

House District 28  
Senate District 14

THE TWENTY-FOURTH LEGISLATURE  
HAWAII STATE LEGISLATURE  
APPLICATION FOR GRANTS & SUBSIDIES  
CHAPTER 42F, HAWAII REVISED STATUTES

Log No:

For Legislature's Use Only

Type of Grant or Subsidy Request:

- GRANT REQUEST - OPERATING       GRANT REQUEST - CAPITAL       SUBSIDY REQUEST

"Grant" means an award of state funds by the legislature, by an appropriation to a specified recipient, to support the activities of the recipient and permit the community to benefit from those activities.

"Subsidy" means an award of state funds by the legislature, by an appropriation to a recipient specified in the appropriation, to reduce the costs incurred by the organization or individual in providing a service available to some or all members of the public.

"Recipient" means any organization or person receiving a grant or subsidy.

STATE DEPARTMENT OR AGENCY RELATED TO THIS REQUEST

DEPARTMENT OF AGRICULTURE \_\_\_\_\_

AND PROGRAM I.D. NO. \_\_\_\_\_

1. APPLICANT INFORMATION:

Legal Name of Requesting Organization or Individual:  
Hawaii Farm Bureau Federation  
Db:

Street Address: 2343 Rose Street  
Honolulu, HI 96819

Mailing Address:  
Same as above.

2. CONTACT PERSON FOR MATTERS INVOLVING THIS APPLICATION:

Name ALAN TAKEMOTO

Title Executive Director

Phone # 808-848-2074

Fax # 808-848-1921

e-mail atakemoto@hfbf.org

3. TYPE OF BUSINESS ENTITY:

- NON PROFIT CORPORATION  
 FOR PROFIT CORPORATION  
 LIMITED LIABILITY COMPANY  
 SOLE PROPRIETORSHIP/INDIVIDUAL

4. FEDERAL TAX ID #: \_\_\_\_\_

5. STATE TAX ID #: \_\_\_\_\_

6. SSN (IF AN INDIVIDUAL): \_\_\_\_\_

7. DESCRIPTIVE TITLE OF APPLICANT'S REQUEST:

(Maximum 300 Characters)

8. FISCAL YEARS AND AMOUNT OF STATE FUNDS REQUESTED:

FY 2007-2008 \$ 1,000,000.00

FY 2008-2009 \$ 1,000,000.00

9. STATUS OF SERVICE DESCRIBED IN THIS REQUEST:

- NEW SERVICE (PRESENTLY DOES NOT EXIST)  
 EXISTING SERVICE (PRESENTLY IN OPERATION)

SPECIFY THE AMOUNT BY SOURCES OF FUNDS AVAILABLE AT THE TIME OF THIS REQUEST:

STATE \$ \_\_\_\_\_

FEDERAL \$ \_\_\_\_\_

COUNTY \$ \_\_\_\_\_

PRIVATE/OTHER \$ \_\_\_\_\_

TYPE NAME & TITLE OF AUTHORIZED REPRESENTATIVE:

AUTHORIZED SIGNATURE

ALAN TAKEMOTO, EXECUTIVE DIRECTOR

NAME & TITLE

1/27/07

DATE SIGNED



**Hawaii Farm Bureau**  
F E D E R A T I O N

2343 Rose Street, Honolulu, HI 96819  
PH: (808)848-2074; Fax: (808) 848-1921

January 30, 2008

✓ Attn: Aaron Nyuha  
Senate Committee on Ways & Means  
State Capitol, Room 210  
Honolulu, HI 96813

Attn: Eric Nouchi  
House Committee on Finance  
State Capitol, Room 306  
Honolulu, HI 96813

Dear Mr. Nyuha and Mr. Nouchi:

Per the instructions for Grants-in-Aid Applications, we are writing to notify you that we have submitted a GIA during the 2007 legislative session for both fiscal years of the biennium. However, we only received funding for one year. Our organization still requires second year funding. Attached is the cover sheet of our applications from last year for your information.

We respectfully submit our application for the second year of funding for 2008-2009.

If you have any questions, please call me at 848-2074 or email [atakemoto@hfbf.org](mailto:atakemoto@hfbf.org).

Sincerely,

A handwritten signature in black ink, which has been redacted with a thick black bar.

Alan T. Takemoto  
Executive Director

Enclosure

House District 28

Senate District 14

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TYPE NAME & TITLE OF AUTHORIZED REPRESENTATIVE:



AUTHORIZED SIGNATURE

ALAN TAKEMOTO, EXECUTIVE DIRECTOR

NAME & TITLE

1/27/07

DATE SIGNED

House District 28

Senate District 14

**THE TWENTY-FOURTH LEGISLATURE  
HAWAI'I STATE LEGISLATURE  
APPLICATION FOR GRANTS & SUBSIDIES  
CHAPTER 42F, HAWAI'I REVISED STATUTES**

Log No: 75-0

For Legislature's Use Only

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PRIVATE/OTHER \$ \_\_\_\_\_

TYPE NAME & TITLE OF AUTHORIZED REPRESENTATIVE:



AUTHORIZED SIGNATURE

ALAN TAKEMOTO, EXECUTIVE DIRECTOR \_\_\_\_\_  
NAME & TITLE

1/27/07 \_\_\_\_\_  
DATE SIGNED

## BUDGET JUSTIFICATION - EQUIPMENT AND MOTOR VEHICLES

Applicant: ~~Hawaii Farm Bureau Federat.~~ Period: July 1, 2007 to June 30, 2009

DESCRIPTION EQUIPMENT	NO. OF ITEMS	COST PER ITEM	TOTAL COST	TOTAL BUDGETED
N/A			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
TOTAL:			\$ -	
JUSTIFICATION/COMMENTS:				

DESCRIPTION OF MOTOR VEHICLE	NO. OF VEHICLES	COST PER VEHICLE	TOTAL COST	TOTAL BUDGETED
			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
TOTAL:			\$ -	
JUSTIFICATION/COMMENTS:				

**BUDGET JUSTIFICATION  
CAPITAL PROJECT DETAILS**

Applicant: Hawaii Farm Bureau Federation

Period: July 1, 2007 to June 30, 2009

FUNDING AMOUNT REQUESTED						
TOTAL PROJECT COST	ANY OTHER SOURCE OF FUNDS RECEIVED IN PRIOR YEARS		STATE FUNDS REQUESTED		FUNDING REQUIRED IN SUCCEEDING YEARS	
	FY: 2005-2006	FY: 2006-2007	FY: 2007-2008	FY: 2008-2009	FY: 2009-2010	FY: 2010-2011
PLANS						
N/A						
LAND ACQUISITION						
DESIGN						
CONSTRUCTION						
EQUIPMENT						
<b>TOTAL:</b>						
JUSTIFICATION/COMMENTS:						

**DECLARATION STATEMENT  
APPLICANTS FOR GRANTS AND SUBSIDIES  
CHAPTER 42F, HAWAII REVISIED STATUTES**

The undersigned authorized representative of the applicant acknowledges that said applicant meets and will comply with all of the following standards for the award of grants and subsidies pursuant to section 42F-103, Hawaii Revised Statutes:

- (1) Is licensed or accredited, in accordance with federal, state, or county statutes, rules, or ordinances, to conduct the activities or provide the services for which a grant or subsidy is awarded;
- (2) Comply with all applicable federal and state laws prohibiting discrimination against any person on the basis of race, color, national origin, religion, creed, sex, age, sexual orientation, or disability;
- (3) Agree not to use state funds for entertainment or lobbying activities; and
- (4) Allow the state agency to which funds for the grant or subsidy were appropriated for expenditure, legislative committees and their staff, and the auditor full access to their records, reports, files, and other related documents and information for purposes of monitoring, measuring the effectiveness, and assuring the proper expenditure of the grant or subsidy.


In addition, a grant or subsidy may be made to an organization only if the organization:

- (1) Is incorporated under the laws of the State; and
- (2) Has bylaws or policies that describe the manner in which the activities or services for which a grant or subsidy is awarded shall be conducted or provided.

Further, a grant or subsidy may be awarded to a non-profit organization only if the organization:

- (1) Has been determined and designated to be a non-profit organization by the Internal Revenue Service; and
- (2) Has a governing board whose members have no material conflict of interest and serve without compensation.

Further, the undersigned authorized representative certifies that this statement is true and correct to the best of the applicant's knowledge.

Hawaii Farm Bureau Federation  
(Typed Name of Individual or Organization)  
  
(Signature)

1/27/07  
(Date)

Alan Takemoto  
(Typed Name)

Executive Director  
(Title)

## Application for Grants and Subsidies

*If any item is not applicable to the request, the applicant should enter "not applicable".*

### I. Background and Summary

This section shall clearly and concisely summarize and highlight the contents of the request in such a way as to provide the State Legislature with a broad understanding of the request. Include the following:

1. A brief description of the applicant's background;

The Hawaii Farm Bureau Federation was incorporated as a non-profit corporation in December of 1950 for the following purposes:

- A. To work for the solution of the problems of the farm, the farm home and the rural community by use of the recognized advantages or organized action, to the end that those engaged in various branches of agriculture may have the opportunity for happiness and prosperity in their chosen work.
- B. To represent, protect and advance the social, economic and education interests of the farmers of Hawaii.

2. The goals and objectives related to the request;

The Hawaii Farm Bureau Federation is seeking support to implement parts of its Strategic Plan for Hawaii's Agriculture (Attachment 1, pg. 10 – Research and Development, pg 11 Marketing and Competitiveness)

3. State the public purpose and need to be served;

Agriculture fulfills the mandates of Hawaii's constitution. The Hawaii State Constitution, Article XI, Section 1 and 3 states:

Section 1 states "For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air minerals and energy sources, and



shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State...”

Section 3 further states that “the State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands.”

4. Describe the target population to be served;

The target population to be served is the agricultural and rural communities.

5. Describe the geographic coverage; and

State of Hawaii

6. Describe how the request will, in the case of a grant, permit the community to benefit from those activities; or for a subsidy, reduce the costs incurred by the organization or individual in providing a service available to some or all members of the public.

Agriculture benefits the community by contributing to the diversity of economic activity necessary for the sustainability of the state’s business sector. It is the main business activity providing employment in the rural areas and keeping open space and scenic areas through economic activities.

To be sustainable agriculture needs new product development, production innovation, increased efficiencies and market development. A diverse agriculture based on smaller units of similar activities needs public support for these high risk needs more achievable by high volume large scale crop entities.

## II. Experience and Capability

### A. Necessary Skills and Experience

The applicant shall demonstrate that it has the necessary skills, abilities, knowledge of, and experience relating to the request. State your experience and appropriateness for providing the service proposed in this application. The applicant shall also provide a listing of verifiable experience of related projects or contracts for the most recent three years that are pertinent to the request.

The Hawaii Farm Bureau Federation is coordinating the necessary partnerships to advance the agricultural sector under its Strategic Plan. See "The Voice of Agriculture" membership brochure (Attachment 2) for a description and capabilities of the organization. This grant request is to initiate coordination efforts in Research & Development & Marketing.

The Hawaii Farm Bureau Federation experience includes activities such as:

1. Agriculture Research and Market Development, Hawaii Dept. of Agriculture, 2004-2005; 2005-2006; 2006-2007.
2. Hawaii State Farm Fair, Hawaii Dept. of Agriculture, 2004-2006.
3. Hawaii Farmers Market, Hawaii Dept. of Agriculture, 2004-2005.
4. Living Healthy Program, Hawaii Department of Agriculture, 2003-2004.
5. EPA 319 Grant, Cover cropping for reducing soil nitrogen following seed corn production in the Kaialea-Waiialua Watershed, 2002-2003.
6. Hawaii Agricultural Inventory Reduction System, PICTHR, USDA, 2002.
7. Agricultural Conference 2004 and 2006, Co-sponsor and co-administrator.

### B. Quality Assurance and Evaluation

The applicant shall describe its quality assurance and evaluation plans for the request. Specify how the applicant plans to monitor, evaluate and improve their results.

The Hawaii Farm Bureau Federation will solicit request for proposals from the agricultural industry. Through its Review Committee, they will review, evaluate, and make recommend to the Board of Directors to approve selected proposals. The Board of Directors will make the final decision on the recommendations. The Review Committee will review, monitor and evaluate progress of projects conducted by Hawaii Agriculture Research Center and College of Tropical Agriculture and Human Resources and other subcontracts and/or consultants.

**C. Facilities**

The applicant shall provide a description of its facilities and demonstrate its adequacy in relation to the request. If facilities are not presently available, describe plans to secure facilities. Also describe how the facilities meet ADA requirements, as applicable.

The Hawaii Farm Bureau Federation owns its own facilities (1,200 sq. ft. office space; 1,000 sq. ft. storage; 1,800 sq. ft. rental). It will rely on its staff and sub-contractors for facilities to complete the projects. Hawaii Agriculture Research Center's description of facilities is provided in Attachment 3 and the University of Hawaii's facilities are well known.

**III. Personnel: Project Organization and Staffing**

**A. Proposed Staffing, Staff Qualifications, Supervision and Training**

The applicant shall describe the proposed staffing pattern and proposed service capacity appropriate for the viability of the request. The applicant shall provide the qualifications and experience of personnel for the request and shall describe its ability to supervise, train and provide administrative direction relative to the request.

The Hawaii Farm Bureau Federation has 4 staff members which consist of an Executive Director, Community Affairs Manager, Organizational Development Manager, and general office clerk and numerous volunteers. The Executive Director is Alan Takemoto who has over 10 years experience and knowledge in resolving many of Hawaii agricultural issues.

**B. Organization Chart**

The applicant shall illustrate the position of each staff and line of responsibility/supervision. If the request is part of a large, multi-purpose organization, include an organizational chart that illustrates the placement of this request.

See Attachment 3.

#### **IV. Service Summary and Outcomes**

The Service Summary shall include a detailed discussion of the applicant's approach to the request. The applicant shall clearly and concisely specify the results or outcomes from this request.

A. Describe the scope of work, tasks and responsibilities.

"Request for Proposals" similar to Attachment 4 will be used.

B. The applicant shall provide a projected annual timeline for accomplishing the results or outcomes of the service.

Projects are expected to be completed in one to two years.

C. Attachment 5 describes the accomplishments to date.

#### **V. Financial**

##### **Budget**

The applicant shall submit a budget utilizing the enclosed budget forms as applicable, to detail the cost of the request.

See Budget Forms.

#### **VI. Other**

##### **A. Litigation**

The applicant shall disclose any pending litigation to which they are a party, including the disclosure of any outstanding judgement. If applicable, please explain.

None.

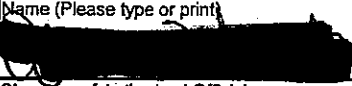
**B. Licensure or Accreditation**

Specify any special qualifications, including but not limited to licensure or accreditation that applicant possesses relevant to this request.

None.

**BUDGET REQUEST BY SOURCE OF FUNDS**  
(Period: July 1, 2007 to June 30, 2009)

Appl Hawaii Farm Bureau Federation

<b>BUDGET CATEGORIES</b>	<b>Total State Funds Requested (a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>
<b>A. PERSONNEL COST</b>				
1. Salaries	36,000	72,000		
2. Payroll Taxes & Assessments	5,000	10,000		
3. Fringe Benefits	7,000	14,000		
<b>TOTAL PERSONNEL COST</b>	<b>48,000</b>	<b>96,000</b>		
<b>B. OTHER CURRENT EXPENSES</b>				
1. Research & Development Projects	1,800,000			
2. Insurance		15,400		
3. Lease/Rental of Equipment		9,800		
4. Supplies		21,000		
5. Telecommunications		2,800		
6. Utilities		19,250		
7. Program Admin. Fee	152,000	13,780		
<b>TOTAL OTHER CURRENT EXPENSES</b>	<b>1,952,000</b>	<b>82,030</b>		
<b>C. EQUIPMENT PURCHASES</b>				
<b>D. MOTOR VEHICLE PURCHASES</b>				
<b>E. CAPITAL</b>				
<b>TOTAL (A+B+C+D+E)</b>	<b>2,000,000</b>	<b>178,030</b>		
<b>SOURCES OF FUNDING</b>		Budget Prepared By:		
(a) Total State Funds Requested	2,000,000	Alan Takemoto	848-2074	
(b) Private Funds	178,030	Name (Please type or print)	Phone	
(c)			Jan. 27, 2007	
(d)		Signature of Authorized Official	Date	
<b>TOTAL REVENUE</b>	<b>2,178,030</b>	Alan Takemoto	Executive Director	
		Name and Title (Please type or print)		



(ATTACHMENT 1)



**Hawaii Farm Bureau**  
F E D E R A T I O N

# **A Strategic Plan For Hawaii's Agriculture**

by

**Hawaii Farm Bureau Federation**

**May 16, 2004**



## INTRODUCTION

Agriculture is a vital component of Hawaii's economy. It provides Hawaii with a stage for tourism, export products for an otherwise service-oriented economy, a diversity of employment opportunities and lifestyles for its residents, and stewardship for its lands and water. Agriculture also provides environmental benefits, such as enviable air and water quality and recharge of our underground aquifers, and social benefits, such as preservation of our rural communities. Most important, diversified agriculture (crops other than sugarcane and pineapple) has made steady progress, increasing in value by an average of five percent per year over the past 20 years, despite the overall depressed economic condition of the state.

Agriculture also helps fulfill the mandates of Hawaii's constitution. The Hawaii State Constitution, Article XI, Section 1 and 3, states:

"For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State....". Section 3 further states that "the State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands."

Thus, the State of Hawaii recognizes the importance of agriculture in the realization of its vision of conservation, protection, and utilization of Hawaii's natural resources.

Agriculture's role in preserving the rural character and open space important to Hawaii's image is well recognized. Less understood is its role as a base industry for a bustling economy and as a provider of a healthy environment for the people of Hawaii.

Agriculture provided the foundation of Hawaii as we know it today. In contrast to the rest of the United States, where public funds were provided for the development of agricultural land, large corporate entities controlled Hawaii's agriculture in the past. Those private enterprises invested and developed much of the state's present day infrastructure, ranging from vast irrigation and road systems to communities and worker welfare.

As large-scale corporate agriculture declined in the past decade, a perception arose that agriculture in general was declining—yet nothing could be further from the truth. Agriculture has not declined. Rather, its nature has changed. Instead of a few large operations controlled by a

few, we now have many smaller-scale, entrepreneurial ventures controlled by many. Successes and failures have occurred, but the overall result has been the creation of competitive and diverse businesses.

As the number of agricultural operations increases, mechanisms are needed that facilitate collaborative efforts to achieve common goals and enhance agriculture's role in the state's future. Crucial to agriculture's success will be industry leaders who understand the industry's vision, are able to communicate it, and can obtain support to implement needed changes.

Now is the time for the growing agricultural sector to come together and develop a set of common objectives. The mission of the Hawaii Farm Bureau Federation makes it the logical organization to take on the leadership role and become the leading advocate and voice for agriculture. Public and private entities have sponsored various conferences and developed plans for the future direction of agriculture. Using these conferences and plans as a guide, the Hawaii Farm Bureau has formulated a vision for agriculture. What is new in this vision are the diversity of the participants and the collective ownership of the product.

This is the third series of a "living documents" that comprise a strategic plan for Hawaii's agriculture.

## VISION

We envision Hawaii's agricultural future to be one in which the priorities for both the private and public sectors include significant amounts of land in profitable agricultural production, maximum opportunities for export and import substitution, increased development of new crops and products, and enhanced marketing of both new and existing crops and products. Landowners, government, and the general population will be aware of the value and significance of agriculture in Hawaii.

We envision agriculture in the future being increasingly diversified, intensive, and technologically sophisticated in the recognition of ever-increasing competition and expansion of regulations intended to protect and preserve our natural environment.

We envision a dynamic private-public partnership in agricultural development. Under strong leadership, the public agencies will be supportive of agriculture with a focus on research, information dissemination, market development, and other support services. Production agriculture will be viewed as an integral part of Hawaii's environmental stewardship. Federal, state, and county policies and regulations affecting agriculture will be assessed and streamlined,

eliminated, or redefined within the context of helping agricultural businesses without compromising public or environmental safety and health. In response to the public sector's recognition of agriculture's role, agriculture will organize itself into collaborative organizations to improve their competitiveness.

### PURPOSE

The purpose of this plan is to evaluate the production, financial, marketing, and distribution problems and opportunities facing Hawaii's agriculture. The plan provides a roadmap to formulate a strategy to address issues hindering Hawaii's agriculture and to fully realize its potential. By identifying each issue, attention can be focused on reaching new or different solutions. This third version begins to identify some of the actions that have taken place and sets into the implementation phase of the Plan.

Private sector motivation must be the driver to move these goals and objectives forward. Agriculture should not rely on government or others to determine its future. Government's role must be limited to providing the political, regulatory, and infrastructural support needed to enhance agriculture.

### MAJOR ISSUES AFFECTING HAWAII'S AGRICULTURE

Implementation of our vision requires that the following major challenges be resolved. The following are suggested resolutions to be considered in developing an implementation plan. Issues are presented in alphabetical order and not in order of priority.

#### Land

Large tracts of land fallowed by plantation closures on all islands represent a tremendous opportunity to facilitate the growth of diversified agriculture. These lands are suitable for most soil-dependent agricultural uses. Constraints to growth of diversified agriculture are primarily the availability of arable lands in appropriate lot sizes with the accompanying infrastructure needed for a successful enterprise.

#### *Land issues include:*

\* The DLNR agricultural lease program needs to be revised to encourage agricultural use of public lands. Examples of the concerns include:

- The current program discourages existing farm tenants from investing in and maintaining their farm operations because they do not know if their leases will be extended. All capital investments on the property are borne by the lessee but cannot be used as credits in the renewal process.
  - The existing public land law creates serious uncertainty that existing farm tenants may be able to continue successful operations. For example, the requirement that a farmer who wishes to extend a 35-year lease must first secure a loan is unreasonable for the long-time tenant who has already built infrastructure. Also, a cap of 55 years limits the long term continuation of a successful operation.
- \* Agricultural lease rents need to reflect agricultural productivity.
  - \* Productive agricultural lands are being rezoned for nonagricultural uses.
  - \* The rezoning of agricultural land into other uses without requiring buffers creates conflict between farmers and the new, nonagricultural occupants of the land. Normal farming activities such as dust, noise, and smells bother occupants close to farms.
  - \* State- and county-permitted uses of agricultural lands are very broad. Permitting low-intensity, nonagricultural, and recreational uses within agricultural zoning without buffers often creates conflicts and reduces productivity of adjacent farmlands.
  - \* Land costs for new agricultural operations are too high.
  - \* Trespass and theft laws are difficult to enforce.

***Resolutions to Land issues include:***

- Continued dialogue with the State DLNR to ensure that agricultural lease rents, tenure, exclusions, and incentives associated with state-owned lands are conducive to new and existing farm tenants. Discussion should include on how we can promote agribusinesses and, thus protect agricultural lands.
- Transfer DLNR's agricultural leases to DOA.
- Continued dialogue with private landowners to encourage lease structures and rents that are conducive to all parties.
- Dialogue with government agencies to encourage financial and regulatory incentives to landowners and farmers for maintaining lands in agriculture.

- Work closely with the county government to develop their county development plans, tax codes, and ordinances. State and county policies should complement or parallel each other.
- Refine the agricultural industry's position on the best methods of protect important agricultural lands (IAL). Focus on an incentive-based approach to keeping lands in agricultural use while directing development away from productive lands.
- Maintain constant communication with law enforcement agencies and county prosecutors relative to agricultural trespass, theft, and liability issues.
- Educate the general public on the Hawaii Right to Farm Act.

***Actions Taken Include:***

- Legislation was approved to strengthen the Hawaii Right To Farm Act. (April 2001)
- Participating in the Ag Coalition and the Ag Working Group to discuss protecting important agricultural land and water issues. Dialogue continues with landowners, environmental groups, agribusinesses, and state and county agencies. ( Started in January 2002; 2004 Legislature - AWG and administration introduced legislation on important ag lands – measure died in conference)
- Coordinated the Ag Theft Task Force which consists of the county prosecutors and law enforcement agencies, state DOA and DLNR, and farmers and ranchers to address this growing concern. Dialogue continues. (Started in October 2002)
- Enabling legislation was approved that sets the policy to transfer DLNR's agricultural leases to DOA (May 2003)

**Water**

Land cannot support agriculture without adequate, economical water resources. Plantation closures not only made available large tracts of agricultural land but also left behind extensive irrigation systems such as the Waiahole Ditch, Oahu; the Lower Hamakua Ditch, Big Island; the East and West Kauai Ditch systems, Kauai; and the Honokohau Ditch on Maui. Unfortunately, the closures have also left the water collection and distribution infrastructure decaying and falling into disrepair. This threatens the orderly transition from plantation operations to diversified agricultural enterprises.

In addition, recent regulatory and court decisions, e.g., those that support leaving water resources in their natural state rather than developing them for agricultural use, are threatening these agricultural water sources and systems.

There is continuous need for an efficient and equitable state policy for agricultural water. Profitability of existing enterprises as well as future expansion and success of the industry rely on the development of adequate sources of water suitable for irrigation and the allocation of that water at reasonable rates. Water development programs within the state must be planned with due consideration for actual and potential agricultural development. Similarly, water regulations in the state should support existing and potential agricultural development. There should be a balance between environmental interests and economic benefits.

Incentives are needed to help develop new sources and distribution systems and to maintain the existing systems. Water development has high capital costs and risk. Joint private-public development of water sources to serve agricultural production on adjacent and/or contiguous state and privately owned lands suited for agriculture should be encouraged.

***Water issues include:***

- \* Existing agricultural water ditch systems are in need of repair and maintenance.
- \* There is an inadequate supply of water at reasonable cost for agriculture.
- \* Regulatory, legal actions, and legal decisions will diminish the sources of economical water for agriculture.
- \* The cost of developing water resources is high.
- \* The state lacks a comprehensive agricultural water use plan.
- \* Agricultural water users have been affected by problems of water shortage, instream standards, drought, and diversion of irrigation water for urban use and are now also threatened by impracticable water quality standards.
- \* Drought conditions continue to restrict and hamper the growth of the livestock industry.

***Resolution to Water issues include:***

- Research and pursue various funding mechanisms for the operation of existing and new irrigation systems such as water irrigation districts and the establishment of a separate

overseeing authority for these water districts (similar to the Hawaii Community Development Authority for Kaka'ako); water cooperatives; etc....

- Evaluate the abandoned or closed plantation irrigation systems to support the transformation out of sugar and pineapple into diversified farms, and encourage the funding for rehabilitation of these irrigation systems and development of supplemental water resources including wells, reservoirs, and aqueducts where needed.
- Establish a water quantity credits system which will provide adequate water for agriculture similar to those that are being developed and used by the EPA for Air Quality credits on emissions from California's industrial firms. This will become effective when farmers transition from flood irrigation to drip, sprinkler to drip, or reservoir to recycle, etc.
- Amend the State Water Code to specify that equal weight shall be given to economic as well as environmental concerns with respect to water.
- Participate in the EMI contested case hearing and support the continued use of East Maui stream waters for agricultural use.
- Re-assess and confer with legal expertise on mounting a legal challenge to the Ruling of the State Supreme Court on the stream restoration issue of the Waihole Contested Case.
- Work with the Department of Health in developing environmental regulations that will provide agricultural operations with certain exemptions or exclusions as the case maybe from stringent EPA or Clean Water Act requirements that have no bearing for Hawaii's situation. Also develop regulations to allow the use of treated effluent or reclaimed water over the underground aquifer; and work to reduce or eliminate costly and time consuming monitoring, testing, and reporting requirements for using such water for irrigation purposes.
- Work with the Department of Agriculture, Commission on Water Resources Management, the Congressional Delegation and the National Farm Bureau to adequately fund the development of the Agricultural Water Use and Development Plan for the State. Also have each irrigation system's users provide adequate input during the review and comment periods on the Plan. Re-instate the active pursuit for the submission and certification of the Hawaii Drought Plan, Phase I by the U.S. Bureau of Reclamation (BuRec) to the U.S. Congress, as this will activate many drought related financial assistance under the BuRec's drought authority. Further encourage the CWRM to actively pursue funding to prepare phase II of

the Hawaii Drought Plan and submit for BuRec's certification, so it may be sent to the U.S. Congress for acceptance.

- Encourage the efficiency and conservation of agricultural water resources including the development and use of drought resistant crops especially in areas with surface water resources and prone low rainfall regions. Work with CTAHR, HARC, and Soil and Water Conservation Districts to develop educational programs on conserving irrigation water for the crops being produced in these target areas and promote the benefits for installing such water conservation measures on individual farms.
- Organize a statewide water users committee to discuss and resolve issues of commonality.
- Address the liability issues of using recycled water.

***Actions Taken include:***

- Legislation was approved to provide a 4% tax credit for drought mitigation facilities. (May 2001)
- Legislation was approved to provide over \$12 million in capital improvements for state irrigation systems statewide. (May 2002)
- Capital Improvement Projects approved: \$3 million for Upcountry Kula, Maui dual line system and \$250,000 for Molokai Irrigation System (Approved in 2004 Legislature).
- Funding the maintenance and operation of East Kauai Irrigation System - \$50,000 (Approved in 2004 Legislature).
- Legislation was approved for funding the Ag Water Development Plan. (May 2002 and 2003)
- Introducing legislation that would strengthen the State Water Code. (January 2004 - measure died in subject matter committee.)
- HFBF filed in contested case hearing for East Maui Irrigation System (2003).

**Environment and Food Safety**

Changes in societal concerns about the environment, healthier diet, and food safety require agriculture to transform its attitudes and practices regarding production, processing, and marketing. Stewardship practices must be implemented or enhanced to protect the soil, water, air quality, and even wildlife habitat. Public expectations have prompted farmers to expend more



resources to rethink their crop protection, waste management, and soil conservation practices. Consumer preferences for diets that focus on health and wellness present opportunities for market channels and production practices that meet this demand. Farming's response to these concerns should take advantage of new market niches.

Global travel and trade make alien pest introductions a threat to local agriculture. Difficulties in implementing abatement measures point to the need to improve mitigation measures.

***Environment and Food Safety issues include:***

- \* Public concern about human and environmental safety will result in stricter controls of pesticide use.
- \* Food safety concerns will require new practices in growing, processing, and transportation of agricultural products.
- \* Because we have inadequate scientific data, there is uncertainty regarding which farm management practices will be required to comply with environmental regulations such as EPA's Total Maximum Daily Load regulation.
- \* Overlapping governmental regulations (federal vs. state vs. county) without coordinated and accessible guidance between agencies are problematic.
- \* There is the potential for exorbitant costs to meet environmental regulatory requirements.
- \* Farmers and ranchers will be increasingly vulnerable to other government regulations (i.e., Endangered Species Act, Right to Know laws, Clean Air Act, Clean Water Act, etc.) that may impact current practices.
- \* Farmers and ranchers may be indirectly impacted by other regulatory controls. For example, they may face higher fuel prices and higher transportation costs due to changes in DOT rules.
- \* Farms and ranches are continuously faced with threats of new alien species and the control of alien species introductions.

***Resolution to Environment and Food Safety issues include:***

- Participate in all levels of regulatory development to ensure laws are applicable to Hawaii (a state made up of islands) and minimize regulatory impacts on the farm.

- Actively seek to have economic impact assessments as a component of all regulatory regulations.
- Promote and implement consumer and producer educational programs on agricultural stewardship and food safety.
- Seek and support data collection efforts to develop critical data needed to develop applicable compliance programs for EPA programs.
- Seek to minimize overlapping governmental regulations to minimize compliance costs.
- Utilize various communication means to increase industry awareness of various regulations.
- Educate regulators of agricultural operations to allow for informed decisions.

### **Research and Development**

The University of Hawaii, College of Tropical Agriculture and Human Resources, the Hawaii Agriculture Research Center, the Hawaii State Department of Agriculture, and the U.S. Department of Agriculture Pacific Basin Agricultural Research Center must work collaboratively to expand their research efforts for agriculture with an emphasis on locally produced products. Priorities lie in the improvement of cultural practices for currently grown products, development of new crops and value-added products, improvements in processing procedures, and development of new postharvest systems that improve the transport and handling of products. New technologies such as biotechnology should be aggressively pursued to provide a competitive edge to Hawaii's agriculture in the market place. Public education is an important element in the development of any new technology to alleviate misperceptions and fears.

### ***Research and development issues include:***

- \* Identify ways to reduce cost of production (yield increase, input cost reduction, improved cultural practices, pest and disease resistance, etc.).
- \* Improve pathways for technology transfer to ensure that information is available to the farmers on a timely basis.
- \* Seek, develop, and provide education for new production and processing techniques.
- \* Improve coordination between industry requirements and research including market development vs. research of new crops.

***Resolution to Research and Development issues include:***

- Aggressively identify and implement means to increase State's ability to carry out agricultural research capabilities.
- Form collaborative relationships with non-agricultural entrepreneurs to increase and encourage value added product developments.
- Organize systematic communication systems between research organizations and the agricultural industry.
- Develop collaborative relationships with other States and Countries to remain current with advancements in the field.
- Develop State and County policies that encourage Hawaii as a favored locale for agricultural research.
- Increase resources for agricultural research.

***Actions Taken include:***

- Legislation was approved that provides approximately \$1 million for agricultural research and market development - \$500,000 grant in aid to HFBF and \$500,000 for CTAHR.  
(May 2004 – approved in Legislature)

**Marketing and Competitiveness**

Hawaii's small size and isolated location provide challenges to the farmer in the global marketplace. Local markets are finite. Exports are a necessity. At one time, Hawaii enjoyed the lion's share of the market for pineapples, macadamia nuts, anthuriums, and other commodities. Foreign regions with similar climatic conditions began producing the same commodities. Considerable effort and funds were expended to develop these crops and their markets. Unfortunately, much of the technological information has been made available to our competitors, creating formidable foreign competition.

All of Hawaii's agricultural exports must be competitive in the world market. Existing costs of production require that Hawaii rely on uniqueness, quality, service, and image to be competitive. Exported Hawaiian products must not only be unique but should also be of high value. The industry must be entrepreneurial, responsive to change, and able to function under

adverse conditions. Many challenges such as trade policies are beyond the farmer's control; however, the industry needs to find ways to mitigate these barriers.

*Marketing and Competitiveness issues include:*

- \* We need to develop systems for food and fiber self-sufficiency for the state of Hawaii.
- \* The cost of doing business in Hawaii is high. One example is the high cost of production inputs (i.e., feed, fertilizer, utilities, labor, and other supplies and equipment).
- \* Some of our products are of inconsistent quality.
- \* Quarantine requirements are restrictive for Hawaii products being exported to the U.S. mainland as well as foreign destinations such as Japan.
- \* Global competition pressures are increasing.
- \* Farming and commodity groups are fragmented due to lack of organizational leadership and coordination.
- \* Transportation costs are high for both import and export of agricultural products; inter-island shipping schedules are limited, as is cargo lift capacity out of Hawaii.
- \* Value-added options are limited for all of Hawaii's agricultural crops, especially for specialty crops.
- \* Available value-added options produce minimal profit margins because they lack sufficient certified processing capabilities.
- \* We have insufficient foreign market information and promotional efforts.

*Resolution to Marketing and Competitiveness issues include:*

- Foster organization of cooperatives to increase purchase and sales competitiveness
- Initiate dialogue with wholesalers and retailers to pursue import replacement opportunities.
- Develop programs to cultivate the development of value added products, reducing the reliance of direct raw product sales.
- Improve foreign market access information availability. Received grant to research and explore market access to China (2003)
- Seek cross marketing, exports, and other opportunities to address transportation issues.
- Recognize agri-tourism activities as an integral part of agriculture.

- Encourage all government agencies to purchase locally grown and processed products.
- Provide for fund for the capital improvements for the Kauai Disinfestation Facility - \$150,000. (Approved in 2004 Legislature)

### Transportation

Hawaii's position as the world's most isolated location, as well as its being a series of islands, presents a major challenge to the state's agriculture industry: transport options for agriculture are limited to air and sea if one wishes to move commodities off an island. This limits growers' abilities to be competitive in the world market. Hawaii must find ways to overcome these barriers.

#### *Transportation issues include:*

- \* Airport and harbor facilities need improvements to meet new food safety laws and to ensure quality of perishable goods.
- \* Lift capacity out of Hawaii is limited.
- \* Airport and harbor consolidation facilities are inadequate to effectively hold and transport agricultural products.
- \* Inter-island transportation needs to be improved.
- \* Federal regulations limit the amount of surface and air transport of agricultural products between Hawaii and other U.S. ports.
- \* The cattle industry lacks proper holding facilities at various ports and needs customized shipping capacity to transport cattle.

#### *Resolution of Transportation issues include:*

- Seek dedicated freight carriers
- Amend the Federal Highway Act to include over sea transportation for island states and territories. This will increase funds for capital improvements to Hawaii harbors.
- Accelerate the development of consolidation facilities at the airports and harbors.
- Actively participate in the Hawaii Transportation Study, authorized in the 2002 Farm Bill.

- Amend the Jones Act or allow an exemption to allow foreign ships to provide services to and from Hawaii.
- Encourage the State or private firm to establish a ferry system for inter-island transportation.

### **Taxation and Fees**

A basic tenet for government involvement should be to provide policies and incentives that support and encourage thriving business enterprises. There should be a taxation package that provides optimal inducement for entrepreneurs to invest in the transformation of Hawaii's agricultural industry. This has the potential to provide key incentives to induce the private sector, but a favorable taxation package should not be the only incentive to encourage future agriculture development in Hawaii.

As regulatory burdens on agriculture increase, so do permitting fees as government agencies strive to be self-sufficient in their costs to do business. Regulatory compliance costs and permitting fees increase the cost of production and can significantly impact the productivity of new enterprises.

#### ***Taxation and Fee issues include:***

- \* Hawaii's general excise tax law creates a pyramiding of taxes that increases the cost of input and production. (Example: A farmer charges 0.5% to the wholesaler, the wholesaler charges an additional 0.5% to the stores, the stores will charge an additional 4% to the consumer, resulting in a net total of over 5%, if transportation taxes are added.) Some of the items purchased by the farmer are subject to the 4% tax.
- \* Taxation policies for fallow lands are not addressed in some counties, especially when in tree and fruit crops, which take 8 to 10 years to production.
- \* Certain agricultural practices that benefit society are nevertheless subjected to high permitting fees and regulatory costs. (Examples: Air permits and monitoring costs for burning of biomass to replace fossil fuel use; permitting and monitoring costs for wastewater reuse.)

#### ***Resolution of Taxation and Fee issues include:***

- Reduce tax rates for long term producing crops (i.e. orchard farms, forestry, etc....) and other new crops that have potential in Hawaii.
- Protect agricultural lands from increased taxes due to development of adjacent land.
- Provide a tax break for landowners that improve their land for agricultural purposes. For example, if a landowner wants to make capital improvements (i.e. roads, utilities, irrigation systems, etc.) to attract farmers, they will get a tax break.
- Provide a real property tax and other tax incentives for lands dedicated for agricultural use for a minimum of 20 years. (May 2004 – pursuing amendment to the Honolulu Real Property Tax Code for agriculture.)
- Educate the tax department to implement a biomass definition, supporting and encouraging biomass development in Hawaii.
- Establish a continuing education program to educate farmers of tax laws applicable to agriculture.
- Provide a retroactive payment for deferred taxes.

### **Farm Management and Labor**

Agricultural enterprises continuously need an adequate supply of a properly trained labor force. Our vision of Hawaii's agricultural industry as an entrepreneurial, competitive industry requires a highly skilled, innovative work force. As the industry grows, private-public partnerships need to identify methods to aggressively start and/or nurture the development of successful agricultural and agriculture-related enterprises. National data show that 80 percent of enterprises developed under conditions such as an "incubation environment" are still in existence after five years, in comparison to only 25 percent for those that did not have such a benefit. Practical training, particularly in business and financial management, is critical for many independent farmers who may lack formal education in these subjects. The shortage of willing and able workers, affordable housing for farm workers, and competition from alternative employment are several of the pressing farm-labor related issues that need to be addressed.

### ***Farm management and labor issues include:***

\*There is a lack of a training and support structure to begin and assist new agricultural enterprises.

- \* A qualified workforce must be trained to meet management and labor needs for expansion in the agricultural industry.
- \* Agricultural workers lack affordable housing.
- \* Transportation modes to get farm workers to and from work areas are lacking.
- \* Mandated labor costs (i.e., wages, workers compensation, unemployment, etc.) are high.
- \* Seasonal workers or contract hires are treated as regular employees.
- \* Alternative employment (manufacturing and construction) often pays its employees more than farmers are willing or able to pay.

***Resolutions to Farm Management and Labor issues include:***

- Intensify research in mechanization options.
- Develop employee education/job training programs to match employee abilities with wage rates to keep operations competitive.
- Determine the labor requirement for economic farm units of various commodities, and the aggregate labor demand by commodity.
- Labor resources should be increased, through the combined cooperative efforts of industry, labor organizations and government agencies involved.
- Dialogue with other business organizations and government to find ways of controlling regular business expenses (i.e. health and liability insurance)
- Encourage farmers to study their labor problems from the viewpoint of the hired employer and in terms of long-range solutions. Such effort should assure that working conditions and productivity are to the mutual satisfaction of both the employee and the employer.
- There should be continuing education programs that are specific to agricultural labor laws.
- Seasonal agricultural worker status must be redefined or reclassified by the federal and state as an independent contractor.
- Providing adequate housing, improving wages, working conditions, and developing sound labor-management relationships.
- Improve and encourage our public education system to provide technical and hands on experience in agribusiness.



## CONCLUSION

Hawaii's economic health is currently in a precarious condition. The state's economy is assessed as one of the worst in the country, due primarily to the decline in the visitor industry, now exacerbated by the events of September 11, 2001. The state must build a diverse economy that has the capacity to buffer against downturns of individual industries. A balanced economy will arise from using Hawaii's unique assets in diverse ways. Complementary and synergistic use of resources will increase our ability to buffer against negative impacts of national and international events beyond local control. Agriculture is a means of obtaining economic benefit from Hawaii's natural resources.

The Hawaii Farm Bureau has prepared this "living document" to assist in focusing on improving Hawaii's agricultural industry. As described in this document, some of these issues are currently being addressed. Some have short-term solutions while others require long-term efforts. Now that we have identified some of the major key issues facing Hawaii's agricultural industry, we must take action to resolve or mitigate the problems. As you can see, we have already begun implementing this document through legislation and administrative actions. However, much work still needs to be done. We will continue to seek your active participation and support as we begin this most difficult process of resolution and implementation.

# Member Benefits

Join AFBF

## MEDICAL AND DENTAL INSURANCE

- Members may apply for medical insurance through HMSA.
- Dental is offered through HDS or HMSA.
- Requires three (3) months of HFBF membership for eligibility.

## DODGE

- Members receive a \$500.00 discount on selected vehicles including mini-vans and trucks.

## GRAINGER

- Save 10% off thousands of products through Grainger Industrial Supplies

## SUPPLEMENTAL INSURANCE

- Cancer Insurance through AFAC
- Long term care insurance through John Hancock

## FINANCIAL SERVICES

- Members can join Hawaii USA Fed and Farm Bureau Bank
- Checking, Savings, low interest loans, home mortgages, credit cards, and much more.

## AIG HAWAII INSURANCE COMPANY, INC.

- Members can enjoy discounts on personal automobile insurance and benefits like free ID Theft Prevention & Restoration Services and Worldwide Emergency Travel & Medical Assistance Services.

## NEWSLETTER

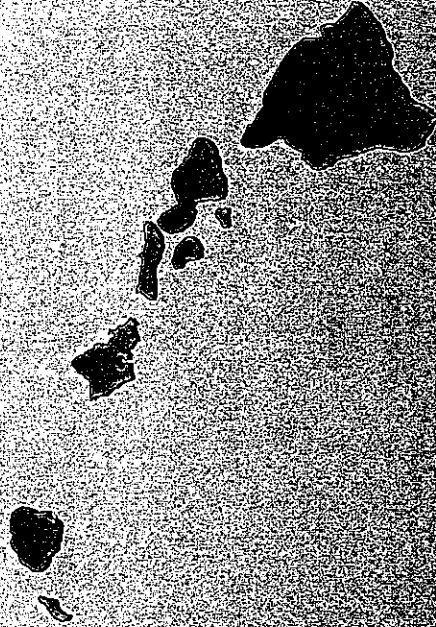
- Members receive the HFBF e-newsletter containing useful information about HFBF and the agriculture industry.

Make a contribution to the award-winning organization *Agriculture Hawaii*.

## AWARD-WINNING PRODUCTS

- Award-winning products from local, state, and national agriculture organizations.

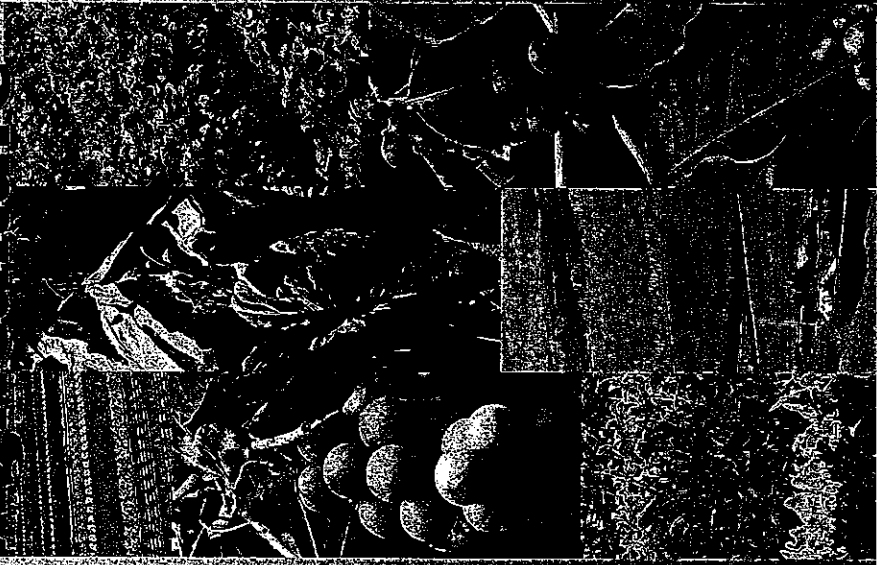
Your support and participation will ensure agriculture has a strong and collective voice in Hawaii.



Hawaii Farm Bureau

F E D E R A T I O N

"Voice of Agriculture"



Hawaii Farm Bureau Federation

2343 Rose Street

Honolulu, Hawaii 96819

Tel: (808) 848-2074

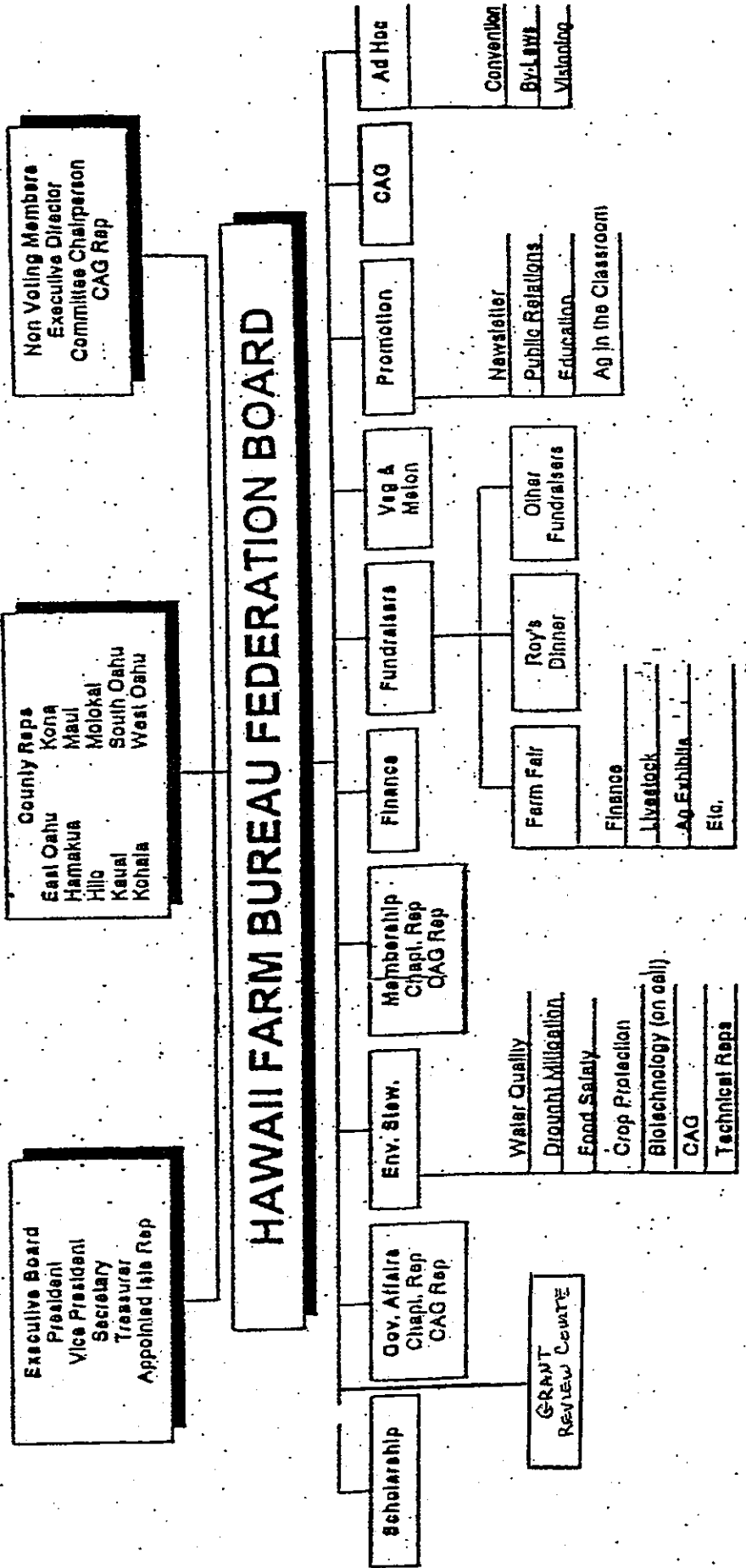
Fax: (808) 848-1921

Neighborhoods: 1-800-482-1272

www.hfbf.org

# Hawaii Farm Bureau Federation Organizational Structure

(ATTACHMENT 3)





**Hawaii Farm Bureau**  
F E D E R A T I O N

2343 Rose Street, Honolulu, HI 96819  
PH: (808)848-2074; Fax: (808) 848-1921  
e-mail [hfbf@hfbf.org](mailto:hfbf@hfbf.org)

November 29, 2006

**TO:** Agriculture Trade Associations and Presidents and Directors of  
Agriculture Research Institutions

**FROM:** Dean J. Okimoto, President

**SUBJECT:** Request for Proposals (RFP) for Agriculture Research and Market  
Development, FY 2007.

I am pleased to announce the availability of research and marketing funds for the Hawaii Farm Bureau Federation's (HFBF) Agriculture Research and Marketing Development Program.

I invite you to submit applications for these grants. Eligible applicants under this program are established Hawaii agriculture research institutions, not-for-profit Hawaii agriculture organization, and individuals or private organizations with a proven track record and strong support from the agriculture industry.

The goal of the Agriculture Research and Marketing Development Program is to maintain our competitive edge with the global market and to sustain the viability of Hawaii's agriculture. Priority will be provided to projects which support local agricultural products with immediate impact to the industry.

Projects to be funded in this program may include: demonstration projects, educational outreach programs, risk management projects, yield improvement or introduction of new varieties of crops, management of agricultural pests and diseases, and market research. This program will give higher consideration to projects with industry matching funds and/or in-kind contributions.

As this RFP is focused on applied research and marketing research, we encourage those who are interested in pursuing promotion of special events or



**Hawaii Farm Bureau Federation**  
**RFP Application Guidelines**  
**For**  
**Agriculture Research and Market Development**  
**FY 2007**

**Background:**

The Hawaii Farm Bureau Federation is a non-profit agricultural organization that strives to work towards solutions facing farmers and ranchers statewide. This research and market development program is funded by a grant that was approved by the Hawaii State Legislature and released by the Governor. The Department of Agriculture issues the funding to the HFBF for research and market development projects

**Eligibility:**

- a. **Eligible Applicants:** Eligible applicants under this program should be established not-for-profit Hawaii agriculture organizations, research institutions, or individuals or private organizations with a proven track record and strong support from the agriculture industry. Applicants are encouraged to form partnerships with other entities that complement, or enhance the effectiveness and efficiency of the proposed project. We encourage applicants to work through a known and reputable research institution.
- b. **Project Period and Funding:** Awards under this grant program will be made on a competitive basis for projects of up to one year. Project no cost extensions may be given under certain circumstances and must be in writing three months prior to the expiration of the grant.

HFBF funds awarded may not be used to:

- Plan or repair buildings or facilities;
- Purchase or install fixed equipment;
- Repair or maintain privately owned vehicles;
- Pay costs incurred prior to receiving contract under this program;
- Fund political activities.

## RFP Application:

A complete application package must include an original research proposal, one paper copy, and one electronic copy (MS Word format preferred) of the application package on diskette or compact disk. Applicants must specify whether their application is new, a renewal, or a resubmitted application and provide the required information in accordance with the following:

- a. New Applications – This is a project application that has not been previously submitted to the HFBF.
- b. Renewal Applications – This is a project proposal that requests additional funding for a project beyond the period that was approved in an original or amended award. Applications for renewal funding must contain the same information as required for new applications, and additionally must contain a Progress Report.
- c. Resubmitted Applications – This is a proposal that was previously submitted to the HFBF but was not funded.
- d. Detailed breakdown of all costs. The HFBF does not fund any indirect costs. Include budget notes on each budget line item detailing how each line item was derived. Only items on services that are necessary for the successful completion of the project will be funded.
- e. A narrative title page. This single page can provide (i) the name of the research project; (ii) the name of the program (HFBF Research & Market Development Program, FY 2007); (iii) the commodity, geographic area and target population for which the project will be directed; (iv) the organization submitting the application; (v) a listing of project partners; (vi) a brief project summary; (vii) specify if the project is already receiving funding from other sources; and (viii) information needed to contact the project's leader, including an e-mail address.
- f. IRS tax exemption declaration.\*
- g. Most recent financial statement.\*
- h. Most recent by-laws.\*
- i. Tax Clearance from the Federal and State Dept. of Taxation.\*
- j. Certificate of Compliance from the State Dept. of Labor.\*
- k. Certificate of Good Standing from the State Dept. of Commerce and Consumer Affairs.\*

\* Items f – i: These items are waived for government agencies, including the University of Hawaii (UH). UH researchers must submit their research proposal to the Office of Research Administration simultaneously with the submittal to the HFBF.

A written narrative (limited to 10 single sided pages) that describes the outreach project in detail, include delivery plan. The narrative should provide the following:  
a. Proposal Title; b) Proposal Summary; c) Approach or process to achieve its

purpose; d) Expected Outcome; e) Impact if not funded; f) Objectives; g) Benefits /Value of the analysis; h) Timeline; i) Budget; j) Special Conditions.

**Additional Information:**

Successful applicants under this Agriculture Research & Market Development Program will be required to credit the Hawaii Farm Bureau Federation and the State Department of Agriculture in any presentation, materials covered or property rights issues under this funding. Additionally, successful applicants must submit progress and financial reports periodically upon request and submit a final project and financial report not later than 45 days upon completion of the project. The HFBF will withhold up to 25% of the grant funds until a final report is submitted, reviewed and approved.

**Acknowledgement of Applications:**

Receipt of applications will be acknowledged by e-mail or fax, whenever possible. Therefore, applicants are encouraged to provide an e-mail address and/or fax number in the application. If an e-mail address or fax number is not indicated on the application, receipt will be acknowledged by letter. There will be no notification for late, incomplete and unqualified applications.

**Confidentiality:**

The name of applicants, the content of applications, and the committee evaluations of applications will all be kept confidential, except to those involved in the review and award process.

**Submission Instructions:**

A complete application package must include an original research proposal, one paper copy, and one electronic copy of the application package on diskette or compact disk. Please see the RFP Application requirements as mentioned above and the Hawaii Farm Bureau's Suggested Research Grant Format.

Applications and all required information shall be submitted no later than **February 1, 2007**. Send your RFP to:

Hawaii Farm Bureau Federation  
Research & Market Development Program  
C/o Executive Director  
2343 Rose Street  
Honolulu, Hawaii 96819





**Hawaii Farm Bureau**  
F E D E R A T I O N

2343 Rose Street, Honolulu, HI 96819  
PH: (808)848-2074; Fax: (808) 848-1921  
e-mail [hfbf@hfbf.org](mailto:hfbf@hfbf.org)

**ANNOUNCEMENT**

**AGRICULTURE RESEARCH AND MARKET DEVELOPMENT PROGRAM**

**Action:**

Announcement of availability of funds and request for proposals (RFP) for the Agriculture research and market development program.

**Summary:**

The Hawaii Farm Bureau Federation announces the availability of up to \$1,000,000 in fiscal year 2007 for research and market development projects that will sustain Hawaii's agriculture. These funds were approved by the Legislature and released by the Governor through the Department of Agriculture. Awards under this program will be made on a competitive basis for projects of up to one year. The closing date for receipt of application under this RFP is February 1, 2007.

Submit projects to or for further information contact:

Alan Takemoto  
Executive Director  
Hawaii Farm Bureau Federation  
2343 Rose Street  
808-848-2074 (b)  
808-848-1921 (f)  
[atakemoto@hfbf.org](mailto:atakemoto@hfbf.org) (email)

**Hawaii Farm Bureau Federation  
Suggested Research Grant Format**

- I. Proposal Title
- II. Proposal summary: (Brief description of why the project is needed, and what the proposal will accomplish)
- III. Approach: (Description of protocol or process to achieve its purpose)
- IV. Expected Outcome:
- V. Impact if Not Funded:
- VI. Objectives: (List the objectives that will be met)
- VII. Benefits / Values of the survey/analysis:
- VIII. Timeline:
- IX. Budget (Line items specific to request for HFBF funding. You may use the Federal Standard Form 424A)
  - personnel, fringe benefits, travel, equipment, supplies, contractual, construction, other, total direct and indirect charges.
- X. Special Conditions (List any special contract conditions)

Please submit this information by February 1, 2007. Any questions, call Hawaii Farm Bureau at 848-2074.



**Hawaii Farm Bureau**  
F E D E R A T I O N

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**Agriculture Research Development and  
Marketing Grants**

**Year I**

(Dec. 2004 - Dec. 2006)

**Year II**

(Jan. 2006 - July 2006)

**Year III**

(Jan. 2007)

**Interim Report**

(As of January 2007)

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**Hawaii Farm Bureau Federation  
Agriculture Research Development and  
Marketing Grants**

**YEAR I  
(Dec. 2004 - 2006)**

**Hawaii State Legislature**

**Interim Report**

**(As of January 2007)**

**HFBF Agriculture Research Development and Marketing Grants  
Year I Interim Report As of December 31, 2006**

Original Contract Period: Dec. 28, 2004 – June 27, 2006

No Cost Extension #1, Contract Period: Dec. 28, 2004 – December 27, 2006

**I. Introduction**

The 2004 Legislature and the Governor approved HB 2009, CD1, (Act 223), which appropriated \$500,000 to the Hawaii Farm Bureau Federation (HFBF) for agriculture research and development. The passage of this Act was a significant recognition of the importance of Hawaii's agricultural industry to remain competitive in the global market through research and market development.

The Legislature recognized that State funding had dramatically declined over the past decade from approximately \$6 million per year in the early 1990's to only half a million dollars per year in 2004. The dramatic decrease in state funding for research and development will weaken producer's competitiveness and eventual loss of market share to outside competition.

The Legislature further recognized the critical advocacy role that the Hawaii Farm Bureau Federation plays in the overall facilitation of Hawaii's agricultural industry. The Hawaii Farm Bureau is the largest non-profit general agricultural organization, representing about 1,600 farm family members on all aspects of farming.

We are excited to present an interim report for the first year's funding allocation initiated in December 28, 2004. Specific agriculture research projects were included in the administration's contract; as such the HFBF was limited to these predetermined projects with the balance going to other projects. Therefore, no solicitation of Requests for Proposals was initiated by the HFBF. In addition to the specified projects, the HFBF appropriated funds for the following projects: USDA-HASS Hawaii Agriculture Theft and Crime Study and for coordination of the HFBF Farmer-to-Farmer Co-existence Discussions. The HFBF felt that these two additional projects were worthy of funding since it would have immediate impact to the farmers economic and social wellbeing.

We have highlighted the successful projects that we felt presented significant information for both the agricultural industry and policy makers. These highlighted successes include:

- The United States Department of Agriculture – Hawaii Agriculture Statistic Service (USDA-HASS) report that theft and property Damage Cost Hawaii Farmers \$11.4 million in 2004;
- Hawaii Chocolate "An Emerging Niche Crop"
- Hawaii's Diverse Agriculture Industry "Farmer to Farmer Discussions about Co-Existence"
- White Peach Scale Threatens Hawaii Papaya Industry
- Optimal Field Management Strategies for Specified Tropical Fruit

These projects have great significance to Hawaii agriculture industries and specific sectors of the industry.

**II. Highlights of YR I Research and Development Projects (Full reports are available upon request)**

**1. Theft and Property Damage Cost Hawaii Farmers \$11.4 Million in 2004**

Award: \$25,000

Project Lead: Mark Hudson/HASS

The USDA-Hawaii Agriculture Statistic Service completed its Hawaii Agriculture Theft and Crime Study and published its report on October 18, 2005. This report quantified the degree of theft, property damage and trespassing incidents on Hawaii's farms. It also quantified the level of prosecution and farmer satisfaction with law enforcement.

**Table 1. Theft and Vandalism Losses and Security Measure Costs, by County, 2004**

County	Losses		Security Measure Costs	Total
	Theft	Vandalism <sup>1</sup>		
	-----\$1,000-----			
Hawaii.....	634	192	3,119	3,945
Honolulu.....	798	568	2,553	3,919
Kauai.....	185	99	893	1,177
Maui.....	329	1,160	835	2,324
Total.....	1,946	2,019	7,400	11,365

<sup>1</sup> A large vandalism event occurred during 2004 and was reported by one of our respondents. We consider this event a statistical aberration. We have omitted this event and summarized the remaining data to acquire what we consider a truer picture of agricultural vandalism for the State of Hawaii.

The study and its findings indicate significant economic loss to farmers and ranchers statewide. It also provides state and county policymakers a greater understanding of where and to what extent these losses means to the agricultural industry and the state overall. Another positive study outcome is that this information informs law enforcement agencies and others about the pervasiveness of this problem. Up to this point, we had no data that could specifically quantify the problem of agricultural theft and vandalism. While this information is useful, there maybe further research on the cause of these agricultural thefts and vandalism.

**2. Hawaiian Chocolate. An Emerging Niche Crop**

Project Title: Fingerprinting of Cacao Germplasm in Hawaii

Award: \$45,000

Principal Investigator: Chifumi Nagai/HARC

Premium Hawaiian chocolate is a potential high-value, low acreage crop. High tonnage and superior quality are required for profitable cacao production in Hawaii. The research project, "Clonal Propagation of Cacao" conducted by HARC initiated a developmental program for Hawaiian Chocolate. A collaboration was established among several growers interested in developing a specialty cacao crop sector: a leading US chocolatier sponsoring the quality testing, the USDA-ARS leading cacao scientist providing guidance and plant diagnostics, and HARC providing the field data and propagation. The USDA-ARS scientist has not only contributed in-kind services but also grant matching funds. While there are a variety of cacao plants throughout the state this project starts the

work needed to identify and make available those plants of high quality and unique tastes to establish market niches for Hawaii's emerging cacao producers.

3. **Exploring Coexistence: Preliminary Best Management Practices for Diverse Farming Practices**

Farmer-to-Farmer Discussions About Best Management Practices for Co-Existence  
Award: \$4,791                      Consultant: Meredith Berry/Consultant

For the first time, Hawaii farmers that use growing practices such as conventional, biotechnology and organic methodologies met to be informed about each practice, identify common agricultural issues in Hawaii, and begin developing best management practices to ensure the economic success of farmers, no matter what growing practice is preferred. Beginning in September 2005 through December 2006, 7 meetings were held. Consultant Meredith Berry, PH.D, coordinated and scheduled meetings, as well as provided report summaries of the meetings. The report summaries were invaluable as it provided a written record of the group's meeting work, which often spanned 6 hours per meeting.

HFBF was able to leverage this support with other sources of funding for the facilitation of these meetings, which resulted in development of Best Management Practices (BMPs) in three areas: Seed Supply, Biological Drift Management and Chemical Contamination. The general structure was developed and agreed upon within each of these areas:

- Improved Communication
  - Communication between stakeholders is critical.
  - Farmers can alleviate some problems by discussing agricultural practices with neighbors.
  - If voluntary neighbor communications are not effective, then reporting agricultural practices to a third-party governing body will be necessary. The third-party body may make information about these practices widely available.
- Improved Education
  - Good education about agricultural BMPs is essential.
  - The educational needs of farmers very greatly based on crop and operation size.
  - Without education, liability for misconduct in agricultural production is a significant concern that exacerbates potential disagreements among neighbors.
  - Education must also include consumers and the general public.
- Third-Party Governance
  - Best management practices will only improve the agricultural industry if they are enforced. A third-party body should be employed to encourage effective communications, supply education, and mediate compliance with best management practices.

The HFBF firmly believes that farmers must work together on issues critical to the agricultural industry. The development of these recommended best management practices is a first step in an ongoing dialogue about managing vital resources with wisdom, respect for one another and commitment to future generations. The HFBF also believes that it is important that on-going dialogue is necessary to help farmers better

understand the concerns as well as identify the commonalities. We appreciate all of the time and efforts each of the participants gave towards this very important issue.

4. **White Peach Scale Threatens Hawaii Papaya Industry**

Project Title: Classical Biological Control of White Peach Scale on Papaya in Hawaii

Award: \$37,000

Principal Investigator: Peter Follet/PBARC

The papaya industry has great potential to expand and develop. The significance of this project is to maintain the on-going productivity of the papaya industry, especially pest and disease problems. The white peach scale (WPS), *Pseudaulacaspis pentagona* (Targioni-Tozzetti) (Hemiptera: Diaspididae), was collected for the first time in Hawaii in September 1997 on papaya. In 2000, the distribution of WPS on the Big Island was limited to several papaya farms on the windward side (Follett 2000). WPS is a serious pest of papaya causing plant stress and quarantine restrictions. It has now spread to most East Hawaii papaya fields and it is a serious economic pest on nearly every farm. WPS has not yet spread to other islands.

Successful biological control of white peach scale has been carried out in Italy, the eastern U.S., and various other countries and Pacific islands using the parasitic wasp *Encarsia berleseii* (Hymenoptera: Aphelinidae) (Clausen et al. 1978, Pedata and Garonna 2001, CAB International 2001).

Collections of Australian passion fruit vines with WPS were brought back to the quarantine facility at Hawaii Volcanoes National Park. Parasitoids began emerging several weeks later and a colony has been maintained continuously since. Current rearing methods involve raising WPS on potato and exposing them to parasitoids in double cages (cage within a cage) at the quarantine facility (Fig. 1). An efficient rearing system has been developed, and, to date, three generations of the wasp have been reared and increased numbers to about 1000 adults per generation.

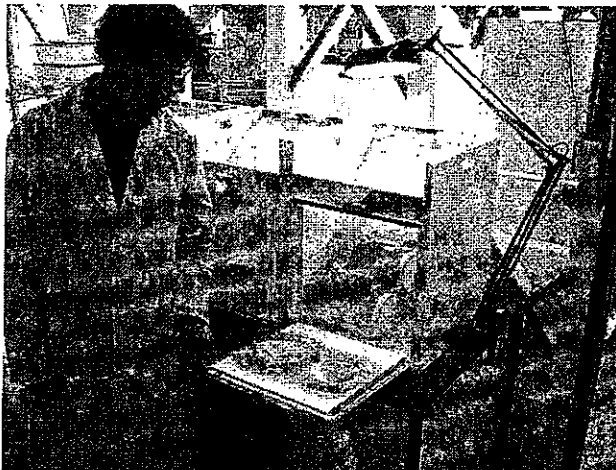


Fig. 1. Rearing parasitoids in the quarantine facility at Hawaii Volcanoes National Park. The parasitic wasps are held in double cages to prevent escape.





Fig. 2. *Encarsia diaspidicola* attacking white peach scale on potatoes. The parasitic wasp is about 1 mm in length.

Regulations associated with the introduction of insect biological control agents into Hawaii are very strict, primarily to ensure that an introduced agent will not harm any native insect species. Host specificity (or range) testing is conducted in quarantine with candidate biological control agents to assess the breadth of their diet. This phase of research is in progress. Field release of *Encarsia diaspidicola* and *E. berlesei* is predicated on the successful outcome of host range testing and obtaining a release permit from the Hawaii Department of Agriculture after their review of the data. Parasitoids will be mass reared by USDA and released in papaya fields in east Hawaii Island.

**5. Hawaii's Fastest Growing New Crops: Hawaii Tropical Specialty Fruits**

Project Title: Optimal Field Management Strategies for Rambutan, Lychee, Longan, Durian and Mangosteen

Award: \$28,985

Principal Investigator: Mike Nagao

Hawaii Tropical Specialty Fruits is one of Hawaii's fastest growing new crops, of which rambutan, longan and lychee are the most popular. Between 1999 and 2005 the number of fruit bearing rambutan trees in Hawaii increased from 3500 to 8000, with total production of 400,000 pounds (2005). Between 2000-2005, longan fruit bearing trees increased from 400 to 4,000 trees, with production increases from 24,000 to 142,000 pounds. Durian and mangosteen have been planted but little information of production under Hawaii conditions are known. According to the Hawaii Agricultural Statistics Service, there are 235 farms with over 1230 acres in these tree crops. The industry has grown to over \$2.7 M in farm gate sales.

Hawaii's environment differs from the native growing areas in the semi-tropics (lychee) and humid tropics. As a consequence, production in some areas of Hawaii are erratic due to inconsistent flowering, poor fruit set, poor nutrition and cultivation of trees in less than optimal growing conditions.

This project, a priority for the Hawaii Tropical Fruit Industry, determined fertilizer needs for lychee, longan, and rambutan; identified mangosteen growing environments, length of

juvenile period, season, and amount of production; and identified durian varieties that tend to be consistent producers under Hawaii conditions.

Through the work led by Dr. Mike Nagao of the Department of Tropical Plant and Soil Sciences of the UH College of Tropical Agriculture and Human Resources, field management trials have been conducted on tropical fruit orchards on the Big Island. Extension of fruit production, would give Hawaii growers greater flexibility in marketing their tropical fruits. The research funded through this project has resulted in additional federal funding through the USDA CSREES Special Research Grant Hawaii Agricultural Diversification -- Tropical Specialty Fruit Research and Development.

**III. Awards: (Please see Addendum for research project listing. Research project reports or updates are available upon request)**

HFBF, upon receipt of the December 28, 2004 executed DOA contract, prepared 5 subcontracts to five different entities as summarized in Table 1. (See YR I Contract Processing Timeline in Appendix)

CTAHR research projects were delayed due to the renegotiation of contract language and the subcontract was executed on November 23, 2005 – June 15, 2006. The Pacific Basin Agriculture Research Center (PBARC) subcontract review by headquarters in New Orleans was delayed due to Hurricane Katrina. PBARC's contracted was executed in January 2006.

USDA-HASS executed and completed the Ag Theft Survey at the end of September 2005, contributing \$958.00 for envelopes, printing and mailing of the release. The \$1,250.97 in excess of the grant award was paid by the HFBF for the postage and mailing of the questionnaire forms.

The HFBF receives 10% or \$50,000 for administrative oversight of the grant projects.

Table 1 Grant Award Recipients and Expenditures

	Award
UH-CTAHR (7 projects)	\$157,798.00
HARC (5 projects)	\$224,160.00
PBARC (1 project)	\$ 37,000.00
USDA-HASS (1 project)	\$ 25,000.00
- HFBF Postage	\$ 1,250.97
M. Berry (1 project)	\$ 4,791.00
<b>TOTAL</b>	<b>\$450,000.00</b>

**IV. No Cost Extensions:**

UH-CTAHR researchers requested and received a six month no cost-extension request (Amdt. #1), which extended the project termination date to December 27, 2006. These requests were primarily generated due to the late contract execution and late start up of projects. UH-CTAHR researchers received notification and authorization for project spending by the UH ORA on December 14, 2005, following the UH's execution of the contract on November 23, 2005.

The UH contract execution process and the following fiscal approvals to begin projects within CTAHR creates a lag in authorization for project implementation. This means that researchers have less than a full year to complete projects. This generates a need for no-cost extension requests, which adds additional effort for monitoring and extends the master contract between the DOA-HFBB.

PBARC in regards to Principal Investigator Peter Follett, PhD's project, "Classical Biological Control of White Peach Scale on Papaya in Hawaii" also requested a no-cost extension request (Amdt. #1) due to late contract execution.

**V. Interim Report Next Steps:**

Updates and a final report will be submitted upon completion of the no cost extension time periods for Amdt 1, pertaining to the UH-CTAHR projects ending Dec. 27, 2006 with final reports due within 45 days.

**VI. Summary**

In summary, the projects as described presented critical information for the agricultural industry in Hawaii. We are very excited about the outcomes of these research and marketing projects, in particular, the Hawaii Agriculture Theft and Crime Study and the Farmer to Farmer Coexistence Discussion that have statewide ramifications.

The HFBB is appreciative of the Legislature, Governor, and the Department of Agriculture in working with us to manage this important funding for research and market development. We find that there is justification for the continued and expanded funding for research and development projects that will have immediate economic impact to the agricultural industry.

# **Appendix:**

- **YR I Contract Processing Timeline**
- **YR I HFBF Research Project Listing**
- **YR I Interim HFBF Research Project Summaries**

**(Respective Research Project Reports Are Available Upon Request)**

## YR I Contract Processing Timeline

- 10/20/04 DOA Request to Governor Lingle for \$500,000 (Act 233) for Appropriation for Agricultural Research and Market Development, Listed Research Projects
- 11/9/04 B&F Approves Allotment of \$500,000
- 11/18/04 DOA Request for Sole Source Provider, HFBF
- 11/24/04 Notice of Sole Source Provider, HFBF
- 12/13/04 Chief Procurement Officer Approval of Sole Source Provider, HFBF
- 12/21/04 HFBF Signs DOA Master Contract
- 12/28/04 DOA Signs Master Contract
- 1/21/05 DOA mails HFBF Executed Master Contract, effective date 12/28/04
- 3/8/05 Contract Administrator Hired
- 5/3/05 Development of subcontract agreement template
- 5/9/05 HARC subcontracts for 4 projects sent  
5/31/05 HARC subcontracts for 4 projects revised and sent  
6/9/05 Subcontract Executed
- 5/19/05 Worked with Hawaii Tropical Fruit Growers and Hawaii Macadamia Nut Growers to clarify and revise the research budgets and resubmit through the UH-CTAHR
- 5/19/05 – 11/23/05  
HFBF subcontract sent to UH; Discussions with the UH-CTAHR and the ORA to resolve subcontract language, reviewed revisions per UH language
- 9/29/05 Revised HFBF subcontract sent to UH for execution  
11/23/05 Subcontract Executed for 11/23/05 – 6/15/06
- 5/31/05 Hand-carried HASS-USDA Ag Theft Study subcontract for execution by HFBF and HASS-USDA
- 6/23/05 – 12/2005  
Ongoing discussions with Hawaii Papaya Industry, DOA, ARS to clarify time period of research project and subcontract vehicle.
- 1/10/06 Revised PBARC-ARS signed subcontract received  
1/20/06 HFBF signs PBARC-ARS subcontract

8/30/05 Meredith Berry contract executed; effective 8/30/05 – 6/27/06 for Co-Existence Project Coordination

9/14/05 HARC Cloning of Papaya Cuttings subcontract sent  
9/14/06 Executed Received

3/31/06 PBARC-ARS requests no cost extension #1  
4/3/06 HFBB sends written acknowledgement of PBARC-ARS request for Amdt #1  
6/13/06 PBARC-ARS sends HFBB Amdt #1 subcontract, which is held pending until DOA provides written approval  
\*7/26/06 HFBB sends executed PBARC-USDA Amdt #1 subcontract

4/20/06 UH-CTAHR Requests for No Cost Extension  
4/20/06-4/30/06 Requests for clarification of information  
5/5/06 HFBB Sends Written Acknowledgement to UH of No Cost Extension Request  
\* 7/26/06 HFBB sends UH Amdt #1 subcontract  
8/11/06 UH signs and sends HFBB executed Amdt #1, 12/28/04 – 12/27/06

5/15/06 HFBB signs Master DOA Amdt #1 Contract  
5/22/06 DOA Signs Master DOA Amdt #1 Contract  
\* 7/26/06 HFBB receives Master DOA Executed Amdt #1 Contract

9/20/06 PBARC Requests Amdt#2, second No Cost Extension until 6/2007  
9/29/06 Verbal approval received by DOA; Amdt #2 pending  
11/21/06 HFBB sends PBARC written acknowledgement of Amdt #2 request  
12/28/06 Pursuant to DOA decision to close out the YR I master contract with the HFBB, PBARC was notified by the HFBB that a final report is due by 3/15/07.

**\* 7/26/06 Subcontract activity is a result of HFBB receipt of the Amdt. #1 to the master contract between HFBB and DOA**

**YR I HFBF Research Project Listing**  
 YR I HFBF-DOA Subcontracts for Agriculture Research and Development  
 Effective Date: Dec. 28, 2004 – Dec. 27, 2006 No Cost Extension (NCE) Amendment #1  
 Entire HFBF – DOA Master Contract Extended

Subcontractee	Research Project	Grant Amount	Status
UH-CTAHR	1. Evaluate all potential post-harvest and pre-plant fungicides to control pineapple fruit rot, fruit mold and butt rot	\$15,732	NCE #1
	2. Develop pest management strategies and protocols for rambutan, longans, lychees and papayas	Project Withdrawn	N/A
	3. Develop new foliage cultivars for the Hawaii commercial foliage industry with emphasis on Dracaena	\$25,000	NCE #1
	4. Develop new culture management strategies associated with macadamia nut varieties to control pests and to further improve the crop yield on trees	\$5,000	NCE #1
	5. Optimal Field Management Strategies for Rambutan, Lychee, Longan, Durian, and Mangosteen	\$28,985	NCE #1
	6. Risk-based integrated pest management decision-making system for southern green stinkbugs in macadamia nuts	\$48,250	NCE #1
	7. Macadamia Variety Trials	\$4,831	NCE #1
	8. Control and Management of the Macadamia Felted Coccid	\$30,000	NCE #1
HARC	9. Improved Diagnostic Methods for Detection of Sugarcane Diseases and Development of Resistant Varieties	\$60,000	Completed
	10. Coffee Breeding: Development of Uniquely Hawaii Coffee	\$79,160	Completed
	11. Clonal Propagation of Cacao	\$45,000	Completed
	12. Selecting for Genetic Resistance to Fusarium Oxysporum f.sp. Koa (Koa Wilt) in Koa for Conservation, Restoration, and Utilization in Hawaii	\$35,000	Completed
	13. Propagation of cloned papayas by rooted cuttings for Hawaii County	\$5,000	Completed
PBARC-USDA	14. Classical Biological Control of White Peach Scale on Papaya in Hawaii	\$37,000	NCE #1
HASS-USDA	15. Hawaii Agricultural Theft and Crime Study	\$25,000 1,251	Completed
Meredith Berry	16. Co-Existence Project Coordination	\$ 4,791	Completed
	Total:	\$450,000	

**YR I**  
**Interim HFBB Research Project Summaries**

Due to the NCE #1, final project reports are not due until 45 days following Dec. 27, 2006 for UH-CTAHR projects. The Legislature will be provided with updated interim reports upon HFBB receipt of the final project reports.

In the meantime, project summaries are provided for the YR I projects:

1. **Project: Evaluate all potential post-harvest and pre-plant fungicides to control pineapple fruit rot, fruit mold and butt rot**

Principal Investigator: Glenn Taniguchi/CTAHR

Award: \$15,732

**Summary:** Without appropriate control measures for these post-harvest molds and fruit rot, the pineapple industry will continue to suffer significant losses. In addition, Bayleton, which is currently the only fungicide used for post-harvest fruit rot is under review for re-registration. Without an alternative fungicide, the pineapple industry is very vulnerable to having no approved fungicide if Bayleton is not re-registered.

Pre-planting treatment trials of selected fungicides for post-harvest mold and fruit rot on pineapple have begun. Agreement has been established at 2 plantations to conduct post-harvest fruit trials. No trials have been conducted to date due to excessive rains for 6-7 weeks, which has resulted in a shortage of fruits for testing. Inoculum has been cultured and ready for use in testing procedures.

2. **Project: Develop pest management strategies and protocols for rambutan, longans, lychees and papayas: Project Withdrawn**

3. **Project: Develop new foliage cultivars for the Hawaii commercial foliage industry with emphasis on Dracaena**

Principal Investigator: Kenneth W. Leonhardt/CTAHR

Award: \$25,000

**Summary:** The project seeks to provide new cultivars of foliage plants to enhance the growth and profitability of Hawaii's commercial foliage industry. Over 30 new accessions were recently obtained from growers in Asia to expand the germplasm collection for breeding and radiation treatments to develop new cultivars. Cuttings of standard commercial cultivars of Dracaena and Zamiodulcas have been irradiated at several dosages and are being evaluated.

4. **Project: Develop new culture management strategies associated with macadamia nut varieties to control pests and to further improve the crop yield on trees**

Principal Investigator: Mike Nagao/CTAHR

Award: \$5,000

**Summary:** Identification of newer and better cultivars is critical for Hawaii's macadamia industry. Evaluation of cultivars with potential resistance to pests will lessen the industry's reliance upon pesticide use. The information derived from this research will be useful for growers when deciding which varieties they would like to replace in their existing orchards or when deciding upon compatible varieties for new orchards for more cost efficient production in terms of nutrient requirements and harvest intervals. Retention of kernel quality in the field will impact upon harvesting intervals and overall harvesting costs. This information will make culture-management practices more efficient and help to minimize production costs.



The project objectives are: (1) to determine how fertilizer application affects recommended leaf nutrient levels for new selections and established cultivars; (2) to determine how well kernel quality is maintained for different selections vs time nuts are on the ground under various environmental conditions (wet, dry).

**5. Project: Optimal Field Management Strategies for Rambutan, Lychee, Longan, Durian, and Mangosteen**

Principal Investigator: Mike Nagao/CTAHR

Award: \$28,985

**Summary:** This project will determine the nutrient content of mature fruits for two longan cultivars ('Biew Khiew' and 'Sri Chompoo'), for the Kaimana lychee cultivar and for 2 rambutan cultivars ('Binjai' and 'Jiflee') growing at 2-3 different locations in East Hawaii on the Island of Hawaii and possibly another location on Kauai. The nutrient analysis data will be used to calculate that amount of N, P, K, Mg and Ca found in 100 pounds of fresh fruits. These amounts would represent the minimum amount of fertilizer nutrients that must be made available to a tree, if there is a harvest of 100 pounds of fruit. Surveys of juvenile and producing mangosteen orchards will be conducted to obtain data on growing environment, length of the juvenile period, season, and amount of production. Surveys will be conducted to identify the durian varieties that tend to be the consistent producers. Yield and production season data can also be collected from the producing trees.

**6. Project: Risk-based integrated pest management decision-making system for southern green stinkbugs (SGS) in macadamia nuts**

Principal Investigator: Mark Wright/CTAHR

Award: \$48,250

**Summary:** The lack of predictive systems for management of Southern green stinkbug (SGS), a significant pest of macadamia nuts, is currently a major stumbling block in macadamia production in Hawaii. This project will develop procedures for combining data on feeding biology and Southern green stinkbug (SGS) population dynamics with risk-based decision system for integrated pest management actions, based on monitoring data for insects and damage levels.

**7. Project: Macadamia Variety Trials**

Principal Investigator: Mike Nagao/CTAHR

Award: \$4,831

**Summary:** The 835 and 856 selections are being evaluated against the 800 (Makai) variety growing near Hilo on the Waiakea Experiment Station. Two new variety trials were planted at Kainaliu and Waiakea in 2001 to evaluate the newest selections that were identified from the Waiakea Station. The new selections include 862, 879, 887, 896, 900 and 932. The trials will determine the yield potential, kernel quality and over-all performance of these new selections. These newly planted fields will not produce significant yield until the 6<sup>th</sup> to 7<sup>th</sup> year after planting. However, kernel quality data can be collected from small yields that are obtained in the early years after planting. Yield data and nut quality data will also be collected from selections 835 and 856 planted at 2000 feet elevation at the Captain Cook Station in Kona. Since this is a mature producing field, annual yield and quality data can be collected over the next 3 to 5 years. Data on in-husk yield, wet-in-shell yield, % kernel recovery, No. 1 kernel yield and susceptibility to insect damage will be collected. Selection of macadamia cultivars requires a long term commitment since evaluation of the performance of new trees can take up to 10 years or more, before promising selections can be propagated and evaluated in replicated field plots.

8. **Project: Control and Management of the Macadamia Felted Coccid**  
Principal Investigator: Mark Wright/CTAHR Award: \$30,000  
**Summary:** The felted coccid has infested the macadamia orchards of the South Kona district of Hawaii. The identification of the best control and management options for the eriococcid will be developed. Reliance on use of insecticides may be a short-term option and for reducing spot infestations, however identification of suitable biocontrol agents is critical for Hawaii's macadamia industry for long term and sustained control of this pest.
9. **Project: Improved Diagnostic Methods for Detection of Sugarcane Diseases and Development of Resistant Varieties. Section: Sugarcane Smut Disease Diagnostic Technique.**  
Principal Investigators: Susan Schenck and Henrik Albert/HARC Award: \$60,000  
**Summary:** Sugarcane smut disease, caused by the fungus *Ustilago scitaminea* is probably the most severe sugarcane disease in Hawaii. It is difficult and costly to control. The goal of this project was to reduce the time and effort to determine a new product's susceptibility to smut, in order to eliminate it from the commercial product development pipeline. Transforming the smut fungi with a fluorescent protein to improve its detection during testing was accomplished. Susceptible plants have been exposed to these fluorescing fungi. The plants are growing out to determine if this approach is viable as a diagnostic method.
10. **Project: Coffee Breeding: Development of Uniquely Hawaiian Coffee**  
Principal Investigator: Chifumi Nagai/HARC Award: \$79,160  
**Summary:** This project is an ongoing program to develop high quality, uniquely Hawaiian coffee plants as requested by the Hawaii Coffee Growers' Association. Thirteen hybrids families were established on Kauai for evaluation; physical characteristic data were collected; and cupping of the source trees was conducted. Clonal propagation using a bioreactor for somatic embryo culture has been initiated. Establishing this technique will allow fast deployment for the growers when improved plants are identified from the program.
11. **Project: Clonal Propagation of Cacao**  
Principal Investigator: Chifumi Nagao/HARC Award: \$45,000  
**Summary:** The research project, "Clonal Propagation of Cacao" conducted by HARC initiated a developmental program for Hawaiian Chocolate. A collaboration was established among several growers interested in developing a specialty cacao crop sector: a leading US chocolatier sponsoring the quality testing, the USDA-ARS leading cacao scientist providing guidance and plant diagnostics, and HARC providing the field data and propagation. The USDA-ARS scientist has not only contributed in-kind services but also grant-matching funds. While there are a variety of cacao plants throughout the state this project starts the work needed to identify and make available those plants of high quality and unique tastes to establish market niches for Hawaii's emerging cacao producers.

12. **Project: Selecting for Genetic Resistance to *Fusarium oxysporum* f.sp. *koae* (koa wilt) in Koa for Conservation, Restoration, and Utilization in Hawaii**  
 Principal Investigator: N.S. Dudley/HARC Award: \$35,000  
**Summary:** This project is a collaboration between HARC and Dr. R. James, plant pathologist, USDA Forest Service to address the severe disease problem in Koa. An inoculation system was developed and deployed in identifying natural resistance to koa wilt. Eleven *Fusarium* isolates were obtained and virulent strains identified. 25 koa seed sources were collected from Oahu and Hawaii; 75 more are planned to include Kauai and Maui. GPS was used to establish location for future collections when resistant sources are identified through screening. Existing field trials were monitored for disease-associated mortality. A "Koa Wilt Technical Committee" was established to guide this state and national effort.
13. **Project: Propagation of cloned Papayas by Rooted Cuttings for Hawaii County**  
 Principal Investigator: Aileen Yeh and Maureen Fitch/HARC Award: \$5,000  
**Summary:** This project supplied matching funds for a Hawaii County grant that provided for a greenhouse equipped with an irrigation system. The greenhouse provides the infrastructure needed to house propagated papaya plants developed by different techniques and which are provided to the growers. This grant provided some wages as part of a USDA/HARC continuing effort to pool resources to demonstrate to participating papaya growers the method and protocol for handling and further multiplying these types of propagated plants.
14. **Project: Classical Biological Control of White Peach Scale on Papaya in Hawaii**  
 Principal Investigator: Peter Follett/PBARC Award: \$37,000  
**Summary:** The white peach scale (WPS), *Pseudaulacaspis pentagona* (Targioni-Tozzetti) (Hemiptera: Diaspididae), was collected for the first time in Hawaii in September 1997 on papaya. In 2000, the distribution of WPS on the Big Island was limited to several farms on the windward side. WPS has now spread to most papaya fields in east Hawaii, and is a serious economic pest on nearly every farm. It has not yet spread to other islands, but this could easily occur.

Insecticides are of limited use to control WPS and few natural enemies have been discovered attacking the scale in Hawaii. Grant funds from HFBF and HPIA are being used to initiate a classical biological control program against WPS in Hawaii. Two parasitoids, *Encarsia berlesei* and *Encarsia diaspidicola*, which have shown excellent results against WPS in other crops in other countries, will be imported into quarantine to determine their host specificity and potential for harm to native insects. The two parasitoids are only known to attack diaspidid scales and there are no native diaspidid scales in Hawaii. Therefore, we are confident that the parasitoids will have minimal non-target impact and will eventually be approved for release against white peach scale in papaya in Hawaii.

15. **Project: Hawaii Agriculture Theft and Crime Study**  
 Project Lead: Mark Hudson, HASS Award: \$25,000  
**Summary:** The USDA-HASS completed its Hawaii Agriculture Theft and Crime Study and published its report on October 18, 2005. This report quantified the degree of theft, property damage and trespassing incidents on Hawaii's farms. It also quantified the level of prosecution and farmer satisfaction with law enforcement.

The study and its findings provided the basis for strong support and adoption of legislative policy that lowered the minimum amount of damage required for a criminal property charge and included the value of future crops damaged in the estimate for agriculture and aquaculture.

16. **Project: Co-Existence Project Coordination**

Consultant: Meredith Berry/Consultant

Award: \$ 4,791

**Summary:** For the first time, Hawaii farmers that use growing practices such as conventional, biotechnology and organic methodologies met to be informed about each practice, identify common agricultural issues in Hawaii, and begin developing best management practices to ensure the economic success of farmers, no matter what growing practice is preferred. Beginning in September 2005 through December 2006, 7 meetings were held. Consultant Meredith Berry coordinated and scheduled 5 of the 7 meetings, as well as provided report summaries of the meetings. The report summaries were invaluable as it provided a written record of the group's meeting work, which often spanned 6 hours per meeting. HFBF was able to leverage this support with other sources of funding for the facilitation of these meetings, which resulted in a HFBF report to the Department of Agriculture about "Exploring Co-existence: Preliminary Report on Best Management Practices for Diverse Farming Practices."

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**Hawaii Farm Bureau Federation  
Agriculture Research Development and  
Marketing Grants**

**YEAR II**  
January 2006 – July 2007

**Hawaii State Legislature**

Interim Report  
(As of January 2007)

# Interim Report As of January 2007

## HFBF Agriculture Research Development and Marketing Grants Year II Interim Report As of December 31, 2006

Master HFBF-DOA Contract Period: Jan. 3, 2006 – July 2, 2007

Marketing and Research Subcontract Period: May 1, 2006 – April 30, 2007, Unless Noted  
Otherwise

### Introduction

The 2005 Legislature, via HB 168, CD1, (Act 180) appropriated \$500,000 for the promotion Hawaii's agricultural industry to the HFBF to conduct agricultural research and market development. The Legislature continued its support of the HFBF as the logical organization to oversee and expend the funding for agricultural research and market development. This is based on the HFBF's long history of working with all commodity groups and partnering with Hawaii's agricultural stakeholders such as the University of Hawaii College of Tropical Agriculture and Human Resources, Hawaii Agriculture Research Center, and the Department of Agriculture. The Hawaii Farm Bureau is the largest non-profit general agricultural organization, representing about 1,600 farm family members statewide.

We are excited to present an interim report for the second year's funding allocation initiated in January 2006. The most exciting part of this year's funding is the ability to have the farming industry distribute critical funding to the various sectors of the agricultural industry for specific short-term projects that will have positive effects on the entire industry. Unlike the previous year, the HFBF now has the full ability to solicit request for proposals and select a wide variety of projects.

Initially, 39 proposals for an aggregate total of \$1.6 million were received by the HFBF. Two projects were withdrawn, leaving a total of 37 proposals, with an aggregate amount of \$1.4 million of requests. The HFBF RFP Review Committee made 14 awards for \$448,565. Below in Table 1 is a summary of the Grant Award Recipients and Expenditures.

### HFBF RFP Solicitations and Awards:

**Table 1 Grant Award Recipients and Expenditures**

Subcontractee	Award
Hawaii Tea Society (1 project)	\$ 10, 200
Hawaii Organic Food Association (1 project)	\$ 19, 500
UH-CTAHR (8 projects)	\$ 229, 130
HARC (3 projects)	\$ 179, 735
HFBF (1 project)	\$ 10, 000
<b>Grand Total:</b>	<b>\$ 448, 565</b>

This report provides the Legislature a summary of projects approved by the Hawaii Farm Bureau Federation. Please see Addendum for YR II Agriculture Marketing and Research Projects, and RFP and Contract Processing Timeline. The first research project status reports are due to the HFBF on Feb. 1, 2007.

## **Appendix:**

- **YR II RFP and Contracting Timeline**
- **YR II HFBF Agriculture Marketing and Research Project Listing**
  - **YR II Interim HFBF Research Project Descriptions**

**(Respective Research Project Reports Are Available Upon Request)**

## YR II RFP and Contracting Timeline

### Master Contract DOA-HFBB

- 7/5/05 DOA Request to Governor Lingle for \$500,000 (Act 180) for Appropriation for Agricultural Research and Market Development
- 9/13/05 B&F Approves Allotment of \$500,000
- 9/28/05 DOA Request for Sole Source Provider, HFBB
- 10/10/05 Chief Procurement Officer Approval of Sole Source Provider, HFBB
- 11/29/05 HFBB Signs DOA Master Contract
- 11/29/05 DOA Signs Master Contract, Effective 1/03/06 – 7/02/07

### RFP Solicitation and HFBB Selection Process:

This process timeline served as a guideline and may not reflect actual dates of some of the timeline milestones.

- February 1, 2006 Deadline for Submittal of Proposals
- February 16, 2006 Proposals Given to Administrator for Review of Application Completeness
- February 23, 2006 Letters sent to Applicants
- Notifying receipt
  - Request for clarification or documentation
- February 28, 2006 Requests for clarification or documentation due to HFBB
- March 3, 2006 Administrator to mail out RFP applications for HFBB Review Committee
- March 13, 2006 Administrator to receive HFBB Review Committee evaluations of RFP applications
- Administrator to compile aggregate scores for each proposal
  - Aggregate scores will be distributed to the HFBB Review Committee
- March 16, 2006 HFBB Review Committee to meet and make award recommendations
- Administrator to prepare award list
- March 18 – 22, 2006 HFBB Board of Directors to ratify recommendations for awards
- March 27, 2006 Letters of awards and non-awards to be distributed
- March 29, 2006 HFBB Listing of Awards and Projects submitted to the DOA



## Contracting Process:

- May 1, 2006 HFBF Subcontract sent to Hawaii Tea Society
- May 10, 2006: Executed Hawaii Tea Society subcontract, effective 5/1/06-4/30/07
- HFBF Subcontract sent to HARC
- May 5, 2006: Executed HARC subcontract for 3 projects, effective 5/1/06-4/30/07
- HFBF Subcontract sent to UH-ORA
- June 14, 2006: Upon followup with the UH-ORA, HFBF became aware that a new contract specialist and new ORA administrator were in place
  - June 21, 2006: New Contract Specialist requested new exclusions language
  - July 11, 2006: HFBF reviewed new exclusions language, discussion with DOA pending
  - July 12, 2006: Discussion with DOA and HFBF legal counsel
  - August 4, 2006: UH requested nominal revisions to the General Conditions
  - August 10, 2006: Executed UH subcontracts (8 individual subcontracts); 7 effective 5/1/06-4/30/07, 1 effective 6/1/06-5/30/07
- May 8, 2006 HFBF Subcontract sent to HOFA
- May 16, 2006: Executed HOFA subcontract, effective 5/1/06-4/30/07
- May 30, 2006 HFBF Subcontract with Jo Ann Johnston executed, effective 7/1/06-12/31/06
- June 10, 2006 HFBF informed that HARC Energy Crop Establishment for Future Ethanol Production would be revised and resubmitted
- July 10, 2006 – August 11, 2006: HFBF contact with individual HFBF Board members for review and approval; individuals were out-of-state
  - Sept. 8, 2006: HFBF sends HARC Amdt #1 for revised project for Energy Crop Establishment for Future Ethanol Production. New Project: Jatropha curcas establishment for future biodiesel production.
  - Sept. 13, 2006: HARC executed Amdt. #1 subcontract, effective 9/1/06-6/30/07

Next Steps: Project Reports are Due 2/1/07 to HFBF

**YR II HFBF Agriculture Marketing and Research Project Listing**  
 YR II HFBF-DOA Subcontracts for Agriculture Marketing and Research Development  
 Effective Date: May 1, 2006 – April 30, 2007, Unless Otherwise Noted

Subcontractee	Projects	Grant Amount
	<b>Marketing Awards:</b>	
Hawaii Tea Society	1. Expansion and Promotion of the Tea Industry for Big Island Growers for New Industry and Industry Development	\$ 10,200
Hawaii Organic Food Association	2. Hawaii Organic Product Directory	\$ 19,500
HFBF	3. Value Added Marketing and the Cruise Line Market (Effective 7/1/06-12/31/06)	\$ 10,000
	<b>Marketing Awards Subtotal:</b>	<b>\$ 39,700</b>
	<b>Research Awards:</b>	
UH-CTAHR	1. A Dryer Utilizing a Heat Pump Dehumidifier as An Energy Source for Estate Coffee Production	\$ 5,450
	2. Quality and Shelf Life of Imported and Local Milk	\$ 9,060
	3. Establishment of Blueberry Variety Trials for Hawaii	\$ 70,450
	4. Control and Management of the Macadamia Felted Coccid	\$ 30,000
	5. Investigations into Tree Dieback and Decline and Field Management Strategies to Alleviate the Problem (Effective 6/1/06-5/31/07)	\$ 55,000
	6. Maximizing the Use of Local By-Products Feed to Reduce Cost, Reduce Environmental Impact and Enhance Value for Local Industry: A Dairy Approach	\$ 22,985
	7. A Strategic Plan to Identify and Prioritize Pest Management Needs for Hawaii's Coffee Industry	\$ 7,200
	8. Optimal Field Management Strategies for Rambutan, Lychee, Longan, Durian and Mangosteen	\$ 28,985
HARC	1. Breeding and Evaluation of Hawaiian Papaya for Phytophthora Resistance	\$ 77,100
	2. Revised Project: Jatropha curcas Establishment for Future Biodiesel Production (Effective 9/1/06-6/30/07)	\$ 37,000
	3. Finger Printing of Cacao Germ Plasm in Hawaii	\$ 65,635
	<b>Research Awards Subtotal:</b>	<b>\$408,865</b>
	HFFB administrative management fees	\$51,435
	<b>Total: Marketing and Research Awards</b>	<b>\$500,000</b>

**YR II**  
**HFBF Research Project Summaries**

February 1, 2007 is the deadline for all HFBF projects to submit program/fiscal reports to the HFBF. Soon after that date, an interim report will be provided.

In the meantime, project summaries are provided for general information about the YR II projects:

1. **Project: Expansion and Promotion of the Tea Industry for Big Island Growers For New Industry and Industry Development**  
Project Contact: Eva Lee/HTS                      Award: \$ 10,200 (HFBF Funding is leveraged with \$17,750 from other sources, an aggregate of \$27,950)  
**Summary:** Tea growing members of the Hawaii Tea Society are projecting that a consistent supply of estate teas will be introduced into the United States consumer niche market within three years. The tea industry movement in Hawaii is very new. Marketers of tea are excited about Hawaii grown tea and interest among growers to produce Hawaii tea is flourishing. The Hawaii Tea Society's membership of tea growers has established a successful understanding in the cultivation of growing *Camellia sinensis* tea on the Big Island of Hawaii. It has become clear that in order to improve and expand the number of growers in this county, gain community support that is of economic value, we must join the elements of small scale tea growing, tea processing and presentation. The leveraged aggregate funding of \$27,950 seeks to: 1) Provide educational tools and training, such as hand processing, for the small-scale tea grower; 2) Increase Hawaii's tea farmers' knowledge of tea tasting and relationship with a renowned tea-tasting expert to establishing current and future Hawaii grown tea-rating criteria; and 3) Develop a leadership training program involving partial sponsorship to major tea educational conferences and trade shows in the United States and China.
  
2. **Project: Hawaii's Organic Products Directory**  
Project Contact: Kelly Lange/HOFA                      Award: \$19,500 (HFBF Funding is leveraged with \$18,500 from other sources, an aggregate of \$38,000)  
**Summary:** Hawaii's Organic Products Directory will be produced in an electronic version as well as approximately 100 pages in hard copy. This Directory will prove to be one of the most valuable marketing tools created for the organic community in the State of Hawaii as well as abroad. Farmers, ranchers, and processors will have improved access to the tools they need and the markets available. Retailers will be able to find locally produced commodities and in return help to stimulate the local economy. Chefs will be able to find local producers of wanted ingredients. The Directory will stimulate economic growth by approximately 15-20% for producers and distributors and 5% for retail stores marketing direct to consumers.
  
3. **Project: Value Added Marketing and the Cruise Line Market**  
Project Lead: Jo Ann Johnston (HFBF)                      Award: \$10,000 (Funding is leveraged with \$33,000 Federal Funds and \$20,000 in kind, an aggregate of \$66,000)  
**Summary:** This planning grant investigates the potential opportunity of the cruise line passenger market for diverse agricultural products in Hawaii; and conducts a preliminary

study for the Value Added Cruise Line Marketing Plan. Such a plan is a significant value-added service for customers, and one that would spread benefits to the entire spectrum of Hawaii's agricultural businesses. Objectives of this grant are (1) to conduct a marketing study assessment of the cruise ship market, including working with the Purchasing Agents for Norwegian Cruise Lines as a pilot project to initiate the Collaborative Marketing System. The marketing study research is evaluating and identifying the demand of the cruise ship market for fresh and value added Hawaii agriculture-products. Data is now being obtained from NCL to identify product-specific opportunities for Hawaii agricultural value added goods; and (2) to conduct an applied concept study that will identify producers, farmers, and manufacturers of food products who can respond to the needs of ships and passengers for value-added agricultural products. The study will examine how the market study results and product supply-readiness/delivery response by diverse players would serve the needs of the Cruise ship purchasing agents and the passenger.

4. **Project: A Dryer Utilizing a Heat Pump Dehumidifier As An Energy Source for Estate Coffee Production**

Principal Investigator: Loren D. Gautz/UH-CTAHR Award: \$5,450

**Summary:** The need for smaller coffee processing equipment has increased significantly in the past few years as many coffee farmers are now processing and marketing their own Kona Coffee. Since much of the coffee ripens at the same time, conversion of cherry to dry parch of estate coffee is extremely difficult as there are very few individuals who have the capability or willingness to custom pulp and dry other farmers' coffee. Small farms wanting to process and market their own coffee products (estate production) have to either invest in large expensive dryers or build expensive drying floors or racks to dry their coffee.

During the last 2 years, a prototype dryer using a heat pump dehumidifier to dry coffee showed significant reduction in energy costs. The funds will be used to build a new dryer with a design similar to the prototype dryer mentioned above, but with modifications based on the 2 years of data collection.

5. **Project: Quality and Shelf Life of Imported and Local Milk**

Principal Investigator: C.N. Lee/UH-CTAHR Award: \$9,060

**Summary:** In recent years, there have been many complaints of milk going bad before the expiration date. While several factors contribute to this, e.g. poor handling of milk at home, the underlying facts are: a) milk should still be good several days after the expiration date and b) imported milk which forms 55% of the market share in Hawaii is brought in without refrigeration. Since the majority of milk drinkers are children, its quality is an important food safety issue. The study will evaluate the quality of milk by determining the bacteria count in retail milk. In addition, the pH alkalinity and the types of bacteria found in milk will be monitored. The expiration date will be considered day zero, and comparisons between imported mainland milk and locally produced milk will be evaluated. It is anticipated that the study will validate the superiority of locally produced milk.

6. **Project: Establishment of Blueberry Variety Trials for Hawaii**

Principal Investigator: Stuart Nakamoto/UH-CTAHR Award: \$70,450

**Summary:** Blueberries have gained much popularity among consumers especially because of their health promoting antioxidants. However, blueberries are not commonly

grown in Hawaii. Imported blueberries can command retail prices of \$5 per 4 oz container, and is a potentially lucrative crop for Hawaii growers. The challenge is to adapt a temperate region crop to tropical agriculture with tropical soils, year-round growing conditions, and no dormant period. Such a high quality product will be labor intensive and will be best suited for small-scale agriculture, which may enhance small farm viability and the sustainability of farm families and their communities.

The goal of the CTAHR Blueberry Program is to test the viability of blueberries as a new crop for Hawaii, and if successful, establish a commercial blueberry industry. The program will encompass the entire production-marketing system from variety selection and field establishment, to adapting and developing blueberry production systems including pruning, fertilization, and other cultural practices for commercial production in Hawaii, to the identification of markets, and appropriate post harvest, storage and distribution methods, and facilitating the commercial development of a Hawaii blueberry industry. The HFBF sponsored project addresses the first stage of the overall program: establishing blueberry variety trials and plant grow out trials.

7. **Project: Control and Management of the Macadamia Felted Coccid**

Principal Investigator: Mark Wright/UH-CTAHR                      Award: \$ 30,000

**Summary:** The macadamia felted coccid, (*Eriococcus ironsidei*) a new and potentially devastating insect pest of macadamia in Hawaii, has been found infesting trees on several hundred acres in S. Kona. The coccid, resembling tiny white scales or mealy bugs, is native to Australia. It feeds on the underside of leaves, on trunks and branches and on racemes. Severe infestation can kill young trees and severely reduce nut production. Control of these devastating pests involves research to understand the biology of the coccid and the infestation in Hawaiian macadamia nut orchards. Horticultural oils and reduced risk pesticides will be studied for efficacy, as well as bio-control agents, such as the ladybird beetles or a parasitic wasp will also be studied.

8. **Project: Investigations into Tree Dieback and Decline and Field Management Strategies to Alleviate the Problem**

Principal Investigator: Mike Nagao/UH-CTAHR                      Award: \$55,000

**Summary:** Macadamia tree dieback in mature orchards is a persistent problem within the industry. In some orchards between 2% to 16% of trees will require replacement on an annual basis due to tree decline and dieback. Unique to Hawaii and reported first in 1991, a problem termed macadamia quick decline (MQD) causes rapid decline of 14-36 year old trees. Dieback causes significant losses because a mature producing tree is capable of producing 100 pounds of in-shell nuts/year. A replacement tree can be planted but it will take 2 years to prepare a tree for planting in the field, and economic yields from the tree will not be realized until the 7<sup>th</sup> year. Replacement trees are difficult to secure because nurseries are not willing to propagate and graft trees unless the trees are pre-ordered.

Nearly 100% of Hawaii's macadamia orchards are mature, and over 50% are planted in the wetter section of the Big Island. These orchards are at high risk and will constantly face loss of the trees due to MQD. The identification of control and prevention strategies is necessary to insure that tree health and production are kept at an optimum.

9. **Project: Maximizing the Use of Local By-Products Feed to Reduce Cost, Reduce the Environmental Impact and Enhance the Value for Industry: A Dairy Approach**  
Principal Investigator: C.N. Lee/UH-CTAHR Award: \$22,985  
**Summary:** Currently calves are fed an imported mixture of soybean meal, crack or ground corn and rolled barley – a standard diet across the nation. The project proposes the use of wheat millings from the local flourmill, Hawaii Flour Mill (HFM Foods Inc) for dairy calves' ration. The study would compare the growth rate and performance of the calves fed on the regular ration versus a ration of mostly wheat millings, which might need to be comprised in varying amounts of feed. It will also include an economic impact analysis. If successful, local dairies can cut costs of imported feed, and the HFM will find value added use of wheat millings other than for landfill.
10. **Project: A Strategic Plan to Identify and Prioritize Pest Management Needs for Hawaii's Coffee Industry**  
Principal Investigator: Michael Kawate/UH-CTAHR Award: \$7,200  
**Summary:** Hawaii's tropical and subtropical growing conditions also favor the growth of insects, weeds and plant diseases. Pesticides still constitute important tools for pest management, and identification and assessment of currently registered products is needed. Pest Management Strategic Plans (PMSPs) for the coffee industry is an important process for the industry and allied stakeholders to identify pest management needs. Such a plan assists CTAHR in targeting their pest management research and extension resources to meet the needs of the coffee growers.
11. **Project: Optimal Field Management Strategies for Rambutan, Lychee, Longan, Durian and Mangosteen**  
Principal Investigator: Michael Nagao/UH-CTAHR Award: \$28,985  
**Summary:** The lack of information on the fertilizer requirements for optimum production of lychee, rambutan and longan is a barrier to consistent production. Factors that will influence the fertilizer requirements for an orchard include the amount of nutrient elements contained in the harvested fruits, the amount required for maintaining tree growth, the physical and chemical nature of the soil, and the amount of nutrients lost through leaching.

Little is known about mangosteen production under Hawaii conditions. Mangosteen production is characterized by a long juvenile period that can extend over 10 years or more. Several mangosteen orchards in Hawaii have been planted with significant numbers of trees, but there is little data on the growing environment, length of the juvenile period, season, and amount of production.

Observations on durian production in Hawaii indicate that individual trees can be very erratic in their production. Durian fruit set is influenced by time of day for pollination and whether flowers are self or cross-pollinated. In Hawaii orchards where durian have been planted, there are indications that certain varieties are better adapted to Hawaii growing conditions and tend to have more regular fruit set. However no surveys have been conducted to identify the varieties that tend to be consistent producers. There is also an absence of yield and data on season of production for trees in Hawaii.

Identification of cultivars adapted to local conditions and optimum crop nutrition are critical for successful production. Evaluation of lychee, rambutan, longan, mangosteen and durian in Hawaiian environments will enable producers to select cultivars and

employ cultural practices best suited for their growing conditions. With increased information on cultural practices, optimal and consistent production can be attained.

12. **Project: Breeding and Evaluation of Hawaiian Papaya for Phytophthora Resistance**

Principal Investigator: J. Zhu/HARC

Award: \$77,100

**Summary:** Papaya is one of the most important fruit crops grown in the tropics both for local consumption and export. Papaya diseases such as root rot and aerial blight caused by *Phytophthora palmivora*, a powdery mildew, is devastating because it reduces yield and increases production costs due to the lack of the genetically resistant cultivars. *Phytophthora* is particularly devastating because it is established in wet, rainy weather where fungicides are ineffective. Evaluation of the papaya progeny for *Phytophthora* resistance, selection of best lines for resistance, clonal propagation and planting, pathology studies, and papaya germplasm evaluation will result in reduced fungicide usage by papaya growers. This in turn, results in more profitability for papaya growers, better fruit quality and reduces the chemical load to Hawaii's environment

13. **Project: Jatropha curcas Establishment for Future Biodiesel Production**

Principal Investigator: Mike Poteet/HARC

Award: \$37,000 (HFBF

funding is leveraged with other funding sources for an aggregate of \$54,729)

**Summary:** Hawaii's sugar plantations, Gay and Robinson (Kauai) and HC&S (Maui), in working with HARC, have expressed interest in using more marginal lands to produce alternative fuel onsite. Highly efficient oilcrop plants such as *Jatropha curcas* may aid the plantations' decision making as they continue to work towards providing environmentally friendly sources of energy for the plantation and the communities-at-large.

*Jatropha curcas* is a small tree that is grown in hedgerows and plantation-style plantings in many places in Africa and India. It is believed that a form of converted coffee harvester could harvest this crop, and there could be three fruit cycles per year, depending on irrigation availability. *Jatropha* crops are less labor intensive and disruptive to the soil than traditional oilseed row-crops such as sunflower and soybean because they live up to or beyond 50 years. Its seeds have high oil contents, ranging from 30-45%.

Field-testing of multiple varieties, agronomic practices, and analysis of growth on different islands will begin to determine if *Jatropha curcas* is a potential oilseed crop for further exploration.

14. **Project: Fingerprinting of Cacao Germplasm in Hawaii**

Principal Investigator: Chifumi Nagai/HARC

Award: \$65,635

**Summary:** Recently, the production of premium and specialty chocolates made from cacao has been increasing. Cacao is a candidate for a high value, low acreage agriculture product in Hawaii, and requires high tonnage and superior quality to be a profitable crop. However, Hawaiian cacao plantings are variable in both quality and yield, and are not necessarily adapted to Hawaii's growing conditions. The genotypes of these trees are unknown as growers are planting cacao trees from seeds imported from various sources with variable bean quality and size. By selecting higher yield genotypes the overall yield is estimated to

increase. The project proposes to fingerprint 180 individual trees to assist cacao farmers in selection of superior cultivars based on the cacao trees' parentages/pedigrees.

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**Hawaii Farm Bureau Federation  
Agriculture Research Development and  
Marketing Grants**

**YEAR III**  
January 2007

**Hawaii State Legislature**

Interim Report  
(As of January 2007)

**Interim Report As of January 2007**  
**HFBF Agriculture Research Development and Marketing Grants**  
**Year III Interim Report As of January 2007**  
Master HFBF-DOA Contract Period: Jan. 2007

**Introduction**

The 2006 Legislature appropriated \$1,000,000 through the passage of Act 160, SLH 2006, for the Hawaii Farm Bureau Federation to conduct agricultural research and market development. The Legislature continued its support of the HFBF as the appropriate organization to oversee and expend the funding for agricultural research and market development. This is based on the HFBF's long history of working with all commodity groups and partnering with Hawaii's agricultural stakeholders such as the University of Hawaii College of Tropical Agriculture and Human Resources, Hawaii Agriculture Research Center, and the Department of Agriculture. The Hawaii Farm Bureau is the largest non-profit general agricultural organization, representing about 1,600 farm family members statewide.

We are pleased to present an interim report for the third year's funding allocation. On September 21, 2006, Governor Lingle announced the releasing of the funding. On December 1, 2007, the HFBF sent a Request For Proposal (RFP) to the public and the agricultural industry. On January 2007, we signed the contract with the State and currently await the final contract approval from the State Department of Agriculture. In the meantime, we are receiving responses to our RFP which the deadline is February 1<sup>st</sup>. I have attached a tentative internal time line as a guide to expedite the review and approval process. Once this review process is complete, the HFBF Board of Directors will make the final approval. We are optimistic that if the time line we have set forth are met, we will be able to implement the approval notification to awardees by March and execute subcontracts by May.

We are excited about this latest funding for applied agricultural research and market development as it will immediate and positive impact to the farmers and ranchers of Hawaii. We are excited that the industry will have the ability to direct funding for specific project that they feel will be beneficial to the agribusiness and industry overall.

# Appendix:

- **YR III RFP and Contracting Timeline**

## YR III RFP and Contracting Timeline

### Master Contract DOA-HFBB

- 9/21/06      Receive letter from Governor Lingle announcing she has released the funding.
- 1/16/07      HFBB Signs DOA Master Contract. Pending DOA signing.

### RFP Solicitation and HFBB Selection Process:

This process timeline served as a guideline and may not reflect actual dates of some of the timeline milestones.

- 12/01/06      Send out RFP
- 2/01/07      Deadline for Submittal of RFP
- 2/16/07      Packet sent to Review committee to rank projects  
(Tentative)
- 2/28/07      Review Committee meets to review and approve RFP. Makes recommendation to  
(Tentative)      the HFBB Board of Directors.
- 3/15/07      Send recommendation to HFBB Board for final approval.  
(Tentative)
- 3/22/07      Award notification to Applicants  
(Tentative)
- 3/29/07      HFBB Listing of Awards and Projects submitted to the DOA  
(Tentative)



**Hawaii Farm Bureau**  
F E D E R A T I O N

2343 Rose Street, Honolulu, HI 96819  
PH: (808)848-2074; Fax: (808) 848-1921

January 30, 2008

✓ Attn: Aaron Nyuha  
Senate Committee on Ways & Means  
State Capitol, Room 210  
Honolulu, HI 96813

Attn: Eric Nouchi  
House Committee on Finance  
State Capitol, Room 306  
Honolulu, HI 96813

Dear Mr. Nyuha and Mr. Nouchi:

Per the instructions for Grants-in-Aid Applications, we are writing to notify you that we have submitted a GIA during the 2007 legislative session for both fiscal years of the biennium. However, we only received funding for one year. Our organization still requires second year funding. Attached is the cover sheet of our applications from last year for your information.

We respectfully submit our application for the second year of funding for 2008-2009.

If you have any questions, please call me at 848-2074 or email [atakemoto@hfbf.org](mailto:atakemoto@hfbf.org).

Sincerely,

Alan T. Takemoto  
Executive Director

Enclosure