BEST MANAGEMENT PRACTICES FOR COQUI FROGS

Coqui *(Eleutherodactylus coqui)*

Photo: Jan P. Zegarra, U.S. Fish and Wildlife Service

The coqui frog is believed to have hitchhiked to Hawai'i on a shipment of potted plants from Florida in 1988. These frogs are small, nocturnal predators that eat insects and other invertebrates. Male coqui have a distinct "ko-kee" mating call that can be heard day and night.

1. HARM TO ENVIRONMENT

- High density populations of coqui frogs can eat about 400,000 insects a night
- Coqui frogs put native insect and spider species at risk

2. HARM TO ECONOMY

- Loud mating calls create noise pollution, causing diminished property values
- Decreased export plant sales
- Adverse impacts on tourism

3. HARM TO HEALTH & WAY OF LIFE

- Sound levels can lead to lack of sleep
- Disturbances may also influence people's willingness to reside or continue to reside, in impacted areas

PREVENTATIVE MEASURES:

Coqui frogs hitchhike from infested areas on plants, construction material, gardening material, trash, and vehicles. It is important to monitor what is coming into your nursery in order to ensure that materials are free of coqui frogs.

INSTALL SCREEN BARRIERS

- Consider installing screen barriers around structures to keep frogs out of designated areas.
- Use a fine, anti-insect mesh screen to set up a barrier around the perimeter of greenhouses.
- Barrier should be 32 inches high with a 90° awning to prevent frogs from entering structures.

MINIMIZE SUITABLE HABITAT

- Dispose of green waste properly.
- Keep the perimeter around structures neat and clear of vegetation, materials, and debris.
- Mow cane grass and other tall grasses.
- Remove dead leaves on banana, ti, and other plants with large leaves.
- Avoid stockpiling discarded plant material.
- Always maintain tidy work and storage areas in order to maximize the effectiveness of chemical treatments.

For more information:
E-mail: biisc@hawaii.edu
Call: (808) 933-3340
Visit: www.biisc.org

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BEST MANAGEMENT PRACTICES FOR COQUI FROGS

TRAPS AND HAND CAPTURE

Set out PVC traps

- Use a 3/4" diameter pipe (8-9" length) with a t-joint. Do not glue. Mount 2-3 ft off ground.
- Check the PVC lures at least once every 1-2 weeks; remove nesting adults and eggs.

Photo: Arnold Hara, CTAHR

Perform visual inspections

- Scan plants, media, and leaf litter for adult frogs and eggs.
- Inspect building materials and nursery supplies before bringing them onto property.
- Inspect vehicles for hitchhiking frogs after you leave an infested area.

TREATING WITH CITRIC ACID

Treating with citric acid is a very effective method to control coqui populations in greenhouses, shade houses, open nursery stock areas, as well as surrounding vegetation. Frogs breathe through their skin so they are highly sensitive to chemical contact. Spray potted plants and drench soil to kill adult frogs, juveniles, and eggs.

OPTION #1: CITRIC ACID SPRAY (16%)

Apply a contact spray of 16% citric acid mixed with water. This may burn sensitive plants, such as orchids. Rinse plants off 1 hour after treatment to minimize damage. Treatments can be repeated every 2 weeks.

OPTION #2: CITRIC ACID (8%) WITH PYRETHRINS

Apply a contact spray of natural pyrethrin products plus 8% citric acid to control eggs and adults.

TREATING WITH HOT WATER

- Use a hot water shower to treat plants. Hot water treatments should last for 5 minutes at 109-113°F to kill eggs, juveniles, and adults.
- After treatment, place plants in a coqui-free holding area to prevent re-infestation prior to transport.
- Visually inspect plants for frogs and eggs.
- Caution: Orchids and bromeliads are known to be sensitive to hot water treatment.

Photo: Rod Thompson, Star Bulletin

REFERENCES:

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Hara, A.H. Control of Coqui Frogs in Hawai'i, University of Hawaii at Manoa, CTAHR, www.ctahr.hawaii.edu/coqui/research.asp.

For more information:

Contact: Molly Murphy, mollym3@hawaii.edu

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