



UNIVERSITY OF HAWAII SYSTEM

‘ŌNAEHANA KULANUI O HAWAII

Legislative Testimony

Hō'ike Mana'o I Mua O Ka 'Aha'ōlelo

Testimony Presented Before the
House Committee on Agriculture & Food Systems
Wednesday, March 20, 2024 at 10:15 a.m.

By

Parwinder Grewal, Dean
College of Tropical Agriculture and Human Resources

And

Michael Bruno, Provost
University of Hawai'i at Mānoa

SB 2362 SD1 – RELATING TO ORNAMENTAL GINGER

Chair Gates, Vice Chair Kahaloa, and Members of the Committee:

Thank you for the opportunity to provide testimony in support of SB 2362 SD1 which provides funding to continue studying the diseases affecting ornamental ginger on O'ahu and the neighbor islands.

Ornamental ginger is a valued plant that is one of Hawaii's most commonly used shrub and cut flowers. Red ginger production has declined significantly over the past 10 years due to what is now known to be viral pathogens. The College of Tropical Agriculture and Human Resources' scientists have been able to identify six different viruses and one fungal pathogen that are infecting ornamental ginger. In addition, the Hawai'i Department of Agriculture (HDOA) experts have established the existence of 14 additional pathogens.

What has been achieved so far is as follows:

- The islands of O'ahu, Kaua'i, Maui and Hawai'i have been surveyed multiple times in order to document the magnitude and spread of the decline. This has resulted in the discovery of two new viruses never before identified.
- Symptoms have been characterized based on visual identification and genetic sequencing. Symptom characterization has been presented to stakeholders.
- Two Extension publications were produced outlining the current information and the research publication is ready for submission.
- Outreach efforts with HDOA and industry groups continue; thus far, 764 stakeholders have been contacted directly as the demand for assistance grows.
- Virus-free plants have been identified and a quarantine facility was built to house them at Komohana Research and Extension Center, USDA Pacific Basin Ag Research Center and Hawai'i Agriculture Research Center.
- The impact of co-infection by two dominant viruses is being investigated, and requires funding to support full investigation.

- Vectors of the viruses are being investigated. While not definitive, mealy bugs and aphids are suspected. More investigation is required.
- It is still unclear which viruses, and how the presence of co-infections can affect yield of plants. More investigation is required.

We respectfully request the appropriation of \$125,000 to support the following budget which would promote a better understanding and mitigation of the disease.

Budget Item	FY24-25
Mileage (Mileage is required for farm visits, average farm travel is 50 miles round trip. This would fund 7 farm visits a month at the current mileage rate of 0.67/mile.)	\$ 2,800
Travel (Principal Investigator will be required to perform lab work at UH Mānoa campus, and perform outreach statewide. This requires overnight travel.)	\$ 12,400
Tissue Culture Lab Fees (Fees are required for mass propagation of red ginger. Labs to be utilized to be determined.)	\$ 35,200
Supplies (Supplies include lab supplies, supplies for graduate student research and insect exclusion houses for virus free production.)	\$ 19,000
Student Hire (Student hire required to carry out research and extension objective, 6 hours a week.)	\$ 10,600
Plot Allocation (Pays for a long-term plot for the red ginger trials at a Hawaii Island UH Manoa CTAHR research station.)	\$ 7,000
Plot Allocation (Pays for a casual hire employee to perform trials on red ginger production.)	\$ 38,000
	\$125,000

Thank you for the opportunity to submit testimony in support of SB 2362 SD1, provided that its passage does not impact priorities as indicated in our Board of Regents Approved Budget.

JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor



SHARON HURD
Chairperson, Board of Agriculture

DEXTER KISHIDA
Deputy to the Chairperson

RECEIVED
Date & Time
Mar 19, 2024, 10:40 am

State of Hawai'i
DEPARTMENT OF AGRICULTURE
KA 'OIHANA MAHI'AI
1428 South King Street
Honolulu, Hawai'i 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

LATE

TESTIMONY OF SHARON HURD
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE HOUSE COMMITTEE ON AGRICULTURE & FOOD SYSTEMS

MARCH 20, 2024
10:15 AM
CONFERENCE ROOM 325 & VIDEOCONFERENCE

SENATE BILL NO. 2362, SD1
RELATING TO ORNAMENTAL GINGER

Chair Gates, Vice Chair Kahaloa and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill 2362, SD1 relating to ornamental ginger. This bill appropriates funds for statewide research into ornamental ginger pathogens, prevention of the spread of ornamental ginger pathogens, production and distribution of pathogen-free plants and outreach to ornamental ginger growers. The department strongly supports this bill so long as it does not impact the budget priorities set forth in the Executive Budget Submittal and offers the following comments.

Commercial production of ornamental ginger has been in decline for several years. In 2018, a team from the College of Tropical Agriculture and Human Resources (CTAHR), the Hawaii Farm Bureau and HDOA did site visits. CTAHR virologists identified three plant viruses affecting the HDOA Pathology Unit of the Plant Pest Control Branch, working with the US Department of Agriculture's National Identification Services (NIS) identified 12 other diseases including fungal and bacterial pathogens. The Department dedicated funding through a contract (Contract number 67623) for delimiting the distribution of the viral diseases, associate the viral symptoms with viral infections and the effects of multiple viral infections, identify viral vectors, and determine the cause of decline of ornamental ginger. Subsequent to this funding support to the



University in 2019, the Plant Pest Control Branch lost the Plant Pathologist responsible for supporting this work through retirement and the position was subsequent deleted by the Legislature during the 2021 session.

The Department supports the allocation of funds for the University. This support will be vital for the industry to reverse its negative growth trend and thrive through the development of virus-free ginger plants, mass-production of virus-free plants, improve diagnostics and better management techniques.

Thank you for the opportunity to provide testimony on this bill.



March 18, 2024

Representative Cedric Asuega Gates, Chair
Representative Kirstin Kahaloa, Vice Chair
House Committee on Agriculture & Food Systems

Testimony in Support of SB 2362, S.D. 1 (Appropriates moneys for statewide research into ornamental ginger pathogens, prevention of the spread of ornamental ginger pathogens, production and distribution of pathogen-free ornamental ginger plants, and outreach to ornamental ginger producers. Declares that the appropriation exceeds the state general fund expenditure ceiling for 2024-2025. Effective 7/1/2050.)

Wednesday, March 20, 2024, 10:15 a.m.; State Capitol, Conference Room 325, Via Videoconference.

The Land Use Research Foundation of Hawaii (LURF) is a private, non-profit research and trade association whose members include major Hawaii landowners, developers, and utility companies. LURF's mission is to advocate for reasonable, rational, and equitable land use planning, legislation and regulations that encourage well-planned economic growth and development, while safeguarding Hawaii's significant natural and cultural resources, and public health and safety.

LURF appreciates the opportunity to express its **support of SB 2362, S.D. 1.**

SB 2362, S.D. 1. This bill proposes to appropriate funds to the University of Hawaii for statewide research and prevention of pathogens affecting ornamental ginger.

LURF's Position. LURF understands that production of ornamental ginger has been declining throughout the State since 2014, and that further decline has resulted in producers in affected areas clearing their lands as ornamental ginger can no longer be economically produced. Farmers are concerned about the spread of the disease pathogens and have consulted with the department of agriculture, University of Hawaii college of tropical agriculture and human resources (UHCTAHR), and various farm bureaus. Research conducted has identified a combination of different viruses as well as other pathogens as possible contributing causes that are infecting ornamental ginger, which is a highly valued plant. Virus-infected plants cannot be cured.

Plant diseases and invasive species such as insects, disease-bearing organisms, snakes, weeds, and other pests pose the greatest threat to Hawaii's economy, tourism, agriculture, the natural environment, native species and to the health and lifestyle of Hawaii's people.

Invasive species already cause millions of dollars in crop losses, the extinction of native species, the destruction of native wet, moist, and dry land forests, and the spread of disease, but even more harmful viral, fungal, and unidentified bacterial pathogens such as these unknown pathogens causing devastating crop decline in ornamental ginger, now threaten to invade plants throughout all of the Hawaiian Islands and wreak further uncontrolled damage.

Despite efforts by the UHCTAHR and the State Department of Agriculture to address this critical situation, more research and a multi-agency outreach approach, including development of protocols amongst cultivators, producers and distributors; establishment of cultural management strategies for managing virus-infected plants; and educating growers about those strategies and the importance of virus-free plants, are necessary to avoid further damage to the profitability and long-term sustainability of local ornamental flora and landscape production industries.

For the above reasons, LURF **supports SB 2362, S.D. 1** and respectfully urges your favorable consideration.

Thank you for the opportunity to present testimony regarding this matter.



**HOUSE OF REPRESENTATIVES
THE THIRTY-SECOND LEGISLATURE
REGULAR SESSION OF 2024**

COMMITTEE ON AGRICULTURE & FOOD SYSTEMS

Rep. Cedric Asuega Gates, Chair

Rep. Kirstin Kahaloa, Vice Chair

Wednesday, March 20, 2024 10:15 a.m.

VIA VIDEOCONFERENCE

Conference Room 325

State Capitol

415 South Beretania Street

RE: SB2362 RELATING TO ORNAMENTAL GINGER

My name is Eric S. Tanouye and I am the President for the Hawaii Floriculture and Nursery Association. HFNA is a statewide umbrella organization with approximately 350 members. Our membership is made up with breeders, hybridizers, propagators, growers, shippers, wholesalers, retailers, educators, and the allied industry, which supports our efforts in agriculture.

The Hawaii Floriculture and Nursery Association (HFNA) **STRONGLY SUPPORTS SENATE Bill 2362 SD1.**

Ornamental ginger is a popular tropical flower that could be considered as a symbol of the beauty of Hawaii. For our Nurserymen and women to continue to grow and provide this product it is important we find solutions to the pathogens that threaten the ornamental ginger and avoid the spreading of these viruses to growers statewide. Currently there is no cure for infected plants and the best option would be to have virus free ginger plants available for our industry.

An important way to combat these threats is to have and share the knowledge with growers on how to contain this virus through best management practices. We ask that you support our industry and agriculture by supporting these efforts for statewide research into pathogens, production and distribution of pathogen-free ornamental ginger plants and outreach to our ornamental producers.

If you have any questions at this time, I would be happy to discuss them and can be reached by phone at 808-959-3535 ext 22, cell 960-1433 and email eric@greenpointnursery.com.

Supporting Agriculture and Hawaii,

Eric S. Tanouye
President

Hawaii Floriculture and Nursery Association



EAST OAHU COUNTY FARM BUREAU
910 CALIFORNIA AVE., WAHIAWA, HI 96786

March 18, 2024

Representative Cedric Asuega Gates, Chair
Representative Kirstin Kahaloe, Vice Chair
House Committee on Agriculture and Food Systems
State Capitol, 415 S. Beretania St.
Honolulu, Hawai'i 96813

Dear Chair Gates, Vice Chair Kahaloe, and Members of the Committee,

The East O'ahu County Farm Bureau, which represents approximately 420 farmers and supporters of agriculture from Waimanalo to Kahuku, **strongly supports SB 2362 SD1**, "Relating to Ornamental Ginger," which would provide funding to the University of Hawai'i for research and prevention of the spread of ornamental ginger pathogens.

As the bill's preamble notes, an emerging disease of red ginger has devastated fields of this valuable ornamental plant in Windward O'ahu and threatens to spread to other growing sites throughout the islands. CTAHR researchers initiated studies which identified the causal agents. At last year's legislative session, CTAHR requested funding for a two-year project to collaborate with the Hawai'i Agriculture Research Center to produce virus-free plants for distribution to farmers, to develop strategies to manage infected plants, and to provide outreach to ornamental growers. HB 306 (2023) ultimately passed, but with funding for only the first year of the project. SB 2362 SD1 would provide funding for the second year's work, without which the project would be incomplete.

With the first year's funding, CTAHR researchers have accomplished or are accomplishing the following:

- Starting red ginger plants in tissue culture and performing clean-up to ensure that they are free of viruses.
- Ordering insect exclusion environments to support experimental trials.
- Retrofitting a greenhouse at Komohana Extension Center as a virus-free production facility.
- Giving two seminars on O'ahu to 27 attendees on virus identification and management, with seminars planned for each island during spring and summer 2024, and advertising for interest among growers in receiving virus-free plants.
- When the plants are guaranteed to be virus-free, beginning mass production and starting to release the plants to growers.
- Planning to set up virus-free vegetative propagation environments on each island if possible.

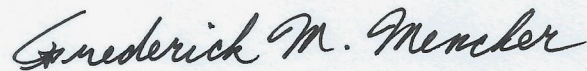
The second year's funding would support:

- Testing virus-free plants in the field to determine performance compared to infected plants.
- Testing methods to reduce the risk of virus spread to virus-free plants.
- Continuing tissue culture of virus-free plant material.
- Continuing extension outreach to stakeholders.

We therefore respectfully request that your committee approve the appropriation proposed by SB 2362 SD1, so that Hawai'i's farmers can continue to grow this beautiful tropical flower.

Thank you for the opportunity to testify on this matter of great importance to Hawai'i's ornamental growers.

Sincerely,

A handwritten signature in cursive script that reads "Frederick M. Mencher".

Frederick M. Mencher
for Grant Hamachi, President
East O'ahu County Farm Bureau



P.O. Box 253, Kunia, Hawai'i 96759
Phone: (808) 848-2074; Fax: (808) 848-1921
e-mail info@hfbf.org; www.hfbf.org

March 20, 2024

HEARING BEFORE THE
HOUSE COMMITTEE ON AGRICULTURE & FOOD SYSTEMS

TESTIMONY ON SB 2362, SD1
RELATING TO ORNAMENTAL GINGER

Conference Room 325 & Videoconference
10:15 AM

Aloha Chair Gates, Vice-Chair Kahaloa, and Members of the Committee:

I am Brian Miyamoto, Executive Director of the Hawai'i Farm Bureau (HFB). Organized since 1948, the HFB is comprised of 1,800 farm family members statewide and serves as Hawai'i's voice of agriculture to protect, advocate, and advance the social, economic, and educational interests of our diverse agricultural community.

The Hawai'i Farm Bureau supports SB 2362, SD1, which appropriates funds for statewide research into ornamental ginger pathogens, prevention of the spread of ornamental ginger pathogens, production and distribution of pathogen-free ornamental ginger plants, and outreach to ornamental producers.

Alpinia purpurata, known commonly as ornamental ginger, is a popular plant that is commonly used in tropical landscape designs. Commercial production of ornamental ginger has been on the decline for over a decade on Oahu. Red ginger growers in Windward Oahu have recently experienced a further decline in the growth of their ornamental red ginger plant production due to a variety of unknown viruses and fungi

Producers in the affected areas are excavating their lands as they can no longer economically produce ornamental ginger in these areas. Neighboring farmers and off-island customers are concerned about the spread of pathogens. Reports of crop decline which originally started in the Kahaluu area of Oahu have spread to surrounding areas such as Waihole and Waikane Valley.

In response, researchers and extension agents at CTAHR performed a statewide survey and causal agent identification study. The study determined that a combination of six viruses, including two viruses never before identified, is the cause of the red ginger decline, with other pathogens and ornamental ginger genetic variation as possible contributing factors. The viruses are found statewide but are most prevalent on Oahu and Hawai'i Islands. Virus-infected plants cannot be cured, and virus-infected plants are currently the main plants being propagated for more plantings, worsening the problem. Most large-scale operations have virus-infected plants.

Without more research and prevention protocols through a multi-agency outreach approach, these pathogens could spread further and impact the profitability and long-term sustainability of the local ornamental and landscape production industries.

Thank you for the opportunity to testify on this important subject.

SB-2362-SD-1

Submitted on: 3/18/2024 10:11:45 AM

Testimony for AGR on 3/20/2024 10:15:00 AM

Submitted By	Organization	Testifier Position	Testify
Nathan Trump	Individual	Support	Written Testimony Only

Comments:

I support this bill which funds research into ornamental ginger pathogens.

SB-2362-SD-1

Submitted on: 3/18/2024 1:02:11 PM

Testimony for AGR on 3/20/2024 10:15:00 AM

Submitted By	Organization	Testifier Position	Testify
Mark Phillipson	Individual	Support	Written Testimony Only

Comments:

Aloha Chairperson Gates and AG committee,

in support saving the red ginger from pathogens that would eventually eradicate this common Hawaiian ornamental.

SB-2362-SD-1

Submitted on: 3/18/2024 2:39:43 PM

Testimony for AGR on 3/20/2024 10:15:00 AM

Submitted By	Organization	Testifier Position	Testify
Jacqueline S. Ambrose	Individual	Support	Written Testimony Only

Comments:

Aloha,

Yes to; appropriating moneys for statewide research into ornamental ginger pathogens, prevention of the spread of ornamental ginger pathogens, production and distribution of pathogen-free ornamental ginger plants, and outreach to ornamental producers.

SB-2362-SD-1

Submitted on: 3/18/2024 9:20:17 PM

Testimony for AGR on 3/20/2024 10:15:00 AM

Submitted By	Organization	Testifier Position	Testify
Megan Blazak	Individual	Support	Written Testimony Only

Comments:

I support SB 2362, SD1, which appropriates funds for statewide research into ornamental ginger pathogens, prevention of the spread of ornamental ginger pathogens, production and distribution of pathogen-free ornamental ginger plants, and outreach to ornamental producers.

Alpinia purpurata, known commonly as ornamental ginger, is a popular plant that is commonly used in tropical landscape designs. Commercial production of ornamental ginger has been on the decline for over a decade on Oahu. Red ginger growers in Windward Oahu have recently experienced a further decline in the growth of their ornamental red ginger plant production due to a variety of unknown viruses and fungi.

Producers in the affected areas are excavating their lands as they can no longer economically produce ornamental ginger in these areas. Neighboring farmers and off-island customers are concerned about the spread of pathogens. Reports of crop decline which originally started in the Kahaluu area of Oahu have spread to surrounding areas such as Waihole and Waikane Valley.

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Without more research and prevention protocols through a multi-agency outreach approach, these pathogens could spread further and impact the profitability and long-term sustainability of the local ornamental and landscape production industries.

Thank you for the opportunity to testify on this important subject.

LATE

SB-2362-SD-1

Submitted on: 3/19/2024 9:41:13 AM

Testimony for AGR on 3/20/2024 10:15:00 AM

Submitted By	Organization	Testifier Position	Testify
Glen Kagamida	Individual	Support	Written Testimony Only

Comments:

HELPING MORE DIVERSITY IS GOOD.

MAHALO!