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DEPT. COMM. NO. 420

March 20, 2018

Department of Agriculture's Progress on Act 163, SLH 2017 ("Clift Tsuji Act") and other Biosecurity Efforts

The Clift Tsuji Act provided funding for various projects relating to biosecurity and the functions of the Plant Industry Division within the Department of Agriculture. While additional general funding would have provided a new, undedicated resource to the Department, Act 163, SLH 2017, provided moneys from the Agricultural Development and Food Security Special Fund ("Barrel Tax").

Barrel Tax funds are allocated to the Department each year averaging approximately $3 million. This fund provides basic program functions throughout the Department, a funding source that is not specified to one particular division. These monies go toward uses such as staffing and administrative costs throughout the department, irrigation systems and worker maintenance, quality assurance division personnel and projects such as water quality testing for food safety, agricultural development division projects such as buying local, agribusiness development corporation projects such as roofing repairs on warehouses, animal industry and aquaculture projects that support development of new laboratories for the University of Hawaii, and other projects that are highlighted each year in the Department's report to the Legislature.

With all divisions relying on the Barrel Tax for programmatic functions and day to day activities, along with the State moving toward a renewable energy platform discouraging the purchase of imported oil in turn diminishing the Department's share of the Barrel Tax, Act 163, SLH2017, should have identified a new source of funding or a more appropriate source to address biosecurity issues. The Department's Biosecurity Program, Chapter 150A, Hawaii Revised Statutes, maintains the Pest Inspection, Quarantine, and Eradication Fund ("Cargo Fee"). This fund is dedicated to biosecurity efforts to support the Department's ongoing efforts to address invasive pests pre-border, border, and post-border.

With the Clift Tsuji Act passed for Fiscal Year 2018, the Department has moved forward with addressing the identified concerns of the measure in this paper. The Department believes that the work identified in this Act is work that is ongoing within the Department's Biosecurity Program and other related invasive species work. While the

Clift Tsuji Act has identified spending an additional $1.2 million on this work, the Department believes that there are ample resources dedicated toward its ongoing biosecurity efforts at nearly $12,000,000 annually. The following response paper is broken into 2 sections. Part 1 highlights the Clift Tsuji Act contents and how the Department is currently performing on each of the categories raised and the resources dedicated to each issue. Part 2 highlights how the Department envisions moving forward with biosecurity with the development of the Interagency Biosecurity Plan and the Hawaii Invasive Species Authority.

If there are any questions, please contact me at 973-9550 or have your staff contact Micah Munekata at 973-9552.

Sincerely,

Scott Enright, Chairperson
Board of Agriculture

Part 1. Act 163, SLH 2017 (The Clift Tsuji Act)

The Clift Tsuji Act states the following:

1. Reaffirm the legislature's finding that the implementation of the Department of Agriculture's biosecurity program is vital to the State
2. Require the Department of Agriculture to establish parameters and construction requirements for biosecurity facilities
3. Appropriate moneys to enable the Department of Agriculture to complete the implementation of the biosecurity program to include import replacement and pest management programs.

Item 1 above is a statement from the Legislature. Items 2 and 3 are discussed in detail below with some basic highlights of the Hawaii Department of Agriculture Biosecurity Program and the various biosecurity projects related to this program.

2. Establish Parameters and Construction Requirements for Biosecurity Facilities

The Transitional Facilities pilot project is providing needed services to the public by facilitating the inspection and movement of commodities that pose a low risk for pest establishment, such as fresh produce when used in conjunction with e-manifesting. The program began with a single produce company and has been expanded to include additional produce companies and some freight forwarders. Total current participants include 4 companies. The pilot program has increased PQB efficiency by reducing the need for inspectors on the weekends at the Oahu Maritime facility. This has allowed reprioritization of the staff to the Airport. With the hiring of new staff, the transitional pilot is a key for reintroduction of night shifts at the Daniel K. Inouye International airport.

There have been some challenges with the pilot, especially with freight forwarders. Because the freight forwarders are not the importers of the commodities, there are often times where the importers are ordering items that are not allowed in Hawaii resulting in delayed inspections. PQB is working on revising the pilot to better suit freight forwarders and to also educate the importers.

The future of the pilot program is promising once more importers are on-board and compliant and the new PQB E-manifest system is up and running. E-manifesting is a key design requirement for Transitional Facilities. The ability to automate risk assessment and release of low-risk commodities is essential for this program to work. By knowing what commodities are arriving within the State, it will allow PQB to focus limited staff to commodities that are of higher risk for

pest introduction such as live plants and to also place increased emphasis on other duties such as private ships and post-entry inspections. Additionally, with the Food Safety Modernization Act, the need for appropriate facilities to house and inspect goods are needed. The use of a centralized, state-run facility is preferable, however, as more and more goods are imported and with limited space at the ports-of-entry, the use of transitional facilities is needed.

3. **Appropriate money to enable the Department of Agriculture to implement the biosecurity program**

In this section, the Clift Tsuji Act identifies six funding categories: 1) import replacement of high-risk crops; 2) development of systems management; 3) development of quarantine treatment options; 4) development and implementation of diagnostics to identify new pests and disease; 5) improvement of inspection capacity; 6) education activities. The following details provide a description as to how the Department has addressed each of the 6 identified categories:

1. **$200,000 for import replacement of high-risk crops**

(The Department currently spends over $550,000 each year on import replacement projects)

The Department funds various projects annually supporting efforts to increase local production and consumption in Hawaii. Import replacement and promotion of Hawaii's agricultural production remains one of the most fundamental missions of the Department of Agriculture. Funding comes through various means including general revenues, special funds, and federal funds. The following is only a sample of projects that we would like to highlight regarding import replacement projects.

The Agricultural Development Division invests funds each year to promote the Eat Local campaign. The Department dedicates $200,000 annually to support the "Buy Local, It Matters" campaign through television, social media, and consumer/retail efforts. Examples of these projects include 1) Foodland's Eat Local Tuesday campaign in each of the 32 Foodland Supermarkets for 52 weeks; 2) Oceanic Time Warner Cable showing PSA's throughout the year; 3) Social media campaign with Kanu Hawaii.

The Department has also invested $60,000 in funds to develop a Hawaii Agriculture and Foods Products Database, where local farmers and ranchers can post products on a central database for the public to see. This promotes local agriculture and increases local consumption.

For the past 2 years, the Department has invested in innovative ways to influence additional import replacement projects such as promotion of local wedding industry products. This project enhances import replacement efforts with locally grown wedding industry products to increase the local market share and to promote the *"Aloha + Challenge: A Culture of Sustainability – He Nohona `Ae`oia"* and/or the "*Buy Local, It Matters*" or similar call to action campaign that encourages more purchases of local products by local consumers which would move the State towards sustainable agriculture. This project has been funded each year at $30,000 from the Pest Inspection, Quarantine, and Eradication Special Fund.

The Department partners with the University of Hawaii (UH) to enhance Hawaii agriculture through new germplasm development. This project provides new germplasm to develop quality local products such as cut flowers, anthuriums, orchids, Myrtaceae, sweet potato, taro, tropical fruits, banana, and citrus. This project was funded through general funds at $200,000.

The Department has invested roughly $160,000 each year for the past 4 years for the Sponsorship and Product Promotion Program (SPP). The primary goal for this program is to enhance the competitiveness of local agricultural products and their industries, including, but not limited to, agritourism, aquaponics, dairy, eggs, fish (marine or freshwater), floriculture, livestock (cattle, goats, sheep, swine, poultry), organic, specialty crops, and value-added (manufactured, processed). The program solicits proposals for marketing activities conducted within the state, including, but not limited to, sponsorships for conferences, festivals, seminars, trade shows, or workshops; for product promotion projects for Hawaii agricultural products including, but not limited to, ad campaigns, development or banners, brochures, or sampling events, or website improvement.

The Department invests over $350,000 each year for the Specialty Crop Block Grant Program (SCBG). The primary goal in this program is to support projects that could provide the highest measurable benefits or return-on-investment to the specialty crop segment in Hawaii. Projects must solely enhance the competitiveness of Hawaii grown specialty crops in either the domestic markets. The program is dedicated to increase production and/or consumption of specialty crops and foster the development of fledging crops and organic operations for Hawaii specialty crop farmers.

The Department has pursued the following Fiscal Year (FY) 2015-2018 projects through General funds and Federal funds through its Sponsorship and Product Promotion Program (SPP) and the Specialty Crop Block Grant Program (SCBG):

FY 2015

SPP FY15: $155,000
"Proposal", Organization (Amount Funded)

1. "2015 Hawaii State Farm Fair", Hawaii Farm Bureau Federation ($35,000)
2. "Hawaii Ranchers Retail Partner Promotion Project for 100% Local Pasture Raised Ground Beef", Hawaii Cattle Producers Cooperative Association ($10,000)
3. "2015 Sustaining Education and Promotional Marketing Program", Hawaii Export Nursery Association ($10,000)
4. "MAHALO AINA Hawaii Public Radio (HPR) Radio Series, Hawaii Forest Institute ($10,000)
5. "Kau Coffee Festival 'Buy Local, It Matters' Co-Branding Promotion", Kau Coffee Growers Cooperative ($15,000)
6. "2015 Localicious Hawaii – Statewide Expansion", Hawaii Agricultural Foundation ($20,000)
7. "Buy Local and Discover Hawaii's Coffee – Proudly Grown in the USA", Hawaii Coffee Association ($30,000)
8. "Made in Hawaii Festival Cooking Demonstration Stage Sponsorship", Hawaii Food Industry Association ($10,000)
9. "Maximizing Hawaii's Flowers and Foliage Marketing Opportunities", Hawaii Tropical Flower Council ($10,000)

Replacement of Imported Holiday Plants FY15: $20,000
"Proposal", Organization (Amount Funded)

1. "Promotion of Locally Grown Holiday Related Plants", Hawaii Floriculture & Nursery Association ($10,000)
2. "Aina Mauna Christmas Tree Demonstration Project", Hawaii Forest Industry Association ($10,000)

SCBG FY15: $345,845
"Proposal", Organization (Amount Funded)

1. "Hawai`i Grown Seed: Growers Network and Industry Development through Farm-to-Farm Variety Trials and Electronic Seed Sales & Exchange", The Kohala Center ($49,032)
2. "Develop organic pulse (dry bean) recommendations to increase local production", Counter Culture, LLC ($39,972)
3. "Propagation of select Hawaiian 'awa cultivars to support the specialty 'awa industry", Hawaii Agricultural Research Center ($23,860)

4. "Propagation and Distribution of Superior Papaya "Rainbow" Seedlings Using Tissue Culture Propagation Method", Hawaii Agricultural Research Center ($32,616)
5. "Jump Starting Hawaii's Fruit Production Industry", Hawaii Tropical Fruit Growers ($43,500)
6. "Developing a Novel Unique Variety of 'Royal Kunia' Papaya with High Yield, Superior Taste and Long Peduncle", Hawaii Agricultural Research Center ($24,865)
7. "Further Development and Commercialization of Single Cacao Pod Micro-Fermentation Methods and Small Batch Quality Assessment for Hawaii's Specialty Cacao Industry", Hawaii Agricultural Research Center ($32,000)
8. "Statewide Hawaii-Grown Cacao Month initiative to provide outreach, public awareness, farmer assistance and education resources", Hawaii Chocolate Association ($20,000)
9. "Hawaii Specialty Farmer Business Training and Promotion", Hawaii Forestry Industry Association ($40,000)
10. "The Moringa Crop Natural Farming Project", Tri-Isle Resource Conservation & Development Council, Inc. ($40,000)

FY 2016

SPP FY16: $169,500

"Proposal", Organization (Amount Funded)

1. "2016 Enhanced Strategic Marketing & Education Program", Hawaii Export Nursery Association ($10,000)
2. "Made in Hawaii Festival Cooking Demonstration Stage Sponsorship", Hawaii Food Industry Association ($15,000)
3. "3rd Annual TASTE Awards", Hawaii Food Manufacturers Association ($10,000)
4. "2016 Localicious Hawaii – Leveraging Success", Hawaii Agricultural Foundation ($10,000)
5. "Hawaii Festival of Farms", Hawaii Agri-Tourism Association ($15,000)
6. "2016 – 26th Annual Hawaii International Tropical Fruit Growers Conference", Hawaii Tropical Fruit Growers ($9,500)
7. "Aina Mauna Christmas Tree Demonstration Project", Hawaii Forest Industry Association ($10,000)
8. "HFNA 2016 Hawaii Flowers and Plants Special Occasion Promotion Project", Hawaii Floriculture and Nursery Association ($10,000)
9. "2016 Hawaii State Farm Fair", Hawaii Farm Bureau Federation ($35,000)

10. "Made in Hawaii: Branding, Promotion and Manufacturing in Hawaii", Chamber of Commerce of Hawaii ($10,000)
11. "Kau Coffee Festival 'Buy Local, It Matters' Co-Branding Promotion", Kau Coffee Growers Cooperative ($10,000)
12. "'Buy Local, It Matters' and Hawaiian Coffee Industry Promotion", Hawaii Coffee Association ($20,000)
13. "Promoting Hawaii Flowers and Foliage In-State Marketing Activities & Supporting the 'Buy Local, It Matters" Campaign", Hawaii Tropical Flower Council ($5,000)

SCBG FY16: $336,534.10

"Proposal", Organization (Amount Funded)

1. "Rejuvenating Molokai's Demand for and Access to Taro Through the "Kalo Connection", Educational Initiative", Sust Aina Ble Molokai ($34,340)
2. "Building Hawaii's Breadfruit Industry from Bottom-Up: Producer Cooperation to Distribute, Market and Improve Production Sustainability", Mala Kalu'ulu Cooperative ($41,636)
3. "Establishing Fields for an Ohelo Kau La'au Industry", University of Hawaii – CTAHR ($26,500)
4. "North Shore Oahu GroupGAP Certification and New Market Access for Small Specialty Crop Farmers", North Shore EVP ($36,754)
5. "HENA's 2017 National Marketing Campaign to Promote Access and Awareness of Hawaii's Potted Foliage", Hawaii Export Nursery Association ($40,000)
6. "Micropropagation of Taro Import Replacement and Export", Hawaii Agricultural Research Center ($39,982)
7. "Same Canoe Local Food Challenge, Canoe Crop Project", Heritage Ranch, Inc. dba One Island ($40,000)
8. "The Kahumana Farm Hub, Creating a Cohesive Farming Community for West Oahu Specialty Crop Farmers", Alternative Structures Int. ($39,522.10)
9. "Development of Beginner Farmer Education Plots on Maui", University of Hawaii – CTAHR ($37,800)

FY 2017

SPP FY17: $168,785

"Proposal", Organization (Amount Funded)

1. "2017 Hawaii State Farm Fair", Hawaii Farm Bureau Federation ($35,000)
2. "2017 Localicious Hawaii - Increasing Success Through Social Media", Hawaii Agricultural Foundation ($22,500)

3. "HENA's 2017 Education & Marketing Campaign to Revitalize the Hawaii Foliage Industry", Hawaii Export Nursery Association ($10,000)
4. "HFNA's 2017 Hawaii Floriculture Promotion and Sustainability Program", Hawaii Floriculture and Nursery Association ($10,000)
5. "Made in Hawaii Festival Cooking Demonstration Stage Sponsorship", Hawaii Food Industry Association ($15,000)
6. "Kalalea/Anehola Farmers Hui (KAF Hui) Farmers Market & Membership Promotions", Malama Kauai ($9,885)
7. "Promoting "Made in Hawaii" and "Buy Local, It Matters" at Local, National, and International Levels", Hawaii Food Manufacturers Association ($21,000)
8. "Parade of Farms - Cultivating Community on the North Shore", O'ahu Resource Conservation and Development Council ($2,000)
9. "27th Annual Hawaii International Tropical Fruit Growers Conference", Hawaii Tropical Fruit Growers ($9,800)
10. "Easter Seals Hawaii: The Traveling Plate", Easter Seals Hawaii ($10,000)
11. "2017 Kauai Chocolate & Coffee Festival", Hanapepe Economic Alliance ($5,000)
12. "Hawaii Ukulele Festival", Ukulele Guild of Hawaii ($7,200)
13. "Healthy Food, Healthy Land, Healthy Communities – Rainfall Simulator and Demonstration: Showing the connection between proper land stewardship and healthy watersheds and ecosystems that support healthy food production", Hawaii Cattlemen's Council, Inc. ($6,400)
14. "The Food & Cookbook Pavilion at the Hawaii Book & Music Festival 2017", Hawaii Book & Music Festival ($5,000)

SCBG FY17: $374,382.1

"Proposal", Organization (Amount Funded)

1. "Macro-Propagation Techniques for Disease Free Banana Planting Material in the Pacific", University of Hawaii ($39,557)
2. "Production and Evaluation of Mid to Low Elevation Locally-Grown Trees to Replace Imported Christmas Trees", Hawaii Forest Industry Association ($40,000)
3. "Increasing Cacao Production Through Improved Orchard Management", Oahu RC&D ($39,474)
4. "High Density Mango Planting Designs to increase Profitability of Mango Production in Hawaii", Hawaii Agriculture Research Center ($34,350)
5. "Organic Butternut Squash & Kalo Farmers", Molokai Homestead Farmers Alliance ($37,920)

6. "Specialty Organic Cucumber Production in Hawaii Using Screenhouse and Multipurpose Companion Plants", University of Hawaii ($40,000)
7. "Evaluating Mechanical Harvest and Agronomical Treatments to Improve Legume Crops Growth and Yield in Hawaii", University of Hawaii ($40,000)
8. "Gourmet Potato Medley Crop", Pacific Gateway Center ($40,000)
9. "2018 Hawaii Potted Tropical Plants National Marketing Campaign", Hawaii Export Nursery Association ($40,000)
10. "Peppercorn Production and Propagation Education for the Local Hawaiian Market", Mauka Vista Farms LLC ($23,081.16)

FY 2018

SPP FY18: $120,050

"Proposal", Organization (Amount Funded)

1. "2018 Hawaii State Farm Fair", Hawaii Farm Bureau Federation ($35,000)
2. "Doubling the Friends with Farms CSA Customer Base", Friends with Farms Agricultural Cooperative ($9,750)
3. "2018 Product Promotion and Marketing Program", Hawaii Export Nursery Association ($10,000)
4. "28th Annual Hawaii International Tropical Fruit Growers Conference", Hawaii Tropical Fruit Growers ($9,800)
5. "2018 HFNA Product Promotion, Import Replacement & Research Program", Hawaii Floriculture & Nursery Association ($10,000)
6. "Parade of Farms - Nalo Style", Oahu Resource Conservation and Development Council ($2,500)
7. "The Returning to Our Roots Program", Kokua Kalihi Valley CFS ($10,000)
8. "Made in Hawaii Festival Cooking Demonstration Stage Sponsorship", Hawaii Food Industry Association ($8,500)
9. "Hawaii Coffee Association 23rd Annual Conference", Hawaii Coffee Association ($20,000)
10. "Kona Coffee Farmers Expo 2018", Kona Coffee Farmers Association ($4,500)

2. **$500,000 for the development of systems management to enhance pest management practices**

(The Department currently spends over $1,100,000 on this project)

The Department has moved to develop a state of the art database system for the Plant Quarantine Branch. The Department has completed an RFP to develop, implement and maintain a Statewide, modern, automated, data

collection, reporting, permitting, and e-Manifest system. The project is set to begin development this year and run up to 24 months until completion. Funding has been secured through the Pest Inspection, Quarantine, and Eradication Special Fund at approximately $1.1 million.

3. **$100,000 for development of quarantine treatment options**

   (The Department currently funds this category as part of the PQB annual budget of over $9.7 million and the PPC annual budget of nearly $1.4 million in both general and special funds)

   PQB has utilized compliance agreements to develop quarantine treatments to prevent the entry of pests into and within the State. PQB's annual budget includes general revenues and special funds at over $5,600,000 million spent on personnel and over $4,100,000 million spent on projects, equipment, supplies, travel, and other current expenses.

   Pre-entry compliance agreement for Christmas Trees: Maintained compliance agreement for Christmas trees with Oregon Department of Agriculture. Established new compliance agreement with Washington State Department of Agriculture. Compliance agreement has best management practices and pre-shipment quarantine treatment methods for Christmas Trees destined to Hawaii. Since 2012, there has been an over 90% (2012: 91 containers, 2017: 6 containers) reduction in rejections of containers due to pest infestations. With Washington State containers, there was a 66% reduction in rejections (2016 -3, 2017-1). There is already a low number of rejections because WA containers represent only ~10-12% of total containers.

   Inter-Island Compliance and testing for Rapid Ohia Death host materials. PQB has maintained compliance agreements with a single company on Hawaii Island to move soil in nursery plants. This compliance agreement has maintained ROD free status for the nursery. PQB is working with another 2 nurseries. PQB also continually tests Ohia logs for movement from Hawaii Island. There have been numerous rejections preventing the spread of ROD to the outer islands. To date, ROD has not been discovered on any other islands within the State.

   PQB has also been inserting pre- and post-arrival treatments and certifications within import permit conditions for non-domestic animals used for production, retail sales, and research. PQB recognizes that the importation of non-domestic animals for activities such as aquaculture require additional safeguards to prevent the entry of pests and diseases. PQB has been including pre-treatments or disease certifications for aquaculture organisms such as tilapia, as well as quarantine requirements upon arrival

into the state and treatment requirements for packing materials and shipping water which may also harbor pathogens.

4. **$100,000 for development and implementation of diagnostic to quickly and reliably identify new and evolving pests and disease**

   (The Department currently spends over $1,148,000 on these projects)

   The Department invests millions each year from its Pest Inspection, Quarantine, and Eradication Special Fund to support projects to quickly and reliably identify new and evolving pests.

   - Hawaii Ant Lab Core Funding. This statewide initiative focuses on the development and use of novel and proven technologies to prevent, detect, respond, and control little fire ant. Increased spread of the little fire due to tough terrain, non-cooperative land owners, and unique natural environments have allowed the little fire ant to spread to various locations throughout the State. To affect change, the Hawaii Ant Lab will need available resources to address this invasive pest. The Hawaii Ant Lab at the University of Hawaii received $350,000, which is used to leverage other funds. The total Hawaii Ant Lab budget is approximately $650,000 annually.

   - Early Detection and Prevention little fire ant on Oahu. This project funds a trained research, survey and response team to provide monitoring of high-risk sites such as nurseries and landscape suppliers. The Hawaii Ant Lab at the University of Hawaii received $124,000.

   - Little Fire Ant Research. This project allows the Hawaii Ant Lab and the University of Hawaii to perform research and field trials on the effectiveness of hydrogels and other water-storing granules to control little fire ant populations. The University of Hawaii received $60,000.

   - JADAM Korean Natural Farming Organic Methods to Address Papaya Mealybug and Coffee Berry Borer. The Department recognizes that there have been advances in control methods for both the papaya mealybug and coffee berry borer, however new, innovative techniques may serve the local farmers through the development of alternative methods for pest management. These issues are also challenging the organic industry to produce a federally certified organic product without the control of effective and cost-efficient methods. Korean Natural Farming, specifically the JADAM method, provides an opportunity to address the papaya mealybug and the coffee berry borer through

natural, USDA organically certified ingredients for pest control. This project received $120,000.

- Support for Big Island Invasive Species Committee. This project funding of $115,000 will support three projects central to the Big Island Invasive Species Committee's mission. The projects include community-based training for residents to control little fire ants; promotion of the Plant Pono plant industry endorsement program; and survey and control of high-impact invasive plants that have escaped into the natural environment.

- County of Hawaii Coqui Frog Control in North Kohala. This project will allow for educational activities and outreach events, prevention activities and control and eradication efforts of the coqui, and the maintenance of a 24/7 coqui hotline and response team. This project received $50,000.

- Two-Lined Spittlebug. The two-lined spittlebug has caused severe impacts to key pasture grasses. In response to the recent invasion and the severe impact of the two-lined spittlebug to the Big Island of Hawaii, immediate actions to restrict its further spread and to prohibit establishment on the other non-infested Hawaiian Islands is necessary. The $300,000 in funds will address rancher education, surveillance, biology and ecology research, Integrated Pest Management, and biological control.

- Citrus Grey Mite. The Department initiated surveillance, host range evaluation, and diagnostics for the citrus grey mite. This project was funded with $4,000.

- Apiary. Statewide biosecurity surveillance for Africanized Honey Bees (AHB), AHB DNA diagnostic, Asian Giant Hornet (AGH) surveillance, supplies for trapping AGH, inspections for honey bee pests: Varroa, Nosema, Tropilaelaps Mites, American and European Foulbrood. This project was funded with $25,000.

5. **$200,000 for improvement of productivity of inspection capacity within the Plant Quarantine Branch**

   (The Department currently spends over $1,600,000 a year on these projects)

Staffing at PQB has been addressed with the onboarding of multiple new positions. Once criticized by the Legislature, the Department put a high priority on recruitment for the Plant Quarantine Inspectors. Currently there are 71 positions filled of the 80 total positions.

Additionally, the Department's PQB database development project funded at $1.1 million, as described in #2 above, will increase efficiencies across the board for productivity of inspection capacity.

Act 243, SLH 2016 funding was utilized by the Department to increase PQB capacity. The following highlights cover the Department's utilization of Act 243, SLH 2016 funds at roughly $500,000 in general revenues:

Interisland Movement of Invasive Species – Rapid Response and Increased Inspections

Staff statewide have increased surveillance on all agricultural commodities moving interisland. The primary focus has been on the port of Hilo with cut flowers and fresh produce as well as an increased presence on Maui and Oahu for inbound interisland agricultural commodities. Fruit and vegetables are heavily shipped interisland, especially seasonal crops such as Litchi. There have been increased rejections in Hilo and Kona, Honolulu, and Maui. The increased presence at the interisland facilities has allowed the PQ staff statewide to reduce interceptions of LFA, assist growers to implement Bests Management Practices (BMPs) to eliminate LFA on fruit shipments, and educate both the shippers and receivers of the threat of LFA.

Rapid responses for coqui were conducted on Oahu, Maui and Kauai. There was a total of 52 responses resulting in the capture of 89 frogs.

PQ Risk Assessments

PQ conducted pathway risk assessments throughout the state, with sites chosen to be able to assess gaps inspection services. Interisland shipments in Kona, Canine handlers at UPS and FedEx Ground, Interisland shipments in Oahu, Interisland shipments in Maui, Passengers in Honolulu and Passengers in Maui. All risk assessments provided extensive outreach opportunities with the transportation companies and with continued risk assessments, increased compliance as well.

- Kona: Staff were able to inspect 140 lots of produce and cut flowers over an 8-week period. 3 shipments were rejected for LFA. This pathway is high risk because some shippers are bringing rejected LFA infested material from Hilo to Kona to try and ship from there to neighbor islands.

- Canine Handlers: Handlers utilized their detector dogs at UPS and FedEx Ground for one week each. UPS is normally staffed by inspectors; however, the detector dogs can find agricultural commodities that are not declared and in unmarked packaging. Within the timeframe a single, unmarked palm plant was discovered and destroyed. This pathway is high risk due to the odd hours for offloading of cargo, high volume of parcels, and the relative ease for shippers to move prohibited commodities. FedEx Ground is not normally monitored by staff. Utilizing the canines, no agricultural materials were discovered. This pathway is low-risk as the cargo is shipped via surface vessel and most agricultural commodities cannot be shipped this way. Periodic monitoring will be maintained to ensure this pathway continues to be low risk.
- Interisland shipments – Maui: Conducted a 10-week increased inspection on agricultural materials moving interisland through FedEx and at Kapalua Airport. Both pathways did have agricultural materials, but the amounts were small compared to the total numbers of parcels imported. Both pathways are deemed to be of moderate risk.
- Interisland shipments – Oahu: Conducted a 14-week increased inspection at Young Brothers, Aloha Air, Hawaiian Air and TransAir. These pathways are high-risk due to the scheduling of the flights/ships and available manpower.
- Passengers – Maui and Oahu: Increased inspection conducted on domestic flights arriving during non-business hours were conducted over a 10-week period.

Increase detection, response, and control programs to address agricultural pests statewide

- 400-gallon sprayer for treatment of coqui frogs, invertebrate pests and other agricultural pests.
- Vehicle/Repair: Pickup-truck, 4x4 for hauling supplies, equipment, and crew to work sites to engage in surveillance, control, eradication of weeds and agricultural pests.
- Public service announcements for Rat Lung Worm – production and airtime costs.
- Hot water treatment machines: the immediate need was not for additional hot water shower machines but for parts to refurbish existing treatment chambers on Hawaii Island currently being used by nurseries shipping plant materials to Neighbor Islands.
- Airfare, Inter-island travel and expenses to conduct surveys, collect samples, meet with stakeholders on pest issues: fireweed biocontrol project.
- Collaterals and promotional items (pencils, pens, magnets, clips, etc.) imprinted with the Pest Hotline phone number to distribute during PQ

and PPC outreach events, such as the LICH conference and elementary school fairs allows citizens to have tangible reminders to remain vigilant of plant pests.

- Microscopes, scope cameras, and accessories for Plant Pest Control and Plant Quarantine diagnostic services were purchased.
- Chemicals and pesticides used to control and eradicate Little Fire Ants, noxious weeds, hala scale were purchased.
- Fireweed Research and Plant growth chamber for incubating pathogens for detection and diagnostics.
- LFA test kit components: zipper bags, envelopes, and popsicle sticks provided at outreach events.
- Tablets and electronic tracking equipment were purchased for use with the certified nursery program to modernize data collection and form generation. When used in conjunction with the new data collection system, it will greatly increase inspector efficiency and reduce paper files.

6. **$100,000 for public and industry education with agricultural commodity organizations.**

   (The Department has invested over $575,000 to support this effort annually)

   Education remains a high priority for the HDOA. Through various commodity events and PSA's, HDOA has continued to fund education booths and media to provide information to agriculturalists and the public throughout the State. General funds and special funds provided the resources to create PSA's for Rat Lungworm and Food Safety at over $125,000. The Cargo Fee supports the educational staff that attends events throughout the state to educate and engage with agricultural stakeholders and the public. The PQB educational team was supported with a general and special fund budget of over $150,000. Events that they attended throughout the 2017 year included:

   - Merry Monarch Outreach on Hawaii Island (4 day)
   - Family Night: Circus Under the Sea at the Waikiki Aquarium
   - Maui County Fair (4 day)
   - Air cargo day (sponsored event by Hawaiian Air)
   - Hawaii County Fair (4 day)
   - Agricultural Conference at Hawaii Convention Center (2 day)
   - Big Island Association of Nurserymen show (2 day)
   - Halawa Xeriscape Un-Thirsty Plant Show
   - Hawaii State Farm Fair (2 day)
   - Pet Expo (2 day)
   - Kunia Orchid Show (3 day)
   - Earth Day at Schofield Barracks

- Ag awareness Day at the Pearl City Urban Garden Center (2 day)
- Ag Day at the Capitol
- NELHA outreach
- Longs Drugs Outreach
- OHIA Love Fest
- STEM outreach at UH Manoa
- Palisades Elem School
- Queen Emma School
- Momilani Elementary
- Makakilo Elementary
- Le Jardin Academy Collaboration with USDA
- Assist Job fairs (UH Manoa, LCC, KCC, Job fair at Neil Blaisdell Center)
- Mililani Middle School STEM program
- Summer Fun Program outreach (2 classes)
- Landscape Industry Counsel of Hawaii conference
- Hawaii Farm Bureau Convention

Plant Quarantine/Invasive Species Awareness at the Daniel K. Inouye International Airport. An initiative by Plant Quarantine Branch personnel was launched to promote awareness of the impact of invasive species on our environment and the promotion of the Plant Quarantine Branch as the first line of defense in combatting invasive species in Hawaii. The effort will include 10-second videos on a 1-minute loop with other products or organizations. The videos will appear on all the television monitor screens above the escalators going down to Baggage Claim from all domestic arrivals and will include the escalator going down to Baggage Claim at the interisland terminal for a total of 4 video monitors. The videos will also be displayed on both sides of the new arrival and departure board at the Hawaiian Airlines/interisland ticket lobby. This is a 3-year project funded with $300,000.

Nearly $12 million is invested annually by the Department of Agriculture for the Biosecurity Program. With limited general funds and a small State budget, it is within the Department's best interest to carefully utilize every funding source appropriately. By doing so, the Department is able to efficiently function with the available resources for each division.

Part 2. Hawaii Interagency Biosecurity Plan and the Hawaii Invasive Species Authority

The Hawaii Interagency Biosecurity Plan

The Hawaii Department of Agriculture lead the development of the Hawaii Interagency Biosecurity Plan (HIBP), utilizing a variety of forums to engage stakeholders from the early conceptual process in 2015 through the production of a final document in January 2017. The final HIBP recognizes that effective biosecurity is comprehensive in scope, and should take an integrated look at pre-border, border, and post-border actions taken by various agencies associated with preventing and mitigating invasive species impacts. Hawaii's growers are best served by building broad partnerships that address invasive species both on and off agricultural lands.

During this process, widespread support was received throughout the local and federal community. While only a few had some concerns over the HIBP, the Department provided ample opportunity to raise those concerns and provide specific areas that needed attention. Through those conversations, the Department has reached out to concerned Maui and Hawaii Island individuals that have raised concerns over the HIBP and the development of the Hawaii Invasive Species Authority. They have referenced that their concerns exist in the Hawaii Farm Bureau Federation (HFBF) testimony submitted to the Department during the development of the HIBP. With regard to HFBF's written comments, the Department provides the responses below:

> **HFBF Comment**: We recommend a review of existing regulations and focus on implementation vs. creation of new regulations which will delay action. For example, we believe authority to inspect non-agricultural commodities is already in place. HDOA PQ has inspected rocks, vehicles and other non-agricultural items in the past.
>
> > **Response**: The planning process for the HIBP did include an extensive review of existing regulations. HRS 150A-5 does authorize inspectors to inspect any aircraft, vessel, or other carrier if the inspector has good cause to believe the provisions of HRS 150A are being violated. While this could be used to inspect non-agricultural items for the presence of pests designated by the department, the HIBP recommends making this authority clearer. For example, what constitutes "good cause" for pest inspection when the material being transported is household goods from one island to another? A clear policy and process should be established for determining "high-risk" non-agricultural commodities that may be vectors of agricultural pests.
>
> **HFBF Comment**: The draft requires significant hiring of personnel without adequate exploration of technology advancements.

Response: The HIBP explores gaps in both personnel and technological advancements. Even with the implementation of electronic manifesting, additional personnel are needed to adequately address the current volume of goods and people moving into and around Hawaii. The HIBP recommends investing in research and development of technologies related to biosecurity, as well as investments in diagnostic capacity. If there are specific recommendations for technology development other than those presented in the HIBP, the state invites recommendations for further research.

HFBF Comment: Mechanisms to quarantine areas within an island should be addressed.

Response: The Hawaii Department of Agriculture has the authority to quarantine areas within an island. For example, quarantine for banana bunchy top virus on Hawaii Island was implemented at the district, rather than island-wide, level. It is not clear what additional mechanisms are being advocated here, but with existing authorities and increased personnel capacity, sub-island quarantines should be an available tool.

HFBF Comment: Eradication should be a priority.

Response: Eradication is absolutely a priority, when feasible. Invasion biology has a well-known problem called the "invasion curve," wherein the population size of an invasive species increases exponentially, while the human-mediated processes of detecting, identifying, and responding to a population are slower. Often by the time the public is aware of an invasive species infestation, the population size is already too large to eradicate. In planning a response, eradication is always the priority, if it is logistically possible. If it is not, containment and control are the next best options.

HFBF Comment: Too often new pests have gotten out of control while extensive surveys are being done.

Response: Surveys are an important process in responding to an invasive species. To plan an eradication effort, responders typically need to know the geographical distribution of the species they are responding to. While responders work as quickly as possible, attempting to conduct an eradication without conducting surveys may lead to wasted resources as the species might not being fully addressed across its full distribution. Eradication requires getting every individual of a species; in order to eradicate, we need to know where those individuals are.

HFBF Comment: Management of known populations of invasive species should be a priority. Control can be done in collaboration with landowners, in certain cases. As is the case in agriculture, hotels usually also have staff that are trained in pesticide use. Developing quick response teams in various locations

on each island, utilizing trained volunteers, may be an option. Although the draft plan heavily emphasizes government actions, invasive species control is everyone's responsibility and we all need to take ownership in the implementation of control measures. The success of any biosecurity plan requires public private collaboration. While referenced, it is not emphasized or prioritized.

> **Response**: Management of known populations is a priority, and the HIBP does incorporate public-private partnerships as part of the solution. For example, the HIBP prioritizes use of public-private partnerships for inspections of commodities at 3rd party facilities. With regard to response, the HIBP describes working with stakeholders, including farmers, nursery operators, and interested members of the public, in learning best management practices for invasive species.

HFBF Comment: Import replacement can make a significant impact in invasive species introductions and significant opportunities exist for local farmers in this area. Additionally, the University has done research on this that currently just sits on the shelves. This work should be reviewed and shared with farmers to encourage local-grown initiatives.

> **Response**: The HIBP recommends investing in import substitution and encourages locally grown goods. The HIBP recommends encouraging locally grown goods. Specifically, it talks about engaging marketing consultants in promoting local agriculture. The Department of Agriculture already invests in a "Buy Local" campaign, but the recommendation of the HIBP would expand this to include more information about the biosecurity value of buying locally.

HFBF Comment: We need implementation actions rather than studies, new laws, and more plans. There have been many plans in the past, and portions of this draft reference these studies. However, the plan seems to fall short on recognizing the authorities in existing laws and potential collaborative opportunities.

> **Response**: The primary product of the HIBP is an implementation matrix, with 147 actions to be taken. The HIBP is not a conceptual plan, it has specific actions to be taken to address existing gaps. As referenced above, the HIBP planning process included an extensive review of existing laws. In some cases, such as the authority to inspect non-ag items, the HIBP recommendation is to add clarification to existing authorities. The HIBP also focuses intensely on collaborative opportunities. This is the primary reason that it was designed as an interagency plan: it recognizes that biosecurity is a fundamentally collaborative process and encourages work across agencies and across the public and private sector.

The Hawaii Invasive Species Authority

A major legislative initiative described in the Biosecurity Plan is the restructuring of the HISC into an attached agency known as the Hawaii Invasive Species Authority (HISA). HISC is a voting board only (described in HRS chapter 194), administered by existing staff within the Department of Land and Natural Resources, Division of Forestry and Wildlife, Wildlife Program. In contrast, HISA would be an agency attached to HDOA and would have an expanded board with three new seats for representatives of the agricultural industry, Hawaiian cultural practitioners, and conservation experts from outside State government. The HISA would have the ability to hire dedicated staff to carry out the direction of the board and would fulfill the existing coordination mandate of the HISC with a few key additions, including implementation of the Biosecurity Plan, assisting with emergency response coordination, and providing a central body for invasive species data management. The State's current biosecurity response to an invasive species outbreak is confronted with various agency issues. The issues include, but are not limited to, leadership authority, cross-cutting personnel and duties, detailed resources coordination, and state and federal procurement. HISA would provide the critical implementation role structure for each federal, state, county, and private sector agency to quickly and effectively respond to outbreaks or threats such as Dengue, Rat Lungworm, Little Fire Ant, Coqui Frog, Coconut Rhinoceros Beetle, etc. With the proper resources and legislative support, a dedicated state agency such as the proposed HISA will provide for increased efficiencies and a vital line of defense for the State of Hawaii's biosecurity efforts to prevent the spread of invasive species.

The Department is also aware of testimony on a 2017 measure to restructure the HISC as the Hawaii Invasive Species Authority, written by the Hawaii Floriculture and Nursery Association (HFNA). This testimony stated that the Hawaii Invasive Species Council (HISC) had been ineffective at addressing invasive species issues and was a vehicle to fund the UH Invasive Species Committees. The testimony also states that HFNA views the HISC as lacking in transparency. The Department notes that funds appropriated to the HISC have been utilized for research that has provided cost-saving technologies to prevent and control the spread of invasive species, such as organic treatments for little fire ant, herbicide ballistic technology for invasive plant species, and biological control research support. It has also supported the UH Invasive Species Committees as a set of important gap-filling projects that bridge the mandates of HDOA and DLNR by partnering with these agencies on island-wide detection and control of invasive species that are threats to agriculture, natural resources, and human health. These projects, and the research efforts funded by HISC, have been highly effective and are a model that is now being utilized to develop similar programs in other U.S. states. The Department also disagrees with the characterization of HISC as lacking in transparency. All HISC meetings are subject to Sunshine Law and have been appropriately noticed, with sufficient time for public participation. All products of HISC are provided on the HISC website, including:

- All HISC meeting agendas, notes, and submittals: http://dlnr.hawaii.gov/hisc/meetings/hisc/
- HISC resolutions: http://dlnr.hawaii.gov/hisc/reports/resolutions/
- Descriptions of all HISC-funded projects, FY05-present, including final project reports: (FY18 funded projects at http://dlnr.hawaii.gov/hisc/projects/fy18/, others available under "Funded Projects" menu)
- Reports to the Legislature: http://dlnr.hawaii.gov/hisc/reports/legreports/
- Species profiles: http://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/
- HISC Newsletter archives: http://dlnr.hawaii.gov/hisc/hisc-newsletter/
- HISC strategic plans, and other planning documents: http://dlnr.hawaii.gov/hisc/plans/

Lastly, the Department concurs with statements in the HFNA testimony highlighting the importance of the HDOA Plant Quarantine Biosecurity Program as envisioned by the late Representative Clift Tsuji. Supporting this Biosecurity Program is the main focus of the Hawaii Interagency Biosecurity Plan. The interagency plan simply recognizes the support needed from other agencies to ensure the success of the Plant Quarantine program across the full spectrum of prevention, response, and control actions.

In the first year of the Interagency Biosecurity Plan, over 40% of the internal agency actions described in the plan were initiated, and 20% of the legislative actions described in the plan had been introduced for consideration by legislators. Provision of new funds and positions for biosecurity functions has been lower than the targets provided in the plan, so much of the progress made to date has been focused on making no-cost changes to biosecurity processes and policies. The full 2018 progress report can be found at http://dlnr.hawaii.gov/hisc/plans/hibp/.

Because Hawaii is reliant on intrastate, interstate, and international shipments for most of the day-to-day food and goods, invasive species will continue to be a threat to our islands and must be prioritized and dealt with effectively. Through the support of the Hawaii State Legislature, the Department of Agriculture will continue to increase biosecurity efforts with its various state, federal, county, and private sector partners to provide for a safe and healthy Hawaii by implementing the Hawaii Interagency Biosecurity Plan and developing the Hawaii Invasive Species Authority.