

Coffee Berry Borer Area-Wide Management Provides Substantial Farmer Benefits

The Situation

The coffee berry borer (CBB) is an insect pest that was first detected in Hawai'i in 2010, resulting in dramatically reduced production of high-quality coffee for which Hawai'i is known. Basic questions about the timing of control methods and monitoring pest populations were unknown at that time without basic research on the CBB beetles in Hawai'i.



The Coffee Berry Borer Area-Wide (CBB AW) Project received funding to study CBB and develop options for integrated pest management (IPM). Many farmers and researchers cooperated to gather data and develop effective control measures to prevent loss of quality and yield.

Extension's Response

UH CTAHR researchers and Extension personnel, researchers from the USDA ARS DK1 Pacific Basin Agricultural Research Center (PBARC), and local farmers evaluated control methods that were effective in other coffee growing regions in which CBB was found. They learned how to monitor farms for CBB activity and use IPM methods to minimize CBB populations.

One example of recommended IPM methods is to spray plants with a commercially available biocontrol agent, a fungus that can kill CBB. Another technique is to remove all remaining coffee berries at the end of harvest season because CBB populations reproduce in these berries and later emerge to infect new coffee crops. The teamwork among CTAHR, PBARC, and growers resulted in significant control of CBB in Hawai'i through research and outreach.

Impacts

Prior to implementation of the CBB AW Project in 2017, research and Extension efforts to control CBB using IPM methods were restricted due to limited funding.

The estimated revenue increased due to implementation of IPM, **from \$0 in 2010 to \$2,984 per acre in 2016. After 2017, the estimated**

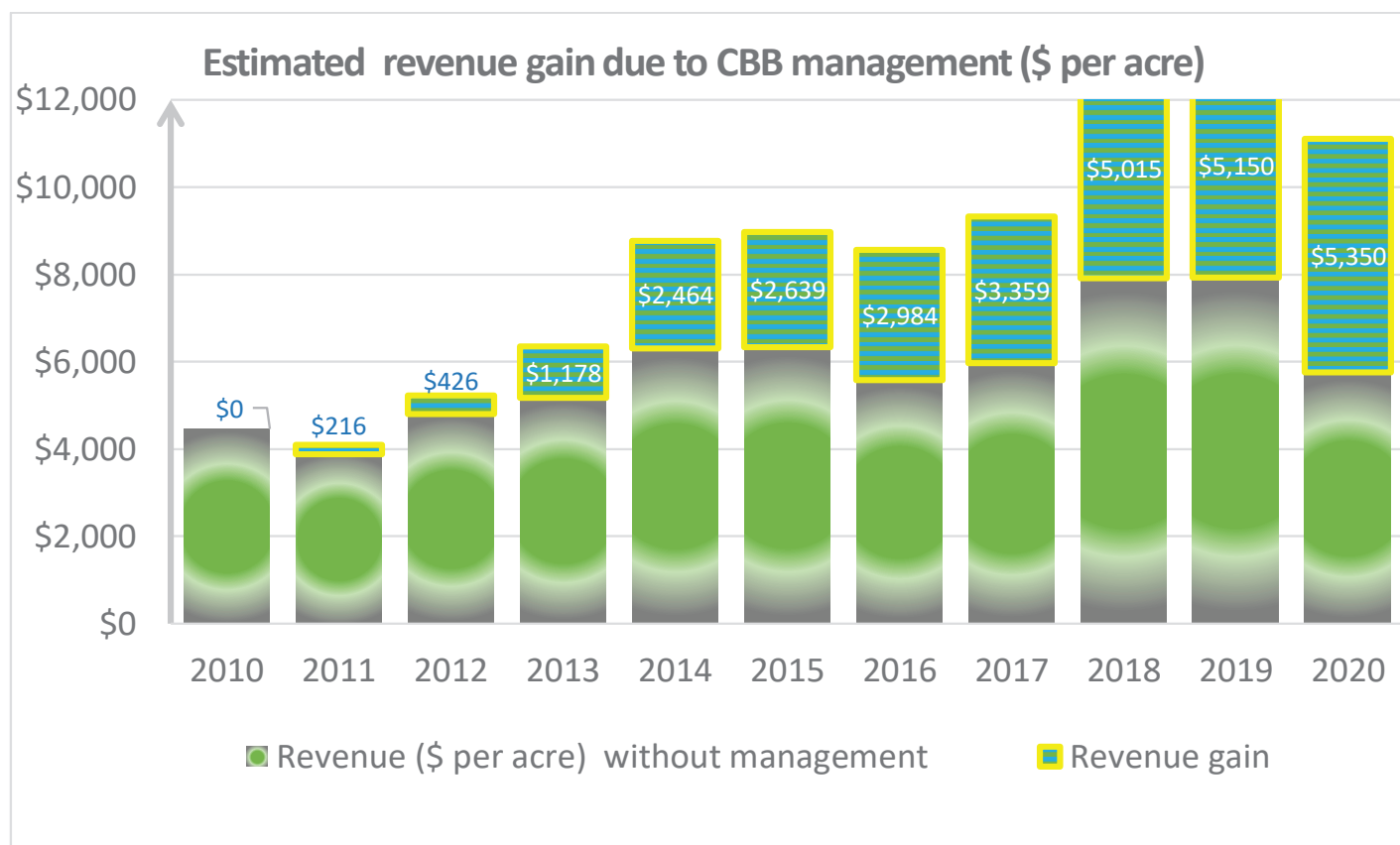
revenue due to IPM implementation increased, from \$3,359 in 2017 to \$5,350 per acre in 2020 – an indication of the effectiveness of the CBB AW project.

During the 2021-2022 season in Hawai'i, coffee was grown on 7,100 acres, with a value of more than \$60,000,000 (NASS, 2022, ISSN: 2471-6812).

An estimate of the economic benefit from CBB management during 2017-2020 in Hawai'i is \$132,000,000.

The coffee industry still has challenges from CBB and now, coffee leaf rust is also a problem. Timely information through the integration of research and Extension will provide growers with IPM tools to sustain coffee production in Hawai'i.





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