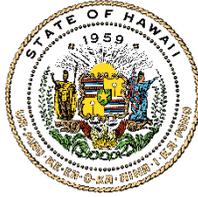


JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Testimony of
DAWN N. S. CHANG
Chairperson

Before the House Committee on
AGRICULTURE & FOOD SYSTEMS

Wednesday, February 5, 2025
9:30 AM

State Capitol, Conference Room 325 and Via Videoconference

In consideration of
HOUSE BILL 1337
RELATING TO ENDEMIC PLANTS

House Bill 1337 requires the University of Hawai'i to establish an endemic plant seed bank pilot program to preserve and promote the planting of plant species that are endemic to Hawai'i. **The Department of Land and Natural Resources (Department) supports this bill.**

Seed banks are critical for providing a safe place to hold large volumes of seeds stored in low-humidity environments until needed. The Department's Division of Forestry and Wildlife (DOFAW) supports investments in seed banks across the state to enable plant conservation and restoration and to create resilient landscapes. Recently, much of the focus at DOFAW has been on ways to increase statewide nursery and seed banking capacity to meet future needs. The University of Hawai'i at Mānoa's Lyon Arboretum currently has an endemic seed bank, and DOFAW supports expanding ongoing efforts both at Lyon Arboretum and the University of Hawai'i at Hilo.

Restoration of degraded ecosystems and rehabilitation of landscapes after wildfire in Hawai'i requires large amounts of locally adapted native plant seed. Restoration practitioners on all islands have confirmed that access to locally adapted plant materials is a major limiting factor for their projects. Ongoing research at Lyon Arboretum has shown that the seeds of most Hawaiian plants can be stored in seed banks for years until they are needed. Investments in locating source populations in remote areas, securing seed collections in seed banks, and marshaling the resources to plant the right seeds at the right time in the right place are urgently needed.

Mahalo 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 Agriculture & Food Systems
Wednesday, February 5, 2025 at 9:30 a.m.

By

Don Drake

Interim Director

Harold L. Lyon Arboretum

And

Michael Bruno, PhD

Provost

University of Hawai'i at Manoa

HB 1337 – RELATING TO ENDEMIC PLANTS

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

The University of Hawai'i offers comments on HB 1337, which proposes the establishment of a seed bank at the University of Hawai'i to store seeds of endemic Hawaiian plants for conservation purposes.

The Harold L. Lyon Arboretum, an Organized Research Unit of the University of Hawai'i at Mānoa, maintains a seed bank of native Hawaiian plants (both endemic and indigenous) as part of its Hawaiian Rare Plant Program (HRPP). The mission of the HRPP is to aid in the prevention of further extinction of Hawaiian plant species by maintaining living material through the use of seed banking, tissue culture, and cryopreservation. The plants in these collections are intended to be grown out and placed back on the land when and where conditions are appropriate to restore native vegetation.

One of the HRPP's facilities is the Seed Science Laboratory, which includes a seed bank containing over 34 million seeds of native plants from nearly 13,000 accessions. These accessions represent more than 650 species (or subspecies), which is over 45% of the native Hawaiian flora (of seed plants and ferns). Seed banking is the most cost-effective means to store living plants in collections. However, not all plant species can be stored in seed banks.

The HRPP also has a Micropropagation and Cryopreservation Laboratory, which conserves species that either do not produce seeds, such as ferns, or that have seeds that cannot be stored in a seed bank. The micropropagation collection uses tissue culture to maintain over 45,000 plants of more than 200 native plant species (or subspecies) and traditional Polynesian crops. In addition, ongoing research in the lab is

leading to an increasing number of species being stored using cryopreservation (freezing in liquid nitrogen).

The plant collection in the HRPP is continually increasing to meet the state's needs to conserve native plants for use in restoring native vegetation on the land. Over 70% of the plant species (and subspecies) in the HRPP's collections are federally listed as threatened or endangered. It is currently the world's largest conservation collection of native Hawaiian plants and the world's largest conservation collection of endangered US plants. In 2024, Botanic Gardens Conservation International recognized Lyon Arboretum's seed bank as "conserving the greatest proportion of threatened species in their collection," more than any other institution in the world.

The HRPP laboratories are currently staffed and operated entirely through external grants. Personnel include 5.5 staff members and numerous UH student hires, interns, and volunteers.

The University of Hawai'i appreciates the opportunity to engage in a thoughtful conversation about the future of Hawaiian endemic plants, which are vital to the islands' unique ecosystem and cultural heritage. Thank you for allowing us to provide comments on this measure.



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Aloha Chair Kahaloa, Vice Chair Kusch, and Members of the House Agriculture & Food Systems Committee,

The Hawaii Farmers Union is a 501(c)(5) agricultural advocacy nonprofit representing a network of over 2,500 family farmers and their supporters across the Hawaiian Islands. **HFUU supports HB1337.**

Hawaii's endemic plants, found nowhere else on Earth, are an integral part of our environment, and preserving their seeds secures the genetic diversity vital for conservation efforts. By mandating the University of Hawaii to spearhead this pilot program, the bill addresses an important need to protect the rich biodiversity of our islands. In addition to their cultural significance, these plants may offer resilience against the effects of climate change, pests, and diseases, strengthening Hawaii's ecosystems and agricultural landscapes.

Endemic plants have co-evolved with Hawaii's distinct ecosystems, making them particularly well-suited to local growing conditions and resilient in the face of environmental changes. Establishing a seed bank ensures the preservation of these valuable species. By protecting and promoting endemic plant species, we are investing in the health of our environment and perpetuating the natural heritage that makes Hawaii truly unique. HB1337 is not just about preserving the past; it is about nurturing the land for future generations.

Mahalo for the opportunity to testify.

Hunter Heavilin
Advocacy Director
Hawaii Farmers Union



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February 5, 2025

HEARING BEFORE THE
HOUSE COMMITTEE ON AGRICULTURE & FOOD SYSTEMS

TESTIMONY ON HB 1337
RELATING TO ENDEMIC PLANTS

Conference Room 325 & Videoconference
9:30 AM

Aloha Chair Kahaloa, Vice-Chair Kusch, 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 1337, which requires the University of Hawai'i to establish an endemic plant seed bank pilot program to preserve and promote the planting of plant species that are endemic to Hawai'i.

Hawai'i's unique ecosystem is home to many endemic plant species that are found nowhere else in the world. These plants play a critical role in preserving biodiversity, preventing erosion, and maintaining the health of Hawai'i's environment. However, many endemic species are threatened by habitat loss, climate change, and invasive species, making conservation efforts increasingly urgent.

Establishing a seed bank program will help ensure that Hawai'i's endemic plants are preserved for future generations. By collecting, storing, and propagating seeds from native plant species, this program will create a valuable resource for conservationists, land managers, farmers, and researchers. Additionally, promoting the planting of endemic species can enhance reforestation efforts, support watershed restoration, and contribute to the long-term sustainability of Hawai'i's natural and agricultural landscapes.

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

HB-1337

Submitted on: 1/31/2025 2:16:15 PM

Testimony for AGR on 2/5/2025 9:30:00 AM

| Submitted By | Organization | Testifier Position | Testify |
|---------------------|---------------------|---------------------------|---------------------------|
| Theresa M Thompson | Individual | Support | Written Testimony Only |

Comments:

I support HB 1337 RELATING TO ENDEMIC PLANTS.

Mahalo,

Theresa Thompson

HB-1337

Submitted on: 2/2/2025 2:07:25 PM

Testimony for AGR on 2/5/2025 9:30:00 AM

| Submitted By | Organization | Testifier Position | Testify |
|---------------------|---------------------|---------------------------|---------------------------|
| pahnelopi mckenzie | Individual | Support | Written Testimony Only |

Comments:

I support HB1337 as the need to endemic plants to once again thrive and be protected in Hawaii is essential for long term survival and sustainability. Please support this seed bank of endemic species. Support HB 1337

thank you Pahnelopi McKenzie