

# DEPARTMENT OF BUSINESSEPT. COMM. ECONOMIC DEVELOPMENT & TOURISM

KA 'OIHANA HO'OMOHALA PĀ'OIHANA, 'IMI WAIWAI A HO'OMĀKA'IKA'I

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804 Web site: dbedt.hawaii.gov 211. GOVERNOR

JAMES KUNANE TOKIOKA DIRECTOR

> DANE K. WICKER DEPUTY DIRECTOR

 Telephone:
 (808) 586-2355

 Fax:
 (808) 586-2377

### DTS#202312260920TA

December 27, 2023

The Honorable Ronald D. Kouchi, President and Members of the Senate Thirty-Second State Legislature State Capitol, Room 409 Honolulu, Hawaii 96813 The Honorable Scott K. Saiki, Speaker and Members of the House of Representatives Thirty-Second State Legislature State Capitol, Room 431 Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Agribusiness Development Corporation Annual Report, as required by Section §163D-19, Hawaii Revised Statutes. In accordance with Section 93-16, Hawaii Revised Statutes, I am also informing you that the report may be viewed electronically at: <u>http://dbedt.hawaii.gov/overview/annual-reports-reports-to-the-legislature/.</u>

Sincerely,

Enclosure

c: Legislative Reference Bureau



# **Agribusiness Development Corporation**

# **Annual Report**

### Fiscal Year 2023

A report to the Legislature of the State of Hawaii as required by Section §163D-19, Hawaii Revised Statutes

Submitted December 2023



235 South Beretania Street, Room 205, Honolulu, Hawaii 96813 T: (808) 586-0186 E: <u>dbedt.adc@hawaii.gov</u>



# A Message from the ADC Board Chairman

#### Aloha!

In reflecting back over the Calendar Year 2023, it has been a year of incredible change. In January, with the change in administration, we welcomed Chair Sharon Hurd of the Hawaii Department of Agriculture and Deputy Chair Dane Wicker with the Department of Business, Economic Development and Tourism. I would like to say a heartfelt mahalo to Fred Lau, Phyllis Shimabukuro-Geiser, Kaleo Manuel and Mary Alice Evans who gave their time and talent to support the mission of the ADC. In April, we were saddened with the sudden passing of ADC Executive Director James Nakatani, who headed our agency from 2012 to 2023.



In the latter half of the year, we welcomed new ADC Executive Director Wendy Gady, in addition to Linda Goto Accountant V, Lolita Cabante, Accountant IV, and Ingrid Hisatake, Executive Secretary. We were also delighted to welcome new members to the ADC Board of Directors, Jason Okuhama at-large member from Oahu, Karen Seddon at-large member from Oahu, Jayson M. Watts board member from Maui, and Russell Tsuji, State Lands Administrator, Department of Land and Natural Resources.

The ADC Board of Directors is overwhelmed with appreciation for the Expressions of Interest (EOI) and Land Applications and is beginning to review the information from agribusiness entrepreneurs across the state. The quality and content are exciting to witness, and we continue to welcome entrepreneurs on all islands to fill out either the EOI or Land Application forms found on the website.

We look forward to an exciting 2024 we can all build together.

Aloha!

Warren Watanabe

Warren Watanabe Board Chair, Agribusiness Development Corporation

# Executive Summary

### Land

In FY2023, ADC made bold steps in ADC awarded most of its remaining available farmable lands on Oahu to various awardees. It also worked to complete the purchase of three deep water wells from Dole, finalized the purchase of the "wings" parcels in Whitmore Village, began the conversion process to a new land management software system.

Much of ADC's efforts focus on property management



- the processes and labor required to manage the life cycle of all acquired property including acquisition, control, accountability, responsibility, restoration, maintenance, utilization, and disposition. Property management encompasses both individual properties and the infrastructure that ties the region together. Adding to this complexity is the requirement that ADC farmers submit an approved conservation plan and meet current food safety and good agriculture practices (GAP) criteria. ADC's effort to encourage tenant farmers to embrace GAP certification was paused at the start of the Covid-19 pandemic. However, efforts are again underway.

In our effort to improve security on our properties, we conducted inspections of a majority of ADC tenants and lands, conducted continuing outreach and cleanup of vacant property with Honolulu Police Department.

We also conducted tenant meetings to build awareness of Good Agricultural Practices and the 2011 Food Safety Modernization Act.



Agriculture water continues to be central to developing and expanding diversified agriculture in Hawaii. With predicted droughts and climate change on the horizon, developing irrigation water systems to prepare for the future needs to happen now.

In FY 2023, the ADC moved forward with the corporation's plan for water security, competing two reservoirs adding 25 million gallons of storage



capacity on Oahu, and making continued improvements and maintenance to the Kekaha ditch system on Kauai and the Waiahole Water system on Oahu. ADC also began the due diligence studies on the Wahiawa Irrigation System (WIS).

The WIS is the primary source of agriculture water for approximately 17,000 acres of farmland on Oahu's north shore and the state is reviewing a potential takeover of the system in 2026. The ADC is developing and implementing plans to reduce water loss by piping and capping open ditches. These improvements will not only ensure the production of crops but will also address some of the goals of the Hawaii Fresh Water Initiative in their 2016-2018 Blueprint for Action, Water Security for an Uncertain Future.

The council identified some uncertainty factors related to climate change that include reduced rainfall, increased drought and increased evapotranspiration as having an impact on our water resources. They found that rainfall in Hawaii has decreased by 18% between 1978 and 2007. They also found that because of global warming, increased temperatures have resulted in increased evaporation of surface water.

It emphasizes three strategies of conservation recharge and re-use to ensure the availability of water. A specific goal under the conservation strategy is to improve agricultural water efficiency. It also emphasizes that the ability to store water in reservoirs is key to managing drought conditions and to making use of storm water runoff. ADC's Water Security Plan seeks to mitigate some of these factors and help to increase the availability of agricultural water without increasing the allocation of water. It also addresses the agricultural water needs of the Central plains by leveraging a public-private partnership with a private landowner.





### Infrastructure

FY 2023 saw ongoing planning and community engagement for the Wahiawa Recycled Water Irrigation Project and the Whitmore Community Food Hub Project. Staff received Board approval and funding for the purchase of three deep-water wells from Dole Food Company to supply irrigation water to ADC tenants and provide redundancy for ADC irrigation systems; acquisition efforts are ongoing. Additionally, ADC supported legislative efforts to fund the acquisition of the Wahiawa Reservoir, which would have included the Wahiawa Ditch system.



### Tribute to Former ADC Executive Director James "Jimmy" Nakatani

With his untimely passing on April 23, 2023, Mr. James "Jimmy" Nakatani's 11-year tenure as executive director of the Agribusiness Development Corporation (ADC) came to an end. Mr. Nakatani worked tirelessly from a young age to create a strong and strategic future for the benefit of all of Hawaii. His vision became a reality by stating the need for the ADC to preserve land for the future of agriculture and food following the demise of the sugar and pineapple industries in Hawaii. He was strategically focused on building mutually beneficial relationships that made his vision a reality.



Mr. Nakatani's ties to agriculture started as a young man working for his family's watercress farm where he learned the value of hard work and the purpose of service to a much larger community. The Nakatani family instilled the importance of access to land and water at an affordable price for the greater purpose of growing good and families in the communities they served.

James "Jimmy" Nakatani's involvement in agriculture began with his family watercress farm, Nakatani Farms until 1994. He became the President of the Hawaii Farm Bureau for 10 years from 1985-1995 and then served as director of the state Department of Agriculture from 1995 to 2003. Jimmy served as Congressman Ed Case's District Director from 2003 to 2007 and returned to the state Department of Agriculture as the Deputy Director in 2010. Jimmy was appointed as the Executive Director of the Agribusiness Development Corporation in 2012 and served in that capacity until his passing on April 23, 2023.

A graduate of Waipahu High School, and University of Hawaii, Mr. Nakatani became a mentor to both friends and colleagues. He had a note of humor in his candor when giving professional advice and feedback. He was a mentor to many rising food entrepreneurs and civic leaders.

Mr. Nakatani's organizational and team building skills were evident in his nonstop life of service. He served as the President of the Hawai'i Farm Bureau from 1995 to 2003 securing a future for the organization with the acquisition of a physical building in Kalihi. His desire to see a strong, vibrant agricultural community took shape in the tireless hours he spent volunteering to organize and



support the annual Farm Fair. Jimmy took great enjoyment of revealing the joy of growing food and raising livestock across Hawaii through the state Farm Fairs hosted at McKinley High School and later Kualoa Ranch.

Mr. Nakatani served as Congressman Ed Case's District Director from 2003 to 2007. He worked well into the evenings and weekends to serve Governor Ben Cayetano. Professionally, Mr. Nakatani was humble, but proud of his tenure as the Deputy Director of the Hawaii Department of Agriculture in 2012. As the Hawaii Department of Agriculture Deputy Director, he was instrumental in gathering data that would become knowledge for decision making regarding what types of crops were being imported to feed Hawaii's people. In parallel, he could see the role and footprint the monocrop ag industry had played in the state and the impact that their impending departure would leave behind. Mr. Nakatani worked quietly behind the scenes to craft the creation of the Agribusiness Development Corporation.



Nakatani inspects the ag operations of farmer/ADC tenant Shin Ho of Ho Farms

Mr. Nakatani's servant leadership legacy will continue as the ADC grows well into the future due to his vision and life full of purpose in creating a strong agricultural foundation for the future.

The ADC family profoundly appreciates the foundation that Jimmy worked to build and the Nakatani family who generously shared him with the agricultural community.



# Who is ADC?

The Agribusiness Development Corporation ("ADC") is a state agency created in 1994 by the Hawaii State Legislature and administratively attached to the Hawaii Department of Business, Economic Development, and Tourism, to conserve and convert arable lands and their associated infrastructure that were formerly large mono-crop plantation lands into new productive uses. The agency's ultimate goal is to ensure that agricultural production and agribusiness ventures will be responsive to the current food and other agricultural needs of the State.



In 2005, the Hawaii 2050 Sustainability Task Force developed a broad, comprehensive plan that recognized local food production as a key element of food self-sufficiency and sustainability for the State. In his Sustainable Hawaii Initiative, Governor David Ige unveiled his 2016 roadmap, adopting the guiding principles of the Sustainability Task Force and narrowing his focus to five goals. Included among the five goals was the increase in local food

production, a key element in our quest to prudently utilize our natural resources and to ensure that we today and our successors in the future can enjoy the beauty and bounty of this great state.

With the support of the Legislature, ADC's first major action in 1998 was the purchase of the nearly 100-year-old Waiahole ditch from the Waiahole Irrigation Company, Ltd., formerly the Waiahole

Water Company, Ltd., a subsidiary of Oahu Sugar Company. Litigation over the propriety of the diversion and re-direction of water from the lush windward side of Oahu to the drier, but arable lands in central and leeward Oahu began in 1995 and continued for 15 years, until its final resolution in 2010. ADC continues to operate and manage the 26mile-long ditch, which provides non-potable water to approximately 5,866 acres of agricultural lands.



In 2012, with a new administration, a new executive director, and an energetic and visionary board of directors, and again with the support and direction of the Legislature, ADC began an aggressive campaign to kick-start Hawaii's diversified agricultural production. At the same time, Dole Foods Company and Castle and Cooke Hawaii began to divest themselves of lands that were best suited for agricultural use, keeping those lands with optimum commercial value for commercial and residential



development. Through the concerted efforts, support, and confidence of the administration, the Legislature, and the private sector, ADC began and continues to acquire the best arable lands from Waialua to Wahiawa and Waipio, enabling it to fulfill its mission of conserving and converting former sugarcane and pineapple fields into diversified crop production, and guaranteeing these prime lands will never be lost to casual farming or other non-agricultural uses. Since 2012, ADC has acquired approximately 3,371 acres of former sugar and pineapple lands in the area. A breakdown of the land purchases can be found in the appendix.

In July 2022, Governor Ige signed into law Act 219 that approved the transfer of ADC to the state Department of Business, Economic Development and Tourism (DBEDT). We are grateful in partnering with DBEDT and the resources the department can provide in furthering our mission in assisting local agriculture and expanding local food production.

As the ADC moves forward under the leadership of Executive Director Wendy Gady, the corporation will continue to build on Hawaii's respect for local farmers and its agricultural foundations. Local agriculture on ADC property will not only help us toward our goal of food sustainability but diversify our local economy and help ADC safeguard Hawaii's agricultural lands in perpetuity.

### ADC's Mission

To acquire and manage, in partnership with farmers, ranchers and aquaculture groups, selected arable 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.



# What ADC Does for Hawaii

Rich agricultural lands are one of Hawaii's greatest assets. ADC's role is to protect the future of agriculture in Hawaii by facilitating its transformation from a dual crop economy of sugar and pineapple to a multi-crop industry. The breadth of ADC's responsibilities includes transitioning former plantation lands and water systems to diversified long-term agricultural use, initiating and developing diversified agriculture facilities, and finding innovative solutions for issues facing the agricultural industry today.

ADC's unique position enables it to coordinate Federal, State and private resources to optimize agribusiness opportunities. Its exemptions from Hawaii Revised Statutes Chapter 171 regarding land use, as well as Public Utilities Commission regulations and civil service laws, allow for greater



flexibility in managing its programs. ADC fosters the growth of agricultural enterprises across the state by providing affordable irrigation and long-term licenses or leases to tenants, which stimulates investment in agribusiness and enhances the viability of agriculture in Hawaii.

ADC has the power to achieve these goals through diverse efforts, such as:

- Acquiring and managing select arable agricultural lands, water systems and infrastructure.
- Acquiring agricultural conservation easements to protect certain agricultural lands.
- Organizing farmers and users into cooperatives that benefit from the participants' common interests and collective efforts.
- Assisting in acquiring or constructing processing and/or treatment facilities to enhance producers' abilities to access export or value-added opportunities.
- Informing, educating or training farmers on various industry practices such as food safety, production techniques and land uses.
- Coordinating and cooperating with other government agencies, educational institutions and private organizations to advance agriculture in Hawaii.
- Conducting research and demonstrative projects to facilitate the transfer of knowledge or adoption of technology.
- Conducting economic and feasibility studies relating to agriculture.





# Organizational Overview

The ADC is headed by an 11-member board of directors consisting of four members representing counties, four at-large members, and three ex-officio members. The current members as of June 30, 2023, are:

Warren Watanabe, Chair At Large Member

**Lyle Tabata** Kauai County Member

Vacancy Hawaii County Member

Jayson Watts Maui County Member

**Glenn Hong** At Large Member

Jason Okuhama At Large Member

Karen Seddon At Large Member

Vacancy City & County of Honolulu Member

**Sharon K. Hurd** Ex-Officio, Board of Agriculture Chairperson

**Dane K. Wicker** Ex-Officio, Department of Business, Economic Development & Tourism, Deputy Designated Representative

**Russell Y. Tsuji** Ex-Officio, Department of Land & Natural Resources Designated Representative





# ADC Staff

The ADC Executive Director is Wendy Gady, appointed by the ADC board of directors in August.

Gady is a graduate of Iowa Wesleyan University with a B.A. in Business and Communications, with additional Executive MBA course work in Strategic Market Planning at the University of Michigan. She has managed a wide variety of farming operations, from conventional to Certified Organic, successfully written grants, passed national audits,



leased ag land to new operators across Oahu, developed farm business plans for individual operators, performed water testing and compliance across microclimates and water systems, raised financing for a 30-million-gallon-per-year biodiesel plant (providing a community with high-paying local jobs, and shareholder wealth), run farmers markets, coordinated water management, food safety, marketing, and new product training for operators.

A staff of 14 employees, including the Executive Director, support agribusiness development and maintain the Waiahole Water System. The following positions are yet to be filled:



1. ADC Property Manager, ADC Administrative Services Officer

\*Proposed position organization chart



#### FY2023 Financial Statement Agriculture Development Revolving Fund

Revenue	Budget (\$)	Actual (\$)	
Kekaha	545,035	535,997	
Galbraith	348,708	311,262	
Navy 2468	445,000	302,538	
Misc	5,384	7,725	
East Kauai	216,901	156,994	
Whitmore 24	59,352	55,264	
Tamura Warehouse	19,166	17,569	
Whitmore 256	129,866	90,476	
Kalaeloa Rendering Plant	37,120	27,840	
Mokuleia Aquaculture	996	282	
Dole 73	1,741	1,306	
Paalaa Uka	121,852	68,168	
Other	663,511	770,154	
OHA/DHHL	(289,656)	(356,826)	
Total	2,304,976	1,988,749	
Expenditure	Budget (\$)	Actual (\$)	
<b>Expenditure</b> Kekaha	<b>Budget (\$)</b> 976,630	<b>Actual (\$)</b> 494,348	
-			
Kekaha	976,630	494,348	
Kekaha Galbraith	976,630 403,000	494,348 321,984	
Kekaha Galbraith Navy 2468	976,630 403,000	494,348 321,984 268,194	
Kekaha Galbraith Navy 2468 Misc 2	976,630 403,000	494,348 321,984 268,194 993	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai	976,630 403,000 355,000 - -	494,348 321,984 268,194 993 4,460	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai Whitmore 24	976,630 403,000 355,000 - -	494,348 321,984 268,194 993 4,460	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai Whitmore 24 Tamura Warehouse	976,630 403,000 355,000 - 120,000 -	494,348 321,984 268,194 993 4,460 119,476	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai Whitmore 24 Tamura Warehouse Whitmore 256	976,630 403,000 355,000 - 120,000 -	494,348 321,984 268,194 993 4,460 119,476 - 97,411	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai Whitmore 24 Tamura Warehouse Whitmore 256 Keaau	976,630 403,000 355,000 - 120,000 - 85,000 -	494,348 321,984 268,194 993 4,460 119,476 - 97,411 423	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai Whitmore 24 Tamura Warehouse Whitmore 256 Keaau Payroll	976,630 403,000 355,000 - - 120,000 - 85,000 - 38,795	494,348 321,984 268,194 993 4,460 119,476 - 97,411 423 48,496	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai Whitmore 24 Tamura Warehouse Whitmore 256 Keaau Payroll Admin-Fiscal Office	976,630 403,000 355,000 - 120,000 - 85,000 - 38,795 266,350	494,348 321,984 268,194 993 4,460 119,476 - 97,411 423 48,496	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai Whitmore 24 Tamura Warehouse Whitmore 256 Keaau Payroll Admin-Fiscal Office Insurance	976,630 403,000 355,000 - 120,000 - 85,000 - 38,795 266,350	494,348 321,984 268,194 993 4,460 119,476 - 97,411 423 48,496 284,297	
Kekaha Galbraith Navy 2468 Misc 2 East Kauai Whitmore 24 Tamura Warehouse Whitmore 256 Keaau Payroll Admin-Fiscal Office Insurance	976,630 403,000 355,000 - 120,000 - 85,000 - 38,795 266,350 200 -	494,348 321,984 268,194 993 4,460 119,476 - 97,411 423 48,496 284,297 - 157,341	



#### FY2023 Financial Statement Waiahole Water System Revolving Fund

Revenue	Budget (\$)	Actual (\$)
Water Delivery	1,445,453	1,041,559
Investment Earnings	7,500	11,443
Total	1,452,953	1,053,002

Expenditure	Budget (\$)	Actual (\$)
Payroll & Benefits	556,541	518,662
General Administration	313,594	83,856
Equipment / Vehicles (new)	-	146
Insurance	6,000	-
Materials & Supplies	71,400	16,063
Repairs & Maintenance	71,951	23,159
G.O. Bond Repayment	433,468	423,147
Total	1,452,954	1,065,033
Revenue Less Expenditure	\$1	(12,031)

#### FY2023 Financial Statement Agriculture Development & Research Fund

Revenue	Budget (\$)	Actual (\$)
Legislative Appropriation	3,011,324	2,814,498
Restriction	(196,826)	
Total	2,814,498	2,814,498

Expenditure	Budget (\$)	Actual (\$)
Kekaha	514,985	-
Galbraith	1,401,957	520,764
Tamura Warehouse	-	-
Whitmore 256	-	-
Paalaa Uka	-	7,802
Keaau	-	10
Payroll	621,844	532,865
Admin-Fiscal Office	233,660	17,950
Insurance	-	625
Transfer to Special fund	42,052	-
Total	2,814,498	1,080,016
Revenue Less Expenditure	-	1,734,482



# Land Holding Overview

This graph illustrates the breakdown of land areas managed by ADC.



# Central Oahu Lands

In 2012, the Trust for Public Land purchased 1,732 acres of land from the Galbraith Estate, near Wahiawa, and transferred the land to two Hawaii public agencies. ADC received 1,200 acres and the Office of Hawaiian Affairs (OHA) received the 500 acres surrounding Kukaniloko, the royal birthing site. Today, ADC owns or manages nearly 4,000 acres on Oahu. The properties can only be used for agriculture or agriculture-related activities.



# Kalepa, Kauai Lands

In 2005, ADC gained control of nearly 6,000 acres of former Lihue Plantation land, now referred to as Kalepa.

# Kekaha, Kauai Lands

In 2002, with the closing of all Amfac/JMB sugar operations, ADC gained control of over 12,000 acres of land in the Mana plains area of Kekaha, followed in 2009 with the transfer of

the Kokee Ditch System, the Kekaha Ditch System, two pump stations, two hydro-electric power plants, and an irrigation/drainage ditch system.



# FY2023 Highlights

FY2023 Accomplishments

1. Completed plans and design for phase 1 of the Wahiawa Reclaimed Water Irrigation System to remove the City's R-1 effluent from Lake Wilson and transmit the water to the Galbraith Agricultural Lands for irrigation.



2. Continued supporting DAGS Public Works in the development of the infrastructure and warehouse at the Central Oahu Food Hub in Whitmore, Oahu. 17. Bid opening for construction scheduled for March 2024.

3. Executed contract to procure contractor to improve and connect (3) deep wells to increase water security for the ADC lands and surrounding farmlands. Bid opening for construction scheduled for March 2024.

4. Completed solid waste removal and hazmat soil testing at the Galbraith Agricultural Lands. Land will be licensed for agricultural production.





5. Completed improvements to strengthen the Christian Crossing Bridge, which also serves as the only alternative crossing across the Wailua River for large vehicles and heavy equipment to the North Shore of Kauai.

6. Completed improvement to the interior access road and bridge design for the Kekaha Bridge in Kekaha, Kauai.





7. Completed construction of a new in-take and 15 MGD Reservoir along the Waiahole Ditch in Kunia.



8. Executed contract to improve the Menehune Ditch in Waimea, Kauai. Estimated date of completion is September 30, 2023.

9. Obtained grants of easements for the Reservoir 155 and 225 relining project. Bid opening for construction scheduled for May 2024.



10. Executed contract to replace the hydro power plant on the Kekaha Ditch. This requirement to

Kekaha Ditch. This requirement to modify the instream flow is the result of a settlement of a complaint against ADC before the Commission on Water Resources Management ("CWRM") to stop waste of water, and a petition to amend interim instream flow standards in the Waimea River. Bid opening for construction scheduled for April 2024.

11. Oahu Feed Mill obtained all necessary permits to conduct feed

trials at their facility in Kalaeloa, Oahu. Feed trials are set to begin in December 2023.

12. 5Ks ENV – Island Resource Solutions continued to assist ADC complete and obtain a National Pollutant Discharge Elimination System permit.

13. Continuing sweeps of vacant properties with the assistance of HPD until tenants are licensed and can begin to occupy and farm the land.

14. Staff continued to push tenants to embrace GAP training and certification as FSMA rules come into force.

15. ADC issued a long-term (35 years) License for 600 acres of ag lands in the Whitmore area to farmers.

16. Staff continued to push tenants to embrace GAP training and certification as FSMA rules come into force.

17. Continued clearing of vacant lands in anticipation of new tenants.

18. Acquired surveillance cameras for high-risk areas.



New 15MGD Reservoir, Kunia, Oahu





# Challenges Ahead

Economic forecasts related to the Maui Wildfire have already caused impacts for the end of the calendar year and beyond raise concerns about funding opportunities for ADC's projects to improve food security and resiliency. Beyond FY 2023, the tragic fires that decimated Lahaina, Maui will likely have state-wide repercussions for years to come.

Additionally, staff anticipates tenant farmer challenges associated with obtaining GAP training and certification and meeting the mandates of the federal Food Safety Modernization Act of 2011. On Kauai, ADC's properties and the community-at-large have endured several extreme flooding events in the last several years. The realities of climate change suggest that these events may become more frequent and more severe in the coming years. Sea level rise is already threatening coastal

communities across the world and is a particular concern for the community and ADC tenants in Kekaha, Kauai. Severe drought will also be a challenge and the need for improved water infrastructure will be a goal for ADC in the upcoming years.

ADC and our tenants continue to experience and attempt to mitigate agricultural theft and other security issues such as trespassing, encampments of houseless



individuals, and other illegal activity. These phenomena are hardly unique to ADC; indeed, farmers large and small struggle to mitigate these activities. ADC has experienced some small measure of success by partnering with local law enforcement, as well as recently awarding much of our vacant land to tenant farmers. Regardless, the economic realities of the pandemic, as well as recent enforcement activities which disrupted large encampments elsewhere appear to have resulted in greater numbers of houseless individuals and increased transient activity on ADC lands and the lands of our neighbors.

Lastly, ADC, like many landowners and State agencies, continues to experience pressure for access to prime agricultural lands from competing non-agricultural interests such as solar power generation, waste disposal, and recreational and training activities.



# Appendix I

# Land Purchase Summary as of

### FY2023

#### **ADC Land Purchase Breakdown**

Seller	тмк	Acreage	Closing
Trustee of the George Galbraith Estate	Various	1,250	2012
Castle & Cooke, Inc.	1-7-1-002-009	24	2013
Tamura Enterprises, Inc.	1-7-4-012-016	2	2014
Dole Food Company, Inc.	1-7-1-002-004 1-7-1-002-023	257	2015
W.H. Shipman, Ltd.	3-6-151-002	2	2015
Dole Food Company, Inc.	1-6-5-002-001	73	2016
Dole Food Company, Inc.	1-7-1-002-006 1-7-1-002-034	197	2016
Castle & Cooke, Inc.	1-7-1-002-032	205	2016
Dole Food Company, Inc.	1-6-4-003-016 1-6-5-001-046	386	2017
Castle & Cooke, Inc.	1-9-5-003-007	92	2017
Dole Food Company, Inc.	1-6-5-002-011	215	2017
Dole Food Company, Inc.	1-6-4-004-008 1-6-4-004-006	234	2017
Dole Food Company, Inc.	1-6-5-005-002	434	2017
Dole Food Company, Inc.	1-6-5-001-044	114	2020
Castle & Cooke, Inc.	1-7-1-002-037 1-7-1-002-044	30 22	2022 2022



## Appendix II

### Reporting Requirements per 163D-19(b)(1)-(4), HRS as of

### FY2023

**§163D-19** Annual **report.** (a) The corporation shall submit to the governor and the legislature, no later than twenty days prior to the convening of each regular session, a complete and detailed report of its plans and activities.

(b) The following information shall be included in the annual report and shall be posted on the corporation's website:

- (1) The number of lots the corporation leased or used, by size and island;
- (2) The number of lots the corporation leased or used, by island, that contain protocols and conditions supporting specialty farm products;
- (3) The number of vacant parcels and unoccupied parcels in the leasing process, by island, including the parcel size, location, and date the parcel was last occupied by a tenant; and
- (4) A description of any lease sales or transfers approved by the corporation, including:
  - (A) A description of the type of farm products produced by the transferring lessee and the farm products to be produced by the accepting lessee on the leased lands; and
  - (B) The date and description of the transferring lessee's last lease approved by the corporation. [L 1994, c 264, pt of §1; am L 2019, c 28, §9]



### Field Availability

Island	Location	Lot, Field, Unit, Parcel, Tax Map	Sizo (acros)	Specialty Crop	Licensed	Date Last Occupied (vacant)
Hawaii	Location Keaau	Key Number 002	Size (acres)	Specialty Crop	Licensed	n/a
Kauai	Kalepa	A	419	х	х	2020
Kauai	Kalepa	В	61.4	X	X	n/a
Kauai	Kalepa	HSPA 1	2	X	X	n/a
Kauai	Kalepa	HSPA 2	2	X	X	n/a
Kauai	Kalepa	HSPA 3	19	X	X	n/a
Kauai	Kalepa	C	179	X	X	n/a
Kauai	Kalepa	D	469	X	X	n/a
Kauai	Kalepa	E	587	~	X	n/a
Kauai	Kalepa	F	630	х	X	n/a
Kauai	Kalepa	G	312	Λ	X	n/a
Kauai	Kalepa	Н	382		X	n/a
Kauai	Kalepa		518		X	n/a
Kauai	Kalepa	J	160		Λ	n/a
Kauai	Kalepa	K	345.43		Х	n/a
Kauai	Kalepa	L	287	Х	X	n/a
Kauai	Kalepa	M	235	~	X	n/a
Kauai	Kalepa	GE (A-M)	1000	Х	X	n/a
Kauai	Kekaha	101	71.38	X	X	n/a
Kauai	Kekaha	101	67.03	X	X	n/a
Kauai	Kekaha	102		X	X	n/a
Kauai	Kekaha	103	21.8 (por)	X	X	n/a
Kauai	Kekaha	104	52.23 (por) 52.75	X	X	
	Kekaha	105	38.08	X	X	n/a
Kauai	Kekaha		80.29	X	X	n/a
Kauai		107				n/a
Kauai	Kekaha Kekaha	108	61.88	X	X	n/a
Kauai		109	4.58	X	X	n/a
Kauai	Kekaha	110	43.17	X	X	n/a
Kauai	Kekaha	111	23.01	X	X	n/a
Kauai	Kekaha	112	114.62	X	X	n/a
Kauai	Kekaha	113	54.74	X	X	n/a
Kauai	Kekaha	115	47.47	X	X	n/a
Kauai	Kekaha	116	106.88	X	X	n/a
Kauai	Kekaha	117	58.81	X	Х	n/a
Kauai	Kekaha	119	94.26	X	V	unknown
Kauai	Kekaha	120	107.09	X	X	n/a
Kauai	Kekaha	121	106.44	X	X	n/a
Kauai	Kekaha	123	48.34	X	X	n/a
Kauai	Kekaha	125	68.31	Х	Х	n/a



Kauai	Kekaha	127	151.47	х	х	n/a
Kauai	Kekaha	128	153.92	X	X	n/a
Kauai	Kekaha	130	83.71	X	X	n/a
Kauai	Kekaha	201	80.76	X	~	unknown
Kauai	Kekaha	206	24.17	X	Х	n/a
Kauai	Kekaha	207	88.02	X	~	n/a
Kauai	Kekaha	208	59.8	X	Х	n/a
Kauai	Kekaha	209	73.32	X	X	n/a
Kauai	Kekaha	210	34.96	X	X	n/a
Kauai	Kekaha	210	33.69	X	x	n/a
Kauai	Kekaha	212	88.84	X	X	n/a
Kauai	Kekaha	212	37.15	X	Λ	2015
Kauai	Kekaha	213	54.96	X		2015
Kauai	Kekaha	215	85.05	X		2015
Kauai	Kekaha	215	98.79	X	х	n/a
Kauai	Kekaha	210	112.3	X	X	n/a
Kauai	Kekaha	217	64.16	X	X	n/a
Kauai	Kekaha	218	199.72	X	X	n/a
Kauai	Kekaha	219	91.94	X	X	n/a
Kauai	Kekaha	220	100.03	X	X	n/a
	Kekaha	221	71.94	X	X	
Kauai				X	X	n/a
Kauai	Kekaha	223	85.02			n/a
Kauai	Kekaha	225	105.22	X X	X	n/a
Kauai	Kekaha	228	82.87		X	n/a
Kauai	Kekaha	229	92.02	X	X	n/a
Kauai	Kekaha	309	139.88 (por)	X	X	n/a
Kauai	Kekaha	310	75.76	X	X	n/a
Kauai	Kekaha	311	42.69	X	X	n/a
Kauai	Kekaha	312	88.19	X	X	n/a
Kauai	Kekaha	313	50.79	Х	Х	n/a
Kauai	Kekaha	314	64.36	X	X	n/a
Kauai	Kekaha	315	40.71	Х	Х	n/a
Kauai	Kekaha	316	21.25	Х	Х	n/a
Kauai	Kekaha	317	54.48	Х		2016
Kauai	Kekaha	320	101.73	Х		2013
Kauai	Kekaha	321	69.28	Х	Х	n/a
Kauai	Kekaha	322	63.03	Х	Х	n/a
Kauai	Kekaha	323	127.92	Х		unknown
Kauai	Kekaha	324	41.88	Х	Х	n/a
Kauai	Kekaha	325	31.57	Х	Х	n/a
Kauai	Kekaha	326	117.77	Х		2010
Kauai	Kekaha	327	117.04	Х		2016
17 · · ·	Kekaha	408	15	Х	Х	n/a
Kauai Kauai	KEKalla	400	15	X	X	n/ a



Kauai	Kekaha	414	14.76	х		2015
Kauai	Kekaha	419	91.14	X		2013
Kauai	Kekaha	419	63.6	X		2013
Kauai	Kekaha	424	67.74	X		2013
Kauai	Kekaha	425	70.66	X		2010
Kauai	Kekaha	601	50.77	X		2003
Kauai	Kekaha	602	59.93	X		2003
Kauai	Kekaha	611	48.17	X		2003
Kauai	Kekaha	612	62.36	X		2003
Kauai	Kekaha	613	142.71	Х		2003
Kauai	Kekaha	621	101.99	X		2003
Kauai	Kekaha	631	67.17	Х		2003
Kauai	Kekaha	632	65.71	Х		2003
Kauai	Kekaha	633	62.29	Х	Х	n/a
Kauai	Kekaha	635	87.73	Х		2003
Kauai	Kekaha	641	48.26	Х		2003
Kauai	Kekaha	642	94.16	Х		2003
Kauai	Kekaha	643	41.99	Х		2003
Kauai	Kekaha	644	47.58	Х		2003
Kauai	Kekaha	645	80.25	Х		2003
Kauai	Kekaha	646	44.41	Х	Х	n/a
Kauai	Kekaha	651	31.2	Х		2003
Kauai	Kekaha	652	68.74	Х		2003
Kauai	Kekaha	653	56.79	Х		2003
Kauai	Kekaha	661	52.76	Х		2003
Kauai	Kekaha	662	43.02	х		2003
Kauai	Kekaha	663	63.65	х		2003
Kauai	Kekaha	664	105.52	Х		2003
Kauai	Kekaha	665	111.71	Х		2003
Kauai	Kekaha	666	82.55	Х	Х	n/a
Kauai	Kekaha	671	49.49	Х		2003
Kauai	Kekaha	672	75.29	Х		2003
Kauai	Kekaha	673	31.85	Х		2003
Kauai	Kekaha	KAP 1	6.371	Х	х	n/a
Kauai	Kekaha	KAP 2	13.726	х	х	n/a
Kauai	Kekaha	KAP 3	10.834	Х	х	n/a
Kauai	Kekaha	KAP 4	10.014	Х	х	n/a
Kauai	Kekaha	KAP 5	9.954	X	X	n/a
Kauai	Kekaha	KAP 6	8.472	X	X	n/a
Kauai	Kekaha	KAP 7	8.495	X	X	n/a
Kauai	Kekaha	KAP 8	8.113	X	X	n/a
Kauai	Kekaha	KAP 9	6.045	X	X	n/a
Kauai	Kekaha	KAP 10	5.423	X	X	n/a
Kauai	Kekaha	KAP 11	7.603	X	X	n/a
Ruuui	Renaria		7.005		Λ	nyu



Kauai	Kekaha	KAP 12	5.465	Х	Х	n/a
Kauai	Kekaha	KAP 13	5.976	Х	Х	n/a
Kauai	Kekaha	KAP 14	7.91	Х	Х	n/a
Kauai	Kekaha	KAP 15	7.845	Х	Х	n/a
Kauai	Kekaha	KAP 16	7.753	Х	Х	n/a
Kauai	Kekaha	KAP 17	9.447	Х	Х	n/a
Kauai	Kekaha	KAP 18	9.447	Х	Х	n/a
Kauai	Kekaha	KAP 19	7.585	Х	Х	n/a
Kauai	Kekaha	Parcel A	5.601		Х	n/a
Kauai	Kekaha	Parcel B	32.929		Х	n/a
Kauai	Kekaha	Parcel C	17.297	х	Х	n/a
Kauai	Kekaha	Parcel D	5.195	Х	Х	n/a
Kauai	Kekaha	Parcel E	42.019		Х	n/a
Oahu	Galbraith	1	26.551	Х	Х	n/a
Oahu	Galbraith	2	10.767	Х	Х	n/a
Oahu	Galbraith	3	6.023	х		2012
Oahu	Galbraith	4	10.000	х	Х	n/a
Oahu	Galbraith	5	36.026	Х	х	n/a
Oahu	Galbraith	6	30.616	Х	х	n/a
Oahu	Galbraith	7	24.202	Х	х	n/a
Oahu	Galbraith	8	42.325	Х	х	n/a
Oahu	Galbraith	9	79.991	X	X	n/a
Oahu	Galbraith	10	83.328	Х	х	n/a
Oahu	Galbraith	11	62.025	X	X	n/a
Oahu	Galbraith	12	57.783	X	X	n/a
Oahu	Galbraith	005	221.902	X	X	2017
Oahu	Galbraith	003	132.648	X	X	n/a
Oahu	Galbraith	010	319.769	X	X	n/a
Oahu	Whitmore	004	257	X	X	n/a
Oahu	Whitmore	037	30	X	~	n/a
Oahu	Whitmore	044	22	X		n/a
Oahu	Whitmore	009	24	X	Х	n/a
Cunu	Paalaa	005	27	X	A	nya
Oahu	Uka	016	552.47	Х		2017
Oahu	Whitmore	006	4	Х		2017
Oahu	Whitmore	008	230	Х		2017
	Paalaa					
Oahu	Uka	056	114	Х	х	n/a
	Paalaa					
Oahu	Uka	046	42	Х	Х	n/a
Oahu	Whitmore	001	73	Х	Х	n/a
	Paalaa					
Oahu	Uka	006	42	Х	Х	n/a
Oal	Paalaa	000	40	V	V	
Oahu	Uka	008	46	Х	Х	n/a



# Description of Lease Sales or Transfers FY 2023

		<u>Effective</u>				
<u>No.</u>	<u>Doc. No.</u>	<u>Date</u>	<u>Transferor</u>	<u>Products</u>	<u>Transferee</u>	<u>Products</u>
1	LI-K0801	9/30/2016	Beck's Superior Hybrids Inc.	Seeds	SOH, Department of Education	Educational Programs
2	LI-K1102	5/3/2011	Green Energy Team, LLC	Biomass	Mahipapa, LLC	Biomass
3	LI-KA1501	10/1/2014	Green Energy Team, LLC	Biomass	Mahipapa, LLC	Biomass
4	LI-K1502	1/1/2015	Andros Engineering Corporation	Ag & Engineering Services	Kekaha Agriculture Association	Ag & Engineering Services; base yard



# Appendix III

Hawaii Agribusiness Plan (2023)

See 2021 Agribusiness Plan on Following Pages

# HAWAII AGRIBUSINESS PLAN JULY 2023



Agribusiness Development Corporation

# CONTENTS

3	Introduction
6	ADC Framework for Increased Agricultural Productivity Land Acquisition & Development
8	Irrigation System Development & Maintenance
10	Improve Components of the Food System
11	Appendix 1: Maps



# INTRODUCTION

The 2022-2023 Fiscal Year has been a year of great change for the State of Hawaii Agribusiness Development Corporation (ADC). Act 219, Hawaii Session Laws 2022 took effect July 1, 2022. Through Act 219, the Legislature redefined ADC's mission, eliminated responsibilities that duplicate efforts of other state agencies, created an internal system of accountability, and recognized the importance of having a plan, with benchmarks and long-term goals. One significant change was the transfer of ADC's administrative attachment from the Hawaii Department of Agriculture (HDOA) to the Department of Business, Economic Development, and Tourism (DBEDT). The Legislature views agriculture as an important economic driver and felt that associating ADC with other innovative industries through DBEDT would help achieve the state's goal of increased production and consumption of local foods and products. ADC will continue to collaborate with HDOA on agriculture related programs.





The sudden and unexpected passing of ADC's long time executive director **James Nakatani** in April 2023 has created a void in ADC's operations that will be hard to fill. Mr. Nakatani has served the agricultural community through working with his family watercress farm, serving as president of the Hawaii Farm Bureau, and Director of HDOA. Mr. Nakatani's knowledge, foresight, and leadership will be greatly missed.

But with loss comes an opportunity for change and creating a new agribusiness plan at this time has become more important than ever. To ensure the plan is done right, ADC has enlisted the aid of the Office of Planning and Sustainable

Development, an agency whose mission is to conduct strategic planning, identify and analyze significant issues, problems, and opportunities, and formulate strategies and alternative courses of action in response to identified problems and opportunities. The Legislature's amendment of the Hawaii Agribusiness Plan has provided ADC with a roadmap to success and ADC intends to use this tool to increase agricultural products for local consumption.

# **INTRODUCTION (cont.)**

In Search of the Hawaii Agribusiness Plan

Section 163D-5, Hawaii Revised Statutes, the Hawaii Agribusiness Plan, as amended by Act 219, reads as follows:

- (a) The corporation shall prepare and post on its website the Hawaii agribusiness plan, which shall define and establish goals, objectives, policies, and priority guidelines for its agribusiness development strategy. The plan shall include but not be limited to: (1) An inventory of agricultural lands with suitable adequate water resources that are or will become available; provided that the inventory of agricultural lands under this paragraph shall be agricultural lands within the purview of the corporation that can be used to meet present and future agricultural production needs; (2) An Inventory of available agricultural infrastructure, such as Irrigation systems, drainage systems, processing facilities, and other accessory facilities, that are controlled by the corporation; and (3) Strategies for federal, state, county, and community stakeholder actions that will promote the development and enhancement of Hawaii's agricultural Industries.
- (b) The Hawaii agribusiness plan goals shall have specific one-year, five-year, and ten-year objective and measurable outcomes that prioritize local food production from the corporation's leases or licenses. The objectives and outcomes shall include annual performance goals and measures that the corporation shall be evaluated on annually.
- (c) The Hawaii agribusiness plan shall include metrics, timeframes, and budget expectations as part of the corporation's agribusiness development strategy.
- (d) The corporation shall update the Hawaii agribusiness plan no later than July 1, 2023, and every five years thereafter, and shall Incorporate the plan in its annual report to the governor and the legislature as provided in section 163D-19.

# INTRODUCTION (cont.)

OPSD's Plan to Transform Hawaii's Agriculture

The Office of State Planning, now known as the Office of Planning and Sustainable Development (OPSD), created the Hawaii 2050 Sustainability Plan, which was published in January 2008. The 2050 Sustainability Plan identified the goal of increased production and consumption of local foods and products, particularly agricultural products. This goal was based on the fact that only 15% of the food consumed in Hawaii was actually grown in Hawaii. Increasing local agricultural production was seen



as a way of helping farms thrive, preserve green space and a rural way of life, and make Hawaii less vulnerable to external catastrophes. The 2050 Sustainability Plan also noted that focusing on the agricultural sector would create a more diverse and resilient economy.

In 2018, OPSD issued its *Hawaii 2050 Sustainability Plan Ten Year Measurement Update (2008-2017).* The Hawaii 2050 Sustainability Plan is to be evaluated every ten years. The Updated 2050 Sustainability Plan reviewed the data collected over the course of ten-years to measure Hawaii's progress toward sustainability. The 2018 update reported that local agriculture had marginally increased, but that Hawaii still imported 80-90% of its food, making Hawaii particularly vulnerable to natural disasters, global events, and shipping disruptions. This vulnerability become quite apparent during the global pandemic that hit Hawaii in early 2020.

In light of the extensive research and planning OPSD has already devoted to guiding Hawaii's agricultural industry to increased production, ADC looks forward to working with OPSD in consulting with community and industry stakeholders in developing a more detailed and granular updated Agribusiness Plan by December 2024.

# ADC FRAMEWORK

for Increased Agricultural Productivity Land Acquisition & Development

The ADC manages 22,000 acres on the island of Kauai and Oahu. Of the 22,000 acres it manages, 13,900 acres have commercial value and are considered ideal lands for agriculture production. The remainder is comprised of gulches, ravines, ditches, and roadways. To date, ADC has issued license agreements and permits to agriculture operations for long-term use of 8,000+ acres, which represents over 60% of its total land inventory. Keeping large tracts of former plantation lands in agriculture and providing long-term licenses and leases to agricultural operations are the key elements to building the agriculture sector of the future.

### GOAL

Acquire and develop productive agricultural lands for agricultural development

### **OBJECTIVES**

- 1. To maximize utilization (100% occupancy) of ADC agricultural land resources for diversified agribusiness.
- 2. To implement the State's goal to double local food production and consumption.
- 3. To reduce food imports.
- 4. To acquire and make agriculture lands available for production.
- 5. Educate the public on the importance of local agriculture and farming to our state economy and food supply.



# ADC FRAMEWORK FOR INCREASED AGRICULTURAL PRODUCTIVITY LAND ACQUISITION & DEVELOPMENT (cont.)

### **ACTION ITEMS**

### OAHU

- Acquire additional acres into ADC land inventory (5 to 7 years). Selected parcels will be purchased to protect agriculture status and availability.
- Convert an additional 1,000 acres of vacant land to productive diversified agriculture status (1 to 3 years). Selected parcels will be targeted for land preparation including tree clearing and amending the conditions of the soil.
- Develop and implement a crop rotation framework that includes both livestock and crops (1 to 3 years).
- Develop facilities and infrastructure to accommodate agriculture activities (harvesting, packing, processing and distribution) (5 to 7 years).
- Implementation of new land management software to help better manage ADC properties and communicate with tenants.

### KALEPA, KAUAI

- Convert 500 acres to productive diversified agriculture status (1 to 3 years). Selected parcels will be targeted for land preparation including tree clearing and amending the conditions of the soil.
- Implement a crop rotation program (1 to 3 years).
   Develop a crop rotation framework that includes both livestock and field crops.



### KEKAHA, KAUAI

• Convert 1,000 acres to productive diversified agriculture status (1 to 3 years). Selected parcels will be targeted for land preparation including tree clearing and amending the conditions of the soil.



# IRRIGATION SYSTEM

Development & Maintenance

In addition to agricultural lands on Kauai and Oahu, the ADC also manages the Waiahole Water System. The ADC continues to work with its farmers to improve and maintain critical infrastructure necessary to support agricultural operations. In addition to ongoing maintenance of existing infrastructure, the ADC is also developing new infrastructure and improving water storage capacity by constructing reservoirs and storage ponds to ensure farmers have a consistent and affordable supply of irrigation water.

### GOAL

Assure the continued availability of adequate, reasonably priced water to lands to accommodate present and future agricultural activities.

### **OBJECTIVES**

- 1. To develop a master irrigation plan which incorporates system development, watershed management and water recycling.
- 2. To maintain and improve the efficiency of existing irrigations systems.
- 3. To expand agricultural water resources.



### **CENTRAL OAHU**

- Implement the Central Oahu Watershed Management Plan (5 to 7 years).
- Rehabilitate the existing Waiahole Water System which includes constructing a reservoir, renovating reservoirs 155 and 225, back-up well development, enclosing high-risk sections, and improving data gathering (1 to 5 years).



### WAHIAWA, OAHU

- Incorporate R-1 water from the Wahiawa Wastewater Treatment Plant into the agriculture system (5 to 10 years).
- Expand system capacity by acquiring and incorporating 3 existing wells (1 to 3 years).
- Develop additional reservoirs to accumulate surface water and incorporate into the agriculture system (2 to 5 years).

# **IRRIGATION SYSTEM DEVELOPMENT & MAINTENANCE (cont.)**

### **ACTION ITEMS**

### KALEPA, KAUAI

- Work with the Department of Land and Natural Resources to rehabilitate the Hanamaulu ditch portion of the existing irrigation system (2 to 5 years).
- Improve the Christian Crossing Bridge which provides access for standard trucks and heavy equipment (1 to 3 years). This project began in 2021 and is near completion.

### KEKAHA, KAUAI

- Pressurize the existing irrigation system (1 to 5 years). The structural materials required to implement this project has been purchased. Installation is expected to begin in 2023.
- Rehabilitate the existing irrigation system including repair of the hydro-electric plant (2 to 5 years).
- Work with the Kekaha Agriculture Association to improve the Kekaha Bridge which provides access for standard trucks and heavy equipment (1 to 3 years).



# Improve Components of the FOOD SYSTEM

A food system includes all processes and infrastructure involved in feeding a population: growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items. It also includes the inputs needed and outputs generated at each of these steps. A food system operates within and is influenced by social, political, economic and environmental contexts. It also requires human resources that provide labor, research and education.

### GOAL

To improve the productivity of agriculture operations by providing brick and mortar facilities, as needed, and to promote efficient profitability by enticing the development of applied research and innovation on State lands and in State facilities.

### OBJECTIVE

Identify and deploy viable new techniques and tools to improve crop and livestock yield and marketability.

### **ACTION ITEMS**

### **Research & Development:**

- Greenhouse development to lower costs and implement new technology.
- Plant breeding to develop new varietal and cultivar annually.
- Improve the handling and processing of papaya.
- Increase the 'ulu industry to productive scale.

### Marketing:

- Increase exposure of emerging crops that include, but are not limited to, tilapia and 'ulu for local, as well as export markets such as papaya.
- Provide available space to producers who can afford to construct their own food hub facility.

### KEKAHA, KAUAI

- Develop a central food hub to accommodate processing, packing, storage and distribution.
- Develop a workforce housing solution with private partner.



### CENTRAL OAHU



# APPENDIX 1 - MAPS (cont.)



KALEPA, KAUAI

# APPENDIX 1 - MAPS (cont.)

KEKAHA, KAUAI



# APPENDIX 1 - MAPS (cont.)



WAIAHOLE WATER SYSTEM, OAHU