

JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor



SHARON HURD
Chairperson, Board of Agriculture

DEAN M. MATSUKAWA
Deputy to the Chairperson

State of Hawai'i
DEPARTMENT OF AGRICULTURE
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TESTIMONY OF SHARON HURD
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE HOUSE COMMITTEE ON FINANCE

THURSDAY, FEBRUARY 20, 2025
2:00 P.M.
CONFERENCE ROOM 308

HOUSE BILL NO. 1185, H.D. 2
RELATING TO AGRICULTURE

Chair Yamashita, Vice Chair Takenouchi, and Members of the Committee:

Thank you for the opportunity to testify on House Bill 1185, H.D. 2. This bill aims to establish a plant-based building materials working group to study and report on how best to grow plants and develop plant-based building materials in Hawai'i. The Department of Agriculture (Department) appreciates this initiative, led by UH-CTAHR, and offers its support.

The Department recognizes that certain local plant-based materials have the potential to be processed into structural building materials for use in Hawai'i. Some of these building materials offer advantageous properties, such as increased strength, flexibility, and reduced weight compared to conventional steel or wood.

Thank you for the opportunity to testify on this measure.





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 Finance
February 20, 2025 at 2:00 p.m.

By

Parwinder Grewal, Dean
College of Tropical Agriculture and Human Resilience
And

Michael Bruno, Provost
University of Hawai'i at Mānoa

HB 1185 HD2 – RELATING TO AGRICULTURE

Chair Yamashita, Vice Chair Takenouchi and Members of the Committee:

Thank you for the opportunity to provide testimony supporting the intent of HB 1185 HD2 which establishes a Plant-based Building Materials Working Group to study and report on how best to grow plants and develop plant-based building materials in Hawai'i with appropriation of funds.

We support the intent of this bill and offer the following comments. There is a need first for targeted research to establish baseline data (e.g., yield potentials, cost structures, market opportunities, competition with food production, etc.). In an emerging field like plant-based building materials, particularly in Hawai'i with its competing demands for sustainable land use, we recognize the desire between wanting to coordinate stakeholders early so that policy can be informed by a broad range of expertise, and ensuring that there is solid research to guide those policies. We suggest that once preliminary research results are available, a broader working group could then be convened with a mandate to integrate those findings into a comprehensive strategy that includes economic development, job creation, and environmental benefits.

We support the intent of HB 1185 HD 2 provided that its passage does not replace or adversely impact priorities as indicated in our BOR Approved Budget. Thank you for the opportunity to submit testimony.



To: The House Committee on Finance (FIN)
From: Sherry Pollack, Co-Founder, 350Hawaii.org
Date: Thursday, February 20, 2025, 2pm

In support of HB1185 HD2

Aloha Chair Yamashita, Vice Chair Takenouchi, and FIN Committee members;

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org **supports HB1185 HD2** that establishes a Plant-based Building Materials Working Group to study and report on how best to grow plants and develop plant-based building materials in Hawaii.

HB1185 HD2 is an innovative and sustainable approach towards enhancing both Hawaii's agricultural and construction sectors. Hemp and bamboo are ideal for eco-friendly construction because they are sustainable, cost-effective, and have low environmental impact. This measure will help reduce greenhouse gases, which is critically needed in our fight against the climate crisis. Plant-based products such as industrial hempcrete and structural bamboo are excellent alternatives to replace carbon-intensive materials used today such as concrete and steel.

We need to target all emission sources, especially cost-effective low hanging fruit like this. Please pass HB1185 HD2.

Mahalo for the opportunity to testify.

Sherry Pollack
Co-Founder, 350Hawaii.org



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February 20, 2025

HEARING BEFORE THE
HOUSE COMMITTEE ON FINANCE

TESTIMONY ON HB 1185, HD2
RELATING TO AGRICULTURE

Conference Room 308 & Videoconference
2:00 PM

Aloha Chair Yamashita, Vice-Chair Takenouchi, 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 HB 1185, HD2, which establishes a Plant-Based Building Materials Working Group to study and report on how best to grow plants and develop plant-based building materials in Hawai'i. This bill also appropriates funds to support the working group's efforts.

Hemp, bamboo, and other plant-based building materials are fast-growing, renewable resources with a lower environmental footprint compared to traditional construction materials like concrete and steel. These materials have the potential to reduce greenhouse gas emissions and waste while supporting Hawai'i's sustainability and climate resiliency goals.

Plant-based construction materials such as hempcrete, bamboo panels, and fiber-reinforced composites are lightweight, durable, and energy-efficient. Encouraging the development of these materials in Hawai'i would help reduce reliance on imported building supplies, lower shipping costs, and provide opportunities for local farmers to cultivate high-value crops that support both agriculture and the construction industry.

Establishing a working group to assess how best to grow and develop plant-based building materials is a critical step toward diversifying Hawai'i's agricultural sector, promoting innovation, and supporting the state's housing and sustainability goals.

We encourage the working group to:

- Ensure that farmers and agricultural stakeholders are included in discussions on crop selection, processing infrastructure, and economic viability.
- Evaluate potential barriers to commercial-scale production, including regulatory, processing, and market challenges.
- Coordinate with existing research institutions and industry experts to develop best practices for growing and processing plant-based building materials in Hawai'i's unique climate.

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



Hawaii Environmental Change Agents' Building Decarbonization and Carbon Sequestration
Task Force

February 19, 2025

Position: Support of HB1185 HD2

Dear Chair Yamashita, Vice Chair Takenouchi, and members of the FIN Committee,

On behalf of the Hawaii Environmental Change Agents' Building Decarbonization and Carbon Sequestration Task Force, I am submitting testimony in **strong support** of HB1185 HD2.

Hawai'i is facing financial pressures and needs to look at how to best use its resources to support and protect its economy and environment. One such opportunity to accomplish both is to study how best to grow plants and develop a plant-based building materials industry in Hawai'i.

This bill would appropriate the funds to administer a working group to study these opportunities. Hawai'i's year round growing season with ample rain in many areas, has advantages for growing various crops that can be processed into structural plant-based materials. Thus, Hawai'i's unique situation is highly likely to give it a competitive advantage over imports.

Developing such an industry would provide many benefits to Hawai'i and its residents: lessen its reliance on imported materials, provide more local jobs, and lower costs of goods.

Please pass HB1185 HD2 out of your committee.

Mahalo,

Paul Bernstein

Chair of HECA's Building Decarbonization and Carbon Sequestration Task Force



To: The Honorable Representative Kyle Yamashita, Chair, the Honorable Jenna Takenouchi, Vice Chair, and Members of the Finance Committee.

From: Hawai'i Reef and Ocean Coalition and Climate Protectors Hawai'i (by Ted Bohlen)

Re: **Hearing HB1185 HD2 RELATING TO AGRICULTURE**

Hearing: Thursday February 20, 2025 2:00 p.m. CR308

Aloha Chair Yamashita, Vice Chair Takenouchi, and Members of the Finance Committee!

The Hawai'i Reef and Ocean Coalition (HIROC) is a group of scientists, educators, filmmakers and environmental advocates who have been working since 2017 to protect Hawaii's coral reefs and

ocean. The mission of the Climate Protectors Hawai'i is to educate and engage the local community in climate change action, to help Hawai'i show the world the way back to a safe and stable climate.

The Hawai'i Reef and Ocean Coalition and Climate Protectors Hawaii STRONGLY SUPPORT HB1185 HD2!

Hawaii can use **plants** to develop a **home-grown building materials industry**, with **green jobs in both agriculture and production**, while sequestering carbon to **mitigate climate warming!**

Most of Hawaii's building materials are shipped to Hawaii from the continents at great expense. Much of the money that is leaving Hawaii would stay if we could **produce building materials here instead of importing lumber, steel, cement and other building materials.**

Hawaii's climate, with a year-round growing season and ample rain in many areas, has advantages for growing various crops that can be processed into structural plant-based building materials. For example,

- There are types of **clumping bamboo** that can grow very rapidly with sufficient water. Bamboo is a grass; when cut, it simply regrows, whereas trees used for timber die and have to be replanted. Clumping bamboo can be processed into building materials that are more flexible and lighter than timber or steel and be made more fire- and termite-resistant than wood. Bamboo has a tensile strength by weight that exceeds steel. In addition, bamboo can be used to produce a wide range of construction material, from flooring and paneling to structural support and roofing.
- "**Hempcrete**", developed from industrial hemp, can substitute for concrete building blocks, with weather-resistant durable materials.
- "**Biocement**" is a calcium carbonate material produced by microbes that can substitute for Portland cement. It can be produced from cyanobacteria (blue-green algae or "pond scum").

Green jobs would be created for growing plants and producing building materials here in Hawaii.

Bamboo and other plant-based building materials would **help Hawaii meet its net negative greenhouse gas emissions goal** because they sequester carbon, whereas production of traditional building materials such as timber, steel, and cement emit very large amounts of greenhouse gases.

The purpose of this bill is to establish at the University of Hawaii at Manoa College of Tropical Agriculture and Human Resilience a working group to study and report on how best to grow plants and develop a plant-based building materials industry here in Hawaii. Funds would be appropriated to administer the working group.

Please pass this bill!

Mahalo!

Hawai'i Reef and Ocean Coalition and Climate Protectors Hawai'i (by Ted Bohlen)

HB-1185-HD-2

Submitted on: 2/18/2025 3:56:01 PM

Testimony for FIN on 2/20/2025 2:00:00 PM

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

Comments:

SUPPORT! GOOD IDEA FOR A NEW INDUSTRY AND NEW JOBS! MAHALO!

HB-1185-HD-2

Submitted on: 2/18/2025 6:04:43 PM

Testimony for FIN on 2/20/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Virginia Tinch	Individual	Support	Written Testimony Only

Comments:

Strong Support

From the bill -

The legislature further finds that these and other plant-based building materials could also attract green agricultural jobs to Hawaii. The legislature also finds that the use of plant-based building materials could help the State meet its net negative carbon and greenhouse gas emission goals because they sequester carbon, whereas the production of traditional building materials, such as timber, steel, and cement, emit very large amounts of greenhouse gases.

HB-1185-HD-2

Submitted on: 2/19/2025 8:30:36 AM

Testimony for FIN on 2/20/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Andrea Nandoskar	Individual	Support	Written Testimony Only

Comments:

Strongly Support!

HB-1185-HD-2

Submitted on: 2/19/2025 9:13:05 AM

Testimony for FIN on 2/20/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Noel Morin	Individual	Support	Written Testimony Only

Comments:

SUPPORT FOR HB1185 HD2 (RELATING TO AGRICULTURE)

Dear Chair Yamashita, Vice-Chair Takenouchi, and members of the Committee,

I support HB1185 HD2, which Establishes a Plant-based Building Materials Working Group to study and report on how best to grow plants and develop plant-based building materials in Hawai‘i.

This measure is designed to help Hawaii understand the potential of sustainable building materials to reduce the environmental and carbon footprint of the construction industry, establish new economic opportunities in the agriculture sector, and increase our resilience.

The working group must be represented by all relevant stakeholders and take a holistic, ecosystem-wide approach to understand what’s required to establish products that meet the building industry needs and, importantly, what systems will be necessary for complete product lifecycle coverage and the avoidance of unintended consequences.

Please pass HB1185 HD2.

Thank you for the opportunity to testify.

Sincerely,

Noel Morin

Climate, Sustainability, and Resilience Advocate

Hilo, Hawaii

HB-1185-HD-2

Submitted on: 2/19/2025 9:15:51 AM

Testimony for FIN on 2/20/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Stephanie Skow, MD	Individual	Support	Written Testimony Only

Comments:

My name is Stephanie Skow and I support this bill.

Bamboo building materials, Hempcrete blocks, Biocements = Made in America, Made in Hawaii!

About 85% of Hawaii's building materials are imported. Concrete, steel, lumber, and other building materials are shipped to Hawaii from the mainland, Canada, and elsewhere.

Local agriculture jobs would be created with plant-based building materials.

Thank you! Have a great afternoon!

Aloha,

Stephanie Skow, MD

Lihue, HI

HB-1185-HD-2

Submitted on: 2/19/2025 10:00:17 AM

Testimony for FIN on 2/20/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Victoria Anderson	Individual	Support	Written Testimony Only

Comments:

Please support this bill. Bamboo building materials and hempcrete would drastically cut our carbon emissions compared to concrete. Furthermore, these materials would be made locally, whereas currently about 85% of the concrete, steel, lumber and other building materials used in Hawaii have to be shipped here. Let's create local agricultural jobs and cut our carbon emissions at the same time, by using these plant-based building materials.

Thank you,

Victoria Anderson

HB-1185-HD-2

Submitted on: 2/19/2025 10:30:26 AM

Testimony for FIN on 2/20/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
katherine skow	Individual	Support	Written Testimony Only

Comments:

I am writing in support of bill 1185.

About 85% of Hawaii's building materials are imported. Concrete, steel, lumber, and other building materials are shipped to Hawaii from the mainland, Canada, and elsewhere.

Bamboo building materials, Hempcrete blocks, Biocements = Made in America, made in Hawaii! These building materials would drastically cut our carbon emissions compared to concrete.

In addition, local agriculture jobs would be created with plant-based building materials.

Sincerely,

Katherine Skow

HB-1185-HD-2

Submitted on: 2/19/2025 10:33:46 AM

Testimony for FIN on 2/20/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Keith Neal	Individual	Support	Written Testimony Only

Comments:

Aloha Chair Yamashita, Vice Chair Takenouchi, and members of the committee,

I strongly support of HB1855_HD2.

Hawaii's isolation and remoteness necessitates we use resources wisely. Constructing residential and commercial buildings from locally grown and indigenous materials makes economic and cultural sense for Hawaii.

Respectfully submitted,

Keith Neal

Waimea