



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Testimony Presented Before the  
Senate Committee on Higher Education  
and  
Senate Committee on Agriculture and Environment  
Tuesday, February 11, 2020 at 3:00 p.m.

By  
Nicholas Comerford, Dean  
College of Tropical Agriculture and Human Resources  
And  
Michael Bruno, PhD  
Provost  
University of Hawai'i at Mānoa

### SB 2730 – RELATING TO 'ULU

Chairs Kim and Gabbard, Vice Chairs Kidani and Ruderman, and members of the Senate Committee on Higher Education and Senate Committee on Agriculture and Environment:

Thank you for the opportunity to submit testimony in support of SB 2730, which relates to developing an 'ulu industry in Hawai'i.

'Ulu is a crop that is unique to the agriculture of the United States and no other state grows it. The crop holds significant potential for farmers in the state, but that potential appears to be mainly in the value added component of the industry. One reason is that the shelf life of the fruit is limited.

The University of Hawai'i College of Tropical Agriculture and Human Resources (CTAHR) is currently engaged in research and development of this crop. CTAHR's effort is led by Dr. Noa Lincoln whose research includes the cultivation of the crop while incorporating native Hawaiian knowledge. Dr. Lincoln leads 'ulu workshops to help individuals care for their trees. His approach is to support the growth of the industry while also presenting a native Hawaiian philosophy to the task.

If funded, CTAHR is well-prepared to take on the challenge and engage the range of scientists that are inside and outside CTAHR. For example, Dr. Kacie Ho, a recent hire, teaches the Experimental Foods Laboratory and conducts research on the health benefits of foods.

Thank you for the opportunity to submit testimony in strong support of SB 2730 provided that its passage does not replace or adversely impact priorities as indicated in our BOR Approved Budget.

**SB-2730**

Submitted on: 2/8/2020 5:06:44 PM

Testimony for HRE on 2/11/2020 3:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Megan Fox	Testifying for Malama Kauaâ€™i	Support	No

Comments:

**SB-2730**

Submitted on: 2/3/2020 8:46:34 PM

Testimony for HRE on 2/11/2020 3:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Benton Kealii Pang, Ph.D.	Individual	Support	No

Comments:

**SB-2730**

Submitted on: 2/4/2020 10:46:57 AM

Testimony for HRE on 2/11/2020 3:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Amy Brinker	Individual	Support	No

Comments:

**SB-2730**

Submitted on: 2/4/2020 12:32:07 AM

Testimony for HRE on 2/11/2020 3:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Jennifer Azuma Chrupalyk	Individual	Support	No

Comments:

DAVID Y. IGE  
Governor

JOSH GREEN  
Lt. Governor



PHYLLIS SHIMABUKURO-GEISER  
Chairperson, Board of Agriculture

MORRIS M. ATTA  
Deputy to the Chairperson

State of Hawaii  
**DEPARTMENT OF AGRICULTURE**  
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TESTIMONY OF PHYLLIS SHIMABUKURO-GEISER  
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEES ON HIGHER EDUCATION AND  
AGRICULTURE AND ENVIRONMENT

FEBRUARY 11, 2020  
3:00 P.M.  
CONFERENCE ROOM 229

SENATE BILL NO. 2730  
RELATING TO 'ULU

Chairpersons Mercado Kim and Gabbard, and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill No. 2730, which appropriates funds for the research, development, marketing and conservation of 'ulu. The Department supports, provided it does not adversely impact the Administration's priorities in the executive Budget this bill and offers comments.

The Department recognizes that it lacks the scientific technologies, tools and expertise for the research and development of micropropagation methods for rapid expansion of plantings and for the conservation of 'ulu through agroforestry designs that create environmental, economic and social benefits for Hawaii.

The Department, however, has been actively engaged in the marketing of 'ulu, through collaboration with the industry on projects to achieve commercial success for Hawaii-grown 'ulu. The Department suggests the marketing of 'ulu be conducted by the Agricultural Development Division (ADD), as they are responsible for the marketing of Hawaii agricultural products. The additional funding will allow ADD to expand the



promotion and marketing of 'ulu to local, domestic and international consumers where the emergence of `ulu is positioned to become the "next big thing" to local consumers and in the global market, where consumers are seeking new sources of plant-based, gluten-free proteins.

The Department believes that it is both practicable and advantageous to assign the marketing portion to ADD as they have demonstrated success with marketing 'ulu at trade shows and projects to assist Hawaii farmers and producers to achieve commercial success.

Thank you for the opportunity to testify on this measure.

**LATE**

THE SENATE

THE THIRTIETH LEGISLATURE REGULAR SESSION OF 2020

COMMITTEE ON HIGHER EDUCATION

Senator Donna Mercado Kim, Chair Senator Michelle N. Kidani, Vice Chair

COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair Senator Russell E. Ruderman, Vice Chair

SB 2730

NOTICE OF HEARING

Tuesday, February 11, 2020 3:00 PM  
Conference Room 229 State Capitol

415 South Beretania Street

I, Monica Killingsworth, support the SB2730 bill *Relating to 'Ulu* due to the wealth of benefits that will develop and promote Hawaii's people, culture, economy, and set Hawaii apart as a global research leader ("Relating to 'Ulu", 2020). I am an MSW Graduate student graduating in May 2020 and am a part of the Senate District 10. I believe in having sustainable economic security and health through innovative partnerships. Hawaii's community connection to land, culture, and people is the foundation for success of this bill. Hawaii has many diverse communities in which 'ulu is a traditional food source. Through partnerships with researchers, educators, and farmers the 'ulu production can become a market leader and export of Hawaii generating income back into the state. SB2730 seeks to promote commercial production of the 'ulu (also known as breadfruit) crop that will utilize local farmers knowledge and expertise combined with research and educational measures ("Relating to 'Ulu", 2020). SB2730 describes



“The global gluten-free market was valued at \$14,940,000,000 in 2016 and is expected to grow at a compound annual growth rate of 9.3 per cent from 2017 to 2025, illustrating the potential external market for breadfruit. Furthermore, the profit projected from processing and marketing the breadfruit flower as an organic insecticide is estimated to exceed the million-dollar mark. The breadfruit flower contains a potent natural tri-chemical compound combination that outperforms its synthetic insecticide competitors” (“Relating to ‘Ulu”, 2020).

SB2730 will promote health within the Hawaii community significantly. Hawaii has a large amount of ‘ulu as SB2730 reported 9,000 trees planted and more to come (“Relating to ‘Ulu”, 2020). An article on *Breadfruit Nutritional Value and Versatility* from the Breadfruit Institute of the National Tropical Botanical Garden and Hawai‘i Homegrown Food Network reports ‘ulu as a staple complex carbohydrate that is low in fat, cholesterol and is gluten-free (Ragone, 2014). This local fruit will benefit the health of local communities in Hawaii that have disparaging rates of health problems. A Medscape article on Diabetes Rates in Hawaii discusses the high rates of diabetes in Hawaii “Overall diabetes prevalence in these states was 14.3% for Native Hawaiians/Pacific Islanders compared with 8% among whites ( $P < .001$ )” (Haelle, 2015). With education and research funding local communities will have easier access to the healthy ‘ulu product and receive education on ‘ulu’s health benefits, which when incorporated in their lives, can improve diabetes rates. A Civil Beat article elaborates on this describing “Early data from a UH study shows interns at the farm lowered their diabetes risk by altering eating habits and lifestyles — with a ripple effect of health benefits for friends and families” (Gill, 2019).

Additionally, successful ‘ulu production expands health and cultural ties that have been lost through colonization, overpopulation, and the rising cost of living in Hawaii. This bill will build partnerships and knowledge through connecting local farmers, communities, and

educational and research communities. It will promote cultural connectivity with the land and people. With the projected rate of growth that research has calculated the need arises for mass education, hands-on learning and maintenance of the 'ulu.

One way that this bill can expand is to provide an education-based program for high school and college students. The program can mimick Ma'o Farm's work and scholarship-related program. Students will learn about the 'ulu, their cultural connection, health benefits, how to grow and maintain 'ulu, gain employment skills, and gain the knowledge to start their own 'ulu farm. Additionally, these students can earn scholarship(s) to attend college (Gill, 2019).

This funding and partnership will tap manpower needed to educate and maintain 'ulu farms while giving back to the people, culture, and economy of Hawaii.

Monica Killingsworth

MSW Graduate Student

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References:

Gill, E. (2019) *Changing Habits Yields Health Benefits at MA'O Farms in Waianae*. Retrieved

from <https://www.civilbeat.org/2019/07/changing-old-habits-yields-health-benefits-at-mao-farms-in-waianae>

Haelle, T. (2015) *Diabetes Prevalence High in Hawaiian/Pacific Islanders and Asians*.

Retrieved from <https://www.medscape.com/viewarticle/855010>.

Ragone, D. (2014) *Breadfruit Nutritional Value and Versatility*. Retrieved from

<https://hdoa.hawaii.gov/add/files/2014/05/Breadfruit-Nutrition-Fact-Sheet.pdf>.

Relating to 'Ulu act of 2020, S.B. 2730, 13<sup>th</sup> Leg. (2020)

**LATE**

**SB-2730**

Submitted on: 2/11/2020 1:33:52 PM

Testimony for HRE on 2/11/2020 3:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Noa Lincoln	Individual	Support	No

Comments:

Aloha Senators,

My name is Noa Lincoln, a researcher with the College of Tropical Agriculture and Human Resources at the University of Hawai'i at Manoa. I run a vibrant breadfruit research program, supporting farmers through R&D on breadfruit nutrition management, variety trials, disease and pest management, and post-harvest processes. I work directly and indirectly, through cooperatives and food hubs, with well over 100 breadfruit farmers in Hawai'i. The emerging industry shows exceptional promise, as recognized by the legislation in the funding of breadfruit organizations and processing facilities last year. The support services are becoming increasingly important and impactful. Through my work I have helped individual farmers increase their yields and reduce their losses, in many cases by over 100% changes in total marketable yields and, therefore, also in profits to the farmer. The growing organizations supporting breadfruit production, marketing, processing, and distribution make substantial, and rapidly expanding, economic contributions to the state. This bill would provide much needed support to the industry to ensure that it is not lost through uniformed management of the crops. Thank you. Noa Lincoln



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**LATE**

February 11, 2020

HEARING BEFORE THE  
SENATE COMMITTEE ON HIGHER EDUCATION  
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

**TESTIMONY ON SB 2730**  
RELATING TO ULU

Room 229  
3:00 PM

Aloha Chairs Kim and Gabbard, Vice Chairs Kidani and Ruderman, and Members of the Committees:

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

**The Hawaii Farm Bureau strongly supports SB 2730**, which appropriates funds for the research, development, marketing, and conservation of 'ulu.

The Hawaii Farm Bureau recognizes 'ulu's importance in Hawaii's cultural identity and role in local food security. This measure is aimed to assist 'ulu farmers in their efforts to increase their production and viability.

'Ulu is one of the world's few staple crops that grows perennial trees, so it doesn't need to be replanted every year. They can live up to 100 years or more and produce over a thousand pounds of fruit annually. 'Ulu is an excellent source of fiber, protein, and essential vitamins and minerals, and can be an alternative to starches such as potatoes, wheat, and rice. 'Ulu is so versatile that it can be used to make soups, stews, salads, casseroles, lasagna, burgers, hummus, chips, bread, ice cream, and pancakes.

We support this effort to improve Hawaii's 'ulu farmer's ability to expand their long term success.

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