KA MAHI'AI

AGRICULTURAL NEWS FOR KAMEHAMEHA SCHOOLS `OHANA & FARMERS ISSUE NO. 2 2011

As a private trust founded and endowed by the legacy of Princess Bernice Pauahi Bishop, Kamehameha Schools (KS) is dedicated to improving the capability and well-being of Native Hawaiians. With 98% of the Schools' land kuleana in agriculture and conservation, the success of KS' agricultural tenants ultimately feeds the Schools' mission in perpetuity.

This newsletter was designed to share agricultural related information and news in an effort to connect with nā mahi`ai o Kamehameha. We recognize the value of promoting agriculture as an industry and supporting those whose labor and livelihood have preserved a tradition of sustainable living in Hawai`i.

We hope you find this newsletter relevant and useful. If you have any questions or feedback, please contact us at land@ksbe.edu.

Mahalo!

Fighting the Coffee Berry Borer

Three major strategies will combat these pests in 2011

Contributed by H.C. "Skip" Bittenbender, Ph.D.-- Extension Specialist for CTAHR

The coffee berry borer (Hypothenemus hampei) is a beetle native to Africa affecting over 70 countries, mainly in Latin America. Hawai'i has seen its fair share of coffee pests in the past, such as the black twig borer and tropical nut borer, but the coffee berry borer (CBB) has most recently been destroying Hawaiian coffee farms.

The female beetle sticking out of the cherry is evidence of an infested coffee cherry.

The devastation begins when the female beetle attacks the coffee berries from about eight weeks after flowering up to harvest season. Females bore a hole in the 'piko' or 'bulls eye' at the blossom end of the cherry. Two days after entry, anywhere from 35-50 eggs are laid, producing 13 females to each male. The young maggot-like beetles eat the seed and later mate. During harvest, the only indication of an infested cherry is a hole in the fruit or the female's rear sticking out of the cherry.

CBB is a pest of the coffee farm, not a storage pest of the coffee warehouse. It does not attack or reproduce in the beans sold for roasting. Hawai'i benefits from the experience gained in other countries which are successfully farming coffee despite the CBB. The three major strategies successfully used in other countries are:

1. SANITATION
This strategy involves containing and killing. It requires stripping all cherries from the tree, after the last harvest, before pruning. Collecting fallen cherries from the ground and destroying them by heat or burying is also important. To break the life cycle of the beetle, all cherries, raisins, and drops must be removed. If this is done properly, the only way for the beetle to infest the orchard is from external sources. At the mill, cherries should arrive in closed bags and be held in a screened area in order to prevent the CBB from escaping. During the pulping phase, the skins must also be heated or composted. The drying floor should be enclosed with a screen (0.020 inch mesh or smaller) to prevent any remaining pests from escaping.

2. TRAPPING
This strategy is used in the spring and summer when the females are seeking the ripe cherry. Traps to catch the female are baited with a 3:1 mix of methanol and ethanol and can be homemade or purchased. When the beetle flies into the trap, she hits the walls and falls down into a mix of soapy water or antifreeze and dies.

3. INSECTICIDAL FUNGUS
Spraying a commercial formulation of fungal spores (Beauveria bassiana) was approved by the Hawai'i Department of Agriculture last month. Two products Mycotrol O (certified organic) and BotaniGard ES are available in Kona and should be sprayed as soon as CBB or its damage is observed. CTAHR is also evaluating currently or soon-to-be approved coffee insecticides.

In all likelihood, Hawai'i cannot eradicate the CBB but can learn to manage this challenge. All imported green beans are fumigated before reaching Hawai'i as beetles can hitchhike on burlap bags. The coffee quarantine in Kona and Hawai'i County is in place to slow the movement of the CBB into Ka'ū and Hāmākua and to the other coffee farms on O'ahu, Maui, Moloka'i and Kaua'i.

The Hawai'i Coffee Berry Borer Task Force was organized to coordinate the research, regulatory, and outreach efforts of the Hawai'i Department of Agriculture (DOA), the UH College of Tropical Agriculture and Human Resources (CTAHR), USDA Pacific Basin Agricultural Research Center (PBARC), and coffee organizations. For more information, visit www.ctahr.hawaii.edu and click on Coffee Berry Borer Alerts.

Featured Rancher: Jill Andrade-Mattos

Raised in a hard working family of entrepreneurs, Jill Andrade-Mattos grew up with a strong work ethic and business savvy. Her great grandparents came to Hawai'i from Portugal to work in the sugar plantation and her grandfather slaughtered cattle by hand, selling meat on a string for 75 cents.

After working in the food service and management industry for 16 years, Jill decided to come back and help grow her grandfather's business. In 1990, she took over the operations of JJ Andrade Slaughter House until it closed in 2006. Jill is now the general manager of Hawai'i Beef Producers (HBP) and she and her husband Roy own JJ's Meat Market in Honoka'a. They also lease 705 acres of land on the Hāmākua coast from Kamehameha Schools where they run 400 cows and 50 on-the-ground steers. Currently they are entering into an agreement with Hawai'i Beef

Producers to raise more cows in order to supply the slaughter house with more than 100 heads of grass-finished cattle a year.

As desirable as Hāmākua is for raising cattle, the challenge is what to do with the cattle once they reach maturity.

" Ranchers can't afford to keep all their cattle in Hawai'i because they need the cash flow," Jill said. "An alternative is to diversify and ship some steers to the mainland, saving others for the local market. If ranchers did this more, we could keep a consistent market for local grass-fed beef."

To help solve this problem, Hawaii Beef Producers is looking into an incentive program where ranchers will receive $1.45 to $1.55 per pound, working their way up to $1.65 per pound. If the pilot goes as planned, ranchers can continue to grow their businesses and the people of Hawai'i will benefit by having good tasting and healthy local beef!

Mea'ai: Chuck Wagon Stew

Compliments of JJ's Country Market

5 lbs. grass-fed Big Island beef
5 lbs. local beef brisket
2 lbs. of carrots
3 lbs. of potatoes
1 whole onion, chopped
2 cans of Italian stewed tomatoes
2 cans of V8 juice
2-3 cubes of beef bouillon
4-5 bay leaves
Parsley flakes
Garlic, Hawaiian salt and black pepper to taste

Directions:
Cover beef with water. Add beef bouillon cubes, bay leaves, onion, parsley, salt and pepper. Boil beef until tender. Add stewed tomatoes, V8 juice, and carrots. Cook until half cooked. Add potatoes, simmer until cooked. Refrigerate overnight, skim off oil, heat and serve.

Crop Share

Bring surplus produce from your farm or garden to exchange with other community members. If you don't have produce to share, we always welcome a lending hand. At the end of the swap, excess food will be collected for delivery to local food distribution centers.

Join us every Saturday through the end of August from 12:30 - 3pm at Mala`ai Garden, accessed from the new gravel road into Waimea Middle School by Kahilu Theater.

Call us if you need help harvesting!
For more information, contact Nicole Milne, Crop Share coordinator, at 987-9210 or nmilne@hawaii.edu.

Meet Allen Salavea

Allen was newly hired as land planning and entitlements manager for Hawai'i island. He previously worked as a senior land use planner with the West Hawai'i's County of Hawai'i Planning Department and oversaw the creation of two Community Development Plans (CDP) for North and South Kohala. He also served as project manager on key implementation elements of the Kona CDP.

Allen holds a bachelor of arts degree in geography and urban and environmental planning from the University of Hawai'i at Hilo. His background in permitting and entitlements can be a valuable asset by providing land use articles that are of interest and benefit to our KS tenants. To make suggestions on land use topics you'd like to see addressed in the next Ka Mahi'ai, contact Allen at topics@ksbe.edu.

The Purple Plague

Ever wonder what that obtrusively large purple and green plant is in the corner of your farm lot or pasture? It could be a harmless ornamental or one of Hawai'i's deadliest invasive weeds.

Miconia (Miconia calvescens) is native to Central and South America and was introduced to Hawai'i in 1961 as an ornamental garden plant. It has very large leaves, flashy white veins, a distinctive trio of midribs and can grow up to 50 feet.

The shallow-rooted thickets shade out native vegetations, preventing any plant from growing nearby and promoting erosion. The sand-sized seeds are spread aggressively by birds and other animals that are attracted to the sweet fruit.

On Hawai'i island, the weed has been detected within forest reserves and on agricultural lands. Large populations exist in Puna, Hilo, Hāmākua and two smaller Kona populations are known in Kahalu'u-Keauhou and Hōnaunau. On the other islands, miconia has been found in varying degrees in the Ko'olau mountain range, Wailua State Park on Kaua'i, and throughout East Maui.

To help eradicate this destructive weed, Kamehameha Schools contracts Forest Solutions, Inc. a local business that performs bi-annual sweeps of Kahalu'u and Hōnaunau forest. Trained technicians comb through the forests, killing every miconia plant they find. Although reproducing individuals have not been found in Kahalu'u since 2006 and in Hōnaunau since 2004, KS will continue miconia management until the seed bank is exhausted.

"Your help in detecting and eradicating miconia is about more than lease compliance," said natural and cultural resource land asset manager Kama Dancil. "Stopping miconia before it spreads further into our forests is our shared goal."

If you lease agricultural land in Hilo-Hāmākua or Kona, check your area at least once a year to help maintain the property in a reasonable weed-free condition. Professionals can also help eradicate "the purple plague" free of charge. Contact Kanoe DeRego of the Big Island Invasive Species Committee at (808) 933-3347 or kkderego@hawaii.edu to schedule a free eradication.

Ka Limahana: Meet the LAD Staff

From left to right: Margarette, Terry, Tanya, Naomi, Sherry, Pamela

Margarette Kaneali'i

Margarette Kaneali'i is responsible for leading the West Hawai'i lease administration team to oversee North and South Kona agricultural leases. Born and raised in Kona, Margarette graduated from Konawaena. She earned an associate degree in business administration and her Hawai'i real estate license.

Terry Knabusch

Terry Knabusch and her team are responsible for assisting in the management and administration of agriculture, pasture, orchards, residential and commercial leases in Hāmākua, Hilo, Puna, Ka'ū, Kohala and Kona. Based in East Hawai'i, she moved from Michigan 27 years ago and has been with KS for the past 16 years.

Tanya Andrade

Tanya Andrade is responsible for assisting the land asset managers in administering agriculture, pasture, orchard, residential and commercial leases in Puna, Hilo, Hāmākua, Ka'ū, Kohala and Kona. Born and raised in Hawai'i, Tanya has worked in the Hāmākua office for the past four years.

Naomi Yamagata

Naomi Yamagata is responsible for executing and documenting all South Kona agreement transactions by inputting and monitoring all critical data. Naomi was born and raised in South Kona and last year she celebrated 25 years of service with Kamehameha Schools.

Sherry Ortiz

Sherry Ortiz is a lease administrator assistant, responsible for the North and South Kona agricultural leases. She grew up in Missouri and moved to Kona in 1983. Prior to coming to work for KS in 2007, Sherry worked for a residential developer and for an escrow and title company. She also has her Hawai'i real estate license

Pamela Alcoran

Pamela Alcoran is a lease administrator assistant, responsible for the South Kona leases. She attended Linfield College and Oregon State before moving to Kona in 1974. Prior to KS, Pam worked at an escrow and title business in Kona for the previous 20 years. Pam has been married for 28 years, has three children and three grandchildren.

If you haven't had the opportunity to respond to the survey we sent out via mail, please visit www.surveymonkey.com/s/ksag. The online survey will take no longer than 10 minutes and will allow us to better support you and your agricultural operations. Please know that the information you provide is very important to us and will be used strictly for Kamehameha Schools' purposes. We look forward to hearing from you!

Nā Mea Hoihoi: Calendar of Events

August 6	**Cream of the Crop** Kailua-Kona, Hawai'i	September 29 - October 1	**Hawai'i Food & Wine Festival** Waikīkī, O'ahu
September 24	**Breadfruit Festival** Amy Greenwell Botanical Gardens, Hawai'i	October 29	**Hāmākua Alive!** Pā'auhau Plantation, Hawai'i
September 30	**Mealani's Taste of the Hawaiian Range** Hilton Waikoloa Village, Hawai'i	November 4-13	**Kona Coffee Cultural Festival** Kailua-Kona, Hawai'i

For a list of farmers' markets statewide, visit www.hawaii.gov/hdoa/add/farmers-market-in-hawaii

Kamehameha Schools is a private, educational, charitable trust founded and endowed by the legacy of Princess Bernice Pauahi Bishop. Kamehameha Schools operates a statewide educational system enrolling more than 6,900 students of Hawaiian ancestry at K-12 campuses on O'ahu, Maui and Hawai'i and 31 preschool sites statewide. Approximately 37,500 additional Hawaiian learners are served each year through a range of other Kamehameha Schools' outreach programs, community collaborations and financial aid opportunities in Hawai'i and across the continental United States.