



# Understanding Coffee Berry Borer Activity for Improve its Integrated Pest Management in Hawaii

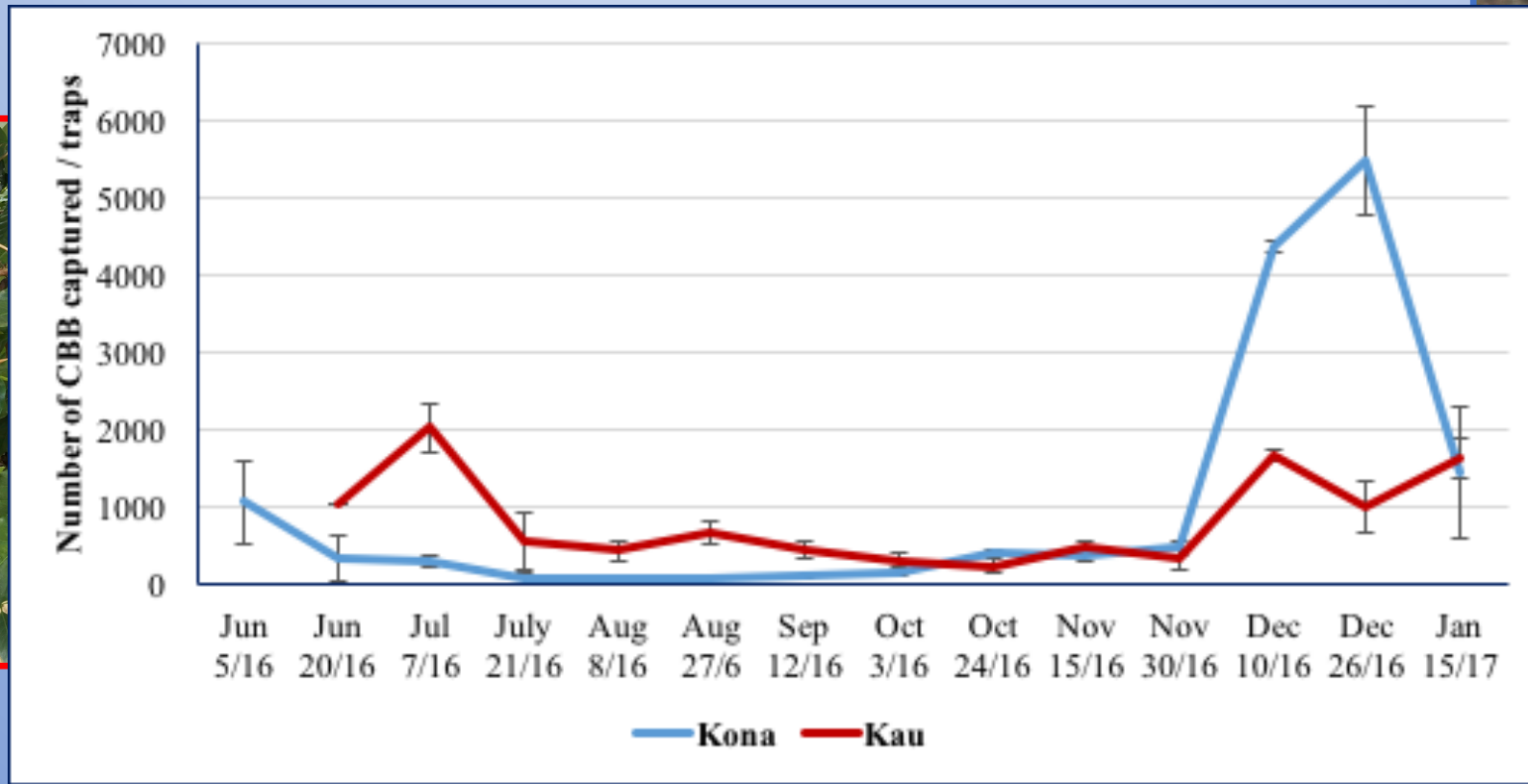
Luis F. Aristizábal

Synergistic Hawaii Agriculture Council

**Kona, HI**

**January 25, 2017**

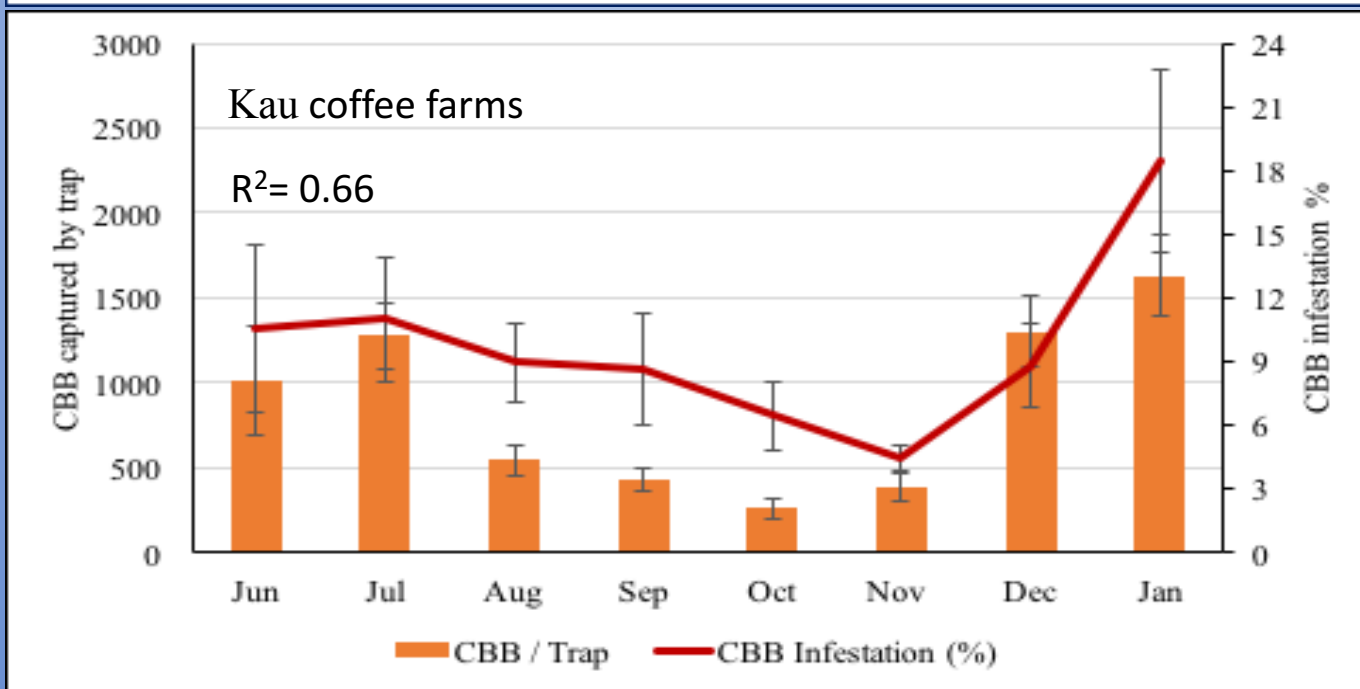
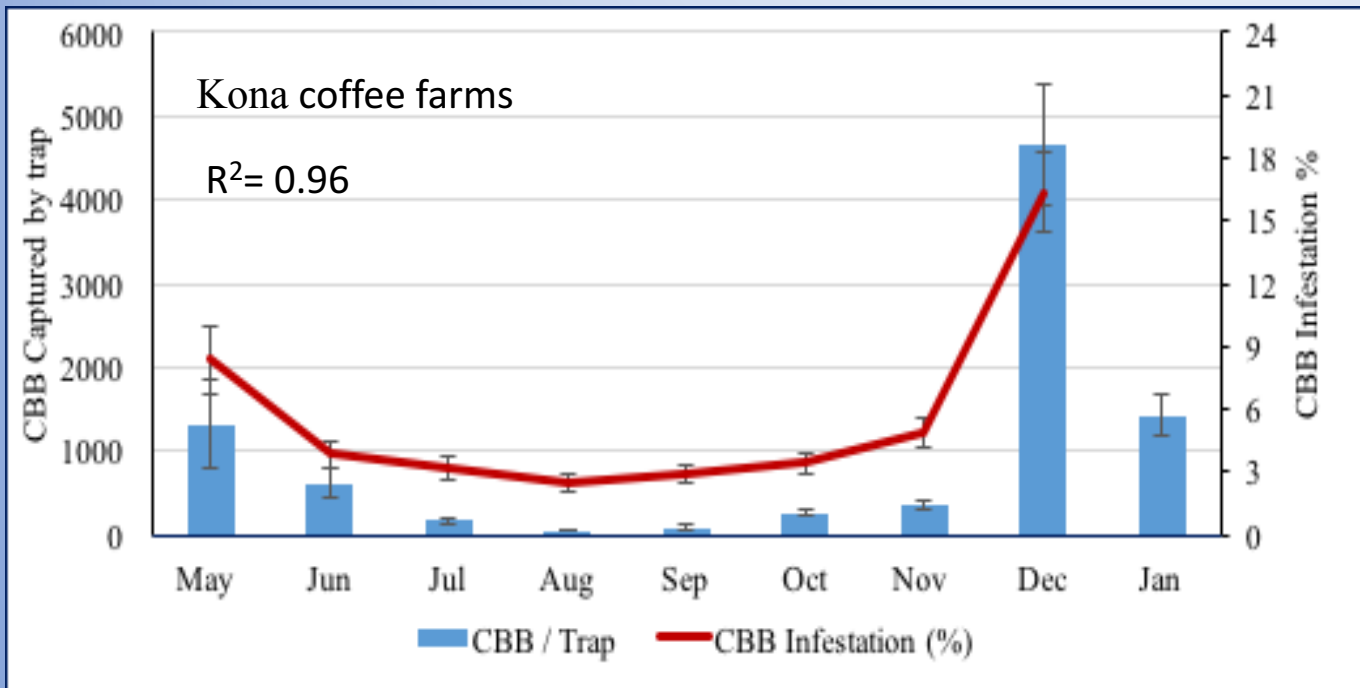
# Coffee Berry Borer Captured by Alcohol Traps in Coffee Farms from Kona & Kau, Hawaii (2016- 2017)



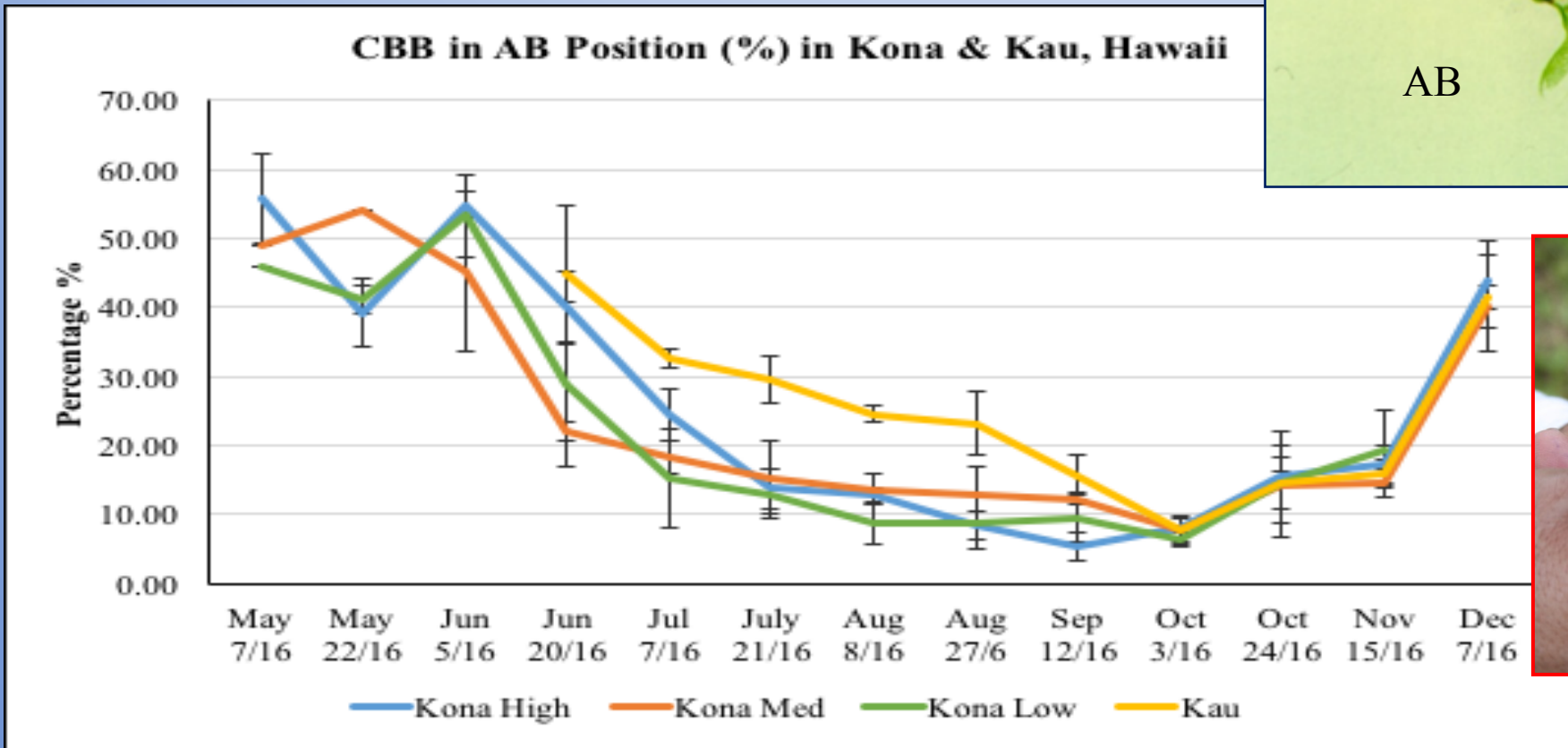
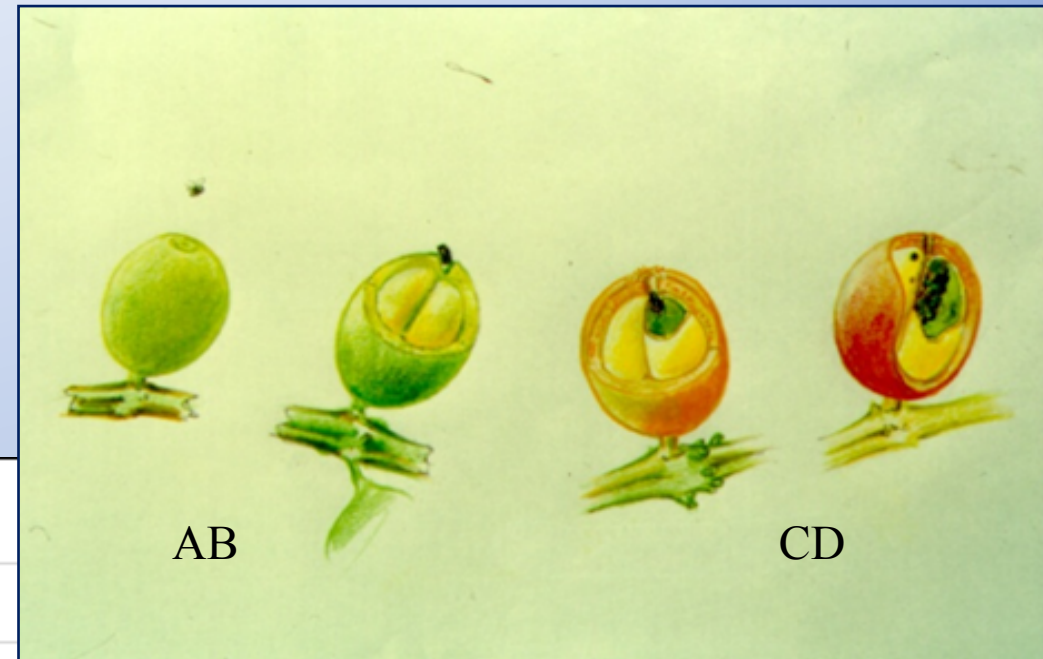
# Trapping CBB

## Kona & Kau, HI

### (2016-2017)



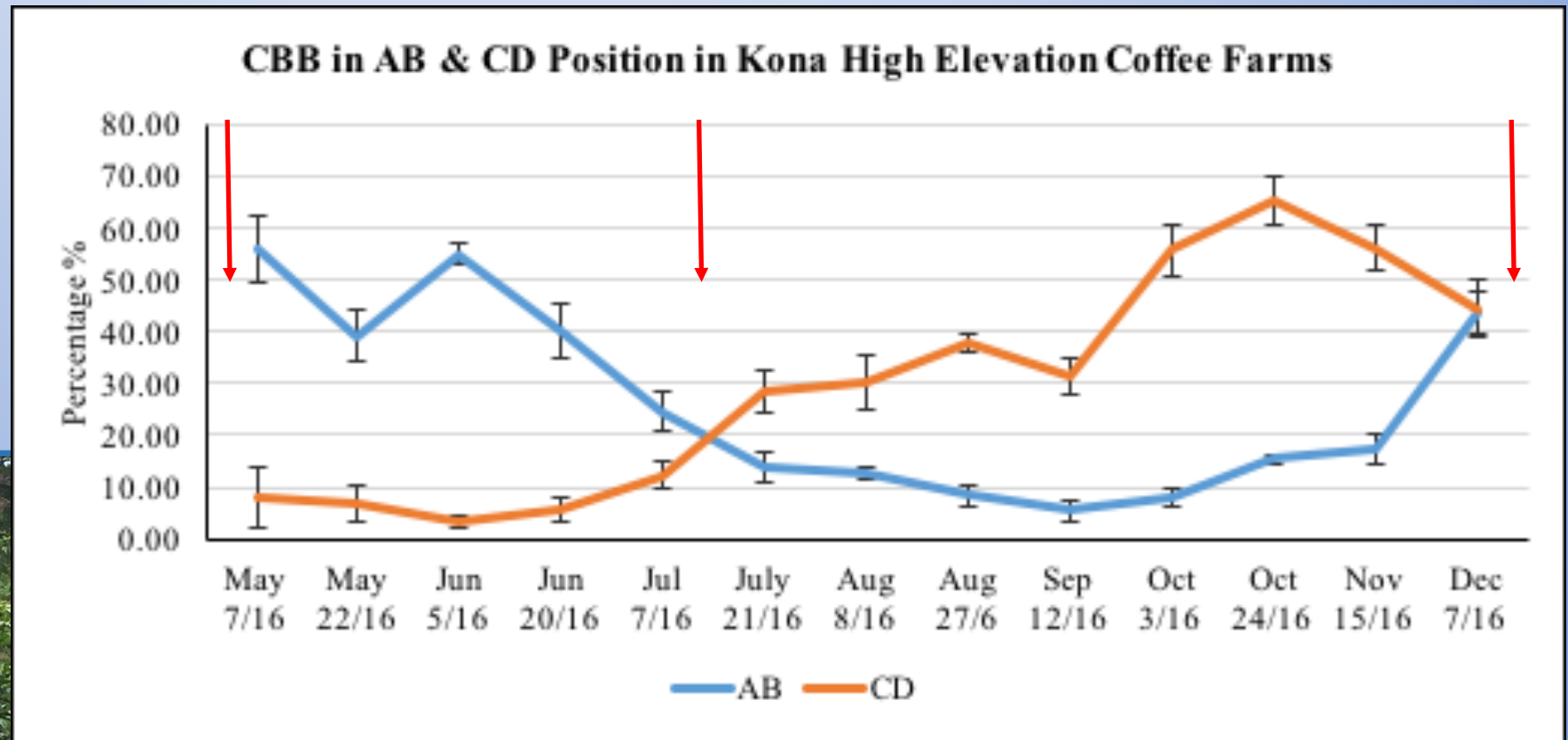
# Coffee Berry Borer in AB Position, Coffee farms from Hawaii, 2016



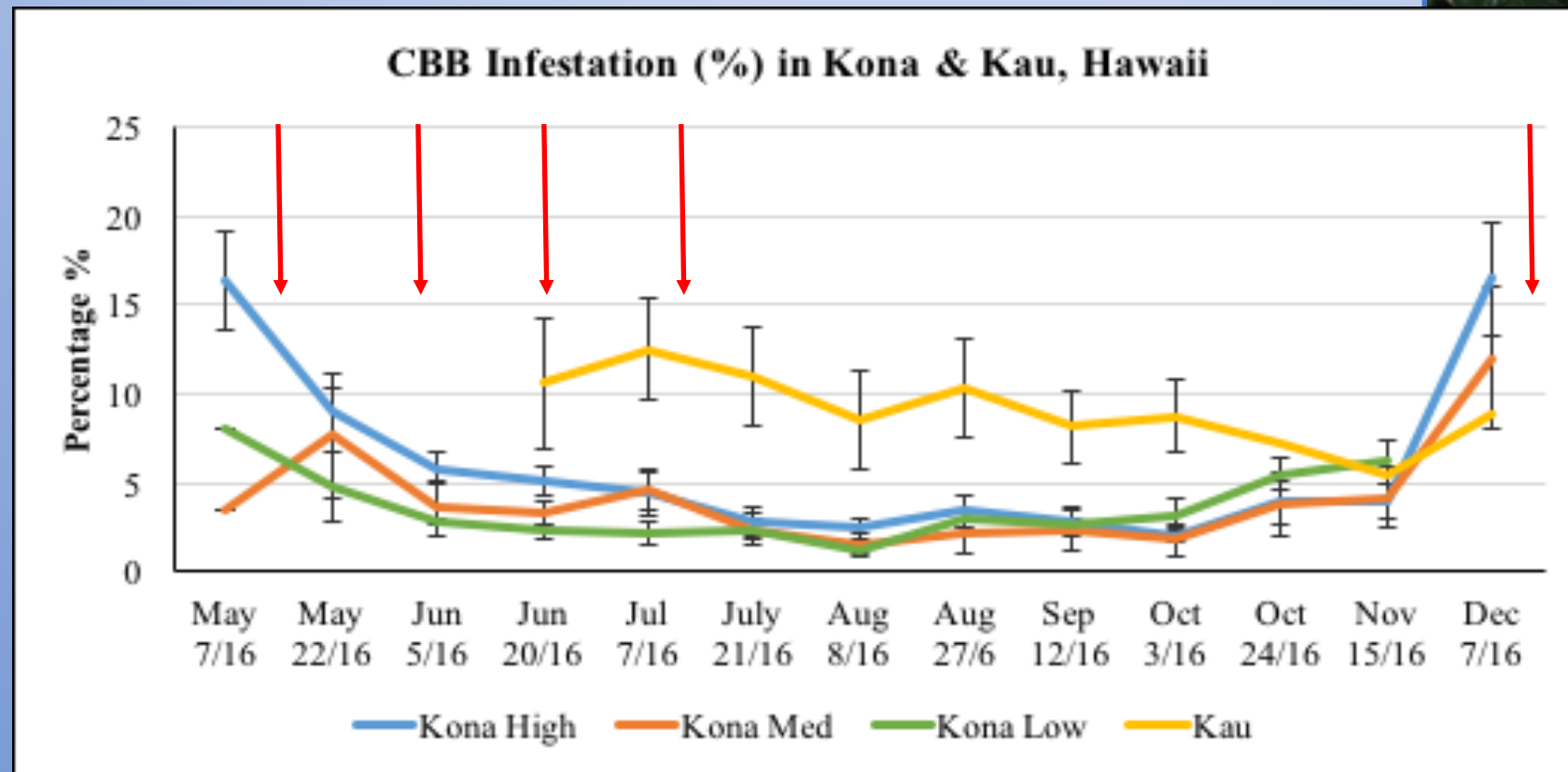
# Taming *B. bassiana* Applications with CBB in AB Position



Spraying  
*Beauveria bassiana*

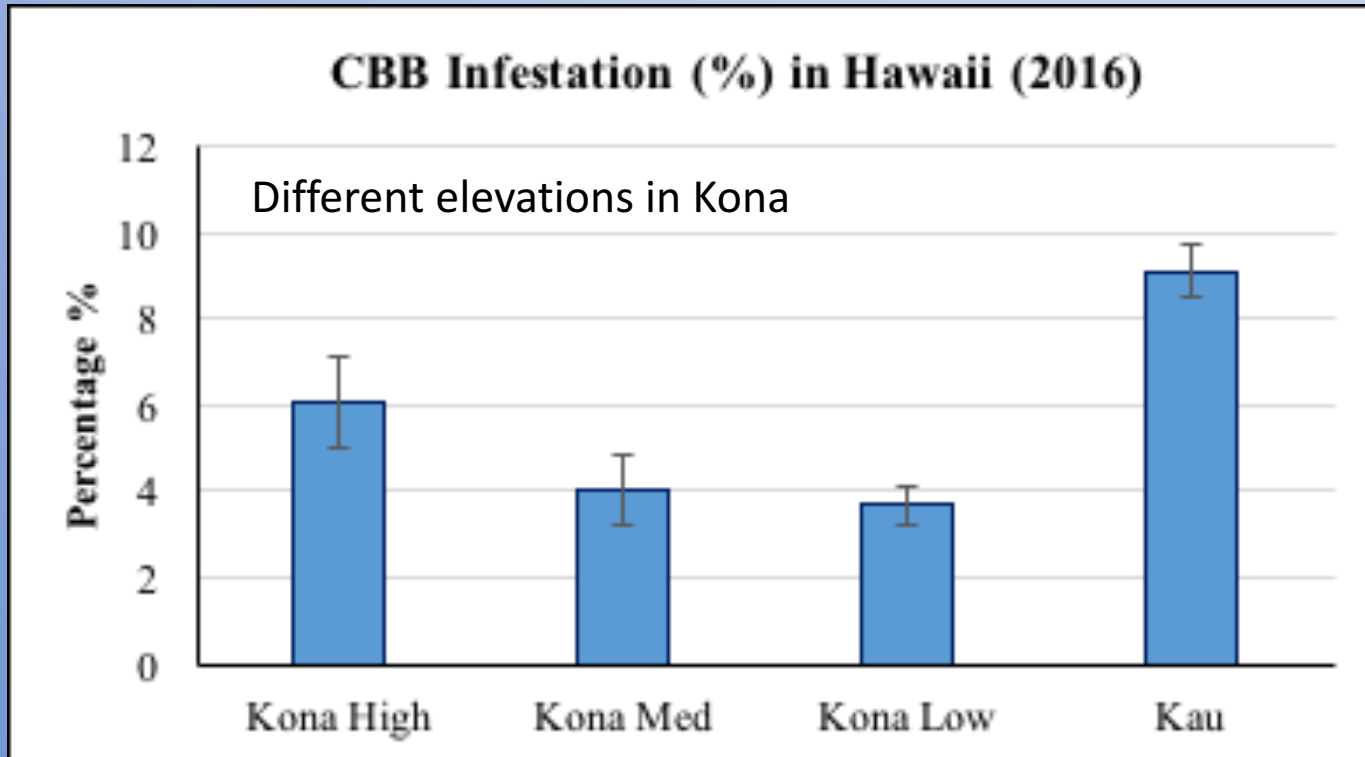


# Infestation Levels for Coffee Berry Borer in Hawaii (2016)



*B. Bassiana*  
applications

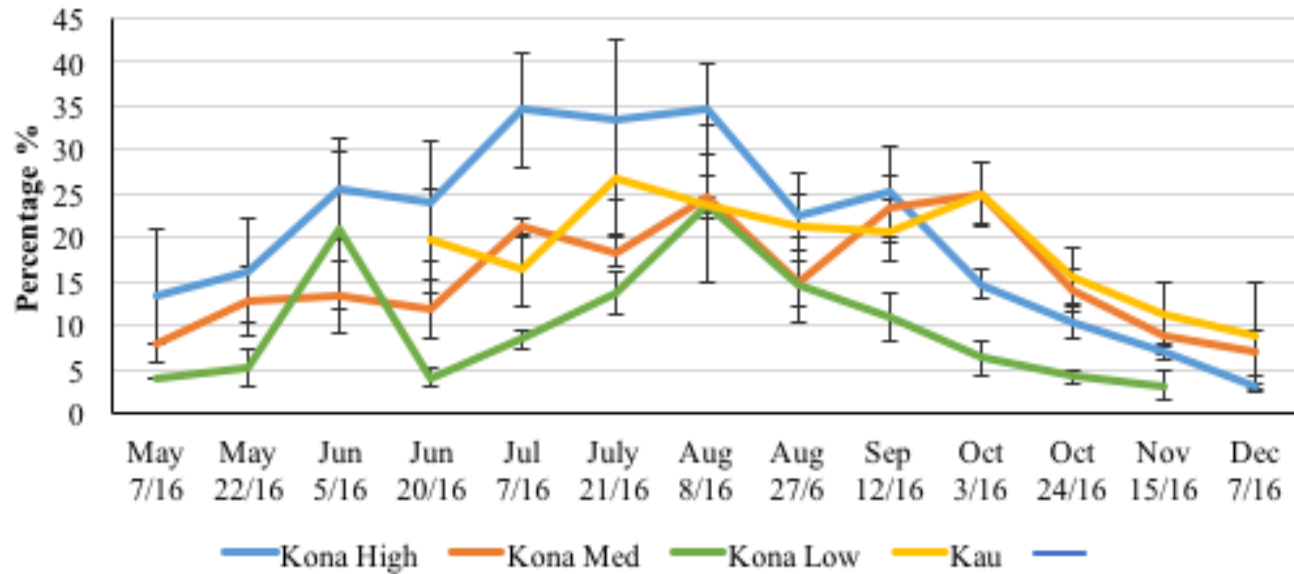
# Infestation Levels for Coffee Berry Borer in Hawaii (2016)



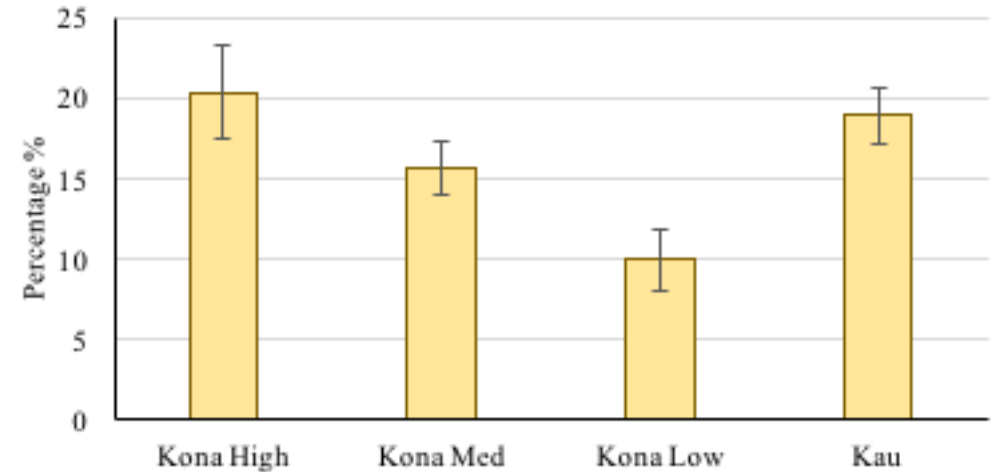
# Effect of *B. bassiana* against Coffee Berry Borer in Hawaii



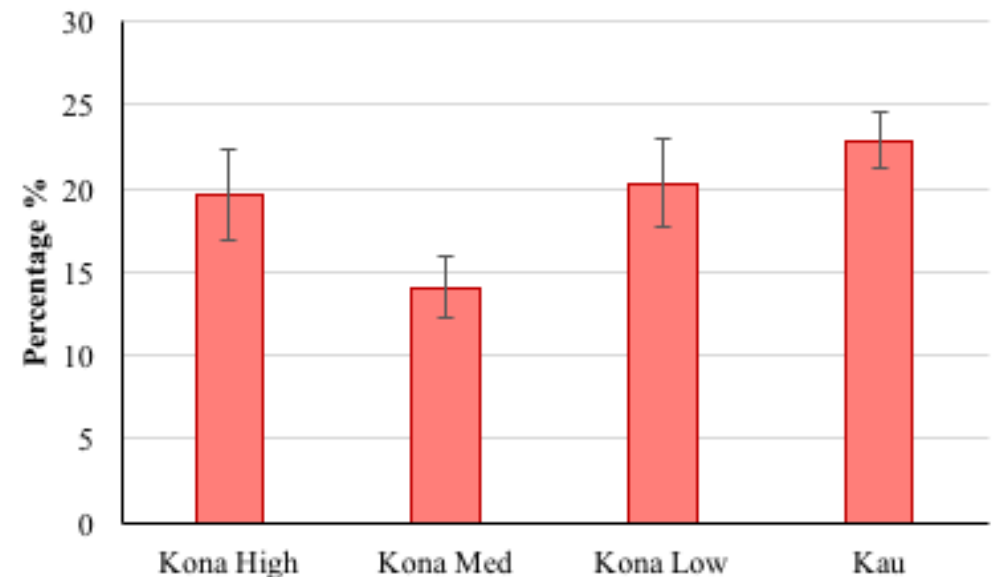
Incidence of *B. bassiana* infecting CBB (%) in Kona & Kau, Hawaii



CBB infected by *B. bassiana* in Hawaii (2016)

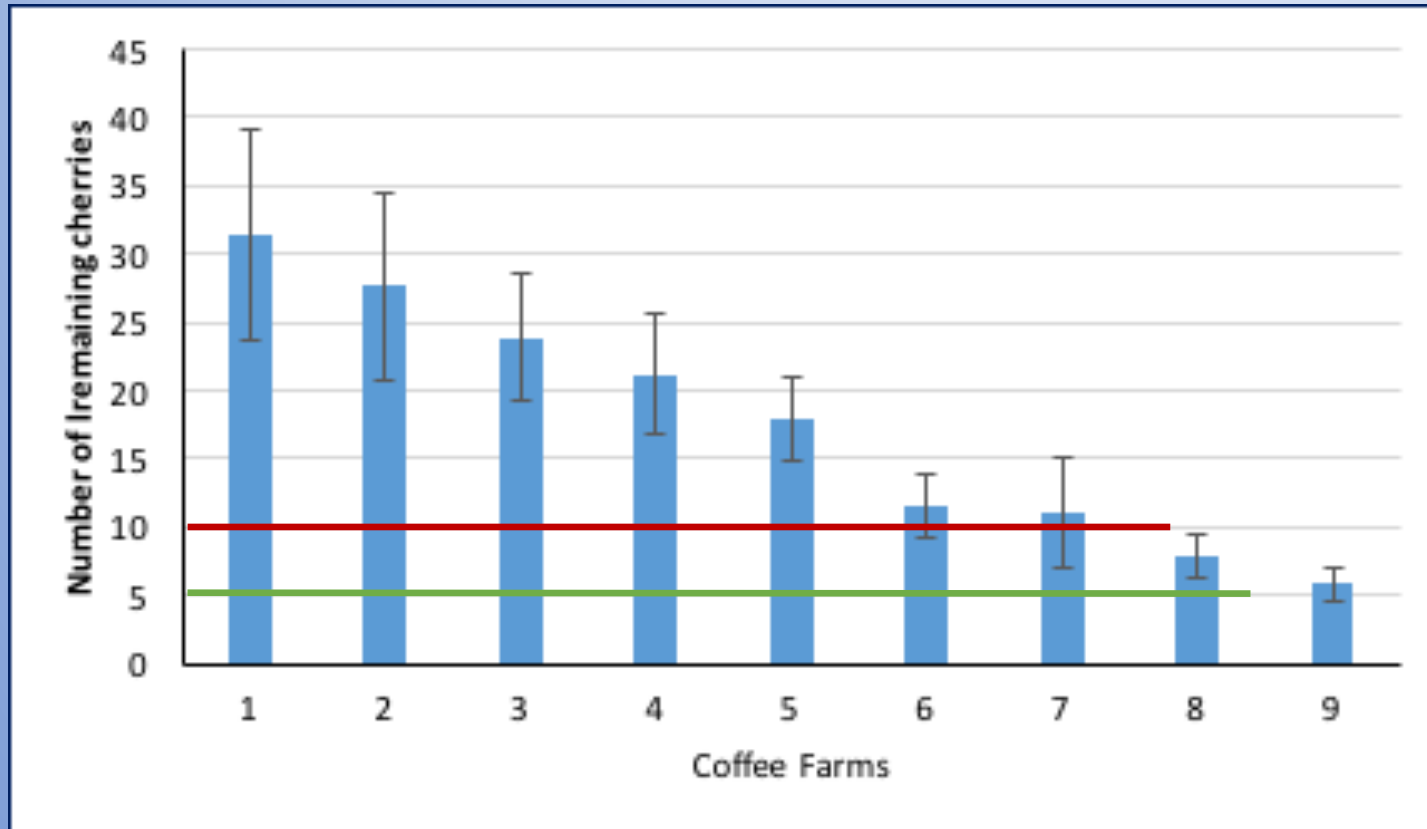


CBB Mortality (%) in Hawaii (2016)





# Efficacy of Harvesting



Remainder of cherries, over-ripe & raisins per tree after a harvesting round:

**Excellent < 5**

**Good 5-10**

**Bad > 10**



# Distribution of Harvesting Efficacy in Kona, HI

11 Coffee farms  
36 Harvesting rounds

**Average 13.8 = Bad**

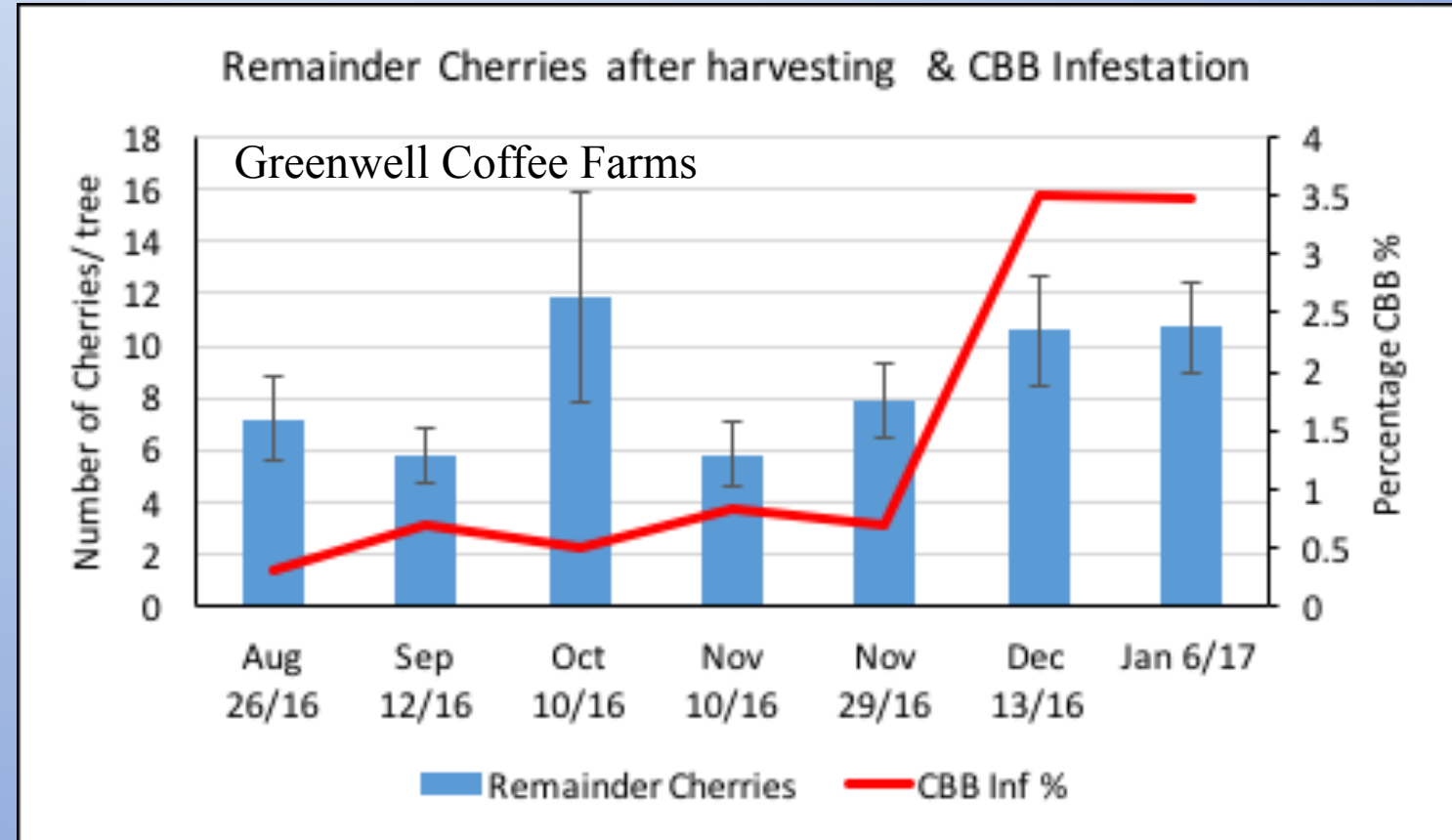
21% (>20 raisins) = **VERY BAD**

48.5% (10-20 raisins) = **Bad**

21% (5-10 raisins) = **Good**

9% (< 5 raisins) **Excellent**

## Harvesting & CBB Infestation (%)



# Facts & opinions about CBB situation in Kona & Kau Districts, Hawaii

CBB is very happy living in Hawaii

Kau offers better conditions for CBB survival than Kona since several flowering a long of the year (berries for food, shelter and reproduction).

Higher CBB population was observed in coffee farms at high elevation in Kona in contrast with medium and low elevation.

April, May and Jun showed more flight activity of CBB and CBB in AB position in Kona, which could be used for taming applications of *B. bassiana* and improve the control.

High emergency of CBB “Explosion” was observed during early December in Kona due to delays on harvesting, CBB reproduction, and changes on weathers conditions.

Efficacy of harvestings is a key point for control the CBB, but it is an issue that have not been addressed in Hawaii.



Thanks for your attention

Acknowledges

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