

Emilie Kirk  
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**College of Tropical Agriculture and Human Resources**  
Department of Tropical Plant and Soil Sciences  
FTE Distribution: 100% Extension (E)

### **Education**

<u>Degree</u>	<u>University</u>	<u>Major</u>
Master of Science	University of California, Davis	Soils and Biogeochemistry
Bachelor of Science	University of California, Davis	International Agricultural Development

### **Professional Appointments**

<u>Title</u>	<u>Employer</u>	<u>Dates Employed</u>
Assistant Extension Agent	University of Hawaii at Manoa	2/2019 – Present
Junior Extension Agent	University of Hawaii at Manoa	10/2017 – 2/2019

### **Bibliography**

#### Conference Presentations

1. **Kirk, E.**, Isele, E., Ahmad, A. 2023. Cacao Living Cages: A Proof-of-Concept Trial for Alternative Cacao Establishment. American Society for Horticultural Sciences Annual Conference. Orlando, FL. Aug 1.
2. Tello, N., Pearson, B., Gomez, C., Fisher, P., Langenhoven, P., **Kirk, E.**, Ahmad, A., Collier, E., Radovich, T., Niu, G., Masabni, J. 2023. Multi-site Characterization of Ginger and Turmeric Rhizome Yield and Quality. American Society for Horticultural Sciences Annual Conference. Orlando, FL. Aug 2.
3. Ahmad, A., Wang, K.H., Uyeda, J., Wages, S., **Kirk, E.**, Gutierrez-Coarite, R., Silva, J., Hawkins, J., Radovich, T., Galanti, R., Tavares, K., Sugano, J. 2023. Revitalizing the Declining Hawai'i Banana Industry with Clean, Virus-Free Planting Materials and a Statewide Extension Outreach Program. American Society for Horticultural Sciences Annual Conference. Orlando, FL. Aug 1.
4. Kobayashi, K., Gaughen, K., **Kirk, E.** 2023. A Mentor-Mentee Graduate Scientific Communications Course [Poster]. American Society for Horticultural Sciences Annual Conference. Orlando, FL. Aug 4.
5. **Kirk, E.**, Tavares, K., Calpito, J., Motomura-Wages, S., Bingham, J.P., Ahmad, A., Uyeda, J., Collier, E., Radovich, T. 2022. Describing Genotype x Environmental Influence on Turmeric Yield and Quality to Adapt to a Changing Climate. *In workshop: Cultivation and Application of Medicinal Plants in Plant, Human and Animal Health and How They Are Affected By Climate Change*. American Society for Horticultural Sciences Annual Conference. Chicago, IL. Aug 2. (Invited)
6. Tavares, K., **Kirk, E.**, Calpito, J., Wages, S.A., Bingham, J.P., Ahmad, A.A., Silva, J., Uyeda, J., Sugano, J., Collier, E., Radovich, T. 2022. Evaluating diverse turmeric

- (*Curcuma longa*) cultivars for commercial production in Hawai'i [Poster]. Hawai'i Agriculture Conference. Honolulu, HI. Sep 27-28.
7. **Kirk, E.** 2022. Language Access to Support a More Inclusive Extension System in Hawai'i [Poster]. Western Extension Leadership Development Seminar. San Diego, CA. Sep 19.
  8. **Kirk, E.**, Tavares, K., Calpito, J., Motomura-Wages, S., Bingham, J.P., Ahmad, A., Uyeda, J., Collier, E., Radovich, T. 2022. Evaluating diverse turmeric (*Curcuma longa*) cultivars for commercial production in Hawai'i. American Society for Horticultural Sciences Annual Conference. Chicago, IL. Aug 2.
  9. Keach, J., **Kirk, E.**, Hampton, M., Hanakawa, C., Silva, J., Hawkins, J., Ooki, N., Tavares, K., Ahmad, A., Eng, S., Settlege, R., Christobal, H. 2022. CTAHR Seed Hui, Extension, and Participatory Breeding. Hawai'i Seed Summit. Online. Mar 26.
  10. **Kirk, E.**, Tavares, K., Calpito, J., Wages, S., Bingham, J., Teves, G., Ahmad, A., Silva, J., Uyeda, J., Sugano, J., Collier, E., and Radovich, T. 2021. Assessing Yield and Curcuminoid Content for 6 Varieties of Turmeric (*Curcuma longa*) Grown in Kauai [Poster]. The American Society for Horticultural Science Annual Conference. Denver, CO. Aug 7. Abstract published in: HortScience 56(9):S260.  
<https://doi.org/10.21273/HORTSCI.56.9S.S1>
  11. Ahmad, A., Radovich, T., Uyeda, J., Wages, S., Tavares, K., **Kirk, E.**, Silva, J. 2021. Root:Shoot Ratio is Sweet Corn and Soybean Under Different Applications of Organic Amendments. The American Society for Horticultural Science Annual Conference. Denver, CO. Abstract published in: HortScience 56(9):S260.  
<https://doi.org/10.21273/HORTSCI.56.9S.S1>
  12. **Kirk, E.**, Tavares, K., Silva, J., Motomura-Wages, S.A., Uyeda, J. 2019. Ag-GAP-tation: CTAHR's Role in Supporting Hawai'i's Agricultural Food Safety Needs [Panel Presentation]. Hawai'i Agricultural Conference. Honolulu, HI. Oct 16.  
<https://www.hiagconference.org/2019program.html>
  13. Tavares, K., Radovich, T., Bingham, J., Calpito, J., Ahmad, A., **Kirk, E.**, Teves, G., Motomura-Wages, S., Silva, J., Uyeda, J., Sugano, J., Nakamura-Tengan, L. (2019, July 21-25). Yield and Quality of Turmeric and Related Germplasm on Maui [Poster]. The American Society for Horticultural Science Annual Conference. Las Vegas, NV.  
[https://cdn.ymaws.com/ashs.org/resource/resmgr/2019conference/2019\\_abstract\\_supplement.pdf](https://cdn.ymaws.com/ashs.org/resource/resmgr/2019conference/2019_abstract_supplement.pdf)
  14. Sengxua, P., Jackson, T.M., **Kirk, E.**, Bouahom, B., Wade, L. 2015. Capacity building and external linkages assist use and integration of technology options for research and development projects. 777-780. "Building Productive, Diverse and Sustainable Landscapes". In: T. Acuña, C. Moeller, D. Parsons and M. Harrison, eds. Proc. of the 17<sup>th</sup> Australian Agronomy Conference, Hobart, Tasmania.  
<http://agronomyaustraliaproceedings.org/images/sampled/ASA17ConferenceProceedings2015.pdf>
  15. **Kirk, E.**, Linquist, B.A., van Kessel, C. 2014. Measuring subsidence in a degraded peat soil: nitrogen mineralization under rice cultivation. Soil Science Society of America Ecosystem Services Conference – Soil's role in restoring ecosystem services, Sacramento, CA. <https://www.soils.org/meetings/specialized-conferences/ecosystem-services/abstracts>

16. Jackson, T.M., Sensourivong, T., Thiravong, K., **Kirk, E.**, Pathoummalangsy, K., Armstrong, J., Samadmanivong, S., Xayavong, S. 2014. Linking research and extension at the local level through on-farm research. 136-142. “A policy dialogue on rice futures: rice-based farming systems research in the Mekong region”. In: Robins, L., *ed.* ACIAR Proc. No. 142. Australian Centre for International Agricultural Research, Phnom Penh, Cambodia. <https://www.aciar.gov.au/sites/default/files/legacy/pr142-web.pdf>
17. **Kirk, E.**, Linquist, B.A., van Kessel, C. 2013. Nitrogen cycling and rice crop management: implications for subsidence of delta peat soils. SSSA-ASA-CSSA International Annual Meeting, Tampa, FL. <https://dl.sciencesocieties.org/publications/meetings/2013am/11233/80382>

### **Refereed Journal Publications**

- Tavares, K., **Kirk, E.**, Motomura-Wages, S., Calpito, J., Bingham, J.P., Ahmad, A., Flanagan, K., Uyeda, J., Kantar, M., Radovich, T. 2022. Genotypic and Environmental Influence on Fresh Rhizome Yield of Turmeric (*Curcuma longa* L.). *Agronomy*, 2022, 12, 2703. <https://doi.org/10.3390/agronomy12112703>
- Paudel, R., Bartlett, B., Zamora, C., Gutierrez-Coarite, R., Keach, J., Hawkins, J., Ahmad, A., Motomura-Wages, S., **Kirk, E.**, Kantar, M., Lamour, K., Bernabe, C., Shintaku, M., Miyasaka, S. 2022. Breeding and selection of Taro (*Colocasia esculenta*) genotypes for improved disease-resistance in Hawai‘i. *Plants, People, Planet*, 1– 23. <https://doi.org/10.1002/ppp3.10335>
- Kirk, E.**, van Kessel, C., Horwath, W.H., Linquist, B.A. 2015. Estimating Annual Soil Carbon Loss in Agricultural Peatland Soils Using a Nitrogen Budget Approach. *PLoS ONE*, 10(3), e0121432. <https://doi.org/10.1371/journal.pone.0121432>
- Espe, M.B., **Kirk, E.**, van Kessel, C., Horwath, W.H., Linquist, B.A. 2015. Indigenous Nitrogen Supply of Rice is Predicted by Soil Organic Carbon. *Soil Science Society of America Journal*, 79: 569-576. <https://doi.org/10.2136/sssaj2014.08.0328>
- Jackson, T.M., **Kirk, E.**, Pathoummalangsy, K., Sensourivong, T., Smith, J., Samadmanivong, S., et al. 2014. “Het tua jing”: experiences with on-farm research for local stakeholders in southern Laos. *Lao Journal of Agriculture and Forestry*, 30.

### **Extension Publications and Fact Sheets**

1. **Kirk, E.**, Silva, J., Keach, J., Hampton, M., Hanakawa, C. 2023. Needs and Interests of Experienced Hawai‘i Seed Savers. College of Tropical Agriculture and Human Resources, University of Hawai‘i at Mānoa. <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/SA-24.pdf>
2. **Kirk, E.**, Tavares, K., Radovich, T., Flanagan, K., Bingham, J.P., Ellinwood, J., Wages, S., Ahmad, A., Uyeda, J., Paull, R.E., Silva, J., Bryant, G., Collier, E., Sugano, J. 2023. Hawai‘i Turmeric Production Guidelines. College of Tropical Agriculture and Human Resources, University of Hawai‘i at Mānoa. <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/VC-9.pdf>
3. Le, T., Ahmad, A., Brown, E., Crum, J., Wong, A., Sand, S., Oshiro, M., **Kirk, E.** 2022. Rates of stress, depression, and suicide among Hawaii agricultural producers & allied professionals. Extension Publications MH-1. University of Hawai‘i at Manoa. Honolulu, HI. <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/MHI-1.pdf>

4. **Kirk, E.**, Sand, S., Bloese, J., Gutierrez-Coarite, R., Keach, J., Eng, S. 2021. COVID-19 Hawaii Agriculture Survey: Initial and On-going Impacts. University of Hawai‘i at Manoa. Honolulu, HI.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=70601&dt=3&g=12>
5. **Kirk, E.**, Sand, S., Katulski, S. 2020. Household food security. University of Hawai‘i at Manoa. Honolulu, HI.  
<https://cms.ctahr.hawaii.edu/Portals/0/DNNGalleryPro/uploads/2020/5/27/Household%20Food%20Security%205%202020.pdf>
6. **Kirk, E.**, Katulski, S., Sand, S. 2020. Local food resources: Produce edition. University of Hawai‘i at Manoa. Honolulu, HI.  
<https://cms.ctahr.hawaii.edu/Portals/0/DNNGalleryPro/uploads/2020/5/27/Local%20Produce%205%202020.pdf>
7. Katulski, S., **Kirk, E.**, Sand, S. 2020. Local food resources: Protein edition. University of Hawai‘i at Manoa. Honolulu, HI.  
<https://cms.ctahr.hawaii.edu/Portals/0/DNNGalleryPro/uploads/2020/5/20/Local%20Protein%205%202020.pdf>

### **Web-Based Extension Newsletter Articles**

1. Keach, J., **Kirk, E.** 2023. A Vegetable Trial of Neglect: Cultivars producing, while untended, during COVID-19 lockdown. *Hānai ‘Ai The Food Provider* Vol. 50: April, May, June 2023. University of Hawai‘i at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=72145&dt=3&g=12>
2. **Kirk, E.**, Keach, J. 2023. Feature Farmers: University of Hawai‘i Seed Lab. *Hānai ‘Ai The Food Provider* Vol. 49: January, February, March 2023. University of Hawai‘i at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=72082&dt=3&g=12>  
Interview video: <https://www.youtube.com/watch?v=m6BkYiMNqo4>
3. **Kirk, E.** 2022. Feature Farmer: Rainbow Roots. *Hānai ‘Ai The Food Provider* Vol. 48: October, November, December 2022. University of Hawai‘i at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=71773&dt=3&g=12>
4. Hanakawa, C., Keach, J., **Kirk, E.**, Silva, J., Hampton, M. 2022. The Need for Seed: Surveying the Interests of Local Seed Growers. *Hānai ‘Ai The Food Provider* Vol. 48: October, November, December 2022. University of Hawai‘i at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=71758&dt=3&g=12>
5. Martin, U., **Kirk, E.** 2022. The Mango Loa Project: A Comparison of Two High Density Orchard Management Systems for Mangoes. *Hānai ‘Ai The Food Provider* 46 April, May, June 2022. Sustainable and Organic Agriculture Program, University of Hawaii at Manoa.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=71211&dt=3&g=12>
6. Ahmad, A., Radovich, T.J.K., Uyeda, J., Motomura, S., **Kirk, E.**, Silva, J., Tavares, K., Gutierrez-Coarite, R., Hawkins, J., and Sugano, J. 2022. Intercropping: A Sustainable Strategy for Hawaii’s Small Farm Holders. *Hānai ‘Ai The Food Provider* 45: January,

February, March 2022. Sustainable and Organic Agriculture Program, University of Hawaii at Manoa.

<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=71116&dt=3&g=12>.

7. **Kirk, E.**, Tavares, K., Calpito, J., Wages, S., Bingham, J.P., Ahmad, A., Uyeda, J., Collier, E., Radovich, T. 2022. Assessing Yield and Curcuminoid Content for 6 Varieties of Turmeric (*Curcuma longa*) Grown on Kaua‘i. *Hānai ‘Ai The Food Provider* 45: January, February, March 2022. University of Hawai‘i at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=71123&dt=3&g=12>
8. Tavares, K., **Kirk, E.**, Calpito, J., Bingham, J.P., Wages, S., Ahmad, A., Uyeda, J., Collier, E., Radovich, T. 2022. Yield and Quality of Turmeric Grown on Maui. *Hānai ‘Ai The Food Provider* 45: January, February, March 2022. University of Hawai‘i at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=71121&dt=3&g=12>
9. Silva, J., Tavares, K., Hawkins, J., **Kirk, E.** 2022. Sound Cannons for Bird Deterrence: Regulations and Noise Complaints. *Hānai ‘Ai The Food Provider* 45: January, February, March 2022. University of Hawai‘i at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=71125&dt=3&g=12>
10. Manandhar, R., Keach, J., **Kirk, E.** 2022. Three promising sweet potato varieties for Kaua‘i from a 2019 trial. *Hānai ‘Ai The Food Provider* 45: January, February, March 2022. University of Hawai‘i at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=71115&dt=3&g=12>
11. **Kirk, E.**, Isele, E., Ahmad, A. 2021. Cacao Living Cages: A Proof-of-Concept Trial for Alternative Cacao Establishment. *Hānai ‘Ai The Food Provider* 43: July, August, September 2021. University of Hawaii at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=69151&dt=3&g=12>
12. Ahmad, A., Wang, K., Radovich, T., Uyeda, J., Motomura-Wages, S., **Kirk, E.**, Silva, J., Gutierrez-Coarite, R., Tavares, K., Sugano, J. 2021. Transitioning Tissue Culture Banana Seedlings from Lab to Field. *Hānai ‘Ai The Food Provider* 43: July, August, September 2021. University of Hawaii at Mānoa. College of Tropical Agriculture and Human Resources.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=69436&dt=3&g=12>
13. **Kirk, E.** 2021. Feature Farmer: Sakda Farm. *Hānai ‘Ai The Food Provider* Vol. 41, Winter 2021.  
<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=67961&dt=3&g=12>
14. **Kirk, E.** 2020. Feature Farmer: Kaua‘i Glory Farm. *Hānai ‘Ai The Food Provider* Vol. 39, Fall 2020.  
<https://gms.ctahr.Hawaii.edu/gs/handler/getmedia.ashx?moid=67428&dt=3&g=12>
15. Ahmad, A., Uyeda, J., Radovich, T., Motomura-Wages, S., Silva, J., **Kirk, E.**, Tavares, K., Sugano, J. 2020. Guava Fruit Bagging for Bird and Fruit Fly Damage Control. Sustainable and Organic Agriculture Program. *Hānai ‘Ai The Food Provider* 39: July 2020-September 2020. University of Hawaii at Mānoa. College of Tropical Agriculture

and Human Resources.

<https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=67440&dt=3&g=12>

16. Ahmad, A., Uyeda, J., Radovich, T., Sugano, J., Motomura, S., Tavares, K., Silva, J., **Kirk, E.** 2020. Evaluating the quality of locally produced liquid organic fertilizer for seedlings quality and crop yield. *Hānai 'Ai The Food Provider* 38: Summer 2020. <https://gms.ctahr.Hawaii.edu/gs/handler/getmedia.ashx?moid=67113&dt=3&g=12>
17. Silva, J., Uyeda, J., Tavares, K., Hawkins, J., Motomura-Wages, S.A., Akahoshi, K., **Kirk, E.** 2020. COVID-19 Farm Food Safety Reminders. *Hānai 'Ai The Food Provider* 37: January 2020-March 2020. University of Hawaii at Mānoa. College of Tropical Agriculture and Human Resources. <https://gms.ctahr.hawaii.edu/gs/handler/getmedia.ashx?moid=66889&dt=3&g=12>
18. **Kirk, E.** 2019. Feature Farmer: Sustainable Boost. *Hānai 'Ai The Food Provider* 34: Summer 2019. <https://gms.ctahr.Hawaii.edu/gs/handler/getmedia.ashx?moid=65966&dt=3&g=12>

### **Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)**

#### Extension Videos, Web-Based Applications, Websites:

1. **Kirk, E.**, Sugano, J. Local Immigrant Farmer Education Website. <https://cms.ctahr.hawaii.edu/life>
2. Ooki, N., Hampton, M., Keach, J., **Kirk, E.**, Hanakawa, C. Seed Saving – GET Local Website. <https://manoa.hawaii.edu/ctahr/getlocal/projects/seed-saving/>
3. CTAHR Sustainable & Organic Agriculture Program (SOAP) digital media contributor:
  - a. YouTube Channel (HISustainAg): <https://www.youtube.com/channel/UCxtjiseeHHUxty-0k0cLwFA>
  - b. Website: <https://cms.ctahr.hawaii.edu/soap/>
  - c. Quarterly digital newsletter co-reviewer: <https://cms.ctahr.hawaii.edu/soap/Hanai-Ai>
4. Sugano, J., Radovich, T., Uyeda, J., Ahmad, A., Silva, J., **Kirk, E.**, Collier, E., Bost, J., Teves, G. Seed Saving: Eggplant. University of Hawaii at Manoa. <https://youtu.be/8qO1Y7lwbq0>
5. Ooki, N., Silva, J., Kawabata, A., **Kirk, E.**, St. Pierre, J. 2018 Agriculture in Hawai'i. Google Expeditions app, Google. <https://poly.google.com/view/2GXsp3pbOR->
6. **Kirk, E.** 2018. School Garden Resources. Tropical Topics: Web Links. University of Hawai'i Master Gardener website. CTAHR. <https://cms.ctahr.Hawai'i.edu/uhtmprogram/Tropical-Topics>
7. **Kirk, E.** 2018. Kaua'i Master Gardener training course on-line "textbook." University of Hawai'i Master Gardener website.

#### **Leadership Roles**

- CTAHR Cooperative Extension Language Access Coordinator. UH Language Access Committee. Jul 2021 – Present. <https://www.hawaii.edu/offices/eo/language-access/>
- University of Hawaii Professional Assembly (UHPA), Faculty Representative for Cooperative Extension Services: Kaua'i County, Oct 2020 – present
- Kaua'i Master Gardeners, Program Coordinator, Oct 2017 – Dec 2019
- East Kaua'i Soil & Water Conservation District, Board Member, Dec 2021 – present

- CTAHR Search committees:
  - o Committee chair, TPSS Integrated Systems Researcher, Kaua'i County. 2019 – 2020
  - o Committee chair, Kauai County Ornamental/Landscape/Floriculture Extension Agent, 2019
  - o Committee member, Kauai County Administrator, 2019 – 2020
  - o Committee member, Kauai County Intergenerational Programs Extension Agent, 2019

## **Grant Support**

### **As Principal Investigator**

1. **Kirk, E.**, Silva, J. Pacific Food Safety Education and Training Collaborative. Oregon State University. USDA-NIFA Food Safety Outreach Program subaward. 9/2023 – 9/2026. \$59,971
2. **Kirk, E.**, Yamamoto, J., Motomura Wages, S., Gutierrez-Coarite, R., Tavares, K., Silva, J., Ahmad, A., Uyeda, J., Keach, J., Manandhar, R., Sand, S., Eng, S. Limited English and Immigrant Farmer Education (LIFE): Improving Access to Support Services for Hawaii's Agricultural Population with Limited English Proficiency. USDA-OPPE. 9/30/2022 – 9/28/2025. \$743,667
3. **Kirk, E.**, Hawkins, J., Manandhar, R., Nakamura-Tengan, L., Silva, J., Sugano, J, Tavares, K., Uyeda, J., Motomura-Wages, S. Immigrant Farmer Support Program – Farm Food Safety. CTAHR supplemental funds. 2018 – 2019. \$25,000
4. **Kirk, E.**, Manandhar, R. Expanding Cacao Research on Kaua'i. CTAHR supplemental funds. 2018 – 2019. \$10,500

### **As Co-Investigator**

5. Yamamoto, J., Ediger, L., **Kirk, E.** GoFarm Hawai'i: Growing Hawai'i's Agricultural Industry. USDA-NIFA Beginning Farmer and Rancher Development Program. 9/2023 – 9/2026. \$750,000
6. Yamamoto, J., Tavares, K., Lincoln, N., Akahoshi, K., Gutierrez-Coarite, R., Ahmad, A., Wages, S., Ediger, L., Bernal, L., Uyeda, J., Silva, J., **Kirk, E.**, Galanti, R., Hawkins, J. GoFarm Hawai'i: Enhancing Hawai'i's Agricultural Workforce. USDA-NIFA-ANNH. 9/2023 – 9/2027. \$475,000
7. Ahmad, A., **Kirk, E.**, Uyeda, J., Radovich, T., Silva, J., Tavares, K., Gutierrez-Coarite, R., Wages, S., Collier, E. Revitalizing Soil Health and Crop Productivity with Biochar Produced from Invasive Species. USDA-NRCS Conservation Innovation Grant. 9/2023 – 9/2026. \$149,961
8. Stone, D., Kovacevic, J., Bevan, J., **Kirk, E.**, Silva, J., Yang, J., Gurr, I., Waite-Cusic, J., Brown, S., Gurr, J., Sarker, Z., Diguerra, J. Pacific Food Safety Education and Training Collaborative. Oregon State University. USDA-NIFA Food Safety Outreach Program subaward. 9/2023 – 9/2026. \$536,923
9. Radovich, T., Collier, E., **Kirk, E.**, Ahmad, A., Uyeda, J., Wages, S., Tavares, K. University of Hawai'i Transition Organic Partnership Program. California Certified Organic Farmers, Inc. 6/2023 – 10/2027. \$375,000

10. Kawabata, A., Gutierrez-Coarite, R., **Kirk, E.**, Lutgen, H., Manadhar, R., Oshiro, M., Silva, J., Tavares, K., Uyeda, J., Wages, S., Nakamoto, S.T. Educating Hawai'i's Producers, Farmworkers, and Pesticide Handlers About Crop Insurance and Safe Pesticide Use to Reduce Risks. Washington State University, USDA-NIFA Western Extension Risk Management Education. 4/2023 – 9/2024. \$99,999
11. Radovich, T., Collier, E., Ahmad, A., Uyeda, J., Motomura-Wages, S., **Kirk, E.**, Tavares, K. Supporting Organic Food Crop Production through the Washington Place Organic Garden. Hawai'i Department of Agriculture. 4/2023 – 3/2024. \$75,000
12. Keach, J., **Kirk, E.**, Manandhar, R., Ahmad, A. Comparing Production of Melons Using Field and Protected Methods under Hawai'i's Conditions. Hawai'i Department of Agriculture. 4/2023 – 3/2025. \$40,000
13. Ahmad, A., Uyeda, J., Wages, S., Hawkins, J., **Kirk, E.**, Gutierrez-Coarite, R., Tavares, K., Silva, J. Evaluating the Growth and Yield of Celery and Cilantro Varieties Statewide to Increase Local Production. Hawai'i Department of Agriculture. 4/2023 – 3/2025. \$55,000
14. Gutierrez-Coarite, R., Ahmad, A., Tavares, K., Ticono, J., Uyeda, J., Silva, J., Wages, **Kirk, E.** Increasing the Number of Sweet Potato Storage Roots to Increase the Yield of Sweet Potato Crops in Hawaii. Hawai'i Department of Agriculture. 4/2023 – 3/2025. \$40,000
15. Yamamoto, J., Ediger, L., Teves, G., Silva, J., Gutierrez-Coarite, R., Hawkins, J., Ahmad, A., Wages, S., **Kirk, E.**, Akahoshi, K., Sand, S., Tavares, K., Uyeda, J., Lincoln, N. GoFarm Hawai'i (GFH): Growing Hawaii's Agricultural Workforce and Industry. USDA-NIFA-ANNH. 8/2022 – 7/2025. \$475,000
16. Radovich, T., Collier, E., Ahmad, A., Uyeda, J., Motomura-Wages, S., **Kirk, E.**, Tavares, K. Research, Extension, and Education Activities to Improve Sustainable and Organic Farming in Hawaii. Hawai'i Department of Agriculture. 5/2022 – 5/2023. \$49,500
17. Ahmad, A., Motomura, S., Uyeda, J., Silva, J., **Kirk, E.**, Baldos, O., Gutierrez-Coarite, R. Expanding Availability of High Yielding Mamaki Varieties for Better Selection by Hawaii's Growers. Hawai'i Department of Agriculture. 3/2022 – 2/2023. \$55,000
18. Le, T., Ahmad, A., Caires, K., Greenwood, H., **Kirk, E.**, Mogren, C., Sand, S. Farm and Ranch Stress Assistance Network (FRSAN) - Hawaii State Plan to NIFA, FY 2021. Hawai'i Department of Agriculture. 9/2021 – 3/2023. \$474,835
19. Greenwood, H., Hawkins, J., Akahoshi, K., Cristobal, H., Eng, S., Hampton, M., Keach, J., **Kirk, E.**, Ooki, N. 'Ohana Garden & Grindz: Addressing the Spread of SARS-Cov-2 Utilizing A Virtual Family-Based Agriculture Education Aimed at Reducing Food Insecurity. USDA-NIFA. 9/2021 – 8/2023. \$350,000
20. Yamamoto, J., Ediger, L., Teves, G., Silva, J., Gutierrez-Coarite, R., Hawkins, J., Ahmad, A., Motomura, S., **Kirk, E.**, Akahoshi, K., Sand, S., Tavares, K., Bernal, L. GoFarm Hawai'i (GFH): Training New Farmers and Growing Agribusiness in Hawai'i. USDA-NIFA Alaska Native-Serving and Native Hawaiian-Serving Institutions Education Competitive Grants Program. 8/2021 – 7/2023. \$450,000
21. Radovich, T., Collier, E., Ahmad, A., Uyeda, J., Motomura-Wages, S., **Kirk, E.**, Tavares, K. Research, Extension, and Education Activities to Improve Sustainable and Organic Farming in Hawaii. Hawai'i Department of Agriculture. 4/2021 – 6/2022. \$99,294



22. Lincoln, N., Jha, R., Radovich, T., Silva, J., **Kirk, E.** Leveraging established research plantings of breadfruit (*Artocarpus altilis*) to understand drivers of fruit quality and its impacts on post-harvest processes and profits. USDA-NIFA. 1/2021 – 1/2026. \$480,000
23. Tavares, K., Motomura-Wages, S., Silva, J.H.S., Uyeda, J., **Kirk, E.** Building Hawaii's Capacity for Produce Safety Education. Hawaii Department of Agriculture. 12/2020 – 6/2023. \$35,000
24. Ahmad, A., **Kirk, E.**, Wages, S.A., Radovich, T. Silva, J., Sugano, J., Tavares, K., Wang, K. Establishing an Avocado Orchard as Model for a Year-Round Harvest in Hawaii. Hawaii Department of Agriculture. 12/2020 – 12/2022. \$50,000
25. Silva, J., Motomura-Wages, S., Tavares, K., Hawkins, J., **Kirk, E.** Food Safety Modernization Act Produce Safety Rule Outreach and Education FY 2021. Hawaii Department of Agriculture. 2/2021 – 6/2021. \$55,777
26. Motomura-Wages, S., Akahoshi, K., Hawkins, J., **Kirk, E.**, Silva, J., Tavares, K., Uyeda, J. Farm Food Safety Training for Local and Immigrant Crop Producers in Hawaii. USDA-NIFA Food Safety Outreach Program. 9/2020 – 8/2023. \$200,000
27. Kelly, K., **Kirk, E.**, Rhoden, M., Fox, M. Safe and Stable Kaua'i Farms Initiative. Kaua'i County Office of Economic Development, CARES Act Funds. 7/2020 – 12/2020. \$280,246
28. Sand, S., Kawabata, A., Motomura-Wages, S., Uyeda, J., Hawkins, J., Tavares, K., Silva, K., Akahoshi, K., **Kirk, E.**, Nakamoto, S. Building Capacity to Educate and Develop Awareness of Risk Management and Crop Insurance Among Hawaii's Underserved Producers. Western Extension Risk Management Education Center. 6/2020 – 6/2022. \$55,000
29. Silva, J., Tavares, K., Uyeda, J., Wages, S., **Kirk, E.**, Manandhar, R., Hawkins, J., Nakamura-Tengan, L. The Pacific Food Safety Center: Supporting Small, Disadvantaged Farmers to Comply with Food Safety Requirements. CTAHR Supplemental Funding. 10/2019 – 9/2022. \$60,000
30. Uyeda, J., Hawkins, J., Kawabata, A., **Kirk, E.**, Motomura-Wages, S.A, Tavares, K. Increasing the Production of Yellow Potatoes in Hawaii. Hawaii Department of Agriculture. 10/2019 – 9/2020. \$19,999
31. Gutierrez-Coarite, R., Mau, R., Tavares, K., Uyeda, J., Silva, J., Sugano, J., Manandhar, R., **Kirk, E.** Hawaii Integrated Pest Management Program for Diamondback Moth and Other Lepidopteran Pests on Crucifers. Hawai'i Department of Agriculture. 5/2019 – 6/2022. \$49,500
32. Gutierrez-Coarite, R., Shimabuku, R., Silva, J., Tavares, K., Uyeda, J., Ahmad, A., **Kirk, E.**, Manandhar, R., Hawkins, J. Hands-on Integrated Pest Management Education. USDA-NIFA, CTAHR Statewide IPM. 6/2019 – 12/2019. \$6,000.00
33. Radovich, T., Ahmad, A., Bingham, J., Kantar, M., **Kirk, E.**, Motomura-Wages, S. A., Silva, J., Sugano, J., Tavares, K., Teves, G., Uyeda, J. Expanding the Market for Hawaiian Turmeric with High Yielding and High Curcumin Varieties. Hawaii Department of Agriculture. 2/2019 – 1/2021. \$40,000
34. Manandhar, R., Hawkins, J., **Kirk, E.**, Nakamura-Tengan, L., Silva, J., Sugano, J., Tavares, K., Uyeda, J., Motomura-Wages, S. Immigrant Farmer Support Program – Pesticide Safety. CTAHR supplemental funds. Amount: \$25,000 January 2019-June 2019
35. Manandhar, R., **Kirk, E.**, Keach, J., Wang, K.H. Sweet Potato Variety Trial on Kaua'i. CTAHR supplemental funds. 2018 – 2019. \$9,000

36. Silva, J., Uyeda, J., Sugano, J., Mau, R., Shimabuku, R., Nazario-Leary, C., Wong, K., Kawabata, A., Wages, S., **Kirk, E.** Updated Melon Fly Resistance and Control Programs for Hawaii. CTAHR Statewide IPM Project-USDA NIFA PI: Mark Wright. 4/2018 – 3/2019. \$4,600
37. Le, T., A. Ahmad, K. Caires, H. Greenwood-Junkermeier, **E. Kirk**, C. Mogren, S. Sand. Farm and Ranch Stress Assistance Network (FRSAN) – Hawaii State Plan to NIFA, FY 2021. HDOA. 9/2021 – 8/2022. \$474,835 (Co-PI)
38. Lincoln, N., R. Jha, T. Radovich, J. Silva, **E. Kirk**. Leveraging established research plantings of breadfruit (*Artocarpus altilis*) to understand drivers of fruit quality and its impacts on post-harvest processes and profits. USDA-NIFA. 1/2021 – 1/2026. \$480,000 (Co-PI)
39. K. Tavares, S. Wages, J. Silva, J. Uyeda, **E. Kirk**, J. Hawkins. Building Hawaii's Capacity for Produce Safety Education. HDOA. 4/2021 – 3/2022. \$35,000 (Co-PI)
40. Ahmad, A., S. Motomura Wages, J. Uyeda, J. Sugano, T. Radovich, K. Tavares, J. Silva, K.H. Wang, **E. Kirk**. Establishing an Avocado Orchard as Model for a Year-Round Harvest in Hawai'i. HDOA. 2/2021 – 1/2023. \$50,000 (Co-PI)
41. Wages, S., K. Akahoshi, J. Hawkins, **E. Kirk**, J. Silva, K. Tavares, J. Uyeda. Farm Food Safety Training for Local and Immigrant Crop Producers in Hawai'i. USDA, NIFA-FSOP. 9/2020 – 8/2022. \$200,000 (Co-PI)
42. Kelly, K., M. Rhoden, **E. Kirk**, M. Fox. Safe and Stable Kaua'i Farms Initiative. Kaua'i County Office of Economic Development, CARES Act Funds. 7/2020 – 12/2020. \$280,246 (Collaborator)
43. Sand, S., A.M. Kawabata, S. Wages, J. Uyeda, J. Hawkins, K. Tavares, J. Silva, K. Akahoshi, **E. Kirk**, S.T. Nakamoto. Building Capacity to Educate and Develop Awareness of Risk Management and Crop Insurance Among Hawai'i's Underserved Producers. Western Extension Risk Management Education. 6/2020 – 11/2021. \$55,000 (Co-PI)
44. Radovich, T., A. Ahmad, **E. Kirk**, K. Tavares, J. Uyeda, J. Sugano and E. Collier. Enhancing Hawai'i's Organic Agriculture through Research and Extension Activities. HDOA. 3/2020 – 2/2021. \$131,000 (Co-PI)
45. Uyeda, J., J. Hawkins, A. Kawabata, **E. Kirk**, S. Motomura, K. Tavares. Increasing the Production of Yellow Potatoes in Hawai'i. HDOA. 9/2019 – 9/2020. \$20,000 (Co-PI)
46. Shimabuku, R., R. Gutierrez-Coarite, R. Hamasaki, **E. Kirk**, R. Manandhar, R. Mau, J. Silva, J. Sugano, K. Tavares, J. Uyeda. Hawai'i Integrated Pest Management Program for Diamondback Moth and Other Lepidopteran Pests on Crucifers. HDOA. 6/2019 – 6/2021. \$49,500 (Co-PI)
47. Radovich, T., A. Ahmad, J. Bingham, M. Kantar, **E. Kirk**, S. Motomura-Wages, J. Silva, J. Sugano, K. Tavares, G. Teves, J. Uyeda. Expanding the Market for Hawai'ian Turmeric with High Yielding and High Curcumin Varieties. HDOA. 1/2019 – 1/2021. \$40,000 (Co-PI)
48. Wang, K.-H., B. Sipes, I. Shikano, J. Sugano, R. Manandhar, J. Uyeda, J. Silva, K. Tavares, R. Gutierrez-Coarite, **E. Kirk**. Insecticide resistance management for diamondback moth in organic farms: from manipulating insect behavior and biological control to push and pull strategies. CTAHR Team Science Concept Note. 9/2019 – 9/2020. \$80,000 (Co-PI)
49. Gutierrez-Coarite, R., K. Tavares, R. Shimabuku, J. Silva, J. Uyeda, **E. Kirk**, A. Ahmad,

- R. Manandhar, E. Isele. Hands-on integrated pest management education. CTAHR Statewide IPM Extension Program. 8/2019 – 12/2019. \$6,000 (Co-PI)
50. Manandhar, R., **E. Kirk**. Implementing Integrated Pest Management (IPM) strategies to manage key insect pests of vegetables on small immigrant farms of Kaua‘i. CTAHR Statewide IPM Extension Program. 8/2019 – 12/2019. \$4,500 (Co-PI)
51. **Kirk, E.**, J. Hawkins, R. Manandhar, L. Nakamura-Tengan, J. Silva, J. Sugano, K. Tavares, J. Uyeda, S. Motomura-Wages. Immigrant Farmer Support Program – Farm Food Safety. CTAHR supplemental funds. 2018 – 2019. \$25,000 (PI)
52. **Kirk, E.**, R. Manandhar. Expanding Cacao Research on Kaua‘i. CTAHR supplemental funds. 2018 – 2019. \$10,500 (PI)
53. Manandhar, R., J. Hawkins, **E. Kirk**, L. Nakamura-Tengan, J. Silva, J. Sugano, K. Tavares, J. Uyeda, S. Motomura-Wages. Immigrant Farmer Support Program – Pesticide Safety. CTAHR supplemental funds. 2018 – 2019. \$25,000 (Co-PI)
54. Manandhar, R., **E. Kirk**, J. Keach, K.H. Wang. Sweet Potato Variety Trial on Kaua‘i. CTAHR supplemental funds. 2018 – 2019. \$9,000 (Co-PI)