



Areawide IPM for Coffee Berry Borer Control in Hawaii and Puerto Rico

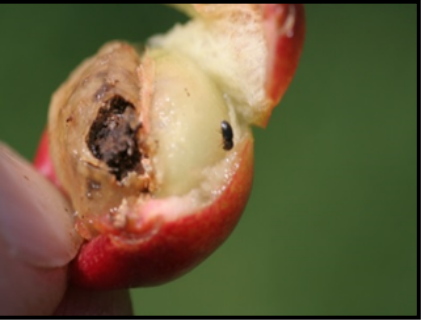
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CBB in Hawaii: 2010 to 2017

- August 2010 - CBB first discovered in Kona
- 2010-2011 season - ~90% of Kona farms infested with CBB with 25% to 100% crop loss.
- Feb 2011 - Based on PBARC advanced studies, HDOA approves import and field use of *Beauveria* products Botanigard® and Mycotrol® for control of CBB.
- 2011 - SHAC obtained grant to aid farmers in acquiring *B. bassiana*.
- 2012 – Improved quarantine treatments.



CBB control practices used in other countries



Adapt to cultural practices and farm micro-climates in Hawaii and Puerto Rico



- Optimize the dose and use of commercial *Beauveria*
- Map the area and extent of the infestation
- Economic analysis of CBB effects
- Understand insect biology
- Synchronize coffee blooms for harvest and sanitation
- Area-wide extension and outreach

2013: \$1 million (HI)

2014: \$700,000 (HI)

2015: \$700,000 (HI)
+\$300,000 (PR)



Tools for reducing field populations of CBB

Sanitation



Strip picking



Pruning



Predators



Parasitoids



Entomopathogenic nematodes (EPNs)

A nictating infective juvenile of S. carpocapsae



AW-IPM Phase II

USDA- ARS

- Coordinate existing CBB control activities over AW landscape
- Collect insect, plant, environment, and production data at AW level
- Develop & validate models
- Projections of CBB for ecologically diverse locations
- Quality & economic assessments
- Area-wide extension and outreach

2016: \$250,000 (HI)
+\$250,000 (PR)

2017: \$700,000 (HI)
+\$300,000 (PR)

2018-2020: ??



AW-IPM Monitoring for Optimized Management of CBB



GOAL: Provide growers in Hawaii and Puerto Rico real-time data and projections on CBB populations, plus recommend optimized control via electronic databases, models and digital delivery.



Sites:

Kona

Kau

Oahu

Puerto Rico





Mahalo

