

Prospects for areawide management of coffee berry borer in Hawaii

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Importance of coffee industry in Hawaii

- The coffee industry in Hawaii has a long and rich history that rivals bigger industries such as sugar cane and pineapple
- While not the largest industry in terms of economic value to the state it has been part of the cultural landscape for more than 150 years
- Niche market value of Hawaii-grown coffee continues to increase statewide



Challenges to the coffee industry

- 1850's - Labor shortages, pests, disease, droughts
- 1900 - Competition with sugar in Hawaii and (later) bulk coffee growers worldwide
- World Wars, depressions (1929)
- 2010 - CBB

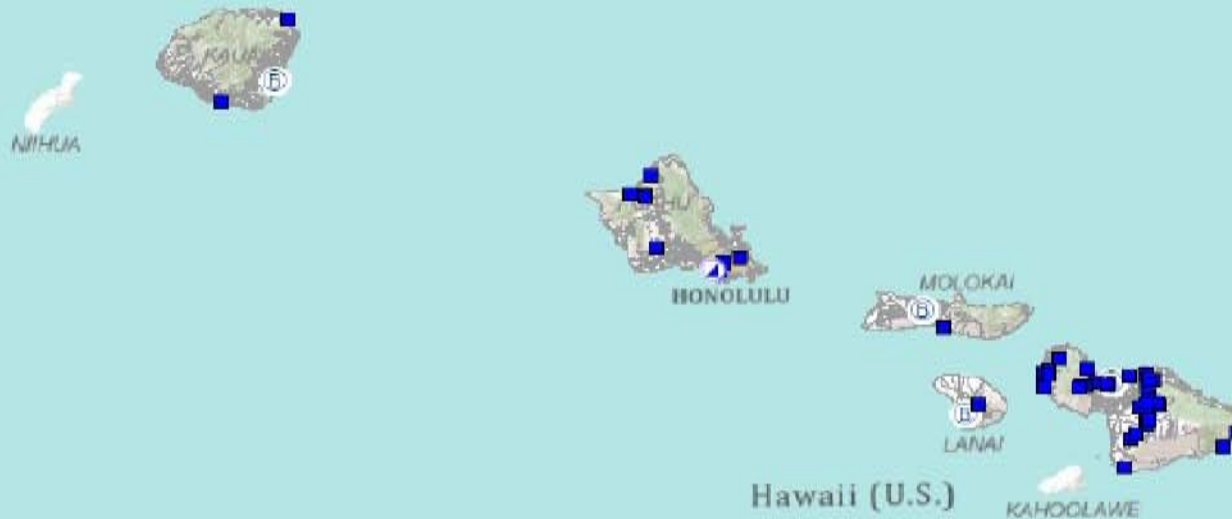
Eradicate or manage

- Eradication
 - Costly
 - Needs state and federal government help
 - Strict quarantines on imports
 - Tools for eradication may be different from control
- Control/management
 - Can be done by individual farms
 - Cost proportional to effort and desired outcome
 - Continued effort as long as pest is present
 - Areawide management can be effective

Why areawide management ?

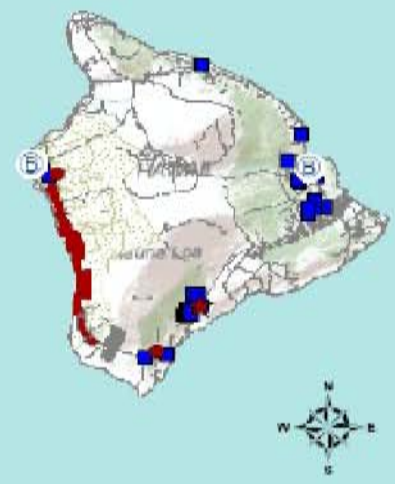
- Pests such as CBB do not recognize farm boundaries
- Small-farm nature of many coffee farms make it difficult to control if neighbors do not control their properties
- Large plantation can experience large losses if pest not controlled on an areawide basis
- Areawide management can be more sustainable than farm-by-farm methods
- Has been used in other countries successfully

Coffee Berry Borer (*Hypothenemus hampei*) Hawaii Survey Map



- Hawaii_CCB_negative
- Kona_positive_zone
- Kalaheo_Maui_Pestfree_12-7-10
- Waipahoehoe_Pestfree_10-4-10
- ★ Captured One CBB in trap on 11-20-10_Pahala Area
- ▲ ICS office HDOA 1429 St. King St. Honolulu, HI
- B Base_Molokai_Airport_APHIS_PPG
- B Base_Lanai_Airport_APHIS_PPG
- B Base_APHIS_PPG_Honolulu_Maui
- B Base_APHIS_PPG_Kona_Airport
- B Base_HDOA_488A_Pua_Loke_St_Lihue_Kauai
- B Base_HDOA_10E_Laikaula_St_Hilo_HI
- B North_South_Kona_city_soring

ICS Partners: HDOA & APHIS, PPG
 Data Sources: contributed by HDOA, PPG, CTAHR
 Coordinate System: Projected Coordinate System, UTM, NAD 83
 Map Created by HDOA, Plant Pest Control Branch
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Tools available for areawide management

- While not exhaustive or singly effective, tools are available to manage CBB
 - Lures and traps
 - Sanitation
 - Chemicals (none registered in Hawaii ?)
 - Microbials such as Beauveria
 - Quarantine treatments
 - Fumigation
 - Bagging
 - Freezing (pending)
 - Biological controls?



Cost benefit of areawide management

- Areawide management of pest can be just as cost effective or more effective than farm-by-farm control
 - Why?
 - Adjoining properties can buffer your farm for repeat invasions
 - Costs of labor and/or chemicals/microbials could be reduced if neighbors work cooperatively

What are the prospects for successful areawide management of CBB in Hawaii

- Areawide control can be very successful....but
 - It depends on you the grower and neighbors
 - Desire to get this pest under control (attitude)
 - Continued support from agricultural research, teaching and regulatory entities to improve methods for control
 - luck and hard work!



What should we be doing now?

- Maintain quarantine to prevent movement
- Understand biology of CBB (especially in HI)
- Evaluate potential control measures (one size does not fit all)
- Maintain effective extension /outreach activities
- Continue research to further improve methods
- Communicate among growers, processors, researchers and regulatory/ task force members
- Learn