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Governor

SHAN S. TSUTSUI
Lt. Governor

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

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DEPARTMENT OF AGRICULTURE
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DEPT. COMM. NO. 248

January 10, 2017

The Honorable Ronald D. Kouchi,
President and Members of the Senate
Twenty-Ninth State Legislature
State Capitol, Room 409
Honolulu, HI 96813

The Honorable Joseph M. Souki,
Speaker and Members of the House of
Representatives
Twenty-Ninth State Legislature
State Capitol, Room 431
Honolulu, HI 96813

Dear President Kouchi, Speaker Souki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Annual Report on the Biosecurity Program as required by Act 236, SLH 2008. In accordance with Section 93-16, Hawaii Revised Statutes, I am also informing you that the report may be viewed electronically at http://hdoa.hawaii.gov/.

Sincerely,

Scott E. Enright, Chairperson
Board of Agriculture

Enclosure

Island Fresh

REPORT TO THE TWENTY-NINTH LEGISLATURE
2017 REGULAR SESSION
STATE OF HAWAII

ANNUAL REPORT ON THE

BIOSECURITY PROGRAM

ACT 236, SLH 2008

PREPARED BY:

HAWAII DEPARTMENT OF AGRICULTURE

December 2016

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SECTION I

Background

A. Act 236, 2008 Session Laws of Hawaii

Act 236 of the 2008 Session Laws of Hawaii recognized that the unchecked spread of invasive species was a threat to Hawaii's economy, natural environment, and the health and lifestyle of Hawaii's people. Act 236 created a Biosecurity Program within the Department of Agriculture to support the Department's efforts in combatting invasive species. In particular, Act 236 recognized that the Department was undertaking a number of activities to fight invasive species by:

1. Administering pre-entry measures to minimize the risk of invasive pests entering the State;
2. Conducting port-of-entry inspections to detect and quarantine or destroy pests upon arrival; and
3. Administering post-entry measures to mitigate the establishment of pests in the State.

Additionally, Act 236 acknowledged the Department's efforts to reduce the State's dependency on imported agricultural products by increasing the capacity of Hawaii's agricultural industry that would in turn reduce the risk of importing agricultural commodities that could contain invasive pests.

The Biosecurity Program was created to support the Department's ongoing efforts to combat invasive pests. The Legislature also established the Pest Inspection, Quarantine, and Eradication (PIQE) fund to finance much of these activities.

B. Role of the Hawaii Department of Agriculture

Efforts to prevent the introduction of invasive species, control and mitigate existing invasive species, and where possible, to eradicate invasive species incursions, are covered by multiple divisions and branches within the Department of Agriculture. There are also multiple funding sources used to fund these activities including general funds, Pest Inspection, Quarantine, and Eradication (PIQE), barrel tax, and federal funds.

The Plant Industry Division is composed of the Plant Quarantine Branch, Plant Pest Control Branch, and the Pesticide Branch. All three branches play a role in biosecurity with HDOA and work closely together to accomplish the objectives. The Plant Quarantine Branch (PQ) is largely tasked with the inspections and permitting of agricultural commodities (live plants; non-propagative plant parts such as fresh produce, cut flowers, animal feed; non-domestic animals

and microorganisms) at ports of entry to prevent the introduction and interisland spread of new or existing invasive species. This branch works closely with its federal partners to ensure Hawaii's ports of entry are being kept free of invasive species threats. The Plant Pest Control Branch focus is primarily on the detection, response, control, containment, and eradication of pests that have managed to bypass inspections at the ports of entry. It is staff from this branch that are in the field actively working with farmers, homeowners, and businesses to help treat, prevent, and where possible, eradicate invasive species threats when they are discovered. The Pesticides Branch ensures that pesticide technologies are available for these efforts and are being properly used. Specific activities of the Plant Industry Division relating to biosecurity are as follows:

Prevention – activities to prevent the introduction of invasive species

- Inspection at port-of-entries.
- Issuance of permits for restricted commodities such as restricted plants, non-domestic animals, and microorganisms.
- Origin certification programs for high risk commodities (compliance agreements between origin state, commodity handlers/shippers, and destination state) designed to minimize or eliminate pest risk levels.

Diagnostics – ability to identify invasive species: Insects, Plant Pathogens, Non-domestic Animals, Microorganisms, and Noxious Weed identification.

Detection – surveillance for the existence and location of an invasive species that may be introduced.

Rapid Response – Immediate survey, control, and eradication measures to detect, capture, or eliminate a single threat or incipient population of invasive species before it can become established.

Monitoring – ongoing surveys to track the presence or absence and status of introduced invasive species over time and to evaluate effectiveness of prevention, control and restoration activities. Surveys are conducted at high risk areas, including within the *airport and harbor environs, surrounding the port-of-entry, agricultural lands, and selected protected areas within the State.*

Biological Sampling – ongoing surveys to track the presence and status of existing species over time and to evaluate effectiveness of prevention, control and restoration activities.

Research and development – the development of scientific knowledge, methods, and technologies to prevent, detect, control and monitor invasive species and assist in

implementing learned technologies to control invasive species' effects on agricultural production.

Education outreach – actions taken to support public education and outreach programs.

Partnerships & cooperative activities – cooperative efforts with stakeholders (agricultural industries); federal, state, county, and private partners; including domestic and international partnerships and agreements.

Information management – activities to facilitate access to and exchange of information concerning invasive species. Includes storage and sharing of data and databases.

Quality Control Programs – activities to measure levels of effectiveness, including on-going pest risk assessments to determine pest-risk pathways, evaluation of mitigation activities, and re-prioritization of inspection activities for invasive species.

Quarantine Treatment Facilities – "shared" government certified treatment facility(ies) approved to conduct disinfestations treatments to recondition and/or destroy shipments infested with quarantine pests, or to subject shipments to treatments that will exterminate the quarantine pest.

Permitting – issuing permits based on statutes, administrative rules, and prior Board of Agriculture decisions to ensure the introduction of regulated commodities can be appropriately imported into the State and not introduce or become invasive species in accordance with pest risk.

Compliance and Enforcement – strengthening the enforcement components to compel compliance with quarantine laws and regulations.

Export Programs – providing services to facilitate the export of agricultural goods to domestic and foreign markets.

The Animal Industry Division approaches biosecurity as a process for risk management of high impact animal diseases. This is accomplished as a spectrum of activities that encompasses mitigation of invasive animal disease occurrence and appropriate response methods to support continuity of business and protect human health. Detection of high impact animal diseases will affect both local industries as well as global trade. The Rabies Control Branch and the Animal Disease Control branch share the same objective of minimizing the impact of animal disease occurrence, but focus on different species. Pre-arrival requirements provide assurances that newly imported animals have been properly identified, complied with disease testing and have undergone pre-transport examination. Upon arrival, inspection occurs to verify animal identification, examine for clinical signs of illness and check for the presence of foreign

parasites. In addition to monitoring newly importing animals, Animal Division staff performs routine surveillance of existing populations to detect emerging or re-emerging animal diseases that are subject to control or eradication. To determine the level of impact when irregularities are detected, the Veterinary Laboratory provides diagnostic support. Upon confirmation of the presence of invasive animal disease or parasites, response methods are initiated to contain disease spread, work towards eradication, and minimize the impact on existing industries, human health and global trade.

Section II

Description of Projects and Activities Funded by the Pest Inspection, Quarantine, and Eradication Fund

Plant Quarantine Branch Database and e-Manifesting.

PQ maintains a database called INVICTA to record import inspection, permitting, and pest hotline reporting activities. The database is a critical and essential tool not only for information storage but is also used to determine effectiveness of operations and aids commodity and pathway risk analysis. Once analyzed, the data is used by PQ to focus inspection activities to intercept pests. The database is outdated, limiting among other things the ability to retrieve information needed for comprehensive risk analysis. The database is being maintained and updated as much as possible with PIQE funds while PQ contracts out for a modern database. A scope of work for the new database has been completed and the department is working on an RFP to seek an appropriate vendor to design it.

Previous risk assessments conducted at statewide ports of entry have determined that commodities pose different risk levels for the entry of pests. INVICTA has been instrumental in these risk assessments but does not have the capacity to efficiently determine commodity risk and allow for efficient electronic-manifesting (e-manifest). The new database will incorporate a standardized e-manifest module that will allow shippers and importers to electronically submit a shipping manifest to HDOA before (sea containers typically 5 days prior and air shipments typically 6-8 hours prior) the commodities arrive in the State. This will allow PQ to efficiently utilize limited manpower by scheduling inspections based on the risk level of the arriving commodities. A pilot project for the e-manifesting system has continued throughout this fiscal year to better design a module that can be incorporated into the new database.

Nursery Certification and Compliance Project.

PQ initiated a pilot project to assess the feasibility of establishing a compliance program for nursery stock. Nurseries in this pilot program will be able to ship nursery stock interisland without inspection if they establish, execute, and maintain standard operating procedures in

their nurseries that meet best management practices demonstrated to reduce risk or eliminate pest infestation. PQ has also established a compliance project with nurseries who ship bursary stock in soil for Rapid Ohia Death (ROD). It includes best management practices as well as periodic testing of soil in the nursery for the fungus that causes ROD.

Christmas Tree Inspection Project.

PQ worked collaboratively with Oregon Department of Agriculture (ODA) to maintain implementation of best management practices and inspection protocols with Oregon Christmas tree shippers to ensure that the shipments are free of pests. In previous years, ODA personnel have come to Hawaii to work with HDOA to inspect the trees as they arrive and to assess the results of the efforts. The results will be analyzed after this Christmas tree season.

PQ is working with the Washington Department of Agriculture to conduct a similar program for Christmas trees from Washington State.

Funding of Personnel.

The PIQE is a significant source of funding ($3.5 million) for PQ staff positions. PIQE supports approximately half (42 of 96) of the PQ positions. These positions were originally general funded but lost during the RIF in 2009. The staff in these positions conduct the day-to-day inspection, permitting, pest response activities and special projects funded by PIQE which meet the mandates of ACT 236 SLH 2008.

Funded Projects.

Hawaii Ant Lab Core Funding: A contract ($190,000) was procured to the Hawaii Ant Lab at the University of Hawaii for a statewide initiative that focused on the development and use of novel and proven technologies to prevent, detect, respond, and control little fire ant.

Early Detection and Prevention little fire ant on Oahu: A contract ($100,000) was procured to the Hawaii Ant Lab at the University of Hawaii to fund a trained research, survey and response team to provide monitoring of high-risk sites such as nurseries and landscape suppliers.

The Hawaii Interagency Biosecurity Plan: A contract ($299,000) was procured to develop an interagency biosecurity plan in order to address the many multi-faceted challenges the State faces when battling invasive species. This plan allowed for State, County, Federal and private and public sector stakeholders to help determine what gaps exist between agencies in addressing invasive species in Hawaii. The plan is a 10-year road map highlighting nearly 150 different tasks that identifies critical needs for additional authorities, resources, and personnel.

Pest Management Program for the Diamondback Moth: A contract ($80,000) was procured with the University of Hawaii to develop a pest management program for the Diamondback Moth and other Lepidopteran pests on crucifers throughout the State. The project's results will provide important information in supporting the Department's efforts to improve biosecurity and increase import replacement.

Hawaii Administrative Rule amendments.

PQ administers Hawaii Administrative Rules that directly apply to biosecurity. These rules are continually being reviewed and updated as needed. This is a multi-tiered process which involves staff, various Advisory Subcommittees, the Advisory Committee on Plants and Animals, and Board of Agriculture review followed by the public hearing process. The process was initiated for the following changes:

Chapter 4-70 Plant Import Rules. Addition of a subchapter on Myrtaceae to address the risk of the import of *Puccinia psidii*, commonly known as Ohia Rust or Guava Rust.

Chapter 4-71 Non-Domestic Animal Import Rules. Change list placement of various non-domestic animals including Nile tilapia, *Oreochromis niloticus*, for aquaculture, crickets, *Acheta domesticus*, for animal feed, and import of certain wild animals for circuses and other short-term performance or exhibition purposes.

Chapter 4-72 Plant Intrastate Rules. Addition of a subchapter on ROD to prohibit the movement of Ohia plants, plant parts, and soil from Hawaii Island to prevent the movement of fungus *Ceratocystuc fimbriata*, the causal agent of ROD, except by permit, to other islands throughout the State.

Section III

Description of Proposed Projects and Activities to be funded by the PIQE Fund

Funded Projects.

Rapid Ohia Death Research. The spread of Rapid Ohia Death throughout the native forests on Hawaii island have been devastating. The Department is working with the University of Hawaii College of Tropical Agriculture and Human Resources to determine vectors of the disease, such as beetles. The University of Hawaii received a contract for $60,000 to develop this research.

Rapid Ohia Death Surveys. Rapid Ohia Death has continued to spread while State and Federal partners are continuing to determine the science around the disease. To keep on track with the effects of Rapid Ohia Death, the Division of Forestry and Wildlife at the Department of

Land and Natural Resources will receive $110,000 to continue aerial surveys to determine the footprint of the Rapid Ohia Death disease.

Hawaii Ant Lab Core Funding. This statewide initiative will focus 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. 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 will receive $307,000.

Early Detection and Prevention little fire ant on Oahu. This project will fund 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 will receive $118,000.

Plant Quarantine Branch Database and e-Manifesting.

This project will continue as described in Section II.

Nursery Certification and Compliance Project.

This project will continue as described in Section II.

Funding of Personnel.

Continuing as described in Section II with minimal change.

Hawaii Administrative Rule amendments.

The review and amendment process for Hawaii Administrative Rules is a dynamic process. The activities will continue as described in Section II.

Section IV

Act 243, Session Laws of Hawaii 2016 Report

The Department of Agriculture has requested the release of and received approval to expend funds as identified in Act 243, SLH 2016 as of late 2016. The mechanism to expend these funds is currently being finalized with fiscal accounts at the Department level. The Plant Industry Division is in its planning stages for Act 243, SLH 2016 funds. Planned activities will include, but not be limited to, the following:

- Interisland Movement of Invasive Species -PQ Rapid Response and Nursery Certification – Personnel costs

- Agricultural Pests Statewide– Personnel and Other Cost (Travel, equipment, supplies, etc).
    1. PQ Risk Assessments
    2. Equipment - Hot Water Treatment Machines, Portable Sprayer, microscopes
    3. LFA Kits
    4. Outreach Materials, Collaterals
    5. PSA
    6. Tablets and electronic tracking equipment
    7. Fireweed Research

The Department is hopeful to move forward with expenditures in early 2017. With this additional funding, the Department will continue its biosecurity work in addressing the interisland movement of invasive species.

Section V

Financial Plan

Pest Inspection, Quarantine, and Eradication
Special Fund

	Actual					Projected				
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	4,046,393	3,784,125	4,974,816	7,175,038	8,098,975	8,433,036	8,379,694	8,378,694	8,313,694	8,314,694
	5,190,456	4,939,775	5,846,025	5,100,803	5,369,318	5,400,000	5,508,000	5,618,000	5,730,000	5,845,000
Investment Pool Interest	21,836	12,038	15,843	33,616	57,162	41,300	42,000	43,000	44,000	45,000
Beginning Fund Balance	159,045	40,006	562	6,255	-	-	-	-	-	-
	5,371,337	4,991,819	5,862,430	5,140,674	5,426,480	5,441,300	5,550,000	5,661,000	5,774,000	5,890,000
REVENUE										
Fees										
Personnel Costs	3,564,194	2,875,139	2,821,868	3,196,542	3,549,165	3,651,942	3,725,000	3,800,000	3,876,000	3,954,000
Other Current Expenses	2,064,576	913,331	837,446	986,084	1,717,101	1,751,000	1,786,000	1,821,000	1,857,000	1,894,000
Equipment	4,835	12,658	2,895	34,110	83,400	40,000	40,000	40,000	40,000	40,000
Motor Vehicles	-	-	-	-	65,681	51,700		65,000		
TOTAL EXPENDITURES	5,633,605	3,801,128	3,662,208	4,216,736	5,415,347	5,494,642	5,551,000	5,726,000	5,773,000	5,888,000
BALANCE	3,784,125	4,974,816	7,175,038	8,098,975	8,110,108	8,379,694	8,378,694	8,313,694	8,314,694	8,316,694