

Application Submittal Checklist

The following items are required for submittal of the grant application. Please verify and check off that the items have been included in the application packet.

- 1) Certificate of Good Standing (If the Applicant is an Organization)
- 2) Declaration Statement
- 3) Verify that grant shall be used for a public purpose
- 4) Background and Summary
- 5) Service Summary and Outcomes
- 6) Budget
 - a) Budget request by source of funds ([Link](#))
 - b) Personnel salaries and wages ([Link](#))
 - c) Equipment and motor vehicles ([Link](#))
 - d) Capital project details ([Link](#))
 - e) Government contracts, grants, and grants in aid ([Link](#))
- 7) Experience and Capability
- 8) Personnel: Project Organization and Staffing



AUTHORIZED SIGNATURE

TYLER JONES, DIRECTOR OF RESEARCH

PRINT NAME AND TITLE

1/21/2022

DATE

**THE THIRTIETH LEGISLATURE
APPLICATION FOR GRANTS
CHAPTER 42F, HAWAII REVISED STATUTES**

Type of Grant Request:

Operating Capital

Legal Name of Requesting Organization or Individual: DbA:
 Hawaii Agriculture Research Center n/a

Amount of State Funds Requested: \$ 800,000

Brief Description of Request (Please attach word document to back of page if extra space is needed):

The project is designed to leverage the investments made by HARC and partners over the past 25 years to develop a sustainable, commercial, forest products and tree crop industry. The project will strengthen the collaboration between HARC, the State of Hawaii DLNR and Hawaii farmers through investing in the infrastructure required to operate a modern tree seedling production and distribution center at the HARC Maunawili Farm. The project is particularly timely as it will enable the safe importation and distribution of coffee leaf rust resistant varieties at commercial scale.

Amount of Other Funds Available:

State: \$ _____

Federal: \$ _____

County: \$ _____

Private/Other: \$ _____

Total amount of State Grants Received in the Past 5 Fiscal Years: \$ 50,000

Unrestricted Assets: \$ 401,121

New Service (Presently Does Not Exist): Existing Service (Presently in Operation):

- Type of Business Entity:
- 501(C)(3) Non Profit Corporation
 - Other Non Profit
 - Other

Mailing Address:


PO Box 100

City: State: Zip:

Kunia HI 96759

Contact Person for Matters Involving this Application	
Tyler Jones	
Name: Tyler Jones	Title: Research Director
Email: tjones@harc-hspa.com	Phone: 808-927-7508

Federal Tax ID#: <div style="background-color: black; width: 100px; height: 15px;"></div>	State Tax ID#: <div style="background-color: black; width: 100px; height: 15px;"></div>
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 _____ Authorized Signature	Tyler Jones, Research Director _____ Name and Title	1/21/2022 _____ Date Signed
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**STATE OF HAWAII
STATE PROCUREMENT OFFICE**

CERTIFICATE OF VENDOR COMPLIANCE

This document presents the compliance status of the vendor identified below on the issue date with respect to certificates required from the Hawaii Department of Taxation (DOTAX), the Internal Revenue Service, the Hawaii Department of Labor and Industrial Relations (DLIR), and the Hawaii Department of Commerce and Consumer Affairs

Vendor Name: HAWAII AGRICULTURE RESEARCH CENTER

Issue Date: 01/21/2022

Status: Compliant

Hawaii Tax#: 20269028-01
New Hawaii Tax#: GE-0376150016-01
FEIN/SSN#: XX-XXX0700
UI#: XXXXXX1270
DCCA FILE#: 37120

Status of Compliance for this Vendor on issue date:

Form	Department(s)	Status
A-6	Hawaii Department of Taxation	Compliant
8821	Internal Revenue Service	Compliant
COGS	Hawaii Department of Commerce & Consumer Affairs	Exempt
LIR27	Hawaii Department of Labor & Industrial Relations	Compliant

Status Legend:

Status	Description
Exempt	The entity is exempt from this requirement
Compliant	The entity is compliant with this requirement or the entity is in agreement with agency and actively working towards compliance
Pending	A status determination has not yet been made
Submitted	The entity has applied for the certificate but is awaiting approval
Not Compliant	The entity is not in compliance with the requirement and should contact the issuing agency for more information

**DECLARATION STATEMENT OF
APPLICANTS FOR GRANTS PURSUANT TO
CHAPTER 42F, HAWAI'I REVISED STATUTES**

The undersigned authorized representative of the applicant certifies the following:


- 1) The applicant meets and will comply with all of the following standards for the award of grants pursuant to Section 42F-103, Hawai'i Revised Statutes:
 - a) 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 is awarded;
 - b) Complies 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;
 - c) Agrees not to use state funds for entertainment or lobbying activities; and
 - d) Allows the state agency to which funds for the grant 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 ensuring the proper expenditure of the grant.
- 2) If the applicant is an organization, the applicant meets the following requirements pursuant to Section 42F-103, Hawai'i Revised Statutes:
 - a) Is incorporated under the laws of the State; and
 - b) Has bylaws or policies that describe the manner in which the activities or services for which a grant is awarded shall be conducted or provided.
- 3) If the applicant is a non-profit organization, it meets the following requirements pursuant to Section 42F-103, Hawai'i Revised Statutes:
 - a) Is determined and designated to be a non-profit organization by the Internal Revenue Service; and
 - b) Has a governing board whose members have no material conflict of interest and serve without compensation.

Pursuant to Section 42F-103, Hawai'i Revised Statutes, for grants used for the acquisition of land, when the organization discontinues the activities or services on the land acquired for which the grant was awarded and disposes of the land in fee simple or by lease, the organization shall negotiate with the expending agency for a lump sum or installment repayment to the State of the amount of the grant used for the acquisition of the land.

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

Hawaii Agriculture Research Center

(Typed Name of Individual or Organization)



(Signature) 1/21/2022

(Date)

Tyler Jones Director of Research

(Typed Name) (Title)

PUBLIC PURPOSE

The requested grant will be used for a public purpose pursuant to Section 42F-102, Hawaii Revised Statutes.

The Hawaii Agriculture Research Center (HARC) requests a grant in order to improve the overall benefits to the people of Hawaii by providing increased diversified agriculture and economic opportunity in the state. The grant will be used to support HARC plant propagation services in providing currently unavailable crops for farmers to plant and value-added processors to utilize. HARC requests \$800,000 to achieve the stated goals.

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

Hawaii Agriculture Research Center
(Typed Name of Individual or Organization)


(Signature)

1/21/2022
(Date)

Tyler Jones
(Typed Name)

Director of Research
(Title)

II. Background and Summary

1. Description of the Applicant's Background

The Hawaii Agriculture Research Center (HARC) is a private, nonprofit organization (501c3) supporting diversified agriculture in Hawaii through scientific research, technology transfer and business development. Stephanie Whalen is the Executive Director of HARC and has been closely involved in Hawaii's agricultural industry for many years. Mrs. Whalen led the transition of HARC from the sugarcane industry funded, Hawaii Sugar Planters' Association (HSPA), to its current status with expertise and close relationships in most aspects of Hawaii's diversified agriculture industry. In addition, HARC Executive Director, Mrs. Stephanie Whalen has overseen the conversion of Del Monte pineapple acreage and camp to a vibrant agricultural complex and Kunia Village housing for low-income farm workers. HARC has a long track record of successful projects in collaboration with local, state and federal agencies, universities and private industry. HARC's diverse expertise in a wide range of agricultural subjects provides a valuable resource for Hawaii's farmers in a rapidly changing agricultural environment. HARC/HSPA scientists have played an instrumental role in island forestry, coffee, and cacao dating back to the early 20th century when HSPA helped to set up Hawaii's Forest Reserve System and reforest hundreds of thousands of acres across the state.

2. Goals and Objectives

The primary goal of this project is to leverage the investments made by HARC and partners over the past 25 years to develop a sustainable, commercial, forest products and tree crop industry. The proposed capital improvement project is designed to strengthen the collaboration between HARC's forestry program, the State of Hawaii-DLNR-DOFAW and Hawaii farmers through investing in the infrastructure required to operate a modern tree seedling production and distribution center at the HARC Maunawili Farm. The requested funds will be used to modernize the HARC greenhouse infrastructure and ensure low cost, equitable distribution of a wide range of forest and agricultural tree seedlings across the Hawaiian Islands for decades to come. While the infrastructure was designed to suit a range of tree species, the initial focus will be:

- Koa
- Coffee Leaf Rust Resistant varieties

The HARC facility in Maunawili on Oahu is well suited to serve as the distribution hub for entire state. The production, processing and distribution of high-quality, disease-free plants requires highly specialized labor and equipment, and therefore a centralized center is the most efficient production method for most uses. HARC has proven this centralized production method to work well in Hawaii, as the HARC/HSPA Maunawili station produced millions of seedlings annually for the entire sugarcane industry for over 100 years. While HARC's sugarcane breeding program ended with the closing of HC&S in 2016, HARC maintains the specialized staff, infrastructure and company culture to effectively pivot to forest seedling production. HARC has approximately 40 years left on its Hawaii Department of Agriculture lease for its Maunawili farm.

Koa

Koa (*Acacia koa* A. Gray) is an overstory tree species, endemic to the Hawaiian archipelago that holds cultural, ecological, and economic significance. Koa is a dominant canopy tree and keystone species in native forests where it provides suitable habitats for endangered native birds and epiphytic plants. Koa is of immense cultural importance to native Hawaiians. Its wood is used for a range of traditional applications. Most notably, it is the preferred wood for construction of traditional Hawaiian voyaging canoes. Koa timber is a high-value hardwood, used for producing musical instruments, specialty furniture and other high value craft goods. The very limited supply of commercial quality trees is a significant limiting factor to the Hawaiian forestry industry, and a sustainable, reliable supply would have significant economic benefit to the forest products industry in Hawaii.

HARC, in partnership with the United States Forest Service, University of Hawaii, State of Hawaii and numerous private partners has worked to develop varieties of koa suitable for commercial forestry. Commercial forestry around the world is based on using genetic improvement to develop varieties that are well suited for production. The primary impediment to successful koa reforestation is a vascular wilt disease caused by the fungal pathogen, *Fusarium oxysporum* f. sp. *koae* (FOXY). The disease causes high rates of mortality in plantings and threatens native koa forests across the state. Landowners are reluctant to consider koa for reforestation and restoration in many areas due to the risk of mortality caused by the disease. Producing seeds with genetic resistance to FOXY is vital to successful koa reforestation and restoration. HARC, with both public and private partners, operates a tree improvement program to develop koa wilt resistant populations in Hawaii. Over the past 25 years, HARC has selected disease resistant varieties from the most important regions on each of the largest four Hawaiian Islands and installed a network of seed orchards across the state. The project is a great example of a successful public-private partnership, with disease resistant plantings now located on dozens of landowners' properties across the state, including Kamehameha Schools, Haleakala Ranch, and State of Hawaii DLNR-DOFAW. The program's success has been instrumental in recruiting new industry, as evidenced by Taylor Guitar's recent purchase of approximately 600 acres on Hawaii Island for koa reforestation. Furthermore, HARC is working with DLNR-DOFAW to provide disease resistant seedlings for small landowners through the Forest Stewardship Program.

Coffee Leaf Rust Resistant Varieties

Hawaii's coffee industry is currently facing an unprecedented challenge from the invasive pathogen, coffee leaf rust (CLR). CLR is now present across the state and causing significant loss to farmer yield. Hawaii's coffee varieties have little/no resistance to CLR and chemical control options are limited. The disease has the potential to devastate the industry, robbing Hawaii of an important economic and cultural resource.

HARC has worked closely with the coffee industry for approximately 75 years and has the scientific and genetic resources to help the coffee industry transition to high quality varieties with natural genetic resistance to CLR. The Hawaii Coffee Industry Association and the Hawaii Coffee Growers Association have expressed a strong desire to undertake this transition. HARC works closely with the industry to develop proprietary, local, CLR resistant varieties AND to import new varieties from foreign sources. This will require a significant investment from the industry, as it will require replacing millions of trees around the state.

Hawaii's ability to import and produce the necessary coffee plants for this undertaking is severely limited by a lack of commercial scale quarantine and propagation facilities. The proposed project will enable HARC to fill this need through providing 100,000+ coffee plants per year, in a low costs and safe manner.

Objective 1: Convert HARC's sugarcane seedling production greenhouse into forest seedling production greenhouses.

Objective 2: Convert HARC's sugarcane outdoor "hardening" off nursery into tree species production nursery.

3. Public purpose and need to be served

As large commercial agricultural production of sugarcane and pineapple decreased in the state, many agricultural workers and their families have struggled to survive. Furthermore, landowners struggle to manage their land, as invasive species quickly colonize the area and degrade the land. Commercial forestry and coffee provide a unique opportunity to provide economic, ecological and cultural benefit.

4. Target population

The immediate population served by the project will be the landowners that now have access to a sustainable, income generating land management tool. The agricultural workers of Hawaii will benefit through the increased employment opportunities created. Hawaii woodworkers will benefit from an increased supply of koa lumber to create products. The general population will benefit from increased accessibility of koa products. The general public will also benefit from the improved ecosystem services (e.g., carbon sequestration, watershed recharge) provided by koa compared to invasive weeds. Hawaii coffee farmers will benefit from increased access to low-cost, CLR resistant varieties, thus reducing reliance on chemical control and ensuring long term sustainability. The State of Hawaii will benefit directly from revenue generated by timber sales and from increased tax revenue from commercial forestry. The Hawaii tourism industry will benefit from increased forested areas for recreational activities and from ensuring Hawaii's unique coffee production remains available to visitors.

5. Geographic

The project has statewide implications as all inhabited islands have suitable growing areas for koa. Previous estimates indicate approximately 200,000 acres of abandoned or underutilized land to be suitable for commercial forestry. Coffee farms across the state will benefit from CLR resistant varieties.

III. Service Summary and Outcomes

1. Scope of work, tasks and responsibilities

Conversion of the HARC Maunawili greenhouse structures and purchase of necessary equipment will be managed by the HARC Research Director, Tyler Jones.

2. *Timeline*

- A: Secure contractor to perform the greenhouse improvements: Months 1-4
- B: Complete greenhouse improvements: Months 4-12

3. *Quality assurance and Evaluation Plans*

HARC has a long, successful history of R&D on a wide range of crops. HARC utilizes an internal review process to ensure proper quality control. HARC regularly conducts external reviews with DLNR-DOFAW, the US Department of Agriculture and the US Forest Service. HARC hires a third-party auditor annually for financial compliance.

4. *Measure of effectiveness*

Reports will be made to the legislature describing the success of proposed activities. The information will be reported with the results and training of their usefulness and application to Hawaii landowners. Increase in capacity to produce tree seedlings to serve as the most important measure of effectiveness. Current capacity is approximately 10,000 seedlings per year. Proposed project to enable 150,000+ per year.

IV. Financial

- 1. *See Enclosed Budget Forms*
- 2. *Quarterly Funding Needs*

Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total Grant
\$300,000	\$250,000	\$175,000	\$75,000	\$800,000

- 3. *No other funding sources are requested at this time.*
- 4. *HARC has not applied for or received any tax credits in the past three years and does not anticipate receiving any in the foreseeable future.*
- 5. *Government contracts, grants and grants in aid received by HARC*
 - A: Federal:
 - B: State of Hawaii: 2019 OP GIA, AGR 192, \$50,000
 - C: County:
- 6. As of December 31, 2021, HARC had unrestricted current assets of \$401,121

V. Experience and Capability

1. *Necessary Skills and Experience*

HARC forestry and coffee staff have over 100 years of combined experience in developing, testing, importing and distributing tree seedlings in Hawaii. HARC’s diverse professional staff, including Ph.D. scientists in genetics, agronomy and pathology provide significant value to the project and ensure sufficient capability to address any unforeseen issues.

HARC's long history of working in Hawaii provides access to a network of local, highly qualified contractors and suppliers.

2. *Facilities and Equipment*

HARC has a standard plant tissue culture laboratory to conduct the micropropagation, including a medium preparation room containing an autoclave, washing area, glass wares, a pH meter, weighing balances etc, and tissue culture rooms containing laminar hoods, bio-safety hoods, incubators and shakers etc. The laboratory provides well-controlled temperature, humidity, air circulation, and light quality and duration. HARC has approximately 180 acres of actively farmed land on Oahu between its Kunia and Maunawili Farms. Both sites have all the requisite vehicles, tractors, irrigation and other standard farm equipment needed for the field plantings.

VI. Personnel: Project Organization and Staffing

1. *Proposed staffing, qualifications, supervision and training*

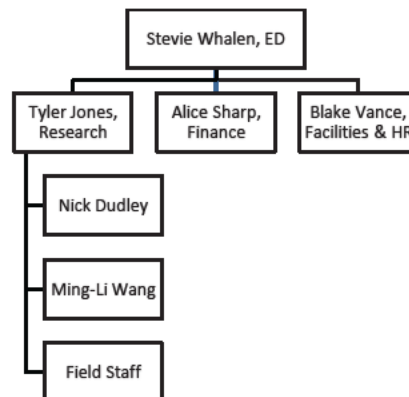
Tyler Jones, Director of Research, MS, MBA: Tyler Jones has over a decade of experience in conducting field trials on a wide range of new crops across the state of Hawaii. Tyler will work with the HARC Farm managers to install the infrastructure improvements and equipment purchases. Through his education, training and experience, Tyler is a proven team leader, supervisor and trainer for complex projects that require a range of specialty expertise.

Nick Dudley, Senior Forester, MS: Nick Dudley has over 30 years in Hawaii Forestry. He has successfully developed methods for developing improved koa genetics and manages the HARC network of koa sites.

Ming-Li Wang, Senior Scientist, Ph.D.: Dr. Wang has over 20 years of experience managing commercial scale plant propagation and coffee variety development in Hawaii.

Field Staff: HARC has numerous field staff that have significant experience in planting research trials on a wide range of crops. The existing experience provides significant value to the proposed project as little additional training is needed.

3. *Organizational Chart*



4. *Compensation*

The highest compensation for HARC employees are for Tyler Jones, Blake Vance and Alice Sharp. The three salaries are \$81,500, \$90,850 and \$94,300.

VII. Other


1. *HARC has no pending litigation or outstanding judgements.*
2. *No special licensures or accreditation is necessary to complete the project.*
3. *No grant funds will be used to support or benefit a sectarian or non-sectarian private educational institution.*
4. *Future sustainability of the project will rely on private funding.*

BUDGET REQUEST BY SOURCE OF FUNDS

Period: July 1, 2022 to June 30, 2023

App

HARC

BUDGET CATEGORIES	Total State Funds Requested (a)	Total Federal Funds Requested (b)	Total County Funds Requested (c)	Total Private/Other Funds Requested (d)
A. PERSONNEL COST				
1. Salaries	\$ 50,000			
2. Payroll Taxes & Assessments	\$ 5,000			
3. Fringe Benefits	\$ 21,000			
TOTAL PERSONNEL COST	\$ 76,000			
B. OTHER CURRENT EXPENSES				
1. Airfare, Inter Is and				
2. Insurance				
3. Lease/Rental of Equipment				
4. Lease/Rental of Space				
5. Staff Training				
6. Supplies				
7. Telecommunication				
8. Utilities				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
TOTAL OTHER CURRENT EXPENSES	\$ -			
C. EQUIPMENT PURCHASES	\$ 150,000			
D. MOTOR VEHICLE PURCHASES	\$ 55,000			
E. CAPITAL	\$ 519,000			
TOTAL (A+B+C+D+E)	\$ 800,000			
SOURCES OF FUNDING		Budget Prepared By:		
(a) Total State Funds Requested	\$ 800,000	Tyler Jones	808-927-7508	
(b) Total Federal Funds Requested		Name (Please type or print) Phone		
(c) Total County Funds Requested			1/21/22	
(d) Total Private/Other Funds Requested		Signature of Authorized Official Date		
TOTAL BUDGET	\$ 800,000	Tyler Jones Research Director Name and Title (Please type or print)		

BUDGET JUSTIFICATION - PERSONNEL SALARIES AND WAGES

Period: July 1, 2022 to June 30, 2023

Applicant: _____ HARC _____

POSITION TITLE	FULL TIME EQUIVALENT	ANNUAL SALARY A	% OF TIME ALLOCATED TO GRANT REQUEST B	TOTAL STATE FUNDS REQUESTED (A x B)
Director of Research, Tyler Jones	2080 hours	\$94,300.00	20.00%	\$ 18,860.00
Maunawili Farm Manager; Michael Kaufmann	2080 hours	\$52,000.00	30.00%	\$ 15,600.00
Senior Forester; Nick Dudley	2080 hours	\$80,000.00	10.00%	\$ 8,000.00
Senior Scientist; Ming-Li Wang	2080 hours	\$80,000.00	9.43%	\$ 7,540.00
				\$ -
				\$ -
				\$ -
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				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
TOTAL:				50,000.00

Tyler Jones will oversee entire project. Michael Kaufmann will oversee day to day management at Maunawili. Nick Dudley and Ming-Li Wang will provide expertise on koa and coffee respectively.

BUDGET JUSTIFICATION - EQUIPMENT AND MOTOR VEHICLES

Period: July 1, 2022 to June 30, 2023

Applicant: _____ HARC _____

DESCRIPTION EQUIPMENT	NO. OF ITEMS	COST PER ITEM	TOTAL COST	TOTAL BUDGETED
Cargo Trailer for transporting seedlings	1.00	\$15,000.00	\$ 15,000.00	
Irrigation and greenhouse bench systems	6	\$12,000.00	\$ 72,000.00	
Compact Track Loader	1	\$40,500.00	\$ 40,500.00	
LED greenhouse lighting	15	\$1,500.00	\$ 22,500.00	
			\$ -	
TOTAL:	23		\$ 150,000.00	

JUSTIFICATION/COMMENTS:

All equipment is designed and necessary for modern tree seedling production

DESCRIPTION OF MOTOR VEHICLE	NO. OF VEHICLES	COST PER VEHICLE	TOTAL COST	TOTAL BUDGETED
3/4 Ton Full Size, 4WD Truck (F-250)	1.00	\$55,000.00	\$ 55,000.00	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
TOTAL:	1		\$ 55,000.00	

JUSTIFICATION/COMMENTS:

Truck is needed to transport seedlings to farmers.

BUDGET JUSTIFICATION - CAPITAL PROJECT DETAILS

Period: July 1, 2022 to June 30, 2023

Applicant: _____ HARC _____

FUNDING AMOUNT REQUESTED						
TOTAL PROJECT COST	ALL SOURCES OF FUNDS RECEIVED IN PRIOR YEARS		STATE FUNDS REQUESTED	OTHER SOURCES OF FUNDS REQUESTED	FUNDING REQUIRED IN SUCCEEDING YEARS	
	FY: 2020-2021	FY: 2021-2022	FY:2022-2023	FY:2022-2023	FY:2023-2024	FY:2024-2025
PLANS			\$ 10,000			
LAND ACQUISITION						
DESIGN			\$ 10,000			
CONSTRUCTION			\$ 499,000			
EQUIPMENT						
TOTAL:			\$ 519,000			
JUSTIFICATION/COMMENTS:						
Planning, design and construction costs are for modernization of HARC greenhouse						

GOVERNMENT CONTRACTS, GRANTS, AND / OR GRANTS IN AID

Applicant: HARC

Contracts Total: -

	CONTRACT DESCRIPTION	EFFECTIVE DATES	AGENCY	GOVERNMENT ENTITY (U.S./State/Hawaii/ Honolulu/ Kauai/ Maui County)	CONTRACT VALUE
1	N/a				
2					
3					
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