



AGDAPTATION: HAWAII'S GROWING OPPORTUNITY

OCTOBER 15 - 16, 2019
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WELCOME & MAHALO

Aloha Mai Kakou!

The 2019 Hawai'i Agriculture Conference (AG2019) provides a gathering place for all-sectors of Hawai'i agriculture. Hosted by the Agricultural Leadership Foundation of Hawai'i (ALFH) since 2002, this event is Hawai'i's premiere agriculture conference. A diverse planning team of industry stakeholders including producers, aggregators, educators, landowners and non-profit administrators worked together over the last year to produce this conference.

AGDAPTATION: HAWAI'I'S GROWING OPPORTUNITY

In an ever-changing world, Hawai'i's agriculture must adapt to become a viable, sustainable resource that provides rewarding careers, enriches lifestyles, and stewards our 'āina for future generations. Successful AGadaptation means that Hawai'i agriculture doesn't just survive, it thrives! AG2019 aims to expose and bring together multiple participants and components of Hawai'i's food system value chain.

Three keynotes will start-off AG2019 with international and local perspectives of AGadaptation. Keynote speakers include Jamie Tuuta, Chair New Zealand Tourism Board; and Michelle Galimba, Kuahiwi Ranch, Hawai'i Island. You may also join each keynote in individual breakout sessions where you will be able to hear more about their experiences and perspectives.

AG2019 will include over 30 concurrent sessions with topics covering leadership development in food sustainability, technology for small farms, solutions for food safety, carbon sequestration opportunities, food manufacturing and more. Also, the Hawai'i Department of Agriculture will conduct a session on the department's statewide strategic plan that aims to give conference participants a chance to provide feedback. A special track of dynamic, interactive student sessions aimed at transforming Hawai'i's food system will be offered for representatives from Future Farmers of America and other youth programs.

Outside of the conference sessions, there are many other exciting happenings taking place at AG2019. If you're a grower or a buyer, you won't want to miss the Grower-Buyer Meet-Up where you can build successful business relationships. Meanwhile, at the AGxChange you can visit exhibitors, recharge yourself and your electronics, browse student displays and more. Finally, don't miss the Farm to Table Tastings event at pau hana on Day 1 where you can sample locally sourced and prepared foods from local chefs, celebrate Agricultural Leadership Program Class XVI Graduates, visit with vendors, poster presenters and students, listen to the sounds of live Hawaiian music and talk story with fellow professionals.

AG2019 is an exciting and energy-charged two days. Ultimately however, the agriculture industry depends on you. Come learn, network, eat, have fun and challenge yourself with AGadaptation for a Hawai'i agriculture that thrives!

Mahalo a nui loa to our participants, sponsors and other contributors.

A hui hou,

Sydney Keli'ipuleole
AG2019 Conference Chair

Taylor Kellerman, President
Agricultural Leadership Foundation of Hawai'i

CONGRATULATIONS CLASS XVI GRADUATES!

The Agricultural Leadership Program is an 18-month program for emerging and mid-level agriculture and conservation resources professionals. Over 190 graduates since 1984. Class XVII starts in 2020. Learn more at agleaderhi.org



Jayme Barton
Hawai'i Agriculture Research Center



Gene Ross Davis
Department of Hawaiian Homelands



Yarrow Flower
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Jonathan Ho
Hawai'i Department of Agriculture



Brian Kau
Hawai'i Department of Agriculture



Will Lydgate
Lydgate Farms



Julie Nemoto
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Agricultural Leadership
Foundation of Hawai'i



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Photo credit: Taylor Kellerman



MAHALO FROM AG2019

AG2019 PLANNING COMMITTEE



AG2019 STAFF



Christine Brammer,
Executive &
Program Director

Sarah Voigt,
Program Assistant

AG2019 is presented by the Agricultural Leadership Foundation of Hawai'i with support from the Hawai'i Department of Agriculture. A special thank you is extended to all of the conference sponsors including Ulupono Initiative, Kamehameha Schools, Corteva Agriscience, Bayer, Skagit Farmers Supply/Agro Research International, American AgCredit and many other sponsors and partner organizations, as well as all who will attend AG2019. Mahalo!



Cover photo: Jayme Barton, O'ahu
Farmer and Scientist, ALP Class XVI.
Photo credit: Brad Stubbs.

AT THE CONFERENCE

AGxChange

Throughout Conference, Room 313ABC

Visit the AG2019 exhibitors in the AGxChange room to learn about innovative practices, explore resources to help grow your business, and connect with government agencies, companies and organizations that support Hawai'i agriculture. Visit the exhibits, peruse the poster presentations and displays, relax and recharge your smartphone in the lounge area, refuel with food and beverages, enjoy the café-like seating areas, and take advantage of free Wi-Fi. The AGxChange will be open throughout the conference as well as during the evening Farm to Table Tastings event. Please stop by! View the poster and exhibitor list on pages 34-35.

Commitment to Agriculture Station

Throughout Conference, Ala Halawai Concourse outside Room 313ABC

Visit the Agricultural Leadership Foundation of Hawai'i and Principal Sponsor Ulupono Initiative to share your commitment to agriculture at this special booth. Make your commitment and receive a token of appreciation. Participate and inspire the next generation to find their role in this vital industry.

Farm to Table Tastings and Refreshments

Featuring the Agricultural Leadership Program Class XVI Graduation

Hawai'i Convention Center, Ala Halawai Concourse and Room 313ABC, Tuesday, October 15, 2019, 5:00 PM - 7:30 PM

Enjoy farm-to-table cuisine and network with agriculture producers and professionals, foodies, farmers, teachers, and students. The Agricultural Leadership Foundation of Hawai'i will begin the festivities with a presentation recognizing its Class XVI graduates. Enjoy Hawaiian music while savoring the ono-licious dishes prepared by local chefs using locally grown ingredients. Friends of James A. Wriston III are hosting the first round of beverages for conference participants. Visit exhibitors, poster presenters and students showcasing recent projects. This event is the perfect time to make new connections and renew friendships. We look forward to seeing you there!

PARTICIPATING RESTAURANTS:



CONTRIBUTOR:

IN MEMORY OF JAMES "JIM" WRISTON III



These first round of libations at the Farm to Table Tastings are sponsored in the memory of A. James "Jim" Wriston III, by his friends and partners Stephen Nimz, Stephen Swift and Alan Gottlieb. Jim, an Agricultural Leadership Foundation of Hawaii alumnus, lifelong agriculturalist and entrepreneur, lived a short but very full life. His friends remember Jim as a "really good guy" who liked to hang with his family and

friends, fish and drink beer. His fun approach to life was liked by all. Jim's entrepreneurial spirit and environmental vision, his love for the land and his strong sense of right and wrong, his respect for others and the strength of his word are all qualities to be remembered as we honor others in this sector who continue to assist it's sustainable growth.

HERBERT 'MONTY' RICHARDS REMEMBERED



Herbert 'Monty' Richards will be remembered as a giant of modern agriculture in Hawai'i! Monty recently passed away at 88, but his legacy lives on in the numerous transformational initiatives that moved Hawaii from plantations to a fully diversified and robust entrepreneurial agricultural landscape. Never afraid, he called for policy changes, federal and state financial support, and a 'geev um' approach to new crops and mixed uses – including wasabi to windmills, and ag-tourism horseback riding, and great Wagyu steaks to cap off the day. Monty was a visionary, recognizing that leaders in agriculture would need to quickly depart the plantations and thrive in a new independent agricultural sector; hence, in 1982 he and a few contemporary cohorts envisioned and created the Agricultural Leadership Foundation of Hawaii (ALFH). Now 37 years later, ALFH has trained over 180 cross-sector agricultural leaders. Mahalo, Monty, for leading Hawai'i agriculture into the 21st century and beyond. We are working hard to continue your legacy!

Landscape Industry Council of Hawai'i (LICH) Green Industry Conference "Strengthening Our Roots"



Monday, October 14th, 2019

The Landscape Industry Council of Hawai'i (LICH) is pleased to partner with the Agricultural Leadership Foundation of Hawai'i to host its annual Green Industry Conference as a parallel event of AG2019. LICH represents co-lateral

businesses and government agencies, such as landscape and irrigation specialists, arborists, nurseries and county, state and University of Hawai'i participants, which are all vital to a thriving Hawai'i agriculture industry. AG2019 and LICH have partnered to encourage cross-over conference attendance and collaboration. Find out more online at: www.hawaiiscape.com/conference



A MESSAGE FROM
Governor David Y. Ige

On behalf of the people of Hawai'i, I send a warm aloha to all attendees at the 2019 Hawai'i Agriculture Conference, hosted by the Agriculture Leadership Foundation of Hawai'i. Agriculture is critical to self-sufficiency and food security. It cannot be understated how your participation during this conference is vital to the future of our state and our ability to increase and enhance our food security.

This year's conference theme, "AGadaptation: Hawai'i's Growing Opportunity," emphasizes how our agricultural industry needs to adapt and become a sustainable resource. During this conference, many of you will have the opportunity to explore the benefits and possibilities of new technologies and methodologies that may bring greater efficiency and higher production to your operations, learn about innovative strategies for marketing and brand development, and foster relationships within the industry as well as with the retail and consumer segments.

Mahalo to all who are taking the time to contribute toward the common goal of building a stronger, more vibrant agricultural industry in Hawai'i. Your collective experience, knowledge and passion will improve the overall quality of our community and our island lifestyle. Best wishes for a successful conference!

With warmest regards,

A handwritten signature in black ink that reads "David Y. Ige".

DAVID Y. IGE
Governor, State of Hawai'i

KEYNOTE SPEAKERS



JAMIE TUUTA

Chair, New Zealand Tourism Board
Urenui, Taranaki, New Zealand

“NEW ZEALAND: AT THE CROSSROADS OF CULTURE, AGRICULTURE AND ECO-TOURISM”

In May 2019, Jamie was named Chair of the New Zealand Tourism Board, which is responsible for marketing New Zealand as a global destination. He is inspired by the opportunities for New Zealand to be an exemplar for other countries. He is also the Chair of Māori Television, Te Ohu Kaimoana (the Māori Fisheries Commission) and Taranaki Mounga, an ambitious project with a vision to restore ecological resilience to more than 34,000 hectares from the mountain to the sea. As the former Māori Trustee and CEO of Te Tumu Paeroa, he administered 100,000 hectares of Māori land throughout the country. He is also the former chair of Parininihi ki Waitōtara Incorporation, a large land-based farming business, and a former director of Wools of New Zealand and Port Nicholson Fisheries, Ltd. Jamie is passionate about investing in innovation and increasing the economic and environmental performance of New Zealand’s primary industries, particularly the Māori pastoral and fishing sectors, and developing the capacity and capability of Māori. In 2010 he received the Sir Peter Blake Emerging Leadership Award and in 2016 the Young Māori Business Leader Award.



MICHELLE GALIMBA

Cattle Rancher
Ka'u, Hawai'i, U.S.A.

“TRADITION & INNOVATION: ONE HAWAII RANCHER’S STORY”

Michelle Galimba is a cattle rancher in the Ka'u district of Hawai'i Island where she runs Kuahiwi Ranch with her brother, Guy Galimba. Their family ranch provides locally grown beef to supermarkets, farmer's markets, and restaurants on O'ahu and Hawai'i Island. She grew up on dairy farms in Hawai'i and has been involved with her family's ranch since it started on abandoned sugar-cane acreage in the early 1990's. Having grown up in agriculture in Hawai'i, she has seen first-hand the stresses and constraints which make farming and ranching particularly challenging. She is interested in the key role that agriculture, small farms in particular, plays in addressing the big challenges of our time: economic inequity, political dis-enfranchisement, biodiversity loss, and climate change. Michelle has served on the State of Hawai'i's Board of Agriculture and is currently a Director of the Farm Credit Service of Hawai'i and other agricultural and conservation programs and non-profits. Michelle received a Ph.D. in Comparative Literature from U.C. Berkeley. Her dissertation was on the poetry of the 13th century Chinese poet/calligrapher/statesman/farmer, Su Dongpo.



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STUDENT PROGRAM

The 2019 Hawai'i Agriculture Conference is pleased to offer an exceptional thread of sessions dedicated to enhancing the conference experience for students. In these sessions, students will learn, develop, and take the lead to present a vision of the future of Hawai'i's School Food System. Students will be able to take what was learned and presented to the next level and become advocates for change at home and at school. Students are encouraged to be active participants during AG2019 by attending conference sessions of their choice during times when a student program is not offered. Refer to AG2019 Day 1 and Day 2 schedules for information on conference sessions, breaks and special events.

TUESDAY, OCTOBER 15, 2019

11:00 AM - 1:00 PM

Opportunities To Transform Hawai'i's Food System

Moderator: Paula Daniels, *Center for Good Food Purchasing*

Introduction to the food system in Hawai'i – what we are getting right and what we KNOW we need to work on – specifically as it impacts our school lunch options. This session will focus on the key gaps (a.k.a., OPPORTUNITIES!) in Hawai'i's food system as it impacts a student's school lunch. Listen to stories from the professionals in the industry who are trying to increase the quality and amount of local agricultural produce on each plate served. Food for thought...

Includes boxed lunch

1:30 PM - 3:30 PM

Creating a Statewide 2030 Vision of a Resilient, Equitable School Food System for Hawai'i

Moderator: Paula Daniels, *Center for Good Food Purchasing*

Armed with an understanding of the many obstacles keeping local produce off our school cafeteria plates, join local students in discussing how to overcome obstacles by providing a vision for 2030 that will turn Hawai'i's decision-makers (e.g., government agencies, school administrators, the agricultural community) into solution-makers! With the help of industry professionals to confirm facts and to clarify issues, the students will create a clear, concise, written statement to share and post for input from peers and the broader agriculture community.

WEDNESDAY, OCTOBER 16, 2019

8:30 AM - 9:30 AM

Next Gen Presents the Future of Hawai'i's School Food System (2030)

Moderator: Paula Daniels, *Center for Good Food Purchasing*

Students share their 2030 vision statements for Hawai'i's School Food System and also present the takeaways from AG2019 Student Sessions, calls to action, how students plan to advocate for change and how you can become a solution-maker.

9:45 AM - 10:45 AM

An Introduction to Career Opportunities in Agriculture

Moderators: Julia Nemoto and Jonathan Tanouye, *Agricultural Leadership Program Class XVI*

For a thriving agriculture industry in Hawai'i to exist, the number of new farmers must grow. Along with new farmers, it is also important to grow the number of qualified candidates for a wide range of supporting positions that provide services to help ensure the success of our farmers. During this one-hour session, learn about career opportunities in the field of agriculture. Meet professionals that work in Hawai'i's agricultural sector as farmers, ranchers, scientists, managers, administrators, and more. Learn what led each to a career in agriculture and what it took to get there. Participants will have time to ask questions and network with the speakers.

11:00 AM - 12:00 PM

Featuring the Future of Agriculture

Moderator: Ken Kozuma, *Waipahu Intermediate FFA*

The average age of a farmer continues to rise because traditional farming methods are becoming less and less appealing to the next generation of agriculturalists. As John F. Kennedy once said, "Children are the world's most valuable resource and its best hope for the future." We need to invest time and resources into our future in order to change our current trajectory of agriculture. Come check out a few of the young rising stars in agriculture from Waipahu. Listen as they share their stories and backgrounds, see some of their recent projects and you'll begin to feel their passion for agriculture and for service. See what they are doing to initiate changes in agriculture. These students exemplify the FFA motto: "Learning to Do, Doing to Learn, Earning to Live, Living to Serve."

LOCATION LEGEND

310

301AB

302AB

306AB

308AB

Mahalo Nui Loa to the following sponsors who made contributions to directly aid student attendance at AG2019



PART OF THE SALTCHUK FAMILY OF COMPANIES

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The National FFA Organization makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through Agriculture and Natural Resources education. The letters FFA stand for Future Farmers of America. These letters are a part of the organization's history and heritage, but FFA is not just for students who want to be production farmers; FFA also welcomes members who aspire to careers as teachers, doctors, scientists, business owners and more. The Hawai'i Association FFA has been part of Hawai'i's proud agriculture heritage since it's founding in 1929. FFA is a student-led organization, which allows students to develop their leadership skills through self-directed projects within their local schools and communities. Students are encouraged to seek projects based on their career interests or which may serve others within the community. Please support our student leaders so they can help to shape and advance agriculture in Hawai'i. To learn more visit: www.hawaiiffa.weebly.com



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 Seattle | Seoul (Incheon) | Sydney | Tokyo (Haneda) | Tokyo (Narita)

POSTERS AND DISPLAYS

Available for viewing in the AGxChange - Room 313ABC

- **Ag Innovators Of Tomorrow**
Mariah Iris Ramo, Waipahu High School FFA
- **An Interactive Decision-Support Tool for Students and Livestock Producers to Integrate Sustainable Animal Breeding and Genetics Principles into Real-World Production Environments**
Kyle C. Caires, Ph.D., UHM-CTAHR-HNFS
- **Bridging the GAP in Farm Food Safety Requirements: FSMA, OFRR, and Third-Party Audits**
Joshua Silva and Kylie Tavares, UHM-CTAHR-CE
- **Evaluating Water Use Efficiency in Hawai'i's Irrigated Agriculture: A Framework and Case Study**
Emma Brown, UHM-CTAHR-DNREM
- **Feedstuffs Production Using Sub-Surface Drip Irrigation and Precision Ag Tools: A Viable Model for Tropical and Subtropical Agriculturalists**
Kyle C. Caires, Ph.D., UHM-CTAHR-HNFS; Shyloh Stafford-Jones, SJ Ag Operations
- **GET (Grow Eat Think) Local Initiative**
Kiersten Akahoshi, Amjad Ahmad, Kyle Caires, Sharon Motomura-Wages, Lynn Nakamura-Tengan, Nancy Ooki, Jari Sugano, Joshua Silva, Kylie Tavares, Jensen Uyeda, and Julia Zee, UHM-CTAHR-CE
- **Keiki Farmacy: A Feasibility Evaluation of a Produce**

- **Prescription Program to Address Food Insecurity and Health Disparities**
Monica Esquivel, Ph.D., RDN, UHM-CTAHR-HNFS; Moulika Hitchens, MA, Waianae Coast Comprehensive Health Center; Alicia Higa, Waianae Coast Comprehensive Health Center; Cherese Shelton, UHM-CTAHR-HNFS
 - **Spark an Ag Explosion!**
Dr. Kioni Dudley, 2050 Hawai'i, Inc.
 - **Stimulating Kalo Corm Development in a Backyard Aquaponics System to Promote Food Production, Nutrition, and STEM Education**
Neil Tsukayama, Windward Community College, Department of Natural Sciences
 - **The Search for Herbicidal Natural Products from the Plants of Hawai'i**
Joey Ooka, Skylar Hara, and Daniel K Owens, Ph.D., UHM-CTAHR-MBBE
 - **Use of Genomics Technologies to Facilitate Rapid Genetic Improvement of Economically Relevant Traits (ERTs) for Beef Cattle Production in Hawai'i**
Kyle C. Caires, Ph.D., UHM-CTAHR-HNFS
- Acronyms:**
- UHM-CTAHR-CE** - University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Cooperative Extension
- UHM-CTAHR-DNREM** - University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Department of Natural Resource

and Environmental Management
UHM-CTAHR-HNFS - University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Department of Human Nutrition, Food and Animal Sciences

UHM-CTAHR-MBBE - University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Department of Molecular Biosciences and Bioengineering



Mālama Learning Center

Students from Mālama Learning Center's Ola Nā Kini program will display information on recent natural resource conservation and agriculture projects at the AGxChange. Stop by and show support. For more information on the Mālama Learning Center, visit: [www.malamalearningcenter.org](http://malamalearningcenter.org)

Mahalo to the U.S. E.P.A Environmental Education Grant Program for supporting Malama Learning Center's participation in AG2019.



Hawai'i Agricultural Foundation

The Hawai'i Agricultural Foundation (HAF) will display the winning entries from this year's Localicious® Art and Poetry Contest at the AGxChange. To learn more, please visit HAF online at www.hawaiiaagfoundation.org

EXHIBITORS

Visit AG2019 Exhibitors in the AGxChange - Room 313ABC

1. Agricultural Leadership Foundation of Hawai'i
2. American AgCredit
3. Arborjet
4. Bayer
5. BCS America
6. BeGreen Hawai'i
7. Corteva Agriscience
8. Dole Food Company Hawai'i
9. First Financial Bank - Farm and Ranch Division
10. GoFarm Hawai'i
11. Hawai'i Ant Lab
12. Hawai'i Beef Industry Council
13. Hawai'i Chocolate and Cacao Association
14. Hawai'i Department of Agriculture
15. Hawai'i Farm Bureau
16. Hawai'i Island Farm Trails
17. Hawai'i Seed Growers Network
18. Hawai'i Sheep and Goat Association
19. Hawai'i Tourism Authority
20. Hawaiian Air Cargo
21. Hawaiian Earth Recycling
22. Hawaiian Islands Land Trust
23. Imua Energy
24. Island Grower Supplies LLC
25. JM Eagle
26. Landscape Industry Council of Hawai'i
27. Malama Learning Center
28. MIDCO Global
29. O'ahu Agriculture and Conservation Association
30. Organic Ag Products
31. Skagit Farmers Supply / Agro Research International
32. State of Hawai'i, Department of Business, Economic Development & Tourism - Community-Based BED/EZ
33. Synagro
34. The Kohala Center
35. The Trust for Public Land
36. University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources (CTAHR)
37. University of Hawai'i at Mānoa, CTAHR, Sustainable and Organic Agriculture Program (SOAP)
38. Ulupono Initiative
39. USDA Natural Resources Conservation Service Pacific Islands Area
40. Young Brothers, LLC

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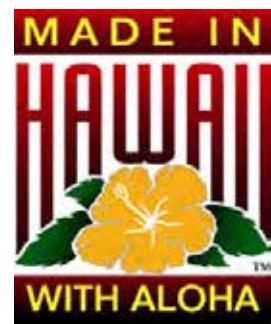


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SCHEDULE - DAY 1 (OCTOBER 15, 2019)

8:00 AM - 9:00 AM CONFERENCE OPENING & KEYNOTE PRESENTATIONS	REGISTRATION / MORNING COFFEE / AGxCHANGE 9:00 AM - 10:45 AM Conference Opening & Keynote Presentations AGadaptation: Hawai'i's Growing Opportunity Welcome: Taylor Kellerman New Zealand: At the Crossroads of Culture, Agriculture and Eco-tourism: Jamie Tuuta Tradition & Innovation: One Hawai'i Rancher's Story: Michelle Galimba Moderator: Donna Ching
10:45 AM - 11:00 AM CONCURRENT SESSION 1	NETWORKING BREAK / AGxCHANGE 11:00 AM - 12:00 PM Achieving Food System Resilience and Equity in Hawai'i Moderator: Albie Miles, Ph.D. 11:00 AM - 12:00 PM Small But Mighty - How Small Farms Incorporate Innovation Moderator: Jesse Cooke 11:00 AM - 12:30 PM Alternative Water Sources for Agriculture in Hawai'i Moderator: Elson Gushiken 11:00 AM - 12:30 PM Hawai'i's Fruitful Future Moderator: Robert Paull
12:00 PM - 1:30 PM CONCURRENT SESSION 2	LUNCH / NETWORKING BREAK / AGxCHANGE 1:30 PM - 2:30 PM Environmental Health, Human Health, and Agriculture Moderator: Michelle Galimba 1:30 PM - 2:30 PM Farm to Brand: How Successful Enterprises Use Branding and Marketing to Grow their Business Moderator: Pomai Weigert 1:30 PM - 2:30 PM Connecting Farmers & Food Innovators Moderator: Chris Speere
2:30 PM - 2:45 PM CONCURRENT SESSION 3	NETWORKING BREAK / AGxCHANGE 2:45 PM - 3:45 PM Growing Resilience: Strategies for Hawai'i Women Farmers Moderator: Frankie Koethe 2:45 PM - 3:45 PM Innovating from the Ground Up Moderator: Danya Hakeem 2:45 PM - 5:00 PM (Continues into Concurrent Session 4) Reshaping Hawai'i's Agriculture: Developing a New Vision to Meet the Challenges Moderator: Micah Munekata
3:45 PM - 4:00 PM CONCURRENT SESSION 4	NETWORKING BREAK / AGxCHANGE 4:00 PM - 5:00 PM Transformative Food Systems Education for the Anthropocene Moderator: Albie Miles, Ph.D. 4:00 PM - 5:00 PM Cooperatives and Community Wealth Building Moderator: Teresa Young 2:45 PM - 5:00 PM (Continued from Concurrent Session 3) Reshaping Hawai'i's Agriculture: Developing a New Vision to Meet the Challenges Moderator: Micah Munekata 4:00 PM - 5:00 PM Moving to Clean Energy: Agriculture Seizing the Advantage Moderator: Sydney Keli'ipuleole
5:00 PM - 7:30 PM	FARM TO TABLE TASTINGS & REFRESHMENTS <i>Featuring the Agricultural Leadership Program Class XVI Graduation</i>

LOCATION LEGEND



■ - Extended session time
 ▲ - Special keynote presenter session

SCHEDULE - DAY 2 (OCTOBER 16, 2019)

6:30 AM - 8:30 AM	GROWER-BUYER MEET-UP (Pre-registration required) Moderator: Michelle Gorham
8:00 AM - 8:30 AM	MORNING COFFEE / AGxCHANGE
DAY 2 OPENING SESSION	8:30 AM - 9:30 AM NEXT GEN PRESENTS THE FUTURE OF HAWAII'S SCHOOL FOOD SYSTEM Moderator: Paula Daniels Featuring: Hawai'i students
9:30 AM - 9:45 AM	NETWORKING BREAK / AGxCHANGE
CONCURRENT SESSION 5	<p>9:45 AM - 12:00 PM (Continues into Concurrent Session 6) Supply Chain Impacts of FSMA: What's a Farmer to Do? Moderator: Kevin Kelly ■</p> <p>9:45 AM - 10:45 AM Local for Local: OnBoarding Small Farmers to the DTL for Access to Alternative Financing Moderator: Maria Palombini</p> <p>9:45 AM - 10:45 AM Pathways to Sustainability Moderator: Jacob Tavares</p>
10:45 AM - 11:00 AM	NETWORKING BREAK / AGxCHANGE
CONCURRENT SESSION 6	<p>9:45 AM - 12:00 PM (Continues from Concurrent Session 5) Supply Chain Impacts of FSMA: What's a Farmer to Do? Moderator: Kevin Kelly ■</p> <p>11:00 AM - 12:00 PM Fostering the Future of Agriculture Moderator: Ken Kozuma</p> <p>11:00 AM - 12:00 PM Cultivation, Carbon and Collaboration: Adapting the Carbon Model for Hawai'i's Farms & Ranches Moderator: Stephanie Mock</p> <p>11:00 AM - 12:00 PM Financing Makes the Farm Go-Round Moderator: Jason Okuhama</p>
12:00 PM - 1:00 PM	LUNCH / NETWORKING BREAK / AGxCHANGE
CONCURRENT SESSION 7	<p>1:00 PM - 2:00 PM Growing the Love of Agriculture through Education Moderator: Natalie McKinney</p> <p>1:00 PM - 2:00 PM Invasive Species in Hawai'i: Impact to Agriculture and Producers Moderator: Michelle Starke</p> <p>1:00 PM - 2:00 PM New Zealand: At the Crossroads of Culture, Agriculture and Eco-tourism Moderator: Jamie Tuuta ▲</p> <p>1:00 PM - 2:00 PM Time Tested and Now Trending Moderator: David Kaupu</p>
2:00 PM - 2:15 PM	NETWORKING BREAK / AGxCHANGE
CONCURRENT SESSION 8	<p>2:15 PM - 3:15 PM Getting Proactive Against Theft, Vandalism & Trespassing Moderator: Brian Miyamoto</p> <p>2:15 PM - 3:15 PM Options and Opportunities for Agricultural Waste Moderator: Carl Campagna</p> <p>2:15 PM - 3:15 PM Financing Models for Developing Small Scale Agriculture Moderator: Eric Bowman</p> <p>2:15 PM - 3:15 PM The Digital Wave: Offering Increased Certainty & Productivity Moderator: Mark Stoutemyer</p>
3:15 PM - 3:30 PM	NETWORKING BREAK / AGxCHANGE
CONCURRENT SESSION 9	<p>3:30 PM - 4:30 PM Cultivating and Sustaining Hawai'i's Farm to School Movement Moderator: Lydi Bernal</p> <p>3:30 PM - 4:30 PM How Land Trusts Can Help Hawai'i Agriculture Thrive Moderator: Chad Cherefko</p> <p>3:30 PM - 4:30 PM 2018 Farm Bill Update - USDA Program Opportunities for Agricultural Producers Moderator: Travis Thomason</p> <p>3:30 PM - 4:30 PM Ag-GAP-tation: CTAHR's Role in Supporting Hawai'i's Agricultural Food Safety Needs Moderator: Kylie Tavares</p>

LOCATION LEGEND



■ - Extended session time
▲ - Special keynote presenter session



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PROGRAM DETAILS

Tuesday, October 15, 2019

REGISTRATION

8:00 AM – 9:00 AM, Outside Room 313



CONFERENCE OPENING AND KEYNOTE PRESENTATIONS

AGadaptation: Hawai'i's Growing Opportunity

9:00 AM - 10:45 AM, Room 310

Welcome Address: Taylor Kellerman, *Kualoa Ranch; Agricultural Leadership Foundation of Hawai'i*

Keynote Presentations:

- **New Zealand: At the Crossroads of Culture, Agriculture and Eco-tourism**
Jamie Tuuta, *Chair, New Zealand Tourism Board*

- **Tradition and Innovation: One Hawai'i Rancher's Story**

Michelle Galimba, *Cattle Rancher, Kuahiwi Ranch*

See Keynote Presenters, page 30.

Moderator: Donna Ching, *Pacific Center for Collaboration; Agricultural Leadership Foundation of Hawai'i*



CONCURRENT SESSION 1

Achieving Food System Resilience and Equity in Hawai'i

11:00 AM - 12:00 PM, Room 310

Moderator: Albie Miles, Ph.D., *University of Hawai'i - West O'ahu, Sustainable Community Food Systems Program*

With a residential population of over 1.4 million and 9 million annual visitors, Hawai'i is one of the most geographically isolated and food import-dependent populations in the world. Importing over 90% of its food and fertilizer, and over 73% of its energy, the Hawaiian Islands are uniquely vulnerable to statewide and community food insecurity in the face of anthropogenic climate change, fuel price fluctuations and other economic or natural disturbances. The just-in-time system of shipping food into the state has few functional redundancies in key import infrastructure, with little state-led resilience measures or emergency food reserves in place for maintaining food security in the instance of significant natural or human-induced disasters. Key system risks to the food supply of Hawai'i will be identified and summarized along with the anticipated impacts of climate change on food pricing and community food security among the state's most vulnerable populations. Strategies for building food system resilience are presented along

with a range of strategies promoting equitable access to healthy foods and culturally appropriate food ways. Research, education and public policy initiatives aimed at achieving food system resilience and equity in Hawai'i are outlined.

Speakers:

David A. Lopez, *State of Hawai'i Emergency Management Agency*
Albie Miles, Ph.D., *University of Hawai'i - West O'ahu, Sustainable Community Food Systems Program*

Suggested Commitments:

Support local agriculture and food enterprises. Invest in University of Hawai'i scholarship fund for students studying agriculture and food systems; enroll in agriculture/food system programs of study. Encourage elected officials to support local agriculture, food system planning and climate change adaptation strategies.



Small but Mighty: How Small Farms Incorporate Innovation

11:00 AM - 12:00 PM, Room 301AB

Moderator: Jesse Cooke, *Ulupono Initiative; Agricultural Leadership Foundation of Hawai'i*

The landscape of agriculture is quickly changing. As a generation of farmers retire, a new generation is looking for new ways to farm. This panel will explore how to blend technology and farming together to achieve innovation and adaptation.

Panelists:

Rob Barreca, *Farm Link Hawai'i*
Dan Ching, *Ili'iili Farms*
Kerry Kakazu, *MetroGrow Hawai'i*

Suggested Commitments:

Support a thriving agricultural community through commitments to continuous education and an openness to innovation and technology. Explore technology as a means to grow more food, feed and floriculture.



Alternative Water Sources for Agriculture in Hawai'i

11:00 AM - 12:30 PM, Room 304AB

Moderator: Elson Gushiken, *ITC Water Management*

Reliable and affordable water availability is one of the biggest and most prevalent challenges for all agricultural operations in Hawai'i. The competing demands for potable use, cultural practices, and agriculture production often

leads to community-dividing conflict. It becomes even more difficult to navigate water issues and find balanced solutions with evolving regulatory requirements and restrictions, the need to protect our environment, and climate change. This symposium is intended to explore the potential of alternative water sources for modern agriculture in Hawai'i. Industry professionals will briefly cover several potential sources of water made possible via recent technology and global innovation including local availability of recycled water, potential for desalination and feasibility of wastewater recycling plants. In addition to opportunities, panelists will discuss roadblocks such as cost, availability, health concerns, FSMA, and perception. Alternative water sources may provide an opportunity for some in the agricultural industry to break free of community and environmental conflict by tapping previously unutilized or underutilized water sources, if given the right economic and social conditions. The potential exists for reliable and affordable agriculture water that does not compete with traditional ground and surface water sources. Explore how to realize this potential in Hawai'i.

Panelists:

Dana Okano, Ph.D., *Hawai'i Community Foundation*
 Steve Parabolicoli, *Mana Water*
 Sina Pruder, *Hawai'i Department of Health*
 Bahman Sheikh, Ph.D., *Bahman Sheikh Water Reuse Consulting*
 Barry Usagawa, *Honolulu Board of Water Supply*

Suggested Commitments:

Be open to alternative sources of water for agriculture and support infrastructure and costs that may be associated with embracing those alternatives.

Hawai'i's Fruitful Future

11:00 AM - 12:30 PM, Room 306AB

Moderator: Robert Paull, *University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources*

Learn about the opportunities and challenges of growing breadfruit in Hawai'i. Find out about techniques to improve the production and quality of Hawai'i fruits while lessening labor demand and production time. Hear about Hawai'i Fruit Growers' efforts to help local growers achieve better economic sustainability through crop selection to match location and the need to grow new farmers to match demand.

Speakers:

Noa Lincoln, Ph.D., *University of Hawai'i at Mānoa*
 Umi Martin, *Umi's Farm*
 Mark Suiso, *Hawai'i Tropical Fruit Growers and Makaha Mangos*

Suggested Commitments:

Eat more 'ulu. Try a new 'ulu recipe. Buy and consume local fruits. Commit to take steps to modernize and improve tropical fruit farming. Plant a wider variety of cultivars and species to insure sustainable stability through seasonal diversification. Testify in support of capital improvements

for agricultural infrastructure. Support food hubs and small scale distributors.



CONCURRENT SESSION 2

Environmental Health, Human Health, and Agriculture

1:30 PM - 2:30 PM, Room 310

Moderator: Michelle Galimba, *Kuahiwi Ranch; Agricultural Leadership Foundation of Hawai'i*

How to articulate the connection between environmental health, human health, and agriculture? How can re-localized, resilient agriculture support environmental and human health? How can the health community and the agricultural community work together to achieve common goals? How can environmental and human health be safeguarded while still allowing for innovative sustainable agriculture and value-added food processing? What process, policy, or legislative changes can make it less difficult for small-scale local farmers and food entrepreneurs to meet regulatory requirements?

Suggested Commitments:

Support policies that help Hawai'i increase agricultural production while at the same time preserving and enhancing human and environmental health. Take steps to make the permitting process more user-friendly without sacrificing commitment to health. Actively engage with the health community to help this sector to help local agricultural producers.



Farm to Brand: How Successful Enterprises Use Branding and Marketing to Grow Their Business

1:30 PM - 2:30 PM, Room 301AB

Moderator: Pomai Weigert, *GoFarm Hawai'i*

A strong brand can help set a business apart from competitors, increase sales, and drive customer loyalty. Creating a powerful brand message allows buyers to relate to a specific brand by inspiring, persuading, motivating, and ultimately creating the demand for the purchase of the product. Learn how to build and grow a successful brand using traditional and digital marketing techniques and how to leverage partnerships and agritourism.

Panelists:

Fung Yang, *Small Kine Farm*
 Amy Hennessey, *Ulupono Initiative*
 Lauren Ruotolo, *Hawai'i Institute of Pacific Agriculture*

Suggested Commitments:

Branding and marketing are essential for brands to thrive - the same way sunlight and water are essential for crops to grow. Be authentic, partner together, and connect in the community.

Connecting Farmers and Food Innovators: The Key Ingredients for New and Value- Added Food Product Development

1:30 PM - 2:30 PM, Room 304AB

Moderator: Chris Speere, Maui Food Innovation Center

The food and beverage marketplace is constantly changing as are consumer buying habits. Learn how farmers and food innovators can work together to stay current with consumer demand and satisfy emerging market niches and new lifestyle trends, while adapting to an evolving food culture in Hawai'i.

Panelists:

Rudy Balala, *Haliimaile Pineapple Company*
 Jimmy Chan, *Hawaiian Chip Company*
 Tracy Hayward, *Hana Horizons*
 Paula Hegele, *Maui Wine*

Suggested Commitments:

Create greater understanding of how farmers and food innovators can collaborate along the supply chain from field to finished specialty food product. Open communication channels between local farmers and food innovators to build a first class brand for Hawai'i made specialty foods. Farmers and food innovators commit to win-win partnerships that offer secured purchases of local agriculture inputs as a key ingredient for new and value-added food product development in Hawai'i.



CONCURRENT SESSION 3

Growing Resilience: Strategies for Hawai'i Women Farmers

2:45 PM - 3:45 PM, Room 310

Moderator: Frankie Koethe, O'ahu Resource Conservation & Development Council

This forum will showcase and embody the successes of women in Hawai'i agriculture. "It's real, it's hard, but it's attainable." The words of this Hawai'i woman farmer ring true for many. As the "culture" of agriculture is evolving, so is the identity of farmers, with increasing numbers of women engaged in farming and managing agribusinesses. Since 2016, O'ahu Resource Conservation & Development Council has been on the ground with women farmers providing resources to enhance the value chain on an individual and community level. By having a safe space to speak, conversations are developing dynamic solutions. On-farm workshops reached more than 200 women farmers and ranchers across the state, fostering a network for collaboration and community engagement. Through the Hawai'i Women Farmers Network, many agribusinesses have progressed and will continue to create new opportunities for a resilient and sustainable sector. With guest speakers who developed women farmer networks, advocated for rural communities, and created self-motivated agribusiness strategies, participants will

learn from stories and gather ideas for their business and communities. It is through community that understanding and cooperation is fostered, and strategies developed for a changing environment and local agriculture.

Panelist:

Brittany Anderson, *Owner/Farmer, Sugar Hill Farmstead Pono Correa, Double D Farm and Ranch, Pono Pacific Pomai Weigert, Hawai'i Agritourism Association; GoFarm Hawai'i*

Suggested Commitments:

Join a community of farming networks in your area. If you're a woman farmer, rancher, or agricultural professional, join the Hawai'i Women Farmers Facebook group, or refer a friend. Attend a future Hawai'i women farmers event.



Innovating from the Ground Up

2:45 PM - 3:45 PM, Room 301AB

Moderator: Danya Hakeem, Elemental Excelerator

Hawai'i has the opportunity to lead the global transition to a regenerative, climate-friendly agricultural system. But in order to do that, it will take visionary thinkers and community members with deep roots collaborating to solve Hawai'i's most pressing challenges. This panel will explore how we increase the appetite for innovation in agriculture and what we foresee for the future of Hawaii's food system. Elemental Excelerator is facilitating that future by supporting growing businesses like Farm Link Hawai'i and TerViva. Get to know how these entrepreneurs are contributing to a thriving agricultural sector and hear how to be a part of the solution.

Panelists:

Rob Barreca, *Farm Link Hawai'i*
 Warren Doi, *TerViva*

Suggested Commitments:

Commit to incorporate innovative ideas, business models, and technologies into your company or organization.



Reshaping Hawai'i's Agriculture: Developing a New Vision to Meet the Challenges

2:45 PM - 5:00 PM, Room 304AB

Moderator: Micah Munekata, Hawai'i Department of Agriculture

This session presents an opportunity to provide comments, feedback and guidance to the Hawai'i Department of Agriculture. The Department will soon unveil an initial draft of its new strategic plan to double local food production. Much of the draft is currently in concept form, as efforts include merging the plan

with legislative mandates requiring completion of similar planning efforts before the 2020 Legislature convenes. In its final form, the Department's strategic plan will serve as the blueprint to promote and protect agricultural businesses and resources in the same manner that other State functions promote and protect natural resources, public facilities, cultural assets, renewable energy, endangered species, and public welfare.

The Department is seeking comments on the initial draft strategic plan, goals and objectives, the current sector status today and how to shape the future. An opportunity to receive frank input from the agricultural community and leaders will help make the plan more robust, relevant and responsive to the sector. Following the strategic plan discussion, general comments and concerns from the audience will be addressed. Have you had any interactions with the Department lately? Share your experience—both positive and negative. Do you have any suggestions that could help the Department to improve or modify existing protocols? What additional services should the Department provide or offer? This is the critical moment for the sector to help guide the future of agriculture and the Department.

Panelists:

Jeri Kahana, *HDOA Quality Assurance Division Administrator*
 Matthew Loke, *Ph.D., HDOA Agricultural Development Division Administrator*
 Todd Low, *HDOA Agribusiness Development Corporation*
 Dean Matsukawa, *HDOA Agricultural Loan Administrator*
 Earl Yamamoto, *HDOA Planner*
 Phyllis Shimabukuro-Geiser, *Chairperson, Hawai'i Board of Agriculture*



CONCURRENT SESSION 4

Transformative Food Systems Education for the Anthropocene: Developing Sustainability Competencies for Leadership in the Era of Global Environmental Change

4:00 PM - 5:00 PM, Room 310

Moderator: Albie Miles, Ph.D., *University of Hawai'i - West O'ahu, Sustainable Community Food Systems Program*

The food system is a complex socio-ecological system and a primary driver of global environmental change. The food system contributes significantly to anthropogenic climate forcing and is an important factor in determining human health, air, water and soil quality, ecosystem functions, and the conservation of biodiversity. How food systems are structured and managed will have an overwhelming influence on the ability of global society to restore critical ecosystems services, mitigate and adapt to climate change, and ensure food security, human health and well-being into the future.

Understanding the systemic causes of pressing issues in the agri-food system and successfully addressing them, will require educating new generations of food system scholars and practitioners to think critically and across disciplinary boundaries and to engage through real-world problem solving in agriculture, policy-making, planning, business, research and education. This forum will engage participants in a discussion of a regional case study as an approach in transformative food systems education for achieving key sustainability competencies and leadership development in the era of global environmental change. Additional case studies in sustainable agriculture and food systems programming across the university system will be presented. Participants will be solicited to provide input into defining key agri-food systems competencies for the Anthropocene.

Panelists:

Walter Bowen, Ph.D., *University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources*
 Travis Idol, Ph.D., *University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Department of Natural Resources and Environmental Management*
 Bruce W. Mathews, Ph.D., *University of Hawai'i at Hilo, College of Agriculture, Forestry and Natural Resource Management*



Cooperatives and Community Wealth Building

4:00 PM - 5:00 PM, Room 301AB

Moderator: Teresa Young, *The Kohala Center*

Cooperatives play a critical role in building wealth in small communities. In particular, where the cost of doing business is high, cooperatives draw on a community's social capital to build a more self-reliant island-based economy. Diversified agriculture cannot flourish without a healthy local food system, where producers have the ability to aggregate, process, market, and transport a variety of products to market. Cooperatives themselves are an AGadaptation, inspired and created by their members, to form a collective with shared purpose and practices that create efficiencies across the value chain. The cooperative model allows producers to become more vertically integrated, gaining control over more than just crop production, in an effort to decrease costs, value add, or access new markets. Agricultural producers across Hawai'i are utilizing the cooperative business structure to increase the viability of individual farm and food businesses and to scale ways of feeding families. There are over 20 active cooperatives in Hawai'i working to increase wealth—ecologically, economically, culturally, and socially—in local communities. Learn about the role of cooperatives in an island economy and hear from co-op members who are working together to achieve success that would not be possible without collective effort and local leadership.

Panelists:

Laurie Carlson, *Kokua Market Natural Foods*
 Elizabeth Dunne, *Dunne Law LLC*
 Dana Shapiro, *Hawai'i 'Ulu Cooperative*
 Betty Spence, *Hawai'i Cattle Producers Cooperative*

Suggested Commitments:

Cooperatives are a social, economic, and cultural adaptation to challenges surrounding economies of scale in agriculture. Support and join a local cooperative.



Moving to Clean Energy: Agriculture Seizing the Advantage

4:00 PM - 5:00 PM, Room 306AB

Moderators: Sydney Keli'iipuleole, *Agricultural Leadership Foundation of Hawai'i*

As climate change hits home, government policy makers are pushing to get a handle on the science and impacts both current and projected while taking action to reduce the carbon footprint now. One of the most promising of options is to kick the fossil fuel habit and transition to clean energy; thus, reducing greenhouse gas emissions and offering significant financial gain. Join this panel and learn about major policies, initiatives, solutions and incentives launched and supported by local government, a non-profit and a social enterprise all working and leveraging assets to prove the energy systems can and must transform now. Also, hear how Hawai'i grown macadamia and sunflower is playing an active role now in crop-to-oil options.

Panelists:

Scott Glenn, *Hawai'i State Department of Health*
 Justin Gruenstein, *City and County of Honolulu Office of Climate Change, Sustainability & Resiliency*
 Bob King, *Pacific Biodiesel*
 Jeff Mikulina, *Blue Planet Foundation*

Suggested Commitments:

Support policy change makers seeking to address the biggest challenge of our era – climate change. Purchase from energy conscious providers of supplies and services. Have a free farm or ranch energy audit conducted. Reduce energy consumption through simple steps. Explore the USDA Rural Development's Rural Energy for America Program financial benefits and applicability.



Farm to Table Tastings and Refreshments Featuring the Agricultural Leadership Program Class XVI Graduation

5:00 PM - 7:30 PM, Ala Halawai Concourse and Room 313ABC

For more, see page 28.



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PROGRAM DETAILS

Wednesday, October 16, 2019

Grower-Buyer Meet-Up

6:30 AM - 8:30 AM, Room 308AB

Moderator: Michelle Gorham, *O'ahu Agriculture and Conservation Association*

Speakers:

Derek Kurisu, *KTA Super Stores*

Tisha Uyehara, *Armstrong Produce*

The Grower-Buyer meet-up supports local agricultural producers and the retail and wholesale relationships that grow our local agriculture sector. The event facilitates connections that lead to successful sales relationships through efficient one-on-one meetings where both parties present opportunity statements and needs. This knowledge exchange is designed to create understanding between growers and buyers about business practices essential for both parties to achieve long-term success. All are welcome, but pre-registration is required. Growers and Buyers must complete event registration forms. Event coordinators then create a meeting matrix based on compatibility. There is time for impromptu meetings at the very end of the session, too. Visit: <https://www.hiagconference.org/2019-grower-buyer.html> for complete details.

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Next Gen Presents the Future of Hawai'i's School Food System (2030)

8:30 AM - 9:30 AM, Room 310

Moderator: Paula Daniels, *Center For Good Food Purchasing*

It's time to take the bull by the horns and share our youth's 2030 vision statements for Hawai'i's School Food System. This will be an opportunity for you to hear about the takeaways from AG2019 Student Sessions, calls to action, how students plan to advocate for change and how you can become a solution-maker.

Suggested Commitments:

Engage the larger Hawai'i agriculture community to provide stakeholder feedback and support of the Youth's Vision for 2030.

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CONCURRENT SESSION 5

Supply Chain Impacts of FSMA: What's a Farmer to Do?

9:45 AM - 12:00 PM, Room 310

Moderator: Kevin Kelly, *North Shore Economic Vitality Partnership*

This forum will gather a panel of agriculture and food safety experts to discuss how the Food Safety and Modernization Act (FSMA) may impact business practices and what steps can be taken to minimize disruptions in the Hawai'i food supply chain. The conversation will focus on a spectrum of FSMA requirements (exemptions, labeling, traceability and documentation), liability issues, and procurement challenges, especially when working with small farms. Farmers can learn about what changes to expect from buyers and what to do to get ready for FSMA.

Panelists:

Lamont Brown, *Maya's Tapas & Wine*

Derek Kurisu, *KTA Superstores*

Lisa Rhoden, *North Shore Economic Vitality Partnership*

Bruce Silverglade, *OFW Law*

Warren Watanabe, *Maui County Farm Bureau*

Suggested Commitments:

Commit to understanding the requirements of the FSMA, aligning expectations of buyers and growers through clear and consistent communications, and embracing a culture of good agricultural practices and documentation that builds consumer confidence in the quality and safety of locally grown produce.

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Local for Local: OnBoarding Small Farmers to Distributed Ledger Technologies for Access to Alternative Financing

9:45 AM - 10:45 AM, Room 301AB

Moderator: Maria Palombini, *IEEE-Standards Association*

Local for Local Agriculture Blockchain is a start-up Hawai'i-based technology team seeking additional technologists, academia, growers and other supporters to assist small producers digitizing and capitalizing their operations to sustain and further cultivate the agricultural sector. Utilizing blockchain – linked data sets continue to expand in an open, distributed ledger to provide efficient and verifiable transaction records. With blockchain, producers can gain access to capital, new markets and provide for product traceability and auditing for consumer safety.

Suggested Commitments:

Learn more about how technology can advance individual and collective agricultural production in Hawai'i, including what needs to get done; how to get involved in this groundbreaking project; and how to collectively arrive at success.

Pathways to Sustainability

9:45 AM - 10:45 AM, Room 306AB

Moderator: Jacob Tavares, *Mahi Pono; Agricultural Leadership Foundation of Hawai'i*

Agriculture is frequently blamed for excessive consumption of natural resources and the disruption of natural ecosystems; yet, the demand for food, goods and services are all intrinsically bound up in the use of resources and ecosystems. This panel brings new approaches to the fundamental question of how communities attain sustainability and at what cost. Learn about an upcoming study to evaluate the public's willingness to pay (WTP) to preserve wildlife habitat and associated management options for balancing ecological-economic trade-offs in water diversion for food production, including public subsidies for efficient irrigation water and drought resistant crop development. Explore the practical application of effective microorganism technology as a means to control bacterial diseases in intensive shrimp production in harmony with the natural environment that results in increased sustainability of the production system. Join the new non-profit, Hawai'i Bioeconomy Trade Organization as it shares ideas for cross-industry and sector collaboration to take advantage of constructive and proactive paths to develop green fuels and expand local food production and reasonably compensate agriculture.

Speakers:

Gustavo Pinoargote, Ph.D., *University of Arizona, EM Research Organization*
 Joelle Simonpietri, *Hawai'i Bioeconomy Trade Organization*
 Rupananda Widanage, *University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Department of Natural Resources and Environmental Management*

Suggested Commitments:

Participants can make the commitment to convey the information to aquaculture industry players so that sustainability is put in the steering wheel of decision makers. Agree to participate in the University of Hawai'i's upcoming study, Agricultural Water Pricing, Local Food Production and Conservation of Wildlife Habitat in Hawai'i. Explore further opportunities for individual agricultural operations or affiliated associations to engage with the non-profit, Hawai'i Bioeconomy Trade Organization.

As John F. Kennedy once said, "Children are the world's most valuable resource and its best hope for the future." We need to invest time and resources into our future in order to change our current trajectory of agriculture. Come check out a few of the young rising stars in agriculture from Waipahu. Listen as they share their stories and backgrounds, see some of their recent projects and you'll begin to feel their passion for agriculture and for service. See what they are doing to initiate changes in agriculture. These students exemplify the FFA Motto: "Learning to Do, Doing to Learn, Earning to Live, Living to Serve."

Panelists:

Hannah Apostol, *Waipahu High School FFA*
 Darren Estal, *Waipahu High School FFA*
 Jhanella Gerardo, *Waipahu High School FFA*
 Mariah Iris Ramo, *Waipahu High School FFA*
 Vheena Sistoza, *Waipahu High School FFA*
 Sean Valencia, *Waipahu High School FFA*

Suggested Commitments:

Participants are encouraged to engage with the youth and invest in our future agriculturalists by giving time or other resources whenever possible.



Cultivation, Carbon and Collaboration: Adapting the Carbon Model for Hawai'i's Farms and Ranches

11:00 AM - 12:00 PM, Room 304AB

Moderator: Stephanie Mock, *Kualoa Ranch*

Hawai'i has the ambitious goal of carbon neutrality by 2045 and is focused on emissions reduction and efficiency of the transportation and energy sectors. With this effort, it is also important to prioritize carbon sequestration efforts or "carbon sinks" to maximize carbon management and neutrality. Many think of forests as the only avenue of carbon sequestration, but the potential for soils to sequester carbon, aiding in emissions reduction and efficiency is extensive. Farmers and ranchers help to create healthy soils that ultimately trap and store carbon from the atmosphere. By looking at farms and ranches' ability to provide this ecosystem service, "carbon farming" becomes a guiding principle of land management to sequester carbon while also providing value through creation of carbon farm plans, participation in carbon markets, ecosystem service payment programs and private sustainability efforts. This symposium will feature speakers discussing work with farms and ranches in California and Hawai'i using the lens of "carbon management" as a guiding principle for operations; thus, beginning a conversation about what may be needed to acquire value in the ecosystem services provided, specifically in carbon sequestration efforts of creating and maintaining healthy soils in Hawai'i.

Panelists:

Pelayo Alvarez, *Carbon Cycle Institute*
 Jayme Barton, *Healthy Soils Hawai'i*

CONCURRENT SESSION 6

Fostering the Future of Agriculture

11:00 AM - 12:00 PM, Room 301AB

Moderator: Ken Kozuma, *Waipahu Intermediate FFA*

The average age of a farmer continues to rise because traditional farming methods are becoming less and less appealing to the next generation of agriculturalists.

Susan Crow, Ph.D., *University of Hawai'i at Mānoa*
 Harry M. "Pono" von Holt, *Ponoholo Ranch*

Suggested Commitments:

Install one best management practice that sequesters carbon and creates healthier soils. Talk to local legislators and communities about creating a program to incentivize carbon sequestration on working lands.



Financing Makes the Farm Go-Round

11:00 AM - 12:00 PM, Room 306AB

Moderator: Jason Okuhama, *Commercial and Business Lending*

Take a relook at the financial position of your operation. Is the operation financially sustainable? Is it a passive "price taker" or a proactive "price maker?" How about the array of grant funding out there, and what can your operation take advantage of? Oh no; my operation is in financial trouble and needs guidance.

Learn the four basic components of farm information to jump start to a new vitality and sustainable financial future. Next explore the landscape of available grants to increase financial returns, create space for innovation, partnerships and access to technical assistance. Funding is available for fencing, irrigation, wildfire-suppression, best management practices, value-added production, pesticide safety and more, so why not take advantage of the resources. Learn about the key points to successful grant applications including eight points to message, 360 review of organizational assets, organizational areas of opportunity, how to find grants and partners to help with grant applications, as well as loans. Also, find out about no-cost mediation assistance that is available to producers, lenders, and others in the agricultural community for a variety of agricultural disputes. Mediation is a non-confrontational way to resolve disputes that often saves parties time and money.

Speakers:

Megan Blazak, *The Kohala Center*
 Michelle Gorham, *O'ahu Agriculture and Conservation Association*
 Buddy Nichols, *Agricultural Leadership Program Class XVI*
 Teya Penniman, *Hawai'i Agricultural Mediation Program*

Suggested Commitments:

Commit to building sound business practices as part of a sound agricultural practice; build a basic business plan; conduct a 360 assessment of my business; and explore grant opportunities quarterly to grow your business. Should financial trouble arise, do not wait but ask for assistance early.

CONCURRENT SESSION 7

Growing the Love of Agriculture through Education

1:00 PM - 2:00 PM, Room 310

Moderator: Natalie McKinney, *Kōkua Hawai'i Foundation*

A brighter future for local agriculture is on the horizon, thanks in part to the collaborative efforts of many to infuse agriculture into our systems of education for students of all ages, from preschool through post-secondary (P-20) levels in Hawai'i. Agriculture education is essential to growing future farmers and an ag-friendly society, while contributing in a critical way to the success of farm to school efforts by connecting students to where food comes from and why it matters. Incremental progress has been made to secure supportive policies and funding, while a grassroots movement is steadily growing within schools and communities. Local food producers play an important role in agriculture education by serving as mentors and strengthening agricultural literacy among children, youth, and adults through farm field trips and school visits. Participants in this session will deepen appreciation for the crucial role of education in revitalizing agriculture, as conveyed through the varied experiences of a university extension agent, kalo farmer and educator, two stellar FFA students, and a farm to school network coordinator. Attendees will have the opportunity to inspire future generations by sharing stories through print and digital media about experiences that have sparked a lifelong love of agriculture.

Panelists:

Bronson Azama, *Castle High School, FFA*
 Chynna Chun, *Mililani High School, FFA*
 Debbie Millikan, *O'ahu Farm to School Network, Hawai'i Farm to School Hui*
 Hōkūao Pellegrino, *Kamehameha Schools Maui and Noho'ana Farm*
 Glenn Teves, *University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Cooperative Extension Service Molokai*

Suggested Commitments:

Support school garden and agriculture education programs in local schools through community work days, consultations, demonstrations, and donations. Develop robust on-farm educational opportunities for students, families, educators, and policy makers. Support policies that advance agriculture education in Hawai'i, and participate in local and statewide networks for systems change.



Invasive Species in Hawai'i: Impact to Agriculture and Producers

1:00 PM - 2:00 PM, Room 301AB

Moderator: Michelle Starke, *Bayer Crop Science*

Invasive species are a pressing economic and quality of life concern for agriculture producers in Hawai'i. International

and national commerce, travel, the island's hospitable climate and lack of public awareness have led to new introductions and establishment of numerous invasive species. Successful control of invasive species will take adaptation and collaboration from several organizations along agricultural production chain and increase resiliency in the agricultural community. To mitigate the risks associated with invasive species, Hawai'i has established a biosecurity plan that emphasizes specific capacity needs to enhance control at entry points, post introduction response and control efforts, and raising public awareness of biosecurity and invasive species. Implementation of the plan is currently in progress with focus including resources and funding, promoting public awareness of risks, and developing and supporting control options and protocols. This forum discussion will include case analysis of current invasive species and economic threats, a progress update of the current status of Hawai'i's biosecurity plan, a discussion of how agricultural producers can help support the plan, control tactics and the importance of pest control tools.

Panelists:

Josh Atwood, Ph.D., *Hawai'i Department of Land and Natural Resources*

Zhiqiang Cheng, Ph.D., *University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Department of Plant & Environmental Protection Sciences*

Mike Melzer, Ph.D., *University of Hawai'i at Mānoa*
Michelle Starke, *Bayer Crop Science*

Suggested Commitments:

Advocate for federal and state governments to increase staff capacity and funding for biosecurity facilities, detection methodology and identification, monitoring technology, mitigation tools, and control and eradication programs. Identify opportunities for growers to engage in decision making regarding biosecurity and invasive species. Identify support needed by growers to mitigate invasive species impacts on production.

New Zealand: At the Crossroads of Culture, Agriculture and Eco-tourism

1:00 PM - 2:00 PM, Room 304AB

Speaker: Jamie Tuuta, *Chair, New Zealand Tourism Board*

Join one of AG2019's Keynote Speakers on a deeper dive into the topics presented in his keynote address. The agriculture sector has been a staple of New Zealand's economy, with the nation's history intertwined with its primary industries. Jamie will provide insight into the New Zealand experience and approach to position New

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Zealand as an efficient and sustainable producer of food and fiber products. He will discuss the Māori indigenous experience and objectives to land use and development underpinned by cultural values and a deep connection to place.



Time Tested and Now Trending

1:00 PM - 2:00 PM, Room 306AB

Moderator: David Kaapu, *Agricultural Leadership Foundation of Hawai'i*

Since 3,000 BC, agriculture and its production systems continue to evolve; yet, in this modern age many are looking back to time tested systems for answers to maintaining costs, effective and sustainable production. Attend this session to learn how utilizing natural farming methods can yield benefits in the production of vegetables, fruit and animals, and a learning lab which is yielding big benefits educating high school students, families and communities about food production. Explore alternatives to chemical controls through phenols and terpenes contained in the essential oils of certain plants. Applied as bacteria, fungal, insecticidal, nematocidal and herbicidal control, such organic products show promising application in semi-tropical environments. Finally, compost offers a wide range of benefits for production, including enhanced soil structure, increased microbial activity and reduced need for fertilizer applications. Learn more about the make-up of compost and its attributes, and how the Hawai'i Department of Agriculture's new initiative is offering 50% reimbursement for any commercial compost purchases up to \$50,000 per farm.

Speakers:

Dominique Depaz, *Agro Research International*
 David Fuentes, *Kahua Pa'a Mua*
 Todd Low, *Hawai'i Department of Agriculture*
 Fung Yang, *Small Kine Farm*

Suggested Commitments:

Explore the upside to natural farming by taking a class or reading more and then putting into practice a test crop or two alongside the control of your routine cropping system. Take the opportunity to explore the benefits of compost first hand with some dedicated applications and participation in the State's Compost Reimbursement Program.



CONCURRENT SESSION 8

Getting Proactive Against Theft, Vandalism and Trespassing

2:15 PM - 3:15 PM, Room 310

Moderator: Brian Miyamoto, *Hawai'i Farm Bureau*

Thieves know how to access your operation and escape with your hard-earned yields, supplies, tools and equipment. Vandals destroy property and equipment

and trespassers put the landowner at risk for liability. Attend this session to learn best practices to protect your operation and minimize risks, what the law requires you to do and how to press police and prosecutors to pursue justice.

Panelists:

Brittany Anderson, *Owner/Farmer Sugar Hill Farmstead*
 Janet Ashman, *Hawai'i Farm Bureau*
 Mark Fukui, *Contemporary Landscaping*
 Alan Gottlieb, *Alou Farms*

Suggested Commitments:

Do not give into thieves, vandals and trespassers; rather, follow the law regarding signage and invoice documentation and provide evidence and press the police and prosecutors to take action to enforce laws.



Options and Opportunities for Agricultural Waste

2:15 PM - 3:15 PM, Room 301AB

Moderator: Carl Campagna, *Hawai'i Bioeconomy Trade Organization*

How much of each harvest is not marketable because it is pest-damaged, misshapen, mis-colored, or otherwise off-specification? How are animal feed supplies or waste disposal options changing because of the new food safety and clean water regulations? Hawai'i's transition from large centrally managed plantations to small diversified farms has left a gap in the agricultural waste management and electricity generating sectors that was filled by sugar mills. In addition, waste management requirements and regulations for farmers and agri-processing facilities are growing more complicated and costly -- and can even force a farm to close. In this forum, farmers, agri-processors and cooperatives, and fuel/energy practitioners will explore options and opportunities for agricultural waste. The new Hawai'i Bioeconomy Trade Organization will give an overview of the technical options for re-use of agricultural waste and explore a case study to beneficially and safely re-use waste and return the nutrients as soil amendments. A mapping exercise of current and near-term farming activity across the state will provide a better understanding of the type and volume of agricultural waste generated and help determine what opportunities may exist for distributed waste re-use projects for each of the islands.

Panelists:

Bob King, *Pacific Biodiesel*
 Aaron Kirk, *Hawai'i Gas*
 Joelle Simonpietri, *Simonpietri Enterprises LLC*

Suggested Commitments:

Identify projects to re-use agricultural waste, and sketch out a road map to implement the projects.

Financing Models for Developing Small Scale Agriculture

2:15 PM - 3:15 PM, Room 304AB

Moderator: Eric Bowman, *The Kohala Center*

Many aspiring and existing small businesses lack access to sufficient capital to launch, sustain, and grow successful enterprises. While a variety of financial institutions, government programs, and nonprofit organizations offer loans to small businesses in Hawai'i, agricultural operations in particular fail to qualify for many programs because they lack collateral, lack sufficient cash to meet minimum equity requirements for the projects they seek to finance, or fail to meet program eligibility requirements, such as experience, operating history, and tax and financial statements. Community development financing models, and in particular those that are culturally appropriate and place-based, can be a solution for the unique conditions faced by producers. Moreover, these models can serve multiple purposes, from financing a start-up and helping a company scale, to catalyzing relationships that continue to nourish the small business as it evolves and matures. Join in a discussion on how lending to small scale farmers, ranchers, and food producers can play an important role in building wealth – ecologically, economically, culturally, and socially – throughout Hawai'i's rural communities.

Panelists:

Robert Crowell, *OHA Loan Programs*
 Aaron Ellis, *Feed the Hunger Foundation*
 Anne Lufkin, *Kiva*
 Mary Spadaro, *Slow Money Hawai'i*

Suggested Commitments:

Consider personally making peer-to-peer investments in local agriculture.

The Digital Wave: Offering Increased Certainty and Productivity

2:15 PM - 3:15 PM, Room 306AB

Moderator: Mark Stoutemyer, *Corteva Agriscience; Agricultural Leadership Foundation of Hawai'i*

Agriculture is fraught with uncertainty and negative impacts hit small producers hard, and unfortunately this state will only escalate in the era of climate change. Bayer Crop Science Hawai'i will share how to unlock productivity and success on small farms and ranches by leveraging data, technology and systems approaches to maximize returns on inputs. Data layers can be captured on soil, weather and crops modeled to create prescriptive solutions to maximize yield, quality, soil health, insects and diseases. Finally, Smart Yields will highlight work with the Rocky Mountain Farmers Union to deliver a state-of-the-art network to protect crops and optimize operations by deploying hundreds of remote sensors and low-power, long range wireless networks to provide real-time crop monitoring, weather alerts, trends, forecasts and recommendations.

Speakers:

Vincent Kimura, *Smart Yields*
 Bruce Schnicker, Ph.D., *Bayer*

Suggested Commitments:

Support both agricultural as well as STEM education programs that will be critical to the development of successful farming systems for the future.



CONCURRENT SESSION 9

Cultivating and Sustaining Hawai'i's Farm to School Movement

3:30 PM - 4:30 PM, Room 310

Moderator: Lydi Bernal, *Hawai'i Public Health Institute*

Farm to school is a powerful driver of systems change in the areas of agriculture, education, and health. Successful farm to school programs actively incorporate the use of school gardens and experiential education around agriculture, culinary arts, nutrition, and food systems, while making significant school meal improvements through staff training, menu development, scratch cooking, and local procurement. In 2010, the Hawai'i Farm to School Hui formed as a statewide network comprised of five island-level networks, community organizations, schools and state agencies with a collective mission to strengthen Hawai'i's farm to school movement. Through implementation of innovative tools such as the collective impact model and sociocratic governance, the Hui has achieved major milestones and continues to play a crucial role in contributing to the revitalization of agriculture in Hawai'i. Participants in this session will gain insights into the movement-building efforts, tap into expansion of the Hawai'i Department of Education's 'Aina Pono program, explore the Hawai'i 'Ulu Producers Cooperative's successful aggregation model, and see how The Bennett Foundation is working to impact the health of communities by bringing Farm to ECE (early care and education) to the youngest keiki.

Speakers:

Lydi Bernal, *Hawai'i Public Health Institute*
 Dexter Kishida, *Hawai'i Department of Education, 'Aina Pono*
 Kristy Sakai, *The Bennett Foundation*
 Dana Shapiro, *Hawai'i 'Ulu Producers Cooperative*

Suggested Commitments:

Connect with Hawai'i Farm to School Hui members, explore resources, and sign up for updates at <https://www.hiphi.org/farmtoschool>. Support policies and dedicated positions and funding at the school, community, and state levels to grow Hawai'i's farm to school movement.

How Land Trusts Can Help Hawai'i Agriculture Thrive

3:30 PM - 4:30 PM, Room 301AB

Moderator: Chad Cherefko, U.S. Department of Agriculture - Natural Resources Conservation Service

Although land trusts are often associated with preserving conservation lands, land trusts have a variety of tools to help Hawai'i agriculture thrive, including agricultural conservation easements that can compensate landowners for dedicating land to agriculture or ranching, and provide affordable housing for farm and ranch workers. Benefits to landowners can include compensation to re-invest in the land or pay down loans. Protection of the land from development can help ensure property values are kept low enough that descendants can inherit the lands without having to sell some of the land to pay inheritance taxes.

Speakers:

Dale Bonar, *Land Conservation Consulting*

Lea Hong, *The Trust for Public Land*

Laura Kaakua, *Hawaiian Islands Land Trust*

Suggested Commitments:

Explore options to dedicate land to agriculture or ranching and receive compensation to re-invest in the land or pay down loans. Educate other landowners regarding the benefits of agricultural conservation easements.

2018 Farm Bill Update – USDA Program Opportunities for Agricultural Producers

3:30 PM - 4:30 PM, Room 304AB

Moderator: Travis Thomason, U.S. Department of Agriculture - Natural Resources Conservation Service

This symposium will provide updated 2018 Farm Bill information to agricultural producers to better understand and capitalize on USDA funding. The USDA's farm production and conservation agencies - Farm Service Agency (FSA) and Natural Resources Conservation Service (NRCS) - have USDA service centers, in counties statewide, to provide support to local producers with financial assistance, conservation planning, risk management programs, and so much more.

Farm Service Agency implements agricultural policy, administers credit and loan programs, and manages conservation, commodity, disaster and farm marketing programs. This session will focus on program updates including information on the new Disaster Relief Act of 2019, Noninsured Crop Disaster Assistance Program (NAP), and Farm Loan Programs.

Natural Resources Conservation Service recognizes that conservation by farmers, ranchers, and forest

owners today means thriving and sustainable agriculture for our future. Conservation of Hawai'i's private lands not only results in healthy soils and forests, clean and abundant water, and resilient ecosystems, but also provides productive and sustainable working lands. NRCS has tools and resources to help producers to voluntarily improve the natural resource conditions of land. Program updates will be provided including: The Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP), and the Regional Conservation Partnership Program (RCPP).

Panelists:

Al Frenzel, U.S. Department of Agriculture - Farm Service Agency

Susan Kubo, U.S. Department of Agriculture - Natural Resources Conservation Service

Suggested Commitments:

Contact the local U.S. Department of Agriculture Service Center or visit <https://www.fsa.usda.gov> or <https://www.nrcs.usda.gov> for more information.



Ag-GAP-tation: CTAHR's Role in Supporting Hawai'i's Agricultural Food Safety Needs

3:30 PM - 4:30 PM, Room 306AB

Moderator: Kylie Tavares, University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Cooperative Extension

Changes in the farm food safety landscape have created doubt and concerns about the ability as an industry to adapt. Despite the challenges associated with meeting regulations or third-party audits, there is strong support available through the local efforts of the University of Hawai'i at Mānoa Cooperative Extension Farm Food Safety Team and industry partners to assist growers with adapting in the face of food safety change. Learn more about available resources in this breakout session.

Speakers:

Emilie Kirk, University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Cooperative Extension
Sharon Motomura-Wages, University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Cooperative Extension

Joshua Silva, University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Cooperative Extension

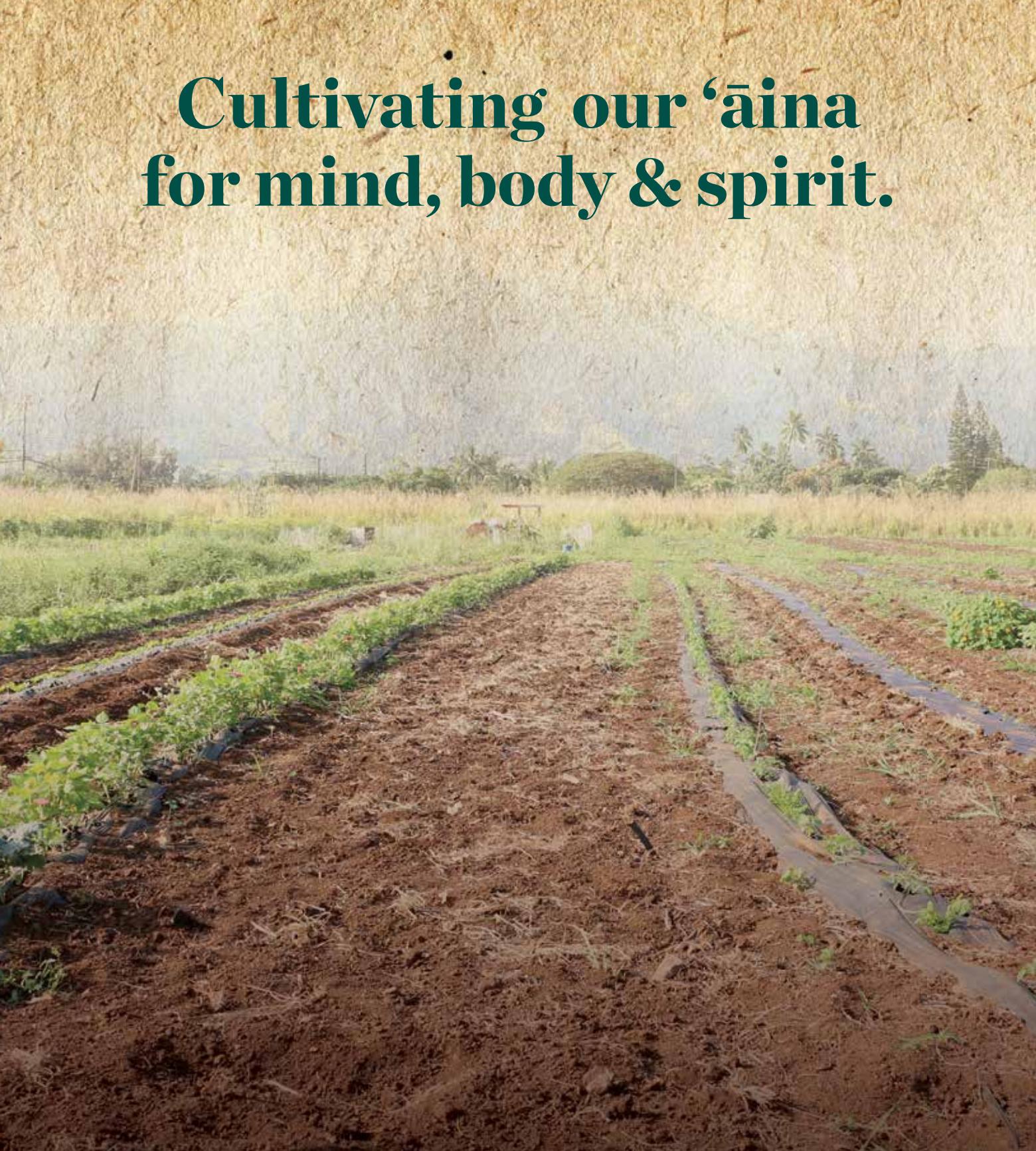
Kylie Tavares, University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Cooperative Extension

Jensen Uyeda, University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources, Cooperative Extension

Suggested Commitments:

Commit to making efforts to keep produce safe, because food safety begins on the farm, but it is everyone's responsibility.

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