

**COQUI-FREE CERTIFICATION PROGRAM ON THE ISLAND OF MAUI:
USING MARKET INCENTIVES
TO PREVENT INADVERTENT VECTURING**



**Progress Report to Hawai'i Department of Land and Natural Resources
Hawai'i Invasive Species Council
Contract # 54961
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**Presented by
Maui Invasive Species Committee
Pacific Cooperative Studies Unit**

SUMMARY OF PROJECT OBJECTIVES AND RESULTS

The coqui frog (*Eleutherodactylus coqui*), native to Puerto Rico, is an invasive alien species in Hawai‘i, formally listed by the State of Hawai‘i as injurious wildlife (HRS, Title 13, Chapter 124). The coqui frog poses significant environmental, economic and quality-of-life threats to Hawai‘i. Last year alone, over \$4 million were allocated for work related to coqui research and control activities in Hawai‘i. Continued intra-island movement of frogs through the nursery trade seriously undermines ongoing efforts to control the spread of this pest. To address the inadvertent vectoring of coqui frogs through the nursery trade, the Maui Invasive Species Committee (MISC) proposed to develop and implement a voluntary coqui-free certification program for plant industry participants.

The intent of the project is threefold: 1) develop and implement a voluntary “coqui-free” certification program; 2) evaluate whether participation in a “coqui free” certification program varies by size of the business; and 3) assess the impact of the certification program and associated marketing on consumer behavior.

The project focuses on two hypotheses:

Hypothesis 1 (Market Incentive): Low volume businesses will be more likely to participate in a certified “coqui-free” program than high-volume businesses.

Hypothesis 2 (Consumer Behavior): Designation as a certified coqui-free business will positively influence consumer purchasing behavior.

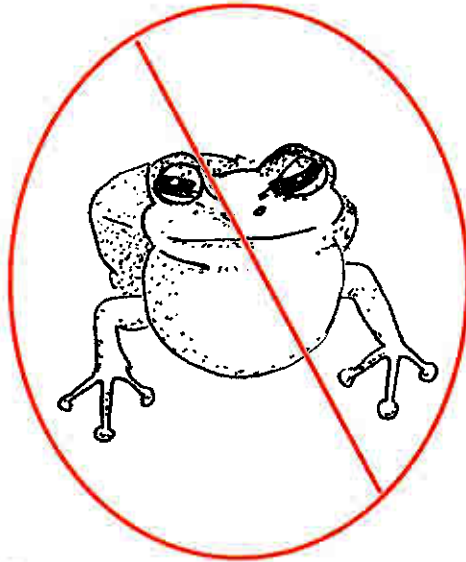
PROJECT ACCOMPLISHMENTS

Funds first became available for the project in October 2006. The following summarizes progress to date on the certification program.

1. Identification of the Market: In order to test the first hypothesis, the plant provider industry first needed to be quantified and identified. MISC has developed a list of potential plant providers from the following sources: phone books, public advertising, the Maui Association of Landscape Professionals, Maui Nui Botanical Garden, and MISC’s own internal database. Efforts have been made to contact an initial list of 115 businesses, which for some businesses has required repeated follow-up efforts. A database was developed to track information obtained about industry members and the status of each business. MISC has identified a minimum of 56 businesses that provide plants or cut flowers on Maui. Efforts will continue to be made to reach businesses where no contact has yet been made.
2. Development of the Certification Program: Draft standards for participation in the certification program have been developed and are included below. These standards were shared with concerned members of the landscape industry on the island of Hawai‘i and with staff from the Hawai‘i Department of Agriculture. MISC will meet with selected

members of the industry on Maui to get input on the standards before they are formally adopted as part of the program.

MISC has begun to develop marketing materials that can be used by participating providers who meet established standards. Marketing of the program is expected to include signage and stickers for participating industry members, publicity, and information and networking capabilities posted on the Internet. Final designs will be determined closer to the roll-out date of the program.



**COQUI – FREE PLANT PROVIDER
MISC CERTIFIED!**

Draft marketing material.

Development is underway of a survey instrument to test consumer awareness and purchasing behavior both before and after the certification program is implemented. Research has been conducted on appropriate methodology for developing a robust and meaningful survey. Initial questions have been written, but completion requires final review of survey standards. MISC also is hoping to work with professionals from the Marketing Department at the University of Hawai‘i as part of this process.

For more information on this project, contact:

Teya M. Penniman
Maui Invasive Species Committee
P.O. Box 983
Makawao, HI 96768
808-573-6471
misc@hawaii.edu

DRAFT

Draft Coqui-free Certification Protocols

The following draft protocols incorporate elements proposed by the Hawai'i Department of Agriculture. Protocols depend on whether coqui frogs have been detected at a site.

Preliminary designation process:

1. All plants and nurseries will undergo 100% inspection of the site prior to designation.

No Coqui Detected at Site

To be designated "Coqui-free," a participant must meet the following standards:

1. No frogs detected by MISC personnel at the site or within 100 yards during night-time surveys;
2. Meaningful efforts are made to use products and materials from frog-free sources;
 - Acceptable "meaningful efforts" will include at least two of the following:
 1. Development of a staging area when receiving new plant material;
 2. Disclosure of plant sources and volume of plant sales;
 3. Inspection of plants and/or plant material prior to sale;
 4. Operating as a repository for coqui reports and passing along all relevant information within one week of the report;
 5. Distributing citric acid to customers who believe they have coqui frogs; and
 6. Findings of coqui frogs will be reported within 24 hours of the incident.
3. Regular physical inspections of all stock and night-time surveys have detected no evidence of coqui frogs or eggs within the last three months;
4. New stock is thoroughly inspected and sprayed with an approved agent, or treated with hot-water, or quarantined for two weeks at the site before sale to consumers;
5. Frog-friendly habitat is eliminated by trimming and cleaning dead leaves, removing rubbish in pots, and removing non-stock vegetation or supplies that could create frog habitat;
6. All staff is trained in coqui-frog identification and control techniques during initial surveys and refreshed at least once a year; and
7. Action steps are documented on approved forms.

Coqui Detected at Site

At sites where coqui frogs have been detected within the last three months, a participant may receive a "Coqui-controlled" Certification by meeting the following standards:

1. Regular inspection of facilities and all plant material will occur at least every four to six weeks.
2. Participant will develop a treatment plan in cooperation with MISC;
3. Efforts are made to use products and materials from frog-free sources;

4. Regular inspections and surveys are conducted to detect and locate any frogs on site;
5. Any frog detections are reported to MISC within 24 hours;
6. Random night-time surveys are conducted by MISC personnel, with advance notice;
7. The entire infested area is treated on a regular schedule with an approved pesticide, hot-water treatment, hand capture technique, or combination of methods;
8. New stock is thoroughly inspected and sprayed with an approved agent, or treated with hot-water, or quarantined for two weeks at the site before sale to consumers;
9. Frog-friendly habitat is reduced by removing unwanted piles of plant debris, and / or eliminated by trimming and cleaning dead leaves, removing rubbish in pots, and removing non-stock vegetation or supplies that could create frog habitat;
10. A buffer zone will be created around infested areas of at least 100 feet and movement and / or sale of infested materials will not occur;
11. All staff is trained in coqui-frog identification and control techniques during initial surveys and refreshed at least once a year;
12. The presence of coqui frogs at the site is disclosed to consumers who are encouraged to inspect plants prior to leaving the nursery and quarantine plants before planting at a new site; and
13. Action steps are documented on approved forms.

A “Coqui-controlled” site may become “Coqui-free” certified after three months with no frogs detected at the site.