



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Written Testimony Presented Before the  
Senate Committee on Ways and Means  
Tuesday, March 25, 2014 at 9:00 am

By

Maria Gallo, Dean

and

J. Kenneth Grace, Interim Associate Dean  
College of Tropical Agriculture and Human Resources  
University of Hawai'i at Mānoa

### HB 1931 HD1 SD1 – RELATING TO AGRICULTURE

Chair Ige, Vice Chair Kidani, and members of the Senate Committee on Ways and Means, we respectfully submit testimony in support of HB 1931 HD1 SD1, which appropriates funds to the department of agriculture and the University of Hawai'i to research and develop methods for the prevention and treatment of macadamia felted coccid.

The College of Tropical Agriculture and Human Resources and the University of Hawai'i strongly support this bill provided that its passage does not replace or adversely impact priorities as indicated in the University's Board of Regents Approved Executive Biennium Budget.

Macadamia felted coccid is a severe pest of macadamia, a crop with a \$38.2 million farm value in Hawai'i in 2012. It was found in south Kona in February 2005, and at this time, the coccid is distributed throughout the Island of Hawai'i. Development of new control methods and appropriate management recommendations are essential for Hawai'i's producers to stop this invasive pest. Horticultural and harvest methods used in Hawai'i and the large size of trees in our well-established orchards contribute to great difficulties in achieving effective control.

HB 1931 HD1 SD1 includes an appropriation of \$735,000 for the efforts of the College of Tropical Agriculture and Human Resources, in collaboration with the Department of Agriculture, to research and develop methods to control macadamia felted coccid. Section 4 states that funds appropriated are not to lapse at the end of the fiscal biennium. This is the equivalent of \$367,000 for a single fiscal year, which would support hire of research and extension staff to address this problem, in addition to funding for travel and operations.

**NEIL ABERCROMBIE**  
Governor



**SCOTT E. ENRIGHT**  
Chairperson, Board of Agriculture

**KEN H. KAKESAKO**  
Deputy to the Chairperson

State of Hawaii  
**DEPARTMENT OF AGRICULTURE**  
1428 South King Street  
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**TESTIMONY OF SCOTT E. ENRIGHT  
CHAIRPERSON, BOARD OF AGRICULTURE**

**BEFORE THE SENATE COMMITTEE ON WAYS AND MEANS  
TUESDAY, MARCH 25, 2014  
9:00 A.M.  
Conference Room 211**

**HOUSE BILL NO. 1931 HD1 SD1  
RELATING TO AGRICULTURE**

Chairperson Ige and Members of the Committee,

Thank you for the opportunity to testify on House Bill 1931 HD1 SD1. This bill would appropriate funding for research to develop new methods of preventing and treating macadamia felted coccid infestations. The Hawaii Department of Agriculture is in support of this bill and would defer to the University of Hawaii College of Tropical Agriculture and Human Resources as to the level of funding that is needed.

The macadamia nut industry is a vital part of the agricultural economy here in Hawaii. With an estimated farm value of over \$35 million, macadamia nuts are one of the top five agricultural commodities for the State of Hawaii.

The macadamia felted coccid is an insipid pest that can cause severe damage to macadamia nut trees and hurt our macadamia nut industry. It is vital to develop new methods to prevent the spread of this pest and limit the damage that it will have on the macadamia nut industry.

Thank you, again, for the opportunity to testify on this measure.



March 24, 2014, Conference Room 211

RE: HB 1931 HD1 Relating to Agriculture

**In Support**

Aloha Chair persons and Committee Members,

I support HB 1931, which would provide appropriations for the University of Hawaii - College of Tropical Agriculture and Human Resources for the research of Macadamia Felted Coccid (MFC). In recent years, MFC has become a serious pest of Macadamia on the island of Hawaii and has caused the decline of otherwise healthy, productive trees throughout the Ka'u region. It has since spread up to Hamakua. If left unchecked, this pest could cause the decline of the entire Macadamia industry, which directly and indirectly provides jobs for innumerable Hawaii residents.

The macadamia industry isn't solely comprised of large companies; in reality many of the farms in Hawaii are small growers that depend on their Macadamia harvests and value added products for survival. Treatment options are already scarce to non-existent for large growers. When you consider the resources available to small growers, there are even less options. If realistic and economical treatment options aren't discovered, many of the small farmers will be powerless to save their trees and will likely lose their means of income.

Research on MFC is still in its nascency and will require many years and a lot of funding to complete. Many growers within the industry have already contributed as much funding as they could afford to initiate the research, but it has not been nearly enough.

I believe that HB 1931 will provide more of the necessary funding and assistance towards the goal of finding a viable solution to this devastating pest. Without action, the Hawaiian Macadamia industry faces a grim fate. During a time when some of the main issues facing Hawaii are food sustainability and supporting local farmers, it would be contradictory to those goals to essentially let Hawaii's already existing crops fall by the wayside. It is up to you to decide whether ensuring the survival of one of Hawaii's main agricultural industries is a cause worth supporting.

Thank you for the opportunity to submit testimony.

Mahalo,

Bonnie Schoneberg

Research Committee Chair

Hawaii Macadamia Nut Association



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March 25, 2014

HEARING BEFORE THE  
SENATE COMMITTEE ON WAYS AND MEANS

**TESTIMONY ON HB 1931, HD1, SD1**  
RELATING TO AGRICULTURE

Room 211  
9:00 AM

Aloha Chair Ige, Vice Chair Kidani, and Members of the Committee:

I am Christopher Manfredi, President of the Hawaii Farm Bureau Federation (HFB). Organized since 1948, the HFB is comprised of 1,832 farm family members statewide, and serves as Hawaii's voice of agriculture to protect, advocate and advance the social, economic and educational interest of our diverse agricultural community.

**HFB strongly supports HB 1931, HD1, SD1** which appropriates funds to the Hawaii Department of Agriculture and the University of Hawaii to research and develop methods for the prevention and treatment of macadamia felted coccid. It also provides funds for a full time equivalent entomologist position at CTAHR.

Hawai'i is the 3<sup>rd</sup> largest producer of macadamia nuts in the world (570 farms, operating on 17,000 acres), after Australia and South Africa. Production in 2011-2012 totaled 58 million pounds; **the net farm value was \$38 million.**

The macadamia felted coccid (MFC) threatens the entire macadamia nut industry in Hawaii by causing severe tree dieback and then death. Even mature trees can be killed by this small insect. If not controlled, we believe the MFC will spread and could devastate Hawaii's macadamia nut industry. We have seen what the coffee berry borer has done to the local coffee industry and we know that we can't afford to wait. We need to fund research to find economical solutions to this problem. This bill would supply the needed funding to help develop new ways to prevent and treat MFC infestations.

**Hundreds of jobs are tied to macadamia farming in Hawai'i;** it is a vital source of employment in Ka'u, which has among the highest unemployment rate in the state. Over 50% of Hawai'i's macadamia tree acres are located in the Ka'u district, the area hardest hit by the MFC.

**Please support HB 1931 HD1, SD1.** Thank you.

Dear Legislators:

My name is Glenn Sako and I am employed by Royal Hawaiian Services, L.P. in Pahala, HI. I am requesting that you support HB 1931 to fund research to help control the Macadamia Felted Coccid (MFC) and its devastating effect on Macadamia Nut trees.

I have been in Pahala for 2 years and I have witnessed the spread of the branch dieback on the Macadamia Nut trees. The branches typically dieback on the lower portions of the canopy and the disease spread upwards toward the crown. Eventually, the entire original canopy is dead and non-productive. The dead branches are constantly breaking off, causing a hazardous condition for our workers and increasing the maintenance cost of the orchard.

We have applied 2 chemical treatments that have been cleared for Macadamia Nut trees. The soap/growth regulator treatment costs \$150 per acre for the material and we cannot move faster than 2 acres an hour. That comes out to 16 acres a day and we have 3300 acres to protect. The Movento chemical treatment costs \$100 an acre to apply by helicopter and that includes the material cost. But we need a good rain to clear the dust off the canopy, give the helicopter operator a week's notice, and have to stop application if the wind speed exceeds 10 mph and need a good rain again after application to have the chemical work through the trees. Too difficult to get all of these conditions to line up properly.

The Macadamia Felted Coccid is causing a hazardous condition, reducing the yield and increasing the costs of operation. Our margin is very thin and this insect is putting a lot of pressure on our bottom line. We have 120 employees who depend on a healthy orchard and efficient operation to maintain their way of life. If the Pahala orchard should ever close down, what will these people do?

Please support HB 1931 to help the macadamia industry fight this devastating pest.

Thank you,

Glenn Sako  
Operations Management Associate, RHS LP.

**From:** [mailinglist@capitol.hawaii.gov](mailto:mailinglist@capitol.hawaii.gov)  
**To:** [WAM Testimony](#)  
**Cc:** [john@olsontrust.com](mailto:john@olsontrust.com)  
**Subject:** Submitted testimony for HB1931 on Mar 25, 2014 09:00AM  
**Date:** Monday, March 24, 2014 9:04:08 AM

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**HB1931**

Submitted on: 3/24/2014

Testimony for WAM on Mar 25, 2014 09:00AM in Conference Room 211

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
John C. Cross	Edmund C. Olson Trust II	Support	No

Comments: Dear Members of the Ways and Means committee. The Edmund C. Olson Trust and it's macadamia growing and processing subsidiaries STRONGLY support his bill. Please help us battle this especially devastating insect pest of Macadamia Nuts.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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**SENATE COMMITTEE ON WAYS AND MEANS**

**March 25, 2014**

**9:00 AM**

**Room 211**

**Relating to Agriculture**

**HB 1931, HD1, SD1**

Aloha Chairperson Ige, Vice Chair Kidani and Members of the Committee,

I am Randy Cabral and I have been farming in Hawaii for over 40 years. I am the Senior Vice President of Operations for Royal Hawaiian Orchards LP. We farm 6,000 acres of macadamia on Hawai'i Island. Of these, 3,000 are in the District of Ka'u. We employ 250 full time and seasonal workers. **We strongly support this bill.**

I am testifying today to request funding to prevent a dire situation from becoming even worse. Hawai'i is the 3<sup>rd</sup> largest producer of macadamia nuts in the world (570 farms, operating on 17,000 acres), after Australia and South Africa. Production in 2011-2012 totaled 58 million pounds; the net farm value was \$38 million.

**The problem ---the Macadamia Felted Coccid**

Already, three of our largest growers, along with many smaller growers, have found a devastating pest, the macadamia felted coccid (MFC) in their orchards. These farms produce over 80% of the state's macadamia kernels.

The strangely named pest is a small Australian insect that covers and feeds on leaves, nuts, branches, and trunks of the macadamia tree. It even thrives in drought conditions, such as those in Ka'u, and can spread easily by wind.

The MFC threatens the entire macadamia nut industry in Hawaii by causing severe tree dieback and then death. Even mature trees can be killed by this small insect. If not controlled, we believe the MFC will spread to other regions on Hawai'i Island and other islands, and devastate the macadamia nut industry. We have seen what the coffee berry borer has done to the local coffee industry and we

know that we can't afford to wait. We need to fund research to find economical solutions to this problem. This bill would supply the needed funding to help develop new ways to prevent and treat MFC infestations.

### **What do we know and what's been done?**

Currently, very little is known about the life cycle or vulnerabilities of the pest. In its native Australia, macadamia nut growers use considerable pesticides to control the MFC, but in Hawaii, because we typically don't use insecticides, we don't have the equipment and resources to apply these types of pesticides to large, mature trees. Some pesticides seem to work but require adequate rainfall or adequate irrigation, neither of which is available.

The MFC has no significant natural predators in Hawaii as compared to Australia.

### **Why fund research to control the pest?**

Hundreds of jobs are tied to macadamia farming in Hawai'i; it is a vital source of employment in Ka'u, which has among the highest unemployment rate in the state. Over 50% of Hawai'i's macadamia tree acres are located in the Ka'u district, the area hardest hit by the MFC.

We know there are many other demands for funding and there is a limited budget. Other pests such as the coffee berry borer have gotten more media attention and funding. But we want you to know that without intervention, we have little chance of successfully continuing macadamia farming.

The HDOA and UH CTAHR can help us by studying the MFC and figuring out sustainable and economical solutions. Growers themselves have contributed \$95,000 to UH CTAHR to conduct MFC research, but more funding is needed.

Thank you for allowing me this opportunity to explain our predicament to you. I would be happy to answer any questions you might have. Please contact me if you're interested in seeing in person the devastation this pest has already caused in Ka'u (see photo examples on following pages).



# MFC Damage in Ka'u Orchard





Tree infested with MFC



MFC on trunk of infested tree



Extensive MFC damage within an orchard block

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**Cc:** [troy@okfarmshawaii.com](mailto:troy@okfarmshawaii.com)  
**Subject:** Submitted testimony for HB1931 on Mar 25, 2014 09:00AM  
**Date:** Saturday, March 22, 2014 10:38:52 AM

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**HB1931**

Submitted on: 3/22/2014

Testimony for WAM on Mar 25, 2014 09:00AM in Conference Room 211

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
TRoy Keolanui	OK FARms llc	Support	No

Comments: WE farm 300 acres of Macadamia here in North Hilo. The felted cocid has been found here in our orchards and has diminished our yields and caused die back in the orchard. While the pest is primarily in found in high density in the southern part of the island, we need to act quickly. Research to find new methods of control and recommendations for cultural practices to prevent infestations is essential. Without funding to support the effort, this pest will certainly gain a stronger foot hold and threaten a industry here on the big island that includes 20,000 plus acres of orchards and 100's if not 1000's of jobs. thank you , Troy Keolanui

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**Cc:** [ashman.janet@gmail.com](mailto:ashman.janet@gmail.com)  
**Subject:** Submitted testimony for HB1931 on Mar 25, 2014 09:00AM  
**Date:** Sunday, March 23, 2014 5:28:12 PM

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**HB1931**

Submitted on: 3/23/2014

Testimony for WAM on Mar 25, 2014 09:00AM in Conference Room 211

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Janet Ashman	Individual	Support	No

Comments: Please show your support for Hawaii agriculture. Funding this effort to research and develop methods to prevent and treat the destruction caused by the macadamia felted coccid now will be much more cost-effective than trying to address it later. Thank you.

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HB1931, Relating to Agriculture:

Chair Ige, Vice Chair Kidani, and members of the Committee on Ways and Means, I thank you for this opportunity to provide my personal testimony in support of HB 1931, Relating to Agriculture. I strongly support this bill provided that its passage does not replace or adversely impact priorities as indicated in the University's Board of Regents Approved Executive Biennium Budget.

Macadamia felted coccid is the most serious pest of macadamia nuts cultivated in Hawaii. This insect is capable of killing trees, and can have a dramatic impact on yields if left unchecked. Losses in nut production in heavily infested trees upon which management efforts are made are severe; yield potential of trees is of course completely lost in the case of trees that succumb to the insects' impact. When this pest was initially detected in 2005, immediate efforts were made to suppress the pest in the South Kona, where it was restricted to at that time. The soil and moisture environment at the South Kona growing areas is significantly different from other areas where macadamia nuts are grown, producing an environment in which effective pest control measures could relatively easily be implemented. Effective suppression protocols were developed and implemented with very good results. In some areas where this pest spread to subsequently, we were successful in eradicating early infestations in very young trees.

While biological control options and insecticide treatments are effective under certain circumstances, there are many situations where the impacts of both are reduced. Research is required to address improvement of biological and chemical control of this pest under all growing conditions; the exact origin (as potential sources of new biological control agents); interactions with macadamia felted coccids with pathogens of macadamia nut trees; and natural resistance to macadamia felted coccid in macadamia varieties. This pest is spreading extensively in macadamia growing areas of Hawaii, and immediate action is essential.

My name is Mark G Wright. I am a professor of entomology and an entomology extension specialist at UH Manoa. I have conducted extensive research on the management of macadamia felted coccid. However, today, I am providing personal testimony.  
March 23, 2014.

**HOUSE WAYS AND MEANS COMMITTEE**  
**March 24, 2014**  
**Relating to Agriculture**  
**HB 1931**

Aloha Chairperson Isaac Choy, Vice Chair Linda Ichiyama, and Members of the Committee,

My name is Randy Mochizuki and I am the Crop Control Superintendant at the Royal Hawaiian Orchard in Pahala, HI. **We strongly support this bill to fund a way to protect macadamia nut farmers from a devastating invasive pest.**

The coccids were first found in our orchard in 2009 damaging a few trees. It has since spread throughout our 3,300 acres and has destroyed or damaged a substantial number of trees.

Due to the size of our trees; oil sprays which can control the pest in other orchards, are ineffective because of inadequate coverage.

Other orchards in Kau and along the Hamakua coast are also being damaged by the coccids and have been unable to find effective means of control.

If we don't find a cost effective control; it may lead to the demise of our Pahala orchard and 125 jobs. But, it may also severely impact our company as a whole and another 150 jobs.

It also has the potential of destroying other macadamia orchards in the state affecting 1,500 acres and 570 farms and a 35-38 million dollar industry.

Our company's Pahala division has spent over \$100,000 on this pest since 2009. The industry has recently contributed \$85,000 for research. But much more is need to not only find an immediate control, but long term control measure.

Please help us by supporting this bill.

Thank you for your consideration of my comments.

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**Subject:** \*Submitted testimony for HB1931 on Mar 25, 2014 09:00AM\*  
**Date:** Monday, March 24, 2014 6:39:45 AM

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**HB1931**

Submitted on: 3/24/2014

Testimony for WAM on Mar 25, 2014 09:00AM in Conference Room 211

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Volanda Collins-Toribio	Individual	Support	No

Comments:

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**HB1931**

Submitted on: 3/24/2014

Testimony for WAM on Mar 25, 2014 09:00AM in Conference Room 211

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Albert Kam	Individual	Support	No

Comments: I own a small 10 acre macadamia orchard in Pahala where the Macadamia Felted Coccid is running rampant and has the potential to destroy the Hawaiian Macadamia Industry. Hawaii led the development and cultivation of macadamia nut trees and back in 1980 produced over 90% of the world supply. Today Hawaii represents only 15% of the world supply and needs every bit of help to keep a quintessential Hawaiian Agricultural Industry alive. Please fund HB1931 to help the Macadamia industry.

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