



HOW CBB DAMAGE AFFECTS THE CUP OF COFFEE

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May 3, 2015 – Ka'u Coffee Festival's Coffee College

**CBB-DAMAGED COFFEE AFFECTS
THE AROMA, FLAVOR AND
QUALITY OF COFFEE**



IF I CAN'T SMELL OR TASTE
ANYTHING WRONG, /S THERE REALLY
ANYTHING WRONG WITH MY COFFEE?



WHAT IS THE *REAL* COST OF SELLING
CBB-DAMAGED COFFEE?



Coffee Quality – A “driver”, that if successfully addressed, would have a positive impact on other issues

PROJECT OBJECTIVES

The MAIN GOAL of this project was to better understand the effects of Coffee Berry Borer damage to roasted coffee by determining the percent (by weight) in cup that CBB damaged beans can be detected.



The secondary goal of this project was to determine if a darker roast masked the taste of CBB damaged beans.



Dark Roast



Medium Roast



No CBB Damage
GFI Prime



Slight CBB Damage
GFI Prime



Severe CBB Damage
GFI Prime





	0%	2%	3%	5%	10%	20%
Good Coffee	10.0	9.8	9.7	9.5	9.0	8.0
Slight/ Severe Damage	0	0.2	0.3	0.5	1.0	2.0
Total Wt. (g)	10.0	10.0	10.0	10.0	10.0	10.0

EVALUATIONS

Round 1: Non-blind cupping of coffee with slight* CBB-damaged beans

Round 2: Non-blind cupping of coffee with severe* CBB-damaged beans

Round 3: Blind cupping of coffee with slight CBB-damaged beans

Round 4: Blind cupping of coffee with severe CBB-damaged beans

Round 5: Medium vs dark roast of slight CBB-damaged beans

*According to SCAA definition. All beans were hand-sorted for defects and only CBB damaged beans were evaluated.

RESULTS AND OBSERVATIONS

Slight CBB Damage:

EA taste difference: 20-25%

Astringency, sour & bitter
flavors

Q-grade cuppers: 5-10%

Loss of aroma & astringency

Severe CBB Damage:

EA taste difference: 5%

Astringency, bitter & burnt
flavors

Q-grade cuppers: 3%

Flat, dry finish & metallic
flavors

A pungent, ammonia smell was noted
when the coffee was ground.



Medium vs Dark Roast:

Dark roasting did not hide the flavors of slightly CBB damaged beans.

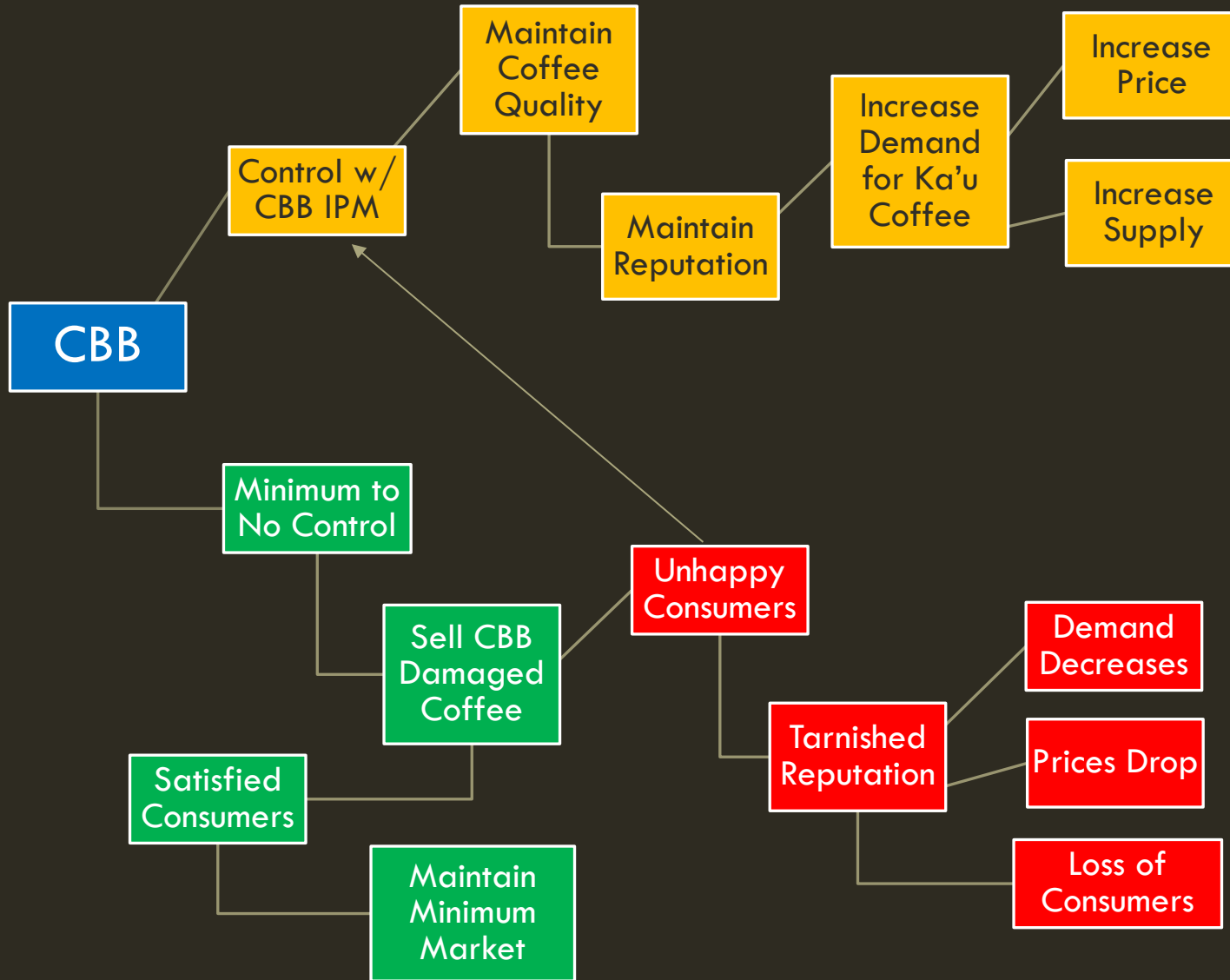
When ground, the dry coffee had a pungent ammonia smell and the cup for dark roast had a smoky taint and slight tobacco flavor.

IF I CAN'T SMELL OR TASTE ANYTHING WRONG, IS THERE REALLY ANYTHING WRONG WITH MY COFFEE?



Over 20 different fungal species associated with CBB including *Aspergillus ochraceus*. *A. ochraceus*, as well as other members of the genus *Aspergillus*, are known to be important toxigenic fungi. For the coffee industry, the presence of ochratoxin A (produced by *A. ochraceus*) in coffee is a serious concern. Ochratoxin A has been reported in green coffee beans, roasted coffee, instant coffee, and coffee brews.

WHAT IS THE *REAL* COST OF SELLING CBB-
DAMAGED COFFEE?



Individuals AND Industry Benefit – Long Term

...Loss of farms, jobs, etc.

Individuals AND Industry Suffers – Long Term

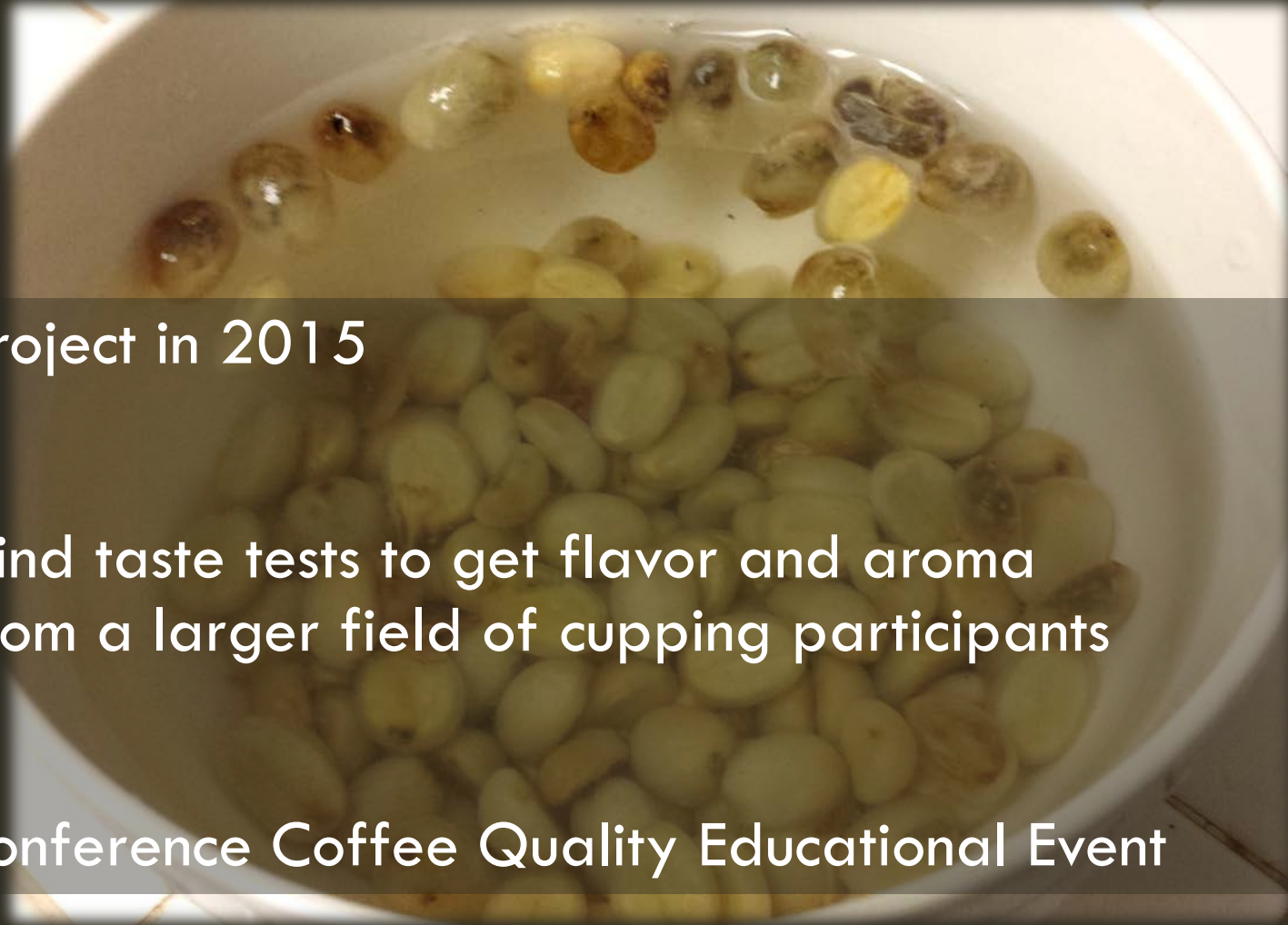
Individuals Benefit – Short Term

FUTURE STUDIES

Repeat this project in 2015

Investigate blind taste tests to get flavor and aroma evaluations from a larger field of cupping participants

2015 HCA Conference Coffee Quality Educational Event



WHAT CAN YOU DO?

- Follow CBB Best Management Recommendations.
- Don't wait for the subsidized medicine to arrive.
- Improve the health and management of your coffee trees.
- Sort your coffee.
- Don't hide behind ground coffee.
- Taste and smell great coffee. Be critical of yours.
- Aim high; higher than the standards
- Think quality.
- Think long-term.



MAHALO!

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Joan Chong

Tommy Greenwell

Ka'u Coffee Festival & Growers



UCC
COFFEE

