

ALIEN PEST ALERT!

Coffee Berry Borer

Hypothenemus hampei (Ferrari)

One of the most devastating coffee pests, the coffee berry borer (*Hypothenemus hampei*), has been found in several coffee farms in Kona. The coffee berry borer is a small beetle and is native to Central Africa and is also found in many coffee-growing regions of the world, including Central and South America. The beetle bores into the coffee “cherry” to lay its eggs. The larvae feed on the coffee bean, reducing the yield and quality of the bean. Because the larvae are inside the bean, it makes it difficult to control by pesticides.

Elsie Burbano from the University of Hawai‘i at Mānoa, College of Tropical Agriculture and Human Resources (UH-CTAHR), collected the beetles from several farms in Kona and dropped off samples to the Hawai‘i Department of Agriculture on September 2nd. The identification of coffee bean borer beetle was confirmed by the U.S. Department of Agriculture entomology laboratory in Riverdale, MD.

HDOA entomologists from Honolulu and Hawai‘i Island are organizing surveys on all islands to determine the extent of the infestation; however, early indications are that the beetle is established from Kainaliu to Honaunau on the west coast of Hawai‘i Island. Discussions with coffee growers this week indicate that the beetle may have been present for more than a year, but was only reported last week.

It is not known how the coffee berry borer was introduced to Hawai‘i. Hawai‘i has strict importation rules that require quarantine fumigation of all imported green coffee beans to rid the beans of pathogens and insect pests. Coffee plants and plant parts are also restricted from being imported to Hawai‘i under Plant Quarantine rules.

It appears that this pest has been here for several years and may be well established in some growing areas in South Kona. Staff from the HDOA and the UH-CTAHR have already begun to investigate various control methods, including biological control which involves finding natural enemies of this beetle.



Adult beetle shown in detail



Adult beetles are 1.4-1.7 mm in length, smaller than a sesame seed

What you can do.

UH-CTAHR Extension Specialist for Coffee, H.C. “Skip” Bittenbender, Ph.D., offers the following recommendations to Hawai‘i growers to help manage their coffee fields to try and lessen the impact of the coffee berry borer:

- Reduce heavy shade*
- Prune coffee to keep the bush as open as possible*
**to create a less humid environment for the beetle*
- Picking should take place at least once a week in the main harvest season and once a month at other times to prevent over-ripe infested cherries falling to the ground where adult females can survive and attack out-of-season cherries.
- Cherries should be left on the ground as little as possible. Dropped cherries will provide a source for beetles to reinfest the next crop.
- All infested cherries should be destroyed by burning, deep burying or if possible rapid sun-drying.
- Before a main flowering the crop should be stripped completely.
- If you employ coffee workers who pick at other farms, be sure that their equipment and clothing is free of coffee cherry from other farms.

If Hawai‘i coffee growers suspect they have the coffee berry borer, they should call the HDOA Plant Pest Control Branch on O‘ahu at (808) 973-9522 or e-mail: hdoa.ppc@hawaii.gov

USDA teams (headed by Dr. Jack Armstrong, PBARC/ ARS retired) have done extensive research on fumigation procedures for coffee. All imported green coffee entering Hawai'i is fumigated with methyl bromide though ozone is also effective for killing all stages of the coffee berry borer and coffee leaf rust. More importantly we've learned that the coffee berry borer cannot survive or reproduce on dried green coffee (less than 15 percent moisture content).

The coffee berry borer is not a stored product pest, it attacks cherry on the trees. It's more likely that someone who came from an area with the coffee berry borer—a tourist, a returning coffee farmer, or a migratory coffee picker—had an infested cherry or parchment bean lodged in their clothing or luggage.



Females bore into green cherries through the blossom end of the fruit, leaving an entrance hole. White fungus is sometimes visible around the hole.

