Swette Center for Sustainable Food Systems
Arizona State University

Agricultural Labor on Hawai‘i Island

Exploring Alternative Models for Collaborating and Organizing the Supply of Agricultural Labor on Hawai‘i Island

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Swette Center for Sustainable Food Systems, Arizona State University
May 2025

This publication is a Capstone Report by the Master of Science in Sustainable Food Systems and Graduate Certificate in Food Policy and Sustainability Leadership cohort of 2023.

Suggested Citation:
Swette Center for Sustainable Food Systems. *Agricultural Labor on Hawai'i Island*. May, 2025. (Swette Center, 2025)

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This report is the product of many dedicated professionals who supported organizing and participating in a farmer focus group on Hawai‘i Island, provided input to the development of the collaborative labor models explored, and other activities throughout this project.

We are thankful to the farm owners and farm advocates for participating in the focus group and interviews. Your input was invaluable and helped shape the findings of this report.

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Executive Summary

Hawai‘i Island faces unique agricultural labor challenges due to the high cost of living, geographic isolation, and a limited labor pool. In response to these issues, the Hāmākua Institute, in collaboration with the Hawai‘i Island Agriculture Partnership (HIAP), has sought to explore alternative models for organizing labor to support local farmers. This report aims to build on existing research by conducting a comparative analysis of local efforts across the Hawaiian Islands; collaborative models from Cuba and India; and various labor models from the United States to help identify potential labor solutions for Hawai‘i Island’s agricultural sector.

Through extensive research, interviews, and a focus group composed of local farmers, we analyzed the agricultural challenges facing Hawai‘i Island and how specific characteristics from local and global labor models might be applied to the Hawai‘i context.

Five key elements—organizational structure, workforce supply, governance, resource contributions, and government involvement—were used to evaluate and compare each model’s applicability to the island’s agricultural sector.

The report presents two broad recommendations: first, drawing inspiration from collaborative labor models, and second, advancing policy initiatives and advocacy efforts.

Key recommendations include:

- Expanding cooperative and collective models through pilot projects
- Strengthening workforce development programs such as MA‘O Organic Farms, GoFarm Hawai‘i, and the University of Hawai‘i (UH) AgConnect initiative
- Fostering community-oriented initiatives
- Advocating for policy reforms

Policy recommendations target improving housing for farmworkers, advocating for agricultural wage adjustments and subsidies, and enhancing communication between government agencies and the farming community. Other recommendations include implementing reforms to support volunteer programs, encouraging private-public partnerships, and promoting appropriate technology and mechanization.

Glossary

Agriculture Labor - The employment of any persons on a farm or ranch, working with the operation, management, conservation, maintenance, or improvement of the farm and equipment (Labor, 2024).

ʻĀina: The land, which offers abundant resources that nourish us physically, spiritually, emotionally, and intellectually (MAʻO Organic Farms, n.d.-a)

Aloha ʻĀina: Deep love and respect for the land (Office of Hawaiian Affairs, 2016).

ʻAuwai: An open water channel that links a channel of water to a taro patch or fishpond (MAʻO Organic Farms, n.d.-a).

Cooperative: An autonomous organization of individuals joined voluntarily to meet their common economic, social, and cultural needs through a democratically owned enterprise (Kumar et al., 2015).

Collective: A group of farmers who share land ownership, engage jointly in farming activities and joint market enterprise (Singh, n.d.).

ʻIke Kūpuna: Ancestral knowledge that sparks generational learning, supports righteous living (pono), and builds spiritual power (mana) (MAʻO Organic Farms, n.d.-a).

Kānaka: The people who convey ancestral memory and lived experiences, linking past, present, and future centers (piko), thus fostering resilience and continuity as a community (MAʻO Organic Farms, n.d.-a).

Introduction

The agricultural sector on Hawai‘i Island faces notable challenges due to labor shortages, with 41.4% of farmers and ranchers on the island citing insufficient access to labor as a major barrier to business expansion (for operations with at least $50,000 in gross sales annually) (United States Department of Agriculture [USDA]-National Agricultural Statistics Service [NASS], 2021). These labor shortages not only drive up production costs but also limit the ability of local farms to scale and compete with imported food.

As Hawai‘i Farm Bureau Executive Director Brian Miyamoto noted in 2024, “Farmers have difficulty attracting labor. A lot of the time they have to pay more than the minimum wage but having to [do so] increases the cost of the farmers’ production” (as cited in Lee, 2024).

This labor issue is closely tied to Hawai‘i’s high cost of living, affordable housing crisis and heavy reliance on imported food. Between 85% and 95% of the state’s food supply is imported, with local farmers facing significant barriers to expanding food production (Relating to Food Security, H.B. 2771, 2024). In terms of housing, Hawai‘i is home to “the highest median rents” and “the highest housing costs in the nation” at “2.7 times the national level” with only 20% of Hawai‘i’s households able to afford the downpayment and mortgage on an $852,000 median single-family home, due in part to some of “the most restrictive land use regulations in the country” (Terrell, 2023; Terrell, 2024; Tyndall et al., 2023). Hawai‘i residents also must contend with the highest rates of electricity as compared to the rest of the United States (Moore, 2024). With such exorbitant costs facing prospective workers, farms struggle to attract labor and grow, further increasing the state’s dependence on imported food.

Addressing these interconnected challenges requires innovative solutions that extend beyond traditional labor models. This includes policy reforms, investment in appropriate and regionally adapted technology, and culturally sensitive strategies to build a sustainable and resilient agricultural workforce, enabling farms to expand and reduce Hawai‘i’s dependence on imported food.

This report offers an overview of several labor models that could be studied to address agricultural labor issues on Hawai‘i Island, including various organizational structures, workforce sourcing, governance forms, required resource contributions, and levels of government involvement. It explores collaborative agricultural labor models from other regions and assesses their potential for adaptation to Hawai‘i Island's unique farming context.

The report also incorporates insights from interviews and from a focus group of farmers and food system professionals who evaluated the suitability of these models for Hawai‘i Island. Finally, the report presents recommendations for addressing Hawai‘i Island’s agricultural labor needs.

The authors of this report are Sustainable Food Systems graduate students from Arizona State University. The students came from diverse backgrounds and professional expertise.

The Hāmākua Institute and HIAP were the clients for this research. This report aims to identify potential labor solutions for Hawai‘i Island’s agricultural sector to help local farmers and agricultural workers collectively strengthen and support their community.

Research Question:

What labor models and characteristics work best to support Hawai‘i Island agriculture?

Background

The agricultural labor landscape in Hawai‘i, particularly on Hawai‘i Island, presents a complex set of challenges that have far-reaching implications for Hawai‘i’s agricultural sustainability. Hawai‘i Island, which is home to 200,629 residents, is the southernmost and largest island in the archipelago, covering approximately 4,030 square miles- large enough to fit all the other Hawaiian Islands within its boundaries (“Hawai‘i”, 2025; Hawai‘i Tourism Authority, 2025a). As with the other counties in Hawai‘i, Hawai‘i County, comprised of Hawai‘i Island, grapples with a shortage of agricultural labor. The shortage is not merely a consequence of the physically demanding requirements of farming, it also stems from larger systemic issues such as the seasonal nature of agricultural work, the prohibitively high cost of living, a scarcity of affordable housing, geographic proximity to the continental United States, an aging farmworker population, dependence on unpaid labor, and limited access to appropriate agricultural technology (USDA-NASS, 2021).

The agricultural sector as of 2021 comprised around 1% of Hawai‘i’s total economy yet almost half of all the land in Hawai‘i is assigned for agricultural use (Terrell, 2021). According to the 2022 United States Department of Agriculture’s (USDA) Census of Agriculture, there were 3,638 farms in Hawai‘i County that year, yet only 873 of these farms, or approximately **24%, reported hiring farm labor**, employing an estimated 4,463 workers (Table 1). In contrast, 1,396 farms, representing about **38.4% of the total, relied on unpaid workers** (USDA-NASS, 2024b). This data suggests that, although there are more hired farm laborers in Hawai‘i County by number, a significant number of farms also rely on unpaid workers. This reveals that securing paid laborers in the county is challenging, leading many farms to depend on volunteer labor or family members to support their agricultural operations.

Table 1: Hawai‘i County summary highlights comparing worker and farm data (USDA-NASS, 2024b)

Type	# of Workers	# of Farms
Hawai‘i County Total	7,961	3,638
Hired farm labor	4,463	873
Unpaid workers	3,498	1,396
Worked 150 days or more	2,311	437
Worked less than 150 days	2,152	630

Hawai‘i’s agriculture is heavily dependent on seasonal crops such as coffee, macadamia nuts, and tropical fruits, which have fluctuating demands throughout the year. This seasonality and the resulting instability in the workforce may further exacerbate the reliance on unpaid or temporary labor, as farms struggle to secure dependable, long-term employees in the face of high living costs that continue to rise and the fluctuating demands of agricultural production. Of the hired farmworkers in Hawai‘i County, only 2,311 were employed for 150 days or more, indicating that just over half of the agricultural labor workforce had stable employment. The remaining 48% were employed for less than 150 days (USDA-NASS, 2024b), reflecting the seasonal nature of agricultural work on the island and highlighting a major dilemma for farm laborers.

While Hawai‘i Island agriculture relies on migrant workers, they made up only 9.4% of the hired farm labor force on the island in 2022, with 419 migrant workers employed that year. Although a small proportion, these workers play a crucial role in meeting seasonal labor demands (USDA-NASS, 2024b).

The high cost of living significantly impacts nearly every industry in Hawai‘i, including the agricultural sector. Hawai‘i consistently ranks as one of the most expensive states due to a myriad of contributing factors, including its distance from the continental United States, which drives up the cost of goods such as food and fuel. Additionally, real estate costs, including land and housing, far exceed the national average (Department of Business, Economic Development & Tourism, 2023).

Hawai‘i’s high cost for goods also makes it difficult for farmers to afford essential inputs and equipment, further straining their operational viability. Farms often must compete

with the tourism industry for labor and struggle to offer wages and benefits that can attract and retain workers (Tyndall et al., 2024). As a result, the local workforce is insufficient to meet the agriculture sector's needs.

According to the 2022 Census of Agriculture, the average age of a farmer in Hawai'i is 61.2 years old (USDA-NASS, 2024a). The aging demographic of farmers adds to the urgency of developing sustainable labor models. Younger generations are often uninterested or unable to take over their family farms due to a multiplicity of socioeconomic factors (Hawai'i Department of Agriculture, 2012; Nathaniel, 2024). Therefore, as current farmers age out of the workforce, demand for labor is exacerbated, making the search for alternative labor models even more critical.

In response to labor challenges, there is growing interest in adopting regionally adapted and island appropriate technologies to increase overall productivity for Hawai'i's agricultural sector. Hawai'i's farms are generally smaller than their United States continental counterparts with 66% having under 49 acres of land and 30% having less than 10 acres of land (Market Analysis and News Branch, 2022). Hawai'i's distinctive topography marked by steep slopes, deep ravines, rocky terrain and bounded by the ocean means that most farms often cannot effectively utilize the kind of industrial mechanization available for larger and flatter agricultural parcels commonly found in states such as California (Rehkamp et al., 2021). Additionally, **Hawai'i's input costs such as land, labor, electricity, transportation, and soil amendments are collectively approximately 40% more than comparable farms on the United States continent. This is largely due to labor, accounting for around 37% of farm operational expenses in Hawai'i while only amounting to 17% of the budget for farms in California** (Rehkamp et al., 2021).

Farm labor wages in California are higher on average than in the islands (Rehkamp et al., 2021). This Indicates that Hawai'i's elevated labor costs, in part, result from a lack of suitable and available agricultural equipment and the need to hire more workers to compensate for reduced mechanization, contributing to efficiency and economic viability issues (Rehkamp et al., 2021). Japan being an archipelagic nation in the Pacific has similar geographic characteristics to Hawai'i leading to smaller overall farm sizes. Japan has developed agricultural technology that is well-suited to these conditions which increases yields while lowering overhead expenses. Hawai'i farmers are eager to incorporate such appropriate technological innovations but must contend with cumbersome federal regulations and high and rising shipping costs (Terrell, 2021). As a result, many farms in Hawai'i continue to operate with a lack of mechanization and disproportionally higher reliance on seasonal manual labor, affecting productivity and profitability. This makes it harder for farms to compete both locally with imported food

and in broader markets which inevitably impacts the long-term overall viability of Hawai‘i’s waning agricultural sector (Rehkamp et al., 2021; State of Hawai‘i Workforce Development Council, 2023).

In conclusion, Hawai‘i's farms face a complex set of interconnected challenges, from the high cost of living and limited affordable housing options, labor shortages, geographic distance from the continental United States, and an aging farming population. The reliance on unpaid labor, seasonal instability, and limited access to appropriate, place-based agricultural technology further compounds these issues, making it difficult for local farms to remain solvent. Alternative models are needed, not only to bridge the divide between labor supply and demand, but also to help address these interwoven issues through innovative, multifaceted approaches.

This report is intended to empower Hawai‘i Island farmers by presenting alternative labor models that they can readily adopt and develop strategies from to aid in retaining a stable workforce.

Methodology

This research was conducted by five graduate student researchers under the guidance of Senior Research Specialist Carly Wyman and Executive Director at the Swette Center for Sustainable Food Systems, Dr. Kathleen Merrigan. Dennis Flemming, Executive Director of the Hāmākua Institute, also provided significant guidance and direction on the project.

This report was reviewed and deemed exempt by the Arizona State University Institutional Review Board (IRB) on 7/22/2024. The IRB study number for this project is 00020386.

Research Design

The foundation of our research is the paper *Collaborative Solutions to Farm Labor Challenges: What Is Feasible?*, produced through an award from the USDA National Institute of Food and Agriculture (NIFA) Northeast Sustainable Agriculture Research and Education (SARE) grant to a collaborative group of East Coast universities (Northeast SARE, 2022). This report examined "how farm owners and workers responded to the broader concept of collaborative labor solutions, and to the various forms those solutions could take" (Northeast SARE, 2022, p.4). Building on this prior work, we sought to present and evaluate models that could be adapted for use on Hawai‘i Island to help alleviate and improve their distinct labor challenges.

We explored seven additional case studies by examining data from grey literature and consulting peer-reviewed articles for a more in-depth analysis. Through our research, common themes emerged across different agricultural labor models. To better compare the case studies, our team summarized each one based on select key elements, which informed the development of our Hawai‘i Island farmer focus group.

We examined the seven identified agricultural workforce recruitment models utilizing the following criteria:

1. **Organizational Structure:** How the operation's activities are organized, including potential benefits and drawbacks of various structures, such as for profit third-party contractors, public private partnerships, or non-profit.

2. **Workforce Supply:** The source of labor, including direct hiring, hiring through a third-party, cooperative joint labor, and volunteer/internship programs.

3. **Governance:** Decision-making within the farm operation, including mechanisms like individually operated governance, member-driven governance, and governance by an elected board.

4. **Resource Contributions:** The resources producers may need to contribute to support and retain their workforce, such as training and skill development, housing and living support, and additional benefits like insurance and tuition coverage.

5. **Government Involvement:** The degree of government involvement in a specific labor solution.

The focus group comprised of local Hawai‘i Island farmers and other stakeholders, aimed to capture firsthand experiences of local producers hiring agricultural labor and to gain insights into what models might have practical and culturally appropriate elements for farmers in Hawai‘i County. We aimed to understand how these models could be tailored to the specific needs and cultural context of Hawai‘i's agricultural sector.

Six producers participated in the focus group. Participants were recruited individually through recommendations from HIAP, a network of agricultural producers coordinated through the Hāmākua Institute. The focus group lasted approximately 90 minutes and was conducted and recorded via Zoom. The focus group questions were open-ended and guided by the five key elements mentioned above. The complete list of questions posed during the focus group can be found in Appendix A.

Study Limitations

The main limitation of this study was the scarcity of research sources specific to Hawai‘i Island agricultural labor. Another limitation was selection bias, as the sampling method for the focus group was determined in part by the client and researchers, who selected individuals familiar to them and whom they believed would be willing to participate and provide honest feedback. This resulted in a limited pool of participants, which may not

fully capture the diversity of perspectives across different types and scales of farming operations on the island.

Scheduling constraints and time zone differences also posed some challenges. If time had permitted, the next step would have been to conduct a survey with producers across the island to gather their valuable feedback on the insights gained from the focus group. The proposed survey questions are listed in Appendix C, should the Hāmākua Institute wish to distribute these in the future.

Case Studies: Comparative Analysis of Agricultural Labor Models

The comparative analysis of labor models from around the globe has identified five key elements that contribute to their productivity, sustainability, and profitability: **organizational structure, workforce supply, governance, resource contributions, and government involvement.** Each case study is described utilizing these elements.

MA‘O Organic Farms

MA‘O Organic Farms, located in Wai‘anae on the island of O‘ahu, is an organic-certified producer that operates under the Wai‘anae Community Re-development Corporation (WCRC), a nonprofit founded in 2000 by a coalition of residents, traditional practitioners, educators, and business leaders to address the needs of the Wai‘anae community, and its youth in particular. WCRC's strategic focus encompasses five key areas: supporting underprivileged youth, promoting sustainable economic development, advancing organic agriculture, enhancing health and well-being, and preserving Hawaiian culture. The organization’s primary goal is to train young people to become culturally rooted, community-driven social entrepreneurs and leaders, fostering a youth movement grounded in the value of aloha ‘āina (love and respect for the land) (Office of Hawaiian Affairs, 2016).

Since its inception, MA‘O has produced over 1.6 million pounds of local organic produce, established a community-supported agriculture (CSA) program to provide affordable, healthy produce to Wai‘anae families, and launched three internship programs for students aged 15–25, aimed at restoring and affirming the interdependent relationship between ‘āina (land) and ‘ōpio (youth) (MA‘O Organic Farms, n.d.-b).

A significant aspect of MA‘O’s educational model is the *‘auwai concept*. An ‘auwai is an open water channel that links the kahawai (stream) to a lo‘i kalo (flooded taro patch) and/or a loko i‘a (fishpond). As the wai (water) travels through the ahupua‘a (a Native Hawaiian land division and holistic resource management system typically extending from mauka (mountainside) to makai (seaside)), it absorbs nutrients and becomes essential to the downstream estuary's biological health. At MA‘O, this concept is metaphorically applied to signify that interns gain knowledge and "nutrients" through educational and work systems, benefiting themselves, their families, and the broader community. The ‘auwai represents all youth participating in work and learning on the farm each year. Rooted in Native Hawaiian pedagogy, the ‘auwai incorporates three fundamental program components within a modern farming context:

Figure 1: The MA‘O ‘Auwai Model (source: MA‘O Organic Farms, n.d.-a)

- ‘Āina: The land, which offers abundant resources that nourish us physically, spiritually, emotionally, and intellectually.
- ‘Ike Kūpuna: Ancestral knowledge that sparks generational learning, supports righteous living (pono), and builds spiritual power (mana).
- Kānaka: The people who convey ancestral memory and lived experiences, linking past, present, and future centers (piko), thus fostering resilience and continuity as a community (MA‘O Organic Farms, n.d.-a).

Youth progressing through the ‘auwai excel in this culturally significant and community-focused environment, where they are held to high standards and receive comprehensive support. This method prepares students for college and lifelong learning by enhancing peer-to-peer engagement, balancing support with responsibility (kuleana),

empowering youth to set actionable goals, and providing personalized mentorship (MA‘O Organic Farms, n.d.-a).

In 2019, MA‘O partnered with Central Pacific Bank and Kamehameha Schools to expand its farm operations from 45 to 281 acres (Kamehameha Schools, 2019). This partnership increased MA‘O’s capacity to create jobs, grow locally sourced organic produce, and support youth in higher education and sustainable careers.

Figure 1 illustrates the MA‘O ‘auwai model, depicting the progression of youth through various stages of involvement with MA‘O Organic Farms, from introductory experiences to high school internships and the Youth Leadership Training (YLT) program, culminating in roles such as MA‘O farm co-manager and other careers that enrich the community. The model highlights the resources MA‘O contributes to youth at each stage, including school GPA and farm work evaluations, tuition support, stipends/wages, leadership skills, cultural grounding, and a commitment to community. This structured pathway ensures that participants are holistically supported and emboldened to achieve both educational and career success while maintaining strong cultural and community ties.

Key Elements of MA‘O Organic Farms’ Model

In the following section, the MA‘O Organic Farms model will be examined through five key elements: organizational structure, workforce supply, governance, resource contributions, and government involvement. These elements offer insight into how the model operates and highlight what aspects could be adapted for use on Hawai‘i Island.

Organizational Structure

MA‘O Organic Farms operates under the nonprofit Wai‘anae Community Re-Development Corporation (WCRC). This structure allows MA‘O to focus on its community and cultural goals while utilizing funding sources available to nonprofit organizations (Office of Hawaiian Affairs, 2016). As a social enterprise, MA‘O produces, processes, markets, and distributes a variety of organic fruits and vegetables. This business model supports the farm’s educational and cultural missions while generating revenue to sustain its programs. The social enterprise structure enables MA‘O to use the revenue generated from its organic farming business, along with external funds, to pursue its mission of community empowerment. This model is particularly effective in Wai‘anae, a region that has faced significant challenges due to decades of underinvestment (MA‘O Organic Farms, n.d.-c).

Figure 2: MAʻO Organic Farms' social enterprise structure (source: MAʻO Organic Farms, n.d.-c)

Workforce Supply

MAʻO's workforce supply strategy emphasizes local recruitment, targeting high school and college-aged youth up to age 25, with some exceptions made on a case-by-case basis. Their strategy for recruitment varies based on program and can be understood as the following:

High School Internship: Recruitment focuses on high school sophomores, juniors, and seniors from the Waiʻanae, ʻEwa, and Waialua moku (districts), offering a program that integrates cultural values, practical skills, and academic and career readiness (MAʻO Organic Farms, n.d.-b).

Summer/Winter Ramp Up: This program recruits local high school students and young adults interested in a college-to-career pathway in agriculture (MAʻO Organic Farms, n.d.-b).

Youth Leadership Training (YLT): Targeting young adults aged 17 to 25, who are enrolled at Leeward Community College or UH West Oʻahu, this program is designed to develop leadership through organic farming and Hawaiian cultural practices and requires prior participation in the Summer or Winter Ramp-up (MAʻO Organic Farms, n.d.-b).

Farm Expansion Experience (FE‘E): The program recruits aspiring farmers seeking hands-on experience in organic farm management. The *Kauwela* (Summer Internship) is an intensive 12-week program for full-time participants, while the *Ho‘oilo* (Cool-season Internship) is a part-time program lasting up to 8 months, appealing to those balancing farm work with ongoing education (MA‘O Organic Farms, n.d.-b).

Governance

Governance at MA‘O involves shared decision-making between the executive team and the board of directors (MA‘O Organic Farms, n.d.-b). This collaborative governance model ensures that the organization’s strategic direction aligns with its mission and community needs. Community and cultural values are embedded in governance processes to maintain a focus on cultivating aloha ‘āina (a deep love of the land) (Pukui & Elbert, 1986) among youth, strengthening their connection to heritage and community.

Resource Contributions

MA‘O provides comprehensive training and support at its main site, which spans over 200 acres, as well as six partner farms across O‘ahu. The resources provided by MA‘O helps remove financial barriers for participants, providing practical, educational, and financial support. The resources offered to interns vary by program, but can be summarized as the following:

High School Spring Break Internship: Students gain hands-on work experience, education on growing organic produce, and a $350 stipend (MA‘O Organic Farms, n.d.-b).

Summer/Winter Ramp Up: Participants engage in work experience, college preparation, and cultural protocol classes to facilitate their transition to higher education (MA‘O Organic Farms, n.d.-b).

Youth Leadership Training (YLT): Interns receive a monthly stipend and tuition support—either 50% tuition coverage at UH West O‘ahu or 100% at Leeward Community College—along with leadership training and cultural grounding (MA‘O Organic Farms, n.d.-b).

Farm Expansion Experience (FE‘E): The *Kauwela* (Summer Internship) provides a stipend of $2,400 per month, which is given upon successful completion of all internship activities for each pay period. The *Ho‘oilo* (Cool-season Internship) offers a stipend ranging from $1,080 to $2,160 per month, depending on the agreed-upon schedule,

with the stipend also provided upon successful completion of activities. Participants in both tracks receive hands-on training in organic farm management and participate in workshops on climate-smart agricultural practices (MAʻO Organic Farms, n.d.-b).

Government Involvement

As a nonprofit, MAʻO is eligible for and receives significant funding from federal and state governments, as well as private donors. This financial support allows MAʻO to offer extensive training and educational opportunities, bolstering its impact on the community.

Adapting the MAʻO Farms Model for Hawaiʻi Island

Community Connections

As Matthew Lau, a Kanaka ʻŌiwi (Native Hawaiian) and Associate Professor of Indigenous Knowledge and Practice at the University of Hawaiʻi West Oʻahu, explains:

> For anywhere you're going to work in Hawaiʻi, understanding who the important people are in the community, like the elder farmers, and how they relate to the land that they're on and the other people in the community, is the place I would start from. (M. Lau, personal communication, July 24, 2024)

This highlights how community connectivity is key to successful collaborative initiatives in Hawaiʻi.

Access to Funding and Resources

One key aspect of the MAʻO Farms model that could be adapted on Hawaiʻi Island is its organizational structure as a nonprofit social enterprise. This allows access to a broad range of funding sources, from county, state, and federal grants to private donations. These diverse revenue streams provide resources for intern training, wages, and other support that individual farmers might struggle to afford. Farmers in the focus group agreed that their budgets often do not allow for extensive resources for workers. Establishing an umbrella nonprofit to support multiple farms could:

Provide training and wages: Offer training programs and fair wages for interns and workers, making agricultural work more sustainable and attractive to potential workers.

- **Access public funding:** Leverage public funds and grants to support agricultural education, internships, and workforce development, reducing the financial burden on individual farmers.

Educational Programs

Another adaptable aspect is the integration of educational programs and organizational capacity development. Matthew Lau, who previously worked as the Program Coordinator for the FEʻE Internship at MAʻO Organic Farms, mentions, "MAʻO has worked with multiple consultancies to develop organizational capacity and community orientation. Finding ways to build momentum behind a vision for the program and continuing to foster the program's development through community engagement is important" (M. Lau, personal communication, July 24, 2024). This underscores the significance of establishing strong educational frameworks and partnerships to support a program such as MAʻO.

The MAʻO Farms YLT program, which integrates formal education with practical farming experience and offers comprehensive support including tuition coverage and stipends, could be a model for Hawaiʻi Island farms. Feedback from the focus group highlighted the need for more effective internship programs. Key aspects that could be replicated include:

- **Structured internships:** Implement structured internship programs that provide real-world farming experience, leadership training, and cultural education. Ensuring interns have meaningful, hands-on roles on the farm can increase their contribution and learning.
- **Support systems:** Offer educational support, such as tuition assistance and stipends, to make internships more attractive and financially viable for young people. This can also help develop a skilled agricultural workforce committed to staying in the community.

Aspects of the MAʻO Model That May Not Be Replicable

Funding and grants play a critical role in the success of the MAʻO model, which may not be easily replicable in other contexts. Lau explains, "MAʻO is a for-profit farm within a nonprofit organization, the Waianae Community Redevelopment Corporation. Any profit goes back to the nonprofit" (M. Lau, personal communication, July 24, 2024). **This structure allows MAʻO to prioritize paying livable wages and providing benefits, mostly supported by grants.** For-profit farmers on Hawaiʻi Island may find it challenging to secure similar levels of funding, but exploring partnerships with nonprofits

could provide a means for accessing other types of financial support less available to for-profit organizations.

In addition to funding, the scale and impact of the MAʻO model, along with the systemic challenges it addresses, may not be easily replicated. Lau shares that within the FEʻE program, some of the partner farms "already had frameworks and processes," while others were less regimented. "We had some challenges, but overall, even interns who faced struggles gave positive reviews of the experience. The goal was to create a pipeline for interns to take their next steps in the food system." However, he also points out the historical constraints that affect farm work in Hawaiʻi: "The agricultural system in Hawaiʻi has had multiple rounds of creating these constraints that force people into roles so that they can be exploited for their labor" (M. Lau, personal communication, July 24, 2024). This statement reflects the long-standing patterns of inequality rooted in Hawaiʻi's plantation-era history, where laborers, often imported from other countries, were subjected to harsh working conditions and low wages (Center for Labor Education & Research, n.d.). These labor dynamics have persisted, manifesting in today's agricultural system in Hawaiʻi, where workers often face unstable employment and limited opportunities for advancement.

The enduring impacts of colonization further complicate the replication of the MAʻO model. As Riley et al. (2022) highlight, colonization not only dispossessed Native Hawaiians of their land but also severed the connection between people and ʻāina, contributing to long-term health and social disparities. The loss of land and forced dependence on external systems has left deep scars on Hawaiʻi's agricultural and social landscape, perpetuating inequities that persist today. This colonial legacy makes it more challenging to establish self-sufficient, community-centered agricultural practices, as many of the structures in place are remnants of exploitative systems from the plantation era.

Lau emphasizes, "Hawaiʻi has a clear window into how our present is constrained by historical activities, particularly in agriculture. If we're not doing community-oriented work, we risk perpetuating systemic issues. People who can move fast and have power may not be connected to the historical constraints and could reinforce systemic inequalities," (M. Lau, personal communication, July 24, 2024). Addressing these systemic barriers requires a concerted effort to restore Native Hawaiian cultural practices and community-driven approaches to farming and land stewardship.

While these challenges complicate the direct replication of the MAʻO model, they also provide valuable insights into how community-driven, culturally grounded agricultural models can evolve to meet the unique needs of other regions, including Hawaiʻi Island. Similarly focused on supporting the growth of aspiring farmers and the community,

GoFarm Hawai‘i offers a model that integrates education with hands-on farming experience, creating a unique and impactful approach to youth development in agriculture.

GoFarm Hawai‘i Model

GoFarm Hawai‘i, a UH College of Tropical Agriculture and Human Resilience (CTAHR) extension program, provides hands-on commercial farm and business training for beginning farmers and farmworkers. The program is dedicated to cultivating the next generation of farmers in Hawai‘i by equipping participants with the skills and knowledge needed to start their own farms or work in established agricultural operations. With a phased approach, GoFarm gradually increases the commitment of trainees through a combination of classroom teaching, in-field training, and business management education (GoFarm Hawai‘i, 2024).

GoFarm Hawai‘i offers several programs tailored to different levels of farming experience. *AgCurious* is a free 2-hour online introduction, providing an overview of the program and requirements. For those looking to gain hands-on experience, *AgXposure* is a 5-week program where participants visit commercial farms, work on projects, and learn about farming. *AgXcel* follows with an intensive 6-month commitment, where participants manage a 2,500-square-foot plot, covering both production and business

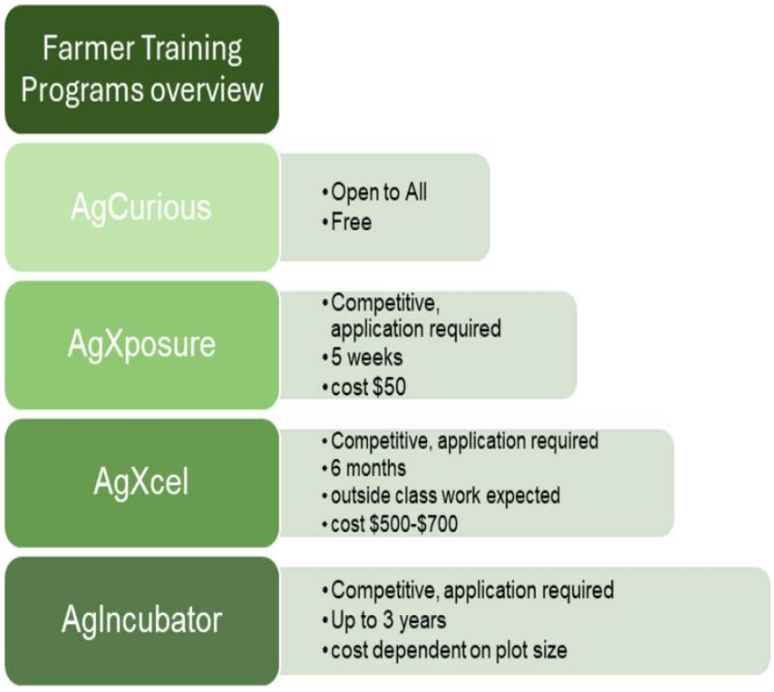

Figure 3: GoFarm Hawai‘i statewide Beginning Farmer Training Program (source: graphic created by authors using data from GoFarm Hawai’i, 2025b)

topics while developing and marketing their crops. Graduates can apply to the *AgIncubator*, a 3-year program offering land, resources, and mentorship to start an independent farm business. Each phase, as outlined in Figure 3 above, builds skills progressively, preparing participants for a career in agriculture (GoFarm Hawai‘i, 2025b).

By fostering the development of both commercial farming skills and business acumen, GoFarm Hawai‘i helps new farmers and farmworkers become well-rounded agricultural professionals. Graduates of the program gain expertise in key areas such as soil health, crop production, irrigation, pest management, and food safety. The program also covers critical business topics like farm planning, production costs, marketing, and sales strategies. Through hands-on workshops, participants engage in practical learning experiences, including tractor training, irrigation setup, post-harvest handling, and small-scale farm management. These skills are essential for running or contributing to the success of farms and agricultural businesses across Hawai‘i (GoFarm Hawai‘i, 2025b).

GoFarm Hawai‘i is heavily supported by government funding through the U.S. Department of Agriculture, Hawai‘i Department of Agriculture, Maui County Office of Economic Development, Kaua‘i County Office of Economic Development, along with support from American AgCredit, Kamehameha Schools, the UH System, and others (GoFarm Hawai‘i, 2025a).

GoFarm Hawai‘i provides a comprehensive model for training beginning farmers in both commercial agriculture and business skills. Building on these efforts to equip aspiring farmers with the necessary tools for success, the University of Hawai‘i developed the AgConnect Program, another initiative designed to link education with practical experience in agriculture.

University of Hawai‘i *AgConnect* Model

AgConnect was a program launched by the UH to help pair UH agriculture graduate technicians with Hawai‘i agribusinesses, readying students for careers in farming through internships and apprenticeships while providing much needed assistance for local producers. Operated by CTAHR, the program ensured that both interns and host farms benefited from the arrangement (Hawai‘i Community College, n.d.).

While *AgConnect* primarily focused on UH ag graduates, applicants who did not graduate from UH were still invited to apply and assessed for program suitability based on “their background and experience” (Hawai‘i Community College, n.d.). Host farms were similarly evaluated to ensure they were seeking internships for business growth rather than supplemental farm labor. A farm visit confirmed the “safety and

appropriateness of the ag site for intern's work." If both parties met the program's criteria, they were matched accordingly (Hawai'i Community College, n.d.).

Farmers and ag interns participating in the program worked alongside one another, committing at least 16 hours per week for a minimum of eight weeks together. They also collaborated on the development of a two-year business plan. Farmers provided hands-on training in commercial farm practices, mentorship, and opportunities for interns to engage in various farm duties. In return, farmers benefited from the assistance of trained agricultural technicians, stipend support for interns, expert guidance in business planning, and enhanced productivity to grow their business (Hawai'i Community College, n.d.). The program, however, was put on indefinite hold in August 2024 after two years of operation.

Figure 4: UH AgConnect Instagram photo (source: UH Ag Connect, 2023)

The UH *AgConnect* initiative allowed farmers and trained interns to work together to grow their skills while mutually benefiting from a hands-on, collaborative environment. Such programs offer novel ways to better engage future generations of local farmers and when done in conjunction with more community-centered models of agriculture, such as cooperatives, it becomes a powerful mechanism to support and preserve Hawai'i's agricultural sector. Rooted in collective ownership and democratic governance, cooperatives present an alternative framework for addressing agricultural challenges, one that emphasizes long-term sustainability and the equitable sharing of resources. The following sections explore cooperatives in greater detail.

Background on the Cooperative Structure

Cooperatives are community-centered organizations driven by shared values rather than profit (International Cooperative Alliance, n.d.) and operate under the following core principles: open and voluntary membership, democratic control, economic

participation, autonomy, education, cooperation, and concern for the community (Kumar et al., 2015).

Before Western contact, Hawai‘i practiced a largely communal and cooperative form of agriculture and natural resource stewardship through the ahupua‘a system, briefly discussed previously. Essentially, each mokupuni (island) in Kō Hawai‘i Pae ‘Āina (the Hawaiian archipelago) was divided into moku (triangular land resource divisions) that were further subdivided into ahupua‘a which usually corresponded with watersheds, extending from the mountain ridge to the near shore reef. Ahupua‘a are comprehensive, holistic, and sophisticated “complete life support systems” that were cooperatively run and designed to create sustainable food abundance while increasing ecological health and balance (Mueller-Dombois, 2007).

After the overthrow of the Kingdom of Hawai‘i by American businessmen on January 17, 1893 (Kamehameha Schools, 2017), plantation-era Hawai‘i became a territory of the United States with numerous small-scale agriculture cooperatives revolving around pineapple, sugar, and meat production. In 1913, there were six recorded agricultural cooperatives and by 1947, there were 10 consisting of 915 members (Fukuda, 1972). World War II was “a boon for agricultural cooperatives” (Fukuda, 1972, p. 8) through an initiative known as the “Hawai‘i Produce Market” developed by the Office of Civil Defense which coordinated with some 800 small Hawai‘i farms to meet wartime demand (Fukuda, 1972). By 1969, Hawai‘i had 32 agricultural cooperatives with approximately 3,248 members; however, a recent 2019 USDA ag co-op statistics report only recorded 8 agriculture cooperatives with only 370 actual members highlighting the dramatic shift away from the sector in Hawai‘i (Fukuda, 1972; Rural Development, 2021).

Doug O’Brien, President and CEO of the National Cooperative Business Association CLUSA International (NCBA CLUSA), in a 2024 interview shared his insights on present-day cooperatives and how they can potentially address agricultural labor shortages in Hawai‘i. He paraphrased the USDA’s definition of a cooperative as, **"a private business that is owned, controlled, and benefits the people who use the business,"** (D. O’Brien, personal communication, August 5, 2024).

O'Brien outlined three main kinds of cooperatives, namely: producer cooperatives (e.g., farmer cooperatives), consumer cooperatives (e.g., REI), and worker cooperatives, where workers own and control the business. He emphasized that **the central and defining tenets of cooperatives are that they prioritize long-term sustainability and member interests over short-term profits through democratic governance, wherein each member has one vote, and that profits, known as patronage refunds or dividends in agricultural settings, are collectively distributed based on usage** (D. O'Brien, personal communication, August 5, 2024).

Cooperative models where member ownership extends to real estate are not very common in the United States; however, O'Brien mentioned that New Communities, Inc. is one such noteworthy example. Originally established as a joint-ownership farm collective to support African American families during the Civil Rights Movement in segregation era Georgia, New Communities is now a successful grassroots operation that is the archetypal model for community land trusts across the United States. Charles and Shirley Sherrod founded the organization, "to empower communities through agribusiness and economic development" (New Communities Inc., n.d.).

Figure 5: Seven areas where the benefits of cooperative structure have the most impact (source: NCBA CLUSA, 2024)

Cooperatives, like New Communities, can span multiple generations. Considering this, O'Brien stressed the importance of equipping each new member cohort through education and training opportunities to help maintain the cooperative's distinctiveness and prevent demutualization, wherein cooperatives might be sold to private equity. He highlighted that successful cooperatives meet both immediate and long-term member needs, ensure member engagement in governance, and provide good worker wages. A cooperative's commitment to these value systems coupled with strong communication and loyalty are vital for its continued evolution and innovation (D. O'Brien, personal communication, August 5, 2024).

> By providing a platform for farmers to pool resources, share risks and access markets, the cooperative model not only helps farmers reduce costs and improve efficiency but contributes to the stability and development of rural communities through a grassroots management structure. (Munch, 2024)

Given Hawai‘i’s storied history with cooperative agriculture, this re-emphasis of the model may present a viable method to alleviate the sector’s labor and operational cost vulnerabilities. In the following section, we will explore agricultural cooperative models from the countries of Cuba and India, where such models have historically received substantial levels of national support and where government mandates help ensure funding is available for education and training within such organizations.

Cooperative Model: Cuban Agriculture

The Cuban Revolution of 1959 was a catalyst for agricultural reform and the eventual cooperativization of Cuba’s agricultural land (Bono & Loopmans, 2021). The first agrarian land reform in 1959 aimed to create a strong state farm sector and transfer land to farmer families who were already cultivating and producing. These small family-run farms eventually organized into Credit and Service Cooperatives (Cooperativas de Créditos y Servicios [CCS]), where farmers independently owned or leased their land but collaborated within the cooperative for credit services, machinery, and other agricultural inputs (Bono & Loopmans, 2021).

Figure 6: Vegetable farm in Vinales Valley, Cuba

In response to the agrarian reforms, the National Association of Small Farmers (Asociación Nacional de Agricultores Pequeños [ANAP]) was established in 1961 to advocate for small farmers, ensuring their integration into national agricultural policies and supporting their development (Fernandez et al., 2018). ANAP, although an independent association, aligns with the government's socialist principles and agricultural policies, representing the interests of small farmers while maintaining a member-first approach (Gurcan, 2014).

In 1975, the First Congress of the Communist Party introduced Agricultural Production Cooperatives (Cooperativas de Producción Agropecuaria [CPAs]) to encourage farmers to incorporate their land and labor into collective units to increase production (Bono & Loopmans, 2021). CPAs allowed farmers to retain land ownership while receiving government support, such as access to technical and social services. These cooperatives became vital not just for agricultural production but also for improving rural living standards. Both CCSs and CPAs operate democratically, holding monthly general assemblies where members participate, vote on issues, and elect board members (Bono & Loopmans, 2021).

The collapse of the Soviet Union, Cuba's main trading partner, and the reinforcement of the U.S. embargo in the early 1990s led to the "Special Period" in Cuban agriculture (Brent, 2010). This era was marked by severe economic hardship and a loss of imported agricultural inputs (Bono & Loopmans, 2021). In response, the Cuban government prioritized domestic food security and recognized the crucial role of small collectives, initiating a decentralization movement that prioritized production by CPAs and CCSs (Bono & Loopmans, 2021).

In 1993, government reforms further decentralized agriculture by converting large state farms into Basic Units of Cooperative Production (Uniones Básicas de Producción Cooperativa [UBPC]). These units functioned similarly to CPAs, with farmers collectively owning or leasing land, working together on crop cultivation, and receiving government support (Bono & Loopmans, 2021). Land for UBPCs was granted freely and indefinitely to former state workers and new farmers under usufruct rights, allowing them to use and occupy the land without legal ownership. UBPC farmers were required to produce food cooperatively and sell a significant portion back to the state (Bono & Loopmans, 2021).

Cuba and Hawai‘i both have limited labor pools and share similarities as archipelagic states with former sugar plantation economies that continue to endure the ramifications of colonialism (Fernandez et al., 2018; Hawai‘i Department of Agriculture, 1999). After its revolution, Cuba shifted to cooperative labor models to adapt to shifting socioeconomic conditions, while Hawai‘i continues to struggle with labor shortages exacerbated by a high cost of living and a diminishing agricultural sector. To address

these challenges, Hawai‘i Island farmers could benefit from integrating elements of Cuba’s agricultural collectives and collaborative labor structures to create a more resilient agricultural system moving forward.

Key Elements of Cuban Agriculture

Cuban agriculture is built on the principles of solidarity, food security, and sustainability. Cuban cooperatives have been able to develop their expansive mechanisms of solidarity because of the country's socialist political economy, which diminishes competitive pressures and explicitly supports solidarity (Bono & Loopmans, 2021). These elements play key roles in the success of Cuban agriculture today.

Organizational Structure

Cuban agriculture is anchored in cooperatives. The various Cuban cooperative types including CCSs, CPAs, and UBPCs all operate within a framework regulated and overseen by the state (Fernandez et al., 2018). They may receive support from the government, such as access to resources or markets, and are required to comply with state regulations (Fernandez et al., 2018). Despite this oversight, cooperatives are distinct from state enterprises because they are owned and managed by their members, who share in the profits and decision-making processes (Gurcan, 2014). The Cuban government's support for cooperatives is part of a broader strategy to diversify the economy and increase productivity while maintaining socialist principles.

Workforce Supply

Cooperatives are embedded in the development and success of the communities they operate in and thus try to recruit members from within the community who already have ties to the land and share a sense of solidarity. These cooperatives take up the needs of their workers and can gain employees through a mix of voluntary membership, recruitment, and, occasionally, state allocation of labor. These cooperatives offer benefits such as profit sharing, access to resources, and participation in management, which can attract members and workers (Bono & Loopmans, 2021).

Governance

In terms of governance, Cuban co-ops operate under a democratic system. This system is based on the principle of "one member, one vote," ensuring that every individual has a voice. Monthly general assemblies are held, providing a platform for decision-making

and discussion, fostering a sense of community and collective responsibility (Gurcan, 2014).

Resource Contributions

The state provides additional subsidies and social services, helping to support the agricultural community and ensure that workers have access to essential resources. Cooperatives are responsible for the well-being of members and their families and endeavor to meet their material, social, educational, cultural and spiritual needs. In a case study completed in Central Cuba, one CPA built and maintained houses for its members (Gurcan, 2014).

Government Involvement

Cuban agriculture is both state-initiated and state-supported. This means that the government not only starts agricultural initiatives but also provides ongoing support to sustain them. The cooperatives are embedded in a national distribution system that connects interdependent members of the nation, a system that was planned and is organized by the Cuban state.

Adapting Cuban Agricultural Strategies for Hawai‘i Island

Cuba’s agricultural labor strategies, particularly the use of farming cooperatives, offer valuable insights for Hawai‘i Island farmers. In Cuba, cooperatives allow farmers to pool resources and share labor, reducing individual financial burdens and creating a more stable labor pool (Gurcan, 2014). Similar cooperative structures on Hawai‘i Island could reduce operational expenses and facilitate more access to grants and government support, increasing the overall economic viability of the sector.

Figure 7: Alamar Organic Farms, an agriculture cooperative on the outskirts of Havana (photo credit: Sam Holt)

The practice of resource sharing, such as with tools, machinery, and storage facilities, is another essential aspect of Cuba's agricultural model that could benefit Hawai'i Island farmers (Bono & Loopmans, 2021). **Establishing resource-sharing programs on Hawai'i Island could improve efficiency and reduce costs by allowing farmers to access equipment and labor without the need for individual ownership.** Advocacy for government support of agricultural cooperatives through policies, subsidies, tax incentives, or grants would be critical in the long-term success of the model (Fernandez et al., 2018).

Education and knowledge sharing are central to Cuba's agricultural success. Cuban farmers receive training in sustainable practices, cooperative management, and agroecology, ensuring widespread adoption of efficient farming methods (Gurcan, 2014). Implementing similar educational initiatives on Hawai'i Island could empower local farmers with the skills needed to optimize their practices and manage labor more effectively. These programs could be offered through local universities, government services, or nonprofit organizations, and tailored to address the specific challenges of farming in Hawai'i.

Cuba's agricultural model depends heavily on community collaboration during critical periods like planting and harvesting (Gurcan, 2014). This community reliance alleviates labor shortages and strengthens social bonds. Hawai'i Island farmers could benefit from establishing similar networks of collaboration during peak labor times, reducing the need for hired labor. The success of Cuba's collaborative labor practices is deeply rooted in their integration into the community's social and cultural identity, with a strong emphasis on solidarity (Bono & Loopmans, 2021). Native

Hawaiian traditional food systems were designed around fostering a culture of collaboration and community engagement in food production and environmental stewardship. By promoting a renewed sense of collaboration and collective kuleana (privilege and shared responsibility) within the agricultural sector on Hawai'i Island, local communities will be increasingly inspired to participate thereby growing the next generation's interest in farming locally - leading to a more resilient and integrated farming system on the island.

While Cuban cooperatives offer one example of an effective collaborative agricultural labor structure, cooperatives are present globally across various sectors (Kumar et al., 2015). In many developing countries, agriculture continues to be the engine of economic growth, making cooperative models a vital tool in fostering sustainable agricultural practices and economic resilience.

Cooperative Model: Indian Agriculture

India has an extensive history of cooperatives dating back to the 19th century. Cooperative practices originated when India faced poverty and landlessness due to British colonial policies (Laxman & Ravi, 2023).

The development of cooperative institutions began in 1904 when the Indian government enacted the Cooperative Societies Act (Kamenov, 2020). This Act responded to the debt, poverty, and socioeconomic challenges that farmers, small-scale producers, and marginalized communities face (Ministry of Cooperation, 2022). The three principles of the 1904 Act consisted of mutual aid, cooperation, and self-help, thus enabling agriculturalists and artisans to pool their resources for mutual benefit (Ministry of Cooperation, 2022).

While the 1904 Act laid the original foundation for cooperative societies, it had limitations that only allowed the creation of credit cooperatives, particularly ones that lacked tailored governance (Ministry of Cooperation, 2022). These limitations led to the Cooperative Societies Act of 1912, which authorized non-credit cooperatives for farming, housing, processing, marketing, and artisan societies (Ministry of Cooperation, n.d.). Along with creating non-credit societies, the 1912 Act established a regulatory framework for management structure within cooperative operations (Ministry of Cooperation, 2022).

Figure 8: Women plucking tea in Darjeeling, West Bengal

In 1919, the Government of India Act decentralized cooperative law, shifting the responsibility of cooperative societies to the provinces (Ministry of Cooperation, 2022). This Act was significant because it addressed the different conditions of India's provinces, allowing each province to tailor its legislation to meet the needs of its population (Ministry of Cooperation, 2022). Dividing the policy among each province led to the Bombay Cooperative Societies Act of 1925, which ratified the one-person-one-vote principle (Ministry of Cooperation, 2022).

Table 2: History of development of cooperative institutions in India (Ministry of Cooperation, 2022)

Indian Law	Cooperative Institution Development
Cooperative Societies Act, 1904	Began as a response to the debt and poverty of exploited farmers and small-scale producers. Consisted of mutual aid, cooperation, and self-help, enabling agriculturalists to pool their resources for mutual benefit
Cooperative Societies Act, 1912	Authorized non-credit cooperatives and established regulatory framework, allowed the provinces to tailor legislation to the needs of their population
Government of India Act, 1919	Decentralized cooperative law and shifted responsibility to the provinces

Today, India's cooperative societies play a significant economic role, notably in the Western states' sugar and dairy industries. **Studies have shown that Indian cooperatives support rural community development and improve agricultural labor conditions through higher average incomes and providing more available annual workdays** (Ghosh, 2007). Cooperatives are successful today due to the dynamic leadership of the members and the alliance between large and small growers (Ghosh, 2007). Cooperatives have supported members through education, health, family, and welfare programs such as access to college institutions and providing medical services (Ghosh, 2007). Top cooperatives currently in India include the Sittilingi Organic Farmers Association (SOFA), Indian Farmers Fertiliser Cooperative Limited (IFFCO), Amul (dairy), and the National Bank for Agriculture and Rural Development (NABARD) (India Brand Equity Foundation, 2022).

Key Elements of India’s Cooperative Model

The key elements of India's cooperative model and how they apply to agriculture are detailed below.

Organizational Structure

Cooperatives are member-owned and operated, while members maintain individual private land ownership. Members may pool specific resources into the group to support individual needs with financial assistance largely through the credit cooperative institutions that the government structured (Hegde, 2013; Ghosh, 2007; Unacademy, 2025).

Workforce Supply

Labor is supplied by members for their own enterprises through various channels, such as family labor, direct hiring, volunteers, and local hiring agencies. Cooperative farming uses joint farming as a means for farmers to work together with cultivation, seed sharing, crop management, and harvesting (Hegde, 2013; Unacademy, 2025).

Governance

Cooperatives are governed through a democratic process, where each member has a vote, and a board of directors makes the ultimate decisions. Formal cooperative meetings assess reports through discussions and finalize policies (Bhowmik & Sarker, 2002). Elections of the board of directors are held regularly by the power of member voting (Bhowmik & Sarker, 2002).

Resource Contributions

The resources contributed within a cooperative are through cooperative credit institutions, membership dues, and dividends (Ghosh, 2007; Ministry of Cooperation, n.d; Ministry of Cooperation, 2023). Benefits can include education, training, wages, housing, and living support. Other resources, such as equipment and technology (irrigation and electricity), inputs, and marketing, are commonly shared within cooperatives (Patankar et al., 2020).

Government Involvement

The origin of cooperatives in India is heavily influenced by the government's history of promoting and implementing national and regional plans for cooperative participation. In

the 1950s, India's government conceptualized farming cooperatives, known as “cooperative societies,” as whole village enterprises wherein resources and labor are shared amongst members to help bolster agricultural output and act as a catalyst for economic development in rural areas (Ebrahim, 2000).

The main variations of farming cooperatives defined at this time by India’s government were distinguished according to land ownership and use. “Tenant farming societies” lease out cooperative owned land for use to members, while in “joint farming societies” members retain private ownership of their land that is collectively used by members. Members in “better farming societies” retain private use of their land; however, members in “collective farming societies” communally own and utilize their land for farming (Ebrahim, 2000).

A central issue for Indian farming cooperatives is that they “presuppose a modicum of social equality, political democracy and economic viability among the villagers” which “have not been present in village India and are still not present today” (Ghosh, 2007, quoting Thorne, 1962, p.27). Thus, farming cooperatives have not been wholly successful in rural India due to a multiplicity of sociopolitical, structural, and economic issues, except for the notable exceptions of the sugar and dairy sectors (Hegde, 2013).

Nevertheless, cooperatives have been foundational in driving economic and social development, especially in rural areas with the goal of increasing mutual economic benefits, social empowerment, environmental sustainability, and cultural preservation. Of the cooperatives, India’s collective farming society model is more holistic, better meeting the needs of India's most rural communities contending with a rapidly evolving, globalized landscape.

Collective Labor Model: India

After Independence in 1947, India’s government enacted a series of five-year plans to further strengthen cooperatives (Ministry of Cooperation, 2022). The series of five-year plans from 1950 to 2017 boosted investments in rural development, sustainability, poverty alleviation, social justice, and economic growth by promoting cooperatives (Ministry of Cooperation, 2022). Shifting focus to support small and marginal enterprises led to the increase in collective structure plans and initiatives (e.g., Kudumbashree, Self-Help Groups, and Joint Liability Groups) by the government (Bharti & Malik, 2023). These groups originated in the 1970s when the Self-Employed Women’s Association (SEWA) was established due to a lack of credit access for women and individuals experiencing rural poverty (BYJU’S, n.d.). These groups support and empower the people of India, particularly women and marginalized communities, by working to

eradicate poverty through financial assistance and socio-economic development (Choudhury et al., 2021).

A *collective* is a version of the cooperative farming model where members pool resources and jointly own, use, and cultivate their shared land (Ebahrim, 2000). Essentially, a collective offers the same benefits as other cooperatives, with the addition of shared labor and land ownership.

Key Elements of India's Collective Labor Model

Collective farming is a practical, locally specific method to combat land fragmentation, labor shortages, along with landlord-tenant and gender relations (Leder et al., 2019). **Small and marginal farmers benefit from collective farming by leveraging cumulated land and infrastructure to increase productivity and profitability** (Leder et al., 2019). Collectives utilize "multipurpose comprehensive cooperation" to pool all resources and inputs together, especially labor. Likewise, all returns are shared between members (Sugden et al., 2020). The following section will outline the main differences between collectives and other forms of Indian cooperatives.

Figure 9: Indian women farming in Bihar, India (photo credit: Jake Lyell)

Organizational Structure

India's collectives are member-owned, member-operated, and member-driven, sharing land, capital, resources, equipment, technology, labor, and skills. The members of the collective have joint land ownership through a shared loan (Ministry of Cooperation, n.d.; Suresh et al., 2024).

Workforce Supply

Collectives supply their workforce through directly hiring or recruiting members. The critical aspect of a collective workforce is the concept of joint labor, wherein each member of the collective provides labor for the cultivation of shared land (Cooperative Development Institute, 2025).

Governance

The governance structure of collectives is member-driven and generally non-hierarchical with all members having equal decision-making powers, making them co-directors. Every member participates in major governance and management decisions via member meetings (Cooperative Development Institute, 2025).

Resource Contributions

Collectives are known for having substantial pools of resources for members which can include training and skills development opportunities, improved worker wages, in addition to housing and living support. The bedrock of these resources is the collective's joint land acquisition by purchase or lease and the subsequent communal cultivation of their farms (Agarwal, 2010). Collective agricultural labor allows for increased flexibility in terms of time, cost sharing, and the bringing together of people with various proficiencies such as marketing, accounting, and public relations for the whole group's benefit (Agarwal, 2010).

Government Involvement

India's government has initiated action plans to promote collectives, but the state has no direct administrative control of agricultural collectives. Collectives also have state support through various programs such as state-subsidized credit and loans for purchasing or leasing agricultural lands (Agarwal, 2010).

Adapting India's Labor Models for Hawai'i Island

Integrating aspects of India's cooperative and collective models can help provide sustainable long-term solutions for Hawai'i Island producers, particularly for small-scale, diversified farms and socially disadvantaged farmers. Supporting the creation of more cooperatives and collectives on Hawai'i Island can address issues with productivity, land cost, market access, and labor shortages. It can aid in making more resources available (e.g., equipment and technology), while also allowing for more education and training possibilities.

Another benefit of the cooperative and collective models for Hawai'i Island farmers is the ability to coordinate seasonal labor demands for planting and harvesting activities according to each member's needs which will ensure more steady employment for farmworkers.

While the focus group participants involved in this study valued private land ownership, they could benefit from utilizing the cooperative structure to consolidate resources to support each other's agricultural needs. Collective purchasing of costly agricultural requirements such as mechanization, irrigation, cold storage, and even marketing can help reduce each member's cost burden while maintaining separate individual land holdings.

Through collective purchasing, processing, and marketing, cooperatives can achieve economies of scale, improve decision-making, and increase profitability. The Kamuela Vacuum Cooling Co-op is one example of a Hawai'i Island cooperative providing needed resources to farmers and creating self-reliance and community-driven development. The cooperative supplies cold storage to local Hawai'i Island farmers and businesses for rapidly cooling agricultural products (Kamuela Vacuum Cooling Cooperative, 2023). This serves as an example of how cooperative and collective resource pooling offers a solution for the lack of technology and distribution challenges.

Cooperatives and collectives provide a communal and collaborative approach to agricultural labor, emphasizing mutual aid and strengthening community ties—an approach that fits well with the existing culture in Hawai'i. In India, cooperatives and collectives have long been a cornerstone of rural development, fostering community-driven agricultural practices and economic resilience. Given Hawai'i's long history of strong community partnerships, cooperation, and collaboration around growing food, Hawai'i Island farmers could see considerable benefits in terms of labor reliability and availability through amplifying and supporting the formation of more local agricultural cooperatives and collectives.

As most Hawai‘i Island agricultural work is seasonal, depending on various crop harvest times, interim solutions to provide manpower for farms using existing systems is needed while long-term solutions are being further developed. The guest worker model is one potential stopgap measure that has been employed for some time in the United States, Canada, Australia, and New Zealand, among many others, to help satiate seasonal agricultural labor requirements. Though this model is certainly susceptible to shifting geopolitical conditions and administrative policies, it has been successfully utilized in many countries to support local farm operations.

Guest Worker Model

The guest worker model offers a potential interim solution to Hawai‘i’s agricultural labor challenges through the temporary migration of foreign workers to fill critical labor shortages during seasonal and peak periods of demand. Guest worker programs are federally regulated through specific visa plans that ensure compliance with labor laws, protect worker rights, and support their economic needs, as well as the needs of their United States based sponsor. The model can benefit Hawai‘i County by maintaining agricultural productivity, supporting the local economy, and fostering cultural exchange, while also presenting challenges in terms of regulatory compliance, worker welfare, and economic impact.

H-2A Visa Program for Temporary Agricultural Workers in the United States

The H-2A program is designed to allow U.S. agricultural employers to hire foreign workers on temporary visas to fill seasonal jobs. Employers must prove that there is a shortage of U.S. workers and ensure that hiring foreign workers does not adversely affect U.S. workers’ wages and working conditions (U.S. Citizenship and Immigration Services, 2025).

Initial setup and compliance costs may be high, but the long-term benefits of a reliable seasonal labor force can outweigh these expenses. A steady source of seasonal labor is essential for the Hawai‘i agricultural sector's seasonal and peak needs, and the recruitment of experienced agricultural workers enhances productivity through efficiency.

By maintaining agricultural productivity, these programs help sustain the local economy, supporting both direct and indirect employment. However, careful management is required to ensure that the influx of guest workers does not depress wages for local workers. Programs must be designed to be sustainable in the long term, balancing the

needs of the agricultural sector with the rights and well-being of guest workers (Brodbeck, 2024).

As of August 2024, the program includes workers from approximately 84 countries. The primary countries participating in the H-2A program are Mexico, Guatemala, El Salvador, and Honduras. These countries supply most of the H-2A workforce, with Mexico being the main source, accounting for over 90% of all H-2A workers (United Farm Workers, 2023).

Controversy about the H-2A Visa program

While it provides a legal avenue for labor, the program is often criticized for its bureaucratic complexity and the potential for worker abuse. A report published by Farmworker Justice (2012) exposed significant flaws and systemic abuses within the H-2A visa program, showing that in some cases, the program has become a vehicle for exploitation and injustice, affecting both U.S. and foreign workers (Newman et al., 2012).

As a result, the USDA is creating and supporting initiatives to solve these issues. Initiatives like the USDA's Farm Labor Stabilization and Protection Pilot Program (FLSP) can significantly improve conditions for future H-2A workers, especially in Hawai‘i, by addressing labor shortages through ethical recruitment practices and enhancing worker protections. The FLSP program provides support to small and mid-sized farms, promotes ethical recruitment practices, and offers benefits such as paid sick leave, improved living conditions, and worker rights training. Additionally, FLSP expands legal labor migration pathways, particularly for workers from Northern Central America, to ensure a stable and resilient workforce (Farm Service Agency, 2024).

By promoting these standards, Hawai‘i can attract and retain a more stable and satisfied seasonal agricultural workforce, fostering an increasingly resilient and sustainable agricultural sector.

J-1 Visa Program for Exchange Visitors in the United States

The J-1 visa program allows foreign nationals to participate in exchange programs in the United States, with the goal of promoting cultural exchange (Bureau of Educational and Cultural Affairs, n.d.-a). Participants entering the United States as a “specialist” in their field, in this case agriculture, are allowed to work in the United States for up to 12 months and are expected to return to their home countries upon program completion (Bridge USA, n.d.).

A distinctive feature of the J-1 visa program is its educational requirement. The goal is for workers to arrive with above-average experience, gain further training, share their knowledge with the host farm, and return home to advance their agricultural careers and benefit their communities (Bureau of Educational and Cultural Affairs, n.d.-b).

Figure 10: Harvesting eggplants in Kahuku, O‘ahu (photo credit: Scott Bauer, USDA Natural Resources Conservation Service)

Traditionally associated with college students and teachers, the program also offers valuable opportunities for agricultural workers. Programs like MESA (Multinational Exchange for Sustainable Agriculture) and CAEP (Communicating for Agriculture Education Programs) demonstrate how the visa can be effectively applied within the agriculture sector. Participants of these programs can work on U.S. farms while learning about American agricultural and cultural practices as well as sharing about their own, ultimately contributing to a more diverse and skilled agricultural workforce.

Two types of J1 visas are available for agricultural workers: trainees and interns. A trainee must be a foreign national with a degree or professional certificate from a foreign post-secondary institution, plus at least one year of prior work experience in their field. Alternatively, five years of relevant work experience outside the United States also qualifies. An intern, however, must be a foreign national currently studying at a foreign post-secondary institution or who graduated from such an institution no more than 12 months before the program's start date. The intern must also have at least one year of prior work experience in their field (Silger, 2011).

Many farmers use the J-1 visa program as a supplement to the H-2A visa program, with some growers expressing their preference for J-1 workers due to their flexibility and familiarity with the host culture (Yanik, 2011).

MESA (Multinational Exchange for Sustainable Agriculture)

MESA is a nonprofit organization that connects sustainable agriculture and food justice organizations in the United States with international farmers and agricultural professionals. MESA's mission is "connecting a global grassroots network, collaborating with food and farming leaders, and cultivating community food systems" (MESA, 2024d).

According to their website, their J-1 visa program includes training on sustainable agriculture practices, coupled with educational seminars and cultural activities. Participants return to their home countries equipped with sustainable practices that can be adapted and implemented locally, promoting global agricultural sustainability (MESA, 2024b). The MESA program has facilitated training and cultural exchanges for thousands of participants from 50 countries across 300+ host sites in the United States (MESA, 2024c). Participating countries include Armenia, Georgia, Ghana, Kenya, Lithuania, Mexico, Nepal, Peru, Sri Lanka, and Thailand (MESA, 2024b).

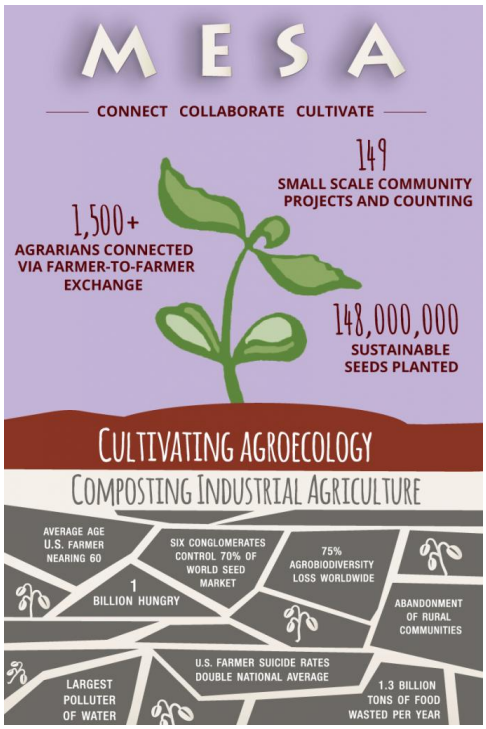

Figure 11: MESA impact infographic (source: MESA, 2024a)

Host farmers benefit from the program by gaining insights into diverse agricultural practices and addressing seasonal labor shortages. Many farmers have been part of the program for decades, with some hosting multiple participants at the same time. The program emphasizes the mutual learning experience, where both hosts and participants exchange knowledge thus contributing to global agricultural sustainability (McGarry, 2014).

Program participants are called "stewards," and they work at a host farm while learning about organic, biointensive, biodynamic, and permaculture production, as well as marketing and community organizing. Many stewards receive scholarships, while host farms help cover lodging, stipends, and training costs. MESA also provides financial support and mentoring training to hosts via on-farm project grants (MESA, 2024b).

CAEP (Communicating for Agriculture Education Programs)

CAEP offers exchange programs that provide training and internship opportunities in agriculture for young adults from around the world. CAEP's agricultural exchange

programs are designed to foster professional development and cultural exchange (CAEP, 2025b). According to CAEP's website, their J-1 visa programs include hands-on training in various agricultural fields such as horticulture, dairy farming, and crop production. The program aims to enhance participants' technical skills and cultural understanding, benefiting both the participants and the host farms through the exchange of knowledge and practices (CAEP, 2025a).

CAEP has facilitated training for over 20,000 young adults, placing J-1 interns and trainees in fruit and vegetable businesses across the country, ranging from small family farms to larger operations (Silger, 2011). Craig Schmuck, CAEP coordinator, said in an interview with Vegetable Growers News:

> We match qualified interns and trainees based on the specific needs of the host farm or operation. [...] The program provides a vocational component to agricultural education for participants, and hosts often learn as much from the interns and trainees (as cited in Silger, 2011).

As the sponsoring organization, CAEP manages the entry of trainees into the United States as exchange visitors, ensuring all necessary paperwork and program objectives set by the U.S. State Department are completed. CAEP simplifies the process for host farms seeking J-1 agricultural placements by handling visa logistics, travel arrangements, pre-arrival training, and technical support (European Network for Rural Development, n.d.).

Guest Worker Programs in the Pacific Region Used for Agricultural Labor

Australia's Seasonal Worker Programme (SWP)

SWP has been operational since 2012, focusing on horticulture but also including the accommodation and tourism sectors. The program has been successful in dealing with labor shortages and is primarily focused on seasonal work for up to nine months a year. Participating countries include Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu. Some challenges from this model include potential exploitation and the need for robust monitoring to ensure worker rights are protected (Joint Standing Committee on Foreign Affairs, Defence and Trade, 2021).

Pacific Australia Labour Mobility (PALM) Scheme

The PALM Scheme allows Australian businesses to hire workers from nine Pacific Island countries and Timor-Leste for short-term positions of up to nine months, or long-term positions between one and four years. This program aims to fill labor gaps in agriculture and other sectors, while providing Pacific and Timor-Leste workers with skills development and income generating opportunities (Department of Employment and Workplace Relations, n.d.).

PALM and SWP share the same participant countries; however, PALM offers more comprehensive support for both employers and workers, including better protection of worker rights and a streamlined process for employers (Department of Employment and Workplace Relations, n.d.).

Figure 12: Pacific Labor Scheme (source: Global Skill Partnerships, 2025)

New Zealand's Recognised Seasonal Employer (RSE) Scheme

Established in 2007, the RSE scheme allows New Zealand employers to recruit workers from the Pacific region for seasonal work in horticulture and viticulture. The program has been highly effective, with significant contributions to the economies of both New Zealand and the participating nations. However, ensuring fair treatment and living conditions for workers remains a critical concern (New Zealand Immigration, 2025).

Pacific Island Countries (PICs) and Pacific Island Labor Scheme (PLS)

The Pacific Labor Scheme (PLS) was launched in 2018 as a successor to the SWP and RSE programs. It allows citizens from nine Pacific Island Countries (PICs) to take up entry-level jobs in rural Australia for up to three years (Global Skill Partnerships, 2025). This scheme aims to address seasonal labor shortages and is open to various sectors and industries, with a focus on non-seasonal agriculture, forestry, and fishing industries. Additionally, there are lessons to be learned from PICs like Kiribati, Samoa, and Tuvalu, which have developed national labor migration policies in and between participating countries (Global Skill Partnerships, 2025).

Organizational Structure

Farms are privately owned and managed by their owners; however, guest worker programs are administered through a network of intermediary organizations (visa sponsors) that manage recruitment, placement, and oversight of migrant workers (Costa & Martin, 2018).

Workforce Supply

The workforce supply in guest worker programs is primarily driven by the labor demands of host farms and the availability of workers in sending countries. The supply of workers is influenced by economic conditions in sending countries, who often have high unemployment rates and limited economic opportunities, making guest worker programs attractive (Costa & Martin, 2018).

Governance

The governance structure for on-farm decision making, like training, remains completely in control of the farm employer. While the intermediary organization or agency provides recruitment services, the farm generally retains a high degree of control over who they hire. Farmers typically set job criteria, conduct interviews, and make the final hiring decision. The farmer’s choice might be constrained by the availability of workers who meet visa criteria or by labor laws in both the host country and the worker’s country of origin (Costa & Martin, 2018).

Resource Contributions

Resource contributions refer to the investments made by various stakeholders in the implementation and maintenance of guest worker programs. These contributions include financial investments from employers, administrative resources from government agencies, and support services from non-governmental organizations

(NGOs) and community groups. Employers bear the cost of recruitment, transportation, housing, and wages for guest workers. Governments provide regulatory oversight and enforcement, while NGOs often offer the services required for recruitment, advocacy, and social services to support guest workers (Costa & Martin, 2018).

Government Involvement

Government involvement is crucial in the design, implementation, and oversight of guest worker programs. Governments of both sending and receiving countries play a role in negotiating bilateral agreements, setting program standards, and monitoring compliance (Costa & Martin, 2018). In the United States, the Department of Labor and United States Citizenship and Immigration Services are heavily involved in the administration of the H-2A and J-1 visa programs, ensuring that employers adhere to labor standards and that workers' rights are protected (Klobucista & Roy, 2023).

Applicability on Hawai‘i Island

The Guest Worker model, specifically through the H-2A and J-1 visa program, offers a potential pathway to help alleviate the persistent seasonal labor shortages faced by Hawai‘i Island’s agricultural sector. By providing access to an array of skilled agricultural laborers, this model directly addresses the high-demand periods of production, which are particularly challenging due to the island's reliance on seasonal crops like coffee and macadamia nuts.

The key advantage of the H-2A program is its ability to provide Hawai‘i Island with experienced agricultural workers from tropical countries like Mexico and Central America who may already be familiar with the kinds of crops being harvested in Hawai‘i. These workers bring specialized agricultural proficiencies, enhancing productivity and reducing the need for intensive onboarding on local farms. Additionally, by stabilizing the labor supply during periods of peak demand, the guest worker model can help local farms scale up, potentially decreasing the cost of production and making local food more competitive with imports.

However, the regulatory and economic challenges associated with implementing the H-2A program on Hawai‘i Island cannot be overlooked. The high cost of living, shifting political climates, combined with the significant administrative burden on farmers to prove labor shortages and comply with housing and wage requirements, can make the program less attractive, particularly for smaller farms. Furthermore, concerns about potential wage depression for local workers and the risk of worker exploitation (Costa & Martin, 2018)—criticisms often leveled at the H-2A program—must be addressed through robust oversight and worker protections.

Collaborative partnerships between the state government, local agricultural associations, and NGOs can help streamline the program, providing farms with access to affordable, skilled labor while striving to ensure that worker rights are protected. Such a model would not only address the immediate labor shortages but also contribute to the long-term sustainability of Hawai'i Island's agricultural sector compensating for the seasonal variations in demand.

The guest worker model's success hinges on the coordination and contributions of various stakeholders. The model's structure allows for flexibility in hiring but also presents challenges in ensuring fair labor practices are upheld and workers' rights protected. The availability of workers is shaped by fluctuating global dynamics, with individuals from economically disadvantaged countries often filling labor roles. To improve the model, concerted efforts need to be made to safeguard workers, foster collaboration between all parties, and adapt to evolving international labor market needs.

Agricultural Volunteer Tourism

Another alternative to accessing farm labor is volunteer tourism, or "voluntourism." Voluntourism combines leisure travel with volunteer work and is a growing trend as travelers seek more hands-on cultural experiences (Bakkar & Lamoureux, 2008**).**

A meta-analysis on volunteer tourism revealed "the volunteer tourism industry is valued at approximately USD 1.7 to 2.6 billion and involves around 10 million volunteer tourists a year" (Avolio et al., 2024). Volunteer tourism has social and economic benefits for farmers, "especially in dealing with labor shortages" (Terry, 2014, p. 94). A member of the Hawai'i Agritourism Association noted that agriculture is a means for Hawai'i to diversify its economy, and they have been "really branding a lot with our food and culture – and really, the root of food and culture is agriculture" (Schack, 2019). This model offers alternative solutions to farmers' labor challenges on Hawai'i Island.

Though making up a small percentage of Hawai'i County agricultural labor, the island still accounted for more than half of the state's migrant agricultural workforce in 2022 (USDA-NASS, 2024b). This also held true for unpaid laborers, with 57% of unpaid agriculture laborers being located on Hawai'i Island. Across all islands, 225 guest workers were hired on H-2A visas in the first half of fiscal year 2024 (October 1, 2023 - March 31, 2024), representing a 42% increase from the same period in the prior year; however, the H-2A visa approval rate was down to 65%. At 137,457 H-2A visas issued, this is the lowest visa approval rate since FY 2015 (Market Analysis and News Branch, 2024).

Table 3 exhibits information on Hawai‘i’s labor force and distinguishes a high percentage of unpaid labor used. These statistics support the need for alternative models for collaborating and organizing the supply of labor on Hawai‘i Island.

Table 3: Comparison of migrant workers, unpaid labor, and total hired farm labor (USDA-NASS, 2024b)

	Hawai‘i County	Total State	Hawai'i County % of State
Total hired farm labor[1]	4,463	9,593	47%
Migrant workers	419	694	60%
Unpaid labor	3,498	6,104	57%

Research suggests a growing concern about the impact of volunteer tourism on local communities and cultures. As the industry evolves to create more enriching experiences, there is a risk of focusing too much on the traveler and losing sight of the deeper purpose of volunteer tourism. **Prioritizing volunteer participants over the host community may lead to a lack of “long-term commitment,” which can hinder sustainable development in those communities”** (Avolio et al., 2024).

One strategy to assess these impacts is to develop sociocultural, economic, and environmental indicators to measure success of such programs. Literature on international development, social indicators, and volunteer tourism suggests that indicator development should engage both host communities and volunteer tourism organizations (Lupoli & Morse, 2015). Local participation and input on program development are key to the sustainable growth of the farm and the betterment of the community (Tran & Ho Tran, 2024).

Examples of Volunteer Tourism

World Wide Opportunities on Organic Farms (WWOOF)

The World Wide Opportunities on Organic Farms (WWOOF) network has connected volunteers with organic farms globally for over 50 years, operating in more than 130 countries (Federation of WWOOOF Organisations [FoWo], 2025c). Unlike traditional

[1] Total hired farm labor is workers on payroll in 2022.

employment, WWOOF participants volunteer their time in exchange for room and board, without monetary compensation (FoWo, 2023). WWOOF aims to promote sustainable food systems and support diversified small farms (FoWo, 2025a).

Currently, 118 farms in Hawai‘i are listed in the WWOOF USA directory, and the program could likely be expanded to include additional farms, offering more educational opportunities for volunteers (WWOOF USA, n.d.). Further research is needed to grow WWOOF’s presence in Hawai‘i and enhance the experience for participants and host farms alike.

Hawai‘i Tourism Authority: Go Hawai‘i

The Hawai‘i Tourism Authority promotes voluntourism opportunities for visitors through their website, www.gohawaii.com. Highlighting existing programs for short-term visitors to give back offers a sustainable alternative for agricultural labor by engaging volunteers in ecological restoration and traditional agricultural practices. These initiatives not only offer essential labor for tasks like removing invasive species and restoring native habitats but also provide educational and meaningful experiences for participants. This approach supports local food systems and marine environments while fostering a sense of responsibility and connection among visitors while promoting a more community-focused and culturally conscientious tourism model in Hawai‘i (Hawai‘i Tourism Authority, 2023). Hawai‘i Island farmers may consider connecting with Go Hawai‘i or other voluntourism organizations to develop and promote opportunities for hosting short-term volunteers.

GIVE Volunteers

GIVE, or Growth International Volunteer Excursions, is an organization whose mission is “to inspire growth, empower global citizens, and ignite sustainable change worldwide” through grassroots service projects and volunteer partnerships with local communities (GIVE, 2024b).

Founded in 2011, the organization aims to offer university students an educationally engaging experience while positively impacting the communities they visit. They use an “asset-based community development (ABCD) model, which is a set of proven best practices in sustainable development that mobilizes a community’s own assets and resources as the basis for development” (GIVE, 2024b).

Unlike many hiring agency models, GIVE has two staff members based in Hawai‘i who serve as program coordinators and guides throughout the project. The volunteer projects in Hawai‘i include Indigenous land stewardship practices, rehabilitating native forest ecosystems, and supporting regenerative farming projects (GIVE, 2024c).

Figure 13: GIVE volunteers in Hawai‘i (source: GIVE, 2024c)

Volunteers can also earn three academic credits through GIVE’s accredited *Ecotourism* course for undergraduates and *Expeditionary Learning Practicum* for graduate students, with courses specific to Hawai‘i (GIVE, 2024a).

Applicability in Hawai‘i

Volunteer tourism can add significant value to the agricultural labor sector in Hawai‘i, but careful oversight is necessary to ensure not only the viability of the farms but also farm safety and that the community's long-term benefit is continually prioritized.

There are practical implications for volunteer tourism in Hawai‘i. Tran and Ho Tran (2024) caution that “organisations should provide more opportunities for local residents to become involved in decision-making regarding volunteer activities and to share their voices and concerns about how the VT (volunteer tourism) programmes are set up.” They also recommend government support services and skills training for local residents to lessen the negative impact on the host community after the volunteers have gone. In a meta-analysis of voluntourism projects globally, Avolio et al. (2024) found “complexity of the planning and development process of volunteer tourism projects” (p. 6), supporting a need for local resident involvement.

Many organic farms, especially those in scenic and culturally appealing locations like Hawai‘i, have relied on programs like WWOOF to attract volunteer labor. The WWOOF program offers volunteers the chance to work in exchange for food and housing, contributing to sustainable agriculture while gaining farm experience; however, **although WWOOF helps small farms cope with labor shortages in the short term, it does not address the deeper, systemic labor issues that have historically challenged Hawai‘i’s agricultural sector** (Mostafanezhad et al., 2015). More research is necessary to assess how programs like WWOOF can be expanded and improved to create lasting, meaningful impacts for Hawai‘i’s farms and volunteer participants.

Key Elements of the Voluntourism Model

Voluntourism presents a unique intersection of travel and service. Unlike structured workforce models, the volunteer base fluctuates significantly, making it difficult to anticipate future labor availability. This unpredictability stems from the personal motivations of volunteers and is largely contingent on larger geopolitical and socioeconomic factors.

Organizational Structure

Voluntourism organizations differ in their structures. While WWOOF operates as a federation of decentralized and independently run nonprofits (FoWo, 2025a), GIVE is a for-profit organization with a sister nonprofit foundation (GIVE Volunteers, n.d.). The Hawai‘i Tourism Authority is a State of Hawai‘i public entity charged with supporting tourism across the islands (Hawai‘i Tourism Authority, 2025b). These varying goals create inherent inconsistencies in how voluntourism organizations operate, manage volunteers, and measure success. Farmers may consider the differing objectives of such entities when choosing whether to partner with an organization that promotes voluntourism. Alternatively, farmers may choose to seek out volunteer workers on their own in the absence of a third-party organization.

Workforce Supply

Volunteer availability in this model is inconsistent due to the nature of the work, which depends on individuals freely offering their time and effort in exchange for meaningful travel experiences rather than monetary compensation. This contrasts with traditional labor models which offer employment and income, allowing for continuity and long-term planning. Moreover, participants in volunteer tourism have varied motivations. For instance, some may seek room and board in exchange for services, such as those involved with WWOOF, while others, like GIVE volunteers, may be motivated to earn academic credits and by a desire to contribute to local communities and ecosystems (FoWo, 2025b; GIVE, 2024b).

Governance

Each organization manages its operations independently, and there is no universal governing body that oversees the voluntourism industry. This decentralized governance structure means that the policies, standards, and practices vary significantly from one organization to another. Some may adhere to rigorous guidelines and standards, while

others may lack transparency or oversight. This disparity creates challenges in regulating voluntourism.

Resource Contributions

Host producers are generally expected to provide a meaningful / educational experience in lieu of payment. At the other end of the spectrum, room and board may be offered in exchange for labor in programs such as WWOOF. While short term volunteers can provide a needed source of labor, hosting such guests means that farmers must open their homes and / or farms to untrained strangers, leading to mixed results. Additionally, while volunteer tourism provides an opportunity for important contributions it does not replace a long-term reliable labor force.

Government Involvement

Government involvement in voluntourism in Hawai‘i is minimal. Issues may arise around housing longer-term volunteers as laws around housing for agricultural workers vary depending on land ownership status, zoning, and other variables.

Hiring Agency Models

Hiring agencies are a practical tool for farms to utilize in seeking both local and international workers. They can help streamline the complexities of managing visas and compliance while casting a wide net to a diverse labor pool. Approximately 24% of farms in Hawai‘i County actively recruit for paid labor (USDA-NASS, 2024b) and hiring agencies can be utilized to help address this need. These agencies, ranging from local to national and international, offer various services for a fee, providing flexible labor solutions tailored to meet the requirements of farms through access to resources, a regulatory knowledge base, and candidate pools, while reducing the administrative burden on farm owners, allowing them to remain focused on day-to-day operations.

Examples of Hiring Agencies

National Labor Exchange (NLx)

The NLx is operated by several nonprofits, offering services to state workforce agencies, employers, and job seekers without additional fees. It hosts a variety of job opportunities throughout Hawai‘i, directing prospective applicants to hirenethawaii.com.

It is a collaborative nonprofit partnership between state workforce agencies, employers, and job seekers. State and national job databases are updated daily. This network enables state job banks to both receive and share job listings (Moore, 2024).

USA Farm Labor

This agency works with farms of all sizes, offering H-2A program assistance from start to finish, including filing, compliance, job matching, petition processing, access to candidate databases, and worker placement (USA Farm Labor, 2024b; USA Farm Labor, 2024c).

Ag Hires

AgHires is a full-service agricultural recruiting firm that recruits, advertises open positions, and conducts headhunting within the agriculture, agribusiness, food production, bioscience, ag technology, and horticulture industries (AgHires, 2025a). Their services provided include job posting packages for a fee, hiring advice, and support services (AgHires, 2025b). AgHires does list job openings in Hawai‘i.

Indeed

Indeed is a global job matching and hiring platform that uses search terms and AI to facilitate job recruitment (Indeed, 2025b). They connect job seekers with employers through job postings on their platform. For an additional fee, Indeed provides updates to employers on potential qualified candidates, along with other digital hiring resources (Indeed, 2025c).

Key Elements of Hiring Agency Models

These agencies are built on the principles of offering various solutions to help farmers obtain labor from local to international levels. Services offered vary and range from simple job postings to full-service end-to-end hiring and training. These services often involve fees or memberships.

Organizational Structure

The business structure of hiring agencies can be private or public, and most operate as third-party contractors with service fees. Services can range from H-2A visa processing through state farm bureaus and third-party agencies, free job postings, to full-service recruiting and hiring for monthly fees.

Workforce Supply

The workforce is supplied through separate agencies that hire, handle administrative functions, and process paperwork and applications, but employers retain ultimate control over employment decisions.

Employers can source workers themselves by searching from a pool of applicants, or an agency can advertise, post available positions, recruit, and hire on the farm's behalf. Farms can choose to make the final decision on employment matters.

Governance

The decision-making within the hiring agency varies, but most have a hierarchical structure with an executive C-suite. Each employer utilizing the service or platform determines how much control they have over hiring and maintains their own specific governance structure separate from that of the hiring agency.

Resource Contributions

Agencies assist in identifying and recruiting potential labor candidates for their clients, often in return for a fee. Employers pay wages along with all additional resources offered to workers such as housing, transportation, and meals which can vary by agency and type of worker hired. For example, if hiring H-2A workers, housing and transportation may need to be provided.

Government Involvement

Government involvement also varies amongst hiring agencies and ranges from minimal to moderate. When the government is involved, it is most often from the Department of Labor, which oversees and audits visa holders and processors (Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2023, 2022; H. R. Rep No. 117-96, 2022; U.S. Department of Labor, n.d.).

Applicability on Hawai‘i Island

Hiring agencies can benefit farms of all types and sizes by offering access to a large selection of potential candidates, flexibility, and time savings. Leveraging the experience and networks of hiring agencies provides another effective tool for farmers seeking reliable, flexible labor by handling the complexities of recruitment, visas, and onboarding for a fee. They cater to farms of all sizes and offer a streamlined approach to sourcing both local and international workers.

While hiring agencies can be a valuable tool to aid in addressing short-term labor recruitment challenges, it is not in itself a solution to the more complex and nuanced issues being faced by Hawai‘i’s agricultural sector.

Conclusion of Case Studies

In analyzing these various labor models, it becomes clear that each offers distinct benefits and challenges, shaped by factors such as farm size, labor supply needs, and organizational governance. The key agricultural labor elements—organizational structure, workforce supply, governance, resource contributions, and government involvement—provide a framework for understanding how different models can address labor shortages being faced on Hawai‘i Island.

The Youth Workforce Development Model exemplified by MA‘O Farms, GoFarm and the AgConnect Models through the University of Hawai‘i, provides avenues for tackling Hawai‘i Island’s labor challenges by focusing on training and empowering the next generation of local farmers through educational and community-rooted initiatives. On the other hand, cooperative and collective farming models offer small and marginal farmers a way to pool resources, share labor, and democratize decision-making, providing a pathway to sustainability even with limited land and capital. Some such as the guest worker model, provide solutions for larger farms needing a steady, seasonal workforce, particularly in places like Hawai‘i, where labor shortages are cyclically acute. The volunteer tourism model highlights a burgeoning and more locally contributory version of tourism that could be further developed to bring about more direct benefit to local farmers and communities; however, the inherent inconsistent nature of the model means that reliance on it to resolve labor shortages and the myriad associated issues is unlikely. Likewise, hiring agencies are a means to help expedite and simplify the canvassing and hiring process but are not a solution in and of themselves.

Table 4 offers a comparative snapshot of these models.

Table 4: Comparative summary of alternative models for organizing agricultural labor

Element	Organizational Structure	Labor Supply	Governance	Resource Contributions	Government Involvement
Youth Workforce Development Model (MA'O Farms)	Nonprofit	Open call, NGO-facilitated Ages < 25	Collaborative: executive team and board of directors	Training, stipends, tuition for youth	Supported in part through government grants
UH GoFarm & AgConnect Models	Public university-affiliated program	Internships filled through open call, university-facilitated process	Governed by UH CTAHR	Stipends are funded by programs and host farms. Host farm receives business plan support, interns gain hands-on training.	Operated by a public university with reliance on grant funding
Cooperative Model: Cuba	State-supported cooperatives, private farms	Members of the Cooperative	Democratic	Wages set by the government; additional subsidies and services	Significant role in policies and support across operations
Cooperative Farming Labor Model: India	Individually owned, member-operated	Members of the cooperative	Democratic	Shared input, equipment, marketing or resources	Strong government support
Collective Farming Labor Model: India	Member-owned and operated	Members of the collective	Joint decision-making by members	Resources pooled collectively: land, labor, capital, skills	Strong government support
Guest Worker Labor Model	Managed by third-party organizations	Facilitated by government-appointed organizations	Agricultural employer makes final decisions	Employers provide wages, housing, food, insurance, training	Overseen by Department of Labor
Volunteer Tourism Model	Non-profit or for-profit	Variable based on volunteer interest	Decentralized; each program differs	Labor exchanged for experiences or room and board	Minimal other than zoning law enforcement
Hiring Agency Model	Farm-specific; agency can be private or public, funded by fees/donors	Managed by the agency	Board of directors governs	Fee-based services	Supported by USDA, EPA

Acronyms: CTHAR - College of Tropical Agriculture and Human Resilience; EPA – Environmental Protection Agency; NGO – non-governmental organization; UH – University of Hawai'i

Analysis of Focus Group and Interviews

On July 31, 2024, a farmer focus group was convened to gather insights on labor hiring challenges and potential collaborative labor solutions on Hawai‘i Island. The session included local producers, one County of Hawai‘i employee, and two farmers who were also representatives from two separate Hawai‘i Island-based cooperatives. Participants shared their firsthand experiences and their perspectives on the various labor models presented in this report, along with the unique challenges faced by the agricultural community on the island.

The focus group aimed to capture local producers' firsthand experiences, identify practical solutions, and inform future strategies to address labor shortages by tailoring collaborative labor models to the specific needs and cultural context of Hawai‘i's agricultural sector.

Table 5: Focus group participants

Participant	Affiliation	Industry/Expertise
Max Bowman	Kamuela Vacuum Cooling Cooperative	Cooperative
Matt and Andrea Drayer	Ancient Valley Growers	Vegetable & māmaki producers
Anna Ezzy	County of Hawai‘i Research and Development	Hawai‘i County
Seed Levine	Nahua ‘Āina Farms	Vegetable producer
Noa Lincoln	University of Hawai‘i at Mānoa, College of Tropical Agriculture and Human Resilience / Māla Kalu'ulu Cooperative	‘Ulu (breadfruit), research
Nathan Trump	Island Harvest	Macadamia nut producer

Challenges Securing and Maintaining an Agricultural Workforce on Hawai‘i Island

The focus group began with the question, “From your perspective, what are the biggest challenges in securing and maintaining an agricultural workforce on Hawai‘i Island?” **The discussion quickly highlighted the significant challenge of housing shortages for workers.** Many producers on the island provide housing as a benefit to workers, often by building it themselves. On-farm housing is crucial partly because some farms are in very remote rural areas, far from the major population centers of Kailua-Kona and Hilo. One participant noted that agricultural work requires a specific mindset—one that values living in extremely rural areas and finds fulfillment in growing food. “The biggest challenge is educating the masses that this is valuable. Luckily, it feels like it is becoming less of a challenge, and now people are realizing, in droves, how valuable growing food is" (M. Drayer, personal communication, July 31, 2024).

Another challenge discussed was land tenure, particularly the development restrictions on leasehold lands, state lands, and Kamehameha Schools Bishop Estate-owned lands. Additionally, the high cost of living and lack of affordable housing options mean that farmers risk losing employees to better-paying jobs in the hotel industry or even to relocation to the continental United States. A further concern was finding enough seasonal laborers willing to do strenuous manual labor for marginal pay, particularly for high value crops such as macadamia nuts (N. Trump, personal communication, July 31, 2024).

Organizational Structure

Smaller farms may struggle with the seasonal nature of agricultural work, where the workforce is often overburdened during the harvest season and underutilized in the off-season. This imbalance makes recruiting and retaining workers for year-round employment challenging, necessitating a more flexible or diversified structure.

Cooperatives can be an excellent model for small-scale farmers to gain access to markets and resources they might not be able to reach individually, including processing facilities, marketing expertise, and distribution networks. This setup reduces the burden on individual farmers and enhances their collective bargaining power and helps ensure they receive a fair price for their products. Cooperatives can also foster community development and support sustainable agricultural practices by keeping operations local and focused on the needs of small producers.

One focus group participant highlighted the growing momentum in Hawai‘i for using third-party hiring agencies, particularly for accessing H-2A visa workers. Guest worker programs allow farms to adjust labor needs based on seasonal demand without the burden of maintaining a permanent workforce and hiring agencies help expedite that process. However, the high costs associated with H-2A workers, including wages and housing, present significant challenges that must be factored into the farm's organizational structure. Stakeholders, including farmers, ranchers, landowners, housing developers, architects and planners, government administrators, and legislators have come together to begin to address the challenges, questions, and recommendations related to increasing agricultural worker housing options, including housing for the H-2A visa workers (The Kohala Center, 2020). One focus group member mentioned that a California-based company is seeking a license to contract labor in Hawai‘i. Some participants expressed surprise that more agencies aren’t pursuing similar opportunities given the demand.

Workforce Supply

When asked about their primary source of farmworkers, three participants indicated that they do not yet source farmworkers, two reported utilizing direct hiring, and one relied on volunteers.

There is a distinct division in preference among farmers between direct hiring and utilizing third-party contractors for labor. Some prefer direct hiring because it allows them to control the process, ensuring workers align with the farm's values and practices. Others see potential benefits in using third-party contractors, especially for employing international workers under the H-2A visa program. One focus group participant noted that many farms already use third-party agencies for hiring, and another expressed that it is "the way to go," although scale is necessary to make it affordable.

As shown in Figure 14, in 2024, there were fewer than 250 H-2A guest workers in Hawai‘i, accounting for only 0.16% of the total H-2A workers in the U.S.

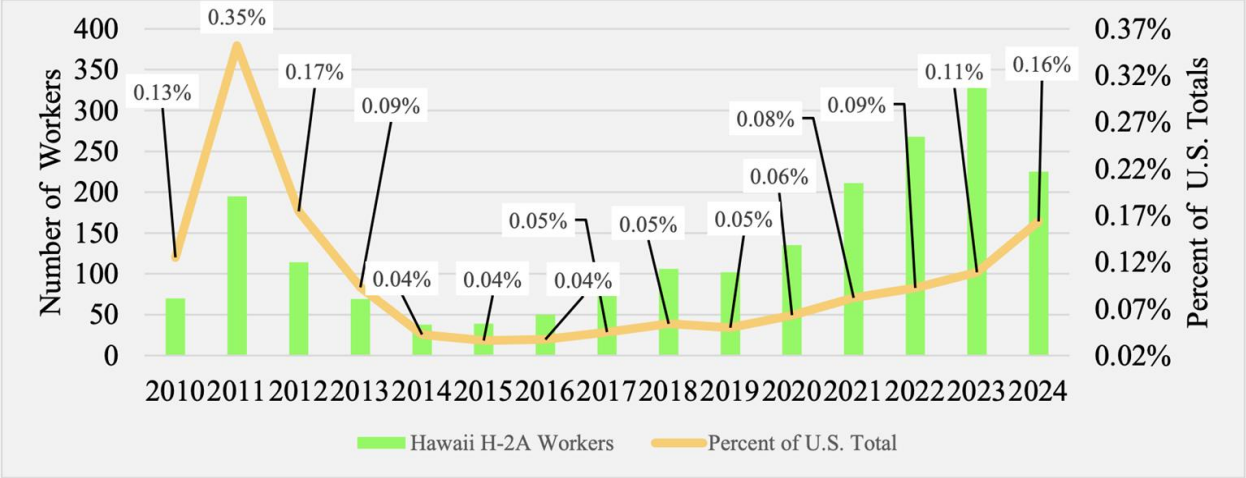

Figure 14: H-2A visa farm labor in Hawai‘i, 2010-2024 (Hawai‘i Department of Agriculture, 2024)

The focus group illuminated several key points regarding the benefits and challenges of guest workers. The primary benefit is the availability of a seasonal, experienced, and reliable workforce, but the challenges are multifaceted, including housing shortages, high costs associated with such programs, regulatory hurdles, and the need for better integration and support systems tailored specifically to Hawai‘i.

Interns were also discussed as a potential labor source. Some farmers expressed concerns about the effectiveness of high school interns, noting that they often lack the skills needed to significantly contribute to farm operations. While these internships provide valuable learning opportunities and open up potential pathways for a next generation of local Hawai‘i residents interested in agriculture, the inexperience of interns can sometimes present a liability to farm owners, and they also may not satiate the immediate labor requirements of farms.

The focus group discussed the conflicts arising from the coexistence of H-2A workers and volunteers on the same farms. Volunteer programs like WWOOF and WorldPackers are popular, but their compatibility with H-2A regulations has been problematic.

The primary issue stems from the incompatibility between the structured nature of the H-2A program, which has strict wage and working condition requirements, and the informal, often unregulated nature of volunteer programs. **One of the farms from the focus group was fined due to issues arising from the presence of both volunteers**

and H-2A workers on the farm. This incident underscores the legal risks and regulatory challenges associated with mixing these two labor sources.

Governance

Many focus group participants favored individually owned and operated governance structures, citing their efficiency and the ability for the owner to make autonomous decisions. The consensus was that **governance models that are closely connected to the actual work tend to produce better outcomes.** In contrast, member-driven governance and collaborative leadership models were seen as problematic in other organizations. Regarding having a board of directors, participants felt that this type of leadership might be too removed from the day-to-day operations, potentially leading to less effective management. The appeal of individually owned operations also lies in the autonomy it affords the owner, allowing for decisive and direct leadership.

Resource Contributions

One of the most significant challenges highlighted by the focus group is the lack of affordable and accessible housing for agricultural workers. Farms in remote areas, such as Kaʻū, face difficulties in attracting and retaining workers due to the long commute to larger cities and the scarcity of available housing. Some farms have resorted to building housing for interns and volunteers as part of their retention strategy. However, most participants in our focus group would prefer to keep housing separate from the employment contract, as it can create difficult situations such as worker vulnerability, where “you’re employing someone but you're also their landlord” (Anonymous, personal communication, July 31, 2024). The focus group participants agreed that a third party or the government could provide or subsidize housing to reduce the financial burden on the farm and improve access for farmworkers.

Feedback from the focus group also highlights the unattractiveness of agricultural jobs due to the combination of relatively low pay and strenuous work, indicating the need for better occupational conditions. Other issues were discussed, such as the need for overtime pay and the broader socioeconomic conditions affecting worker retention. The suggestion of government programs to help provide housing and subsidize overtime wages was seen as a potential solution.

In February of 2022, the Oregon Legislature approved House Bill (HB) 4002, which introduced a tax credit program to ease the financial impact of paying overtime wages to farmworkers, a move that has set a precedent for supporting agricultural employers facing rising labor costs. The state’s new law mandates that farmworkers receive

overtime pay after 40 hours of work per week, a significant shift from previous standards where agricultural labor was exempt from such requirements. To help farmers adjust to this increased labor expense, Oregon offers a tiered tax credit program that reimburses a portion of the overtime wages paid. The tax credits work on a sliding scale based on farm size and gross income, allowing smaller and mid-sized farms to receive a higher percentage of reimbursement compared to larger operations (Oregon Department of Revenue, n.d.).

Ensuring that wages are competitive and reflect the cost of living is crucial for making agricultural jobs more attractive. Additionally, providing clear pathways for career advancement within the farm can help retain workers and make agricultural careers more appealing.

Government Involvement

Farmers expressed a range of opinions regarding the degree of government involvement preferred in a collaborative labor solution. One participant voiced a strong preference for minimal oversight while being open to financial support, "The government is capable of helping us, but sometimes it doesn't go the way that it should. We don't want government oversight, but I'll take the funding" (Anonymous, personal communication, July 31, 2024). This reflects a common sentiment among farmers who appreciate financial assistance but prefer to maintain autonomy in their operations. The same farmer suggested that regulatory bodies should collaborate more closely with the farming community to develop practical guidelines: "They should use our input for their regulations. They shouldn't tell me how to grow my food" (Anonymous, personal communication, July 31, 2024).

The discussion revealed significant challenges in accessing government programs. One farmer shared an experience with a government program for macadamia nuts, noting that despite efforts to spread the word, very few farmers applied, "expecting farmers to participate in the government and programs, even subsidized programs, is not likely. There's not a high likelihood of success for a lot of farmers" (Anonymous, personal communication, July 31, 2024). This highlights a gap between the availability of government support and the farmers' ability to engage with these programs.

Language barriers were also identified as a significant issue. One participant recounted a presentation by Farm Service Agency (FSA) and Natural Resource Conservation Service (NRCS), noting that the inclusion of a Spanish translator for the first time made a positive difference, but also pointed out that many Spanish-speaking farmers still struggle to access information and resources, "here we have a lot of Spanish speakers,

and they can’t communicate or tap into these programs” (Anonymous, personal communication, July 31, 2024).

Some farmers acknowledged that mechanisms exist for addressing their concerns, but their effectiveness varies. As one participant explained, "We interact with state, local, and federal government agencies, whether it's food safety, compliances, permitting issues... It's a fact of life. We’ve got a ton of mechanisms for getting our concerns addressed. Whether or not it happens is a different story” (Anonymous, personal communication, July 31, 2024).

Another farmer emphasized, "the official stance is more incentives and subsidies and less regulations” (Anonymous, personal communication, July 31, 2024).

A concerning trend identified in the focus group discussion is the steady decline in government support for agriculture. One participant noted, "they have steadily declined government ag employees in the state for the past 10 years. It really appears like a self-fulfilling prophecy because if you look at the data of Hawai‘i Department of Agriculture budgets and both federal and state agricultural employees, we have seen nearly a 40% drop over the last 10 years” (Anonymous, personal communication, July 31, 2024). This reduction in support suggests a lack of commitment to the agricultural sector, which could likely hamper its potential growth.

Recommendations

From the increasingly high costs of living; a marked shortage of affordable housing options; a lack of access to appropriate agricultural technology suited to Hawai‘i’s unique geographical characteristics, specific tropical crops, and soil conditions; competition with a proliferation of imported food; high costs of production; the fluctuating seasonal nature of agricultural labor demand; to stagnating agricultural wages, there exists a vast array of systemic issues facing Hawai‘i’s agricultural sector. Given the complex nature of the challenges affecting agricultural labor on Hawai‘i Island, a multisectoral strategy to address these issues is necessary. Based on our research into several labor models and the feedback from the focus group, we provide the following recommendations:

Drawing Inspiration from Collaborative Labor Models

Expanding cooperative and collective labor models is one promising way to tackle agricultural labor challenges, particularly for small-scale farms. Through pooling resources, such as labor, and fostering a strong sense of community, these models can help support a more stable shared workforce while reducing turnover and lightening the financial and administrative load for individual farms.

1. Expand the Use of Cooperative and Collective Models

Our focus group emphasized the potential of cooperative labor structures. Farmers could agree to pay standardized wages and provide insurance within this structure, offering consistent employment opportunities even during seasons of low demand. Additionally, a cooperative entity could help by assigning workers based on their experience and skills to specific member farms depending on needs, reducing seasonal labor shortages.

These cooperatives could also share resources like equipment, training, and marketing to lower overhead for member producers. Pilot projects tailored to the unique context of Hawai‘i Island should be explored to see how well these models work locally.

2. Strengthen Workforce Development Programs

Programs like GoFarm Hawai‘i and MA‘O Organic Farms demonstrate the power of integrated education, training, and employment pathways for youth. Expanding similar programs on Hawai‘i Island can assist in building a local, skilled agricultural workforce.

This could include paid internships, apprenticeships, and pathways to long-term employment, focusing on both technical proficiencies and cultural training. Strategic partnerships with government entities, local high schools, and colleges can be developed to achieve this goal.

The University of Hawai‘i’s AgConnect Program provided valuable insight into addressing agricultural labor needs through practical, hands-on internships. The program succeeded in developing skills and fostering short-term collaborations between farmers and interns. GoFarm is in a strong position to take on the program, as it already has an established alumni network and the necessary infrastructure, and could continue offering valuable hands-on farm experience for interns and business planning guidance for Hawai‘i Island producers.

A dedicated coordinator with expertise in financial management, agriculture, interpersonal communication, and conflict resolution would be essential for maintaining the program’s effectiveness moving forward. Additionally, the shared financial investment model, where host farmers contributed to intern stipends, fostered greater commitment and engagement from farmers and interns alike and should be continued in future program iterations to ensure all participants have a stake in its success.

Expanding structured internship programs like AgConnect, alongside the educational and leadership training model of MA‘O Farms, would enhance the contribution of interns to farm operations. Integrating real-world farming experience, leadership development, and cultural education will ensure that interns are well-prepared for long-term roles in the agricultural sector, helping to address Hawai‘i's ongoing agricultural labor challenges.

3. Community Building and Community-Oriented Initiatives

Concerted community-building efforts, like shared meals or education about rural living, could make agricultural work more appealing and help workers feel more connected to the community. Programs that emphasize the benefits of rural living and community involvement could attract people who are interested in both the work and the lifestyle.

The MA‘O Farms model offers valuable insights that could be adapted to Hawai‘i Island, particularly in creating structured programs that integrate education, leadership development, and agricultural work. Establishing nonprofit organizations that support multiple farms, similar to MA‘O’s structure, could provide access to a broader range of funding sources, enabling the development of training programs and offering fair wages for workers. This approach would also allow farms to leverage public funds and grants

to support agricultural education, internships, and workforce development, reducing the financial burden on individual farmers.

Building on the culturally rooted, community-oriented approach of MAʻO Farms, which emphasizes the importance of Kānaka ʻŌiwi (Native Hawaiian) traditional knowledge and cultural practices, strong community connections, understanding the local community dynamics, and fostering relationships with kūpuna (elder) farmers and key community members, would be crucial for the success of such initiatives. Programs integrating cultural education with agricultural work could help cultivate a deeper connection between workers and the ʻāina (land) they are caring for, further enhancing labor retention.

Policy Initiatives and Advocacy

Strategic policy changes and targeted advocacy are essential to address the pressing challenges in Hawaiʻi's agricultural sector. Key areas such as housing availability for farmworkers, fair compensation practices, and enhanced communication channels, require immediate attention to secure a stable and resilient agricultural workforce. With the Farm Bill extension in place until September 30, 2025 (USDA, n.d.), stakeholders need to provide input on the new Farm Bill. Farmers, workers, and advocates should reach out to Representative Jill Tokuda, who is the only congressperson from Hawaiʻi's delegation serving on the House Agriculture Committee (Tokuda, 2025), to ensure Hawaiʻi's agricultural labor needs are included in upcoming legislation.

The following policy recommendations are informed by the research and feedback from farmers on Hawaiʻi Island, as well as successful models from other regions:

1. Housing for Farmworkers

We recommend continued collaboration with state representatives to strategically support initiatives that address the lack of affordable housing for farmworkers on the island. This would provide immediate relief while also laying the groundwork for a long-term solution that secures a stable agricultural workforce in Hawaiʻi. These initiatives should include:

- Government-funded workforce housing programs to build off-farm housing, ensuring stable living conditions for agricultural workers.
- More flexible land-use policies that allow for the development of necessary infrastructure on leased lands to support worker housing.

- Providing cost-of-living adjustments or subsidies for agricultural workers to make living in rural areas more affordable, helping farms attract and retain labor.

2. Tax Credits to Support Fair Wages

We suggest introducing a state program like Oregon's Agricultural Employer Overtime Tax Credit, which offers a tiered tax credit program to reimburse a portion of the overtime wages paid by agricultural employers. This would help farmers adjust to the increased overtime expenses from the passage of Act 114 (2022) which increases Hawai'i's minimum wage and impacts overtime wage calculations (codified as Hawai'i Revised Statutes [HRS] § 387-2), and Act 300 (2022) codified as provisions amending HRS Chapter 388 that increases the penalty for instances of wage theft to a Class C felony, which includes overtime wages as defined by HRS §387-3 (Department of Labor and Industrial Relations, 2022; Department of Labor and Industrial Relations, 2023; Hawai'i Employers Council, 2022). The tax credits should work on a sliding scale based on farm size and gross income, allowing smaller and mid-sized farms to receive a higher reimbursement percentage than larger operations. This approach ensures that farms most impacted by the financial burden of overtime pay—typically those operating on tight margins—receive the most support.

This initiative helps stabilize farm operations financially and aims to improve labor conditions, attracting a more stable and satisfied workforce. By subsidizing overtime costs, the program encourages farmers to comply with minimum wage increases and overtime regulations without the fear of prohibitive financial strain. Additionally, it helps level the playing field for smaller farms that might otherwise struggle to compete with larger operations capable of absorbing increased labor costs.

3. Improve Communication Channels

Improving how information flows between farmers, government agencies, and organizations is essential for improving policy responsiveness, increasing participation in programs, and ultimately strengthening the agricultural sector. The following measures aim to foster better communication and support for all stakeholders, particularly those who may face language barriers or are less connected to current legislative developments:

- Expanding access to translation services for government programs and training sessions to better support farmers and farmworkers who speak languages other than English. This can be achieved through the hiring of multilingual and multicultural staff.

- Creating consistent and structured communication pathways between farmers and government agencies would help tailor policies and programs to better address the specific needs of Hawai‘i's agricultural sector.
- Increasing outreach and information dissemination on key issues, legislative changes, and market updates.

4. Other Policy Suggestions

- **Encourage Public-Private Partnerships**: Foster collaboration between educational institutions, nonprofits, and private-sector partners to create a pipeline of skilled workers and bolster support networks. Partnerships can enhance training programs, provide funding, and offer hands-on opportunities for aspiring agricultural volunteers and professionals.
- **Promote Appropriate Agricultural Technology**: Investing in appropriate, island-adapted technologies is crucial to bolstering agricultural production in Hawai‘i. Providing grants and subsidies for equipment that can increase efficiency will help farms overcome seasonal labor shortages. Building a network of shared equipment and technical support services can make these innovations accessible to smaller farms and reduce the cost burden to individual producers.

These recommendations provide a multifaceted strategy to address labor shortages through systemic change, cultural alignment, and strategic investment in Hawai‘i Island’s agricultural sector; however, the success of these initiatives hinges on the active participation of the agricultural community.

By engaging with the legislature, Hawai‘i Island farmers and farmworkers can ensure that their voices are heard and that the unique challenges they face—ranging from labor shortages and housing needs to fair compensation and workforce development—are reflected in the upcoming Farm Bill. This active involvement is key to creating a more resilient agricultural sector that not only addresses current labor issues but also strengthens the foundation for future generations of farmers on Hawai‘i Island.

Conclusion

Hawai‘i Island’s agricultural sector faces significant labor shortages that exacerbate production costs and hinder sectoral growth. This problem is compounded by several systemic issues such as Hawai‘i's shortage of affordable housing options, high cost of living, and historic over-reliance on imported food, making the islands extremely vulnerable to external disruptions. Innovative, multifaceted solutions are imperative to grow a resilient agricultural workforce. These include policy reforms, investment in appropriate agricultural technologies, and implementing suitable, locally adapted labor models.

The case studies presented in this report highlight various successful collaborative agricultural labor models that are intended to provide potential pathways for Hawai‘i Island’s producers to consider adopting. From guest worker programs to cooperative and collective farming structures, each model addresses local farmers' specific labor challenges. Combining elements from multiple models, a hybrid approach could create a resilient, locally adapted system but would require community buy-in and consensus amongst many Hawai‘i Island producers to implement effectively. By learning from successful agricultural labor models from other regions and tailoring them to Hawai‘i's unique context, there is potential to alleviate the labor shortage and enhance the sustainability and independence of Hawai‘i's food systems.

The cooperative and collective structures in Cuba and India provide frameworks for pooling resources and sharing labor, reducing financial burdens, and improving operational efficiency. As MA'O Organic Farms demonstrates, integrating educational components could support workforce development while strengthening cultural and community ties. Additionally, ethical guest worker programs with a focus on worker protections could address seasonal labor shortages, while policy reform and legislative advocacy to address agricultural sector problems would offer practical, lasting assistance to farmers.

Overall, the successful elements of these models—democratic governance, community integration, resource sharing, and ethical labor practices—offer scaffolding for developing a more sustainable agricultural labor system on Hawai‘i Island that is resilient, culturally aligned, and economically viable.

Furthermore, findings from the focus group and interviews suggest that enhancing housing access, offering competitive wages, and fostering collaborative labor models are crucial steps toward stabilizing the labor supply in Hawai‘i Island's agricultural sector.

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Appendices

Appendix A: Focus Group and Interview Questions

Focus Group Questions:

- From your perspective, what are the biggest challenges in securing and maintaining an agricultural workforce on Hawai'i Island?
- What are the potential benefits and drawbacks of the structures above? Which structure would you implement and why?
- When thinking about the workforce supply options, which would you prefer and why?
- What governance structure would you prefer if you were to participate in a collaborative labor solution?
- What resources do you feel producers and other partners would need to contribute in a collaborative labor system?
- To what degree would you like the government to be involved in a collaborative labor system and why?

MA'O Farms Interview Questions:

- What is your current role at MA'O Farms?
- Was formal training provided to the farms hosting interns? How did they adapt, and what challenges did they face?
- Were the interns primarily post-high school, and did they have prior farming experience?
- If you were to establish a similar program on Hawai'i Island, what aspects would you prioritize for success?
- What strategies are most effective in fostering community engagement in Hawai'i?
- How do you view the relationship between agricultural labor issues and the broader goal of increasing food production for the community?
- Do you believe government subsidies are necessary to support farmers committed to sustainable agriculture? How do these subsidies intersect with economic challenges like the cost of living and land access?

Doug O'Brien Interview Questions:

- What is a cooperative structure?

- Are you familiar with a collective structure? What is your insight?
- How do cooperatives supply labor?
- Do cooperatives provide education and training for members?
- What makes a successful cooperative?
- Does your organization have any ties in Hawai’i?
- How would your organization go about finding a member of the agricultural cooperative sector of Hawai‘i?

Appendix B: List of Figures and Tables

Appendix C: Deliverables

Survey Questions

1. What is your biggest labor-related challenge? Rank the following from 1 (least challenging) to 5 (most challenging).
    - Recruiting and hiring
    - Administration and Scheduling
    - Training
    - Housing
    - Transportation
    - Other: _____
2. What specific resources or support do you need to address labor challenges? Check all that apply:
    - Affordable Housing
    - Transportation
    - Recruitment Assistance
    - Training Programs
    - Legal and Administrative Support
    - Other: _____
3. What are the pros and cons of your current practices for hiring labor?
4. What do you see as the main challenges of implementing a shared workforce model on Hawai‘i Island?
5. How do you find and recruit people to join your farm team?
6. How do you feel about pooling resources, such as labor, capital, equipment, education/training, inputs, and marketing, with other farmers?
7. If some farmers in your region organized and created a collaborative ag labor structure that finds talent, processes paperwork, handles the onboarding process, training, payroll, and other administrative tasks, would you like to be part of the collaborative labor model?
8. Including the markup for the services mentioned before, what is the maximum hourly rate that you would be willing to pay to employees hired through this collaborative ag labor model? Would you prefer to pay a yearly fee to the collaborative ag labor structure instead?
9. How much involvement and/or control would you want over employment related tasks such as hiring, training, and termination?
10. If you were part of a collaborative farmer model, what would be your main priority, and why?
11. Rank the following issues in order of preference, where 1 is the most important and 5 is the least:

- Labor availability
- Cost of labor
- Skillset of laborer
- Worker safety
- Worker housing

12. Rank the following challenges and concerns around a cooperative or collective labor model in order of relevance, where 1 is the most relevant and 5 is the least:
    - Management
    - Financial implications
    - Operational changes
    - Decision-making
    - Education and training
13. Rank the following aspects of a cooperative labor model that interest you the most in order of preference, where 1 is the most preferred and 5 is the least
    - Profit-sharing
    - Democratic decision-making
    - Pooled resources
    - Sustainable practices
    - Community engagement
14. On a scale of 1 to 10, where 1 is the least interested and 10 is most, how open are you to exploring a cooperative labor model for your farm?

About the Authors

Hannah Leto
Hannah received her undergraduate degree in Human Nutrition and Dietetics from Metropolitan State University of Denver. She went on to complete a Dietetic Internship prior to becoming a Registered Dietitian Nutritionist (RDN). She currently works as a clinical dietitian at Saint Anthony Summit Medical Center in Frisco, Colorado. In her role as a clinical dietitian, she provides nutrition assessments and implements nutrition interventions for patients. Her academic and professional experiences have ignited an interest in the interconnectedness of our food systems and our healthcare system. In Hannah's free time, you can find her running and hiking the trails of Colorado.

Jordan Mitkowski
Jordan is a vegetable farmer at an organic practicing farm in Chandler, Arizona. Devoted to providing healthy and nutritious foods, she advocates for innovative, organic, and sustainable food-growing practices. Jordan believes it is crucial to understand the source of the food system at the production level at farms to mitigate change from the start of the food chain in hopes that the change will trickle down to the consumer and food waste levels. Motivated by deforestation and food waste, she is working towards making a difference in the conventional food industry through Arizona State University's Sustainable Food Systems program by becoming a conservation scientist, supporting farms to adopt organic and sustainable practices.

Katie Hogan
Katie works as a logistics manager for a food service manufacturer and distributor. A working professional with an extensive background in the food industry, she was motivated by the challenges after the COVID-19 pandemic. She aspires to influence policy on food waste and loss at the farm level, reduce retail and foodservice food waste, and improve distribution networks for local food banks.

Katie Wortman
Katie, a Hawai‘i Island resident, is passionately dedicated to supporting the local farming community and enhancing access to fresh, nourishing food across Hawai‘i. Her profound connection to food and natural farming is rooted in cherished memories of her family's farm in Ōkute-juku, Mizunami-shi, Japan. Katie takes pride in continuing her family's legacy through her contributions to the local food system on Hawai‘i Island. Currently, Katie and her ‘ohana steward a small, regenerative cacao farm in Kalaoa.

Maria Ridoutt-Orozco
Maria is a dedicated professional who has traveled around the world to learn about innovative and sustainable solutions for agriculture. Originally from Lima, her journey began at the National Agrarian University in Peru, earning a B.S. in Environmental Engineering. She has done research in greywater irrigation solutions at Yamagata University (Japan), studied Innovation and Technology at Utah State University and Digital Transformation at MIT. Maria is currently working at the Community Alliance with Family Farmers (CAFF), an organization dedicated to empowering small-scale farmers in California through policy advocacy and technical expertise.

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