Agribusiness Development Corporation (ADC)
Strategic Plan
October 15, 2008

Mission Statement

The mission of the Agribusiness Development Corporation (ADC) is to acquire, and manage in partnership with farmers, ranchers, and aquaculture groups, selected high-value lands, water systems, and infrastructure for commercial agricultural use and to direct research into areas that will lead to the development of new crops, markets, and lower production costs.

Goal 1: Transition former plantation land and water systems for diversified agriculture.	**Goal 2: Initiate development of facilities and provide support as necessary for successful diversified agriculture.**	**Goal 3: Provide solutions to certain bottleneck issues facing the agriculture industry.**
Objective 1: Acquire and manage selected high-value agriculture lands, water systems, and infrastructure.	Objective 1: Assist in the acquisition or construction of processing and/or treatment facilities to enhance producers' ability to take advantage of export or value-added opportunities.	Objective 1: Conduct research and demonstrative projects to facilitate the transfer of knowledge or technology.
Objective 2: Acquire agricultural conservation easements to protect certain valuable agriculture lands.	Objective 2: Inform, educate or train farmers on various areas to include food safety, pesticide application, production techniques, ag theft, and land issues.	Objective 2: Conduct economic and feasibility studies relating to agriculture.
Objective 3: Organize farmers and users into cooperatives to coordinate their common interest and collective efforts.	Objective 3: Coordinate and cooperate with other government agencies, educational institutions, or private organizations to advance agriculture.	
Objective 4: Form subsidiaries to create private and public partnership.		

Background

The Agribusiness Development Corporation (ADC) was established pursuant to Act 264, SLH 1994 to coordinate the development of Hawaii's agricultural industry and to facilitate its transition from a dual-crop (sugar and pineapple) industry to a diversified, multi-crop and animal industry. More specifically, ADC is responsible for devising means by which arable sugar and pineapple lands and their production infrastructure can be used again by a diversified agricultural industry and for providing marketing assistance that can lead to the development of local, national, and international markets for Hawaii-grown products.

ADC's enabling legislation, HRS Chapter 163D, was written with a broad purpose to promote agribusiness development. Certain exemptions and powers were given to allow ADC to expedite projects and act more like the private sector. Some of the exemption and powers include the following:

- Being a state agency and allowed to be converted to a private non-profit organization
- Exemption from HRS Chapter 171 (public lands)
- Exemption from the Public Utilities Commission regulations
- Exemption from civil service
- Issue bonds
- Form subsidiaries
- Acquire real and personal properties

A Board of Directors consisting of 3 ex-officio and 8 private-sector members appointed by the Governor heads ADC. For administrative purposes, ADC is attached to the Hawaii Department of Agriculture.

Vision

- ADC contributes to the diversification of the Hawaii's economy by providing the necessary basic ingredients, such as land and water, for the agricultural industry to succeed
- ADC creates management models to handling large tracts of agricultural lands and infrastructure
- ADC demonstrates the use of leading edge technology to control, direct, and measure water flows; protect irrigation systems and structure; and minimize system losses
- ADC provides solutions to solve bottleneck issues relating to agriculture.

Values

- Always see the big picture
- Entrepreneurial spirit

- Fair
- Innovation
- Stewardship

Key Strategies, the ADC approach

ADC specializes in the management of irrigation systems and the handling of large tracts of agricultural land. Our flexibility also allows us to work with and form alliances with many and to do research and demonstrative projects on a wide variety of topics.

Although Chapter 163D, HRS allows ADC to be involved in many areas to assist with the development of agriculture, ADC faces challenges on (1) having limited resources, and (2) duplicating efforts of other state agencies or non-profit organizations. Unless required by law, ADC strongly believes that it should only take on projects based on one or more of the following criteria.

1. The project requires the unique advantages available through ADC;
2. ADC brings value to the project because of our state agency status, resources or expertise;
3. ADC is in a position to help others by facilitating or filling in a niche;
4. The project is or has the potential to become financially self-sustaining;
5. The project has a major economic impact or could benefit many;
6. The project has long-term value.

Some of the characteristics of ADC projects:

1. Every project is treated differently or uniquely to optimize its potential;
2. Users are often organized into Cooperatives to coordinate their common interest and collective efforts;
3. ADC assets are often managed, operated, and maintained by Coops or non-profit organizations;
4. Sometimes our efforts may only have a narrow and regional audience, rather than appealing to all farmers statewide.

Project Selection Criteria:

1. The project requires the unique advantages available through ADC;
2. ADC brings value to the project because of our state agency status, resources or expertise;
3. ADC is in a position to help others by facilitating or filling in a niche;
4. The project is or has the potential to become financially self-sustaining;
5. The project has a major economic impact or could benefit many;
6. The project has long-term value.

Summary and Description of Current Projects

Goal 1. Transition former plantation land and water systems for diversified agriculture.

Objective 1: Acquire and manage selected high-value agriculture lands, water systems, and infrastructure.

Objective 2: Acquire agricultural conservation easements to protect certain valuable agriculture lands.

Objective 3: Organize farmers and users into cooperatives to coordinate their common interest and collective efforts.

Waiahole Water System (WWS). Pursuant to Act 111, SLH 1998, ADC purchased the Waiahole ditch from Amfac JMB/Hawaii in 1999 as Oahu Sugar Company, the former operator of the ditch, ceased its operations a few years earlier. The system has daily usage of about 5 million gallons of irrigation water distributed to 5,600 acres of land on central Oahu. It was estimated that the agribusinesses that use WWS water collectively generated an agricultural production value of approximately $95 million per year and employed about 2,000 individuals based on 2000 statistics. With Del Monte's departure from the island, ADC worked with the landowner, the Kunia Water Cooperative and the various agencies to transition the land from pineapple, plantation-style operation to diversified agriculture. The recent acquisition of thousands of acres of agriculture land from Campbell Estate by various agribusinesses has helped to ensure that these land parcels in Kunia will continue to stay in agriculture.

As a result of the Waiahole Combined Contested Case, the WWS is required to provide flow data and usage information to the Commission on Water Resource Management monthly. A water use permit for system loss was also issued to ADC.

Upon taken control of the ditch system, ADC has replaced three deteriorated wooden siphons and performed many repairs on various parts of the system. ADC is currently working with the U.S. Army Corps of Engineers and the Hawaii Department of Agriculture (HDOA) to line Reservoirs 155 and 225 with a non-permeable liner under a 65/35 cost-sharing arrangement between the federal government and the state. Since Reservoir 155 has a regulated dam, all repairs and alternation work must first be approved by the Department of Land and Natural Resources (DLNR). It was estimated that the cost of lining the reservoirs would be around $6 million.

Kekaha Ag Land and Infrastructure. As Kekaha Sugar Company ceased its operations in 2001, ADC has since been involved in the management of the 12,500 acres of state-own agricultural land and related infrastructure including two irrigation systems, an extensive drainage system fitted with two pump stations, an electrical

system with two hydroelectric plants, and many miles of roadways. ADC is also responsible for the integrity and safe operation of three reservoirs/dams which are part of the irrigation system infrastructure. In 2005, ADC was awarded a 3-year contract from the Navy to operate and maintain the pump stations and drainage canals within the Pacific Missile Range Facility (PMRF). A new 5-year contract was awarded to ADC in September 2008 for similar work.

From 2001 to 2005 ADC completed about $4.5 million of projects to refurbish a hydroelectric plant, replace six drainage pumps, strengthen the pump station structure, replace transformers and improve the drainage channels at or near Kekaha. These improvements, funded by the U.S. Navy, were critical in controlling and reducing the severity of flooding at the Mana plain and the nearby Kekaha town. By taking on this responsibility, ADC has helped to lower the overall maintenance expenses for the Kekaha common infrastructure and make farming affordable in this area.

ADC formally assumed management responsibility of the Kekaha agricultural lands in late 2003 when Executive Order No. 4007 was executed. Subsequently ADC has executed an agreement with the Kekaha Agriculture Association (Coop) for the operation and maintenance of the common infrastructure and issued long-term land licenses to several of the tenants. A combination of favorable climate, fertile soil, and availability of water makes Kekaha one of the most productive farming areas in the state. An economic analysis performed by the HDOA estimated the farm gate value of crops produced at Kekaha between $35-50 million.

Kalepa Lands. The Kalepa lands reverted back to DLNR management when Lihue plantation ceased its operation in 2001. Revocable permits were issued to various ranchers and farmers on a temporary basis. At its March 18, 2005 meeting, the ADC Board agreed to accept the Kalepa property and the East Kauai water system as a project when the water users and tenants approached ADC.

In 2007, the Green Energy Team, LLC, proposed to take 2,000 acres in Kalepa to grow albizia, an invasive species, for energy production. The proposal generated a lot of opposition at the Board of Land and Natural Resources (BLNR) meeting. ADC was tasked to convene a series of co-existence meetings between the revocable permit holders and the energy company. As a result of the meetings, the Green Energy Team agreed to reduce its acreage request to 1,000 acres and to grow eucalyptus, instead of albizia. The various tenants agreed to give up a portion of their permitted area to the energy project. DLNR agreed to issue new revocable permits to the various parties.

On May 21, 2008, the BLNR approved to (1) recommend to the governor the set aside of the 6,200 acres of Kalepa land to the ADC, and (2) issue a management right of entry to the ADC for the property. The set aside will not take place until a previously approved subdivision of land to the Division of Fish and Wildlife (DOFAW) is completed.

East Kauai Irrigation System. Since 2001 ADC has provided state funding for the operation and maintenance of the East Kauai Irrigation System. ADC has continued to work with the East Kauai Water Users' Cooperative to operate, maintain, and improve the irrigation system. Although the set aside of the ditch system to ADC has been under consideration at the BLNR for sometime, it will not take place until water use and other issues involving hydroelectric plants of the Kauai Island Utility Cooperative (KIUC) are resolved.

Kau Water Sources. When the sugar plantation departed, deterioration of the water system infrastructure in the Kau district has put the continued availability of irrigation water for agriculture in question. What makes this project unique is that the irrigation water sources (tunnels) are on state land but the water transmission pipelines belong to private landowners. At the March 1, 2007 meeting, the ADC Board of Directors agreed to take on this project as it fits well into ADC's goal of preserving agricultural infrastructure abandoned by former plantations. ADC began to work with the water users on the formation of a master cooperative which would handle management of the state-owned water sources and the various private water systems.

At its January 11, 2008 meeting, the BLNR approved the set aside of the various Kau District irrigation water sources and a management right of entry to ADC. Before an executive order for the set aside can be executed, ADC needs to prepare a CAD map with metes and bounds descriptions of the water sources.

Wahiawa Irrigation System. In the fall of 2006, ADC was approached by Dole Food Company, owner of the Wahiawa irrigation system (WIS), to look at the feasibility of having the state (ADC) to take over the irrigation system which services about 10,000 acres of former plantation lands on the North Shore of Oahu. ADC commissioned an engineering study of the irrigation system which includes the Wahiawa Reservoir (Lake Wilson), with objectives to evaluate the cost to repair the system and the potential liabilities if ADC decides to take on the system.

Besides deteriorated infrastructure requiring a budget for short-term and long-term repairs, there are complex issues involving a high-hazard dam and water quality. A considerable amount of money, expertise, and effort will be needed to run this system. Negotiation between Dole and ADC is on going.

It is estimated that the WIS service area supports about $38 million of agricultural production and about 635 full-time and part-time jobs.

Farm and Ranch Land Protection Program (FRPP). The federal Farm and Ranch Land Protection Program (FRPP) is funded through the farm bill and is an important tool for states and private entities to protect agricultural lands under development pressure. In August 2006, ADC executed an agreement with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) and obligated $1.8 million of federal

funds for the purchase of an agricultural conservation easement in Kunia under this program. In June 2007, ADC was also able to secure $1.1 million from the Legacy Land Conservation fund managed by the DLNR as matching fund for the federal money. ADC continued to work with the various agencies and the landowner on issues relating to the purchase of the easement which is expected to close in 2009.

Galbraith Estate Land. Act 234, SLH 2008, established various provisions and mechanisms to allow the ADC to acquire agricultural lands and authorized ADC to acquire specific agricultural lands located on Oahu and owned by the Galbraith Estate. The Galbraith Estate lands comprises of over 2,000 acres of prime agricultural land in central Oahu, including a 50% interest in Lake Wilson. The $13 million CIP funding appropriated for this purchase, which needs to be released by the Governor, will be matched with funds from various partners including the U.S. Army, Honolulu City and County, OHA, and the Trust for Public Land.

Goal 2. Initiate development of facilities and provide support as necessary for successful diversified agriculture.

Objective 1: Assist in the acquisition or construction of processing and/or treatment facilities to enhance producers' ability to take advantage of export or value-added opportunities.

Objective 2: Inform, educate or train farmers on various areas to include food safety, pesticide application, production techniques, ag theft, and land issues.

Objective 3: Coordinate and cooperate with other government agencies, educational institutions, or private organizations to advance agriculture.

Kauai Tropical Fruit Disinfestation Facility. In addition to obtaining a lease from the University of Hawaii (UH) for the facility, ADC refurbished and upgraded the treatment chambers, instrumentation, and the fruit-fly free packing area. ADC is managing a $250,000 grant-in-aid awarded to the Kauai Economic Opportunity (KEO) and continues to work with other partners (County of Kauai, Kauai Agriculture Development Corporation and CTAHR) on the training of papaya farmers/disinfestations facility operators and recertification of the facility. Goal is to reopen this facility so that the papaya farmers will have a facility to treat and pack their papaya for exporting to mainland and foreign markets.

Development of a Tea Industry. CTAHR's Tea Project Team has partnered with other agencies and private individuals to create a tea industry in Hawaii and to establish a demonstration farm and pilot processing facility at the Mealani Experiment Station. The processing facility is being used to develop and fine-tune commercial-scale processing methods for locally grown products, and also serves as the industry's interim processing

plant until a permanent facility is built. ADC executed a Memorandum of Agreement with CTAHR to provide $100,000 in funding to assist with this project.

Goal 3. Provide solutions to certain bottleneck issues facing the agriculture industry.

Objective 1: Conduct research and demonstrative projects to facilitate the transfer of knowledge or technology.

Objective 2: Conduct economic and feasibility studies relating to agriculture.

Past projects:

Inter-Island Transportation Study. ADC contracted with the Manufacturing Extension Partnership (MEP) of the High Technology Development Corporation to conduct a study on inter-island transportation of agricultural products. Focus of the study was on less-than-container load cargo service and its potential impact on agriculture in the event that this service was discontinued. The report was completed in early 2008.

Solar Water Pasteurization Project. ADC teamed up with CTAHR to demonstrate the use of solar energy to disinfest irrigation water. Another objective of the project was to evaluate the feasibility and operating costs associated with this technology in a remote farm setting. The demonstrative unit was assembled and operated at a farm in the Kula Ag Park on Maui in 2006. Test results showed a significant microbial reduction in the water treated by this method. It was concluded that a solar pasteurization unit could be used as an alternative to chlorine, ozone, or UV treatments.

Current projects:

Animal Feed Demonstrative Project. The objective of this project is to demonstrate an alternative feed production method which uses locally available resources and at the same time mitigates normal environmental issues associated with piggery operations. ADC has contracted with CTAHR extension personnel in Hilo to evaluate the feasibility of producing animal (pig) feed using a specialty organic fertilizer manufacturing machine. Raw ingredients, including green wastes, mill by-products, and slop collected from local restaurants are heated up and fermented with beneficial microorganisms in the process. The project also includes feeding trials of the end product against commercial feed at nearby farms.

Design of a Waste Stream Management System. Waste disposal has become a challenging task for various segments of the agricultural industry. The objective of this project is to provide practical and holistic solutions to the sustainable reutilization of waste products generated from local food production. ADC agreed to assist on funding

the design of an anaerobic bio-digester which could be used to handle waste stream from a slaughter house or other commercial sources. Although the design is intended for a facility on Maui, it could easily be used for other locations around the state.

Browse Feeding Project. Beef production in Hawaii is currently at a crisis stage owing to both high feed costs which limit local finishing of cattle with imported feeds and high transportation costs which limit the transport of Hawaii cattle to mainland U.S. and Canada feedlots. Browse feeding, a practice which has become a standard procedure in central and northern Queensland, Australia, is a potential long term solution for Hawaii. Dr James Brewbaker from CTAHR has selected and improved advance generations of leucaena leucocephala (haole koa) for this purpose and has supplied the Australians with his breeding material under royalty agreements. In addition to its high nutrient content, leucaena's nitrogen-fixing property brings tremendous benefits to the pastures.

With help from CTAHR, ADC plans on bringing experts from Australia to conduct browse feeding workshops on the islands and sponsoring a trip for Hawaiian ranchers to visit the Australian operations in 2009.

Mobile Slaughter House. As the cattle industry in Hawaii converted to cow-calf operations and shipped their calves to the mainland, the infrastructure for slaughtering and processing livestock deteriorated over time. Most, if not all, of our facilities are old, obsolete, and not operating efficiently to support our livestock industry's efforts to expand local marketing.

It was suggested that a mobile slaughter house may work for some of the smaller ranches on the islands and is an alternative to permanent and more costly facilities. A mobile slaughter house has the following advantages: (1) relatively low cost to set up as compared to larger permanent facility; (2) production of a higher quality meat due to its "stress free" environment as the cattle are slaughtered at the ranch; (3) reduction of cattle transportation costs; (4) the unit can be easily sold to another rancher or operator if the owner decides to exit the business.

The objective of this project is to demonstrate the feasibility of slaughtering cattle in a mobile slaughter unit on the islands. The project involves purchasing the mobile slaughter house, getting the necessary permits, operating the mobile slaughter house, conducting economic analysis, and providing recommendations to the industry. The demonstrative project will have rancher collaborators on Oahu, Maui, and Kauai to test run the unit. The concept of using a mobile slaughter house, certifiable by the USDA, has been successfully demonstrative at various locations on the mainland.