Applicant ___Hawaii Agriculture Research Center_____

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

	STEPHANIE A WHALEN, EXECUTIVE DIRECTOR	1/17/2020
AUTHORIZED SIGNATURE	PRINT NAME AND TITLE	DATE

received
1/17/2020
3:20pm

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

Amount of State Funds Requested: $ 425,000

Brief Description of Request (Please attach word document to back of page if extra space is needed):
The goal of this project is to leverage the investments made by the private sector, federal and state government over the past 25 years to develop a sustainable koa (Acacia koa) forest industry with both economic and ecological benefits. The proposed capital improvement project is designed to strengthen the collaboration between HARC's forestry program, the State of Hawaii and Hawaii landowners through investing in the infrastructure required to operate a modern forest tree seedling production and distribution center at the HARC Maunawili Farm. The project will also establish two new, disease resistant koa seed orchards on land recently acquired by DLNR-DOFAW in Wahiawa and mauka Kula, Maui.

Amount of Other Funds Available:

State: $_____

Federal: $_____

County: $_____

Private/Other: $_____

Total amount of State Grants Received in the Past 5 Fiscal Years:

$_____

Unrestricted Assets:

$ 167,894

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: Kunia State: HI Zip: 96759

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

Federal Tax ID#:	State Tax ID#
[redacted]	[redacted]

Stephanie A Whale

Authorized Signature

STEPHANIE A WHALE, EXEC DIRECTOR

Name and Title

1-17-2020

Date Signed

Department of Commerce and Consumer Affairs

CERTIFICATE OF GOOD STANDING

I, the undersigned Director of Commerce and Consumer Affairs of the State of Hawaii, do hereby certify that

HAWAII AGRICULTURE RESEARCH CENTER

was incorporated under the laws of Hawaii on 08/08/1978 ; that it is an existing nonprofit corporation; and that, as far as the records of this Department reveal, has complied with all of the provisions of the Hawaii Nonprofit Corporations Act, regulating domestic nonprofit corporations.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Department of Commerce and Consumer Affairs, at Honolulu, Hawaii.

Dated: January 13, 2020

Director of Commerce and Consumer Affairs

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)

Stephanie A Whalen — 1-17-2020
(Signature) (Date)

Stephanie A. Whalen — **Executive Director**
(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. In addition, the requested funds will support HARC staff to conduct research and development and technology transfer to Hawaii farmers and landowners, including the State of Hawaii. Hawaii landowners across the state are the primary target group for the requested grant. HARC requests $425,000 to complete the project.

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)

Stephanie Whalen 1-17-2020
(Signature) (Date)

_Stephanie Whalen_____ Executive Director_____
(Typed Name) (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, Mrs. 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 and watershed restoration, 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 the private sector, federal and state government over the past 25 years to develop a sustainable koa (Acacia koa) forest industry with both economic and ecological benefits. The proposed capital improvement project is designed to strengthen the collaboration between HARC's forestry program, the State of Hawaii and Hawaii landowners through investing in the infrastructure required to operate a modern forest tree seedling production and distribution center at the HARC Maunawili Farm. The project will also establish two new, disease resistant koa seed orchards on land recently acquired by DLNR-DOFAW in Wahiawa and mauka Kula, Maui.

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 also a leguminous tree that is the primary nitrogen fixing species in native forest ecosystems. Significant koa forests are found on four of the major Hawaiian Islands (Hawaii, Maui, Oahu, and Kauai). Under ideal conditions, koa grows to heights of over 30 m. This tree 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. The ecological benefits of the reintroduction of koa on a landscape level will directly benefit the long-term sustainability of State of Hawaii's water supply. Koa forests provide opportunity and incentive to remove and control invasive and exotic plant species that are less effective in recharging aquifers and provide important ecosystem services such as carbon storage.

HARC, in partnership with the United States Forest Service, University of Hawaii, State of Hawaii and numerous private partners has worked to develop populations of koa suitable for sustainable commercial forestry and ecological restoration. Successful forestry around the world is based on using genetic improvement to develop varieties that are robust and well adapted to local site conditions. 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, thus higher survival rates 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. The improvement program utilizes a greenhouse inoculation method to select naturally occurring, genetic resistance to the disease. Over the past 25 years, HARC has selected disease resistant populations from the most important regions and priority watersheds 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 Guitars recent purchase of approximately 600 acres on Hawaii for koa reforestation. Furthermore, HARC is working with DLNR-DOFAW to provide disease resistant seedlings for small landowners through the Forest Stewardship Program.

The HARC network of wilt resistant seed orchards represents a total investment of over $3,000,000 and 25+ years of specialized research. As of 2019, the orchards have recently begun to produce high quality, genetically improved seed. This seed represents the first disease resistant koa seed ever produced and is unprecedented in enabling commercial koa forestry and restoration efforts to proceed. HARC has begun to distribute the seed from these orchards across the state, and anticipates the industry to grow rapidly over the next five years. The HARC koa program is based at the HARC facility in Maunawili on Oahu, serving as the distribution hub for entire state. The production, processing and distribution of high quality, improved seed 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.

While the United States Forest Service and HARC's private partners have made long-term investments in developing improved koa genetics, a significant gap remains in HARC infrastructure to efficiently produce and distribute high quality seedlings. The HARC Maunawili infrastructure was built in 1975 and designed to produce sugarcane seedlings. The onsite greenhouses require modification for forest seedling production to ensure Hawaii residents are able to take advantage of the resource. Furthermore, the existing funding mechanisms do not provide opportunity for the capital improvements necessary to operate modern seed orchards. The requested capital improvement funds are to be used to convert HARC's existing

infrastructure into a modern tree seedling production facility, therefore ensuring Hawaii landowners are able to best utilize the resource developed. The facility upgrades would provide HARC the capacity to go from distributing a few thousand propagules per year to 100,000+. The proposed project will also ensure HARC is able to continue working around the state, and producing ecoregional seed for a diverse set of areas, thus maximizing the resource. The funds would also be utilized to establish two new seed orchards on State of Hawaii, DLNR-DOFAW land in Wahiawa and mauka Kula, Maui. These improved seed orchards are instrumental for successful completion of the State's forest management plans at the two sites. From these two orchards, the State would have the seed resource necessary to establish approximately 5,000 acres of sustainable koa forests for both reforestation and restoration, providing significant economic and ecological benefits to the areas.

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

Objective 2: Purchase seed orchard management, seed processing and seedling production equipment to improve efficiency of forest tree seedling production

Objective 3: Install disease resistant seed orchard on State of Hawaii, DLNR-DOFAW land in Wahiawa, Oahu.

Objective 4: Install disease resistant seed orchard on State of Hawaii, DLNR-DOFAW land in Kula on Maui

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. Sustainable forestry based on native species such as koa 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 from commercial forestry operations. The 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. 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 such as hiking and bird watching.

5. Geographic

The project has statewide implications as all inhabited islands have suitable growing areas. Previous estimates indicates approximately 200,000 acres of abandoned or underutilized land to be suitable for commercial forestry.

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 Assistant Director, Tyler Jones. Installation of the disease resistant seed orchards on DLNR-DOFAW property will be managed by the HARC Senior Forester, Nick Dudley. Technician and field labor personnel will be involved in all the work.

2. Timeline

A: Secure contractor to perform the greenhouse improvements: Months 1-4
B: Complete greenhouse improvements: Months 4-9
C: Acquire seed orchard management equipment: Months 3-6
D: Install disease resistant seed orchards on DLNR-DOFAW property: Months 9-12

3. Quality assurance and Evaluation Plans

HARC has long, successful history of R&D on a wide range of crops. HARC utilizes an internal review process to ensure proper quality control. HARC regularaly 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 field trials location and date of installation will be reported with an explanation of the procedure and field plots layout. The data collected and analyzed will be reported with the results and discussion of their usefulness and application to Hawaii landowners.

IV. Financial

1. See Enclosed Budget Forms

2. Quarterly Funding Needs

Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total Grant
$175,000	$100,000	$75,000	$75,000	$425,000

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 forgeable 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, 2019, HARC had unrestricted current assets of $167,894

V. Experience and Capability

1. Necessary Skills and Experience

HARC Forestry staff has over 40 years of combined experience in the production of improved forest tree seedlings. Nick Dudley and staff have installed more than 10 disease resistant koa orchards on four islands across the state. HARC staff has extensive experience in field trials in a wide range of crops such as cacao, coffee, sugarcane, forage grasses, and numerous vegetable crops. HARC's diversity of professional staff including a geneticist, agronomist and pathologist provides significant value to the project and ensures sufficient capability to address any unforeseen issues.

2. *Facilities and Equipment*

HARC has approximately 180 of acres of active farmed research land on Oahu. The HARC Maunawili site was built in 1975 and has been under HARC/HSPA management for this period. The farm was standard agricultural equipment such tractors, trucks, irrigation etc..

VI. Personnel: Project Organization and Staffing

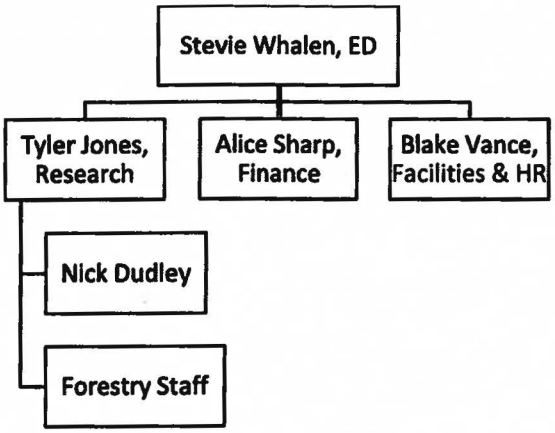
1. Proposed staffing, qualifications, supervision and training

Tyler Jones, Assistant 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 has proven an effective team leader, supervisor and trainer for complex projects that require a range of specialty expertise.

Nick Dudley: 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 i

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.

2. *Organizational Chart*



3. *Compensation*

The top three highest compensation employees at HARC for the three Assistant Directors. The salaries of the three Assistant Directors are $86,520, $76,980 and $76,800.

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, 2020 to June 30, 2021

Applicant: _Hawaii Agriculture Research Center

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	4,500			
3. Fringe Benefits	18,500			
TOTAL PERSONNEL COST	**73,000**			
B. OTHER CURRENT EXPENSES				
1. Airfare, Inter-Island	2,000			
2. Insurance				
3. Lease/Rental of Equipment				
4. Lease/Rental of Space				
5. Staff Training				
6. Supplies	8,000			
7. Telecommunication	1,000			
8. Utilities	1,000			
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
TOTAL OTHER CURRENT EXPENSES	**12,000**			
C. EQUIPMENT PURCHASES	**40,000**			
D. MOTOR VEHICLE PURCHASES				
E. CAPITAL	**300,000**			
TOTAL (A+B+C+D+E)	**425,000**			

SOURCES OF FUNDING		Budget Prepared By:
(a) Total State Funds Requested	425,000	
(b) Total Federal Funds Requested		Tyler Jones 808-927-7508
(c) Total County Funds Requested		Stephanie A Whalen 1-17-2020
(d) Total Private/Other Funds Requested		Signature of Authorized Official Date
TOTAL BUDGET	**425,000**	STEPHANIE A WHALEN, Exec Director Name and Title (Please type or print)

BUDGET JUSTIFICATION - PERSONNEL SALARIES AND WAGES

Period: July 1, 2020 to June 30, 2021

Applicant: _Hawaii Agriculture Research Center_

POSITION TITLE		FULL TIME EQUIVALENT	ANNUAL SALARY A	% OF TIME ALLOCATED TO GRANT REQUEST B	TOTAL STATE FUNDS REQUESTED (A x B)
Tyler Jones	Assistant Director	2080 hours	$77,000.00	15.00%	$ 11,550.00
Nick Dudley		2080 hours	$65,000.00	15.00%	$ 9,750.00
Michael Kaufmann	Maunawili Farm Manager	2080 hours	$46,000.00	20.00%	$ 9,200.00
Forestrty Technician		2080 hours	$39,000.00	50.00%	$ 19,500.00
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
TOTAL:					50,000.00

JUSTIFICATION/COMMENTS:

BUDGET JUSTIFICATION - EQUIPMENT AND MOTOR VEHICLES

Period: July 1, 2020 to June 30, 2021

Applicant: ____HARC_____

DESCRIPTION EQUIPMENT	NO. OF ITEMS	COST PER ITEM	TOTAL COST	TOTAL BUDGETED
Seed Orchard Tractor	1.00	$25,000.00	$ 25,000.00	25,000
Automated nursery equipment	1	$15,000.00	$ 15,000.00	15,000
			$ -	
			$ -	
			$ -	
TOTAL:	2		$ 40,000.00	40,000

JUSTIFICATION/COMMENTS:

DESCRIPTION OF MOTOR VEHICLE	NO. OF VEHICLES	COST PER VEHICLE	TOTAL COST	TOTAL BUDGETED
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
TOTAL:				

JSTIFICATION/COMMENTS:

ll requested funds to be used to complete project as described in proposal

BUDGET JUSTIFICATION - CAPITAL PROJECT DETAILS

Period: July 1, 2020 to June 30, 2021

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: 2018-2019	FY: 2019-2020	FY:2020-2021	FY:2020-2021	FY:2021-2022	FY:2022-2023
PLANS						
LAND ACQUISITION						
DESIGN						
CONSTRUCTION			300000			
EQUIPMENT						
TOTAL:			300,000			

JUSTIFICATION/COMMENTS:

Capital requirements are for HARC Maunawili greenhouse infrastructure improvements

GOVERNMENT CONTRACTS, GRANTS, AND / OR GRANTS IN AID

Apı HARC Contracts Total: 50,000

	CONTRACT DESCRIPTION	EFFECTIVE DATES	AGENCY	GOVERNMENT ENTITY (U.S. / State / Haw / Hon / Kau / Mau)	CONTRACT VALUE
1	2019 GIA, project number AGR 192	11/2019 - 10/2020	HDOA	State of Hawaii	$ 50,000.00
2					
3					
4					
5					
6					
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