategic plan to sustain and expand Hawai‘i’s agriculture industry are known and have been recorded over the years. We must bring them together, update them, and weave them into a comprehensive whole to achieve the goal of doubling the value of Hawai‘i’s agriculture in five years.

The challenge before us is to create an atmosphere in which agribusiness entrepreneurs can thrive. The entrepreneurs will see and seize the opportunities. This initiative is based on a vision of a foodsystem for Hawai‘i that provides for all segments of society a safe and nutritious food supply grown in a manner that protects health and our precious environment and
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adds economic and social value to our rural and urban communities. This initiative must improve existing structures, remove barriers and provide support for success. We must build on the ideas of the past and articulate what action must be taken to create the environment and infrastructure that favors the continued growth of profitable agribusinesses, and the communities that support them. The purpose of this initiative is to support the creation and expansion of entrepreneur led community-based food systems that are locally owned and controlled, environmentally sound and health promoting. What must the state, both the legislative and executive branches, do? What must research entities do? What must agriculturally related groups (e.g., the farm bureau and commodity groups) do? What must entrepreneurs do to help themselves?

This initiative will focus on three primary areas: market-based change, institutional support and public policy. We believe that the community based systems fueled by entrepreneurs demonstrate that that these kinds of enterprises are possible, and that the supportive infrastructure of university (and other institutional) support and public policy friendly to these kinds of enterprises will, in fact help in accelerating the growth of successful agricultural enterprises. Articulation of this plan must be complemented by consensus, action, and sustainability. Thus, a workable plan must obtain consensus across a broad range of constituencies; it must incorporate explicit responsibilities, actions, and timelines; and it must provide the mechanisms and resources for sustaining the plan over the years. No plan can succeed without the political will to commit the financial and human resources necessary to implement it.

Because it is important that an initiative like this for agriculture be embraced by the State of Hawai‘i, we would ask Governor Linda Lingle to be a strong proponent of this effort. Specifically, we would ask her to commit participation by the appropriate state agencies. Her administration’s involvement will make it clear that revitalization of agriculture and rural communities is high on the state government’s agenda.

We propose a multi-phase process to create a business plan with a strong emphasis on implementation that supports the revitalization of Hawai‘i’s agriculture and rural communities. The process presented here is deliberately open-ended and sparsely detailed. However, we envision some characteristics such as to raise the profile of and support for scientists and organizations working to support the creation and expansion of entrepreneurial led community-based food systems that are locally owned and controlled, environmentally sound, and health promoting; support public policy that helps create and expand such food systems; increase the number of economically successful food-related enterprises that utilize sound practices; and broaden the agenda for scholarships at land grant and other educational
institutions to support communities and partners working to create and expand these community-based systems. In the interest of encouraging participation and a sense of inclusion, the outcomes of the process must be arrived at after discussion and debate by all interested parties.

In the first phase, UH staffers, agency experts, and consultants will analyze and summarize all the various ideas and plans that have been written over the years on how to revitalize and expand Hawai‘i agriculture. For example, a report was prepared by the state Department of Planning and Economic Development in 1972 entitled, “Preservation of Agriculture and Agricultural Lands in Hawai‘i.” More recently, in 2002, the Hawai‘i Farm Bureau Federation prepared a strategic plan for Hawai‘i agriculture. Each of these documents has solid ideas for removing the constraints to developing a profitable agriculture industry in Hawai‘i. It is likely that dozens of such reports, media accounts, committee minutes, and so forth exist. These existing reports as well as more current concepts and market realities will be used to develop issue papers for consideration in developing a strategic plan.

In the second phase, we envision assembling a core team to design an effective process to create a strategic plan that addresses the major items raised by the issue papers. It will be incumbent upon the design team to create a process that increases the likelihood that the initiative will be embraced by the public; supported with public policy; and that entrepreneurs are well-equipped for success. The team will be building capacity within the state, seeking experts/consultants that have experience designing creative solutions to systems issues and to seek best practices from other states and nations who have address problems similar to Hawai‘i’s to contribute their ideas.

The third phase will be to implement this initiative developed by the design team. We anticipate that the process will focus on the broad range of stakeholders — customers, farmers, environmentalists, government agencies, general public, etc., as to what types of public policy, institutional support and market information would facilitate their growth and success. Based on the knowledge gained from the communities and stakeholders, the action plan will be designed to leverage the opportunities for success. Input will be gathered in many different formats (large and small groups, individuals, interviews, surveys, focus groups, written statements, etc.).

Capacity building and collaboration is an ongoing priority. At every step while gathering stakeholder input, a conscious effort will be made to encourage participants to form working alliances and partnerships to facilitate implementation of the many actions the plan will require. Education, conferences, travel programs, media promotions and best practices will be
integrated into the plan to broaden the horizons, and to keep moving the vision forward. Success stories will be broadcast through the media.

We anticipate that the final plan will specify what must be done, by whom, and within what time frame. It will include “milestones” by which progress can be measured and provision for regular, perhaps annual, assessment of progress. Some of the actions called for will involve legislative initiatives or changes in the policies of state agencies.

This initiative will keep the broader audience involved in the vision for agriculture in Hawai‘i. It will help create: (1) the public and private will to act, (2) the resources to achieve the goals set forth in the plan, and (3) concrete steps to assure the plan is implemented.

Whatever plan is developed, it will not succeed without commitment and support from the state and federal governments and the private sector. The commitment of the governor’s administration and the legislature is critical. Without enthusiastic endorsement and cooperation from both branches of state government, agriculture will not expand in Hawai‘i to become the economic engine it can be.

This initiative for agriculture will be a strong foundation piece for all planning for the State of Hawai‘i. It will be recognized that agriculture will, indeed, be the stewards of our island state. It will require, literally, unending dynamism, synergy, and collaboration, for it is inherent in any strategic plan that it be iterative, dynamic and self-correcting. Each milestone reached will generate a new one. Invigorating Hawai‘i agriculture is an on-going effort of sustainability of our environment, and is not a “one-time pau” effort. It is abundantly clear that embarking on this endeavor will yield positive results for all the people of Hawai‘i.
APPENDIX I

Listed below are some of issues that the strategic plan should address. The list is not meant to be exhaustive.

EXPANSION AND CREATION OF AGribusinesses

Issues:
- Ways to help existing agribusinesses become more efficient and effective
- Ways to move toward a market driven agriculture
- Ways to meet food safety standards
- Ways to meet environmental standards and/or develop strategies to revise onerous or ineffective regulations
- Ways to insure access to state-of-the-art technologies
- Ways to insure access to well educated and trained workforce
- Ways to provide incentives for new agribusinesses
- Ways to provide incentives for agribusinesses through tax and fee structures
- Ways to provide adequate financing for new and existing agribusinesses
- Ways to simplify applications for loans and loan guarantees
- Others

INFRASTRUCTURE ISSUES

Land Issues:
- Process to meet Hawai‘i State Constitution’s mandate to “conserve and protect agricultural lands” and “assure the availability of agriculturally suitable lands”
- Ways to balance lease rents and tenure with private and public landowner’s return on assets and support economically viable agricultural enterprises
- Ways to provide incentives for private and public landowners to keep their land in agriculture
- Ways to provide incentives for lessees and landowners to be good stewards of their land
- Ways to subdivide large agricultural parcels and provide infrastructure as reasonable cost
- Other

Water Issues:
- Process to develop a comprehensive state water plan
- Ways to maintain and upgrade existing irrigation systems
- Ways to provide reasonably and equitably priced irrigation water to agriculture
- Ways to develop new water systems for agriculture
• Ways to increase water recharge to aquifers
• Ways to increase water retention of surface waters
• Ways to develop safe, economical and reliable ways to recycle wastewaters
• Water Code requirement to establish in-stream flow standards
• Watershed degradation
• Water conservation and demand management
• Others

Transportation Issues:
• Ways to improve airport and harbor produce handling and storage facilities
• Ways to increase lift capacity and consistence for in-state and out-of-state shipment of produce
• Ways to reduce transportation costs of Hawai‘i grown products
• Impact of the Jones Act on the shipment of agricultural products
• Other