JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor

SHARON HURD
Chairperson, Board of Agriculture

MORRIS M. ATTA
Deputy to the Chairperson

State of Hawai'i
DEPARTMENT OF AGRICULTURE
KA 'OIHANA MAHI'AI
1428 South King Street
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TESTIMONY OF SHARON HURD
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEE ON AGRICULTURE AND FOOD SYSTEMS

MARCH 22, 2023
10:00 AM
CONFERENCE ROOM 325

HOUSE BILL 646, HD 1
RELATING TO ORNAMENTAL GINGER

Chairperson Gates and Members of the Committees:

Thank you for the opportunity to testify on House Bill 306, House Draft 2 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 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 and 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 reserve 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.

Testimony Presented Before the
House Committee on Agriculture and Food Systems
Wednesday, March 22, 2023 at 10:00 a.m.
By
Anna Wieczorek, Interim Dean
College of Tropical Agriculture and Human Resources
And
Michael Bruno, Provost
University of Hawai'i at Mānoa

SB 646 SD1 – RELATING TO ORNAMENTAL GINGER

Chair Gates, Vice Chair Kahaloa, and Members of the House Committee on Agriculture:

Thank you for the opportunity to provide testimony in support of SB 646 SD1 which provides funding to continue studying the diseases affecting ornamental ginger on Oahu and the neighbor islands.

Ornamental ginger is a valued plant that can be used as a shrub or as a cut flower. The College of Tropical Agriculture and Human Resources' scientists have been able to identify three 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 fourteen 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 categorization has been presented to stakeholders.
- Virus-free plants have been identified and a quarantine facility was built to house them at Komohana Research and Extension Center.
- Virus-free plants were given to Hawai'i Agriculture Research Center, who received a small amount of funding to trial tissue culture experiments.
- The impact of co-infection by two dominant viruses is being investigated.
- 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 explain the dieback. More investigation is required.

- An Extension publication was produced outlining the current information and the research publication is ready for submission.
- Outreach efforts with HDOA and industry groups continue. More is required.

We respectfully request that the appropriation in the original version of the bill be restored to support the following budget which would promote a better understanding and mitigation of the disease.

Budget Item	Year 1	Year 2	TOTAL
Mileage (Mileage is required for farm visits, average farm travel is 50 miles round trip. This would fund 8 farm visits a month at the current mileage rate of .655.)	$ 3,200	$ 3,200	$ 6,400
Travel (Principal Investigator will be required to perform lab work at UH Manoa campus, this requires overnight travel. Graduate Student hire will be required to travel to neighbor islands to perform research and outreach.)	16,400	16,400	32,800
Tissue Culture Lab Fees (Fees are required for mass propagation of red ginger. Labs to be utilized to be determined.)	38,500	38,500	77,000
Supplies (Supplies include lab supplies, supplies for graduate student research and insect exclusion houses for virus free production.)	15,380	15,380	30,760
Student Hire (Student hire required to carry out research and extension objective, 6 hours a week.)	10,560	10,560	21,120
Graduate Student Hire (Graduate student hire required to perform research on virus spread in virus free fields and virus free production.)	40,960	40,960	81,920
	$125,000	$125,000	$250,000

Thank you for the opportunity to submit testimony in <u>support</u> of SB 646 SD1 provided that its passage does not replace or adversely impact priorities as indicated in our Board of Regents Approved Budget.

P.O. Box 253, Kunia, Hawai'i 96759
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e-mail info@hfbf.org; www.hfbf.org

March 22, 2023

HEARING BEFORE THE
HOUSE COMMITTEE ON AGRICULTURE & FOOD SYSTEMS

TESTIMONY ON SB 646, SD1
RELATING TO ORNAMENTAL GINGER

Conference Room 325 & Via Videoconference
10:00 AM

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

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

The Hawaiʻi Farm Bureau supports SB 646, 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 Hawaiʻi 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.

LAND USE RESEARCH
FOUNDATION OF HAWAII
1100 Alakea Street, Suite 408
Honolulu, Hawaii 96813
(808) 521-4717
www.lurf.org

March 20, 2023

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

Testimony in Support of SB 646, S.D. 1, Relating to Ornamental Ginger (Appropriates funds to the University of Hawaii 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. Effective 7/1/2050.)

Wednesday, March 22, 2023, 10:00 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 646, S.D. 1.**

SB 646, S.D. 1. This bill proposes to make an appropriation to the University of Hawaii (UH) for statewide research of pathogens affecting ornamental ginger and prevention of pathogen spread.

LURF's Position. 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 bacterial pathogens, including two

viruses never before identified, are causing devastating crop decline in ornamental ginger most prevalently on Oahu and Hawaii Island, but threaten to invade all of the

Hawaiian Islands and wreak further damage. LURF understands that virus-infected plants cannot be cured and are currently the main plants being propagated for more plantings, thus worsening the problem, and that most large-scale operations have virus-infected plants.

Despite efforts by the UH college of tropical agriculture to study and address this critical situation, more statewide research and a multi-agency outreach approach is necessary to avoid further damage to the profitability and long-term sustainability of local ornamental ginger, as well as other flora and landscape production industries.

For the above reasons, LURF **supports SB 646, S.D. 1** and respectfully urges your favorable consideration.

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

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

March 20, 2023

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

Dear Chair Gates, Vice Chair Kahaloa, 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 646 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 mentions, an emerging disease of red ginger has devastated fields of this valuable ornamental plant in Windward O'ahu. Growers on other islands are concerned that the disease could spread to their operations. CTAHR researchers have followed up their initial research by proposing to develop strategies for mitigating the new disease and to collaborate with the Hawai'i Agriculture Research Center to produce virus-free plants so that growers can replant with clean stock, but funding is needed to support this effort. We respectfully request that your committee approve the appropriation proposed by SB 646 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,

Frederick M. Mencher

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

SB-646-SD-1
Submitted on: 3/20/2023 10:31:17 AM
Testimony for AGR on 3/22/2023 10:00:00 AM

Submitted By	Organization	Testifier Position	Testify
Gordon Inouye	Individual	Support	Written Testimony Only

Comments:

Dear Members of the House Committee on Agriculture and Food systems. I am Gordon Inouye, a farmer, President of Puna Flower Power, an orchid cooperative and lifelong resident of Hawaii. Our Ginger farmers are being eradicated due to poor yield, poor quality and low returns due to the infestation of viruses in our plant stock. The only solution to enable ginger growers to survive is to have new and virus free plant stock available to increase yields and returns. Othewise we will lose the entire segment of this industry. Please support SB646.

Mahalo! Gordon Inouye

SB-646-SD-1
Submitted on: 3/21/2023 10:30:17 PM
Testimony for AGR on 3/22/2023 10:00:00 AM

Submitted By	Organization	Testifier Position	Testify
J Ashman	Individual	Support	Written Testimony Only

Comments:

I support this needed measure; please pass this bill. Thank you.