



The Coffee berry borer, *Hypothenemus hampei* Ferrari (Coleoptera: Scolytidae) in Eastern Africa region: the extent of spread, damage and management systems.

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Introduction



Eastern Africa Region (Kenya, Uganda, Tanzania, Ethiopia, Rwanda & Burundi)

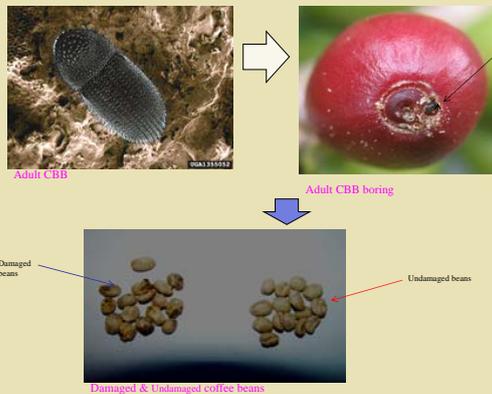
Coffee Varieties grown

- ☐ Robusta coffee - Uganda
- ☐ Arabica coffee - Kenya, Tanzania, Ethiopia, Rwanda & Burundi

Key insect pests

- ❖ Coffee Berry Borer (Broca) - *Hypothenemus hampei**
- ❖ Antestia bugs - *Antestiopsis spp*
- ❖ White Borer - *Anthonus leuconotus*
- ❖ Green scales - *Coccus alpinus*
- ❖ Yellow Headed Borer - *Dirphya nigricornis*
etc

Coffee Berry Borer(CBB)



CBB Impact on Production

- > 50% of foreign exchange earnings for Eastern Africa Regional countries depend on coffee export.
- Heavy infestation by CBB > 96% occurs in the region.
- > Yield losses 80 - 96%

Management Strategies



(a) Cultural- (stripping)



(b) Chemical- (spraying)

(c) Biological (Parasitoids & Fungal pathogens)



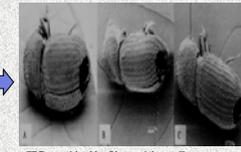
Prorops nasuta



Cephalonomia stephanoderis



Phymastichus coffea



CBB parasitized by *Phymastichus coffea*



Cbb infected by *B. bassiana*

Beuveria bassiana (Fungal pathogen)

- The parasitoids (*Prorops nasuta*, *Cephalonomia stephanoderis*, *Phymastichus coffea*) and fungal pathogen (*Beuveria bassiana*) are indigenous to Eastern Africa region
- These have been exported for classical biocontrol of CBB in countries like Colombia, Guatemala, Honduras, Jamaica, El Salvador, Ecuador, India, Brazil and Mexico
- Promising results in parasitism have been achieved from *Phymastichus coffea*

Proposed Future Management Strategies

- ❑ Development of coffee resistant cultivars to CBB
- ❑ Inorganic and organic fertilizers uses to deter or reduce the infestation levels of coffee beans
- ❑ Integration of biocontrol, botanicals, cultural and selective insecticides as suitable strategies for CBB management

Conclusion and Recommendations

- ❖ CBB as a global problem would require global approach where the existing strategies can be shared
- ❖ The existing potential parasitoids from Eastern Africa Region need to be explored further so that other coffee producing nations can benefit

Acknowledgements

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