CBB Discovery in Kona, September 13, 2010

CBB (Coffee Berry Borer) Task Force

What is involved: Dan Kuhn “Chair”
What is the CBB Problem?

Problems are the small pinholes that are hard to detect. They affect the grading of the coffee.

17% infestation last year harvest, Ranquitte Haiti

Kona produces around 3.6 million pounds of green beans. At $9.00/lbs. this amounts to $32.4 million.

At a 17% loss this amounts to $5.5 million.

India initial infestation 35%, now around 2-5%
Questions - CBB Task Force?

- Is there a need for a Task Force?
- Can it be made to happen?
- Can it be effective?
- Who would participate?
- Can you develop and get consensus?
- Can a volunteer effort succeed?
- Many more issues to think about!
How do you get a Task Force?

- Should it be appointed and by whom?
- See if the various interest groups will participate.
- Agree among the groups on a makeup of a proposed Task Force and operational goals.
- Interest groups appoint or elect representatives. Total of 23 Task Force Members.
- Members nominate & elect chair.
- Formation and vote for Executive Committee.
Final Makeup of CBB Task Force

- Even split between Industry, Regulators and Researchers (if possible)

- Hawaii has good research capabilities
  - UH - CTAHR University of Hawaii
  - PBARC Pacific Basin Agriculture Research Center
  - HARC Hawaii Agriculture Research Center

- Regulators
  - DOA Department of Agriculture
  - USDA-APHIS Animal & Plant Health Inspection Service

- Industry Groups
  - HCGA Hawaii Coffee Growers Association
  - HCA Hawaii Coffee Association
  - KCC Kona Coffee Council
  - KPFC Kona Pacific Farmers Cooperative
  - KCFA Kona Coffee Farmers Association

- Science Panel
  - Dr. Yang, Dr. Grace, Dr. Vega +
<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Location</th>
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<tbody>
<tr>
<td>Bob Smith</td>
<td>KCFA</td>
<td>MAUI</td>
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<td>Carol Okada</td>
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<td>Chris Manfredi</td>
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<td>MOLOKAI</td>
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<td>DeDe Hopkins</td>
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<td>Dr. Chifumi Nagai</td>
<td>HARC</td>
<td>OAHU</td>
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<td>Dan Kuhn</td>
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<td>Dr. Elsie Burbano</td>
<td>CTAHR</td>
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<td>Dr. Eric Jang</td>
<td>PBARC *</td>
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<td>Dr. Gonsalves</td>
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<td>Jeri M. Kahana</td>
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<td>Maria Holmes</td>
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<td>Dr. Mark Wright</td>
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<td>Michael Conway</td>
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<td>Mike Scharf</td>
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<td>Dr. Neil Reimer</td>
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<td>Pepe Miranda</td>
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<td>Tom Greenwell</td>
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<td>Wayne Katayama</td>
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* Executive Committee *
Mission Statement

- CBB is one of the most significant coffee pests in the world. The discovery of this pest in Kona will change how the coffee crop is cultivated and processed, resulting in added production costs.

- The CBB Task Force is a voluntary collaborative effort between industry, government and the scientific community to stop the spread of the CBB to other coffee growing regions on the Big Island and throughout the State of Hawai‘i and to develop and coordinate appropriate pest control, to mitigate its impact and possible eradication in the affected areas.

- Appropriate funding has to be found to develop and implement control measures.
Specific Objectives

- **Communication**
  - Link up with World Experts
  - Farmer Meetings in Kona
  - Miller Meetings
  - Website DOA, CTHAR
  - Visitor Brochure CTHAR, DOA

- **Cooperation among different entities**
  - Industry Groups, Researchers and Government (excellent cooperation)
  - Involve Landowners (Bishop Estate, for example)
  - Involve County, State and Federal entities. (trying for Federal involvement)

- **Site survey**
  - DOA survey of different Islands, HCGA survey on different farms (confirmation of Kona only)
  - Hinterland of Kona, status of infestation (possible areal survey, hiking groups etc. not accomplished)
Specific Objectives

- **Quarantine**
  - Hearings and changing from Kona to whole of Big Island
  - Specifics and implementation (difficult during Christmas time)
  - Fumigation Station (Private vs. State location, expense of fumigation)
  - How to treat organic coffee

- **Trap Acquisition and Maintenance**
  - HCGA, HCA and USDA APHIS raise money and acquire traps
  - High School Ag-program to make traps (make some money)
  - Acquisition of Ethanol and Methanol deployment of traps
  - Maintenance of traps

- **Research**
  - Don’t reinvent the wheel. Collect worldwide data
  - Get world experts to participate. ARS, Columbia, Kenya, India, etc.
  - Pinpoint relevant research for Kona
    - ProFume protocol, Heat treatment, Freezing protocol, IPM for Kona, Fungus deployment, Find local fungus, Post harvest treatment, Best Traps/Lure combination, Synchronized flowering, farming and miller protocol etc.
Specific Objectives

- **Sanitation Measures for Kona**
  - Deal with wild coffee in gulches and hinterland (eradicate)
  - Deploy 3-5 person with supplies and truck for 5 years

- **Quarantine Facility in Kona**
  - Marshaling Yard, public land vs. private
  - Fumigation and heat treatment or freezing (organic coffee)
  - Lessen cost of treatment

- **Legislative Lobbying for Control Measures** (difficult times to raise money)
  - HB 1553 introduced but died in finance committee
  - Federal delegation (trying)
  - Specialty Crop Grant PBARC (in the mill Dr. Matsumoto)
  - State Barrel Tax (slight possibility)
$ Expended towards CBB


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<tr>
<th>Agency</th>
<th>Early work CBB, Elsie Burbano</th>
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<td>UH/CTAHR</td>
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- Dr. Russell Messing (PI)
  methods of field sanitation, alternate host plants of CBB, use of low-toxicity compounds such as neem to prevent oviposition

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- Dr. Mark Wright (PI)
  (CBB lifecycle in Hawaii, improved traps, possible use of traps for population control)

Note: Additional $38,000 committed for FY2012

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- Dr. H. C. Bittenbender (PI)
  (Development of Best Management Practices for coffee, organization of workshops for coffee industry)

Note: Additional $22,000 committed for FY2012

**Dr. Loren Gautz (PI)**

- **Development of heat and fumigation quarantine treatments, improved sanitation methods**
  - CBB Brochure: $2,000
  - Website: $5,000
  - Travel (other than above): $2,000
  - Other administrative time: $5,000
  - Total: $158,000

**DOA**

- Expended:
  - Survey work (3,000 man-hours): $72,000
  - Lab work for identification (1,000 man hrs.): $24,000
  - Travel: $6,000
  - Beauveria (50 man-hrs.): $1,500
  - Other: $3,000
  - Total: $106,500

**PBARC**

- Expended:
  - Trapping/detection: $10,000
  - Beauveria bassiana fungus work: $50,000
  - Flowering control: $10,000
  - Field work: $10,000
  - Travel: $10,000
  - Other: $30,000
  - Total: $120,000

**Total estimated expenditures towards CBB control:** $423,849
Timeline

November 13, 2010 until February 2011

- CBB discovered in Kona by Elsie Burbano, UH PhD candidate; September 13, 2010
- Consideration for forming a response group
- HCGA hires UH expert to go to Kona for Farmers Meeting along with CTAHR
- Formation of CBB Task Force middle of September
- First CBB Meeting Oct. 14 (subsequent Dec.29, Feb.3)
- Vote for chairperson Oct.6
- Executive committee formed meeting Nov.1 (Dec.7,Jan.26)
- Quarantine implementation by HDOA (early December)
- Farmer Meeting in Kona (farm protocol)
- Miller Meeting in Kona (miller protocol)
- Trap construction, $ by HCGA,HCA,KCC
- High School AG-program builds traps (makes some money)
- Importation of Beauvaria fungus cleared by HDOA
- CBB Symposium
What has not been done!

- Find Funding for:
  - Continued Research
  - Sanitation Control Measures for Kona
    - Survey “Wild Coffee”
  - Public quarantine facility “Set Up”

- Emphasize to protect the Neighbor Islands and Kau.

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- Special thanks to all the CBB Members especially
  - Tom Greenwell, Dr. Eric Jang, Dr. Dennis Gonsalves, Dr. Ken Grace, Dr. Bittenbender, Dr. Elsie Burbano Dr. Lyle Wong,
  Dr. Neil Reimer, Mike Sharf, Carol Okada.

- Continue the effort (don’t get accustomed to the situation)