

Farmers & Friends

Monthly | October 2014 | Issue No. 3

www.farmersandfriends.org



An economic geographer looks at the people in the path of Pele p. 25



A farmer's daughter turns to social media p. 23



Hanna Bree samples a Taste of the Hawaiian Range p. 28

Sections

- 2 Editor's Notes:
Long lives, fearless women and lōkahi
- 4 Subscription and advertising rates
- 6 News Briefs
Tulsi Gabbard on the Keauhou Aquifer / TMT Groundbreaking / Kohala Center receives \$2.1M federal grant for ag business accelerator
- 7 CTAHR receives record-high gifts
- 8 Cynthia Reeves assumes job as Maui CTAHR administrator
- 29 Original Hawaiian Chocolate a Martha Stewart finalist
- 30 Jus Play: Music for waiting on a volcano

Contact Farmers & Friends at:
farmersandfriendseditor@gmail.com

October, 2014

Agriculture, natural resources, energy, livelihoods, markets and civil society in Hawai'i



Twin Bridge Farms: A model for farmers

By Joan Namkoong

Two veteran farmers in Hawai'i who survived the demise of the sugar plantations and faced the challenge of diversified agriculture with fortitude are Milton Agader and Al Medrano, partners in Twin Bridge Farms in Waialua on Oahu.

Page 12

Page 16

Q & A with Jerry Ornellas

By Joan Conrow

We're going to saturate the farmers' markets at some point, and it's a major source of income for many farmers. Eventually we're going to have to move into the grocery stores. It's a matter of convincing the consumers that our products are superior, and they are. They're fresher, and they're local.



Page 20



GMO Warriors: Seed company workers speak out about a bill to ban their jobs

By Rhonda Stoltzfus

David Makaiwi now finds himself defending modern agriculture for the next generation, to assure his children access to careers that will allow them to stay on the island he loves. He is a dedicated husband, father, and employee. He's been with Monsanto for nearly 15 years.

Farmers & Friends

News for people building a bright future on the land in Hawai'i

www.farmersandfriends.org

Editorial Board:

Richard Ha
Hamakua Springs Country Farms

David Rietow
Agro Resources, Inc.

Eric Tanouye
Green Point Nurseries

Bill Walter
W. H. Shipman, Ltd.

Eric Weinert
Calavo Growers, Inc.

Contributing Editor:

Rory Flynn
Tel 808.640.8027
Email farmersandfriendseditor@gmail.com

Farmers & Friends
P.O. Box 6525
Kamuela, HI 96743

©2014 Farmers & Friends. All material, either in part or in whole, is protected under U.S. copyright laws. Articles must be accompanied by the author's name, mailing address, email address and phone number. Letters-to-the-editor and viewpoints are subject to editing. Shorter submissions will receive preference for publication.

EDITOR'S NOTES

Long lives, fearless women and lōkahi

Good news, they say, does not sell newspapers—or e-publications. Fine. Let's give it a try, anyway. It's fun to buck the conventional wisdom. Here goes.

In a year when Hawai'i's discussion of food and agriculture oftentimes ranged from the neurotic to the hysterical, there's good news to report. We're living longer than ever.

Hawai'i tops the nation in life expectancy. The lifespan of Hawai'i residents now exceeds 80 years. The average lifespan of a woman in Hawai'i is 84.8—3½ years more than the national average of 81.2, and nearly seven years longer than the 78.1 year average life expectancy of women in West Virginia. Not only is our life expectancy tops in the nation, our overall "health index" is first, as well. That's the good news released by the nonpartisan Social Science Research Council in its latest *Measure of America 2013-14* report.

Consider how far we've come in a century. In 1910, life expectancy in Hawai'i was less than 44 years. By 1950, however, life expectancy in the islands surpassed the national average. We've stayed ahead of the rest of the nation ever since. In 2000, life expectancy in Hawai'i ranked fifth in the world, behind only Andorra, San Marino, Japan and Singapore. Our life expectancy now increases at the rate of one year every decade.

Apparently, we're doing okay. Exercise, hygiene, plumbing, antibiotics, prenatal care, life-saving medical technologies and modern agriculture all played a part in this story of progress. And one other thing we too seldom acknowledge—freedom.

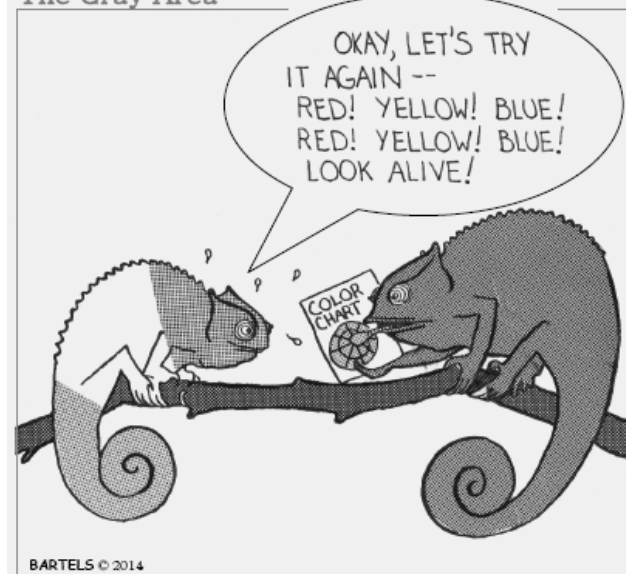
Compare our situation with that of, say, Russia. Since the break-up of the Soviet Union, Russia has suffered an appalling decline in population. From 1992 to 2007, there were 22.3 million births and 34.7

million deaths in Russia, an average of three deaths for every two births. Today, the average life expectancy of men in Russia is 65 years, fully 13 years less than the life expectancy of men in Hawai'i.

Life has a way of making cold statistics ambient and meaningful. The other day, a close friend, age 67, called with joyous news. His daughter had given birth to a healthy boy, making him a grandfather for the second time. Returning to the matter of Russian demography, a small epiphany struck me. If—heavens forbid—my friend and I were Russians, we would not have celebrated the birth of that grandchild. Statistically speaking, we'd both be dead. In all likelihood, we would have succumbed to alcohol (albeit scotch, not vodka) and cardiovascular disease, the leading cause of death among Russian men.

Nowadays, deaths proceed from despair in the Russia of Vladimir Putin. Chronic (*continued next page*)

The Gray Area



BARTELS © 2014

Chameleon Boot Camp

EDITOR'S NOTES

alcoholism is widespread. Two million Russians are heroin addicts. Those too poor to afford opiates concoct a nasty synthetic substitute called *krokodil* ("crocodile"). In rural Russia, tens of thousands of villages have become ghost towns. Russian cities are rife with crime, corruption and racial tensions, often eclipsed by the glitzy boutiques and clubs favored by the elite hipsters of the Russian petrostate.

Such conditions spawn political opposition—and arrests. Blogger Alexei Navalny, a crusader against corruption, chessmaster [Garry Kasparov](#), and members of the incorrigibly brave female punk band [Pussy Riot](#) have all been arrested in recent years. Earlier this year, Vladimir Putin signed a new "bloggers law" to suppress social media opposition. The law prohibits online anonymity and requires bloggers to register with the government. According to *The New York Times* (May 6, 2014), the "new Russian measure specifies that any site with more than 3,000 visitors daily will be considered a media outlet akin to a newspaper and be responsible for the accuracy of the information published."

The Kremlin's intimidation has proven effective. Twitter has not caught on in Russia. Comedian Yakov Smirnoff explained why in June. "In America," he said, "if you have a lot of followers, you're considered popular. In Russia, if you have followers, it means you're under surveillance."

Happily, people in Hawai'i can espouse, rant and rave online with no fear of censorship or imprisonment. That's good news, too. And while much social media is a Wild West show of taunts and barbs, some Hawai'i bloggers generate fresh, penetrating, and remarkably civil commentary.

Three such bloggers — all women and all self-

starters — were invited to write in this issue of *Farmers & Friends*. They include veteran journalist Joan Conrow on Kauai, Joni Kamiya on Oahu, and Rhonda Stoltzfus on Maui.

Conrow: <http://kauaielectic.blogspot.com>

Kamiya: <http://hawaiiifarmersdaughter.com>

Stoltzfus: <http://iowameetsmaui.wordpress.com>

Joan Conrow has been reporting on agriculture, land use, indigenous culture, environmental issues, politics and people in Hawai'i since 1987. She previously reported for the *Honolulu Advertiser*, *Honolulu Star-Bulletin* and *Reuters*. Her freelance articles have appeared in many national and regional magazines.

Joni Kamiya is the daughter of Oahu papaya grower Ken Kamiya. She is a health professional, wife, mother, dogged fact-checker and friend of farmers.

Rhonda Stoltzfus is a Northern California native with a degree in Horticulture from Iowa State University, where she specialized in the sustainable, organic production of fruits and vegetables. She is also a master beekeeper and owns an Iowa fruit farm. Her husband works for Monsanto on Maui.

By way of further disclosure, each contributing writer was tasked by the editor—and no one else—to provide their respective articles. They received no payment.

What sets these women — and their blogs — apart is their fidelity to the facts, coupled with a temperate disposition. They are equally decent, pesky and fearless. I suspect that when historians revisit Kauai's 2013-14 GMO debate some day, they will learn as much from reading Joan Conrow's blog as all other Hawai'i print media combined.

One other bit of good news warrants mention. As the lava flow from the Pu'u O'o crater bears down on the town of Pahoa, Mark Kimura, a visiting geographer at the University of Hawai'i at Hilo, saw

fit to assemble some key demographic information in easy-to-understand graphics to help everyone understand the impacts of lava inundation for the nearly 10,000 residents of Lower Puna. Some of Mark's data is presented in this issue — another job well done by another self-starter.

Call it *lōkahi* — working together. It's something we often do best when faced with a presenting crisis.

And that's the good news wrap. Not bad, eh? ■

— Rory Flynn



Green Point Nurseries

P.O. Box 4400, Hilo, Hawai'i 96720

Tel 808.959.3535 • Fax 808.959.7780

Email gpn@greenpointnursery.com



*floral splendor
with imagination*

Visit us: www.greenpointnursery.com

Subscribe and advertise with us

To subscribe —

We make this easy, in an old-fashioned kind of way. You can call us at 808-640-8027 to speak with our editor, Rory Flynn, or email him at farmersandfriendseditor@gmail.com. Supply us with your name, home or business mailing address, phone (work and/or cell), and your email address. We'll email you an invoice for your records. When you receive it, write a check payable to Farmers & Friends in the amount of \$41.67 (general excise tax included) for your annual subscription. Mail it to Farmers and Friends, P.O. Box 6525, Kamuela, HI 96743. That's it.

We're an e-publication. On the 1st of the month, we will email you your monthly edition of Farmers & Friends in easy-to-read PDF format. We're digital and paperless for a reason. Besides being kind to trees, we can offer unlimited color and affordable advertising for small businesses and family farmers. We can also provide web site links in a PDF file. It's about smart connectivity – giving you with the most information and best presentation at the lowest possible cost.

To advertise —

To place an annual ad (12 issues) in Farmers & Friends, call us (808-640-8027) or email us at farmersandfriendseditor@gmail.com. All annual display advertisers receive one free complimentary subscription to Farmers & Friends. Our ad specs are easy: email us a jpeg or PDF of your ad. Our ad sizes and rates are as follows:

Ad Size	Annual Rate w/Tax
Business card or 2" x 2" square	\$150.00 \$156.25
2" x 3 ½" vertical display	\$200.00 \$208.33
3" x 4" horizontal or 3" x 5" vertical display	\$250.00 \$260.42
3 ½" x 7" vertical display	\$300.00 \$312.50
Half-page vertical	\$400.00 \$416.66
Full-page horizontal	\$600.00 \$625.00
Classifieds (monthly only): \$5.21 for 3 lines (30 words maximum)	

Going Online

In tandem with our first issue in August, *Farmers & Friends* went online with a website. You can find us at www.farmersandfriends.org.

We posted our entire August issue online to acquaint readers with the scope of our news and commentary. As we are a subscriber-based publication, however, we can offer only limited content online. Find it in our "free reads" link to archived articles.

We welcome readers to check in with our website and link others to it. We're working to build a friendly audience of readers across the islands. As we grow, we'll explore more online content and social media options. Stay tuned and mahalo! ■



digital
positive
paperless
informative

where your ad belongs

Proud members of Hawai'i's agricultural community



Calavo Growers Inc., 16-664 Milo Street, Keaau, Hawai'i 96749 • Tel 808.982.8880

***Naturally
Grass-Fed.***

***Nothing
Artificial.***



**Hawaii
Big Island Beef**

**PREMIUM
GRASS-FED**



***Phone: 808-776-1109
or Toll Free: 1-866-449-BEEF***

Congresswoman Tulsi Gabbard weighs in on Keauhou Aquifer

September 22, 2014 — In a letter submitted today to the State Commission on Water Resource Management, Congresswoman Tulsi Gabbard (2nd District) voiced opposition to the petition of the National Park Service to designate the Keauhou Aquifer as a Water Management Area.

"There is no scientific evidence supporting the need for a designation and numerous stakeholder organizations and individuals in the community strongly oppose it," Gabbard wrote. "While we must always be cognizant of our use and preservation of natural resources, we cannot destabilize a community's planned growth and access to water without clear scientific evidence that such action is necessary. I share the community's concerns about the long-term impact that the designation of a Water Management area for the Keauhou Aquifer System would have on the West Hawaii community."

The National Park Service petition is opposed by the County of Hawai'i Department of Water Supply. In July, Congresswoman Colleen Hanabusa told the Park Service its petition was based on an incomplete picture of the island's geohydrology.

In August, Marc Botticelli, P.E., President of the Kona-Kohala Chapter of the Hawai'i Society of Professional Engineers, wrote: "All scientific evidence suggests that there have been no negative impacts to the aquifer as a result of this draw. Fresh water is a public resource that all residents are entitled to. Designating the Keauhou aquifer would only serve to wrest control of that resource from the many to the very few. The Kailua-Kona Chapter of the Hawai'i Society of Professional Engineers feels that this petition to designate is at the very least, terribly premature." ■

Groundbreaking ceremony set for the Thirty Meter Telescope

A groundbreaking ceremony and Hawaiian blessing for the \$1.3 billion Thirty Meter Telescope (TMT) International Observatory is scheduled for October 7th. Governor Abercrombie and Hawai'i County Mayor Billy Kenoi will deliver remarks.

Construction of the long-awaited telescope will begin later this year. An international consortium of astronomers will begin using the telescope in 2022.



Graphic representation of the Thirty Meter Telescope
[Image: Courtesy TMT Observatory Corporation]

TMT, slated to be the world's largest optical telescope, will allow astronomers to observe galaxies forming at the far reaches of the observable universe near the beginning of time, some 13 billion light years from Earth.

In February, the University of Hawai'i Board of Regents on approved a plan to sublease 8.7 acres on the northern plateau of the summit of Mauna Kea for construction of TMT. The university leases state land at the summit of Mauna Kea for a dozen telescopes in all. ■

Kohala Center awarded \$2.1M grant for ag business accelerator

September 19, 2014 — Members of Hawai'i's Congressional delegation today announced that the U.S. Economic Development Administration (EDA) had awarded a \$2,178,250 grant to the Kohala Center on the Big Island for design and construction of an agricultural business accelerator for small farmers in North Hawai'i.

Congresswoman Tulsi Gabbard said the project is expected to save 39 current jobs, create 28 new jobs, and generate greater food self-reliance and sustainability.

The federal funds will enable the Kohala Center to build a commercial and demonstration kitchen and assist food producers to make value-added condiments, lotions, fiber, perfumes, organic salad mixes and specialty coffees. The accelerator will also help farmers develop business plans and financial and marketing strategies.

Earlier this year, the Kohala Center announced that it had received the donation of a 60-acre ranch property on Kohala Mountain Road, where it will develop a campus to house its research, educational and conservation programs beginning in 2015. ■



Wong's Meat Market, Ltd.
 1200 Sand Island Parkway
 Honolulu, Hawai'i 96819
 Tel: (808) 845-5900
 Fax: (808) 845-9600
info@wongsmeatmarket.com

Wong's Meat is the Right Choice!

U.H. College of Tropical Agriculture receives record-high gifts in 2014



NEWS RELEASE

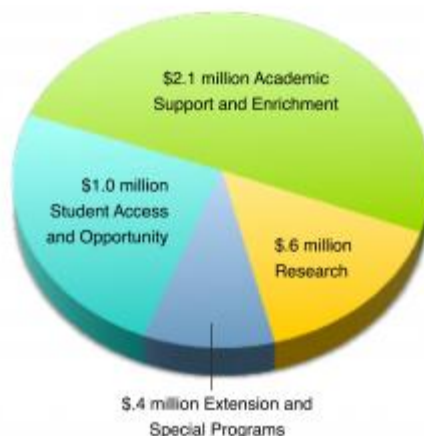
September 12, 2014 — Donations to the University of Hawai'i at Mānoa's College of Tropical Agriculture and Human Resources reached a record high in the 2014 fiscal year, exceeding \$4 million for the first time in the college's 107-year history.

"Private giving is an important resource that enhances CTAHR's ability to address Hawai'i's need for sustainable communities," said Dean Maria Gallo. "It also expresses our benefactors' confidence in our ability to deliver on relevant themes: human, plant and animal health; urban and natural ecosystems; and family and consumer vitality."

A strong response by CTAHR alumni helped fuel a 40 percent increase in the annual giving campaign managed by the University of Hawai'i Foundation. Additional gifts came from CTAHR faculty and staff members, community supporters and nonprofit organizations. Donations ranged from small, individual contributions to specific programs to a major anonymous gift supporting scholarships and special initiatives.

Half of the gifts, nearly \$2.1 million, were designated for academic support and enrichment, including gifts from private foundations and businesses. Another 25 percent of gift dollars, more than \$1 million, was designated for student opportunity and access, much of it in endowed funds that will support scholarships and fellowships in perpetuity. The remainder included support for research, extension and other college activities, including the UH Honeybee Project, bioenergy research, and the GoFarm program, which trains people interested in becoming food producers.

Donations to the College of Tropical Agriculture and Human Resources, FY2014



"CTAHR's six academic departments have developed strong, productive partnerships with their constituencies, and private giving reflects that across the college," said Leslie Lewis, CTAHR development officer.

"Dr. Gallo is a tireless advocate for the college. She encourages the use of innovative funding strategies such as online crowd sourcing and, most

importantly, meets nearly weekly with community groups and prospective donors to explain the people, place and promise of CTAHR."

The strong year puts CTAHR ahead of pace on a seven-year, \$15 million fundraising goal. Fundraising priorities this year include expanding STEM education for Hawai'i's keiki, pursuing initiatives in safe and sustainable agriculture, broadening efforts in public issues education for agriculture and natural resources, extending the Children's Healthy Living program, and promoting community partnerships.

To donate to CTAHR, contact Leslie Lewis at 956-9702 or leslie.lewis@uhfoundation.org. ■

Agro Resources, Inc.

Derrick Nishimura
GENERAL MANAGER / RME

derrick@agroresources.com
Cell 808-557-2635



Specializing in:

- **Agribusiness Management**
- **Macadamia Nuts • Coffee**
- **Tropical Fruits • Forestry**
- **Landscape Contractor**

License #C-30469
P.O. Box 2933
Kamuela, Hawaii 96743

Cynthia Reeves begins position as Maui County CTAHR administrator



College of Tropical Agriculture
and Human Resources

NEWS RELEASE

September 25, 2014 — Cynthia Reeves has begun her duties as Maui County administrator for U.H. Mānoa's College of Tropical Agriculture and Human Resources (CTAHR). Taking over on September 22nd for former interim Maui County administrator Robin Shimabuku, Dr. Reeves will coordinate all CTAHR research, community outreach and instruction for Maui County.

She earned her MPH in Nutrition from U.H. Mānoa and worked as an associate director for Honolulu's March of Dimes program, before earning her Ph.D. in Community and International Nutrition from the University of California-Davis. Previously, since 2011, she served as the national program leader in Nutrition and Health for the USDA's National Institute of Food and Agriculture (NIFA), where she provided strategic planning, policy analysis and leadership for Extension (community outreach) staff and programs in all U.S. states and territories. Earlier, she was NIFA's director of Nutrition and Family Sciences.

She has experience working in the non-profit sector

and in academia at the University of Maryland, College Park and University of Otago in New Zealand.

CTAHR's research and outreach in Maui County are focused in the college's Cooperative Extension offices and research stations: the Maui Agriculture Research Station, Haleakala Agriculture Research Station, Kula Agricultural Park, and Kahului Extension Office on Maui, and the Moloka'i Extension Office and Moloka'i Applied Research Farm.

Important programs include watershed conservation; battling invasive species; training new farmers on Moloka'i's Hawaiian Home Lands; teaching agricultural producers to raise honeybees as pollinators; growing macadamias and koa; and researching best practices for cultivating protea and other ornamentals, taro, cabbage and tomato.



Cynthia Reeves

Returning to Hawai'i was a strong draw in seeking this position, Dr. Reeves said. "I am incredibly excited to once again be working in this beautiful state, with UH Mānoa CTAHR, and this time around, in Maui County! ... I look forward to working with staff and faculty throughout Maui County and U.H. Mānoa, and to enhance and expand our Extension programming." ■

LAND FOR SALE. Eleven (11) acres of deep soil available for sale in Kurtistown. Property is zoned AG-5. Contact David Fukumoto. Tel: 966-7668.



W.H. Shipman Limited is a kama'aina family-owned company established in 1882. Grounded in island values, the Shipman family has long supported local agriculture, conservation and community planning. For serious, aspiring farmers, our lands in Puna offer:

- ✓ **strong infrastructure**
- ✓ **flexible lease terms**
- ✓ **affordable rental rates**
- ✓ **a simple application process**
- ✓ **varied parcel sizes available**
- ✓ **a variety of crop types supported**
- ✓ **close to Hilo airport and harbor**
- ✓ **vapor heat and e-beam facilities nearby**
- ✓ **close proximity to U.H. Hilo**
- ✓ **location in an Enterprise Zone**
- ✓ **approximately 130" of rain annually**
- ✓ **plenty of sunshine**

W.H. Shipman is an equal opportunity landowner. We welcome *all* farmers — conventional, organic and natural. Come see us and share your plan. Let's work together to start your farm.

W.H. Shipman, Limited
Tel: 966-9325 weekdays
www.whshipman.com

Kauai utility co-op dedicates 12MW solar power project



September 25, 2014 — A new \$40 million photovoltaic solar project –the largest in Hawai‘i – was dedicated last week on Kauai. The huge array of 45,360 solar panels, erected by SolarCity on 67 acres of Grove Farm land near the old Koloa mill, will generate up to 12 megawatts of electricity for the Kauai Island Utility Cooperative (KIUC).

“Bringing the Koloa project online is a huge step toward our goal of generating most of our electricity by using cheaper, cleaner renewable resources,” said David Bissell, president and CEO of KIUC. “This project brings the financial benefits of solar energy to all of our members, not just the ones who can afford to buy a rooftop solar system.”

The net cost of electricity generated by the Kōloa Solar Project will range between 10 cents and 13.5 cents per kilowatt hour, about half the cost of oil-fired generation, now at 23 cents per kilowatt hour.

According to KIUC, its daytime solar penetration is now the highest in the State of Hawai‘i, and one of the highest in the nation. By the end of 2014, KIUC expects renewable energy resources, including hydro-

power, to generate up to 30% of Kauai’s electricity.

At noon on August 31st, the new Kōloa solar array helped KIUC furnish 50.8% of customer electricity use from photovoltaic systems alone. According to co-op officials, that amount of renewable energy generation has not happened on Kauai since the late 1980s, when the sugar plantations burned bagasse to generate power.

The new Kōloa Solar Project will generate enough electricity to power about 4,000 homes. KIUC said it will reduce annual oil consumption by 1.7 million gallons and CO₂ emissions by 18,000 tons.



David Bissell, KIUC, and Congresswoman Tulsi Gabbard at the September 25th dedication ceremony of the Kōloa Solar Project on Kauai. [Photos: KIUC; Office of Congresswoman Gabbard]

At the dedication ceremony, Congresswoman Tulsi Gabbard commended KIUC CEO David Bissell and SolarCity co-founder Peter Rive for completing the solar farm on time—and on budget.

“This project is going to do so much to help with KIUC’s renewable energy goals, and will contribute tremendously to the state’s renewable energy goals,” she said. ■



we grow tomatoes



Beef tomatoes • Tomatoes-on the-vine
Cocktail tomatoes • Orange cocktail tomatoes
Hamakua sweets • Heirloom tomatoes

Tel: 981-0805 • Email: info@hamakuasprings.com
Visit us: www.hamakuasprings.com

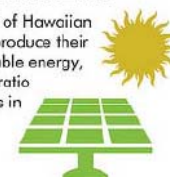
FACTOID BELOW

PROGRESS



18.4 PERCENT

The percent of Hawaiian farms that produce their own renewable energy, the highest ratio of any states in the nation.



www.agcensus.usda.gov
U.S. Department of Agriculture
National Agricultural Statistics Service

USDA 2012 CENSUS OF AGRICULTURE

Sources: 2012 Census of Agriculture, May 2014

REPORT

Kohala Center programs for aspiring farmers and students

September 8, 2014 — Two programs aimed at introducing high school students and aspiring farmers on Hawai'i Island to agricultural careers are seeking applicants for upcoming cohorts in October.

Ku I Ka Mana, a beginning farmer and rancher training program administered by The Kohala Center, is accepting applications from prospective students for its fourth cohort. The 30-session course begins on Friday, October 17 and is conducted in Honoka'a on Friday evenings from 5:30 to 8:30 p.m. and Saturday mornings from 9 a.m. to noon. More information and applications are available online at <http://kohalacenter.org/farmertraining/application> or by calling The Kohala Center at 808-887-6411. The deadline to apply is Friday, October 10.

Although no previous farming experience is required, preference is given to U.S. veterans and to applicants who have taken steps to become agricultural producers, but would benefit from a comprehensive, hands-on curriculum. The course covers a wide range of critical subject areas such as soil management, irrigation, composting, cover cropping, and pest management, as well as the "business" side of farming—marketing, accounting, budgeting, and record-keeping. Students who successfully complete the course and create viable farm and business plans will be able to work with program staff to obtain leased farmland, should they not already have land on which to farm or ranch.

Ku I Ka Mana represents a unique partnership between The Kohala Center, local government agencies, academic institutions, and leading agricultural professionals. The program is funded primarily by an initiative of the U.S. Department of Agriculture that supports new farmer training and education programs in 27 states. The County of Hawai'i provided matching funds that enabled The Kohala Center to secure the USDA grant.

Open to Hawai'i Island high school students and

recent graduates, the fourth cohort of The Center's weeklong High School Agriculture Internship Program will run from 8 a.m. to 5 p.m. daily from October 6 through 10. Additional information and application materials are available online at <http://kohalacenter.org/farmertraining/internships> or by calling The Center. The deadline to apply is Wednesday, October 1st.

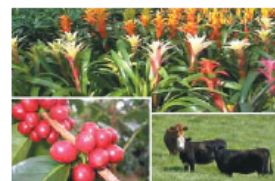
With the 'aina serving as their classroom, interns are introduced to various aspects of agriculture in Hawai'i through site visits to Waipi'o, Kohala, Hamakua, Kona, and Hilo. Participants gain hands-on experience in sustainable agriculture, learn about island food systems, and receive a \$125 stipend upon completion. The High School Agriculture Internship Program is co-sponsored by Kamehameha Schools' 'Aina Ulu Program.

"These programs were designed in an effort to move Hawai'i towards greater food self-reliance by training and motivating the next generation of local food producers," said Derrick Kiyabu, director of The Kohala Center's Ku I Ka Mana Beginning Farmer-Rancher Development Program. ■



Farmers, Ranchers, Fishermen and Country Home Owners:

NEED AN AGRICULTURAL LOAN?



To purchase open land, build a dwelling, operating loans, line of credit, equipment purchase, truck or automobile purchase, livestock purchase, refinance a mortgage or agreement of sale, etc.

We Offer: Long term loans, short term loans, competitive interest rate programs, flexible repayment schedules, excellent loan servicing options, etc.

We also have programs for Young, Beginning, Small and Minority Farmers.

Registered with Nationwide Mortgage Licensing System — NMLS ID# 613630

CALL ONE OF OUR LOAN OFFICERS AT:

OAHU OFFICE • 99-860 Iwaena St., Suite A, Aiea, HI 96701

Ph. 808.836.8009 • Fax 808.836.8610 • www.hawaiiifarmcredit.com

HILO OFFICE • 988 Kinoole St., Hilo, HI 96720 • Ph. 808.961.3708

Fax 808.961.5494 • FROM: Neighbor Islands, Toll Free 1.800.894.4996



FARM CREDIT SERVICES
OF HAWAII, ACA

Federal Land Bank Association of Hawaii, FLCA
Hawaii Production Credit Association

FCS of Hawaii, ACA, is part of the Farm Credit System, a nationwide system of leading agricultural financial institutions which started in 1917. FCS of Hawaii, ACA has been doing business in Hawaii since 1966 through its subsidiary the Federal Land Bank Association of Hawaii, FLCA. The FCS of Hawaii, ACA is not a Federal Agency of the Federal Government.



www.bigislandtoyota.com

2014 **TACOMA**



**Built for
action**



**bigisland
toyota.com**

HILO: 935-2920
811 Kanoelehua Ave.

KONA: 329-8517
74-5504 Kaiwi St.

Twin Bridge Farms: a model for farmers

By Joan Namkoong

Seizing opportunities, taking things a step at a time, learning from experience and creating an organization that can be consistent and reliable – these are some of the attributes of a successful entrepreneur in business and agriculture. It's no easy task: mother nature and the variability of the marketplace can often deter a farmer's journey to success.

Two veteran farmers in Hawai'i who survived the demise of the sugar plantations and faced the challenge of diversified agriculture with fortitude are Milton Agader and Al Medrano, partners in Twin Bridge Farms in Waialua on Oahu. Both men worked together for Waialua Sugar Mill for a combined 45 years and dealt with its closing in 1996.

Milton Agader grew up in Lihue, Kauai where his immigrant father worked on the sugar plantation. After serving in the military, including a tour of Vietnam, Agader returned to Hawaii after eight years on the mainland. He settled in Waialua where he worked for Waialua Sugar Mill, a division of Dole Food Company, owned by Castle and Cooke. "I did everything except research," remembered Agader, who worked there for 32 years.

Al Medrano's career path was similar. His parents, too, were immigrants and he grew up in Waialua. He worked in the field for Waialua Sugar Mill for 23 years alongside Agader and continued on



Al Medrano (left) and Milton Agader of Twin Bridge Farms, Waialua, Oahu

with Dole Foods when the plantation shut down. Over the years, the two became friends and both continued to work for Dole after the 1996 plantation closing. Papaya, hay, grapefruit, mango and bird of paradise were some of the crops they helped plant, none of which became viable alternatives to sugar.

As sugar operations began winding down in 1994, the two men knew that Dole was not going to be their employer for long. They jumped at the chance to get some of the land Dole was going to

lease to farmers and began farming part time on their own. Knowing the infrastructure of the area and the conditions of the land, they chose an area they hoped would be productive. With six acres between them, they began to study the effects of saline water on different asparagus varieties, based on research done by John McHugh at Hawaii Agriculture Research Center (HARC) and funding from a federal grant.

In the meantime, Agader and Medrano were approached by Dole to (continued next page)

become contract farmers for Pioneer Hi Bred International, who was establishing a seed corn research and production area in Waialua. Seeing this as a low risk opportunity, they took on the task. They were able to buy up some equipment from Dole and finally left Dole at the end of 2000.

Agader and Medrano proved themselves to be good partners for Pioneer which has 450 to 700 acres of its 2000 acres planted, allowing for crop rotations. They have since become potato contract farmers for universities in Canada, Idaho, Michigan, Minnesota, Wisconsin, Colorado and Montana, representing about 80 per cent of the potato seed produced in North America. Using about 100 acres of Pioneer lands as a rotation crop, they test the seeds for viruses in established varieties. It's a certification process and once the test results are logged, the potato crop makes its way into local supermarkets and farmers markets.

Agader and Medrano incorporated in 1998 as Twin Bridge Farms, named for the two rivers that meet on the makai side of two bridges at the entrance to Haleiwa town. They acquired a lease for 40 acres in Haleiwa from Kamehameha Schools and later another 100 acres from Dole.

They became the first commercial producer of asparagus in Hawaii, working after hours and on weekends to plant their crop. Agader and Medrano have provided island consumers with asparagus since 2001, at first timing their crop to complement the California asparagus season. Withholding water from the asparagus plant became the methodology to maintain dormancy; the application of water and fertilizer would induce spear growth.

Today, Twin Bridge Farms supplies up to 80,000 pounds of asparagus to island supermarkets and

restaurants, grown on 80 acres year round. Their asparagus is available at Foodland and Whole Foods and there is a waiting list for more. Top restaurants like Alan Wong's, MW, Top of Waikiki in Honolulu and Mama's Fish House on Maui serve Twin Bridge Farms' asparagus.

They employ two dozen people; they have a packing facility and certified commercial kitchen and a newly built office alongside. With a total of 300 acres the grow onions and tomatoes and an annual crop of sunflowers.



Fresh asparagus and pickled onions from Twin Bridge Farms

"Potatoes and onions provide a big window for harvest," explained Agader. "These crops can wait a little to be harvested, giving us flexibility so we can do the corn."

Agader and Medrano are not standing still. They're excited about plans to put up a retail farm stand right at the entrance to Haleiwa town, just alongside the sole traffic light in town. "We want to diversify; we don't want too many eggs in one basket," said Agader, noting that (continued next page)

Agro Resources, Inc.

Derrick Nishimura
GENERAL MANAGER / RME

derrick@agroresources.com
Cell 808-557-2635



Specializing in:

- *Agribusiness Management*
- *Macadamia Nuts • Coffee*
- *Tropical Fruits • Forestry*
- *Landscape Contractor*

License #C-30469

P.O. Box 2933
Kamuela, Hawaii 96743

BEI
HAWAII

WE SELL
**Fertilizers &
Agricultural
Chemicals**

OAHU	311 Pacific Street, Honolulu HI 96817 Sales: (808) 532-7401
KAUAI	1875 Haleukana Street, Lihue, HI 96766 Sales: (808) 241-7333
MAUI	300 Pakana Street, Wailuku, HI 96793 Sales: (808) 244-3761
HILO	430 Kekuanaoa Street, Hilo, HI 96720 Sales: (808) 933-7800
KAILUA-KONA	74-592A Hale Makai Place Kailua-Kona, HI 96740 Sales: (808) 329-8094

sometimes seed corn acreage can be left fallow from year to year.

Agader and Medrano are all about doing this project right: following codes, rules and regulations on farm structures and communicating with their Haleiwa neighbors. They've hired an architect even though this structure doesn't require a permit.

The plan is to sell their own farm produce and value added products to area residents as well as visitors passing through town. They already do pickled onions and hope to do more value added products with their tomatoes and asparagus.

Banana, avocado and mango trees have already been planted. Low acid pineapple, cantaloupe and watermelon are being tested. They're looking into aquaponics and are considering a 35 by 90 foot green house that might be used for leafy greens. What they don't grow they hope to outsource from nearby North Shore farmers.

Alongside the farm stand there will be an acre and a half organic farm plot. Kamehameha Schools is enthusiastically supporting the project.

Twin Bridge Farms is a family affair. Agader's son Derek is involved in the farm; his wife Lavina, a retired school teacher, is supportive at special events. Agader also owns the Brown Bottle, a liquor and convenience store in Waialua where fresh asparagus and pickled onions are sold.

Medrano's wife mans the weekly farmers' market booth in Waialua where she has a steady clientele for Twin Bridge Farms' products.

The partners are still frugal in their pursuits: Medrano can repair machinery, repurposes cast off materials and has constructed an office alongside the packing facility. They want to grow their farm stand slowly, step by step, and are carefully considering the various crops that might be grown to fill the community needs.

Taking advantage of a dynamic agricultural landscape has been their way of coping with change and Agader and Medrano have been successful in their pursuits. Trying to balance their crop schedules to insure their employees are busy throughout the year, Twin Bridge Farms has consistently provided quality products from their land. It has not been an easy ride but it has been fruitful and they continue to broaden their horizons. ■



Grilled Twin Bridge Farms' asparagus, topped with eggs, is a staple of the menu at MW Restaurant, Honolulu.

Want to start or grow your business?

Good. That's where we come in. The University of Hawai'i's Agribusiness Incubator Program (AIP) helps people in ag to start up, grow, and improve their bottom line.

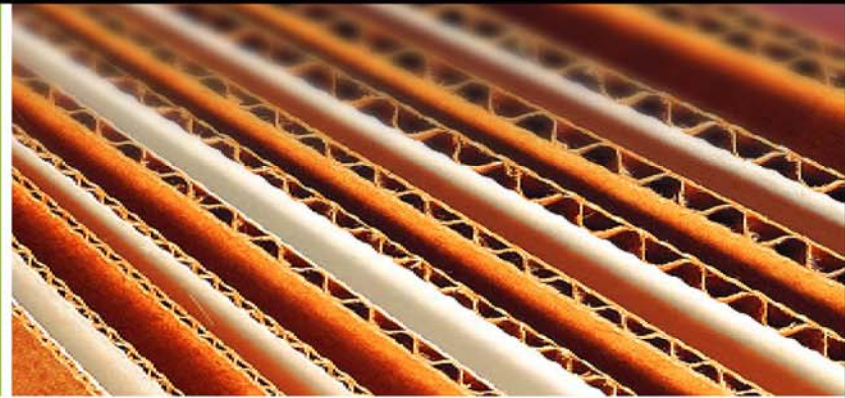
AIP serves all islands with business planning, marketing and financial analysis, and other guidance designed to launch agricultural businesses and products, lower costs, and increase sales.

Contact us/apply at: 808.956.3530
<http://aip.hawaii.edu>
www.facebook.com/aiphawaii
agincubator@ctahr.hawaii.edu



Innovation

We are always on the cutting edge of innovative packaging materials and designs that effectively protect and sell your product.



Local

Locally produced for local use. Supporting local business success by providing the only full service corrugated packaging manufacturing in the state of Hawai'i.

Commitment

Our 'Ohana proudly support the sustainability of Hawai'i's Agriculture Industry with quality products and value-added services.



RENGO PACKAGING, INC. 91-170 Malakole Street | Kapolei, Hawaii 96707
Ph: 080-484-5818 | Fax: 808-484-5821 | Website: www.rengopackaging.com



Q&A with Jerry Ornellas



By Joan Conrow

A lifelong Kauai farmer, Jerry Ornellas was introduced to the challenges and rewards of agriculture on his father's dairy farm. He still farms on family land in Kapaa Homesteads, growing lychee and longan, and collecting taro varieties.

As a veteran advocate for farmers, Ornellas has successfully navigated the disparate landscapes of commercial farm and Hawai'i politics. He serves as the Kauai representative on the state Board of Agriculture, and has long held a leadership role in Kauai Farm Bureau, where he is currently vice president. A tireless champion for the maintenance of irrigation systems that serve agriculture, he's on the board of the East Kauai Water Users Cooperative. He is also a popular pundit at conferences and events. Jerry's message is typically underscored by his enduring optimism for the future of agriculture in Hawai'i.

Kauai journalist and blogger Joan Conrow caught up with Jerry pau lychee season to conduct this interview for Farmers & Friends.



CONROW: *We often hear a lot of doom and gloom about the state of ag in Hawaii. Why are you optimistic?*

ORNELLAS: We've got such a gap between what we consume and what we produce here in Hawai'i. That's a good jumping off point. We've got room to grow in replacing those imports. If we can replace even 10 percent over 20 years, that would be huge for Hawai'i. We're spending \$3.3 billion annually on imported food. That's on par with what we import for energy. I'm a systems thinker—and energy is directly related to ag costs.

There's also an argument on 'can we feed ourselves?' and I think we can. If Hawaiians could do it without modern tools, then I believe we can do it. No question we're going to have to change our diets and that could be a good thing. We can start by replacing wheat and corn with sweet potatoes, taro, breadfruit and possibly soybeans, to produce tofu, a good protein source. It's a really tall order, because people don't like to change. But from a theoretical viewpoint, it's do-able. We have the resources to do it, as far as land and water. Whether we have the political will is another story. *(continued next page)*

CONROW: *Are you seeing evidence of that political will?*

ORNELLAS: Well, on Oahu, we see the state buying the Galbraith lands and taking a close look at the Dole lands. We need to do that on the Neighbor Islands and see if we can secure large contiguous parcels. There's nothing wrong with private ownership, but for private owners who wants to sell, we can look at buying them.

CONROW: *What should we be focusing on in agriculture right now?*

ORNELLAS: We waste a lot of water, both agricultural and municipal. Our systems for transporting water are antiquated. I can see us moving away from open ditches into more piped irrigation. It's an expensive proposition, but as water gets more expensive, it'll be cost-effective. It's a thorny issue politically because most water systems are subsidized somehow, and subsidizing business is a hard sell to an urban public. But if you're producing food, that's another story. I'm not sure farmers can afford the true cost of water. We also have to take into consideration what the future holds, with climate change. A key is returning our agriculture to profitability and that will attract the young people. Until that happens, we're going to struggle.

CONROW: *How can farmers get money to start or expand an operation today?*

ORNELLAS: Most banks are not inclined to finance agricultural operations simply because of the risk and the rate of return. But there are alternative monies — federal loans and HDOA loans to established and first-time farmers. I don't see capital as a really huge hurdle. The department [of Agriculture] has a pretty well-functioning revolving loan account.

CONROW: *If money isn't a problem, what is limiting agriculture in Hawaii?*

ORNELLAS: Marketing is a big hurdle; creating demand for local products is really where we need to focus our energy. A good example is breadfruit. It's a great product, but very little demand. Even chefs aren't using it. I always prefer the private initiative, but farmers don't have resources and expertise. They're price-takers, not price-makers, so marketing may need to be picked up by a state initiative. We need to start by identifying demand for local markets. We're going to saturate the farmers' markets at some point, and it's a major source of income for many farmers. Eventually we're going to have to move into the grocery stores. It's a matter of convincing the consumers that our products are superior, and they are. They're fresher, and they're local. Milk is a perfect example. Do you want something shipped from California, or produced locally?

(continued on next page)



W. H. Shipman is a 132-year old, family-owned land management company headquartered in Kea'au on the Island of Hawai'i. Today, 5,000 acres of our land are in agricultural production.



Banana
Papaya
Avocado
Citrus / Tropical fruit
Ornamentals
Vegetables
Macnut
Guava
Noni
Biofuels
Pasture

Over 125 farmers license land from W. H. Shipman, providing jobs for over 900 employees and staff. Our licensees include many independent farmers with diverse crops. All farmers are welcome – conventional, organic and natural.

W. H. Shipman offers affordable lease rate and a variety of parcel sizes. Our land receives 130" of rainfall annually. We're close to the airport, the port of Hilo, and the U.H. College of Tropical Agriculture Extension Service.

If you're looking for a place to start a career in agriculture, visit us at www.whshipman.com or call us weekdays at 966-9325.

**Come to Kea'au.
It's a great place to farm.**

CONROW: *You've been a Kauai farmer for more than half a century, which gives you a really good historical perspective. What are some of the major shifts that influenced modern agriculture in Hawai'i, aside from the decline of the sugar and pineapple plantations?*

ORNELLAS: The major shift came in the late '50s, early '60s, with the advent of refrigerated containerized cargo and jet travel. In the past, Hawai'i only shipped in commodities like wheat, rice and animal food. But with refrigerated cargo, we could get California produce to Hawai'i relatively quickly and inexpensively, so we lost our competitive edge. Jet travel led to mass tourism in Hawai'i, which created a job market for farmers and agricultural workers. It's often easier to work in hotels than fields. And with the rise of tourism, we saw a huge rise in construction and other sectors, so labor became a problem. Those are still issues we deal with today.

CONROW: *People produced most of their own food back in the day. Do you see a resurgence of that?*

ORNELLAS: When you had time to do that it was great. When you work two jobs, how are you going to have time to raise a nice garden, a few pigs, chicken, cattle? In the rural areas, they still do that. But people now spend most of their time at work. We struggle to define ourselves in Hawai'i as rural versus urban, the townies versus the country guys.

CONROW: *So is the future of ag on Oahu, the Neighbor Islands or both?*

ORNELLAS: Oahu is ramping up its ag production, but also losing its ag lands. Traditionally, the model was the Neighbor Islands, being more rural, would grow the food and ship it to Oahu. But no county is more dependent on tourism than Kauai. That wasn't the case even a few decades ago, when ag was the driver. I still see the potential of Neighbor Islands feeding Oahu, but that's not what's happening. The markets are on Oahu, so if you can produce there, you have a tremendous competitive advantage over someone who is shipping in. It's the same with imported inputs. Oahu can get them cheaper because they're shipped there first. Oahu also has a large immigrant population and many are involved in ag. I don't see it as Oahu versus the Neighbor Islands, but Oahu does have advantages.

Farmers for the most part are apolitical. They just want to farm. They want to be left alone. They're not activists... The newcomers have changed the political landscape. They often have an idealized vision of what ag should be, but they have a shallow understanding of how ag works. And once they get here, they don't want anyone else to come! So just like that influx is driving up the cost of housing, it's driving up the cost of doing ag.

CONROW: *What impact is gentrification — turning ag land into “gentleman's estates” — having on farming?*

ORNELLAS: It obviously has a huge impact on local ag. It's driving up the cost of land for one thing, and it's not always compatible. Everyone wants to live in the country, but not necessarily next to a farmer. It's changing the complexion of our rural areas, and not in a good way. These people often have a very idealized view of what living in the country is all about. The reality is a lot different. Having farms embedded in our community is going to be a big issue. It already is, with the call for setbacks and buffer zones. For the smaller farmers, that's not do-able. Again, this goes back to political will and proper land management.

CONROW: *You always say you're happiest on the farm. Why have you gotten involved in the political aspects of farming?*

ORNELLAS: It was a matter of survival. Farmers for the most part are apolitical. They just want to farm. They want to be left alone. They're not activists. If their

livelihood is threatened, some are going to be more active. Here's the real sea change: In 1960, 70 percent of the population was people born in Hawai'i. Today it's about 50 percent. The newcomers have changed the political landscape. They often have an idealized vision of what ag should be, but they have a shallow understanding of how ag works. And once they get here, they don't want anyone else to come! So just like that influx is driving up the cost of housing, it's driving up the cost of doing ag.

CONROW: *As Kauai Farm Bureau president, speaking in support of all ag, you took a lot of heat during the debate over Bill 2491, the island's pesticide/GMO regulatory law that was overturned by the courts. What was that like?*

ORNELLAS: I've never seen anything like it in all my years of politics on Kauai. I've never seen that level of polarization. How did it go from six people holding signs in front of Safeway to 2,000 people marching on Rice Street two years later? How did that happen? I suspect social media had a lot to do with it. People with strong agendas who will do almost anything to see those move forward. Political apathy on the part of the public also had a lot to do

(continued next page)

with it, not being well-informed enough to counter some of the claims.

CONROW: *How did you deal with the personal attacks?*

ORNELLAS: It's discouraging to be cast as the bad guy. Farmers always have the image of themselves as the good guys, because they produce food for people. It's discouraging to be accused of not caring about the land, the water, the community, or what we do.

CONROW: *How are farmers responding to the attacks on their activities and operations?*

ORNELLAS: Some have pulled back and some want to set the record straight about this is what we do in the community because so many people lack the historical perspective of how ag has shaped Hawai'i economically and socially. It was ag that brought us to this dance and now I'm not sure we even have a partner.

CONROW: *How do you see Hawai'i moving past the polarization that has developed around GMOs and conventional farming?*

ORNELLAS: It depends on how long the public's attention will be focused on these issues. The persistence of this particular issue has surprised a lot of people. Generally we move on, but that's not the case here. We're so polarized now, I don't know how we're going to heal. Once you get into court, you lose a lot of your options. When it's in the hands of the courts and the lawmakers, it adds to the complexities of resolving it. Then it's no longer taking place on the community level. It becomes a larger playing field.

CONROW: *Have you given up on the political process, or decided to retreat?*

ORNELLAS: I'm a farmer and that's all I ever wanted to do. A lot of this is a huge distraction and it's taking me away from doing what I love to do, and that's farm. As far as my role going forward, I don't know. I'd love to get back to the farm. Meetings, hearings, as important as those are, that's not my mission in life, or what I even feel comfortable with. A lot of farmers feel that way. My obligations are to my family and my land. Those are my priorities. If there's time left over for politics, that's okay.

CONROW: *Should other farmers step up to the political plate?*

ORNELLAS: We definitely need farmers to be engaged and involved. But it's hard

saying that because I sometimes feel that I need to disengage and get back to my farm. It's basically an individual choice. All politics are local, but we're dealing with global forces, so it's a little more complex than it used to be. At age 65, I'm kind of looking over my shoulder and saying, where are the guys that are gonna take our place? We've got to get the next generation involved and on the land.

CONROW: *Do you see that happening?*

ORNELLAS: No.

CONROW: *Yet you're still optimistic.*

ORNELLAS: We fed ourselves before and we can do it again. But is that our goal? To feed ourselves? Or to have a healthy robust agricultural sector and support one another? Ironically, we had a lot more diversified ag and even rice exports when we had all the sugar cane and pine. Why are we struggling today? There are a lot of unanswered questions.

CONROW: *So where to from here? Where do we start?*

ORNELLAS: We need to start in our own backyards and see what we can do there. ■



Jerry Ornellas grows longan, lychee and ulu on his 15-acre farm at Kapa'a, Kauai. Visit his farm at <http://www.kauaigrown.org/jerrys-farm>.

GMO Warriors:

Seed company workers speak out on a bill to ban their jobs

By Rhonda Stoltzfus

"GMO Warrior." That is how David Makaiwi of Molokai describes himself nowadays. It's an identity thrust upon him by unwanted political circumstance. On November 4th, a county ballot initiative proposes to ban the growth, testing or cultivation of genetically modified or engineered crops throughout Maui County, including Molokai.

The proposed moratorium would extend until such time as an environmental and public health study and the Maui County Council determine that GMO crops and field operations are safe and harmless. It is the first initiative ever attempted in Maui County, where the initiative power was granted through its charter in 1983, and its implications are huge.

For David Makaiwi, the moratorium, if adopted, could render him a man without a job.

Makaiwi now finds himself defending modern agriculture for the next generation, to assure his children access to careers that will allow them to stay on the island he loves. He is a dedicated husband, father, and employee. He's been with Monsanto for nearly 15 years. Many of his co-workers have been with the company for decades. As the November vote looms, he is a man baffled by his predicament. "The seed companies have been around for more than 50 years," he notes.

Monsanto gave David Makaiwi a second chance in life. Growing up on 40 (continued next page)



David Makaiwi on the job



Florence Cuaresma and Mildred Basilio



Monsanto cornfield
on Molokai

acres of Homestead land taught him how difficult a farming life can be. It required long hours and hard work. He didn't care for it as a child and struck out on his own. He ended up having trouble with the law, drugs, and even spent time in jail. It was a wake-up call. With the support of his wife, who stuck by him through the hard times, he chose to put the past behind him.

"Now this is where Monsanto comes in to our life, because all I knew was the farm life," he recalls "Where better to go [than] with a farming company?"

David started his career in the seed industry as a pollinator. He earned his pesticide applicator's license and worked in that capacity for seven years before becoming the Field Operations Lead.

"I didn't pay attention too much to activism," he says, "but now that's all you hear is, 'GMO this and GMO that'. Now it's time to protect my job... Even if I hated to work hard on the homestead, I came back to a modern way of farming through Monsanto and with all that is going on with the issues over GMOs, I have to defend it for my next generations that will come after me."

The homestead lands that David grew up on face a major water cost increase if the GMO farming ban is voted into law. The revenue of the Molokai Irrigation System (MIS) stands to take a direct hit if the seed companies can no longer do business on the island. Currently, homesteaders get 2/3 of the water rights based upon actual need, but provide only 20% of the revenue for MIS. Commercial use of MIS supplements that by paying the other 80%. Non-homesteaders are also the first to have to cut back water use in a drought situation. If Mycogen and Monsanto are no longer available to help subsidize the cost of the irrigation system, homesteaders may find their wallets pinched by an increase in water costs.

International science organizations that have endorsed the safety of crop biotechnology

- **World Health Organization**
- **American Medical Association**
- **The National Academy of Sciences**
- **The European Commission**
- **The Royal Society of Medicine**
- **The French Academy of Science**
- **American Association for the Advancement of Science**
- **Food Standards Australia and New Zealand**
- **Union of German Academies of Sciences and Humanities**



Homesteaders aren't the only ones facing financial problems. The businesses of Molokai see the seriousness of the situation ahead. Rob Stephenson, President of the Molokai Chamber of Commerce, is well aware of the dire future presented. "We just visited Ed Wond of Napa Auto Parts," Stephenson said. "Some 30% or better of his revenue comes directly from the two seed companies." Mark Wond of Napa elaborated, "Oh, it would drastically affect us. It would affect our whole island. Every vendor on the island would be hurt by this."

Dawn Bicoy, Community Affairs Manager of Monsanto Molokai, ran some rough calculations on how jeopardizing 250 jobs on the island would affect gas stations, just one sector of the economy. She concluded: "Two hundred fifty people, say, with an average gas purchase of \$100 weekly (gas is currently \$5.99/gallon) times 52 weeks amounts to over \$1M a year in lost sales at our gas stations, and on a small island with a small economy, this is just

one example of the severity of the impact."

Rob Stephenson feels it isn't just businesses that will suffer, but schools and social services as well. Families may feel the need to leave the island to find jobs. "If they take their families, school enrollment drops," he says. "School enrollment drops and the money allotted for the schools goes down. At what threshold can the public schools provide a proper and adequate education based upon the lack of funding?"

Education is an important part of life in the Hawaiian islands — from the public school system to the University of Hawaii to the learning gained from *kupuna*. Judson Laird, a Monsanto nursery supervisor, turned his passion for agriculture into a free education. It has given him a global perspective on what his job entails. "If Monsanto is pushed off this island," he says, "it will affect people here and around the globe. This company discovers more productive ways to grow healthy crops from the (continued next page)

rich, fertile soils in Iowa to the hard-baked lands of South Africa. Monsanto seeds survive droughts and hardships to feed multitudes. For me personally, I will lose a job I feel has allowed me to impact the world for good, and helped me to ease the suffering of many people."

Monsanto employee policy allows individuals with aspirations of attending college in an agricultural field to get their degree on the company's dime. Judson was encouraged to enroll and is now taking classes at UH. If the ballot initiative is adopted, not only would Judson lose his source of income, he would lose opportunity to further his education. When asked about what worries him should the initiative pass, he showed equal concern for people around the world. "I hope the voters of Maui County will examine the facts and judge what is best for this island," he said, "and the many people around the globe who depend on the seeds grown here."

Crisian Velasco shares Judson's deep concern for neighbors, and a passion for education. Her mom and brother both work with her at Monsanto on Maui. The company has been part of her family's life for 14 years. When she graduated from Maui High, she knew the finances were not available to allow her to work toward her longstanding dream of becoming a Registered Nurse. It wasn't until she followed her mother's footsteps and found employment with a seed company that she realized she made enough money to see to her needs, as well as begin college.

She has completed three years of her nursing program and has two to go. Not only is she able to do this for herself, but for her younger siblings as well. "Every paycheck, I put aside just enough for my 16 year-old sister to go to school, because I don't want her to have to go through what my siblings and

I went through, where she so much wants to continue school and wants to achieve that goal but can't because of finances."

Multiple generations at one company are common in Hawaii. Mildred Basilio and Florence Cuaresma have desks near each other in an office at the Mokulele site on Maui. They share more than office space, however. Both have multiple generations of their families working with Monsanto, and both value the benefits that come with their jobs. Florence comments, "It's hard to find a company like Monsanto that gives the highest priority to the safety of their employees and with very good benefits!"

Mildred's parents worked these fields for 18 years and have since retired to enjoy time together. She and her husband recently were able to purchase their first home. Her paycheck contributes a lot to paying the bills. "This simple house I dreamed of with my husband and my son may be lost all of a sudden. It's very painful for me to think that our entire earnings through our hard work will be lost for nothing."

Jobs Under Attack

For many decades, good jobs on Molokai have been scarce—and precious. Potentially jobless Monsanto employees cannot easily convert to conventional or organic farming.

Dawn Bicoy has strong feelings on the idea of unemployed seed industry personnel having fewer options when it comes to how they farm. "If you could (farm this way), it would already be happening, it would already be in place and be done. The fact that it isn't is probably a good indicator that it's not as easy as one would simply say that it is." Rob Stephenson agrees. "You don't

need to destroy one industry to implement your business," he says. "Just do it. That tells me it's disingenuous, because if that's your goal, your goal should not rely on the destruction of something else to come to fruition."

According to the wording of the bill, the ramifications of the ban go far beyond just a loss of jobs, it could potentially land county residents in prison. Home owners that plant a GMO papaya or a plot of sweet corn could face fines of up to \$50,000 and up to a year in jail. Family farmers depending on biotechnology to produce sustainable food on Maui would face harsh penalties should they choose to grow a genetically modified crop.

The Hawaii Workforce Infonet lists total jobs by island. Based on their figures, the loss of 250 jobs on Molokai would equate to about 10,000 jobs lost on Maui (or 55,000 on Oahu). Dawn Bicoy is convinced such a mass layoff would be catastrophic. "The voting populace is on the island of Maui," she notes, "and they must choose whether or not to devastate Molokai in this way. Mindful of the current 14% unemployment, who would intentionally impose that misery on their fellow citizens? It's one thing for a business to fail, but who would *thrust* that on someone?"

Dawn sees the island of Maui as the big sister of Molokai. "Maui has never really had to think about its job as protector of Molokai before because there were no laws that were this atrocious. People with a long history on Maui understand their responsibility as caretakers. Maui has always nurtured and cared for Molokai. This could change in November."

The hard-working people of the Friendly Isle now look to Maui. They hope their Maui neighbors act in keeping with tradition, vote "no" in November, and allow the good people of Molokai to remain happily and gainfully employed. ■



Testimony of a farmer's daughter

By Joni Kamiya

I remember back in October 2013, my newsfeed was bombarded by memes from a group called the Babes Against Biotech (BAB). They seemed like a fringe group so I initially ignored them. As the days went on, I began to realize that there was something serious going on. I saw that BAB was actively lobbying people. I immediately called my dad and told him that the farmers had better get organized. My life changed from that moment on.

My mom was not happy that I was going into the social media battlefield. To make her happy, I changed my name online to Joni Rose, to protect our family from being targets. It didn't take long for people to figure it out that I was a biotech papaya farmer's daughter.

I really felt that the Hawai'i farmers needed a voice in the whole issue because it was being drowned out by the activists. I felt alone as the only pro-biotech commenter on many online forums. I had participated in the biotech papaya research. I knew and understood this technology had kept farmers farming. My dad had always pushed me to take a lot of science classes — chemistry, biochemistry and more. I understood the background and research fairly well. I felt compelled to speak for it because of the lies that were being spread all over the social media.

I eventually started a blog to share stories about

farm life and my views on the politics surrounding biotech. I was just utterly frustrated seeing all the misinformation out on the Internet. I did pro-science pages to help give Hawai'i a voice in the issue. GMOLOL was a complete relief to see on the social media. I joined as one of the first 30 members on the site. I befriended other like minds and have since created a network of folks that share the same values about ag biotech in the islands. I'd put my kids to bed and spend hours just reading and researching the issues and studies to learn more in hopes of educating others.

As much as I didn't want to be out there, I had to be. I could not stand aside and watch as activists pointed fingers and told half-truths about our farm. People who knew nothing about farming except what they saw on the Internet were now trying to dictate to my dad how to run his own business. That was absolutely wrong to me because this man had gained his expertise on the job over the course of a lifetime! He was too busy on the farm to go out there and educate others. He barely had time to answer emails. His life's work and passion was farming, not the social media scene. I decided to take that leap for the farm because my brother had decided to take it on. Our future was at stake if no one spoke up for us.

Whenever I'd call my dad about various issues on agriculture or the latest legislation on deck, my nickname became "the activist." I was determined to see that the truth was going to be heard. I hoped others would listen and hear my thoughts. I was born in the year of the tiger and found that fire lit to fight for what is right, to protect our family farm, and ensure that Hawai'i's future was bright for science and research. It was the least I could do having grown up a farmer's daughter. ■

<http://hawaiifarmersdaughter.com>



facts about papaya

Papaya is one of the healthiest whole foods on the planet.

Papayas are rich sources of fiber, antioxidant nutrients such as carotenes, vitamin C and flavonoids; B vitamins such as folate and pantothenic; and minerals, including potassium, copper and magnesium.

Together, these nutrients promote the health of the cardiovascular system and provide protection against colon cancer. Papayas also contain papain, an enzyme that promotes digestive health.

Your Hawaii Agriculture & Agri-Business Specialist



KELLY H. MORAN
CCIM, CIPS, REALTOR®

Direct (808) 938-5757
Business (808) 969-9400
kelly@hilo-brokers.com



400 HUALANI ST., SUITE 296
HILO, HI 96720

www.Hilo-Brokers.com



Hilo Coffee Mill

23 Acre Coffee
Farm & Espresso
Bar

- Turnkey, well-branded farm-to-cup coffee business on busy tourism corridor
- 23.86 acres with over 6000 producing coffee trees, and 2500 sf production & showroom space
- Certified kitchen & espresso bar

www.BuyHiloCoffeeMill.com



Rare 564 Acres of Pastureland with Huge Waterfalls

- Unlimited diversified agriculture potential
- 6 miles north of Hilo—has its own airstrip
- Streams & breathtaking waterfalls
- Spectacular Mauna Kea & Hilo Bay views
- Generating income from zipline lease

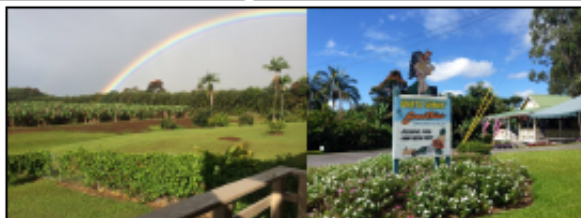
www.HawaiiAcreage.com

— Plant It Hawaii —

Largest Wholesale Fruit Tree Nursery in Hawaii

- Profitable turnkey business
- 5 adjacent contiguous parcels totaling 42 acres
- Exotic fruit orchards, offices, warehouse, greenhouses, shadehouses & equipment
- Includes tradename, accounts & plant inventory

www.BuyPlantItHawaii.com



Home, Farm, Retail Business and Guest House

- Located on the Onomea Scenic Drive
- Zen-inspired retreat residence
- 20 acres income-producing tropical fruit orchards
- On-site "What's Shakin" smoothie business
 - Known internationally, 5-star ratings, operating for 20 years, featured in *Sunset* magazine, on "must visit" lists for numerous travel publications
- Historic guest home = high demand rental

www.BuyWhatsShakin.com



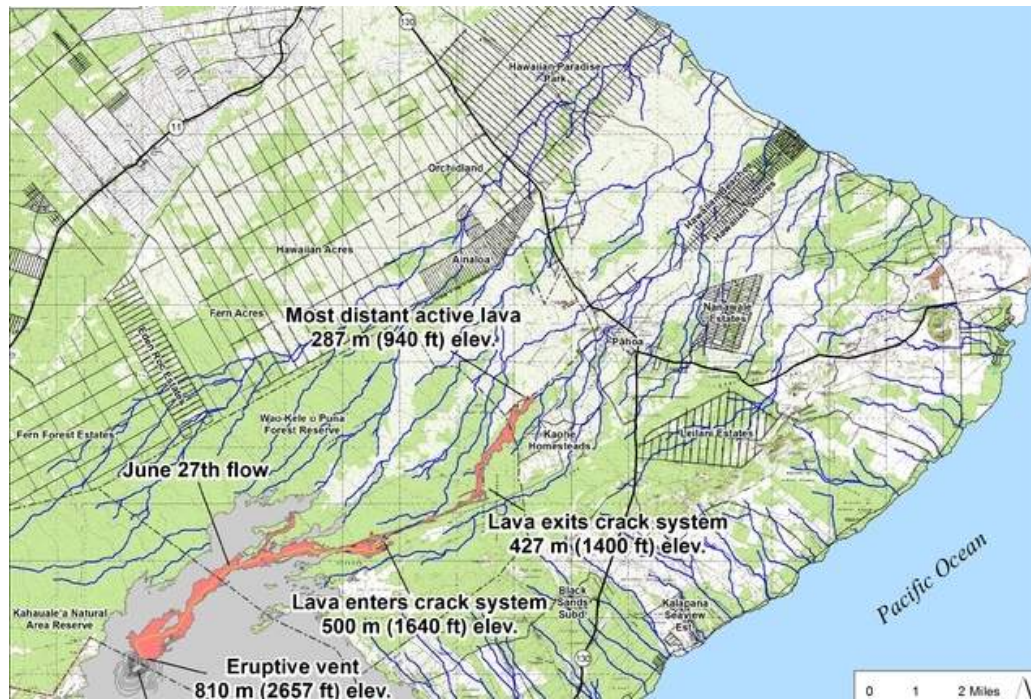
50 Acre Turnkey Tropical Fruit Farm

- Thriving Business! One of the most productive tropical fruit orchards in the State of Hawaii
- Longan, Rambutan & Lychee fruit professionally grown and harvested for the export market
- 2500+ fruit trees in production; 100's more in 2015
- 2,414 square foot custom built home
- Seller will consider hands-on training for buyers

www.TropicalFruitOrchard.com

People in the path of Pele

As the June 27th lava flow from Kilauea Volcano continues to bear down on Pahoa (though the flow has slowed in recent days), Dr. Mark Kimura at the University of Hawai'i at Hilo assembled various "infographics" of the affected Lower Puna community. Shown here are several key impact compilations, with our thanks to Dr. Kimura.



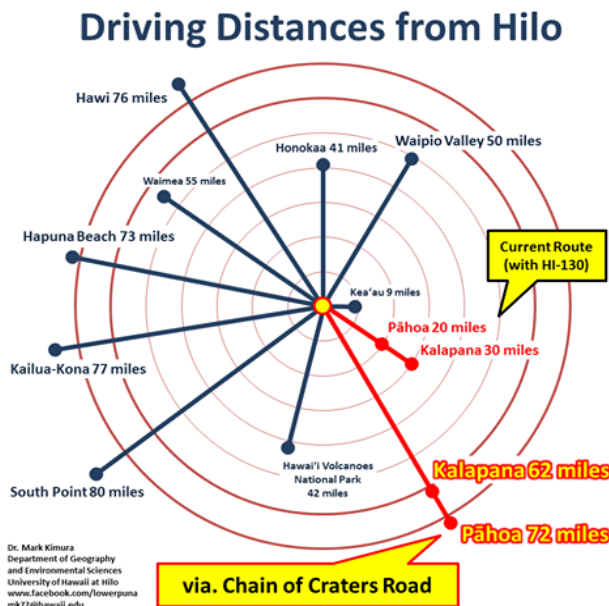
Map: Hawaiian Volcano Observatory

Information and Updates:

Hawaiian Volcano Observatory
<http://hvo.wr.usgs.gov/activity/kilaueastatus.php>

County of Hawaii Civil Defense Alerts
<http://www.hawaiicounty.gov/active-alerts/>

Impact of the Puna Lava Flow in Graphics and Maps | Dr. Mark Kimura
<http://hilo.hawaii.edu/news/stories/2014/09/22/puna-lava-flow-in-graphics-maps/>



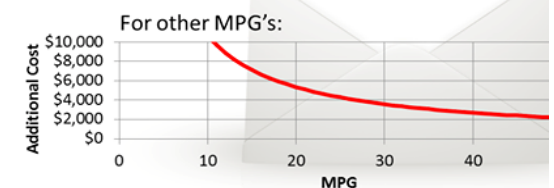
Distance is \$\$\$

Back-of-the-envelope calculation

Commuting between Hilo and Pahoa:

- Extra 52 miles one way = 104 miles round trip.
- 104 miles x 250 workdays/year = 26,000 miles/year.
- If your car's MPG = 25 miles/gallon, then 26,000/25 = 1,040 gallons/year.
- Assuming gas price=\$4.10/gallon, 1,040x4.10=4,264...

You would be spending **additional \$4000+** every year



by the numbers

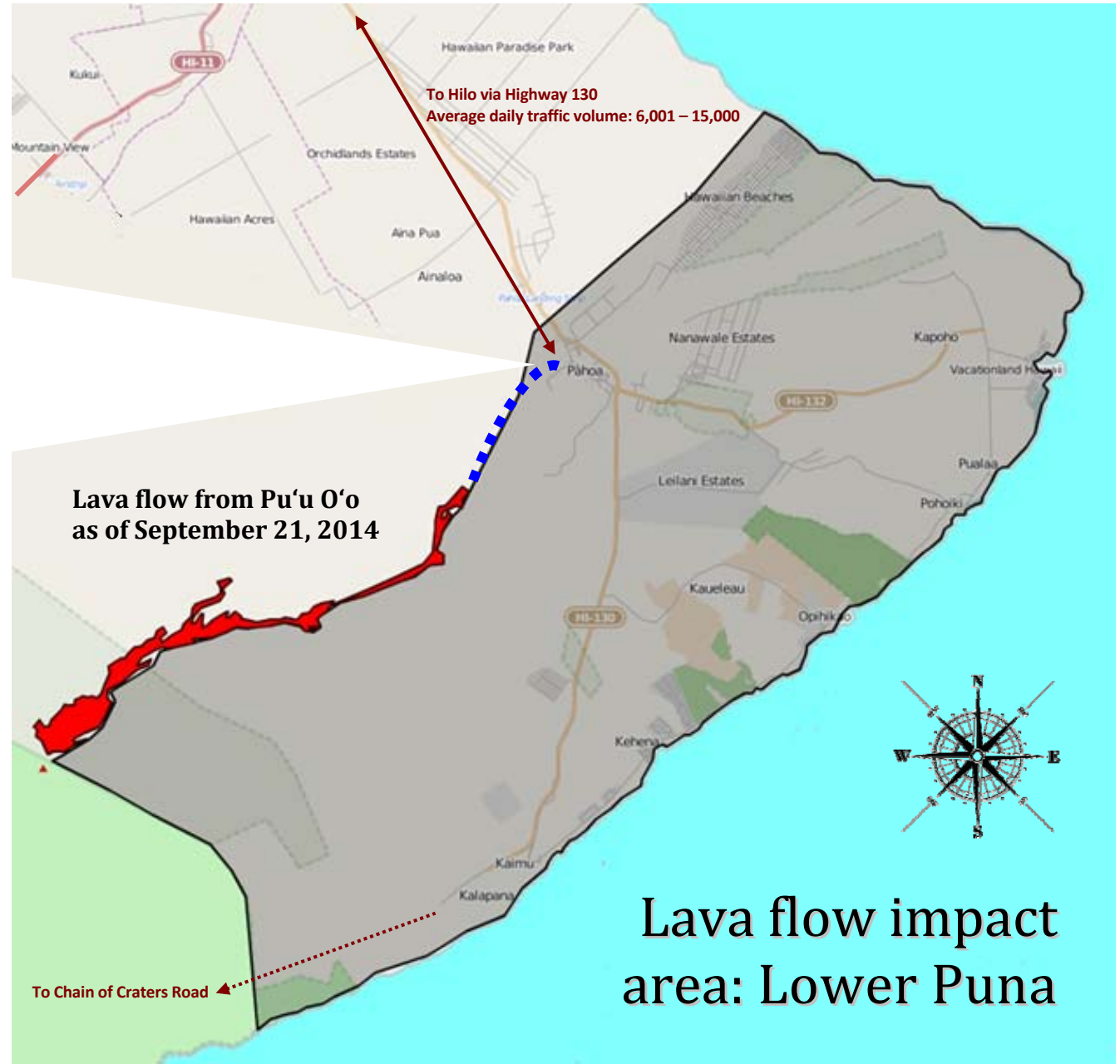
2014 Total Population	9,417
Children under 15	1,902
Adults over 64	1,450
2014 Total Households	3,891
2014 Housing Units	4,885
Owner Occupied	2,677
Renter Occupied	1,214
Total Owner Occupied	
Housing Value	\$554 million

Households by Type (2010 Census)	
Total Households	3,809
Family Households	2,129
Single Mother	476
Single Father	248
Same-Sex Partners	88

Total Students Enrolled in School	1,589
Kindergarten	98
Grades 1-4	347
Grades 5-8	352
Grades 9-12	385
College Undergraduate	296
Graduate/Professional School	43
Nursery School, Pre-School	68

Total Businesses	257
Services	105
Retail	40
Agriculture	28
Construction	23
Wholesale Trade	16
Finance, Insurance, Real Estate	12
Government	2

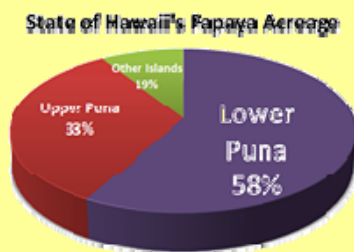
Mark Kimura's data sheet shows there are six hotels and lodging establishments, seven education institutions and libraries, and six health services. He reports that Facebook comments point out that the number of agricultural businesses is too low.



Agriculture in Lower Puna

Baseline Study for Food Self-Sufficiency in Hawaii County

Lower Puna has long been the known as “papaya country,” accounting for more than half of the State of Hawai‘i’s total papaya production. While the current lava flow does not present a threat of lava inundation in papaya fields, it could sever road access and raise production costs for the industry.



Graphic at right by
Mark Kimura: 2014

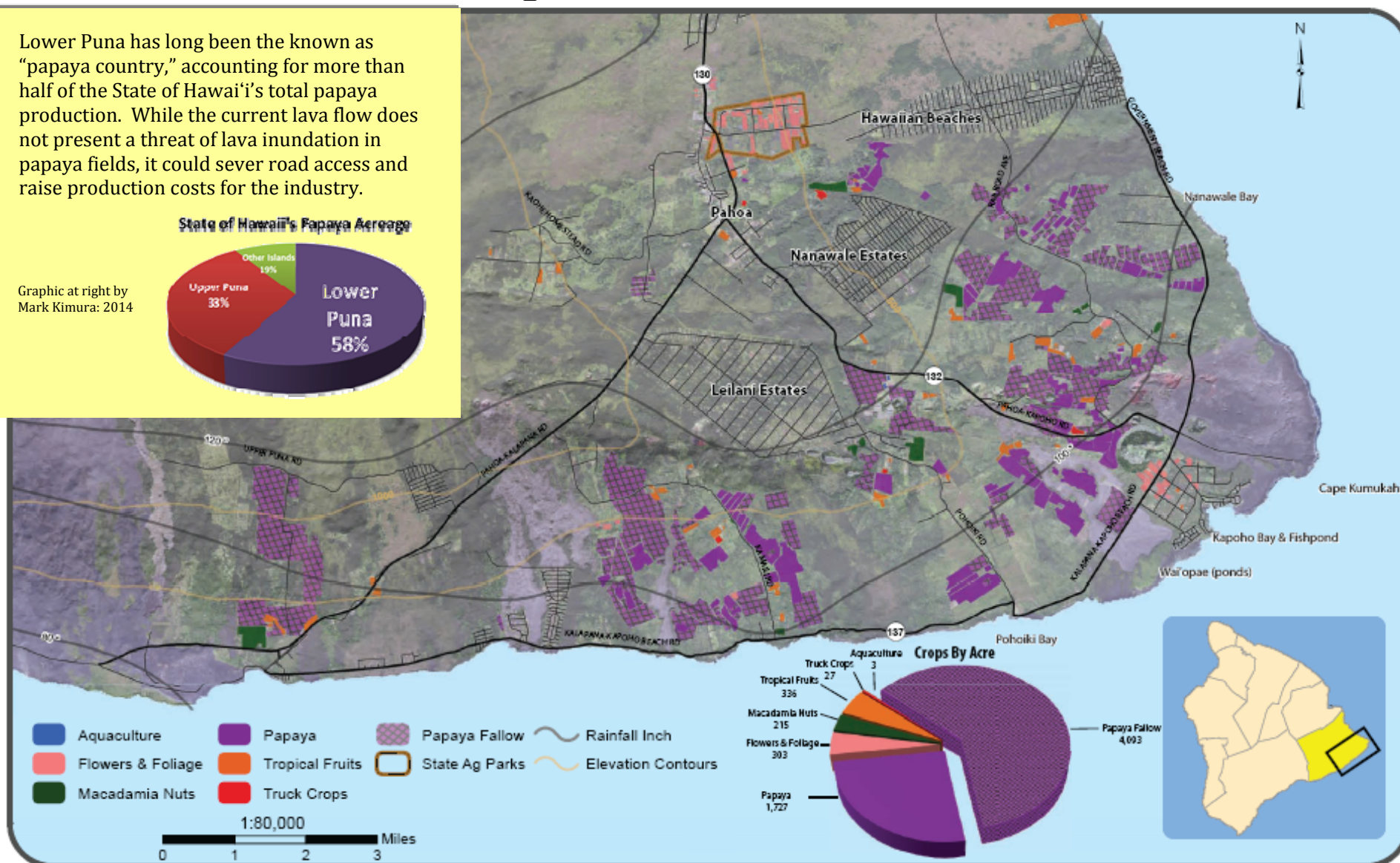


Figure 25. Lower Puna Crop Land Summary

Lower Puna Crop Land Summary



Map and Data: *Baseline Study for Food Self-Sufficiency in Hawaii County 2012*; Jeffrey Melrose, MURP, and Donna Delparte, PhD.; University of Hawai'i at Hilo Geography and Environmental Studies Department



a taste of

Taste of the Hawaiian Range | September 26, 2014

"The purpose of the Taste of the Hawaiian Range is to promote an educational venue to encourage and support local production of agricultural products through social, cultural, and scientific exchanges featuring a diverse array of talents brought together for the purpose of developing an ethos of compatibility, tranquility and sustainability with this land we cohabit."

— Taste of the Hawaiian Range Mission Statement



The Fairmont Orchid's sous-vide beef chuck roll, provided by Kahua Ranch.



Village Burger's red miso beef tartar on top of yaki onigiri (grilled rice). Beef provided by Triple D Ranch.



Chef Will Queja from the Four Seasons Hualalai created this "sirloin tip" taco topped with a spicy rooster slaw and a plum barbeque sauce.



Kohala Burger & Taco were assigned beef heart and rose to the challenge. A delectable beef heart taco topped with tomato salsa in a crunchy shell.



Chef Zach Sato from Merriman's Waimea created an island mutton tartar.



"The highlight for me was chefs showcasing alternative cuts of meat in creative finger-licking good dishes such as beef tongue pho. What a delicious way to expand people's palates to include more sustainable food choices!"

Hanna Bree

Photos by Hanna Bree
for Farmers & Friends

Original Hawaiian Chocolate named Martha Stewart American-Made finalist



NEW YORK, NY – Original Hawaiian Chocolate is a food finalist in the 2014 Martha Stewart American Made Awards. The contest honors small business owners and creative entrepreneurs in the fields of crafts, design, food and style. Competing products and services are 100 percent made-in-America with the highest degree of U.S. content possible.

Judging criteria includes innovativeness, originality of idea, workmanship, appearance and embodiment of an American Made theme. Winners receive \$10,000 plus a trip to New York City and a chance to be marketed by Martha Stewart Living Omnimedia.

Ten winners will be chosen October 17 by a team of judges and via public on-line voting at www.marthastewart.com/americanmade through October 13.

Founded, owned and operated by Raleigh, North Carolina natives Bob and Pam Cooper, The Original Hawaiian Chocolate Factory creates three kinds of single-origin chocolate exclusively from 100 percent Hawaiian cacao. Their "tree to bar" operation in Keauhou-Kona on Hawai'i Island is the first of its kind in Hawai'i and the locally grown-and-made product has won numerous awards.

Original Hawaiian Chocolate is Made in USA Certified and supported by the Hawaii Department of Agriculture's Seal of Quality program, which identifies the state's premium, "cream of the crop" agricultural products.

OHCF makes delicious milk and dark forastero chocolate and criollo dark chocolate in bars and attractive, flower-shaped plumeria pieces. For the chocolate connoisseur, the factory also has roasted forastero and criollo cacao nibs, the essence of pure chocolate. Exclusive plantation tours are Wednesday and Friday mornings.

For more information, call The Original Hawaiian Chocolate Factory at 808-322-2626, or toll free 1-800-447-2626. Original Hawaiian Chocolate products are available at numerous retailers in Hawai'i and on the mainland, plus online at: www.ohcf.us.

A large advertisement for KTA Super Stores. At the top, the KTA Super Stores logo is displayed against a background of a mountain and a blue sky. Below the logo, the text "Hawai'i Island's local grocery store since 1916." is written in a large, bold font. The advertisement features three photographs of local farmers: Ed Boteelho of Clover Leaf Dairy, Justin Hirako of Hirako Farms, and Brady Yagi of Kulana Foods. A circular logo for Mountain Apple Brand is also visible. At the bottom, the text "Support local pride and sustainability with Mountain Apple Brand Hawai'i grown, produced or manufactured products found exclusively at KTA Super Stores." is written. Below this, a list of KTA Super Stores locations is provided: Keawe St., Hilo; Puainaka, Hilo; Waimea, Kamuela; Kailua-Kona; and Keauhou, Kona. The website www.ktasuperstores.com is listed, and the slogan "You're Someone Special Every Day at KTA!" is written in a stylized font at the very bottom.



what we do

- water system design
- well development and permitting
- lakes, ponds, water features ■ water treatment
- hardware restoration ■ GIS mapping and analysis
- hydrology ■ energy applications
- wastewater treatment ■ desalination projects
- irrigation systems ■ biomass energy production
- whitewater aerobic wastewater systems

contact us

Waimea Water Services, LLC
67-1161 Mamalahoa Hwy., Ste. 5, Kamuela, HI 96743
Tel 808.885.5941 • Fax 808.885.7851

John Richards jrichards@waimeawaterservices.com
Cell 808.936.7553

David Barnes dbarnes@waimeawaterservices.com
Cell 808.854.5745

Jeffrey Eng WWS Maui County representative
jkeng@hawaiiintel.net
Cell 808.205.4701

a member of

- American Water Works Association–Hawaii Section
- Hawaii Leeward Planning Conference
- Kona Water Roundtable



Tell us about your needs for water.
Together, we'll make a plan.



jus play



waiting on a volcano

Busload of Faith - Lou Reed

Same Old Man - Holy Modal Rounders

Our Town - Iris Dement & Emmylou Harris

Harvest Moon - Neil Young

You Turn Me On I'm A Radio - Joni Mitchell

The Great Remember - Steve Martin & The Steep Canyon Rangers

Embryonic Journey - Jefferson Airplane

Kaulana Na Pua - Project Kuleana Ohana

Photo: Hawaii County Civil Defense | September 29, 2014



mahalo!