



### Status and Current Research Strategies for Management of the Coffee Berry Borer (*Hypothenemus hampei*Ferr) in Africa

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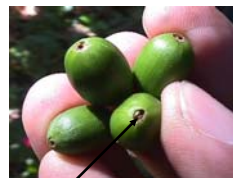
### Coffee production in Africa

- Africa contributes approximately 12.5% of world coffee production
- Production declined from 19.5 to 17.5 million 60kg bags in 1997 and 2008, respectively
- The Low production attributed to a number of factors

### Constraints to coffee production in Africa

- Low yielding varieties
- Limited access to healthy planting materials
- Sub-optimal plant populations
- Civil strife
- Macro-economic mismanagement
- Poor extension services
- Unfavourable land tenure systems
- Poor adoption of innovations
- Unfavourable policies
- Diseases (e.g. Coffee Wilt Disease)
- Insect pests (Mostly CBB)

### Coffee berry borer damage



A coffee berry borer (CBB) entering a berry

Major point of entry for the CBB



Damaged coffee beans/seeds

### Status of the CBB in Africa

- CBB is the most important coffee pest in Africa and endemic to the region.
- Infestation levels between 80-96% have been recorded
- Yield loss of 9% estimated in Uganda
- Earlier research in Uganda showed CBB didn't exist at 1680 masl. and above
- CBB recently found at 1864 masl in Uganda

### Effect of farming practices and cropping systems on CBB infestation

- Heavy shading, close spacing and too much canopy reported to favour CBB infestation
- Intercropping with banana and tree crops believed to favour CBB infestation but yet to be verified
- Leaving some berries on the trees and ground after harvesting harbours CBB for subsequent infestation

## Approaches to CBB management in Africa

- Mainly reliant of cultural practices
- Chemical control draws concerns over effects on human health and safety of environment
- IPM packages sparsely available
- Limited attempts to develop resistant varieties in place
- Hopes are on the use of biological control agents

## Way forward for CBB research and management in Africa

- Integration of cultural control with minimum chemical use
- Investigation of factors governing CBB population dynamics
- Screening coffee germplasm for resistance to CBB
- Developing technologies that promote biological control
- Collaborative research undertakings
- Creation of awareness among stakeholders
- Integration of gender issues in CBB management research

## Conclusion

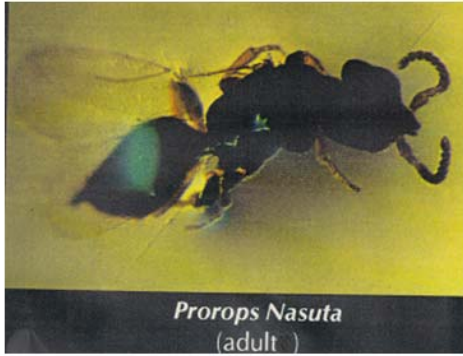
- CBB is a big constraint to coffee production in Africa
- Available CBB control options are ineffective
- There is insufficient awareness among stakeholders, low adoption of control options and limited recourses for CBB research
- A better understanding of coffee farming systems and practices, and their role in CBB prevalence is required
- More efforts needed to develop biological control and varietal resistance to CBB
- Training and sensitisation of stakeholders important
- Regional and international partnerships is encouraged

## Acknowledgement

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- Authors of publications quoted

## Some of the CBB biological control agents naturally occurring in Africa





*Prorops Nasuta*  
(adult)



*Coffee berry borer adult attacked by the entomopathogen Beauveria bassiana*

Thank-you for your audience