

HB1931 Testimony

Appropriates funds to the Department of Agriculture and the University of Hawaii to research and develop methods for the prevention and treatment of macadamia felted coccid. Effective July 1, 2014

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
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

**TESTIMONY OF SCOTT E. ENRIGHT
CHAIRPERSON, BOARD OF AGRICULTURE**

**BEFORE THE SENATE COMMITTEES ON AGRICULTURE, HIGHER EDUCATION,
ENERGY AND ENVIRONMENT
THURSDAY, MARCH 13, 2014
2:20 P.M.
Conference Room 229**

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

Chairpersons Nishihara, Taniguchi, Gabbard and Members of the Committees,

Thank you for the opportunity to testify on House Bill 1931 HD1. 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.



Hawaii State Capitol,
415 S. Beretania Street
Honolulu, HI 96813

RE: SUPPORT of HB 1931: Relating to Agriculture

February, 25, 2014

Dear Members of: Hawaii Agriculture, Higher Ed, and Environment & Energy Committees,

As President and Co-owner of Hamakua Macadamia Nut Company and Vice President of the Hawaii Macadamia Nut Association, I appreciate the committee giving HB 1931 serious consideration. As one of the top five agricultural commodities for the State of Hawaii, the macadamia industry is extremely important to state. The stated \$35 million farm value is only portion of the overall economic impact of the industry to the island.

Hamakua Macadamia Nut Company strongly supports the legislation to obtain funding to combat the macadamia felted coccid; HB 1931, to reduce and over time limit the damage caused by the devastating pest.

As a producer, processor and retailer of 100% Hawaiian macadamia nuts, it is imperative that the bill get passed so further action can be taken to assist farmers and macadamia nut related businesses throughout the island before it is too late.

Thank you for the opportunity to testify. I can be reached for further details or any questions.

Richard Schnitzler

President – Hamakua Macadamia Nut Company
VP – Hamakua Macadamia Nut Association



Hamakua Macadamia Nut Company
P.O. Box 44715, Kawaihae, HI 96743, 808-882-1116, Richard@hawnnut.com

From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: skaye@hawaii.edu
Subject: Submitted testimony for HB1931 on Mar 13, 2014 14:20PM
Date: Monday, March 10, 2014 3:28:52 PM

HB1931

Submitted on: 3/10/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Springer Kaye	Big Island Invasive Species Committee	Support	No

Comments: BIISC supports this bill providing funds to research management of this costly pest of macadamia nut trees. An estimated 1.2 million macadamia nut trees in the state produce 50 million pounds of nuts and 38 million dollars in farm value (2012). With additional value added sales and agro-tourism opportunities, this is a significant agricultural industry. Substantial funding is required to develop quality, outcome-oriented programs. Your consideration is greatly appreciated by the many farmers requiring the assistance of the Department of Agriculture to stop the spread of the felted coccid.

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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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: waiukahenutz@gmail.com
Subject: Submitted testimony for HB1931 on Mar 13, 2014 14:20PM
Date: Monday, March 10, 2014 3:47:54 PM

HB1931

Submitted on: 3/10/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Carol Yurth	Hawaii Macadamia Nut Association	Support	No

Comments: Hawaii Grown Macadamia Nuts are the best macadamia nuts produced in the world. Other countries may grow and produce this special nut however, Hawaii's climate is superb growing weather. Macadamia nuts are healthy as they break down the bad cholesterol. Having additional diseases that would destroy this valuable commodity for Hawaii Farmers would be a tragedy for all. Please support the further study in the prevention of new and those diseases already infesting our crops. Hawaii Macadamia Nuts have, like the Kona Coffee, a niche place in Hawaii's Economic Future. Please make sure to protect our aina for our future generations of farmers, visitors and our economic livelihood. Carol and Bob Yurth, Macadamia Nut Farmers, HMA Members, Owners and Processors.

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The Twenty-Seventh Legislature
Regular Session of 2014

THE SENATE

Committee on Agriculture

Senator Clarence K. Nishihara, Chair
Senator Ronald D. Kouchi, Vice Chair

Committee on Higher Education

Senator Brian T. Taniguchi, Chair
Senator Gilbert Kahele, Vice Chair

Committee on Energy and Environment

Senator Mike Gabbard, Chair
Senator Russell E. Ruderman, Vice Chair

State Capitol, Conference Room 229
Thursday, March 13, 2014; 2:20 p.m.

**STATEMENT OF THE ILWU LOCAL 142 ON H.B. 1931, HD1
RELATING TO AGRICULTURE**

The ILWU Local 142 supports H.B. 1931, HD1, which appropriates funds to the Department of Agriculture and the University of Hawaii to research and develop methods for the prevention and treatment of macadamia felted coccid.

The ILWU represents hundreds of workers in the macadamia nut industry. Our members cultivate macadamia nuts in Pahala and Keaau and work at the factory that processes the macadamia nuts for sale to residents and visitors alike. Macadamia is one of the top five crops grown in Hawaii and offers jobs, supports tourism, and promotes agriculture, which contributes to the diversification of economic activity in Hawaii.

The macadamia felted coccid causes severe damage to macadamia nut trees and, if not controlled, could devastate the industry. The insect was first found in macadamia grown in Hawaii in 2005. Earlier measures to control infestation and its effects seem to be somewhat ineffective. More research is needed.

H.B. 1931, HD1 proposes appropriations to the Department of Agriculture and the University of Hawaii to research and develop methods for the prevention and treatment of macadamia coccid infestation. We believe the funds will represent a sound investment in maintaining the viability of a valuable industry for Hawaii's economy.

The ILWU urges passage of H.B. 1931, HD1. Thank you for the opportunity to testify on this important matter.



March 10, 2014

Regarding: HB 1931
Funding for Research on the Macadamia Felted Coccid

Greetings Senators,

My name is David Schell. I am the General Manager for the Kea'au farming operations of Island Princess. I would like to take a moment of your time to encourage you to move favorably on the macadamia industry's request for research funds to help mitigate the impact of Macadamia Felted Coccid on the Big Island.

This scale has already been found in orchards throughout the island and is continuing to spread into more remote locations. When it was first detected in Hawaii, MFC was considered a nuisance pest. Infestations of the scale resulted in decreased production and some growers in Ka'u were experiencing occasional limb loss if the pest was left untreated. In the last few years, however, orchardists in some of the most infested regions began reporting entire tree mortality that has been linked to MFC. The limited research efforts being supported by the USDA-ARS and being carried out by the labs under Dr. Keith indicate that MFC is vectoring domestic and widely present funguses into trees that they invade. She currently believes that it is these funguses compounded by the weakened health of the trees that are leading to mortality.

Dr. Keith, however, will readily agree that she and her people have only just scratched the surface of understanding this possible mechanism and far more work is needed to come to any sound conclusions – let alone formulate some counter measures for growers to employ. Naturally, this means more money is needed to conduct the work and that is why we are making this request for funding.

As a side, I would like to add that treating for scale is complex. Here in Hawaii, because we have been largely insect free, most growers do not have the type of equipment or the resources needed to apply insecticides. Frankly, I am not sure there are even any compounds that are currently EPA registered to use on scale insects in macadamia. Furthermore, it is very difficult to penetrate the canopy of a macadamia tree in order to introduce direct contact material onto the surfaces inhabited by scales and, because the absorption surfaces of the leaves are on the underside, applications of systemic insecticides would also have limited efficacy.

16-261 Shipman Road, P.O. Box 340, Keaau HI 96749
Phone(808)966-7451 Fax(808)966-8507

I don't think I need to remind you of the value that the macadamia industry lends to the state's economy. We employ thousands of people and support hundreds of local business. With that, of course, the industry is responsible for a substantial portion of the revenues collected as taxes by the state and county of Hawaii. Given that, I would argue that it is incumbent on the state and in the best interests of Hawaii to provide help dealing with what is quickly becoming a very serious problem.

Please consider giving the state's help to our industry and pass HB 1931 onto the floor with your recommendation.

Thank you for your time and understanding.

David Schell
GM, IP Kea'au

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: gottlieb@hawaii.rr.com
Subject: *Submitted testimony for HB1931 on Mar 13, 2014 14:20PM*
Date: Tuesday, March 11, 2014 10:05:12 AM

HB1931

Submitted on: 3/11/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Alan Gottlieb	Hawaii Cattlemen's Council	Support	No

Comments:

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e-mail info@hfbf.org; www.hfbf.org

March 13, 2014

HEARING BEFORE THE
SENATE COMMITTEE ON AGRICULTURE
SENATE COMMITTEE ON HIGHER EDUCATION
SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

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

Room 229
2:20 PM

Aloha Chair Nishihara, Chair Taniguchi, Chair Gabbard, Vice Chair Kouchi, Vice Chair Kahele, Vice Chair Rudermann, and Members of the Committees:

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 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 3rd 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. Thank you.



SUMMARIES

Top 20 commodities, State of Hawaii, 2008-2009 ¹

Commodity ²	Rank		Value of production	
	2008	2009	2008	2009
	--- Number ---		--- 1,000 dollars ---	
Seed crops	1	1	176,990	222,560
Sugarcane (unprocessed)	2	2	44,200	44,200
Macadamia nuts	3	3	33,500	29,400
Cattle	5	4	24,305	28,945
Coffee	4	5	29,240	27,840
Algae	6	6	15,740	16,995
Papayas	7	7	14,393	14,186
Bananas	9	8	8,004	10,175
Eggs	8	9	8,678	8,759
Milk	12	10	5,460	7,491
Basil	10	11	6,755	6,810
Potatoes, sweet	13	12	4,780	5,413
Palms, potted	11	13	6,635	5,251
Dendrobiums, potted	14	14	4,111	3,474
Anthuriums, cut	16	15	3,518	3,006
Hogs	17	16	3,359	2,996
Cabbage, head	19	17	2,820	2,976
Dracaena, potted	15	18	3,919	2,766
Taro	20	19	2,666	2,440
Ginger root	18	20	2,880	2,240

Farm values, State of Hawaii, 1990-2009

Year	Sugar (unprocessed cane)	Pineapples (fresh equivalent)	Diversified agriculture ¹	Total ²
	1,000 dollars			
1990	213,800	106,365	275,789	595,954
1991	174,900	107,775	268,707	551,382
1992	153,700	102,100	264,427	520,227
1993	163,000	79,850	271,094	513,944
1994	160,100	78,890	273,826	512,816
1995	127,700	87,360	291,632	506,692
1996	108,100	95,914	307,329	511,343
1997	85,500	91,721	327,484	504,705
1998	87,300	92,776	329,886	509,962
1999	86,800	101,448	342,846	531,094
2000	62,200	101,530	358,170	521,900
2001	57,800	96,337	370,241	524,378
2002	64,300	100,616	374,602	539,518
2003	64,400	101,470	382,253	548,123
2004	61,500	83,104	407,453	552,057
2005	58,900	79,288	444,597	582,785
2006	50,200	73,652	455,738	579,590
2007	47,600	³	³	577,999
2008	44,200	³	³	605,230
2009	44,200	³	³	627,690

¹ Pineapples, sod, tomatoes, and watermelons not ranked due to disclosure of individual operations.

² Floriculture categories include only growers with total sales of \$10,000 or more.

¹ Aquaculture included beginning 1993.

² Includes all agricultural commodities.

³ Pineapples and diversified agriculture not shown separately to avoid disclosure of individual operations.

Diversified agriculture ranked by value, State of Hawaii, 2008-2009

Commodity	Rank		Value of production			Percent of diversified agriculture ¹	
	2008	2009	2008	2009	Year-to-year percent change	2008	2009
	--- Number ---		---- 1,000 dollars ----		----- Percent -----		
Seed crops	1	1	176,990	222,560	+26	38.8	45.6
Flowers and nursery products	2	2	94,662	80,092	-15	20.7	16.4
Aquaculture	3	3	34,650	32,330	-7	7.6	6.6
Macadamia nuts	4	4	33,500	29,400	-12	7.3	6.0
Cattle	6	5	24,305	28,945	+19	5.3	5.9
Coffee	5	6	29,240	27,840	-5	6.5	5.7
Fruits (excluding pineapples)	7	7	23,680	25,373	+7	5.2	5.2
Vegetables and melons ²	8	8	21,898	22,410	+2	4.8	4.6
Eggs	9	9	8,678	8,759	+1	1.9	1.8
Milk	10	10	5,460	7,491	+37	1.2	1.6
Hogs	11	11	3,359	2,996	-11	.7	.6
Total			³	³		100.0	100.0

¹ Percentages are of displayed items only. ² Includes ginger root and herbs. Beginning 2007, non-published vegetable commodities not included to avoid disclosure of individual operations, but included in total farm value. ³ Data not shown separately to avoid disclosure of individual operations but included in total farm value.

SENATE COMMITTEES ON AGL/HRE/ENE

March 13, 2014

2:20 PM

Room 229

Relating to Agriculture

HB 1931, HD1

Aloha Chairpersons Nishihara, Taniguchi and Gabbard; Vice Chairs Kouchi, Kahele and Ruderman, 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 3rd 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

From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: john@olsontrust.com
Subject: Submitted testimony for HB1931 on Mar 13, 2014 14:20PM
Date: Tuesday, March 11, 2014 4:01:32 PM

HB1931

Submitted on: 3/11/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
John C. Cross	Edmund C. Olson Trust II	Support	Yes

Comments: I represent the Edmund C. Olson Trust and Kau Farms Mgmt. We strongly support this bill. We need all the help we can get in trying to learn more about this pest and bring it under control. It is trully devastating and could threaten the entire Hawaiian Macadamia Nut industry. I will be testifying in person on Thursday.

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688 Kinoole Street, Suite 121, Hilo, Hawaii 96720

March 11, 2014

Messrs. Senator Brian Taniguchi, Chair
Clarence K. Nishihara, Chair
Mike Gabbard, Chair
Hawaii State Capitol
415 S. Beretania Street
Honolulu, HI 96813

Re: In Support of House Bill 1931 HD1

I am writing to ask for your support in passing legislation to obtain funding to combat the macadamia felted coccid and am in strong support of HB 1931 HD1. The funding to thoroughly study and develop methods of combatting the macadamia felted coccid is sorely needed. We currently own and lease over 5,000 tree acres of macadamia nut orchards on Hawaii Island and are one of the largest producers of macadamias in the world. We currently employ over 270 employees.

We have experienced the effects of this invasive pest and have lost and continue to lose macadamia nut trees, which were killed as a result of the coccid. Approximately 13% of macadamia nut trees growing in Pahala are severely infected. We see this pest having the same effect on our industry as the coffee borer beetle has had on our coffee industry and if something is not done, our industry and all the people it employs will surely suffer. In 2013, we estimate that this pest reduced our nut production by 500,000 pounds and it is only getting worse.

We have made attempts to combat this pest with pesticides and other treatments with no lasting success, and have spent over \$250,000 on these ineffective measures. We have sought help from USDA, CTAHR and others, but funding issues have prevented them from assisting us. Accordingly, our company and the Ed Olson Trust have contracted with CTAHR to conduct research, which we are funding. Unfortunately we will not be able to sustain this.

Now is the time to act, as we need to control this pest before it gets more pervasive and costly to treat. Look at what happened with the coqui frog and fire ant. On our island, the coqui has gotten to the point where it is untreatable. We would hate to see this happen with the coccid, as it will devastate the industry and create job losses.

It is critical that this Bill gets passed, which will go a long way in developing methods of eliminating and or controlling this pest. This bill will help ensure our macadamia nut industry remains viable.

Thank you very much for all you do. Should you have any questions, I can be reached at (808) 747-8471 or email at jmiyata@rhomac.com.

Very truly yours,

Jon Y. Miyata
Vice President & Chief
Accounting Officer

March 13, 2014, Conference Room 229

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



March 12, 2014

Senator Clarence Nishihara, Chair,
Senate Committee on Agriculture
Room 204, Hawaii State Capitol
Honolulu, Hawaii 96813

VIA: sennishihara@capitol.hawaii.gov

Senator Ronald Kouchi, Vice Chair
Senate Committee on Agriculture
Room 206, Hawaii State Capitol
Honolulu, Hawaii 96813

VIA: senkouchi@capitol.hawaii.gov

RE: HB 1931 HD1 RELATING TO AGRICULTURE
Hearing: 3/13/14- AGL/HRE/ENE

Testimony of Mark K. Crawford, Operations Manager,
MacFarms of Hawaii, LLC

Dear Honorable Nishihara and Honorable Kouchi:

Thank you for the opportunity to testify on House Bill 1931 HD1. This would appropriate funding for research to develop new methods of control and treating macadamia felted coccid infestations.

MacFarms of Hawaii, LLC is in support of this bill as it will provide required resources to allow the University of Hawaii College of Tropical Agriculture and Human Resources to find a proper control to MFC.

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

If left uncontrolled, the MFC is a pest that can cause severe damage to mature producing macadamia nut trees resulting in a loss of income to Hawaii's macadamia nut farmers. Therefore, is it vital to develop new strategies and controls to limit the damage this pest can do, while at the same time providing additional learning opportunities for the advanced CTAHR students.

Respectfully,

MARK K. CRAWFORD
Operations Manager
MacFarms of Hawaii, LLC

MACFARMS OF HAWAII 89406 MAWALANUOA HIGHWAY CAPTAIN COOK, HI 96704
TELEPHONE 808 328 2435 FAX 808 328 8081

"AN EQUAL OPPORTUNITY EMPLOYER"

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.



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Written Testimony Presented Before the
Senate Committee on Agriculture
and
Senate Committee on Higher Education
and
Senate Committee on Energy and Environment
Thursday, March 13, 2014 at 2:20 pm

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 – RELATING TO AGRICULTURE

Chairs Nishihara, Taniguchi and Gabbard, Vice Chairs Kouchi, Kahele and Ruderman, and members of the committees, thank you for this opportunity to provide testimony on HB 1931 HD1, 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 University of Hawai'i supports 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 two attempts to eradicate the insect appeared to be successful at the time. However, subsequent infestations were again found on the Big Island, indicating that the insect had already spread from the initial point of discovery or that additional introductions occurred. At this time, the coccid is distributed throughout the Big Island, although it is not yet found on other islands.

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 orchard contribute to great difficulties in achieving effective control.

The College of Tropical Agriculture, University of Hawai'i at Mānoa, and the Hawai'i Department of Agriculture are collaborating in this endeavor, as is indicated in HB 1931 HD1, and as permitted by available funding and personnel. Timing is critical, however, and we believe that it is both appropriate and necessary for the Legislature to appropriate funds to accelerate and strengthen this pest management effort, and protect

this critical segment of Hawai'i agriculture from the severe losses that will result from infestation and continued spread of this invasive insect pest.

In discussions, concerned parties have suggested an appropriation of \$735,000, if funds are not to lapse at the end of a single fiscal year. This is the equivalent of \$367,000 for a single fiscal year, which would support hire of a researcher, an extension agent, support staff and a graduate student assistant to address this problem, in addition to funding for travel and operations.

From: [Soles, Tom](#)
To: [AGL Testimony](#)
Subject: HB 1931
Date: Monday, March 10, 2014 12:44:59 PM

I am a board member of the HMNA (Hawaii Macadamia Nut association) and would like to testify in support of approved funding to help fight Felted Coccid.

From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: censey@mac.com
Subject: Submitted testimony for HB1931 on Mar 13, 2014 14:20PM
Date: Monday, March 10, 2014 8:27:39 PM

HB1931

Submitted on: 3/10/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Charles Ensey	Individual	Support	No

Comments: I am a farmer and we produce approximately one million pounds of Macadamia nuts annually. I am not a "gentlemen farmer". Myself, my company as well as all my employees depend on our production levels continuing into the future or we all lose our jobs. The Felted Coccid threatens to change what was a steady source of production. If we do not do the research to know how to battle this pest our farm could come to ruin. Our company could close their doors and our employees will be laid off. This would be detrimental for our community and state when everyone has to go on welfare at that time. I ask for your support to fund the research that is needed so that our industry will be healthy for decades to come. I would hope that you can support one of the few struggling agriculture industries that we still have on the Big Island of Hawaii. As you know, when the Sugar Industry closed their doors, the economy on the big island has never really recovered. Please don't let this be another blow to the Island of Hawaii. Vote in support of this bill and support an industry in need. We work so hard and ask so little.

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SENATE COMMITTEE ON AGRICULTURE

March 13, 2014

2:20 pm

Room 209

Relating to Agriculture

HB 1931 HD1

Aloha Chairman Nishihara, Vice Chair Kouchi, and Members of the Committee,

My name is Alan Yamaguchi and I am the former (retired) Director of Research for Royal Hawaiian Orchards, L.P. **I strongly support this bill to fund a way to protect macadamia nut farmers from a devastating invasive pest.**

Since 2005, when the Macadamia Feltid Coccid was first discovered, this insect pest has established itself on more than 7,000 acres of producing macadamia trees where greater than 50% of Hawaii's in-shell macadamia nuts are grown. The insect is distributed in, but not limited to, the South Kona, Ka'u, Hilo and Hamakua districts on the Big Island and is likely expected to spread over the entire island in due time and affect the entire 15,000 acres of macadamia trees. Most, if not all, of the growers that produce macadamia nuts for the State of Hawaii are on the Big Island.

Hawaii's ideal growth environment for macadamia is, unfortunately, highly suitable for the development and distribution of MFC to all locations where macadamia is grown. Our mild temperatures and tropical climate provides an environment where multiple generations of the pest are produced annually. The insect is found on the trunks, branches, leaves, immature racemes and developing/maturing nuts. It is easily distributed by wind, transport of infested plant parts, and possibly winged animals. The primary damage to the macadamia is through the piercing/sucking mouthpart used to extract moisture and nutrients to sustain its life cycle. Heavily infested trees die while others remain weak with low nut production.

Research is needed to identify long term economical solutions to manage MFC to sustain the Hawaiian macadamia industry. This requires studies to determine to determine short term measures that can reduce pest distribution in orchards to

support current nut production levels. Additionally, research is necessary to seek longer term solutions, such as biological control or use of natural enemies, to manage MFC. The use of natural enemies would reduce the need to use pesticides. Natural enemies identified by the University of Hawaii College of Tropical Agriculture and released by the Hawaii Department of Agriculture significantly reduced the damage caused by the Southern Green Stink Bug on macadamia nuts and basically eliminated the use of pesticide to control the insect. We need to repeat this feat for MFC

Approximately 44-50 million pounds of macadamia nuts are handled or processed by about six processors, all on the Big Island annually. The two largest, MacFarms of Hawaii and Mauna Loa Macadamia Nut Corporation, are located on the east and southern parts of the Big Island and, combined, employ several hundred workers during harvest season and handle approximately 50% of the nut production on Hawaii island. Additionally, Royal Hawaiian Orchards has approximately 200 workers at their orchards located at Pahala, Keaau and Hilo. Four other processors handle the balance of the nuts produced generally in the Kona, Kohala and Hamakua regions of the Big Island.

It is anticipated that MFC will continue to spread, damage macadamia orchards and negatively impact nut production and employment in the industry if this pest is not managed. Past efforts to identify suitable control measures have had mixed results and require extensive research. Any delay will only hurt the macadamia growers, processors and marketers of Hawaii's premium macadamia nut products.

Please help the Hawaiian macadamia growers and industry by supporting this bill.

Thank you for your consideration of my comments.

Mahalo,

Alan Yamaguchi

From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: Jerry-Allen@hawaii.rr.com
Subject: Submitted testimony for HB1931 on Mar 13, 2014 14:20PM
Date: Tuesday, March 11, 2014 9:28:54 AM

HB1931

Submitted on: 3/11/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jerry Allen	Individual	Support	No

Comments: I own, lease and manage 175 tree acres of macadamia nut orchards on the Big Island. Therefore, the potential damage to macadamia orchards is of extreme importance to me. Change of even minimal productivity in this agricultural industry is often the difference between showing a profit or a loss at the end of the crop year.

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: akam808@aol.com
Subject: Submitted testimony for HB1931 on Mar 13, 2014 14:20PM
Date: Tuesday, March 11, 2014 10:53:16 AM

HB1931

Submitted on: 3/11/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Albert Kam	Individual	Support	No

Comments: I own a small 10 acre macadamia orchard in Pahala where the Macadamia Felted Coccid is running rampant. This pest has the potential to wipe out what's left of the Hawaiian macadamia nut industry. In 1980 Hawaii used to produce over 90% of the world's supply of macadamia nuts but today Hawaii produces only 15% of the world's supply of macadamia nuts. The Hawaiian macadamia farmers need help to combat the Macadamia Felted Coccid. I strongly support HB1931. Without the support of the legislature the Hawaiian macadamia nut industry will be in great peril. Albert Kam

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: tsnuts@earthlink.net
Subject: Submitted testimony for HB1931 on Mar 13, 2014 14:20PM
Date: Tuesday, March 11, 2014 1:27:19 PM

HB1931

Submitted on: 3/11/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Phyllis M. Stine	Individual	Support	No

Comments: Aloha, I am a small farmer and business owner (with big dreams) who lives at the top of a subdivided 500 acre plat of Macadamia Nut trees. My primary product is a value added product, Aunt Phyllis' Macadamia Nut Butters. I sell in Hilo farmers market and various Health Food Stores, including Whole Foods Hawai'i. My dream is to build and grow my business organically while adding to the employment of local people. With the threat of damaged trees and fields from the felted coccid, the results would be devatating not only to my dream, but to our entire industry. Thank-you for your support, Sincerely, Phyllis M. Stine TSNuts LLC

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HB1931, Relating to Agriculture:

Chairs, Vice-Chairs, and members of the Senate Committees on Agriculture, Higher Education and Environment and Energy, 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 11, 2014.

From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: vctoribio@rhomac.com
Subject: *Submitted testimony for HB1931 on Mar 13, 2014 14:20PM*
Date: Wednesday, March 12, 2014 9:11:34 AM

HB1931

Submitted on: 3/12/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Volanda Collins-Toribio	Individual	Support	No

Comments:

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HOUSE COMMITTEE ON HIGHER EDUCATION
FEB 11, 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.

From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: ashman.janet@gmail.com
Subject: Submitted testimony for HB1931 on Mar 13, 2014 14:20PM
Date: Wednesday, March 12, 2014 3:05:14 PM

HB1931

Submitted on: 3/12/2014

Testimony for AGL/HRE/ENE on Mar 13, 2014 14:20PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Ashman	Individual	Support	No

Comments: The macadamia nut industry has funded research, but now needs additional funds to quickly find a way to combat this devastating pest. Please appropriate funds to prevent loss of more trees and potentially the entire industry. Thank you.

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