Hawaii Coffee Growers Association

2015 HCA Annual Growers Production Report & HCGA Brazil Trip Report

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Regional Production by Origin

General Comments:

• Production/Acre remains stable, unknown losses in CBB infested areas.
• CBB continues to move, found on Oahu December 2014.
• Areas affected by CBB, there is promising results with Botanigard.
• Kauai, Molokai and Maui remain un-infested by CBB.
• Some weather issues affecting the 2014/15 crop (winds Ka’u, Waialua).
• Weather for 2015/16 crop has so far been normal for most of the State, dry in the north of the State (Kauai), but good cherry yields expected.
2014/15 State figures

- 8.1 mil. Lbs. marketed (Parchment Equivalent Basis)
- 4% less than 2013/14
- Statewide acreage: 9,000 acres
- Statewide harvested acreage: 7,900 acres (pruning high)
- Ave. yield/acre: 1,030 lbs.
- Farm price: $6.70 2014/15, $6.20 2013/14
- $54.3 mil PEB gross sales
- Green equivalent available August 2015.

Source: DOA/NASS report (2/25/2015)
Kauai

Kauai Coffee Co.

• **2014/15 Harvest:** 10.45 mil lbs cherry/2.45 mil lbs. green bean on 2,450 acres.
• Selective top harvest 9/16/14 campaign ended 2/11/15. Latest ever.
• 105% of normal rainfall 2014. Yield below estimate due to natural cycling and other environmental factors (pumps).
• **2015/16 Outlook:** 10.2 mil lbs. cherry estimate on 2,115 acres.
• Acreage reduced due to reservoir shortage and pruning acreage increased.
• Expect limited reservoir water remainder of year. Rain 45% of normal.
• CBB trapping ongoing, no infestation.

Moloa’a Bay Coffee

• 18,000 lbs cherry on 4 acres, 6 total, all Typica
• 2015/16 looks promising. No CBB.
Oahu
Waialua Coffee Estate

- CBB discovered at the farm late 2014.
- Little infestation of the 2014/15 crop, yield: 400,000lbs cherry
- Had issues getting to market with PQB rulings.
- More losses due to storm damage than CBB, (15 -20%)
- March-May 2015 all trees stripped and ground cherry removed.
- March – June 2015, 50+ acres stump pruned (30% of farm)
- Preparation for Botanigard spraying is initiated, equipment and protocol for control program acquired and in place.
- Increased labor force by 5 positions to focus on sanitation.
- Lower yield 2015/16 due to pruning (300,000 lbs cherry)
- Shooting for <5% CBB damage and stable yields by 2017.
Molokai

Coffees of Hawaii

• Reported 285,000 lbs. cherry harvested for 2014/15 crop
• Unknown forecast for 2015/16
• No reported CBB infestation
• Under new ownership
Maui

MauiGrown Coffee, Lahaina

- 345 Acres harvested, 390 acres in production
- 1,750,000 lbs. cherry harvested 2014/15 with (4) varieties
- 20% less than 2013/14 (mechanical harvester breakdown)
- CBB monitoring continues, not yet found on Maui
- Good weather for 2015, expect > 2,250,000 lbs cherry harvest
- Planting new areas (25+ acres over last 2 years)

Maui Coffee Association, (Upcountry & Windward Maui)

- 21,391 lbs. cherry harvested (reported by 14 growers)
- 2014 weather reported to be wetter than 2013 in most areas.
- 2015/16 forecast unknown, expect better due to increased plantings
Kona

- Production Numbers difficult to attain since to the influx of CBB.
- Estimated cherry for Kona origin: 20,000,000 lbs.
- Acreage estimate now to be close to 4,500 planted.
- 2014/15 cherry into mills estimated to be 25% more than 2013/14. Upswing in production, but unknown CBB losses.
- Weather dryer but with more cloud cover.
- **New crop:** Some early harvest, July/August heavier than previous years. So far, CBB damage is down, Beauvaria use up, farmers using it also greatly increased with SHAC grant help.
Ka’u

District Report only (Number of farms unknown)

- 2014/15 reported 3,276,000 lbs. cherry
- Estimated 4,500 lbs/acre, est. total 500 acres harvested
- CBB control becoming more effective with SHAC program, CCB damage reported to be holding at least and not getting worse.

- 2015/16 production estimated to grow 20% more cherry over 2014/15 harvest.
- New plantings continue, est. 700 acres 2016.
Other Big Island Regions

Hamakua
• 2014/15 harvest: 35,000 lbs cherry, est. 7,350 lbs green
• CBB present

Puna
• 2014/15 harvest: 63,000 lbs. cherry, est. 13,230 lbs green
• CBB present
HCGA Brazil Trip Report

June 21 – July 3, 2015

Key Focus: Visit coffee research facilities, coffee farms that principally harvest coffee mechanically. Observe cultural practices that could be used to lessen CBB and other coffee pest issues.

Participants: Dr. Tracie Matsumoto (PBARC), Andrea Kawabata (UH extension service), Dr. Stuart Nakamoto (UH CTAHR), Tom Greenwell (Greenwell Farms), Jon Ching (Kauai Coffee), Derek Lanter (Dole/Waialua Coffee and Cacao), Kimo Falconer (MauiGrown Coffee).
Brazil Cultural Methodology

• Largest Coffee producer in the world (>50 Mil. bags = 7 Bil. Lbs. annually)
• Strong research capacity. New varieties, equipment, farming techniques and chemicals introduced annually.
• Farms are mostly mechanized. Hand picking in steep areas.
• Mostly un-irrigated farms but many converting to irrigated.
• Pruning done every third and fourth year, trees trained to have a single trunk.
• Wet season very predictable. Prefer one, single flowering event. Researching chemical removal of flowers.
• After harvest, they sweep the ground and collect any beans on the ground and process them.
CBB (Broca) control program

- Harvest takes all beans off the tree.
- Coffee on the ground is swept up and collected mechanically. If not collected, it is mulched into the ground.
- Flowering monitoring is crucial. There are better results when there is a known flowering date for CBB monitoring.
- Monitoring begins 60 – 90 days after flowering. At 3% damage, they spray insecticide. (no beauvaria use)
- Only spray the areas that need it, but monitor entire farm.
- Continue monitoring through crop cycle. Longer maturing of cherry 7-9 months.
Sweeper and Tree Skirt Blower
Sweeper/blower (3 pt. Hitch)
Sweepings in windrows
Bean & Trash pick-up and mulching
Ground material collected and processed separately,

Then sold as lower grade ground roasted products.
This lower grade coffee is appropriately named.
Harvesting (70% mechanized)

• Multiple manufacturers all with slightly different approaches.
• Pruning done more frequently, every 3-4 years. Topped on the 3\textsuperscript{rd} year and hedged on the fourth.
• This method allows for increased tree vigor, also allows for best soil management for optimum nutrition. Their most effective way of battling Coffee Leaf Rust and other leaf pests.
• Land is mostly flat, but they are designing machines that can handle up to 30\% slope.
• Also terrace planting for extreme slope areas.
Trees pruned after 4\textsuperscript{th} year
Inter-row mulched, trees with single trunk.
Jacto
TDI (Zero Harvest method)
Prunes and harvests all at once. No CBB impact.
Harvester for slope conditions
Terrace harvester (extending heads)
Hand Harvest (30% of acreage)

• Most farms still employ a large labor force for harvesting young trees and sloped areas.
• Branches are stripped for the most part onto tarps then collected.
• Larger trees hand held machines are used to knock cherry off trees, then collected from tarps.
Key agronomic focuses

- Soil nutrition to for root development to overcompensate for leaf losses due to Leaf Miner, Leaf Rust, Cercospora.
- Monitoring of fields for CBB outbreaks and proper spray timing.
- Although annual rainfall seems adequate, irrigation systems are beginning to be installed.
Coffee Leaf Rust
Young irrigated field with early signs of rust
Electrostatic retro-fit of tow behind sprayer
Electrostatic head to replace conventional nozzles
Mahalo!