



Department
of Agriculture
& Biosecurity
STATE OF HAWAII



HAWAII DEPARTMENT OF
AGRICULTURE AND BIOSECURITY

Annual Report

FY2024-2025

HAWAI‘I DEPARTMENT OF AGRICULTURE AND BIOSECURITY

ANNUAL REPORT FY2024-2025

**Hawai‘i Department
of Agriculture and
Biosecurity**



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CHAIRPERSON'S MESSAGE

It's been a whirlwind of activity this year to say the least! The department has a new moniker, we are now the Hawai'i Department of Agriculture and Biosecurity (DAB) to better reflect our mission to not only support agriculture, but also to protect Hawai'i from invasive species that impact many facets of our life and culture.

I would like to express my appreciation to the Hawai'i State Legislature and Governor Josh Green for the continued support we received during the past session and throughout the years. By codifying our authority and providing supportive funding, the department has established a biosecurity dashboard which reflects all the work that is conducted across the state in the battle against invasive species.

It is a monumental task and our goal is to provide a database where the various invasive species programs can document their efforts, successes and even failures. This transparency will help to develop better and stronger responses against plant pests and diseases and better coordinate efforts with partner agencies and organizations with the same goal of protecting Hawai'i and literally growing our future.

While invasive species will continue to be an important topic, this report contains information on all the other functions and duties that the DAB conducts each day. From animal disease control - protecting our domestic and non-domestic animals from diseases found outside our state, including keeping Hawai'i free of rabies, to enforcing state and federal pesticide laws, to enforcing product labeling laws, the department's responsibilities are wide ranging.

The department also supports our agriculture sector by providing affordable agricultural leases and irrigation resources – services that are vital for so many farmers and ranchers statewide. Agriculture has always been a high-risk industry and main goal of the department's agricultural loan and grant programs is to sustain and expand Hawai'i ag enterprises.

As we head on to a new year, I want to also recognize the DAB staff in every division who dedicate themselves to serving our community. Witnessing their commitment each day, I remain optimistic that the department will rise to all the complex challenges in our mission to grow Hawai'i's future.



A handwritten signature in black ink that reads "Sharon Hurd". The signature is written in a cursive, flowing style.

Sharon Hurd
Chairperson, Hawai'i Board of Agriculture and Biosecurity

ADMINISTRATIVE SERVICES OFFICE



Andrew Robinson
Administrative Services Officer

The Administrative Services Office provides centralized support to the departmental programs. These services include financial administration, human resources, budget and management, information technology, property/vehicle fleet management, and office support. Our mission is to help our program staff be as effective as possible as they support agriculture, food production, and biosecurity in Hawai'i.

A few achievements for the fiscal year are highlighted below as follows:

- **Financial Administration:**
 - Oversaw preparation of annual financial statements, federal grants reporting, internal auditing, accounting for general, federal, and special funds, and payroll & vendor payment processing.
 - Assisted with 36 active federal grants totaling \$26 million, including federal financial reports, requests for advances or reimbursements, processes travel and mileage reimbursement, encumbers purchase orders and contracts, and processes summary warrant vouchers for payments to vendors/sub-awardees.
 - Processed contracts and payments to 720 individual Hawai'i Micro-Grants for Food Security Program recipients totaling \$1.98 million.
- **Office Support:** Three full-time positions on the neighbor islands of Hawai'i, Maui, and Kaua'i assist department staff and address local concerns and questions.
- **Human Resources:**
 - Participated in numerous job fairs to recruit for new hires; conducted DAB's 2025 Incentive and Service Awards Program (ISAP)
 - Provided personnel support services to the divisions, such as position classification (establishments, redesignations, abolishment, etc.) and pay administration; implementation/enforcement of personnel policies and procedures; employee labor relations; personnel records maintenance and reporting; employee development, safety and training.

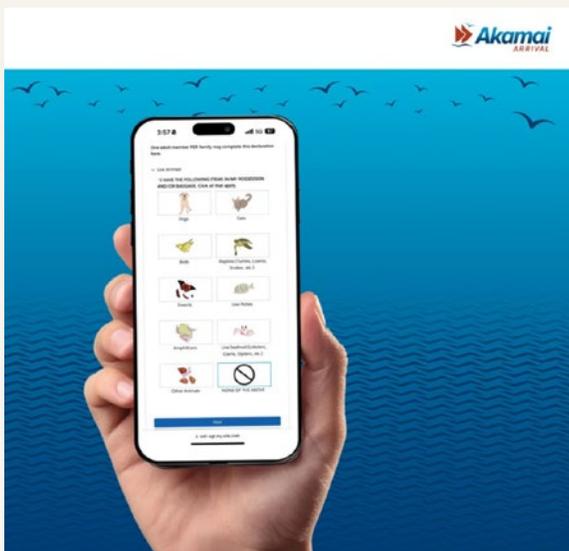


- **Budget Development / Facilities:**

- Implemented capital improvement projects to correct safety concerns and other deficiencies in department facilities. Current projects include air conditioning and fire alarm improvements at the Lanikaula Facility in Hilo, renovation of the Airport Animal Quarantine Facility at the Daniel K. Inouye International Airport, and renovation of the laboratory spaces at the Animal Industry Facility in Hālawā. A recently completed project upgraded the air conditioning and fire alarm systems at the Maui Facility.

- **Information Technology:**

- **Akamai Arrival: Digitizing Hawai'i's Agriculture Declaration Process:** The department successfully launched Akamai Arrival, a fully digital agriculture declaration system for all incoming domestic flights to Hawai'i. This initiative replaced the traditional paper-based forms, streamlining data collection and greatly enhancing the state's biosecurity operations.
- **Network and Communications Upgrades:** Completed a major infrastructure upgrade at the Auikei Street offices, improving both network performance and communication capabilities.



AGRICULTURAL DEVELOPMENT DIVISION



Matthew Loke, Ph.D.
Administrator

The Agricultural Development Division (ADD) promotes the economic sustainability of commercial agriculture in Hawai'i by sponsoring joint marketing programs for agricultural products with high revenue growth potentials, facilitating the development and expansion of marketing opportunities for targeted agricultural and processed goods, and providing timely, accurate and useful statistics. ADD is comprised of two branches – the Market Development Branch (MDB) and the Market Analysis and News Branch (MANB).

Despite staffing challenges, the ADD maintained its core functions of providing subject matter expertise, technical assistance, procurement services, representation, and administrative support and successfully achieved results in Fiscal Year 2025 as highlighted below:

- After numerous implementation delays, the USDA announced awards for 17 Hawai'i projects totaling \$2.6 million under the Resilient Food Systems Infrastructure (RFSI) Program in December 2024. This RFSI program is aimed at strengthening middle-of-the-supply-chain operations and local food systems by supporting processing, manufacturing, storing, transportation, wholesaling and distribution of agricultural products. Hawai'i was the ninth state to be awarded the grant projects, under two distinct grant categories, Infrastructure Grant (IG) and Simplified Equipment Only Grant (SEOG). ADD administers this program.
- Continued to support emergency management initiatives and exercises under the auspices of the Hawai'i Emergency Management Agency (HI-EMA). The department participated in the Hurricane Pilipo Makani Pahili 2025 functional exercise and updated three critical plans, including the department's Emergency Operations Plan (EOP), the Department's Continuity of Operations Plan (COOP), and the State Emergency Support Function (SESF) Annex Plan for Agriculture and Natural Resources. ADD coordinated the emergency management team and supported the planning of Personal Protective Equipment (PPE) for individuals potentially exposed to the H5N1 Avian Influenza threat that endangered local poultry and egg farms.
- Supported and provided technical assistance to USDA-NASS for the Agricultural Theft and Crime 2024 statistics report, which led to the introduction of a legislative bill (Senate Bill 1249) which subsequently passed as "Duke's Law." The new law would "add teeth" and significantly address trespassers, thieves and poachers on agricultural land. The report also estimated total value of theft and vandalism losses, including security costs, from Hawai'i farms at \$12.8 million in 2024.

- ADD also supervised and attained legislative success in two other bills. House Bill 110 passed and modifies certain benchmark goals and timeline for the Department of Education (DOE) to provide locally-sourced agricultural and food products. Additionally, Senate Bill 693 appropriates funds totaling \$1.5 million for the continued implementation of the Food Hub Pilot Program, including the awarding of grant money to qualifying food hubs. The Market Development Branch administers the original program.
- Increased coverage on livestock statistics reporting by introducing the Honolulu eggs price report and cattle report. The egg report was popular and received substantial media coverage.

MARKET DEVELOPMENT BRANCH

Brendan Akamu
Manager

The Market Development Branch (MDB) facilitates the development of the agricultural industry through the expansion of new and existing markets. The team develops and identifies opportunities for Hawai'i's agricultural industry through the strategic use of promotions, grants, community outreach, tradeshow, and educational missions locally, domestically (US Mainland) and internationally.

Promoting export growth of agricultural commodities from the state, the Hawai'i Department of Agriculture and Biosecurity (DAB) leverages its "Made in Hawai'i with Aloha," and "Seal of Quality" branding programs. These programs provide consumers with assurance that the premium products are genuine, authentically Hawai'i-grown, or Hawai'i-made and are guaranteed and certified by the State of Hawai'i.

The Market Development Branch also managed four grant programs each year.

Major Activities and Programs

Micro Grants for Food Security Program (MGFSP) are designed for small-scale gardening, herding and livestock operations to increase the quantity and quality of locally grown food in food-insecure communities. Grants are awarded to individuals of up to \$5,000 per household and \$10,000 for organizations. The application period was from July 11-August 12, 2024, of which 1461 applications were received by individuals and 30 applications for organizations. Award notifications were sent to 620 individuals and nine organizations between November 1-30, 2024, and funds were distributed April 1 – May 30, 2025. The total amount available was \$3,576,470.

Specialty Crop Block Grant Program (SCFSP) supports projects that provide the highest measurable benefits or return-on-investment to the specialty crop industry segment in Hawai'i. Projects must enhance the competitiveness of Hawai'i-grown specialty crops, in either the domestic or foreign markets. Preference is given to projects that measurably increase the production and/or consumption of specialty crops, and/or foster the development of fledging crops and organic operations. Applications were available from February 15 – March 19, 2024, and notice of awards were sent on May 15, 2024 to nine organizations of which 30 applied. The total amount available was \$524,773.

Food Hub - Pursuant to Section 16 of Article III of the State Constitution, SB2218 SD1 HDI CD2, entitled "RELATING TO A FOOD HUB PILOT PROGRAM" became law as Act 313, Session Laws of Hawaii 2022, on July 13, 2022, for a period of five years and was assigned to the DAB (formerly known as the Hawai'i Department of Agriculture). This program established food hubs, which are centrally located facilities having a business management structure that facilitates aggregation, storage, processing, distribution, and marketing of locally produced food products. By actively coordinating these activities along the value chain, food hubs may provide wider access to institutional and retail markets for small-to mid-sized producers and increase consumer access to fresh healthy food, including those consumers in underserved areas and food deserts.

The \$1,500,000 appropriation established a 5-year Food Hub Pilot Program. An RFP was created and posted for applicants on March 27, 2023, and closed on May 3, 2023. A total of 27 proposals were submitted totaling \$6,218,019.26 of which six proposals were accepted totaling \$1,350,000. The MDB is in the third year of the grant period.

Grants-In-Aid (GIA) The state legislature makes appropriations for grants in accordance with Chapter 42F of the Hawaii Revised Statutes (HRS). There are two types of grants: operating and Capital Improvement Project (CIP) grants. Generally, operating grants are for a nonprofit's operational, or program expenses and CIP grants are for construction projects. Funds are available on a reimbursement basis and payments are contingent upon fulfillment of the terms and conditions of the grant agreement. The legislature decides who is awarded a grant, the type of grant, the award amount, what the funds can be used for, and which state department will administer said award. The DAB does not participate in the application process as the House Finance Committee and the Senate Ways and Means Committee conducts the process. The DAB manages the grant recipients of which 10 were assigned for a total of \$1,075,000. All 10 awardees received the total funds in FY25 Q 2 – 4.

Seal of Quality - Launched in May 2006, the Hawai'i Seals of Quality represent the cream of the crop of Hawai'i's agricultural producers. It was established to protect the integrity and value of the marketing cachet for Hawai'i branded farms and value-added products. Products with this seal are genuine, Hawai'i-grown, or Hawai'i-made premium products, a guarantee that is enforced by the State of Hawai'i. The program currently has 89 members of which 61 were renewals and 28 were new to the program.

Made in Hawai'i with Aloha (MIHA) Branding Program - is managed by the DAB and is promoted jointly by DAB, Hawai'i Department of Business, Economic Development and Tourism (DBEDT), and the Chamber of Commerce of Hawaii (CoC). The MIHA branding program was established to protect the integrity and value of authentic Hawai'i branded products and to identify those products made in Hawai'i from products made elsewhere yet called made in Hawai'i. Products labeled with the MIHA logo comply with the provisions of Hawaii Revised Statutes (HRS) §486-119 Hawai'i-made products; Hawai'i-processed products. The program currently has 141 members of which 112 were renewals and 29 were new to the program.

Local Market (Hawai'i) Promotions and Activity

Hawaii Coffee Association – DAB was a sponsor through our Sponsorship Product Promotion (SPP) budget and participated at the 30th Annual Conference and trade show. DAB was part of the program agenda with a panel presentation and discussion which included five divisions/branches: Agricultural Development Division, Plant Industry Division, Pesticides Branch, Quality Assurance Division and Measurement Standards Branch. There were 102 coffee and associated coffee attendees from Hawai'i and the mainland.

Hawaii Cattlemen's Council – is the statewide umbrella organization comprised of the four county level Cattlemen's Association. More than 150 member ranchers represent over 60,000 head of beef cows which represent 75% of all the cattle in the state. DAB was a sponsor through our Sponsorship-Product Promotion (SPP) budget and participated at the annual convention with an informational booth and presented to the association attendees "Ecosystem Approaches to Range Management."

Hawai'i Farm Bureau – serves as Hawai'i's voice of agriculture protects, advocates, and advances the social, economic, and educational interests of a diverse agricultural community. It consists of 2,000 members from eleven counties throughout the State of Hawai'i. DAB was a sponsor through our Sponsorship Product Promotion (SPP) budget and participated at the annual convention with an informational booth and presented an update on the DAB to the association 205 attendees.

Hawaii Tropical Fruit Growers Conference – is dedicated to the Hawai'i-grown tropical fruit community through promotion, research, education, and collaboration. The primary purpose is to promote the interests of any, and all aspects of tropical fruit in the State of Hawai'i. DAB was a sponsor through our Sponsorship-Product Promotion (SPP) budget and participated at the annual convention with an informational booth for the 265 attendees at its annual conference and trade show.

Other smaller events included:

- Hawai'i AgriFood Summit
- Hawaii Chamber of Commerce Annual Convention
- Mana Up Showcase
- Waimānalo Community townhall
- Nānākuli Community townhall
- Ag Day at the Hawai'i State Capitol
- Maui Ag Fest
- Small Business Resource Fair
- Agricultural Awareness Day – Urban Garden
- Kona Coffee Farmers Association Conference
- Wahiawā Value-Added Product Development Center Showcase – Cohort 4
- Hawaii Macadamia Nut Association Conference
- Hawai'i on the Hill – Chamber of Commerce Hawaii



Hawai'i on the Hill – from left: Brendan Akamu, Karen Sur, Gov. Josh Green, DAB Deputy Dean Matsukawa

Mainland (Continental US) and International Promotions and Activities

National Restaurant Association (NRA) - supports the thriving restaurant and foodservice community, providing America with nourishment, opportunity, to enhance quality of life for all. This organization has combined their annual trade show with the National Association of State Departments of Agriculture (NASDA) who speaks on behalf of a unified voice for all 50 states and four territories. NASDA is a nonpartisan association working to influence policy that is beneficial for all regions, people, and environments. DAB participated in their annual trade show “A Taste of the States,” taking three Hawai’i companies to promote their business at an estimated revenue increase in sales of about \$620,000.

Specialty Food Association - is to shape the future of food and to champion and connect members to deliver innovative products and expand consumption of specialty foods - DAB participated in their annual Winter Fancy Food Show taking three Hawai’i companies to promote their business at an estimated revenue income of about \$225,000.

FOODEX Japan - is traditionally the largest food industry trade show in Asia and is a showcase for both domestic and international food manufacturers to showcase their products to a wide range of global buyers to the event. The 2025 event attendance visitor levels reached 75,625. The event drew an increased number of international buyers from North America, Europe, and the Middle East. DAB accompanied 29 companies in cooperation with DBEDT.

This was the third year of the cooperation between DBEDT and DAB for the Hawai’i Pavilion at FoodEx Japan. Through their combined efforts the Hawai’i Pavilion was able to expand its size to 20 booths to support more Hawai’i companies at the event. A combination of Hawai’i manufacturers and Japan agents representing Hawai’i manufacturers participated in this year’s event with a total of 31 Hawai’i companies being represented.

Gulfood Show - The largest annual food and beverage show in the world – promoted as “where real growth happens through genuine connections, insights, stories and talent, amplifying the global food and beverage ecosystem.” DAB participated with one coffee company demonstrating coffee techniques and offering tastings. The 5-day event increased revenues by \$290,000.

Fine Food Australia – is the leading trade event for the food industry. The event has welcomed hundreds of food industry professionals from Australia and beyond. Fine Food Australia is the nation’s only established tradeshow dedicated to all things food – from foodservice to hospitality, and catering equipment, to retail and bakery. DAB participated in the USA pavilion in conjunction with USDA FAS. Three companies from Hawai’i participated of whom all were first-timers to Australia. Seasonings and spices, beverage drinks and coffee were presented.

Global Produce & Floral Show – is the presentation of the International Fresh Produce Association (IFIA) – A domestic U.S. trade association that grows prosperity for all companies in the global fresh produce and floral supply chain. DAB participated in the trade show taking three Hawai’i companies representing coffee, macadamia nuts and herbs. The 3-day event had 9,000+ visitors to our Hawai’i booth and generated \$330,000 in new sales.

Association Activities and Meetings

Western United States Agricultural Trade Association (WUSATA) - The mission of WUSATA - to conduct trade events/missions and activities for companies that target domestic and international markets. These include Export Readiness Training (ERT), financial support, workshops and business development services that are geared to increasing exports internationally. DAB had up to 14 Hawai'i companies in missions that included virtual and in person.

- Match Funds seminar
- Fall out-reach planning
- Canada Virtual Trade Mission
- Taiwan out-bound mission
- Taiwan in-bound mission to Honolulu
- Korea out-bound mission
- Trade Show – Winter Fancy Food



Market Development Branch Staff in FY25 – from left: Ashlynn Kaniho, Caryn Morita, Yukashi Smith, Brendan Akamu, Karen Sur, Matthew Yamane

MARKET ANALYSIS AND NEWS BRANCH

Bonhee Keanu, Ph.D.
Manager

The Market Analysis and News Branch (MANB) is responsible for two primary functions. First, it conducts research to support the department and industry stakeholders, by analyzing trends, commodities availability and valuation, survey methodologies, labor and resource inputs, and other agricultural factors that benefit from market insights. Second, MANB promotes collaboration among agricultural producers, wholesalers, distributors, shippers, food-hubs, local and federal agencies, and other relevant stakeholders. This collaboration generates valuable information resources to enhance decision-making for industry participants, particularly agricultural producers.

A summary of activities and achievements for the fiscal year are highlighted below:

- Posted 24 statistical bulletin reports covering the production, pricing, acreage, yields, and sales of various crops and livestock produced in Hawai'i. These commodities included kale, bananas, eggplant, basil, radish, avocados, eggs, aquaculture, cattle, and hogs and pigs, as well as a report on the top 15 agricultural commodities in terms of market value. The reports also included other farm-related information, such as land use, farm labor and wages, irrigation systems, cash rents, tenure type, and operator characteristics.
- Completed a comprehensive report on the Profitability of Farm Operations in Hawai'i, utilizing the USDA NASS 2022 Census of Agriculture. This report provides an overview of the economic performance and operational efficiency of Hawai'i's farms, categorizing results by acreage intervals and annual farm sales. Key financial metrics – including gross income, net income, output-input ratio, and return on assets – are presented to assess both the short- and long-term profitability of farm operations in Hawai'i.
- Completed a comprehensive report on Hawai'i's Coffee Production, Exports, and Labeling and Blend Requirements. The report highlights trends in Hawai'i's coffee production and pricing, as well as the state's exports of green and roasted coffee to international markets over the past decade. Additionally, it provides an in-depth analysis of Hawai'i's comparative advantage in coffee products within the Japanese market – Hawai'i's largest export destination for agricultural goods.
- Collaborating with the Hawai'i Coffee Association, Kona Coffee Farmers Association, and the University of Hawai'i Extension Service to develop and launch an annual survey program. This joint initiative will enable the State and industry stakeholders to gather critical information and data on coffee production, pricing, marketing strategies, costs of production, production efficiency, operator characteristics, and coffee growers' attitudes and perceptions of new coffee labeling laws in Hawai'i.
- Attended agriculture conferences, university workshops, and trade shows to represent the department and present on the current state of Hawai'i's agriculture.

AGRICULTURAL LOAN DIVISION

The Agricultural Loan Division operates the Agricultural Loan Program and Aquaculture Loan Program. The program's primary objective is to promote the development of the State's economy by stimulating, facilitating, and granting loans to qualified farmers, ranchers, aquaculturists and food manufacturers.

The program works with private lenders through participation loans and loan guaranties to increase the amount of funding available to agriculture and aquaculture industries. The program may provide direct financial assistance to those that are unable to obtain financing from conventional sources. The program operates two revolving loan funds which provide capital to fund agricultural and aquaculture loans. The division also serves as a safety net for agriculture and aquaculture industries by providing assistance during times of emergency.

In FY 2025, loan guaranties provided for expansion of an 'ulu (breadfruit) processing cooperative and an aquaculture operation. Challenges for the agricultural industry included high inflation and tariffs which increased input and equipment costs and the flat economy which limited demand. The demand for loans declined after the implementation of the 10% tariffs which started on April 5, 2025. The loans approved during the fiscal year assisted a variety of operations including a food hub, fruit, vegetable, taro, mushroom operations and aquaponic farm. Loans funded farm expansion, capital improvements and operating purposes.

The division worked with the legislature to make major revisions to the program to better meet the current needs of industry and make it easier for farmers and ranchers to access capital. The successfully passed legislation increased loan limits, reduced the number of credit denials required to qualify for the program, lowered and fixed the program's interest rates. Food hubs were added as qualified borrowers and a line of credit program was established. The program following successful passage of the bill increased its outreach effort to raise awareness for the revitalized program.



Chun's Nursery in Kula, Maui



Blackhat Enterprises Aquaponic Bok Choy Farm in Honaunau, Hawai'i Island

Major activities and accomplishments of the program for FY 2025 were as follows:

- Approved three loans for \$411,400 during FY25. The program provided three 80% loan guaranties which provided \$1,426,181 in funding for an ‘Ulu Cooperative, Mokuwai Piko Poi and an aquaculture operation.
- The loan portfolio covers 11,258 acres in farming and ranching and employment for 435 agricultural workers.
- The division’s loan portfolio as of June 30, 2025 was valued at \$19.6 million with 131 loans booked. The loan breakdown by county is as follows:

Hawai’i County	\$9.4 million
O’ahu County	\$4.7 million
Maui County	\$3.3 million
Kaua’i County	\$2.2 million

- Collected \$3.488 million in FY25. Of the amount collected \$716,081 was in interest and \$2.772 million was in principal.
- Completion of the two-year Agricultural Lending Institute course by a loan officer.
- Outreach efforts included Hawaii Cattlemen’s Council, Hawaii Coffee Association Conference, Hawaii Tropical Fruit Grower Conference, Maui County Agfest & 4-H Livestock Fair, Moloka’i Homestead Farmers Alliance etc.



Z Bar Ranch calves in Waimea, Hawai’i Island



Oko’a Farms Store, Makawao, Maui



Maui Dragon Fruit Farm in Lahaina, Maui

AGRICULTURAL RESOURCE MANAGEMENT DIVISION



Brian Kau, P.E.
Administrator and Chief Engineer

The Agricultural Resource Management Division (ARMD) works to ensure that the State of Hawai'i has dedicated reliable sources of agricultural water, farmland, infrastructure for farming, and agricultural-related processing facilities. The division provides administrative oversight over most of the State-owned agricultural lands in production, processing facilities, and several irrigation systems statewide. By maintaining and operating abandoned plantation irrigation systems, the division supports and encourages the development and expansion of diversified agriculture on former mono-crop plantation fields.

Activities for FY25 included the following:

Capital Improvements

Moloka'i Irrigation System - Waikolu Valley Sluice Gate Repairs

Irrigation water that the Department of Agriculture and Biosecurity (DAB) provides to the farmers of Moloka'i begins its journey on the island's north side. Water is collected in Waikolu Valley and makes its way to the Kualapu'u Reservoir after travelling through a series of pumps, pipes and tunnels.

The infrastructure in Waikolu Valley was originally built in the 1950s and 1960s and is in need of repairs and upgrades. One piece of equipment that needed repair is a sluice gate located at the pump station in the valley. The sluice gate allows water to accumulate in the pump station, which is then pumped to the reservoir.

After many decades of service, a component of the sluice gate significantly deteriorated which rendered the pump station unusable and prevented DAB from collecting water from this source. Construction plans were quickly assembled and advertised for bidding.

Once the contractor was brought on board, close collaboration with the division ensued. This involved a lengthy process of taking detailed measurements, ordering custom manufactured parts, and addressing the logistics of getting those parts delivered to the remote job site.

After it all, the contractor was able to successfully complete the repairs and restore the pump station's ability to provide water to the farmers of Moloka'i.



Broken sluice gate shaft



Repairs in progress

State Irrigation System Reservoir Safety Improvements – Pu‘ukapu Reservoir, Island of Hawai‘i

A major component of the department’s Waimea Irrigation System is the Waimea 60 MG Reservoir (also known as the Pu‘ukapu Reservoir) which was built in 1957. This reservoir provides over 200 million gallons per year of irrigation water to approximately 700 acres of diversified agricultural lands in the Waimea area.

In FY25, the department made much needed improvements to bring the reservoir into compliance with Department of Land and Natural Resources Dam Safety regulations. The work included installation of a high density polyethylene (HDPE) liner to reduce water seepage losses; replacement of the outlet work’s sluice gate and operating stem which enables staff to regulate flow of water to users of the system; installation of a new parapet wall to prevent water from overtopping of the reservoir crest; replacement and relocation of the outlet pipe; and replacement of the spillway’s grouted rock-lined outlet swale with a new HDPE pipe. These improvements will minimize risks associated with the reservoir and ensure a more reliable source of irrigation water for years to come.



Non-Agricultural Parks

KK Ranch – Non-Agricultural Park

KK Ranch, Inc., a prominent beef cattle operation managed by Jason Moniz, encompasses over 5,000 acres of leased pastureland located alongside the slopes of Mauna Kea. Renowned across the State of Hawai‘i and beyond, KK Ranch, is well known and respected in the cattle industry for producing premium, locally raised beef that upholds the highest standards of quality and sustainability. Under Mr. Moniz’s leadership, KK Ranch exemplifies responsible land stewardship and agricultural excellence. The operation maintains a careful balance between productive ranching, and preservation of Hawai‘i’s natural resources, contributing meaningfully to the state’s goals for food security and sustainable agriculture.



Ronald Weidenbach dba Hawai‘i Fish Company – Non-Ag Park

Ronald Weidenbach, owner and operator of Hawai‘i Fish Company has been in the industry of freshwater aquaculture development and production in Hawai‘i for over 30 years. Located in Waialua, Hawai‘i Fish Company maintains a small-scale, self-sustaining, multigenerational family aquaculture operation, where he has a high-quality diversified production of freshwater prawns, tilapia, grass carp, silver carp and bighead carp. Hawai‘i Fish Company has earned an exceptional reputation within the local seafood and restaurant trades as a consistent and reliable supplier of premium quality farm-fresh fish. Through innovation, dedication, and responsible resource management, Mr. Weidenbach and his team exemplify the values of sustainable aquaculture and is a valuable contributor to Hawai‘i’s food security and agricultural diversity.



Agricultural Parks

Kelly Greenwell – Keāhole Agricultural Park

Mr. Greenwell currently leases two parcels located in the Keāhole Agricultural Park. The acreage of the two parcels totals approximately 10.468 acres. Since acquiring both properties, Mr. Greenwell has established and maintained a highly productive operation specializing in a diverse range of ornamental and landscape plants. His nursery provides high-quality plant materials—including mature trees and shrubs—to many of Kona’s leading landscaping professionals. Through years of dedicated effort, he has built a reputation for excellence and reliability in the Hawai‘i’s landscape industry. Mr. Greenwell has been an excellent steward of the land and keeps his operation well maintained, fully utilized, and contributing meaningfully to the vitality of Hawai‘i’s agricultural economy.



Kenneth M. Delimont and Karen Delimont – Pāhoa Agricultural Park

Mr. and Mrs. Delimont are lessees of two parcels located in the Pāhoa Agricultural Park. Since acquiring the properties in the 80’s they have been exemplary stewards fully utilizing approximately 15 acres of state land by cultivating and maintaining a thriving avocado orchard. Their years of dedication, hard work, and sustainable land management have resulted in a successful and well-respected farming operation. They have plans to diversify their food crops to better serve local markets and strengthen Hawai’i island’s agricultural resilience. Their current crops are sold locally, supporting Hawai’i Island’s agricultural community and food supply.



Irrigation Systems

The DAB ARMD operates and maintains five (5) irrigation systems to provide agricultural water to farmers in Kahuku, Waimānalo, Moloka’i, Waimea, and Honoka’a-Pa’auilo. During past years, each of the irrigation systems experienced significantly low rainfall. The knowledge and experience of the irrigation system workers and engineers supported the ongoing operation of the systems.

The following story is from a farmer that utilizes water from one of the irrigation systems.

MA FARMS-Waimānalo Irrigation System

From learning to farm in India in the early 1970’s to caretaking the edible landscape at the University of Hawai’i energy house, Bruce Campbell has always been drawn to agriculture. Campbell owns and operates MA Farms on six acres of prized agricultural land on Makakalo Street in Waimānalo. “The farm used to be in Kamilonui Valley in Hawai’i Kai, then the pandemic happened and we relocated to Waimānalo,” said Campbell. Facing hardships then and coming out of the pandemic, Campbell praises the low cost for water delivery from the Waimānalo Irrigation System has helped the farm tremendously. MA Farms has twelve mala kalo (dryland taro patches) that require a substantial amount of water. When asked how important it was to have non-potable water from the Department of Agriculture and Biosecurity’s Waimānalo Irrigation System; Campbell replied, “very important, we use drip tape irrigation to help conserve water; but yes, the ag. water is very crucial to our operations.”

Recently featured in the MidWeek, MA Farms showcased their Food First Nursery that houses canoe plants like ‘ulu (breadfruit), mai’a (banana), niu



(coconut) kō (sugarcane), liliko'i (passion fruit) and other crops like cucumber, papaya, avocado, lemon, lime, yuzu, orange, chaya; even medicinal plants like moringa and bele and herbs that include 'aloe, noni, māmaki and 'ōlena (tumeric). The farm boasts one of the largest 'ulu nurseries with over a hundred plants for purchase. Visit <https://www.mafarm.org/> for more information.

Campbell is the President of the non-profit Well Fed 'Ohana, whose mission is to feed people experiencing homelessness and families facing poverty with healthy nutritious food that they grow themselves in their own yards, "this is part of restoring food sovereignty for Hawaii," said Campbell. MA Farms not only sells these plants but will even go as far as to show you how to prepare and cook the crop. They are currently partnered with the Waimānalo Health Center, where they teach the public how to prepare and cook the plants from the farm. You can find MA Farms at the health centers farmers market on Wednesdays where you can buy fresh produce like their tomatoes, arugula and so much more.



Capital Improvement Projects for FY2025

The following projects were completed on the Island of Kaua'i:

- East Kaua'i Irrigation System Facilities Assessment Study – Planning

The following projects are ongoing on the Island of O'ahu:

- Waimānalo Irrigation System Maunawili Valley Improvements, Phase II - Construction
- Hawai'i Water Management Project, Waiahole Reservoirs 155 and 225 Improvements - Design
- Waimānalo Irrigation System Baseyard Improvements - Construction
- Kahuku Irrigation System Pumping Station Improvements - Construction
- Wahiawā Reservoir Due Diligence Report – Planning
- Wahiawā Dam Improvements - Design
- Kalaeloa Harvesting Facility – Design and Construction
- Waikupunaha Street Culvert Repair - Design

The following projects were completed on the Island of Moloka'i:

- Moloka'i Irrigation System Waikolu Valley Improvements – Design and Construction
- Statewide Meter Replacement and Miscellaneous Improvements, Moloka'i Irrigation System – Construction
- Coupling Replacement on 30" Irrigation Pipeline From West Portal To Kualapuu Reservoir - Construction
- Kualapuu Reservoir Vegetation Removal - Construction
- Moloka'i Irrigation System Miscellaneous Pumps Valves, and Gates Repair, Replacement and Maintenance – Construction
- Farrington Booster Pumping Station Repairs and Maintenance - Construction

The following projects are ongoing on the Island of Moloka'i:

- Moloka'i Irrigation System Pump Replacement and Improvements – Design

The following projects were completed on the Island of Hawai'i:

- Honalo Marshalling Yard Improvements – Design and Construction

The following projects are ongoing on the Island of Hawai'i:

- Lower Hāmākua Ditch-Waipio Valley Improvements - Construction
- State Irrigation System Reservoir Safety Improvements Pu'u Kapu Reservoir Improvements - Construction
- State Irrigation System Reservoir Safety Improvements Pu'u Pulehu Reservoir Spillway Improvements - Design
- Waimea Irrigation System Drainage Improvements - Construction

The following projects are ongoing statewide:

- Statewide SCADA System Upgrades-Design
- State Irrigation System Reservoir Safety Improvements - Pu'u Pūlehu, Kualapu'u, & Waimānalo Reservoir Miscellaneous Improvements

ANIMAL INDUSTRY DIVISION



Isaac Maeda, DVM
Administrator / State Veterinarian

The Animal Industry Division protects Hawai'i's livestock, poultry, aquaculture industries, animal and public health by preventing disease introductions and detecting and controlling economically important diseases and pests within the state. This aligns with the department's biosecurity responsibilities emphasized by Act 235 to the Department of Agriculture and Biosecurity (DAB). The division conducts: animal disease surveillance, epidemiology and control; inspection of all animals and birds entering the state; aquaculture shrimp disease-free certification; livestock brand registration; voluntary livestock disease certification, animal disease traceability programs; laboratory diagnostic services; and dog and cat import regulation and quarantine to reduce the risk of rabies introduction.

Animal and public health and environmental programs aimed at preventing the introduction of foreign, emerging, zoonotic and economically detrimental animal diseases and pests into the state continue to be important functions of the division. Examples such as Highly Pathogenic Avian Influenza virus (HPAI), African Swine Fever virus, and Asian longhorned tick are just a few examples of disease agents of high concern that are not in the state. The recent intrusion of New World screwworm in Mexico 70 miles south of the Texas border is a critical concern to the US including Hawai'i.

Hawai'i's statuses for State-Federal Cooperative Disease Control Programs during Fiscal Year 2025 (FY25):

- Brucellosis Free, cattle and swine
- Pseudorabies Free, Stage V
- Bovine Tuberculosis (bTB), Accredited Free*
(*Refer to bTB in the Animal Disease Control branch section.)

In response to multiple positive bTB herd detections in 2021-2022, Hawai'i Department of Agriculture (HDOA) placed a quarantine on the island of Moloka'i starting April 8, 2022. A total of six bTB-affected herds were detected between July 2021 and March 2022, including a mixed herd that contained positive detections in both cattle and domestic swine. As a result of these herd detections in 2021-2022 and detection in axis deer on Moloka'i, HDOA and APHIS entered into a bTB Program Memorandum of Understanding (MOU) on November 23, 2022.

The MOU details the requirements and responsibilities for maintaining Hawai'i's Accredited Free State status regarding bovine tuberculosis (bTB) and is anticipated to be updated in November 2025. The state underwent an annual review in person with USDA APHIS VS staff this summer however, the updated MOU is delayed due to the US government shutdown that is in effect at the time of this writing. The MOU, and HDOA responsibilities detailed in the MOU, are subject to annual review and renewal. The latest revision was signed in November 2024 and there have been no other detections of bTB in

livestock on Moloka'i since 2022. The State of Hawai'i continues to maintain a "Bovine Tuberculosis Accredited Free State Status."

In addition to ongoing bTB work on Moloka'i, the division addressed a detection of HPAI virus in a backyard flock of mixed ducks other waterfowl and birds. Details of this action are included in the Animal Disease Control Branch section.

Furthermore, in November 2025, two wild migratory ducks (one in O'ahu and one in Maui) were found infected with HPAI. There have been no other detections of H5N1 in 2025 At the time of this writing. These detections however, emphasize the continued biosecurity risk infectious diseases of high consequence pose to Hawai'i.

Hawai'i is also recognized as free of bluetongue virus and anaplasmosis and surveillance programs for these diseases are ongoing to ensure that the free status is documented and maintained. No other new livestock and poultry disease agents were detected during FY25. Continuing voluntary disease control program activities include scrapie in sheep and goats and Johne's disease in cattle. Stringent import requirements remain in place for birds entering Hawai'i in an effort to reduce the risk of HPAI and West Nile virus introduction.

The division received cooperative agreement funds from the USDA APHIS for \$126,642 during FY25. The agreements supported specific activities in diseases of avian, cattle, One Health (\$5,411), sheep, goat, cervid, equine, swine health, and animal disease traceability. In addition, activities were funded under a FY 24, two-year grant from the National Animal Disease Preparedness and Response Program including field training of veterinarians on aquaculture, a two-day aquatic animal disease workshop for Hawai'i veterinarians, and additional training for the division's aquatic veterinarian. The division was also able to procure and begin installation of a new incinerator this year under a FY 23 grant from the National Animal Disease Preparedness and Response Program to upgrade carcass disposal. The equipment will be used in response to animal diseases that threaten Hawai'i's animal agriculture.

RABIES QUARANTINE BRANCH

The Rabies Quarantine Branch managed a greater number (approximately 23,734) of dogs and cats entering Hawai'i during FY25 compared with prior years (e.g., approximately 18,992 in FY 2023). This represents an increase of 135% from FY10's 10,075 entries. The entries in FY25 were almost four times the 4,771 animals that entered Hawai'i prior to the start of the 5-day-or-less program in FY03. In addition, 247 animals transited through the state similar to the previous year.

The following are approximate rabies quarantine statistics for cats and dogs arriving between July 1, 2024, and June 30, 2025 (FY25):

PROGRAM	NUMBER	PERCENT
120-day	369	1.5
Quarantine <120 days	554	0.2
Airport Release	17,859	75
Total	23,734	100
Transiting Through Hawai'i	247	0.1

Since June 2003, under the 5-Day-or-Less program, the Rabies Quarantine Program focuses on pre-entry vaccination, serology, identification, and health certification to reduce the risk of disease introduction rather than quarantine. In addition, since 2018, the minimum waiting period of 30 days after: the last rabies vaccination; and passing FAVN blood test before arrival were reduced from periods of 90 days after the last rabies vaccination and 120 days after the passing blood test. These changes substantially reduced the preparation time to enter Hawai'i for animals that were not previously vaccinated for rabies or had not had rabies serological testing. These changes do not significantly increase the risk of disease entry.

Pets may be released at Honolulu International Airport if they complete pre-arrival requirements that include (but are not limited to):

1. Positive pet identification with electronic microchip.
2. A minimum of two rabies vaccinations in the animal's lifetime, administered no less than 30-days apart. The current (or last) vaccine must not be administered no less than 30 days before the pet's arrival in the state, and not expired.
3. FAVN rabies serological testing to measure vaccination response with sufficient level (> 0.5 IU/ml) of rabies antibodies.
4. A 30-day waiting period after a passing FAVN rabies test before entry into the state; and a 30-day pre-arrival waiting period between the time the lab receives the blood sample and the earliest date the pet may enter the state (the pre-arrival waiting period is necessary due to the long and variable length of rabies incubation, where the virus may hide in an animal before clinical signs of the disease become apparent).
5. Certificate of Veterinary Inspection (CVI) or Health Certificate, executed no less than 14 days before arrival.
6. Pet owners must also submit required paperwork more than 10 days before the pet's arrival.
7. Inspection upon arrival.

The high and increasing number of direct release qualified dogs and cats at the Daniel K. Inouye International Airport in Honolulu (HNL) is a continual challenge for the veterinary, inspection, clerical, accounting, and animal care staff by substantially increasing workload.

Continued modifications to the program's computer system in FY 25 are intended to increase pet owner access and system operations. Continued system refinement and troubleshooting are in progress. Staff access this Animal Information System (AIS) to manage, monitor, and verify information relevant to qualification. Considerable time is spent reviewing documents, pre-qualifying pets, processing payments, receiving and inspecting pets, and addressing the needs, questions and concerns of the general public. The clerical, veterinary, and inspection personnel spend an extensive amount of time e-mailing and speaking with pet owners on the phone and in person explaining program requirements. It is still estimated that nearly half of all submitted essential documents require follow-up contact with veterinarians or pet owners.

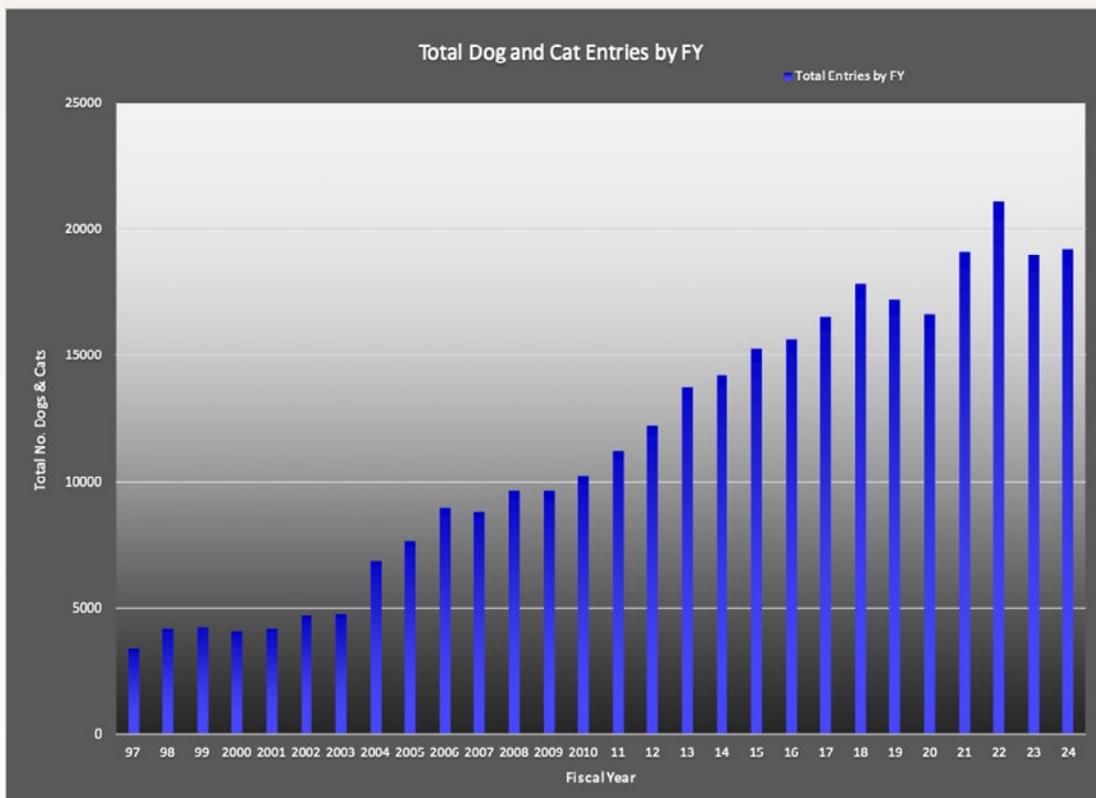
Approximately 17,859 dogs and cats were released at the airport in FY25, that amount is 43% higher than the 12,484 animals released at the airport in FY23. However, this number does not reflect the workload for the total number of pet documents processed, because the database adds an estimated

20,000+ files each year for the 5-Day-or-Less program. Animal Disease Control Branch (ADCB) staff including the port veterinarian and livestock inspectors provide essential support to the program by assisting rabies quarantine veterinary assistants with inspecting and processing dogs and cats released at the Airport Animal Quarantine Holding Facility (AAQHF) seven days a week. The AAQHF is under the jurisdiction of and operated by the ADCB.

The 5-Day-or-Less program continues to be very successful, but it is labor intensive in documentation and verification as well as receiving, inspecting, caring for and releasing dogs and cats. The AAQHF estimates nearly 10% of arriving pet owners do not submit the required pre-arrival documents beforehand resulting in additional screening and verification of these cases by the inspection staff at the airport facility. Pet charter flights also have created severe congestion and processing issues because over 35 animals on a single flight may be delivered at one time, to the AAQHF. The AAQHF is not designed nor staffed to easily manage acute, high volume, influx of animals. These high-volume flights, along with increased numbers of animals routinely arriving in the state in general, increase challenges faced by staff. The AIS HIPOP improvement project mentioned previously should help to address routine arrivals but not pet charter flights as they are not routine and irregular in schedule. Renovation of the facility has started to assist in processing these increase in arrivals.

The department routinely updates its website, including an information brochure that is dedicated to Hawai'i's rabies quarantine program and contains all of the information and forms relating to quarantine and the importation of cats and dogs. Pet owners may access pre-arrival FAVN rabies serological test results and associated 5-Day-or-Less dates at this DAB website. Checklists for the 5-Day-or-Less program are available at the site to assist pet owners of both resident pets and non-resident dogs and cats with preparations to qualify for this reduced quarantine option.

The following graph represents the dramatic rise in the number of dogs and cats entering Hawai'i since the 5-Day-or-Less program was implemented at the end of FY 2003.



Animals may qualify for quarantine periods between zero (airport release) to 120 days under the early arrival provision of the 5-Day-or-Less Program. There were about 538 dogs and cats that were in the early arrival category in FY25 that spent an average of 19 days in quarantine.

In addition to HNL, the department has a system that allows dogs and cats to enter Hawai'i directly at Kona International Airport at Keāhole, Kahului Airport on Maui, and Līhu'e Airport on Kaua'i. Quarantine approved veterinary facilities serve as private contractors to inspect animals upon arrival at these airports because the rabies quarantine program does not have personnel on islands other than O'ahu. A pet owner must apply for a Neighbor Island Inspection Permit (NIIP) to fly with their dog or cat directly to one of these airports from the continental U.S. The following are current requirements to obtain a NIIP:

1. Every dog or cat must meet all the requirements listed on the "Checklist for the 5-Day-or-Less Program" except that all required documents must be submitted earlier (30 days or more before the intended date of arrival).
2. Pet owners must submit the following documentation to the Animal Quarantine Station 30 days or more ahead of the planned arrival:
 - Completed Dog & Cat Import Form, AQS 279
 - Original rabies vaccine certificates for the two (2) most recent vaccinations
 - Payment of \$165 in cashier's check or money order made out to the Department of Agriculture and Biosecurity
 - Flight information
 - A letter from the owner requesting Direct Airport Release at either "Kona" or "Kahului" or "Līhu'e"
3. Owners must make reservations for inspection with an approved contractor. Contractors will then send a confirmation to the Animal Quarantine Station (AQS) that they have agreed to perform the inspection and release procedure on the dog or cat. Owners are responsible for the additional fees to the contractor for this service.
4. A Kona, Kahului, or Līhu'e Neighbor Island Inspection Permit will be e-mailed to the owner once the AQS has:
 - Received the above required documents, information, and payment (see 2 above).
 - Confirmed the pet meets all of the requirements for the 5-Day-or-Less Program and neighbor island inspection and release; and
 - Received confirmation from the approved contractor that they will meet the pet.
5. The pet specific NIIP must accompany the dog or cat on the aircraft and be submitted to the inspector upon arrival in Hawai'i.

Another phase of the AIS improvement project mentioned previously, is planned to have the NIIP application simplified to a digital online process that will also allow pet owners to arrange for an inspection with an approved veterinary contractor online. The goal of the NIIP component of the AIS project is to simplify and decrease the time for accomplishing one through four above, through digitization.

In addition to rabies exclusion, the quarantine program continues to monitor dogs and cats carefully for ticks exotic to Hawai'i. Animals were discovered carrying *Rhipicephalus sanguineus* ticks upon entry examination in FY25. *Rhipicephalus sanguineus*, the brown dog tick, is the only tick established in Hawai'i and associated with dogs. However, cases also involved dogs with either *Amblyomma*

americanum, the lone star tick, or Dermacentor variabilis, the American dog tick. Both of these ticks are not established in Hawai'i and are a concern because they can transmit various diseases to humans and other animals, such as those that cause Lyme disease, ehrlichiosis, rickettsiosis, Rocky Mountain spotted fever, tularemia, and theileriosis. In addition, ticks including D. variabilis can cause tick paralysis in animals and people.

ANIMAL DISEASE CONTROL BRANCH

Travis Heskett, D.V.M., D.A.C.V.P.
Acting Program Manager

The Animal Disease Control Branch (ADCB) prevents, investigates, conducts surveillance, controls and eradicates animal diseases that may have serious economic impacts on the state and nation's livestock and poultry and aquaculture industries, some of which impact public health. The branch inspects animals entering the state and ensures compliance with division rules and laws pertaining to the mitigation, control and eradication of animal diseases.

Highly Pathogenic Avian Influenza (HPAI)

Highly Pathogenic Avian Influenza (HPAI) continues to circulate in wild birds and poultry throughout the world and continental US. HPAI has been detected in wild aquatic birds, commercial poultry, and/or backyard flocks in all 50 states. HPAI testing is routinely conducted for surveillance and disease investigations on ill and dead birds.

A foreign animal disease (FAD) investigation was initiated on November 12, 2024 by the Animal Industry Division on a backyard mixed avian species flock including ducks, other waterfowl and lovebirds in Wahiawā because a private veterinarian reported unusual mortalities and clinical signs at this premises. Animal Industry Division Veterinary Medical Officers (VMO) collected samples and submitted them to Hawai'i Department of Health, State Laboratories Division (SLD), and the National Veterinary Services Laboratory (NVSL). A verbal hold order was placed on the premises upon notification by the NAHLN lab of non-negative Avian influenza PCR result on 11/13/2024. A written quarantine was placed on the premises by DAB on November 14, 2024, and NVSL confirmed H5N1 on November 15, 2025. Due to extensive mortality and illness, remaining avian species were euthanized, and carcasses transported to DAB for incineration on November 15, 2025. During the FAD investigation, two ducks from the index premises were found to be moved to another residential location, and held there with seven other ducks. Subsequently these nine ducks, were moved to a veterinary clinic for isolation. These ducks were previously sampled for pre-movement testing and results were non-negative for HPAI on November 14, 2025. The residential premises was placed under quarantine and the ducks euthanized. The veterinary clinic was cleaned, disinfected and the environment sampled before return to use.

West Nile Virus (WNV)

An embargo on the movement of poultry and other birds, except chicken hatching eggs and chicken day-old chicks through the U.S. Postal Service (USPS) remains in place. In addition, all poultry and other birds including all hatching eggs and all day-old chicks require a "Poultry and Bird Import Permit" for entry into the state. Those species of poultry and birds capable of producing high WN virus levels are required to undergo a seven-day pre-arrival quarantine before qualifying for an entry permit. The

geographic location of the flock of origin for poultry and bird imports are evaluated for proximity to HPAI detections before import permits are issued. Poultry and other birds arriving in the state not meeting entry requirements are refused entry. In FY25, 75 shipments of poultry or other birds were refused entry or returned by carriers or by the USPS to their origins for failing to meet entry requirements. West Nile virus arrived in the continental U.S. in 1999 and now affects all states except Hawai'i and Alaska.

Bovine Tuberculosis (bTB)

Bovine Tuberculosis free status maintained

Bovine tuberculosis (bTB) a chronic, debilitating disease of cattle, bison, goats, cervids, and other animals that can also cause a serious disease in humans, is caused by the bacteria *Mycobacterium bovis*. State and federal veterinarians test cattle herds annually and manage hunter assisted surveillance of wildlife on the East end of Moloka'i, where bovine tuberculosis had been a recurrent problem until 1997. To prevent the potential spread of bovine tuberculosis from eastern Moloka'i, all cattle east of Kamalo were required to obtain a permit and have an annual negative bTB test to move. Prior to 2021, the last bTB infected cattle herd, located on eastern Moloka'i, was depopulated when a single cow was identified with bTB in 1997 and no new cases of bTB in cattle were found at that time.

In June 2021 a small cattle herd was identified as infected with bovine Tuberculosis (bTB) on the island of Moloka'i. The ADCB, in collaboration with USDA APHIS VS, conducted a disease investigation examining and testing trace herds associated with the index herd. By FY23, five (5) cattle and one (1) mixed swine cattle herd were identified as infected with bTB and subsequently depopulated. During that time two (2) hunter collected axis deer were also found infected with bTB. No other bTB infections have been found since.

In response to the bTB detections on Moloka'i in 2021, Quarantine Order 158 was placed on the entire island restricting movement of ungulates by permit only. A memorandum of understanding (MOU) between the Hawai'i Department of Agriculture (DAB) and the USDA APHIS VS, on the requirements and responsibilities for maintaining Hawai'i's Accredited Free state status regarding the risk of bovine tuberculosis (bTB) was executed on November 17, 2022, with a minor revision on January 20, 2023. The latest revision was signed in November 2024. The MOU and bTB activities by DAB and USDA APHIS VS are necessary for the State of Hawai'i to maintain a "Bovine Tuberculosis Accredited Free State Status." The MOU, and DAB and USDA APHIS VS responsibilities detailed in the MOU, are subject to annual review and renewal.

The branch works with hunters, the Department of Land and Natural Resources (DLNR), and USDA Wildlife Services (USDA WS) to source wildlife samples for bTB analysis. As reported previously, only two infected wildlife (axis deer) have been identified since 2021. USDA WS also began a two-year project on Moloka'i (in FY24) to evaluate wildlife population density and movements, and wildlife interactions with livestock. It is hoped that the study will help determine what strategies can be employed to mitigate exposure to livestock.

Bovine Brucellosis

Bovine Brucellosis class free status maintained

Hawai'i has been officially classified as free of bovine brucellosis since 1983.

Bovine brucellosis is an infectious disease of cattle, bison, and elk caused by the bacteria *Brucella abortus*. Brucellosis can also infect humans. During the fiscal year, 44 cattle were tested for brucellosis. No suspects or reactors were found. However occasional spillover of *Brucella suis* from infected feral swine and *Yersinia enterocolitica* will cause cross reactivity on cattle surveillance testing resulting in herd epidemiological investigations that may include herd testing. These investigations find that in

areas where *B. suis* is endemic in feral swine, a single or few heads may become transiently infected but no cattle to cattle spread has been seen and no herd reproductive abnormalities have been found.

Swine Brucellosis & Pseudorabies (PRV)

Hawai'i maintains free statuses for Swine Brucellosis and Pseudorabies

Brucellosis

Hawai'i retained its free status for swine brucellosis during FY25.

Brucellosis in swine is caused by the bacteria *Brucella suis*. Infected swine experience reproductive problems including abortion and infertility. *Brucella suis* can cause serious infections in humans. No domestic swine herds were found infected in FY25. As a result, Hawai'i maintains its *Brucella suis* free status.

Feral swine in Kona, Hāmākua (Hawai'i Island), Kahakuloa (Maui), Ft. Shafter westward through Wai'anae, the North Shore, and Windward (O'ahu) are known to be infected with swine brucellosis. Exposure of domestic swine to infected feral swine and the practice of maintaining transitional herds of mixed feral and domestic swine have been the source of all domestic swine brucellosis infections in the past.

In addition to annual testing of all sows and boars over six months of age at slaughter, 25 percent of the herds in the state are randomly selected for testing to determine their brucellosis status. Surveillance for FY25 included 680 domestic swine samples and 61 feral swine samples.

Pseudorabies

Hawai'i maintains a free status for pseudorabies in swine.

Pseudorabies (PRV), a viral infection of swine, causes respiratory disease and reproductive failure. Pseudorabies infection of other species (such as dogs) is typically fatal, but humans are not susceptible.

Pseudorabies surveillance testing of 680 domestic swine samples during FY25 found one infected domestic swine herd. This herd is in process of cleaning up the infection. Feral swine on the islands of Hawai'i, Maui, and O'ahu are known to be PRV-infected. Fifty-nine (36/61) percent of the feral swine tested in FY25 tested positive for PRV. Infected feral swine are a constant threat to domestic swine herds. A statewide quarantine order prohibits the commingling of feral and domestic swine as well as the interisland movement of feral swine.

Transmissible Spongiform Encephalopathies Scrapie

Hawai'i continues to be recognized as consistent with the USDA Voluntary Scrapie Certification Program Standards.

Scrapie is a transmissible, insidious, neuro-degenerative disease affecting the central nervous system of sheep and goats. Scrapie has not been diagnosed in goat or sheep flocks in Hawai'i.

Hawai'i received USDA cooperative agreements in FY25 to continue to provide sheep and goat flock owners with educational information, enroll flocks in the status program, conduct surveillance testing on cull and diagnostic animals, and provide for some genotype testing. A quarantine order is in place to require change of ownership identification requirements for certain classes of sheep and goats for Hawai'i to remain consistent in the National Scrapie program.

Bovine Spongiform Encephalopathy (BSE)

There were no suspect cases of BSE in FY 25.

Importation/Exportation of Livestock, Poultry and Other Animals

An embargo on the movement of poultry and other birds into Hawai'i through the U.S. Postal Service implemented in September 2002 remains in place. The embargo remains in place to prevent the entry of West Nile virus, avian influenza and other avian diseases from entering the state with infected birds. Inspected and approved for entry into the state: 530 head of livestock; 6,932 poultry and other birds; 711,137 day-old chicks and hatching eggs; and 6,632 other animals.

The branch staff conducted 102 compliance investigations, 10 citations were issued, 279 written warnings, and 53 animals and 70 post office shipments were refused entry.

VETERINARY LABORATORY

Travis Heskett, D.V.M., D.A.C.V.P.
Lab Director

Raquel Wong, D.V.M.
Veterinary Medical Officer

The Veterinary Laboratory provides essential services to assist department veterinarians in identifying and controlling diseases affecting livestock and poultry. The Veterinary Laboratory provides a diverse range of diagnostic services. Professional staff are trained in different disciplines such as pathology, histology, serology, parasitology, and bacteriology. If specialized services are required, laboratory staff members handle and package specimens in accordance with specific shipping regulations to ensure the safe and secure transport of specimens.

In the FY25 fiscal year, the number of tests performed was similar to previous years. The laboratory tests swine serum for brucellosis, pseudorabies, and porcine reproductive and respiratory syndrome (PRRS). Serum and whole blood samples are also forwarded to NVSL-FADDL for classical swine fever and African swine fever surveillance. The veterinary laboratory performs necropsies (which include histology and often parasitology) to investigate unusual morbidity and mortality events.

Diagnostic investigations into poultry deaths included the collection of samples for avian influenza testing. One-hundred and 25 avian influenza samples were forwarded for PCR testing. The laboratory performs Equine Infectious Anemia testing on horse serum, and the presence of this virus was not detected in 418 horses tested. Dogs and cats in quarantine are routinely tested for intestinal parasites, and necropsies and rabies tests are performed on dogs and cats that die during the quarantine period. No dogs or cats died during the quarantine period in FY25 and rabies was not detected in any animal tested in 2025 - six non-domestic species were tested.

AQUACULTURE DEVELOPMENT PROGRAM

Todd Low
Program Manager

The Aquaculture Development Program (ADP) provides essential support services to encourage further growth and diversification of the aquaculture industry. ADP is a planning, development, and problem-solving organization whose goals are to assist in the start-up of production and service businesses and to contribute to their success. Specific activities include planning and policy formulation, new business development, permit facilitation, marketing assistance, disease diagnosis and prevention assistance, and co-funding of statewide technical extension.

The mission of ADP is to: prepare and implement state aquaculture plans and policies for the expansion of aquatic farming, and research and technology transfer business; coordinate statewide development activities; and directly assist both public and private sector interests in achieving their aquaculture-related goals, in order to create jobs and diversify the economies of all islands.

Major activities for FY2025 were:

- Estimated farm-gate product value for the industry was \$65.2M for calendar 2023 according to USDA statisticians, which represents a 27% decrease from 2022. The main reasons for the decline were: critical infrastructure failure at NELHA, severe decline in SPF Shrimp Broodstock shipments, and environmental and regulatory challenges affecting production capacity.
- Continued the joint implementation of the amended Chapter 190D, HRS, Ocean and Submerged Lands Leasing law with the DLNR. Keahole Point Fish (doing business as Blue Ocean Mariculture) produced close to 1,000 tons of Hawaiian Kanpachi – 42% of their current allowable yearly production under its State concession. Ocean Era Farm continues to develop their proposal for an integrated multi-trophic aquaculture operation to be located off Ewa Beach on O’ahu. The project would integrate Nenue (*Kyphosus sandwicensis*), Moi (*Polydactylus sexfilis*) with seaweed in a submersible array.
- Strategically integrated restorative aquaculture principles into its planning framework and operational tactics to achieve net-positive environmental outcomes while advancing commercial viability. This integration represents a shift from traditional extraction-based aquaculture toward regenerative production systems that deliver measurable ecological benefits.
- Continued to provide an internationally recognized Shrimp Surveillance and Certification Program to the growing shrimp broodstock industry. The aquaculture veterinarian provides third-party diagnostic sample collection with chain-of-custody documentation for all Hawai’i broodstock operations including the Oceanic Institution/US Marine Shrimp Farming Program stocks based on O’ahu. At present, there are four shrimp broodstock export farms under the surveillance program and all are disease-free.
- Assisted farmers with import permits and export health documentation for aquatic species on O’ahu, Kaua’i, Maui, Moloka’i, and Hawai’i. The aquaculture veterinarian is continuing to provide chain-of-custody sampling for a voluntary screening of imported koi stocks while in quarantine before being transferred to grow-out systems destined for export. This effort is contributing to the

now significant numbers of koi being exported to the mainland and the future expanding market into the EU. The Disease Prevention Program assists in cooperation with federal oversight in developing new aquaculture drugs for food fish species.

- Promoted the local consumption of aquaculture products by participating in the Agriculture Awareness Day at the State Capital. Worked with various media channels to provide background information, place stories and promote the industry. Maintained an email distribution list to distribute time-sensitive information to local producers.
- Provided technical reviews of research and development proposals to the Center for Tropical and Subtropical Aquaculture. Provided reviews of Aquatic Species Importation permits for the department's Plant Quarantine Branch.
- Provided limited extension services to farmers and start-up operations. Provided inspection services for the cooperative aquaculture facilities permit to the Department of Land and Natural Resources. The aquaculture veterinarian provided critical diagnostic services to farmers for disease outbreak problems.

PLANT INDUSTRY DIVISION



Richard Kim
Plant Industry Administrator

The Plant Industry Division protects Hawai'i's agricultural industries and natural resources by preventing, detecting, and managing harmful insects, diseases, noxious weeds, and other pests and invasive species while minimizing the environmental impacts of pesticide use. Through inspection and quarantine services, export and interisland certification, pest and invasive species control programs, pesticide regulation, and proactive biosecurity measures—including early detection, eradication, enforcement, and public education—the division safeguards the state's agricultural economy, ecosystems, and communities.

PLANT PATHOLOGY UNIT

Josiah Marquez, Ph.D.
Plant Pathologist

The Plant Pathology Unit provides statewide diagnostic services, conducts early detection surveys, supports disease response, develops educational materials, and leads investigations of high-risk priority pathogens for the state. In 2025, the unit advanced detection capacity and laboratory infrastructure, expanded molecular diagnostics, while responding to new pathogen threats.

2025 Highlights

- Continued upgrades to the in-house Laboratory Information Management System (LIMS) to strengthen sample tracking, workflow automation, data management, and reporting.
- Continued documentation for National Plant Diagnostic Network (NPDN) quality control accreditation of plant diagnostic clinic services.
- Secured new laboratory space at the Animal Industry Veterinary Diagnostic Laboratory (Hālawā) and invested in molecular diagnostic equipment to expand species- and subspecies-level identification capabilities.
- Conducted seven educational events for University of Hawai'i (UH) - College of Tropical Agriculture and Human Resilience (CTAHR) Master Gardeners and Plant and Environmental Protection Science (PEPS) classes, pesticide workshops, and GoFarm Hawai'i trainings.
- Detected a new plant disease, aroid rust (*Pseudocercospora paullula*), during a federally funded Plant Protection Act (PPA) 7721 survey; follow-up visits at 86 sites confirmed a recent, limited

incursion on Kaua'i and Hawai'i Island.

- Issued pest alerts, published educational articles, and developed detection and management tools for inspectors, nurseries, and monstera growers.
- Provided targeted management guidance to nurseries participating in the state's Phytosanitary Certification Program.

Invasive Pest Surveys (CAPS / PPA 7721)

The unit and UH collaborators completed multiple federally funded early detection surveys targeting high-risk diseases and pests.

Tropical Host Survey

- 138 visual observations; 41 samples collected
- All samples tested negative for *Candidatus Phytoplasma australiense*, TR4, *Peronosclerospora philippinensis*, *Colletotrichum kahawae*, *Moniliophthora perniciosa*

Vegetable Host Survey

- 177 visual observations; 64 samples collected
- All assays tested negative for *Globodera* spp., cucumber green mottle mosaic virus, groundnut bud necrosis virus, and potato spindle tuber viroid. All diagnoses were recorded in the PPC/PI-PPATH database.
- One sample from a tomato grower on Kaua'i tested positive for Tomato brown rugose fruit virus (ToBRFV). The result was confirmed by the UH agrosecurity laboratory. The sample originated from the same field where ToBRFV was detected during a survey the previous year.
- One eggplant sample from Hawai'i Island has tested positive for *Ralstonia* spp. and is pending further tests to identify species and phylotype.

New Plant Disease Detection: Aroid Rust on Monstera

- Detected during a PPA 7721 survey (May 2025) at a Kaua'i nursery
- Follow-up: 86 site surveys statewide
- Evidence indicates a recent, limited incursion
- Pest alerts and management guidance provided to industry stakeholders and inspectors

Outreach & Education

Events held through:

- UH-CTAHR Master Gardener Program
- UH-CTAHR PEPS courses
- Pesticide workshops
- GoFarm Hawai'i
- Pest alerts and technical bulletins

GEOGRAPHIC INFORMATION SYSTEM (GIS) PROGRAM

Craig Clouet
GIS Program Manager

The program supports GIS across multiple functions, including field data collection, GIS mapping, and the development and maintenance of interactive dashboards. It also maintains department websites and manages specialized projects that leverage GIS technologies to support informed decision-making and planning.

- Newly hired GIS Manager finalized the required Biosecurity Dashboard.
- Dashboard was publicly available on November 24, 2025, pursuant to Act 236.
- Dashboard integrates detection, survey, risk analysis, and spatial modeling data.

MAJOR PEST PROGRAMS (2025)

The Plant Industry Division continued to manage multiple statewide pest programs in 2025. These programs focused on high-impact pests that threaten Hawai'i's agriculture, environment, and communities. Efforts were supported by Act 231 (SLH 2024) and Act 236 (SLH 2025), federal funding, and multi-agency partnerships.

Programs included:

- Coqui Frogs
- Little Fire Ant (LFA)
- Coconut Rhinoceros Beetle (CRB)
- Pest Detection & Rapid Response
- Plant Pathogen Surveillance and Early Detection
- Compliance Programs

Coqui frog, LFA, and CRB require coordinated, island-specific approaches to detection, suppression, and long-term management.

PLANT PEST CONTROL BRANCH

Yeong Han Lau, Ph.D.
Branch Manager

The Plant Pest Control Branch (PPC) is responsible for protecting Hawai'i's agricultural and natural resources through early detection, rapid response, monitoring, mitigation, and long-term management of plant pests and invasive species. PPC collaborates with federal, state, county, industry, and academic partners to identify, survey, control, and, where feasible, eradicate harmful plant pests across the state. In 2025, PPC continued to address a record number of statewide pest threats—from invasive insects and diseases to high-priority agricultural pests—while supporting core functions in diagnostics, surveys, biological control, and community outreach. The branch's work is essential to safeguarding Hawai'i's economy, food security, native ecosystems, and quality of life.

PPC operations in 2025 emphasized:

- Early detection of invasive insects, pathogens, and weeds;
- Rapid response to actionable detections;
- Containment and management of established pests with community and county partners;
- Development of biological control solutions for high-impact invasive species;
- Diagnostic support for plant pathogens and pest identification;
- Technical support to PQB, county partners, and growers; and
- Implementation of multi-agency programs targeting CRB, LFA, coqui, and other priority pests.

BIOLOGICAL CONTROL SECTION

The Biological Control Section (Biocontrol) continues to lead Hawai'i's science-based development, evaluation, and deployment of natural enemies to manage invasive plant and insect species. In 2025, the section worked with national and international partners to advance projects targeting several of Hawai'i's most damaging pests, while navigating constraints in staffing, facilities, containment capacity, and supply-chain limitations.

Biocontrol remains an essential long-term strategy for Hawai'i due to the difficulty, cost, and ecological impact of chemical and mechanical control of widespread invasive species. Work in 2025 focused on ongoing host-specificity testing, colony maintenance, petition preparation, environmental assessments, and strategic foreign exploration.

TAXONOMY UNIT

The Taxonomy Unit gathers and develops information for and provides information to interested parties on the occurrence, distribution, host plant association, and economic importance of insects within the state. The PPC insect taxonomist serves as the authoritative specialist and advisor in taxonomic entomology involving insect identifications, emphasizing insects of agricultural importance, their parasites, and their predators. The insect taxonomist left the program in March 2024 and we are working to fill the vacant position through internal and external recruitment.

New Pest Records & Early Detection Programs

Early detection is the most cost-effective strategy in pest and invasive species management. The Plant Industry Division relies on a coordinated network of surveys, diagnostics, public reports, and partner programs to identify new incursions before they spread. In 2025, Hawai'i faced several new or emerging threats, with notable detections in plant pathogens, invasive ants, CRB, and unexpected high-risk animals.

New Pest Detections of Insects and Other Arthropods

- *Raoiella indica* Hirst (*Acari: Tenuipalpidae*), **Red Palm Mite**

New State Record

A student in a University of Hawai'i at Mānoa (UHM) laboratory class brought in samples of a palm purchased from a local box store which showed some yellowing on the leaves. The sample happened to be infested with red palm mite. Samples were confirmed first by Dr. Michael Melzer of UHM to be red palm mite using molecular tools and followed by morphological identification by USDA National Identification Services. Subsequent surveys by PPC and UHM staff found red palm mite established on O'ahu, Maui and Hawai'i Island.

New Island Record

Hawai'i

- *Oryctes rhinoceros* (Linnaeus, 1758) (Coleoptera: Scarabaeidae), coconut rhinoceros beetle

INSECTARY UNIT

The Biocontrol Section's Insectary Unit receives, evaluates, and propagates beneficial organisms used for the biological control of agricultural and forest pests in Hawai'i. The unit screens all incoming insect and related organism shipments in the Insect Containment Facility; segregates and removes undesirable organisms; conducts host-specificity testing; studies the biology and host preferences of candidate agents; and develops techniques for reliable mass rearing.

The unit's primary functions are to assess and prepare biological control agents for potential release against invasive arthropods and plant pests, evaluate new pest infestations statewide, maintain containment facilities and equipment, and provide outreach and educational support as needed.

Major Biocontrol Projects

Devil Weed (*Chromolaena odorata*)

Chromolaena odorata was discovered in 2011. Once it became evident that attempts to eradicate *Chromolaena* would fail on O'ahu and *Chromolaena* populations continued to spread despite active control programs, the branch began coordinating and working with partners in Australia and the US Forest Service on the biological control, *Cecidochares connexa*, a gall-forming fly was identified. This biological control was developed by Dr. Michael Day for Department of Agriculture and Forestry with Queensland, Australia, for use in the Australia, Papua New Guinea and surrounding areas. The Biocontrol Section was going to lead the testing and evaluation of *C. connexa* but a hiring freeze during COVID followed by a key loss of staff forced the branch to pivot to a supporting role with US Forest Service as the lead agency. A partnership has been formed with US Army Garrison Hawai'i, US Forest Service, and Dr. Day (now an independent contractor) with support from Biosecurity Queensland and colleagues in Guam. The Biocontrol Section established a pathway to reliably obtain gall flies from Australia and Guam, despite COVID imposed transportation restrictions, to begin work on testing and evaluating the biocontrol agent by the US Forest Services. As of September 2025, testing is nearing completion and discussions are underway to begin preparing documents for a petition to release.

Christmas Berry (*Schinus terebinthifolia*)

The Biocontrol Section of the branch has historically been a partner with USDA-ARS, University of Florida (UFL) and Florida Department of Agriculture and Consumer Services on the search for biological control agents of Christmas berry, *Schinus terebinthifolia*, a serious weed of agriculture and the environment. Hawai'i has benefit from the project to develop *Pseudophilothrips ichini* into a biocontrol agent with specific Hawaiian plants tested at our request as facilities in Hawai'i are not rated and approved to contain thrips. This species was approved for release by USDA in 2019. Hawai'i was originally included in the petition to release but was removed from the petition with the understanding that once *P. ichini* was released, additional tests would be conducted in the field to help with the petition to release in Hawai'i. A petition to release is being worked on by the Biocontrol Section, US Forest Service and Department of Land and Natural Resources in addition to an outreach campaign as the honey bee industry, as in Florida, does utilize the nectar and pollen flow associated with Christmas berry for their industry. The Biocontrol Section is working with partners in Florida to collect information on impacts seen due to the release of the biocontrol agent. Results from reports from Florida are forcing a reevaluation of this specific project. Discussions are planned with partners on how we collectively want to proceed.

Macadamia Felted Coccid

Macadamia felted coccid (MFC), *Acanthococcus ironsidei* (Williams, 1973), is a scale insect in the family Eriococcidae, and is a very invasive pest of macadamia trees in Hawai'i. MFC infests macadamia trees by sucking sap from stems, branches, foliage, and nuts with its syringe-like mouthparts thus, resulting in the formation of yellow spots on the leaves, stunted growth of young tissues, and losses in

nut production. Heavy to severe pest infestation may result in the dieback of fruit-bearing trees or the death of young trees.

The macadamia felted coccid was first detected on macadamia trees in South Kona on the Hawai'i Island in 2005. It has since spread to other parts of the island and is impacting commercial as well as small-scale macadamia growers. Horticultural oils have been used for the control of MFC, but thorough spray coverage of trees is seldom achieved. Moreover, although natural enemies have been found present on farms on the island, the impact of these natural enemies is not sufficient to bring the pest numbers down to lower levels. MFC remains a perennial threat to macadamia farmers and the macadamia nut industry in Hawai'i.

A potential biocontrol agent of MFC was collected by the department in Australia in 2013 and is currently held in the department's Insect Containment Facility. *Metaphycus macadamiae* Polaszek & Noyes (Hymenoptera: Encyrtidae) is a tiny, microscopic wasp that parasitizes MFC by inserting one egg into an adult scale where the egg hatches into a larva, develops within, and matures into an adult, killing the host MFC in the process. This parasitoid completes development within the host in two to three weeks depending on the rearing temperature. Twelve economically important and endemic Hawaiian species of insects have already been evaluated against *M. macadamiae*. Thus far, the branch anticipates this biocontrol agent is host-specific to MFC and there will be no significant impact on the environment upon field release in Hawai'i.

A draft Environmental Assessment (EA) for the proposed statewide field release of *M. macadamiae* for the biological control of MFC in Hawai'i has been drafted and will be submitted for publication upon completion and analysis of final risk assessment tests. The branch has begun the process of petitioning for the release of *M. macadamiae* and is working with the UHM on finalizing the EA and the permit application for release.

Erythrina Gall Wasp

Although *Eurytoma erythrinae* was successful in saving the *Erythrina* trees, damage by Erythrina gall wasp (EGW), *Quadrastichus erythrinae* Kim (Hymenoptera: Eulophidae), on the flowers, seed pods, and seedlings of the endemic wiliwili (*Erythrina sandwicensis*) persists. Galls formed by EGW on flowers and seedlings are usually small and scattered but the *E. erythrinae* parasitoid fares well only on large galls. Furthermore, the formation of seed takes approximately three months, and all flower stages are susceptible up to mature seed formation. Seedlings are likewise vulnerable and easily succumb to EGW damage. Hence, the future survival of *E. sandwicensis* remains threatened.

Evaluation of a second biocontrol agent, *Aprostocetus nitens* Prinsloo & Kelly 2009, was completed and the department has submitted an application for its release to aid *E. erythrinae* in combating EGW. As part of this process, the branch published the Final Environmental Assessment (FEA) and Finding of No Significant Impact (FONSI) in January 2023 for the proposed statewide field release of *A. nitens* Prinsloo & Kelly (Hymenoptera: Eulophidae: Tetrastichinae) for the biological control of EGW with the Environmental Review Program. An application to place *A. nitens* on the department's List of Restricted Animals (Part A) and to allow the import and field release from the department's Insect Containment Facility (ICF) was submitted to the department's Plant Quarantine Branch (PQB). The FEA has also been submitted to the USDA Plant Protection and Quarantine for consideration in the Federal permitting process.

The branch's Insectary entomologist has been maintaining the *A. nitens* colony in ICF and assuring its survival while awaiting state and federal permits for release. This includes propagating and keeping the host plants for EGW healthy and clean, infesting the host plants with EGW, and finally exposing the infested host plants to the biocontrol agent, *A. nitens*.

Nettle Caterpillar Project

Darna pallivitta (Lepidoptera: Limacodidae), stinging nettle caterpillar (SNC), is a voracious foliage-feeding, stinging, invasive caterpillar first found on Hawai'i Island in September 2001. This invasive pest fed on high-value crops, including, ornamental foliage, pasture grasses, and indigenous flora. Moreover, SNC's nasty and painful sting could result in an allergic skin reaction. This invasive pest created a new issue that nurserymen had to deal with because of overhead expenses incurred from a shortage of farm help due to fear of getting stung by SNC and the urgent medical care that may go with it.

SNC spreads to the islands of Maui, O'ahu, and Kaua'i soon after its discovery on the Hawai'i Island. Initial efforts to contain the pest with chemical pesticides and other preventative measures proved not only ineffective but costly. Hence, DAB-PPC began to search for a natural enemy to research as a potential biocontrol agent.

Aroplectrus dimerus Linnaeus is a hymenopteran parasitoid (Family Eulophidae) collected from Taiwan during exploration in 2004 and attacks the larva of SNC in all instars of development. Risk assessment evaluation of twenty-five species in 13 families of Lepidoptera showed that the parasitoid is highly specific to SNC and would not pose a threat to non-target organisms in Hawai'i. *A. dimerus* was approved for liberation in Hawai'i by state and federal regulatory agencies in 2010.

In May 2010, DAB-PPC began statewide field releases of *A. dimerus*. The effectiveness of *A. dimerus* as a larval biocontrol agent translated to a steady decline in moth abundance over time, bottoming out to its lowest pest density within three years after its liberation. Moth catches tallied in nearly 200 pheromone-baited traps deployed on the islands of O'ahu, Hawai'i, Maui, and Kaua'i were at the lowest since the invasion of SNC. Persistent parasitization of SNC larvae by *A. dimerus* had effectively suppressed the pest larvae from completing development into mature moths, thus, negating pest build-up to epidemic proportions.

The introduction of this highly specific natural enemy in Hawai'i has continued to mitigate the damage inflicted by the stinging nettle caterpillar on high-value plants. In addition, people have been relieved of burning stings and skin allergies. Similar assessment as well was echoed by community residents and plant growers in their statements, like, "We do not get stung anymore," "we hardly see the stinging caterpillar," "thankful for the job the wasp has done," "understand and appreciate more the value of biological control," among others.

A few months after the release of *A. dimerus*, a hyperparasitoid (a parasitoid attacking the beneficial biocontrol agent parasitoid) emerged in a holding jar of field-collected stinging nettle caterpillars that were parasitized by the recently released agent *A. dimerus*. The SNC larvae were collected from a Waimānalo, O'ahu, nursery where a large population of SNC larvae had ravaged potted areca palm plants. Parasitized SNC were examined in the lab and revealed that some pupae of the biocontrol agent *A. dimerus* appeared darkened. Dark colored hyperparasitoids emerged from the *A. dimerus* pupae shortly after. This tiny hyperparasitoid was determined to be *Pediobius imbreus* Walker (Hymenoptera: Eulophidae), a generalist parasitoid wasp that has been established in Hawai'i for over a century. First collected in 1917, *P. imbreus* was reared as a hyperparasitoid from the cocoon of the braconid wasp *Bracon* (= *Microbracon*) *omiodivorus*, which is a common primary parasitoid of caterpillars. Another documented host record is the Ichneumonid wasp *Cremastus* (= *Trathala*) sp. collected in 1949.

The adult *P. imbreus* hyperparasitoids collected from Waimānalo are black with a yellow-green iridescence, the female about 1.6 mm in body length and the male about 1.4 mm (about 1/16th inch). According to the original description of *P. imbreus*, normal coloration is with a blue-green iridescence, which matches the five older specimens in the DAB insect collection dated between 1917 and 1951.

However, the newer Waimānalo specimens have a yellow-green iridescence, which may cause some confusion. This difference may be due to a Waimānalo color variant or the result of dead specimens changing color over time.

Due to the high prevalence of this hyperparasitoid statewide, population flare-ups of stinging nettle caterpillars have continued. Therefore, Insectary staff continue to rear *A. dimerus* and engage in augmentative (supplemental) releases of this biocontrol agent in the field. Approximately additional 1840 parasitoids have been released since PPC started augmentative releases about two years ago.

Rearing *A. dimerus* also requires rearing of the pest host, larval SNC, and propagation of SNC host plants. Although SNC has a wide host range, areca palms and ti leaves suit our purposes better in the Insectary. Areca palms can support all the life stages of SNC, and adult moths prefer to lay their eggs on areca palm fronds. Furthermore, Insectary staff continue to keep host plants healthy and free of other pest insects which is essential for the continuation of our *A. dimerus* colony.

Fireweed (*Senecio madagascariensis*)

Fireweed biocontrol programs have been paused due to lack of funding and staffing. While *Secusio extensa* has been released and is established in the environment as anticipated, the impact of this leaf defoliating caterpillar is not sufficient to exert landscape level control of fireweed. The Biocontrol Section was maintaining a second biocontrol agent, a stem-boring weevil, *Gastroclisus*. This potential biocontrol agent has a long-life cycle, and it has been difficult to rear the weevil and maintain a self-sustaining colony. In fiscal year 2025, the colony was lost. We are reaching out to CSIRO in Australia for a back-up colony.

Citrus Blackfly (*Aleurocanthus woglumi*)

Plant Pest Control staff assisted experts from Greece to collect parasitoids of the citrus black fly which has been negatively impacting both citrus and grapes in Greece. Collections of the parasitoid were successful. The department has also initiated communication with the Republic of the Marshall Islands to provide support on citrus black fly. We are waiting to get additional information on the hosts affected and positive confirmation of the species before launching a support program. We are also receiving inquiries for work to support Palau. We will be working with US Forest Service to assist partners in the Pacific.

Hala Scale (*Thysanococcus pandani*) — Foreign Exploration Initiative

Hala Scale, *Thysanococcus pandani*, (Hemiptera: Coccoidea: Halimococcidae) is native to Southern Asia and the Pacific islands. There are no known effective measures to combat or control Hala scale. Pesticides and other control options have proven unsuccessful. Surveys to locate extant biocontrol agents were not successful and specialized new candidates are needed. For this expedition, natural habitats in the native range of *Pandanus* (coastal areas in Indonesia, and Thailand) will be surveyed to study the natural enemies of the Hala scale. Potential biocontrol agents may include parasitoids or predators which exclusively parasitize or feed upon *Thysanococcus pandani* or related scales on *Pandanus* trees.

Lobate Lac Scale (*Paratachardina pseudolobata*)

The Lobate Lac Scale, *Paratachardina pseudolobata* (Hemiptera: Coccoidea: Kerriidae), native to Southeast Asia, infests more than 300 species of economically important and native plants in southern Florida and the Bahamas.

Limited research has been conducted on this species, whose exact origin is still unknown, and no effective biocontrol agent has been discovered. Chemical control can successfully manage this pest, but it is too expensive and inappropriate for large scale usage in natural areas. Biological control is

probably the most viable long term control method and generally has a high success rate against scale insects. Extant natural enemies of this pest are absent or ineffective in Florida and Hawai'i. Surveys for new biocontrol agents in the native habitats of the pest are essential. Recent surveys on related species in India and Sri Lanka showed that a species of *Paratachardina* does not cause problems in its area of origin presumably due to activities of various natural enemies.

APIARY PROGRAM

The Hawai'i Department of Agriculture and Biosecurity (DAB) Apiary Program is dedicated to protecting the beekeeping industry in Hawai'i by implementing science-based regulations, conducting regular monitoring, preventing the spread of invasive honey bee pests, offering interactive educational opportunities, and maintaining open communication with beekeepers across the state. The beekeeping industries in Hawai'i include queen bee rearing for domestic and international export, honey production, pollination, and producing an array of value-added products from the hive. North American pollination services greatly depend on the queen bees Hawai'i provides, contributing to the Value of crop production: US domestic is valued at \$15 to \$20 billion in 2022 (American Beekeeping Federation); and Canada is valued at \$7 billion in 2022 (Canadian government). The local economic value of Hawai'i's honey industry in 2021 was \$4,129,000 (USDA National Agricultural Statistics Service). The queen rearing industry in Hawai'i is valued close to \$18 to \$20 million.

Biosecurity: The Apiary Program maintains a network of traps for the detection of exotic races of bees that may affect native pollinators, and for the detection of exotic new pests and diseases and to prevent the unwanted movement of pests and diseases between islands. No new exotic bee races, pests or diseases were detected in 2024.

Certifications: A key function of the Apiary Program is the certification of queen breeders. Hawai'i's queen breeders produce honey bee queens for export to the continental United States, Canada, and other foreign countries. Our queens are vital in ensuring pollination services for much of the world's food crops. Hawai'i's queen bees are projected to provide 40% of US mainland demand and 60% of Canadian demand. This year, the Apiary Program certified seven queen breeders. A total of 19 certification inspections were conducted for domestic and international use. It is estimated that 500,000 queens are exported annually. Canada is our primary export market for queens; 79 certificates for nearly 250,000 queens were issued by the Apiary technician for two companies. There were no reports of failed inspections due to pests and/or diseases of the hive.

The Apiary Program currently functions with no staff in Hilo, Hawai'i. The Hawai'i Island entomologist has been tasked with running the Apiary Program while active recruitment is currently underway to hire technicians for the program.

Kaua'i, Moloka'i and Lana'i being affected the most. This results in difficulties when effectively protecting and monitoring all our ports of entry for honey bee pests and diseases into Hawai'i, especially O'ahu, as they are the first port of entry for most of our cargo and goods being imported. There are not enough staff to effectively respond in the event that a new pest or exotic bee race, such as *Tropilaelaps* and Africanized honey bees, is discovered. This deficiency poses a significant threat to the viability of our honey bee industry.

In Fiscal Year 2025, swarm traps were maintained at the ports on Hawai'i island for early detection of pests to the European honey bee. These traps were located at Hilo Harbor, Hilo Airport, Kona Airport, and Kawaihae Harbor. Swarms caught in the traps were tested for brood diseases, varroa mite levels and if warranted, samples were sent to the UHM for genetic analysis to verify the presence of Asian honey bee genetics or Africanization.

The Apiary Program activities throughout the state

- Monitor traps near state ports of entry to prevent the arrival of invasive pests and diseases of honey bees. Our goal is to maintain biosecurity and environmental safety.
- Conduct quarterly inspections of all honey bee queen breeder operations in Hawai'i to ensure queen bees for export are in good health and apparently free of pests and diseases. This is being done to maintain the health and well-being of our bee populations.
- Offer technical assistance to beekeepers to support them in maintaining the health and vitality of their colonies.
- Assist residents who need help removing honey bee swarms and hive relocation in Hawai'i.
- Vigilantly monitor any suspicious or illegal activities related to bringing honey bees, queen bees, or used equipment into Hawai'i. Illegal importation of honey bees, queen bees, or used bee equipment into Hawai'i can result in a class C felony and penalties of up to \$200,000 [150A-14(C)].

Apiary Program Activities and Highlights for 2025

- Maintaining queen breeding inspections:
 - Seven honey bee queen breeders received honey bee inspections every quarter
 - 20-25 hives assessed per inspection
 - A total of about 19 inspections
 - About 440 hives have been inspected
 - Processed 79 Export Certificates to queen breeders. These export certificates allow the breeder to export queen bees from Hawai'i to Canada
 - Two breeders ship to Canada and the U.S. mainland
 - Seven breeders ship to the U.S. mainland only

Queen Breeders & Export Certification	
Queen Breeding Companies	7
Hawaii Island Queen Breeders	7
Domestic Annual # Inspections	19
Canadian Annual # Inspections	6
# Breeders Shipping to Both Canada & U.S. Mainland	2
# Breeders Shipping to U.S. Mainland Only	7
Annual # of Export Certificates to Canada	76
Annual # Hives Examined	440
Annual # Apiaries Visited	60
Failed Inspections	0

Hawai'i continues to remain free of the following detrimental honey bee pests:

- Africanized honey bees (*Apis mellifera scutellata*)
- Asian honey bees (*Apis cerana*)
- *Varroa jobcobsoni*, *Acarapis woodi*, and *Tropilaelaps clareae* (parasitic mites)
- Apimyiasis
- Nosema
- In 2025, there were no detections of the following:
 - Stonebrood disease
 - American foulbrood disease
- Small hive beetle is consistently present through every inspection, with every hive
- Wax moths are only observed in weak hives but not in high enough populations to be considered a major pest

Honey Bee Hive Health	
European Foulbrood Positive Hives	0
American Foulbrood Positive Hives	0
Stonebrood Positive Hives	0
Visible Nosema Symptoms	0
# Inspections with Varroa Mite Count over 1%	0

Maintaining biosecurity at maritime ports:

- Checked honey bee swarm traps at all Hawai'i Island ports of entry (Hilo Harbor, Hilo Airport, Kona Airport, and Kawaihae Harbor).
- Checked swarm traps every two weeks for Africanized honey bee (AHB) swarms
- Processed all DAB swarm traps that caught honey bee swarms and processed Invasive Species Committees' (ISC) swarm traps (pictures and data sent over)
- Swarms from traps were tested for brood diseases and varroa mite levels, and samples were sent to UH Mānoa for Asian and Africanized honey bee genetic analysis (*Apis cerana* and *Apis mellifera scutellata*)
- Educated and worked with port workers on what to look for concerning honey bee pests, swarms, and invasive hornets/wasps
- Performed swarm trap training for Kaua'i Invasive Species Committee, Maui Invasive Species Committee, O'ahu Invasive Species Committee, USDA, and Hawai'i Invasive Species Council (HISC) staff
- Kaua'i staff maintained 12 swarm traps on island which caught a single swarm. No varroa mite was found in the trap.

Biosecurity	Hilo Maritime	Kawaihae Maritime	Hilo AOA	Kona AOA	Total
# of Traps Maintained Near Ports of Entry	4	8	18	8	38
# of Times Traps Were Checked Annually	16	16	16	16	64
Annual # of Swarms Processed	1	1	1	1	4
Total Annual # of Traps Checked					106

Current projects:

- Working on an Early Detection Rapid Response Plan of Action and educational material for AHB
 - Working with the ISC groups and training their employees in hopes they can effectively maintain AHB swarm traps throughout the state (except for Hawai'i Island)
 - Participating in monthly meetings with the AHB working group
- Tracking the evolving *Vespa mandarina* (northern giant hornet) and *Vespa velutina* (yellow-legged hornet) situation in the U.S. mainland
- Experimenting and formulating the best types of traps and lures to place at maritime ports for invasive hornets and honey bees
- Participating in the national survey for hornets in our local area
 - This involves setting up sentinel traps in key locations to understand our current wasp/hornet population and also to potentially catch hornet species not yet reported in Hawai'i
- Continuing to work with the USDA Baton Rouge honey bee lab on assorted honey bee issues
- Developing educational flyers for the public concerning honey bee pests, diseases, environmental concerns affecting honey bees, basic beekeeping tips, honey bee behavior, and state of Hawai'i regulations
- Developing and updating standard operating procedures for the Apiary Program
 - Biosecurity
 - Interisland honey bee regulations
 - Queen breeder certificates
 - Canadian certification
 - Pest level tolerance

Public & Community Outreach:

- Responding to calls from the public concerning honey bee nuisances
 - Swarm removal calls in residential and public places
 - Educate citizens on bee behavior and biology

Other:

- Maintaining DAB Apiary and fine-tuning beekeeping skills to better help the beekeepers and understand the changing environment and conditions under which queen breeders go through as well, to better assist

CHEMICAL AND MECHANICAL CONTROL (CM) SECTION**Coconut Rhinoceros Beetle (*Oryctes rhinoceros*)**

The Coconut Rhinoceros Beetle (CRB), whose larvae feed on decaying organic matter and adults attack and feed on palms and other plants when infestations are high had been contained to O'ahu by the CRB Response Project administered by the University of Hawai'i since 2013. However, beginning in late 2023, the beetle has managed to establish on the islands of Kaua'i, Maui, and Hawai'i.

*CRB larvae*

DAB continues to lead a multi-agency effort to manage CRB infestations across O‘ahu, Hawai‘i Island, and Kaua‘i. Detections on Maui, Kaua‘i, and Hawai‘i Island in 2023 confirmed that eradication of CRB from O‘ahu was no longer feasible due to multiple established breeding populations and likely spread via green waste and nursery pathways. As a result, statewide funding from various sources has increased to support containment and eradication efforts targeting incipient populations on West Hawai‘i Island. Nevertheless, Kaua‘i CM staff continued to monitor and maintain CRB traps in Kaua‘i.

Since CRB larvae were first detected at a golf course in Kīhei, Maui, in 2023, traps in the surrounding area have been continuously monitored. Preventive tree injections were conducted to protect standing palms. Maui CM staff had treated 35 coconut trees. Additional treatments had been scheduled for Kahului Airport and Kahului Harbor. Fifty-four CRB coconut palm damage surveys were conducted and 26 new CRB traps were deployed. A total of 119 CRB traps were checked and maintained by Maui CM staff. In addition, following the two detections of CRB in potted plants coming from O‘ahu to Lāna‘i, surveys were conducted in Lāna‘i, and 10 CRB traps were deployed in strategic places around the island.

In March 2025, CRB was detected in North Kona, Hawai‘i Island. Palm crown treatments were conducted around Ellison Onizuka International Airport, Keāhole Agricultural Park, Kohanaiki Golf Course, the Natural Energy Laboratory of Hawai‘i Authority, and Honokōhau Marina—establishing a three-mile treatment buffer around the initial detection site. As of December 2025, approximately 2,000 palm crowns have been treated.

DAB also led a coordinated effort with multiple state and county agencies to remove and fumigate CRB breeding material: approximately 200 tons from Keāhole Agricultural Park and 278 tons from Ellison Onizuka International Airport. Personnel from the Hawai‘i Department of Transportation Highways Division and the Hawai‘i County Department of Environmental Management transported treated materials to a West Hawai‘i green waste processing facility to ensure that no surviving CRB remained.



PPC staff treat the crowns of palm trees at Ellison Onizuka International Airport in Kona to protect them against CRB



DAB staff treat palm trees in Waikoloa Village via insecticide injection



Hawai‘i Department of Transportation assisted with heavy equipment in removing treated compost material at Keāhole Agricultural Park on Hawai‘i Island.

Coqui Frog (*Eleutherodactylus coqui*)

Coqui frog is established and widespread on Hawai'i Island, and coqui frog efforts are focused on the islands of Kaua'i and Maui with responses to reports based on male vocalizations being prioritized. In Kaua'i, CM staff worked with Kauai Invasive Species Committee (KISC) to control and eradicate coqui frogs. More than 40 pest calls regarding frogs were received and more than 200 coqui frogs were captured or killed. Thirty-one acres of land was surveyed for coqui frogs, and 3.58 acres were treated with citric acid. Kaua'i CM staff also assisted four commercial nurseries in their control efforts. On Maui, in response to coqui frog reports from the public, Maui CM staff conducted night operations and hand-captured coqui frogs. In addition, 200 gallons of citric acid were applied in one nursery, and 355 pounds of citric acid were given to the public and business to control coqui frogs.

Little Fire Ant (*Wasmannia auropunctata*)

The Little Fire Ant (LFA) is established and widespread on Hawai'i Island. Populations on Maui, O'ahu, and Kaua'i can be quite large and extensive, but staff of the CM section continue to assist in control programs. Kaua'i and Maui CM staff continue to work with their respective Island Invasive Species Committee, the Hawai'i Ant Lab (HAL), and their respective Counties. Kaua'i CM personnel assisted Hawai'i Ant Lab and Kaua'i Invasive Species Committee members in monitoring and treating for LFA at infested properties. Kaua'i CM staff also responded to pest calls from island residents. Two new nurseries were found to be infested with LFA on Kaua'i. On Hawai'i Island, CM staff provide technical support for other agencies as well as surge support for other islands. On Maui, seven nurseries were surveyed with no LFA detections.

Outreach and Pest Calls

CM staff responded to pest calls from the public and conducted educational outreach activities throughout the entire state to educate the public on issues related to agricultural pests and noxious weeds. CM staff also attended tradeshows and conferences such as Nutrien Ag's Annual Hawai'i Island Tradeshow, Annual Hawai'i Cattleman's Association Conference, Hawai'i Coffee Growers Conference to interact with stakeholders. On Maui, CM staff received 77 pest reporting phone call from the public and 36 of the calls were regarding CRB.

On Kaua'i, the CM staff responded to pest calls regarding pests and plant disease such as coqui frogs, little fire ant, coconut rhinoceros beetle, mongoose, stinging nettle caterpillar, Banana Bunchy Top Virus, giant African snails and Myoporum thrips. The Kaua'i CM staff provided training to employees of Waimea Plantation Cottages on the use of INTELI-jet micro-injection system for CRB treatment and responded to requests for CRB treatment information from the public.

On Hawai'i Island, CM staff attended Honoka'a High School's Career Day and spoke to students of the Future Farmers of America Program about possible career opportunities in Biosecurity and DAB. Hawai'i CM staff also assisted Biocontrol staff in responding to a new infestation of Two-lined Spittlebug (TLSB) in Mountain View, Hawai'i. This was the first time TLSB was detected on the east side of the island.

Seed Inspection

Routine surveys of agricultural and vegetable seed vendors were conducted around the State to ensure that seed packages sold to consumers were properly labeled or within expiration dates. The CM staff conducted seed package inspections at 20 retail stores in Hawai'i Island, eight in Kaua'i and 19 in Maui.

Under an agreement with the US Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), the CM staff examines seed lots entering the U.S. from foreign ports. This year, USDA did not request any examination of seeds. There were 53 Seed Importer's Licenses issued by the branch to seed vendors and distributors who sell and/or package seeds for sale in Hawai'i. A total of \$1,325 was collected from fees associated with these licenses.

SUPPORT FOR COFFEE BERRY BORER (CBB) & COFFEE LEAF RUST (CLR)

The Pesticides Branch worked with the County of Hawai'i and industry partners to support pesticide-based management of CBB and CLR.

2025 Program Activity

- County of Hawai'i received \$135,000 to administer the cost-share subsidy program for approved organic microbial pesticides used for CBB control.
- Program expanded to support CLR mitigation, including the use of fungicides where appropriate.
- Branch provided technical guidance on proper product use, label restrictions, and integrated pest management compatibility.

Grower access to effective pesticide tools continues to be a priority for maintaining Hawai'i's coffee industry viability.

PLANT QUARANTINE BRANCH

Jonathan Ho
Branch Manager

The Plant Quarantine Branch (PQB) is the state's first line of defense against the introduction and interisland spread of pests and invasive species. PQB is responsible for inspecting, certifying, and regulating the movement of agricultural commodities, live plants, animals, microorganisms, and soil at all ports of entry. The branch also maintains permitting, compliance, animal interception, rapid response, data management, and enforcement functions essential to Hawai'i's biosecurity system.

In 2025, PQB operated statewide with 95 inspectors, aides, and technicians on O'ahu, Kaua'i, Maui, and in Kona and Hilo on Hawai'i Island, working at airports, seaports, shipper warehouses, express carriers, and U.S. Postal Service facilities. PQB also leads the state's snake interdiction readiness, manages major public-facing compliance programs, and supports statewide detection and control efforts for CRB, LFA, and coqui frog.

IMPORT INSPECTIONS

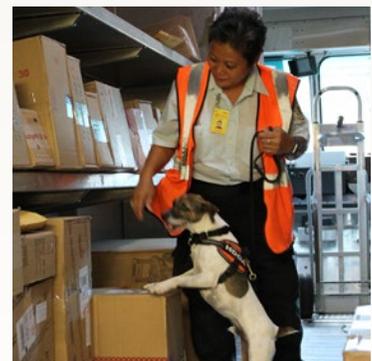
Import inspection remains PQB's largest operational responsibility and is the only state agency with this statutory mandate and authority to conduct these inspections. The inspection of regulated commodities primarily occurs at the first port of entry.

2025 Import Inspection Summary

- 8,238,266 lots of regulated commodities inspected statewide.
- 2,856 lots required treatment, destruction, confiscation, or shipment out of state.



PQB Inspector Techie Lancaster and PQB Technician Glen Leon Guerrero surveilling parcels for regulated commodities at a carrier facility.



PQB Canine Handler Theresa Manzano with her trained detector dog, Kai, searching express mail parcels.

Regulated Commodities

- Propagative plant material such as live plants, cuttings, seeds, etc.
- Cut flowers and foliage
- Fresh produce
- Moss, hay, straw, and other unprocessed plant materials in the raw or natural state
- Soil, known cultures of microorganisms, and microbial products
- Live non-domestic animals
- Containers, pallets, and transport vehicles

Highly perishable commodities arriving via surface vessel are inspected directly at importer facilities to ensure timely clearance and maintain product quality.



PQB Inspector Techie Lancaster inspecting fresh produce for pests at a transportation company



PQB Inspectors Carrie Itoman and Theresa Manzano inspecting shipments of live fish, cut flowers and live insects at an express mail carrier facility.



PQB Inspector David Niide inspection a shipment of cut flowers.

Data Management & Technology Systems

PQB continued major modernization work on the Kupono system, including:

- Upgraded online pest reporting
- Integration of phytosanitary certificate generation
- Enhanced export and interisland certification modules
- Customized reporting tools for management, operations, and enforcement
- Continued use and refinement of the E-manifest system

Akamai Arrival Program (Digital Declaration System)

To modernize the Plant and Animal Declaration Form, the Akamai Arrival Program was launched statewide through a pilot program with all major domestic carriers beginning March 1, 2025. The goal was to use technology to enhance the traveler experience by eliminating paper forms, while maintaining the ability for PQB inspectors to conduct inspections. PQB, with the assistance of the Office of the Lieutenant Governor, worked directly with all carriers, enabling them to be a part of the implementation process, including selecting the intimal routes that would participate and distribution/ dissemination of the declaration. The program has been continually expanded since inception and now covers all domestic flights to Hawai'i.

- Averaged 73% completion rate (vs. ~60% paper form rate)
- Provided inspectors advance visibility on declared items
- Reduced reliance on paper forms
- Enabled targeted inspections as passengers deplane
- Ongoing interface improvements underway for traveler experience and airline submission of data

Permit Processing & Issuance

PQB utilizes permits to minimize the risk of pest spread or introduction by establishing requirements that need to be met prior to importation. These requirements can include treatments, certifications of origin, disease testing, containment requirements, etc. that are scientifically validated as reducing risk. The conditions go through a rigorous review involving PQB staff and in most instances, independent advisory review before approval by the Board of Agriculture and Biosecurity.

PQB administers import and possession permits for:

- Restricted plants
- Non-domestic animals
- Known cultures of Microorganisms
- Microbial products
- Soil
- Intrastate movement of regulated materials such as 'ōhi'a logs and coffee plants

2025 Permit Activity

- 620 import permits issued
- 211 Letters of Authorization issued for nonrestricted microorganisms
- 329 microbial product registrations
- 44 intrastate permits (ROD host materials, coffee commodities, etc.)

While the permitting process can be onerous, the system is designed to balance the needs of business and research, while ensuring the implementation of strict safeguards to prevent pest introduction, including protecting public and animal health and safety.

SNAKE HANDLING PROGRAM & BROWN TREE SNAKE (BTS) INTERDICTION

Hawai'i has no native terrestrial reptiles, and the establishment of any snake species would pose a serious threat to many of the State's threatened or endangered bird species. PQB maintains a program focused on the BTS, one of the world's most damaging invasive species. To prevent BTS or any other snake from becoming established in Hawai'i, PQB operates a snake capture training program that teaches staff to distinguish between venomous and non-venomous species and prepares them for real-world search scenarios, including the safe capture and handling of wild snakes. These training courses are conducted in Guam.

Snake Handling Training

Two training sessions occurred in 2025:

- April 21–25 (Guam)
 - 5 inspectors trained - 3 O'ahu, 1 Hilo, 1 Maui
- September 8–12 (Guam)
 - 5 inspectors trained - 4 O'ahu, 1 Hilo

Training partners included:

- U.S. Geological Survey (USGS)
- Guam National Guard
- U.S. Department of Agriculture - Wildlife Services

Program Summary

- Approximately 80% of PQB staff statewide are now snake-handling certified
- Guam is ideal for safe, realistic training using wild BTS
- Trainers arrive early to prepare facilities, collect live BTS, and ensure safe search areas

Brown Tree Snake Grant

PQB has applied annually since 2020 for U.S. Department of Interior interdiction funding for BTS. The grant includes funds for the inspection of all arriving aircraft and surface vessels that originate from Guam, including other areas in the world where BTS are known to occur; the deployment and maintenance of BTS traps.

In FY 2025:

- 1,463 of 1,489 flights (98.2%) from Guam and other areas where BTS are known to be established were inspected and cleared
- BTS detector dog teams deployed regularly
- PQB conducts fenceline searches 3x/week at Joint Base Pearl Harbor Hickam (JBPHH)
- PQB maintains 32 strategically placed BTS traps throughout JBPHH and Daniel K. Inouye International Airport
- Potential future loss of federal funding remains a concern

PEST REFERRALS & RAPID RESPONSE (PQB-LED)

The PQB maintains the statewide Pest Hotline, 808-643-PEST (7378), which allows anyone to report prohibited or illegal animals, actionable pests, and regulated organisms. PQB staff screen all reports and respond statewide to credible reports of prohibited animals, actionable pests, and regulated organisms.

2025 Pest Referral Summary

- 352 reports statewide, including:
 - snakes
 - skunks
 - opossums
 - iguanas
 - bearded dragons
 - coqui frogs
 - plant pathogens (alongside Plant Pathology Unit and PPC)

Examples:

- Kaka'ako skunk (June 2025) – secured by HPD; tested negative for rabies
- Kaimukī ball python (June 2025) – likely escaped illegal pet
- Kona opossum (January 2025) – captured at big box store
- Iwilei opossum (December 2024) – trapped via PQB-deployed traps
- Hilo gopher snake (November 2024) – found in Christmas tree shipment

PQB's rapid responses help prevent establishment of high-risk species, many of which are not established in the state or could introduce significant diseases of concern such as rabies.

NURSERY CERTIFICATION & COMPLIANCE PROGRAMS

PQB maintains various programs to facilitate the movement of clean nursery stock, provided that participating nurseries are in compliance with all established requirements.

Rapid ‘Ōhi‘a Death (ROD) Soil Program

This program is used in certain circumstances for nurseries that use soil as a potting medium but are at very low risk for ROD introduction/establishment within the nursery.

- Compliance agreements with select nurseries shipping soil to minimize spread of ROD
- Includes regular soil testing and implementation of sanitation BMPs

California Master Permit QC650

PQB maintains the QC650 Master Permit with the California Department of Food and Agriculture (CDFA), which CDFA reviews and has renewed on an annual basis. The nurseries in the program are located across the state and are required to comply with specific facility design, plant propagation and handling procedures, pest management, and data collection requirements. PQB staff inspect each nursery at least two times per year and annually tests each nursery’s certified stock for the presence of plant parasitic nematodes of quarantine significance. PQB staff work closely with CDFA officials to address issues as they arise. A list of all participating nurseries and their certified inventories can be found on the department’s website.

- 110 nurseries certified
- 248 inspections conducted
- 22,685 plants tested for nematodes/other quarantine pests
- Compliance strictly enforced for facility design, pest management, and data reporting

CHRISTMAS TREE INSPECTION PROGRAM

PQB works with the Oregon Department of Agriculture and Washington State Department of Agriculture to ensure pest-free holiday tree shipments through best management practices and phytosanitary certification protocols.

2020–2024 Compliance Trend				
Year	Total	Non-compliant	Passed	Compliance
2020	154	12	142	92%
2021	148	3	145	98%
2022	146	2	144	99%
2023	120	0	120	100%
2024	136	1	135	99%

The 2025 shipment season appears to maintain a similarly high compliance rate.



PQB staff looking for pests or other invasive species on Christmas trees at the container yard.

COMPLIANCE & ENFORCEMENT

PQB enforces HRS 150A, supported by an MOU with the Hawai'i Department of the Attorney General.

2025 Investigations

- 77 investigations conducted statewide
- 55 involved importations of a regulated commodity without a permit
- PQB maintained its “first offense written warning” policy
- Only one repeat violator identified, but findings showed the importer did not request prohibited organisms (shipper error)

EDUCATION & OUTREACH

PQB conducted 78 education and outreach events, with 37,742 public interactions, including:

- 9 school visits
- 23 stakeholder meetings
- 11 job fairs
- 35 community events

Activities emphasized:

- Biosecurity awareness
- Identification and reporting of high-risk pests
- CRB and LFA prevention
- Traveler compliance with import laws

Plant Pathology staff conducted seven additional disease-oriented educational events.



PQB inspector Shao Cheah conducting education and outreach activities about pests and other branch functions with the public.

TRAVEL SUMMARY

PQB conducted extensive interisland and international travel in support of:

- Field inspections
- Operational assistance
- LFA surveys
- Snake training (Guam)
- CRB treatments (Hawai'i Island)
- Biosecurity delegation (New Zealand)
- ESRI GIS Conference (San Diego)
- National Plant Board
- Communication Officers of State Departments of Agriculture (COSDA) Conference
- Airport Operations Area (AOA) badge renewals

HAWAI'I ADMINISTRATIVE RULES (HAR) UPDATES

HAR 4-72 (Plant & Non-Domestic Animal Quarantine)

Permanent rule approved by Governor Green on January 10, 2025, including:

- CRB restrictions made permanent (from Interim Rule 23-1)
- Inspection & permit fees established
- Authority to prohibit movement of infested materials
- Penalties for non-compliance
- Clarification and grammar/formatting updates

Rule became effective January 20, 2025.

Interim Rule for Moloka'i (2025)

- Effective September 24, 2025
- Bans movement of plants, soil, gravel, and CRB host materials from any island in the state to Moloka'i
- Based on community petition submitted by Ipo & Kunani Nihipali

LITTLE FIRE ANT (LFA) DETECTION & RESPONSE

LFA continues to spread across Hawai'i, requiring coordinated detection and rapid treatment.

2025 O'ahu Data

- 82 surveys conducted
- 31,032 samples collected
- 2,791 samples positive
- 22 infested sites identified
- New ant species detected at Honolulu Harbor: *Trichomyrmex* sp. nr. *mayeri*
 - Referred by Hawai'i Ant Lab
 - Treatments ongoing

Statewide Status

- O'ahu: Over 60 sites now known or under treatment (up from 35 in 2022)
- Kaua'i:
 - 15 LFA sites
 - 47 residential properties
 - 9 agricultural facilities
 - 6 nurseries under active monitoring
 - 100+ acres under coordinated treatment
- Maui: DAB staff assist MISC; treatments ongoing as needed
- Hawai'i Island: HAL continues education and outreach

Treatment Capacity

- Residential LFA treatments initiated through Rentokil-Terminix (Act 231 funding): 104 residential treatments (2025)
- PQB staff conducted 9 PQB-led treatments on O'ahu.

COQUI FROG RESPONSE

DAB continued to support the Invasive Species Committees (ISCs) by supplying citric acid, technical guidance, and joint operations.

2025 Results

- 218 coqui responses on O'ahu
- 2,287 frogs captured
- 56 citric acid treatments conducted
- 8,764.68 pounds of citric acid used (including materials provided to partners)

Primary hotspots:

- Waimānalo
- Pālolo Valley
- Continued collaboration with the O'ahu Invasive Species Committee, DLNR and community action groups, particularly in Waimānalo



PQB Inspector Jennifer Kobayashi hand capturing a coqui frog during a rapid response event.



PQB Inspectors David Niide and Wilfred Leon Guerrero, with Plant Pest Control Branch technician Dexter Cho, preparing sprayers for citric acid application for coqui frog control in Waimānalo.

COCONUT RHINOCEROS BEETLE (CRB) DETECTION & RESPONSE

CRB remains one of Hawai'i's most urgent statewide invasive species threats.

2025 O'ahu Survey & Treatment Data

- 159 surveys
- 2,352 trees inspected
- 4 breeding sites located
- 848 total tree treatments, including:
 - 230 foliar sprays
 - 400 trunk injections
 - 211 root injections
 - 7 soil drenches

Tree Removals

- Under HTM Contractors (Act 231 funding):
 - 105 dead palms removed from public lands on O'ahu
 - Tree removals are expected to begin on Kaua'i in early 2026.

CRB Expansion & Inter-Island Impact

- Multiple new detections on:
 - Maui (Kihei introduction 2023; treatments continued)
 - Hawai'i Island (North Kona 2025)
- On Hawai'i Island, a 3-mile treatment buffer was established around Kona's initial detection sites.
- Over 2,000 palm crowns treated in rapid response operations.
- 478 tons of CRB breeding material removed, fumigated, and safely transported to a green waste processing facility for disposal.

Regulatory Response

- Interim Rule 24-2 implemented (October 2024) to prevent CRB spread from O'ahu.
- Permanent HAR 4-72 adopted January 2025.
- Interim rule for Moloka'i (2025) bans movement of CRB host material to prevent new island introduction.

CERTIFICATION & EXPORTS

A major function of the program is the inspection and certification of queen breeders for export.

2025 Certification Activity

- 7 queen breeders certified statewide
- 19 export inspections completed
- Approximately 500,000 queens exported
- Canada received 79 health certificates, covering nearly 250,000 queens
- Zero export denials due to pests or diseases

Certification supports Hawai'i's reputation for producing high-quality, pest-free queens and ensures continued access to major markets.

STAFFING & CAPACITY CHALLENGES

Staff Shortage Impacts (2025)

- No dedicated full-time staff on Hawai'i Island.
- Hawai'i County Entomologist provided temporary program support.
- Limited coverage on Kaua'i, Moloka'i, and Lāna'i.

- Vulnerable coverage at critical ports, especially Honolulu Harbor and Daniel K. Inouye International Airport.
- Reduced capacity for early detection of high-risk pests such as:
 - Tropilaelaps mites
 - Africanized honey bees
 - Exotic viral pathogens

Staffing shortages represent one of the greatest risks for the program, particularly with rising global pest pressures and Hawai'i's increasing trade volume.



From left: PQB Inspector Kent Dumlao, Human Resources Officer Claire Orodio and Human Resources Specialist Jamie Ares conducting departmental education/outreach and job recruitment at the Blaisdell Center.

PESTICIDES BRANCH

Esther Riechert
Branch Manager

The Pesticides Branch ensures that pesticides are available, effective, and used safely in the State of Hawai'i. These pesticides include herbicides, fungicides, insecticides, antimicrobials and more that may be used for public health, agriculture, conservation, and more. The branch regulates the distribution and use of pesticide products via registration and licensing, applicator certification, and compliance monitoring which includes enforcement activities, and provides education such as technical assistance to pesticide applicators such as growers, arborists, other industry stakeholders, and the public. In 2025, the branch continued modernizing its regulatory framework, improving pesticide safety statewide, and supporting invasive species mitigation while maintaining full alignment with Hawai'i Pesticides Law (HRS 149A) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

REGULATORY MODERNIZATION & RULE UPDATES

HAR 4-66 Amendments

In 2025, the branch advanced comprehensive updates to HAR Chapter 4-66 to align with:

- The updated State Certification Plan
- Act 220 (SLH 2023), granting authority to increase civil and criminal penalties
- Federal U.S. EPA certification requirements for Restricted Use Pesticides (RUPs)

2025 Status

- Board of Agriculture and Biosecurity recommended approval of amendments (October 2024)
- Small Business Regulatory Review Board concurred to move forward with sending the updates to public hearing (May 2025)
- Public hearings are expected to start in early 2026
- Expected improvements include:
 - Improved consistency with federal certification regulations

- Increased penalties for repeat offenders
- Updated applicator certification standards and subsequent exams
- Enhanced continuing education and training frameworks

These updates modernize Hawai'i's pesticide regulatory structure and strengthen statewide pesticide safety.

SUPPORT FOR STATEWIDE INVASIVE SPECIES PROGRAMS

The Pesticides Branch provided technical guidance and regulatory support regarding the use of pesticides for chemical mitigation strategies addressing Hawai'i's highest-risk pests:

- Little Fire Ant (LFA)
- Coqui frogs
- Coconut Rhinoceros Beetle (CRB)
- Emerging plant pathogens (e.g., monstera rust)
- Nursery pest management and sanitation programs

Key 2025 Contributions

- Technical and regulatory oversight of LFA pesticide products, including those deployed under Act 231.
- Guidance on pesticide label compliance for CRB trunk, foliar, and soil applications.
- Support for county and state partners on pesticide use in green waste management, compost operations, and nursery sanitation.
- Clarification of label restrictions, safe-use requirements, and application timing for growers and industry.
- Support for Plant Pest Control Branch during application operations.



A Pesticides Branch inspector monitors wind speed to assist PPC's pesticide treatments for CRB in Kona.

These efforts supported statewide pest and invasive species control and ensured that chemical tools were used lawfully and safely.

COMMERCIAL PESTICIDES DISPOSAL PROGRAM

The Hawai'i Pesticides Disposal Program's (PDP) first event after a 15-year hiatus was completed in 2024. The program covers the cost of up to 250 lbs of pesticides per participant and is conducted by a third-party contractor. Regulatory actions will not occur when participating in the events. The event ran from September 30, 2023 - August 16, 2024, with some interesting facts captured below.

- Number of Participants: 222
- Total Program Cost: ~\$720,000+
- Oldest Pesticide Collected: 1980

2023 – 2024 Pounds Collected by Location	
O'ahu	7,377
Maui	7,132
Kaua'i	3,986
Kona	4,366
Hilo	2,944
Moloka'i	833
Lanai	12,642
Total:	39,280

The PDP is continuing for 2025 - 2026 across all major islands with the events on O'ahu and Maui already completed and the registration for Kaua'i has already closed. Interested parties should email hdoa.pdp@hawaii.gov.



Pesticides collected under PDP is safely packed before being shipped off island.

COMPLIANCE, INVESTIGATIONS & ENFORCEMENT

Pesticides Branch inspectors conducted statewide investigations into potential violations of Hawai'i Pesticides Law and FIFRA, including:

- Misuse of pesticide products
- Drift-related complaints
- Worker Protection Standard (WPS) issues
- Potential environmental contamination

The branch also collaborated with PQB and PPC where pesticide exposure was suspected to contribute to plant injury. Suspected pathogen cases were referred to Plant Pathology Unit for diagnostic testing.

PESTICIDE USE REVOLVING FUND (PURF)

The fund supports the registration, licensing, applicator certification and education, compliance monitoring, laboratory analysis, case preparation, enforcement, and administrative functions of the branch. As required by statute, the branch reports annually on:

1. Licensing, registration, and training fees collected
2. Expenditures for registration, licensing, certification, education, and compliance activities
3. Fees set for training and education services
4. Interest earned on deposits or investments
5. Funds lapsed to the State General Fund

Revenue to the PURF totaled \$3,012,050 in FY2025 and was primarily generated from pesticide product licensing fees.

OUTREACH & EDUCATION

The branch continued statewide pesticide safety education efforts, including:

- Applicator training sessions
- Continuing education for certified applicators

- Outreach for industry associations
- Guidance distributed during inspections and compliance visits
- Support for grower meetings, UH-CTAHR trainings, and community workshops

Outreach focused on improving applicator competency, reducing incidents of misuse, and supporting safe pesticide use, storage, and disposal practices.



Pesticides Branch staff and UH pesticide safety coordinator present a scenario exercise at a training workshop.

PESTICIDE CERTIFICATION & LICENSING

The branch continued operations for:

- Commercial applicator certification
- Private applicator licensing
- Monitoring of continuing education units (CEUs)
- Registration of pesticide products used statewide
- Review of groundwater assessments for new chemical active ingredients

These functions support compliance with state and federal pesticide laws and ensure availability of and safe, effective use across Hawai'i's diversified agriculture and landscaping industries.

QUALITY ASSURANCE DIVISION



Leonard Obaldo, PhD
Administrator

The Quality Assurance Division consists of two branches, the Commodities Branch and the Measurement Standards Branch, and oversees two major programs, the Hawai'i Produce Safety Program and the Hemp Program. Together, these branches and programs support the division's mission to ensure food safety and quality in agricultural products, promote accuracy in measurement practices, and maintain fairness in the marketplace. The division serves both consumers and producers by providing inspection and certification services, and by enforcing relevant laws, rules and regulations.

Hawai'i Produce Safety Program

The Hawai'i Department of Agriculture and Biosecurity, through a grant from the U.S. Food and Drug Administration (FDA), continues to operate the Hawai'i Produce Safety Program. This program advances local efforts to support the nationally integrated food safety system by promoting safe production of fresh fruits and vegetables and by encouraging compliance with the FDA's Produce Safety Rule (PSR) – the Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption. The program employs two key staff members whose primary responsibilities are assessing Hawai'i's produce crops and farm inventory, as well as providing education, outreach, and technical assistance to farms on the Produce Safety Rule. Its goal is to strengthen Hawai'i's produce industry by helping farms meet FDA FSMA PSR requirements, fostering a culture of food safety, and protecting public health.

According to the USDA's 2022 Agricultural Census, Hawai'i has approximately 6,569 farms. The Hawai'i Produce Safety Program (Program) oversees a subset of these farms and is building a farm inventory database to identify and verify operations of all sizes that grow, harvest, pack, or hold covered commodities subject to the Produce Safety Rule. This database also helps determine which farms need educational support to comply with the federal rule. Based on the current FY25 inventory, the program has verified:

169 farms fully covered by the PSR with no exemptions, and inspected by the FDA.

314 farms covered by the PSR with qualifying exemptions:

- 217 farms with a qualified sales exemption.
- 95 farms producing commodities that are commercially processed to adequately reduce public health pathogens.
- 2 farms producing commodities under enforcement discretion.

1,827 farms not covered under the PSR:

- 640 farms with annual produce sales under \$33,000.
- 213 farms growing only "rarely consumed raw" produce.

- 478 active farms that no longer grow produce.
- 496 farms that previously grew produce but have since closed.

The program continues to provide produce safety educational and outreach services to farmers such as:

1. Produce Safety Alliance (PSA) Grower Training which is required under PSR Section 112.22(c) for farmers growing covered commodities.
 - The program conducted four PSA Grower Trainings in collaboration with partners such as the University of Hawai'i College of Tropical Agriculture and Human Resilience (UH-CTAHR) Farm Food Safety Team, awarding 54 Certificates to mostly farmers, with some employees of government and non-government organizations also in attendance.
 - One PSA Growers Training was conducted in English/Chinese-Mandarin in collaboration with UH-CTAHR and KBay Consulting for language translation and interpretation services for 12 farmers.



In December 2024, a Chinese-English Produce Safety Alliance Grower Training was hosted by Hawai'i Produce Safety Program (led by Joey Ooka, produce safety manager, 3rd from right) in collaboration with UH-CTAHR Farm Food Safety Team, KBay Consulting and Produce Safety Alliance. Twelve participating farmers (2 not pictured) earned PSA Growers Training Certificates to comply with FDA's FSMA – Produce Safety Rule 21 CFR 112.22(c). The event was held over two consecutive Fridays with eight hours of training on both days. Classroom was provided by UH-CTAHR Farm Food Safety Team with translational services provided by KBay Consulting and Produce Safety Alliance.

2. On-Farm Readiness Reviews (OFRR) which is a free, voluntary, confidential, non-regulatory educational farm visit to provide an assessment of the farm's readiness for PSR inspection.
 - The program conducted 10 OFRRs statewide.
3. Produce safety technical assistance including the use of translated educational materials and brochures intended for Limited English Proficiency (LEP) farmers and rural audiences.
 - 147 farms received technical assistance, including individual case-by-case guidance on how to come into compliance with the PSR and other Good Agricultural Practices.



Produce Safety Manager Joey Ooka and Fiscal-Administrative Assistant Mailyn Kagawa distributed FDA educational materials to help farmers comply with produce safety regulations at the 2025 UH-CTAHR Food Safety Summit held at the UH-Hilo campus.

The program looks forward to FY26 with the goal of transitioning the farm inventory from development to maintenance mode with a collaborative mapping and verification project with the Hawai'i Statewide GIS Program. In addition, the program will begin the process of bringing PSR inspections in-house, as the program seeks to begin conducting PSR inspections under joint FDA-DAB authority in FY27 instead of having FDA continue to send inspectors from the mainland.

Hemp Program

Hemp cultivation in Hawai'i operates under the USDA Domestic Hemp Production Program (DHPP) as mandated by Act 14 (2020). As of June 30, 2025, forty-four USDA-licensed hemp producers are active across the islands, but confidential USDA data on acreage is withheld due to the small number of growers. The Department of Agriculture and Biosecurity (DAB) enforces buffer zones and oversees hemp transportation, with fourteen monitored movements reported in 2025, mostly within islands.

Act 263 (2023) formed the Hawai'i Hemp Task Force, composed of licensed growers and industry sector representatives, to address infrastructure needs. Convened in May 2024 and ended in August 2024, the Hemp Task Force's recommendations led DAB to outline targeted outreach initiatives supporting licensed hemp growers by advancing seed breeding, fostering research collaborations with academic institutions, and strengthening Hawai'i's hemp industry. These efforts included field visits, regulatory guidance, and stakeholder collaboration to build a connected, knowledgeable hemp community.

Key milestones achieved in FY25 include the following:

Industrial Hemp Research

- DAB initiated research collaboration by partnering with the Qing Li Laboratory, one of only two USDA-licensed hemp research facilities at the University of Hawai'i at Mānoa (UHM). The collaborative project, led by Dr. Qing Li, Jari Sugano (UHM O'ahu County Administrator), and Charlene Matilla (Executive Director of PIHA Hawai'i), focuses on cultivating industrial hemp for sustainable building and construction applications at the UHM Waimānalo Experimental Station.



Proposed hemp cultivation site of Dr. Qing Li research group at the Waimānalo Experimental Station.

- DAB supported the research initiatives of the Michael Kantar Laboratory, one of two USDA-licensed hemp research facilities at UHM. As part of these efforts, DAB donated multiple hemp seed varieties to help initiate seed breeding research. Under the direction of Dr. Anna McCormick, a postdoctoral researcher in Kantar lab, additional hemp seeds were also acquired from USDA germplasm collection in Geneva, New York. Active field trials are ongoing at the UHM Waimānalo Experimental Station. These trials aim to evaluate the performance of various hemp cultivars (initially 28) to identify those best suited to Hawai'i's unique environmental conditions.
- DAB visited the 200-acre industrial hemp field of Ohana Hui Ventures in Wahiawā and supported its partnership with Kanda Hemp Seeds in advancing innovative agricultural practices and sustainability initiatives. Ohana Hui Ventures, a USDA-licensed industrial hemp farm based in Wahiawā, is dedicated to cultivating industrial hemp for carbon sequestration, phytoremediation of degraded soils, educational purpose, and the development of eco-friendly applications such as hempcrete, hemp fiber, and grain-based products.



Proposed hemp cultivation site of Dr. Qing Li research group at the Waimānalo Experimental Station.



Proposed hemp cultivation site of Dr. Qing Li research group at the Waimānalo Experimental Station.

CBD Cultivation and Processing Promotion

DAB visited Kaua'i Hemp Company and acknowledged its contributions to the development of the Hawai'i's hemp industry. Located on the island's south shore, the company operates as a USDA-licensed organic hemp farm and vertically integrated CBD/CBG processing facility. Operated under Omas Labs LLC and Omas Lands LLC, the facility is managed by Judiah McRoberts and owned by Daryl Kaneshiro. As one of only five facilities licensed by the Hawai'i Department of Health (DOH), Kaua'i Hemp Company plays a key role in the state's hemp industry by offering toll processing and packaging services to other CBD/CBG-producing farms across Hawai'i.



CBD products (left) and CBD/CBG-processing facility (right) of Kaua'i Hemp Company

- DAB visited the hemp cultivation field of Kulele LLC, a USDA-licensed CBD hemp farm located in Wahiawā. Operated by Michele Matsuda and managed by Lawrence Paet, the farm follows a two-stage cultivation process: hemp plants are initially propagated in a greenhouse facility in Kapolei and once fully rooted, are transplanted to the Wahiawā site to ensure optimal growth and plant health.



Kulele LLC's CBD-hemp farm in Wahiawā

Hemp Program Position

DAB transitioned the Hemp Program position from temporary to permanent status to strengthen long-term support for Hawai'i's industrial hemp industry. The position serves as the Hemp Coordinator, acting as a liaison between hemp producers and DAB. Key responsibilities include conducting outreach to support local hemp growers, promoting industry development, monitoring transportation reports, and ensuring compliance with hemp transportation and cultivation buffer zone requirements statewide.

Regulatory Collaboration with USDA Domestic Hemp Production Program (DHPP)

- DAB collaborated with the USDA DHPP and the Farm Service Agency (FSA) to ensure the state's hemp program remained aligned with federal standards and operational guidelines.
- A hybrid meeting was held on October 22, 2024 between the DHPP and DAB. Led by newly appointed Branch Chief Jessica Munski, the DHPP team included Sue Coleman, Bradley Pakish, and Angela Guidry. Representing DAB were Leo Obaldo, and Artemio Tulio. The meeting facilitated a collaborative discussion on federal regulatory requirements, compliance expectations, production guidelines, while offering DHPP's insight into Hawai'i's hemp program operations and exploring opportunities for continued federal and state coordination for hemp cultivation in Hawai'i.
- In partnership with USDA FSA, the DHPP hosted an in-person office hours event at the Hawai'i Agricultural Research Center in Waipahu on October 23, 2024. The session provided licensed hemp growers with the opportunity to engage directly with DHPP staff Bradley Pakish and Angela Guidry, and seek clarification on regulatory requirements including hemp sampling agents. Attendees included DAB representatives Leo Obaldo and Artemio Tulio, FSA's County Executive Director Jason Shitanishi, and licensed hemp grower Michele Matsuda and Lawrence Paet of Kulele LLC.

COMMODITIES BRANCH

Keith Otsuka
Manager

The mission of the Commodities Branch is to set and uphold standards that ensure Hawai'i's agricultural products are high quality, safe, authentic, and competitive in both local and global markets. By fostering a fair and equitable agricultural business climate, the branch strengthens the economic stability of Hawai'i's farming and food industries.

The Commodities Branch enhances the economic stability of Hawai'i's agricultural industries by maintaining grade standards for locally produced fruits and vegetables, nuts, coffee, flowers and foliage, processed foods and other agricultural products. The branch provides unbiased, professional, and timely service-for-fee grade, condition, and origin certification and food safety audits, to add value and desirability to agricultural products. Under federal-state cooperative agreements, the branch provides federal certification for fresh and processed fruits and vegetables, eggs, seafood, and meat, which may not otherwise be available to local clients, as well as state certification for origin and quality of green coffee, and origin of certain products.

The branch also provides just and unbiased enforcement to assure safety and fair business dealings in agricultural products, to protect the agricultural community as well as the general public.

The branch administers laws and rules pertaining to fresh fruit, vegetable, coffee, egg labeling and advertising; minimum export quality; licensing of dealers in agricultural products; and ownership and movement certification to deter agricultural theft.

Below is a brief overview of the branch's major programs, recent developments affecting its operations, and key highlights from FY25.

Milk Control Program:

The branch's Milk Control program has historically regulated and maintained the stability of the dairy industry in the Honolulu and Hawai'i milk sheds by licensing producers and distributors of milk, establishing milk production quotas, setting minimum class 1 price paid to dairy producers, and conducting retail milk surveys and inspections. This special funded program should be entirely self-funded through licensing fees assessed to milk producers and processors. However, with only one milk producer, and one processor remaining in the state program, it is no longer self-sustaining. The Commodities Branch is no longer able to hire and sustain a milk specialist to fully implement the Milk Control Program and is working towards reassessing Hawaii Revised Statutes and Hawaii Administrative Rules to address foreseeable changes within Hawai'i's milk industry. Despite the lack of a milk specialist, the branch managed to issue 19 licenses to producers, producer-distributors, and distributors of milk, and calculated 24 monthly milk payrolls for processor to pay their producer including licensing fees paid to the milk program.

Shell Egg Program:

Under a cooperative agreement with USDA, branch staff provide federal shell egg grading and certification to the egg industry. With the addition of a second USDA Shell Egg Plant coming online in 2022, there has been a dramatic increase in demand for shell egg inspection services. The branch is working toward meeting the increased workload, in the face of retirements and resignations, and is actively recruiting and training new staff to meet the demand for this and for all the services we provide. The branch performed weekly online grading and issued a total of 463 shell egg certificates. Also conducted 53 surveillance visits for compliance with the Egg Products Inspection Act.



Eggs and Feed Master Journeyperson Marie Souza checking ambient air temperature in a cooler during a shell egg surveillance visit required by the Egg Products Inspection Act.

Fresh Fruit and Vegetable Program:

Under a cooperative agreement with USDA, branch staff sample and grade produce for quality and condition. A major part of the work being conducted are mandatory 8e import inspections, for commodities such as New Zealand onions and kiwifruit, which are being imported directly into Hawai'i from foreign countries. Inspections are also conducted on request by producers and handlers of produce, to assist with claims to recover costs to local buyers of defective imported produce. The branch fulfilled all requests from industry with a total of 31 fresh fruit and vegetable inspections for grade and condition.



Senior ACMS Howard Kamimoto working with advanced trainee Asten Espanto on a mandatory inspection of New Zealand kiwifruit for import quality requirements.

Food Safety Auditing Program:

Under a cooperative agreement with USDA, branch staff conduct Good Agricultural Practices (GAP) and Good Handling Practices (GHP) food safety audits at farms, distributors, and packing warehouse facilities throughout the state. In FY25, the branch had only one licensed auditor performing GAP, Harmonized GAP, and Harmonized GAP+ audits statewide. The branch is in the process of training and licensing a second auditor. Trainees must meet all USDA training requirements and evaluated as a lead auditor at least twice by a representative of the USDA before being licensed. The branch fulfilled all audit requests from produce industry with a total of 53 food safety audits.



Food Safety Auditor Clarence Agustin conducting USDA Good Agricultural Practices audit on a field of fresh basil.

Processed Foods Program:

Under a cooperative agreement with USDA, branch staff conduct inspection on processed food products such as honey, frozen pineapple chunks/juice, noni juice, roasted coffee, and roasted macadamia nuts. Under a cooperative agreement with US Department of Commerce (USDC), Commodities Branch staff provide seafood (fish & shellfish) inspection and auditing services including HACCP protocol. The branch received and issued only one USDA Processed Products export certificate in FY25 which is similar in previous year.

Country of Origin Labeling (COOL):

Under a cooperative agreement with USDA, the branch conducts audit/reviews to assure that retailers notify their customers with information regarding the source of certain foods. Food products covered by the COOL law include muscle cut and ground meats: lamb, goat, and chicken; wild and farm-raised fish and shellfish; fresh and frozen fruits and vegetables; peanuts, pecans, and macadamia nuts; and ginseng. The branch conducted 14 Initial reviews and one follow-up COOL audits/reviews at 15 retail establishments statewide.

Coffee Certification Program:

Commodities Branch staff provide voluntary fee-for-service coffee grading and certification services for our local coffee industry, and staff has provided timely service to all requests for product certification. In October, Coffee Specialist Randall DeAguiar attended the 2024 World Specialty Coffee Conference and exhibition hosted by the Specialty Coffee Association of Japan (SCAJ), to promote our Hawai'i Coffee Grading service. Working with Hawaii Coffee Association and various members of Hawaii's coffee industry on changing Hawai'i Administrative Rules regarding grading standards and classification of green coffee to improve the overall green coffee quality. The branch fulfilled all industry requests for grading services resulting to 323 coffee green bean certificates issued.

Seed Certification Program:

Commodities Branch staff provide voluntary fee-for-service inspection and seed certification services, which maintain varietal purity based on company established traits. The branch fulfilled all requests from seed corn companies with a total of 2,652 field and ear inspections from 685 acres of land planted with seed corn. Also issued 411 certificates of seed corn bulk transfer to U.S. mainland.



Seed inspector John Razon conducting an ear inspection to evaluate the genetic purity of corn seed varieties.

Transgenic Papaya Monitoring:

Commodities Branch staff provide voluntary fee-for-service inspection and non-transgenic papaya testing utilizing "Identity Preservation Protocol" program for tighter control of non-transgenic papayas that are exported to Japan. The branch fulfilled all requests from industry and issued a total of 694 letter reports for Identity Preservation of non-transgenic papaya, representing 42,448 containers exporting 527,698 pounds of papaya.

Dealer Licensing:

Commodities Branch staff maintain a licensing program called the Dealers in Farm Produce License (835 active licenses in FY25), which is required for anyone who handles or sells any Hawai'i-grown agricultural product obtained or purchased directly from a Hawai'i farmer or grower for the purpose of resale. The license is designed to be able to assist Hawai'i growers in case of non-payment from those purchasing product directly from them.

Commodities Branch Manpower:

The Commodities Branch continues to reassess and rebuild its manpower capability to address the continuation of federal cooperative agreements to perform regulatory functions efficiently and effectively such as inspections of fresh fruits and vegetables and shell eggs, GAP audits on behalf of USDA, produce safety inspection on behalf of FDA, and seafood inspections for the USDC NOAA.

MEASUREMENT STANDARDS BRANCH

Richard Cohen
Manager

The Measurement Standards Branch protects consumers, businesses, and manufacturers from unfair trade practices by ensuring accuracy in measurements and adherence to quality standards. Its goal is to reduce losses and inaccuracies caused by faulty or fraudulent measuring equipment, improper processes, or substandard products, safeguarding both consumers and merchants.

The Standards and Technical Services Section ensures that Hawai'i's measurement equipment standards meet the highest national benchmarks. It performs precise metrological calibrations of the enforcement standards used by the branch and the field standards used by certified service agencies to test, repair, and calibrate commercial devices. These calibrated standards form the basis for all inspections and adjustments.

The Standards and Trade Practices Enforcement Section ensures fair and accurate commercial transactions. It oversees measuring devices such as gas pumps, scales, and taxi meters, as well as package labeling, contents of packaged goods, and pricing practices. The section also inspects the packaging and labeling of products like Hawaiian coffee, macadamia nuts, cacao, and Made in Hawai'i items, conducting both routine reviews and investigations based on consumer or business complaints.

Below is a brief overview of the major activities, accomplishments, and developments that shaped the branch's work in FY25:

- The State Metrologist, Michael Tang received advanced training and certification from the National Institute of Standards and Technology (NIST) and hosted the Western Regional Assurance Program annual training meeting here in Hawai'i at the Quality Assurance Division in 2024. In 2025 he attended the meeting in Portland, Oregon with Metrologists from all over the United States.
- The state's metrology laboratory has received re-certification again in FY25 by the National Institute of Standards and Technology for an echelon one lab which is highest of standards for inspection, calibration, and certification of which there are only seven others in the United States. This certification is done annually by NIST after testing the metrologist and reviewing the facilities and equipment used. As custodians of the state level measurement standards, the laboratory serves as the basis for ensuring equity in the marketplace and as reference standard for calibration services for the state and various commercial industry members.
- The metrology laboratory inspected and calibrated a total of 1701 mass test standard units. The metrology laboratory also inspected and calibrated 40 volumetric stainless steel field standards for service agencies and Measurement Standards inspectors conducting business in the State of Hawai'i. These inspections resulted in additional revenues of \$16,960 that went to the state general fund.



100 Gallon Prover for Liquid Test Measure

- The Measurement Standards Branch evaluated 95 labels for compliance with state and federal regulations, 2104 gas and diesel meters at 164 retail fueling stations were inspected by state inspectors and licensed registered service agents, 3637 various types of scales used for commercial sales were examined and approved for use statewide and submitted for commercial licenses.



Testing Accuracy of Gasoline Pumps Weights Calibrated to Test Scales Large capacity Truck Scale Testing

- 1435 Taxi Meters were issued permits after being examined by certified service agencies and branch inspectors, which results in income of over \$29,000. to the general fund of the State of Hawai'i.
- 21,075 commercial measuring device licenses were issued by the branch to over 3,000 businesses for use in fair commercial trade practices within the state, this resulted in generated revenues of \$576,455 for the State of Hawai'i general fund.
- The branch licensed 325 Measure Masters, which produces \$32,500. and 81 registered certified service agents that perform work overseen by Measurement Standards Branch that produces \$8,100. for combined income of \$40,600 to the state general fund.
- Recruitment continues for two additional Measurement Standards inspectors in O'ahu. A new inspector was hired for the Maui office at the end of the fiscal year 2025 and has brought a much-needed presence to that Island. This inspector gives the branch much needed coverage for the neighboring island. There is one inspector in Hilo that functions as both a trade practices inspector as well as a labeling inspector and expert on the Island of Hawai'i, who also handles inspections in Kona where it is possible for both devices and labeling inspections. He performs all types of Measurement Standards inspections in the field for the Island of Hawai'i.
- The branch investigated 47 combined complaints of fuel quantity, quality, and pricing discrepancies in the state and from labeling and net weight packaging errors in FY25. The branch continually educates consumers and merchants on fair trade practices and correct policies and procedures so that equity may prevail in the marketplace.
- In fiscal year 2025 there were eight pricing complaints and price verification inspections done to verify the retail stores were meeting a minimum of 98% accuracy as required. All discrepancies were found were fixed and consumers were re-imbursed for overcharges by the retailers.

- Measurement Standards branch provided important testimony and facts to help pass new legislation for the coffee industry and mamaki tea. With the completion of the economic impact study on the coffee industry in FY25 and with additional changes to the percentage of geographic blended coffee allowed an increase to 51% on July 1, 2027, we are preparing for implementing enforcement and education for the public and businesses involved in the coffee trade. New coffee labeling guidelines and updates can be found on the Department of Agriculture and Biosecurity, Quality Assurance Division's webpages with new information based on the changes in the HRS 486-120.6 coffee law that were made during FY25.



New Coffee Label Inspections

- The Fiscal year 25 budget gave the disbursement of funds for the continuing installation of new computer software upgrade programs that will meet ETS system security requirements and help properly manage all registered measuring devices, device licensing, and inspections of devices for improved efficiency and accuracy. This upgrade will help the branch perform more efficiently and with greater cyber security.
- The Measurement Standards Branch has answered over 250 hundred questions and evaluated potential issues with labels reviewed and other issues for businesses and the public to understand and comply to HRS law changes for Hawaiian coffee and macadamia nuts, mamaki tea, cacao and Hawai'i-made products.
- The Measurement Standards Branch annually reviews current rules and laws changes from the National Council of Weights and Measures and adopts procedures and standards established by NIST for new measuring devices introduced to the marketplace from new technologies like electric vehicle supply equipment (EVSE) chargers and alternate fuels for vehicles. Also, reviews new policies and procedures that have been adopted for better and more accurate conformance of commercial measurement devices, packaging, labeling, and pricing.