



Agritourism in Hawai‘i: Opportunities & Challenges

AGRITOURISM STUDY FOR HAWAI‘I ISLAND, 2022



By: Angela I. Fa‘anunu, Ph.D.

Kaivao Farm, LLC

Mahalo Nui Loa

to the many farmers, members of the community, non-profit organizations, businesses, and government entities whose mana‘o (thoughts, ideas), support, and contributions made this project possible.

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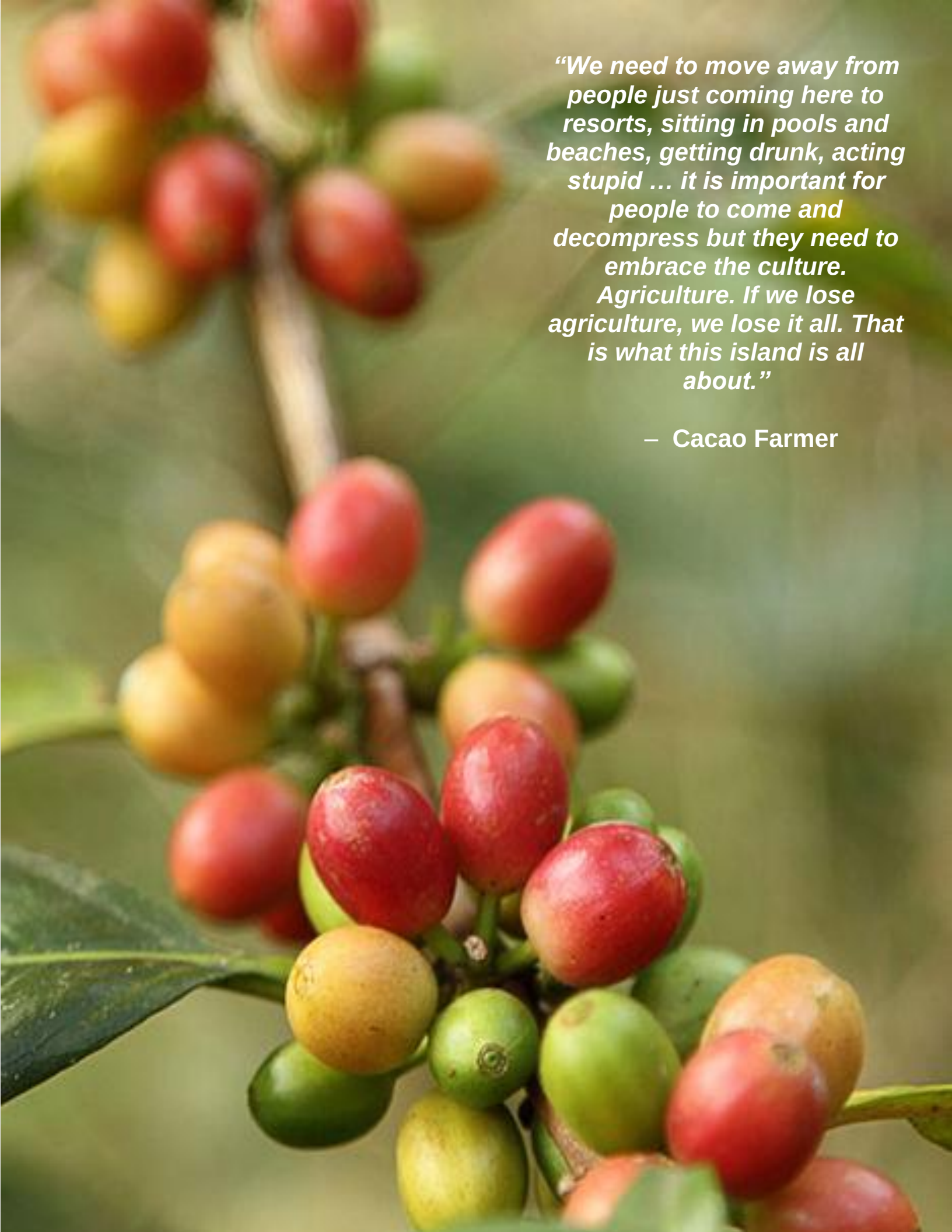
[Depicted on the Front Cover are pictures featuring the various activities that make up agritourism on Hawai‘i Island. From to top left to right: School tours to the Hamākua Chocolate Farm; Hilo Farmers Market; local children on horseback; cattle ranch in Waimea; Wai Meli honey; orchids at Akatsuka Orchid Garden, a nursery; a wedding at Puakea Ranch; and accommodations at a farm where a special permit must be obtained.

[Depicted on the back of the front cover is ‘ulu (breadfruit) at Kaivao Farm. ‘Ulu is a canoe plant and food staple prevalent throughout the Pacific Islands. ‘Ulu is a nutritious, gluten-free superfood with a high protein content that can be processed into gluten free flour to produce many value-added products. Recently, ‘ulu has become a symbol of resilience and food security particularly in Hawai‘i.]



“We need to move away from people just coming here to resorts, sitting in pools and beaches, getting drunk, acting stupid … it is important for people to come and decompress but they need to embrace the culture. Agriculture. If we lose agriculture, we lose it all. That is what this island is all about.”

– **Cacao Farmer**

Prefatory Remarks on Language and Style

A note about Hawaiian and other non-English words:

This report recognizes that the Hawaiian language is an official language of the State of Hawai‘i. Therefore, Hawaiian words are not italicized. Hawaiian words are parenthetically translated or defined in the text at first mention.

[Depicted in the previous page is a branch of the coffee plant with coffee cherries prevalent throughout the Kona and Ka‘ū regions of Hawai‘i Island. Cherries turn red as they ripen.]]
Photo Credit: Hawai‘i Tourism Authority

A Note from the Author

This project began from a small, family-based farm business operation between two sisters – myself, and Kālisi Mausio. We started a small, 10-acre farm (Kaivao Farm) in Hilo, to grow an agroforest farm centered around breadfruit (ʻulu). As farmers, we experienced the many challenges that small farmers face and we learned that farming in Hawaiʻi is difficult. Creating live-able wages from farming is even more difficult to achieve. Therefore, we explored agritourism as a possible solution to our dilemma. Through this process, we came to understand the lack of information on agritourism and the lack of infrastructure to support the industry on Hawaiʻi Island. This led us to propose a project to build the capacity of agritourism on the island. In 2017, our project, "Hawaiʻi Island Agritourism Capacity Building and Promotional Project," was funded by the United States Department of Agriculture (USDA) through the Farmers Market Promotion Program (FMPP).

We proposed to improve the capacity of farmers and ranchers on the island to share their products and services with more people and to improve their visibility, as well as to discover and provide information on the challenges and opportunities for agritourism operations by:

1. Linking consumers directly to farmers/ranchers through: (a) developing a mobile app and webpage and (b) creating a printed Hawaiʻi Farm Trail Map brochure that provides the relevant information for consumers to directly reach these farmers/ranchers; and
2. Conducting a research study on agritourism in Hawaiʻi County to better understand the challenges that agritourism operators face and to identify opportunities to expand and increase the capacity of the industry on the island.

Through this project, a mobile app prototype was initially developed to serve as an electronic platform connecting residents and visitors to agricultural activities on the island. The mobile app initially focused on the island of Hawaiʻi. However, the Hawaiʻi Tourism Authority (HTA), the University of Hawaiʻi via GoFarmsHawaiʻi, and Kamehameha Schools provided additional funding to expand the mobile app, statewide. Hawaiʻi Farm Trails (www.hawaiifarmtrails.com) was officially launched in April 2021.

This report summarizes the findings of the research study and provides recommendations for ways to address the challenges and opportunities for agritourism on Hawaiʻi Island. The recommendations are intended to provide next steps to build capacity. It is important to note that though most farms in Hawaiʻi are located on Hawaiʻi Island, land use on agricultural lands is regulated by the respective county government of each island. Therefore, the policies regulating agritourism are different for each county in Hawaiʻi. The information pertaining to agritourism policy and findings from primary research in this report relates only to Hawaiʻi Island.

We firmly believe that farmer success is key to the future of agriculture in Hawaiʻi. We hope that these efforts will contribute to increasing the capacity and resilience of our local communities while also protecting and maintaining the sense of place that makes Hawaiʻi unique.

Sincerely,
Angela Faʻanunu, Ph.D.*

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Acronyms

A	Agriculture
APD	Agriculture Project District
CDC	Center for Disease Control
CDH	Downtown Hilo Commercial
CG	General Commercial Districts
CN	Neighborhood Commercial Districts
CoBE	University of Hawai‘i at Hilo, College of Business
CSA	Community Supported Agriculture
CV	Village commercial
DHHL	Department of Hawaiian Home Lands
DOH	Hawai‘i State Department of Health
EBT	Electronic Benefit Transfer or Food Stamps
FA	Family Agriculture
FMPP	Farmers Market Promotion Program
GDP	Gross Domestic Product
GET	General Excise Tax
GIS	Geographical Information Systems
HATA	Hawai‘i Agritourism Association
HFT	Hawai‘i Farm Trails
HRS	Hawai‘i Revised Statutes
HTA	Hawai‘i Tourism Authority
HUC	Hawai‘i ‘Ulu Cooperative
IA	Intensive Agriculture
LUC	Land Use Commission
MCI	Meetings, Conventions, and Incentives
MCX	Industrial-Commercial Mixed Districts
MG	General Industrial Districts
ML	Limited Industrial
NELHA	Natural Energy Laboratory of Hawai‘i Authority
RA	Residential and Agriculture
ROD	Rapid ‘Ōhi‘a Death
SBDC	Small Business Development Center
SMA	Special Management Area
USDA	United States Department of Agriculture
VFR	Visiting Friends and Relatives
WWII	World War II

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1 INTRODUCTION

Agritourism can be a significant driver of economic development for Hawai‘i Island, also known as Hawai‘i County, by supporting local agriculture and Hawai‘i’s food system while providing meaningful experiences for residents and visitors. Agritourism is particularly important to Hawai‘i Island as the center of agriculture for the State of Hawai‘i, with more than 4,650 farms and ranches that make up about two thirds (58.2%) of all farms and ranches in the state (Melrose et al., 2015). Though agriculture sales only account for about 4.1 percent to 6.1 percent of the state’s economy, tourism is Hawai‘i’s economic base and a significant component of Hawai‘i’s economy (Leung et al., 2000). In 2019, visitors spent $17.75 billion and generated $2.07 billion in state tax revenue, accounting for more than one fifth (21.3%) of the state’s real gross domestic product (Hawai‘i Tourism Authority, 2019). Leveraging a robust tourism industry to support the growth of agriculture through agritourism would support local self-sufficiency. Food sovereignty and self-sufficiency are important goals for Hawai‘i, where approximately 85 percent of food for consumption is imported (Loke & Leung, 2013).

Most Hawai‘i Island farms do not generate sufficient revenues (USDA, 2019). Therefore, many farmers must pursue other employment in order to make a living. In 2017, most Hawai‘i Island farmers (77%) earned less than $25,000, and only 13 percent of farmers earned more than $50,000 (USDA, 2019). For reference, a study in 2015 found that after adjusting for inflation, $80,381 is needed to support a family of four in Hawai‘i for a, “bare-minimum household survival budget” (United Way, 2017; Caron, 2020, p.1). To achieve financial security, these farmers need alternative strategies to generate additional revenue, such as those offered by agritourism.

Furthermore, compared to conventional mass tourism, agritourism may be more appropriate for small islands by providing mutual benefits for both visitors and local communities and utilizing natural and cultural resources more sustainably. The corporate tourism industry that developed over the latter half of the last century dramatically transformed the customary traditions of hosting and visiting in Hawai‘i and exploited the islands’ natural and cultural resources while dispossessing many Native Hawaiians (Goodyear-Ka‘ōpua, 2014). An alternative, community-based, host-visitor framework for hosting visitors has been proposed for Hawai‘i and the small islands of the Pacific (Fa‘anunu, 2015). Under this framework, hosting visitors not only generates revenues, additional benefits are also achieved including: 1) perpetuating knowledge; 2) teaching leadership and life skills; 3) preserving special places; 4) building relationships; 5) encouraging local food security; and 6) building community capacity. Agritourism offers a type of tourism development that more closely fits this framework, where farmers and ranchers have the ability to share meaningful experiences with visitors and gain a variety of benefits in return.

However, agritourism is an undeveloped, novel industry in Hawai‘i. In 2008, Hawai‘i County adopted Ordinance No. 08-155 to define and regulate agricultural tourism in order to protect the surrounding environment and communities from the impacts of agritourism operations. This ordinance was the first of its kind in the state. Since 2008, however, only a handful of farmers have come forward to register their farms and comply with County regulations, which suggests that the majority of farmers and ranchers engaging in agritourism on the island are either unaware of County regulations for agritourism or that the requirements are too burdensome. In addition, data on existing conditions for agritourism are lacking.

Furthermore, the visibility of agritourism operations is minimal. Most farms (66%) in Hawai‘i are small family farms with one to nine acres of land (USDA, 2019). Many are situated in remote,

rural areas where choices for alternative livelihoods are limited. The low annual earnings for farmers indicate a gap in the industry, where visitor spending is clearly not trickling down to Hawai‘i’s agriculture community (HTA, 2017). In 2016, no island-wide platform focusing on connecting visitors to agritourism operators in the County existed. Therefore, there was a need to increase the understanding of existing agritourism activities in Hawai‘i County and to increase the capacity of farmers and ranchers to engage with more consumers in agritourism.

In response, this report summarizes the findings of a research study to understand the opportunities and the challenges for agritourism on Hawai‘i Island. The study was conducted at the same time as developing the Hawaii Farm Trails mobile app from 2017 to 2020. Through this study, an agritourism database of about 106 farms on Hawai‘i Island was created. Data were collected from a subset of farms in the database through: in-depth interviews with 24 individuals representing 18 agritourism businesses; a focus-group meeting on planning and permitting processes; and meetings with expert consultants. In-depth interviews were 1.5 to 2 hours long and represent diverse perspectives from participants with a wide range of experience in different forms of agritourism. Though the study overlapped with the COVID-19 pandemic, most of the data were collected prior to the pandemic. Therefore, the impact of the pandemic on agritourism is not discussed in this report.

Several themes or topic areas emerged from this research that translated into the four chapters following Chapter 4 (Methods): Planning & Permitting (Chapter 5); Financial Sustainability (Chapter 6); Community Resilience & Social Well-being (Chapter 7); Environmental Quality and Sustainability (Chapter 8); References (Chapter 9) and List of Appendices (Chapter 10). The chapters are also organized in this way to address the pillars of sustainable tourism: economic well-being, socio-cultural benefits, and environmental sustainability. Under each topic, the opportunities and challenges for agritourism are discussed in detail. Each chapter ends with a summary of findings followed by recommendations to address the gaps in the industry and grow opportunities in agritourism on Hawai‘i Island.

Agritourism can be developed to benefit farmers while managing the potential impacts of this commercial activity on rural communities and surrounding environments. However, good planning, research, and comprehensive community and stakeholder input are critical. Though this report highlights the importance of financial sustainability, development must be balanced with the needs of Hawai‘i Island’s communities and the environment. A conservative agritourism ordinance supports slow and controlled growth and provides opportunities for research to inform decision-making. However, policies that are too restrictive may also lead to an agritourism industry that is elitist or too small to matter (Arroyo et. al, 2013; Lamie et. al, 2021).

Hawai‘i Island is ideally positioned to create alternative and more sustainable pathways to development. This report provides information on existing conditions for Hawai‘i agritourism, and recommendations for ways to build the industry based on the three pillars of sustainable tourism. A guiding principle is that agritourism can be developed in such a way as to increase the capacity and resilience of Hawai‘i Island’s communities while also protecting and maintaining the sense of place that makes Hawai‘i unique. The report is intended for farmers, policymakers, researchers, students, and any interested individuals seeking to better understand agritourism in Hawai‘i.

CHAPTER 2
Background

[Depicted on the Chapter 2 section cover is a ranch in Waimea with Mauna Kea blanketed in snow in the backdrop. Cattle ranches were prevalent on Hawai‘i Island during the Plantation Era and continue to be common in Kohala, Ka‘ū, and Kona today.]
Photo Credit: Hawai‘i Tourism Authority

2 BACKGROUND

2.1 Tourism in Hawai‘i – Then and Now

2.1.1 Traditional Vs. Modern Customs of Hospitality (Ho‘okipa) in Hawai‘i

Hospitality, the act of hosting and visiting, is a custom that Pacific peoples have practiced for centuries. Early Pacific Islanders were skilled voyagers whose knowledge of the cosmos and sea-faring double-hulled canoes allowed them to discover and settle on the many islands of Oceania. Land-based customs evolved that enabled survival and resilience with the limited resources of small, isolated islands. Pacific Island societies adapted to their island ecosystems, and core values of relating to the natural environment and to each other emerged to characterize relationships and practices. Close-knit family ties drove social relationships, and stewardship practices reflected dependence on natural resources.

Early Pacific peoples documented their lives in various ways, including, in Hawai‘i, mo‘olelo (stories), ‘ōlelo no‘eau (proverbs), ‘oli (chants), mele (songs), and dance. Oral histories provide clues and enable speculations to be made today about the past, including the relationship between kānaka (man) and ‘āina (land) or nature. In Hawai‘i, scholars and practitioners who have examined the term ‘āina, literally translated as “land” or “earth,” suggest that there existed a symbiotic, socio-ecological, and reciprocal relationship between kānaka and ‘āina (Winters et al., 2000; Pukui & Elbert, 1983). The kānaka-‘āina relationship is further reflected in the proverb, “He ali‘i ka ‘āina, he kauwā ke kanaka,” which translates as “the land is chief, man its servant.” The proverb suggests that the ancient Native Hawaiians, like other indigenous societies, regarded the land with reverence and assumed the responsibility of caring for the ‘āina materially and spiritually. The formation of strict customary rules to protect the integrity of marine and terrestrial resources in Hawai‘i suggest that ecosystem health was foundational for survival among early Hawaiians.

Fa‘anunu (2015) found that core Hawaiian values are key elements that guide ho‘okipa (hospitality) among some Native Hawaiian tourism practitioners in Hawai‘i. Key core values include aloha (love), mālama (to take care of), kuleana (responsibility), and reciprocity. These core values likely grew from the socio-ecological relationship between kānaka and ‘āina and are the foundation of the family (‘ohana), or the smallest unit of community. Such core values are embedded in relationships and in the practices characterizing Pacific customs. Thus, hospitality customs in the Pacific are based on relationships and guided by core values like aloha, mālama, kuleana, and reciprocity (Fa‘anunu, 2015).

Traditionally, a pre-existing relationship between hosts and visitors was necessary for travel in the Pacific. When a person traveled, it was to visit someone they knew, and they would stay with family and friends or acquaintances of family and friends. Visitors would be received and treated as members of the host’s own family. Within this setting, visitors might be expected to reciprocate by respecting the norms of the host and minimizing their burden on the host, such as assisting with household chores. A model developed to represent this host-visitor relationship is illustrated in Figure 1 (Fa‘anunu, 2015).

Though travel to Hawai‘i has occurred for centuries, a corporate tourism industry developed that grew to replace the customary traditions of hosting and visiting in Hawai‘i by the mid-twentieth century. A significant change was the introduction of money as a medium of exchange in the hosting-visiting process. Visitors could pay for experiences and products which shifted the nature of the relationship between hosts and visitors to be transactional and no longer dependent on

relationships. However, byproducts of transactional host-visitor relationships often manifest as insensitive and entitled visitor behavior resulting from visitor expectations. The shift in the nature of host-visitor relations is represented by the model in Figure 1 which also suggests a contemporary host-visitor process that prioritizes visitors over hosts (Fa‘anunu, 2015).

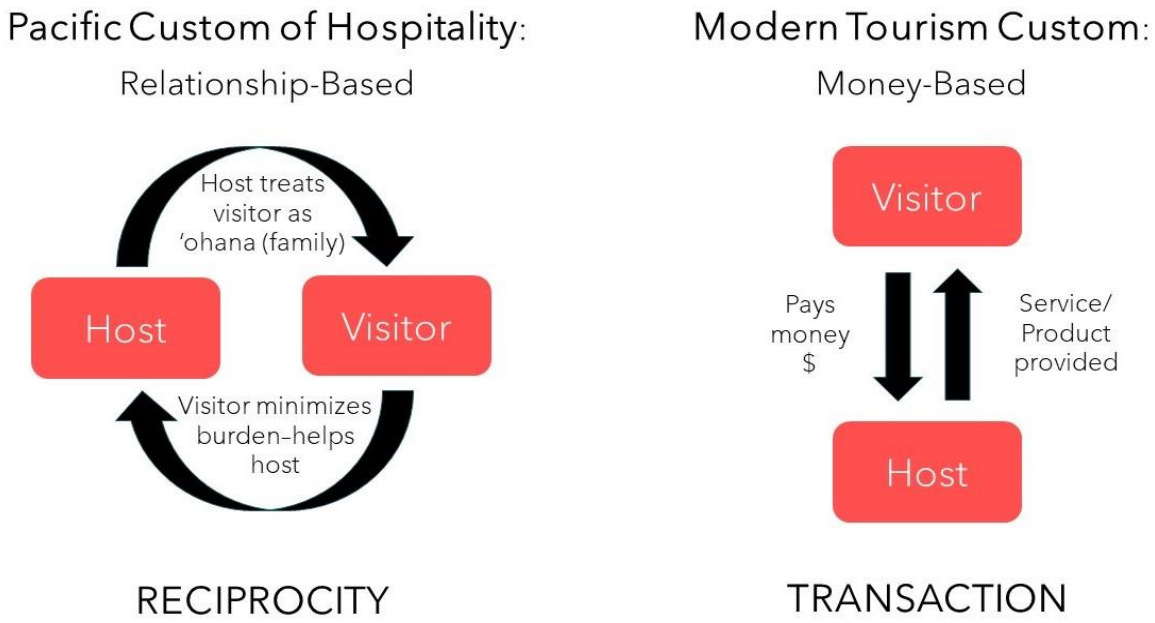

Figure 1. Model of traditional Pacific versus modern customs of hospitality (Fa‘anunu, 2015)

2.2 Visitor Trends

2.2.1 *Number of Visitors*

By 1930, approximately 18,651 people visited Hawai‘i, as shown in Figure 2 (Department of Business, Economic Development and Tourism (DBEDT), n.d.). During World War II, Hawai‘i was marketed as the safest place on earth with its aloha spirit and friendly people. Hawai‘i’s brand as a safe haven and tropical paradise destination appealed to many in the aftermath of the war. In 1959, Hawai‘i became the 50th state of America, which enabled Americans to travel freely to Hawai‘i without a passport. With the combination of ease of travel and more disposable income following the war, Hawai‘i soon became a popular destination.

By the 1960s, plantation agriculture was phasing out as the cost of sugar production became cheaper elsewhere (Finney and Watson, ca.1974). Tourism became coined as Hawai‘i’s “new sugar” and the state’s greatest driver of economic development. Between 1960 and 1990, travel to Hawai‘i boomed and grew to about 6.7 million visitors but stabilized between 1990 and 2010, likely due to the economic recessions during this time period (Figure 2). Travel picked up again with the highest tourism growth rate occurring in the years following 2010 reaching a peak of 10.4 million visitors by 2019. However, by 2020, total visitor arrivals to the Hawaiian Islands declined 73.9 percent from 2019 due to the COVID-19 pandemic, a record decline in visitors since the 1930s (DBEDT, n.d.).

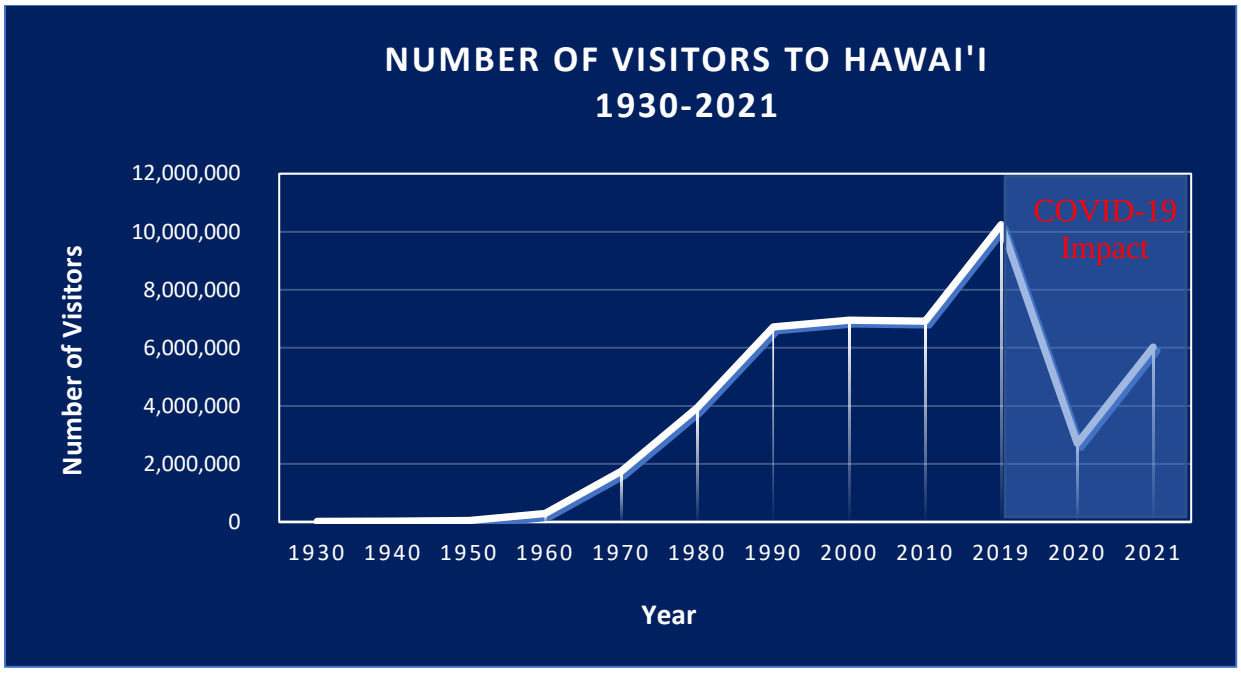

Figure 2. Number of Visitors to Hawai‘i, 1930-2021 (DEBEDT, n.d.)

In 2019, there were 249,021 visitors in Hawai‘i on any given day (HTA, 2019). With a resident population of 1.4 million, the ratio of visitor to resident on any given day was 1:6. Visitors spent $17.75 billion and generated $2.07 billion in state tax revenue, accounting for more than one fifth (21.3%) of the state's real gross domestic product. In addition, tourism supported 216,000 jobs in the same year. Therefore, tourism is a significant part of Hawai‘i's economy and everyday life.

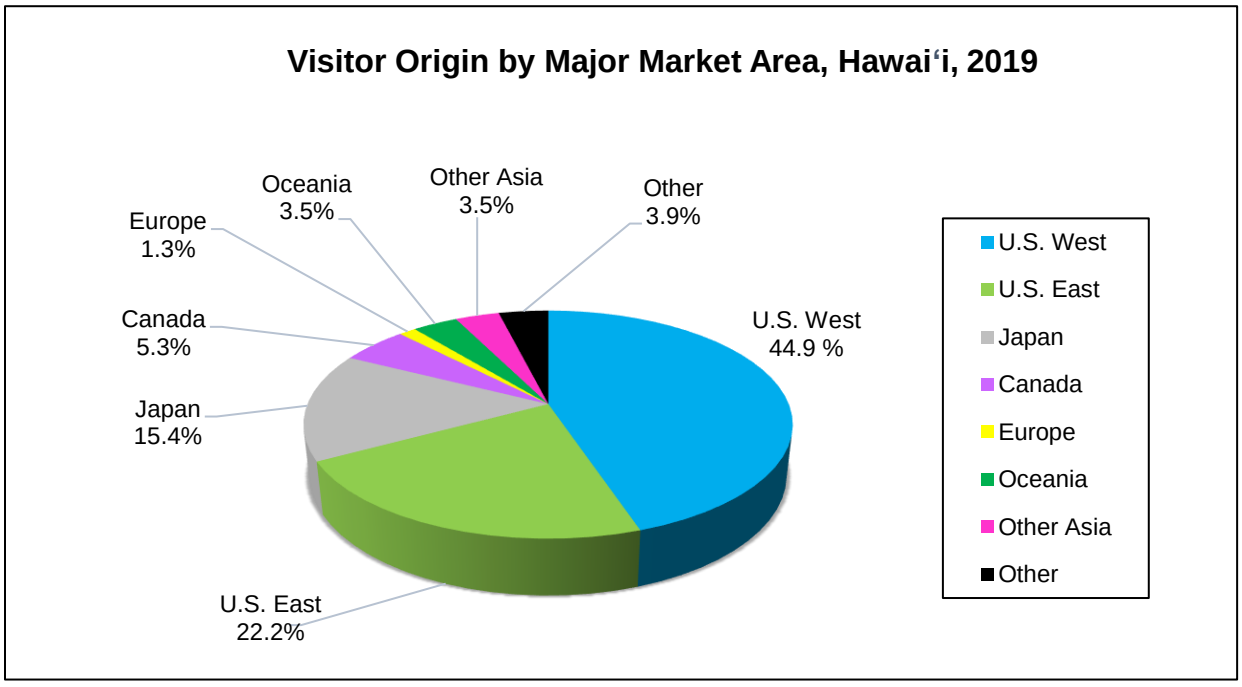

Figure 3. Visitor Origin by Major Market Area, Hawai‘i, 2019 (HTA, 2019)

2.2.2 *Markets of Origin*

Most visitors to Hawai‘i come from the Continental United States (U.S.) followed by Japan and then Canada (Figure 3). In 2019, 67.1 percent of visitors to Hawai‘i came from the Continental U.S. - 44.9 percent from the west coast and 22.2 percent from the east coast. Japan (15.4%) and Canada (5.3%) accounted for the most international travelers to Hawai‘i. While in Hawai‘i, visitors spend the most days on O‘ahu (47%) followed by Maui (27%), Hawai‘i Island (15%), and Kaua‘i (11.3%), as shown in Figure 3. Lāna‘i and Moloka‘i account for the remaining 6 percent of visitor days. For the Island of Hawai‘i, most visitor days are spent in Kona (80.9%) compared to less than 20 percent of visitor days in Hilo. The average length of stay in Hawai‘i in 2019 was 9.27 days. On average, visitors from Canada tended to stay longer (12.7 days) while Japanese visitors stayed in Hawai‘i for only about 5.94 days.

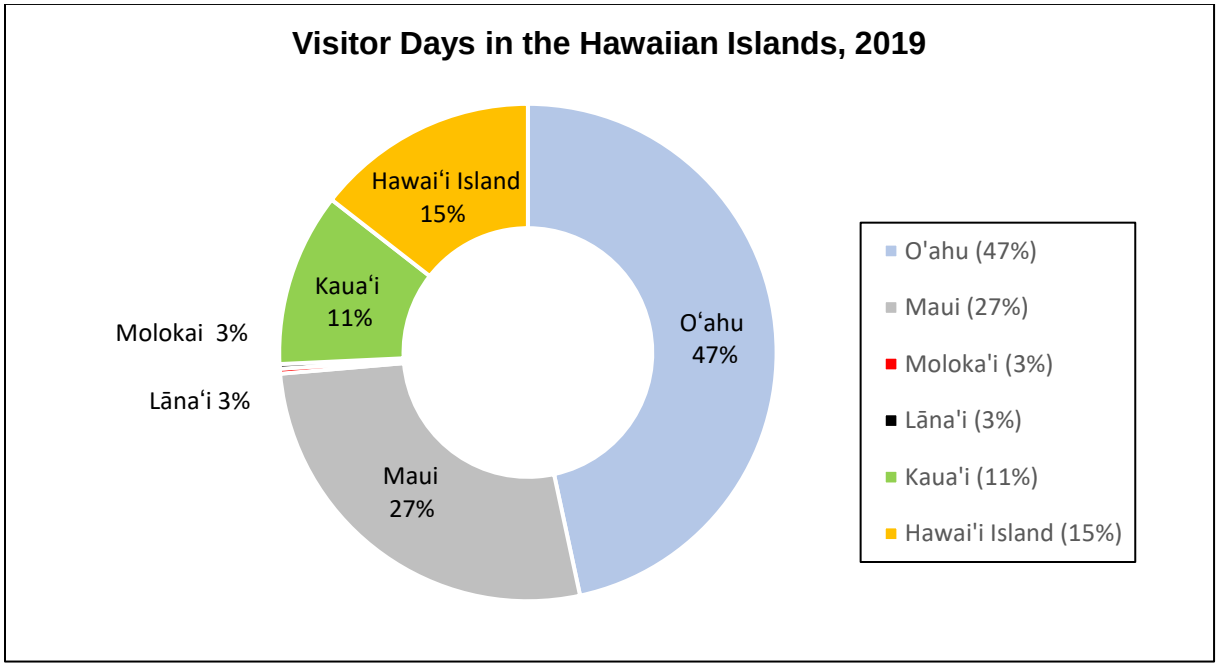

Figure 4. Visitor Days by Island, Hawai‘i, 2019

Visitor spending per person per day (yield) was higher among visitors from the Asia-Pacific region, with Chinese visitors spending the most ($325/person), followed by visitors from Korea ($277/person), Australia ($265/person), and Japan ($240/person). Visitors from the US east coast spent more per day per person ($214) than those from the west coast ($175). These emerging high-yielding markets from the Asia-Pacific region represent potential target markets for agritourism in the future.

2.2.3 *Purpose of Visit*

In 2019, most (80%) visitors to Hawai‘i traveled for vacation, followed by VFR (8%); for honeymoons or to get married (5.1%); and for business (4.7%) (Department of Business, Economic Development, & Tourism (DBEDT), n.d.). More than two thirds were repeat visitors, while only about a third were first-time visitors.

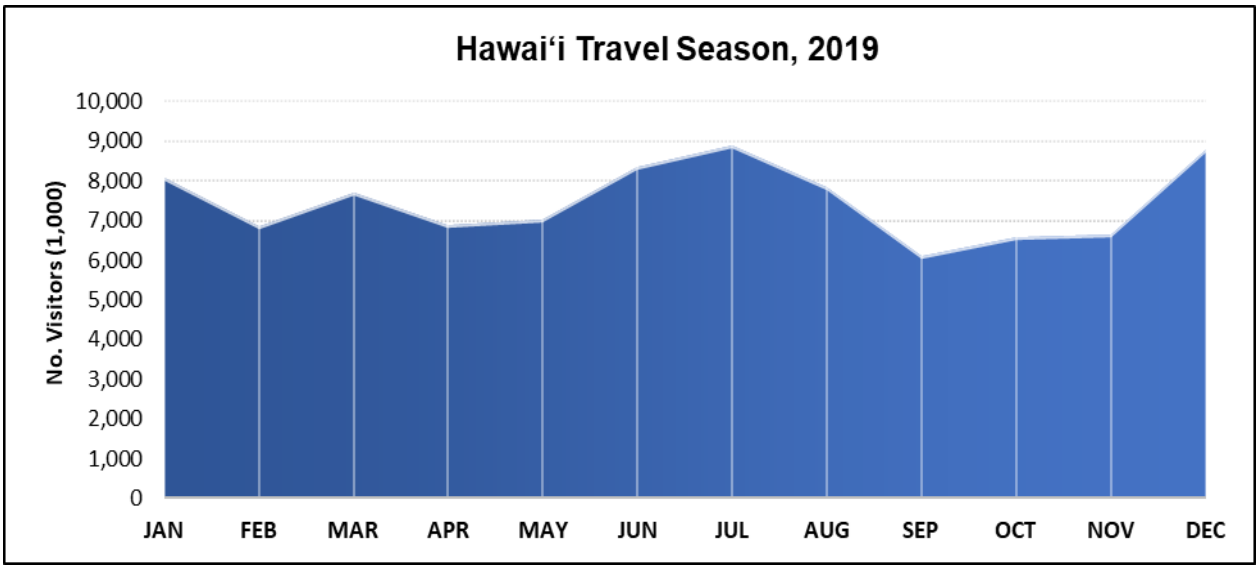

Figure 5. Hawai‘i’s travel season, 2019 (DBEDT, n.d.)

The travel season to Hawai‘i coincides with school holiday months. In 2019, travel to Hawai‘i was highest in the summer months between May and August and also in the winter‘ months with a peak in December (Figure 5). A small increase in visitors to Hawai‘i also occurred in March, perhaps due to Spring Break.

2.2.4 *Cruise Ship Visitors*

Cruise visitors are an important part of Hawai‘i’s tourism and travel industry, particularly for the neighboring islands of O‘ahu. In 2019, 68 out-of-state cruise ships brought 143,508 visitors to Hawai‘i and another 129,542 arrived by air then boarded cruise ships in Hawai‘i totaling 273,050 cruise visitors (DBEDT, n.d.; HTA, 2020). Cruise ships to the neighboring islands of O‘ahu are often only in port for 12 hours so cruise visitors usually stay overnight on cruise ships rather than in local accommodations. In 2019, the average length of stay for cruise visitors was 7.46 days of which 5.38 days were spent on the ship and only 0.92 days spent on shore after the cruise (HTA, 2020). Therefore, cruise visitors are usually day trippers who also need short-term activities to engage in before re-boarding their ship in the evening. Over half (55.1%) of Hawai‘i’s cruise visitors in 2019 were repeat visitors and most came for leisure (86.8%), to visit friends and family (8.9%), and for honeymoons (2%).

2.2.5 *Attractions*

Hawai‘i has six islands that tourists can visit: Kaua‘i, O‘ahu, Moloka‘i, Lāna‘i, Maui, and Hawai‘i. Each island has its own attractions and brand with unique experiences that can only be had on each island. For example, Hawai‘i Island is the largest of the main Hawaiian Islands, with more than 60 percent of all farm lands in the state. Therefore, Hawai‘i Island has an advantage in experiences relating to agriculture compared to the other islands. The island has many farms offering farm tours, farmers markets and food hubs, restaurants with locally-sourced ingredients, and agriculture-related events and festivals.

Market	2017	2018	2019
U.S. Total	11.00%	14.80%	14.40%
U.S. West	9.90%	13.60%	13.20%
U.S. East	13.10%	17.10%	15.70%
Japan	2.70%	12.20%	14.20%
Canada	9.50%	12.50%	12.00%
Europe	8.40%	10.50%	8.80%
Oceania	5.10%	8.10%	8.00%
China	24.50%	17.30%	16.80%
South Korea	18.80%	19.30%	21.40%

Table 1. Hawai‘i visitor activity – Participation in agritourism, 2017–2019 (HTA, n.d.)

Visitor survey data from 2017 to 2019 indicate that interest in agritourism increased overall despite a slight decline in 2019 (HTA, n.d.). The Japanese and South Korean markets sustained positive growth trends throughout the three-year period (Table 1 and Figure 6). In 2019, the percentage of visitors who participated in agritourism was greatest among South Koreans (21.4%), Chinese (16.8%), and U.S. east coast (15.7%) visitors. Though participation in agritourism from other markets such as Japan, Canada, Europe, and Oceania were lower in 2019, more data is needed to understand how these trends hold following the COVID-19 pandemic. The South Korean and Japanese markets are interesting for Hawai‘i, particularly for education-related experiences like agritourism because the population of both countries are generally well educated. In 2018, a greater percentage of young adults between 25 to 34 years of age had a college education in South Korea (70%) and Japan (61%) compared to the U.S. (40%) (Cooper, 2019).

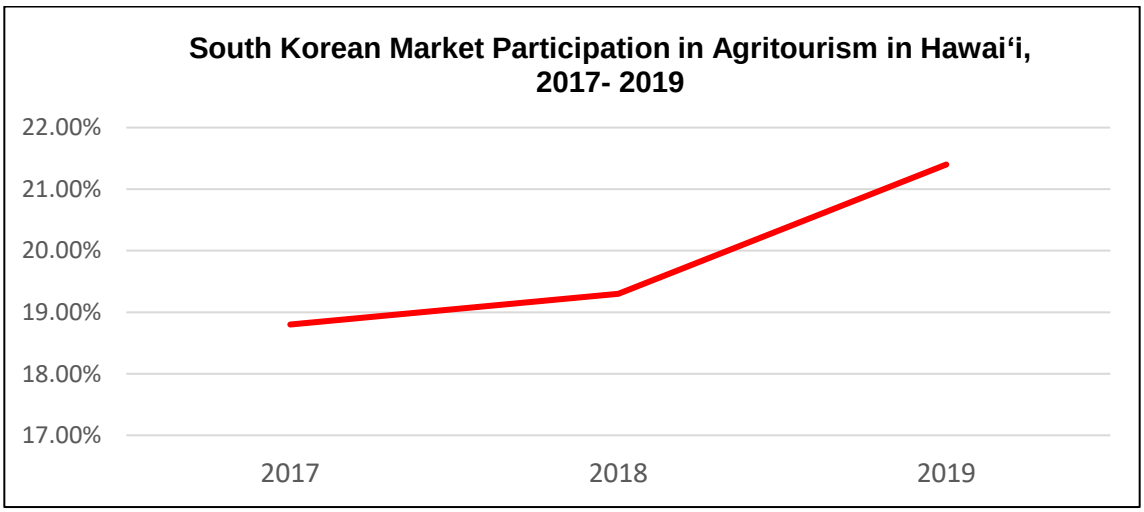

Figure 6. Korean market participation in agritourism, 2017 – 2019 (HTA, n.d)

2.3 Agriculture in Hawai‘i: Then and Now

Oceanic societies boast of resilient histories – many created food abundance on small, isolated islands. Evidence suggests that prior to Western contact (1778), the ancient Hawaiians supported a relatively high population density of between 400,000 and 800,000 by managing a complex, integrated farming system that utilized the unique environments along the coast where agricultural watersheds meet the ocean (Figure 7) (Costa-Pierce, 1987; Lincoln & Vitousek, 2017; Stannard, 1989; Winters et al., 2020). Ancient Hawaiian society was subject to droughts, climatic disruptions, natural disasters, and famines that threatened survival. According to Costa-Pierce (1987), these harsh conditions likely led to innovative practices in food production resulting in remarkable integrated farming systems. The abundance of food created by these systems enabled the early Native Hawaiians to survive and thrive on remote, isolated islands for thousands of years (Stannard, 1989).

Figure 7. Abundance in the Hawaiian ahupua‘a (Source: Kahalewai, n.d.)

2.3.1 Traditional Farming Systems

Hawai‘i’s traditional land tenure system is unique and based on land-based, indigenous values (Minerbi, n.d.). Islands were divided into moku (regional districts) that generally extended from the mountains to the sea. Each moku was then divided into smaller divisions of land called ahupua‘a. The size and shape of ahupua‘a varied but each unit generally included necessary resources for survival, such as forest resources from the upper regions, land for cultivation in the midlands and marine resources from the sea. Ahupua‘a were further divided into ‘ili or smaller parcels, assigned to families who had “continuity of residence, cultivation and connection with the land within an ahupua‘a, that was passed through generations” (Minerbi, n.d., p. 2). District boundaries were marked and upheld by multiple rulers prior to Kamehameha I’s rule (Beamer, 2014).

As in many Pacific Island societies, the management of land and water in Hawai‘i was administered by chiefs. Moku were ruled by high chiefs while smaller land divisions, such as ahupua‘a and ‘ili, were controlled by lesser chiefs. Konohiki, or land managers, worked directly with maka‘āinana (commoners) to steward the land and ocean resources. The konohiki utilized a kapu (prohibition) system or a set of rules to manage the land that was based on natural cycles on land and at sea. Rules were strictly enforced and effective.

2.3.2 Land Use Changes

The Americanization of Hawai‘i and the advent of the plantation era from the 1800s to the 1900s led to major social transformations that would weaken the local systems of self-sufficiency. Agriculture shifted from diversified, small-scale, subsistence agriculture to large, mono-cropped commercial plantations of sugarcane, pineapple, rice, and cattle ranching. During this time, Hawai‘i began exporting food products around the world, and migrant workers were imported to support this industry (Haraguchi, 1987). By the 1960s, cheaper sugar production elsewhere led to the beginning of the end of plantation agriculture in Hawai‘i. The last plantations survived into the 1990s, until the closure of the last one, the HC&S Plantation in Maui, in January 2016 (Melrose et al., 2015). As the sugar industry crashed in the 1960s, tourism emerged as a “new kind of sugar” (Kent, N., n.d. as cited in Finney and Watson, ca. 1974, p.169). Coastal, agricultural, and ancestral lands were cleared to develop massive infrastructure, such as roads, hotels, resorts, and attractions like golf courses, to support the burgeoning tourism industry (Bianchi, 2002; Britton, 1982; Minerbi, 1992). Today, the agriculture industry in Hawai‘i has transitioned to a more diverse, intensive, and decentralized type of agriculture (Melrose et al., 2015).

2.3.3 Profile of Hawai‘i Farms

- 58% of farms in Hawai‘i are on Hawai‘i Island
- 66.4% of Hawai‘i Island farms are 1 to 9 acres
- 94% of Hawai‘i Island farms are family farms
- 77% of Hawai‘i Island farms earn < $25,000
- 13% of Hawai‘i Island farms earn > $50,000
- 8% of farms statewide are owned/operated by Native Hawaiian or Pacific Islander

In 2017, the US Census of Agriculture reported that there were 7,328 farms in Hawai‘i with approximately 1,135,352 acres in farmland (USDA NASS, 2019). These farms are distributed throughout the various Hawaiian Islands; however, 58 percent are located on Hawai‘i Island, accounting for about two thirds (58.5%) of all farm lands in the State of Hawai‘i. Though the average farm size on Hawai‘i Island is 157 acres, about 66.4 percent are less than 10 acres. Thus, the majority of Hawai‘i Island farmers operate small-scale farms and most (94%) are family farms. Only 8 percent of all farms statewide are owned and operated by Native Hawaiians or Pacific Islanders (USDA NASS, 2019).

The agriculture industry generated about $2.9 billion for the State of Hawai‘i in 2017 (USDA, 2019). The market value of all agricultural products sold in the state totaled $563,803,000, of which almost half (48%) came from Hawai‘i Island. Average sales from agricultural products per farm in the state was approximately $76,938 compared to $63,789 for Hawai‘i Island farms. In 2017, most farms in the State of Hawai‘i and in Hawai‘i County (34%) earned less than $2,500 from the sale of agricultural products (Figure 8). Most Hawai‘i Island farmers (77%) earned less than $25,000 and only 13 percent earned more than $50,000 (Figure 8). These data suggest that farming is not a lucrative profession, and that farming may not be a full-time endeavor for most.

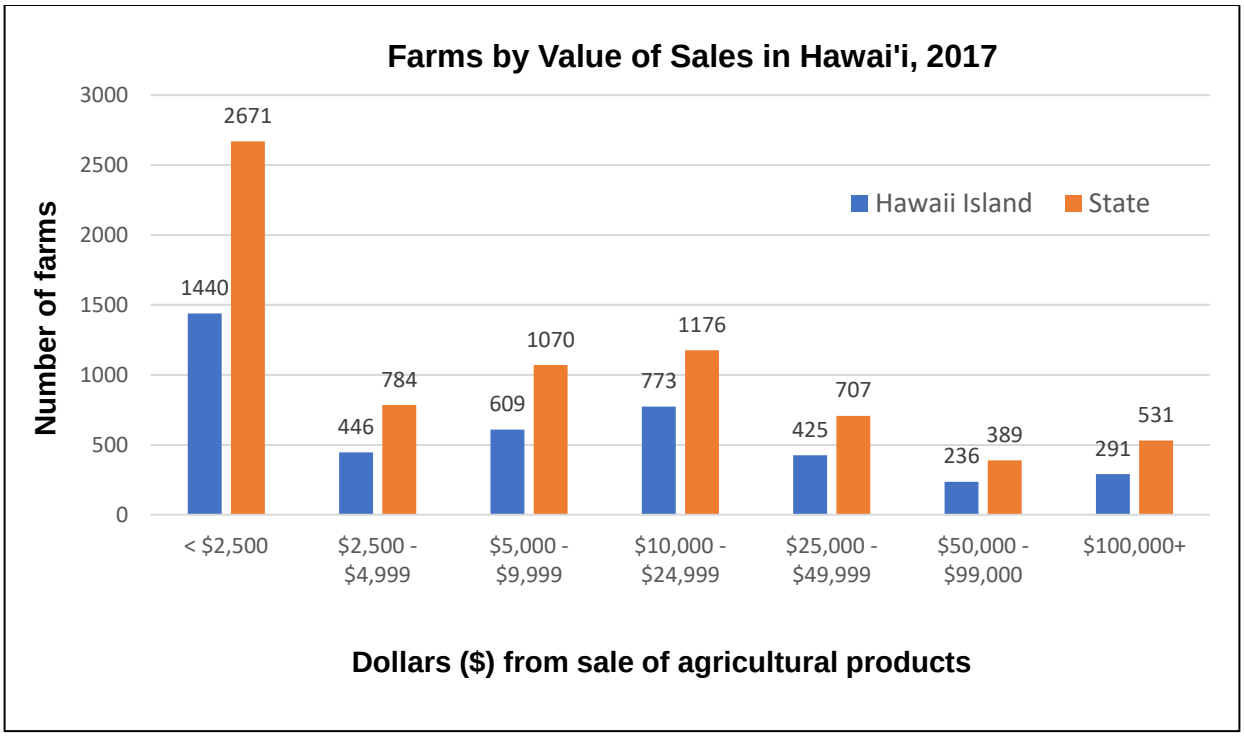

Figure 8. Number of farms by value of sales, 2017 (USDA NASS, 2019)

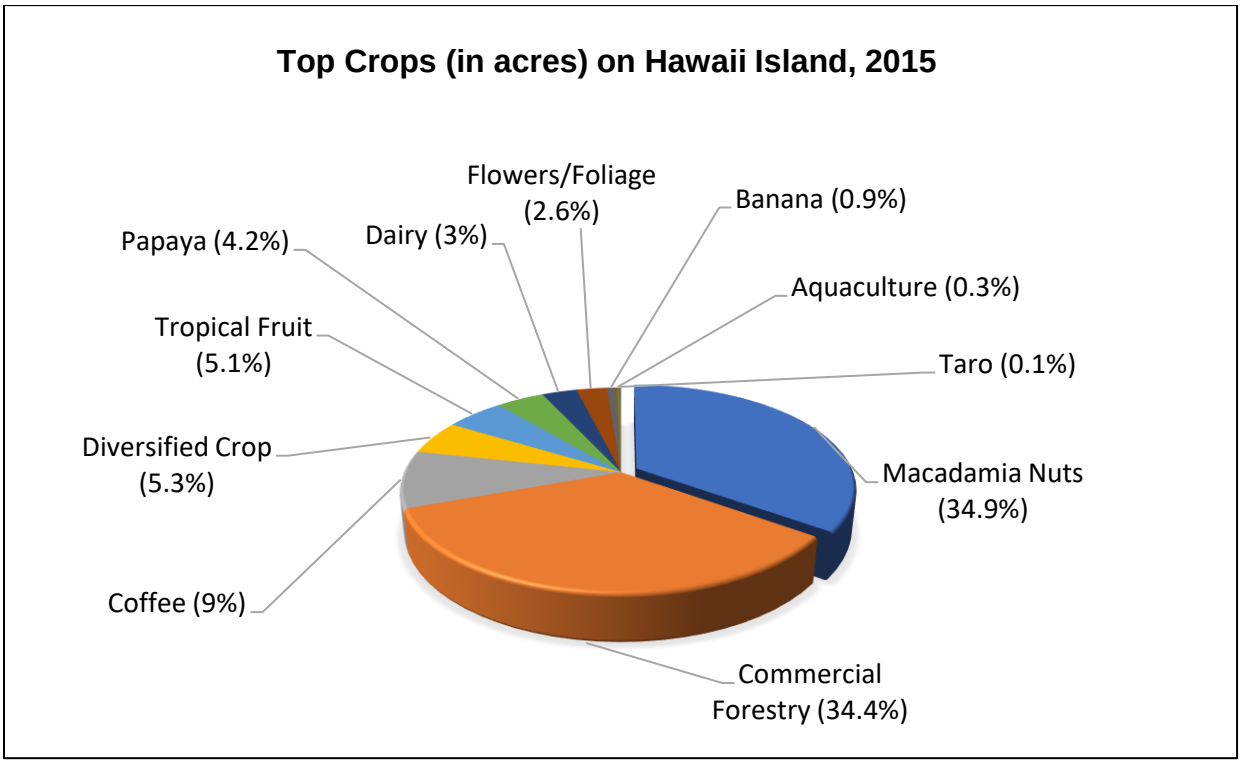

Figure 9. Top crops (in acres) on Hawai‘i Island, 2015 (Melrose et al., 2015)

2.3.4 Hawai‘i Island Agricultural Production

The island of Hawai‘i is a unique island with six distinct ecosystems that evolved from diverse climates, substrates, elevations, and the effects of the northeastern trade winds (Juvik & Juvik, 1973). The diversity of conditions also supports a broad range of crops that characterize the different regions of the island where they predominate. The crop diversity presented in Figure 10 represent the potential to create a network of farm tours around the island. In 2017, approximately 664,444 acres on Hawai‘i Island were farmed, of which most (72%) was in pastureland, while 20 percent was in cropland (12%) and woodland (8%) (USDA NASS, 2019). The top five crops, in acres, were macadamia nuts, commercial forestry, coffee, diversified crops, and tropical fruits (Figure 10). Note that neither of the last two categories include papaya or banana. The following sections provide an overview of the prominent crops in the various districts of Hawai‘i Island.

2.3.4.1 *North & South Kohala*

Kohala was well-known historically for traditional staple crops. Productive dryland field systems of sweet potato extended for miles on Kohala Mountain, as well as taro in its windward valleys. By the early 1900s, the Kohala region had approximately 20,000 acres in sugarcane. Today, cattle ranching is the largest agricultural activity in Kohala, with four major ranches: Ponoholo, Kahuā, Kukuipahu, and Parker Ranch (Melrose et al., 2015). However, much of the cattle is exported to the American west coast (Melrose et al., 2015). Cloverleaf Dairy is also in Kohala, the only commercial dairy operation in the state, with about 840 acres and about 600 cattle.

Waimea is one of the most productive agricultural areas of the island. Approximately 500 acres of land in the farm lots of Lālāmilo and Pu‘ukapu are cultivated in vegetables, such as Chinese and head cabbage, tomatoes, cucumbers, sweet corn, pumpkins, celery, beets, strawberries, and different varieties of lettuce. However, about half of the crop is exported to O‘ahu and the other islands (Melrose et al., 2015). Other notable agricultural activity in Kohala includes macadamia orchards, foliage, tropical fruit, and some diversified crop production.

2.3.4.2 *Hāmākua*

Hāmākua, located on the windward side of the island, extends from Waipi‘o Valley to Hilo. While sugar predominated in Hāmākua until the 1990s, eucalyptus forestry is now the largest intensive agricultural crop in the Hāmākua region. In 2015, approximately 14,500 acres of land leased from Kamehameha Schools and Parker Ranch were in eucalyptus forest for commercial production. Waipi‘o Valley continues to be the island’s largest producer of wetland taro. Other notable crops in this region includes macadamia with about 760 acres, foliage and flowers, goat dairies, apiaries, tea, and coffee.

2.3.4.3 *Hilo*

North and South Hilo extend from ‘O‘okala to the Puna District along the windward coast. The area receives about 100 to 180 inches of rain annually and generally experiences less wind than Hāmākua. It is one of the most agriculturally productive regions in Hawai‘i. Macadamia and forestry are the two largest crops of this region. Tropical fruit orchards of rambutan, lychee, longan, mangosteen, and citrus are also predominant, as well as diversified crops on over 2,000

acres. Other notable crops in this region include sweet potato, flowers, and foliage, while coffee and cacao are emerging products (Melrose et al., 2015).

2.3.4.4 *Puna*

Puna is the largest producer of papaya in the state, with three processing facilities in Kea‘au to market papaya throughout the Pacific region. Also predominant in Puna are macadamia, tropical fruit, and flowers and foliage. Though Puna has little soil, it receives ample rainfall and has ideal conditions for nursery cultivation of various orchids and other flowers. The foliage industry flourished in Puna between 1980 and 2000. However, the industry has declined, though it continues to be an important part of Puna’s agricultural activities. In 2018, ash and sulfur from the Kīlauea volcanic eruption destroyed many orchid nurseries in the Puna region.

2.3.4.5 *Ka‘ū*

Though the Ka‘ū District is the largest on the island of Hawai‘i, agriculture is concentrated in the area around Pāhala and Wood Valley with small farms scattered throughout the region. Ka‘ū is known for its orchards of macadamia nut and coffee farms. Ka‘ū offers favorable conditions for the cultivation of coffee, and Ka‘ū-grown coffee has emerged as a less prominent but growing competitor to the Kona Coffee brand. Kamehameha Schools also has forestry investments in Ka‘ū with almost 4,000 acres of former sugarcane lands in eucalyptus. The cattle industry is also prominent in Ka‘ū agriculture. Kapāpala and Kuahiwi are the two largest ranches and produce beef and goats for local consumption, along with a variety of smaller operations (Melrose et al., 2015). Though cattle ranchers ship calves to the Continental USA, due in part to the lack of local slaughterhouses, some grass-fed beef is sold locally to markets such as Whole Foods and Foodland.

2.3.4.6 *North & South Kona*

Kona is known primarily for its world-renowned coffee. Coffee was established in Kona in 1828, and since then the industry has become characterized by small farming operations. Though Kona is generally drier than the windward side of the island, Kona’s agricultural production occurs mostly along the leeward slopes of Hualālai and Mauna Loa between 700’ and 2,500’ in elevation. The lands of this area, known as the Kona coffee belt, are steep and rocky and receive around 40” to 70” of rain annually. These conditions are favorable for the cultivation not only of coffee but also of macadamia. Other orchard crops such as avocado, mango, rambutan, and dragon fruit also grow well.

Kona is also the largest producer of queen bees in the Pacific (Melrose et al., 2015). The bee industry is growing in South Kona with several apiaries, such as Big Island Bees, that have been in operation since the 1970s. Bees are important pollinators for fruit trees and crops like macadamia and coffee; therefore, many farmers keep bees for pollination. Historically, Kona was well-known for cattle, but many of the ranches were sold or divided in the 1990s (Melrose et al., 2015). In North Kona, though a few cattle ranching operations remain, beef production has largely phased out.

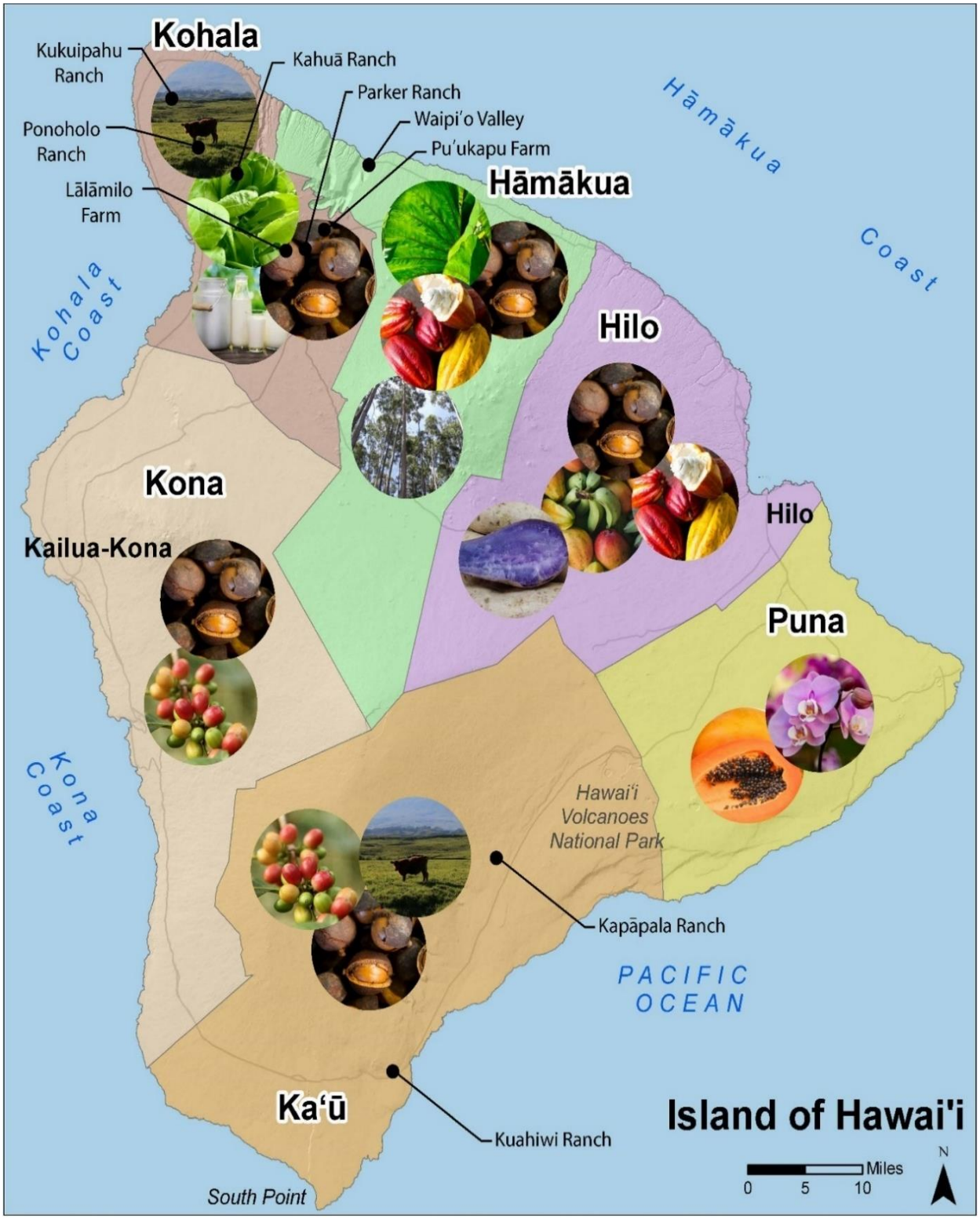

Figure 10. Distribution of Hawai‘i’s main crops by district

CHAPTER 3
What Is Agritourism?

[Depicted on the Chapter 3 cover page is a cacao bean from which chocolate is made. Like Kona Coffee, chocolate made from Hawai‘i Cacao is a premier, top-quality chocolate.]
Photo Credit: Hawai‘i Tourism Authority

3 WHAT IS AGRITOURISM?

A review of the literature suggests that there is no standard definition for agritourism. Rather, the term is contested and vague but generally refers to the intersection of agriculture and tourism (Arroyo et al., 2013; Carpio et al., 2008; Phillip et al., 2010; Tew & Barbieri, 2012; Veeck et al., 2006). Agritourism is also known as agro-tourism, agriculture tourism, and farm tourism. Previously, agritourism was considered a subset of rural tourism or countryside tourism, which encompasses experiences in rural settings or environments that are not readily available in urban areas (Rogerson & Rogerson, 2014; Streifeneder, 2016). Agritourism is usually considered distinct from rural tourism (Colton & Bissix, 2005; Kizos & Iosifides, 2007; McGehee & Kim, 2004). However, agritourism is still considered a type of nature-based tourism because it depends on nature. Agritourism is also considered a form of eco-tourism that is perceived as more sustainable than conventional tourism.

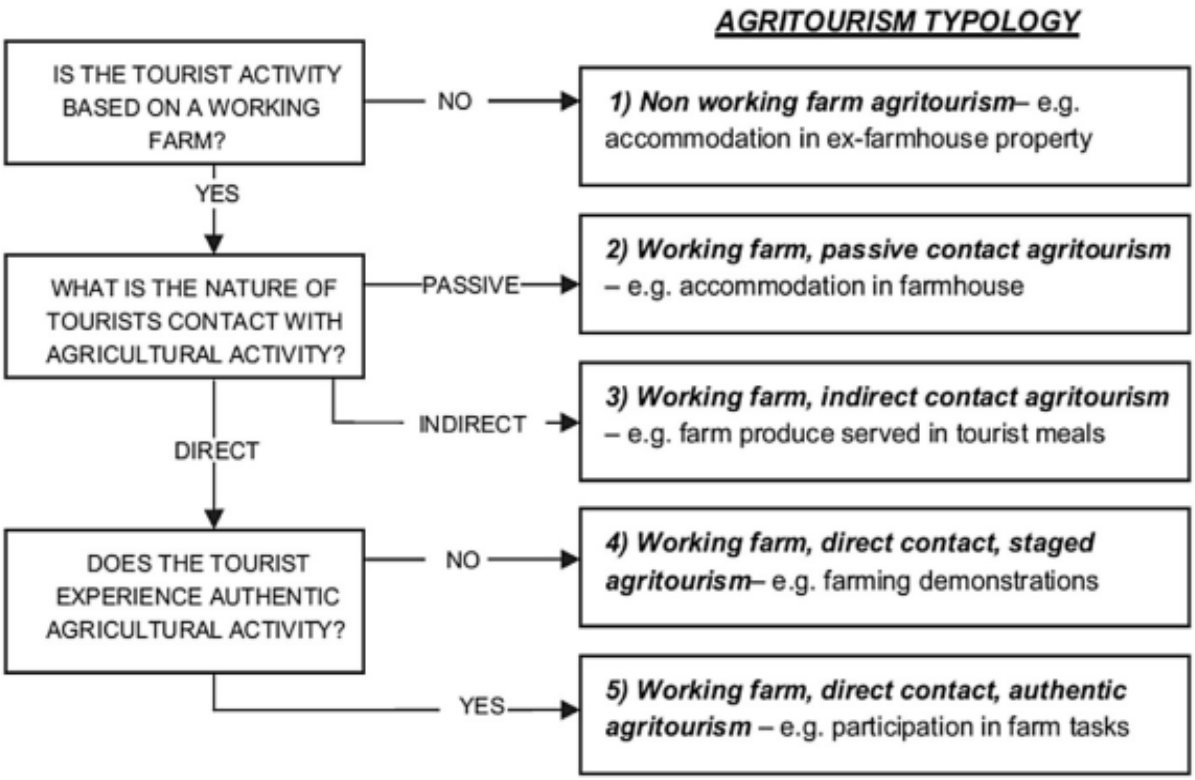

Figure 11. A typology for defining agritourism (Phillip et al., 2010)

Agritourism encompasses a complex and broad array of settings and activities that can involve all stages of agriculture and farm-product processing (Arroyo et al., 2013). To address this complexity, Phillip et al. (2010) proposed a five-class, stratified, theoretical typology of agritourism operations based on whether the farm is a working farm or non-working farm, shown in Figure 11. For working farms, agritourism activities are defined based on the level of visitor contact with agricultural activities and on how visitors participate in farm activities: passively, indirectly, or directly. This typology advanced the understanding of agritourism by differentiating between agritourism products. Flanigan et al. (2014) revised Phillip et al.'s typology based on how

providers and visitors perceive agritourism, which distinguishes between three features of different types of agritourism products:

1. The experience must be on a working farm.
2. Contact with agriculture is either passive, indirect, or direct.
3. The experience is authentic and not staged for tourists

Streifeneder (2016, p. 252) further defined the authenticity of the agritourism experience more narrowly as experiences that are distinct from touristic experiences and occur on a "fully functioning working farm where the agricultural activities are predominant over touristic ones, and where familiar and direct contact with the hosting household and its members takes place in an unaltered agricultural environment." Thus, "authentic agritourism" is based on the farm lifestyle and features of an active farm, rather than on a romanticized conceptualization of agriculture, which characterizes staged experiences (MacCannell, 1973). Streifeneder's (2016) definition of authentic agritourism points to a "pure" form of agritourism that occurs on a working farm.

Many studies indicate that agritourism must be carried out on a farm (Carpio et al., 2008; Ilbery et al., 1998), though other studies include agricultural settings such as ranches, nurseries, and off-site facilities like farmers markets where farm products are sold. The lack of consistency regarding the setting for agritourism has been attributed to the varied definitions of agricultural establishments, especially farms (Arroyo et al., 2013; Che et al., 2005; Tew and Barbieri, 2012; Wicks & Merrett, 2003; Wilson et al., 2006). Farms are defined in the USA as entities generating at least $1,000 from the production or sale of agricultural goods (USDA, 2009); in the European Union as an agricultural holding that can also engage in non-agricultural activities with no financial caps on farm earnings; and in Canada as, "a unit that produces agricultural products and reports revenues or expenses for tax purposes to the Canada Revenue Agency," (Statistics Canada, 2021). Therefore, definitions for agricultural establishments are broad.

Arroyo et al. (2013) suggested that inconsistencies in defining agritourism relate to three issues that include:

- the type of agritourism **setting** (farm or agricultural setting);
- the **authenticity** of the experience (visitor participation in farm activities); and
- the types of **activities** involved in the visitor experience.

The lack of a standard definition for agritourism is problematic for the development of the agritourism industry for various reasons. According to Arroyo et al., inconsistencies in definitions challenge the development of policies to promote and strengthen agritourism; obstruct the development of marketing strategies; and subsequently reduce the availability and accessibility of agritourism to the public. These issues are common in the USA and associated with the lack of legal frameworks and policies related to the development and marketing of agritourism (Arroyo et al., 2013).

In response to the contentious nature of how agritourism is defined, a conceptual framework for understanding agritourism in the USA was developed that distinguishes between core agritourism activities and peripheral activities (Chase et al., 2018; Lamie et al., 2021; Figure 12).

Agritourism activities are classified into five main categories:

1. Education
2. Direct sales
3. Entertainment
4. Outdoor recreation
5. Hospitality

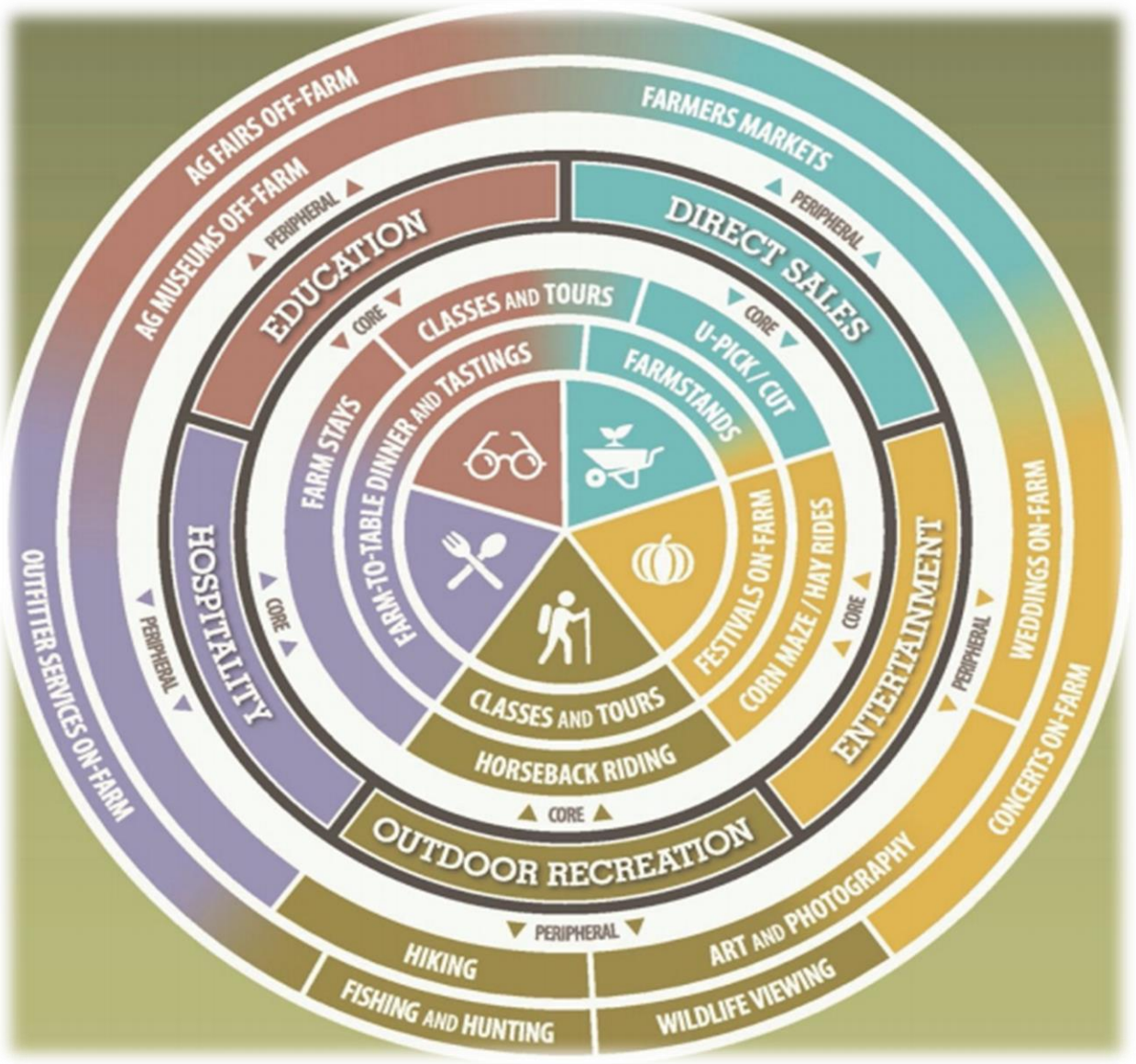

Figure 12. Conceptual framework for agritourism in the USA (Chase et al., 2018)

Type of Activity	Education	Direct Sales	Entertainment	Outdoor Recreation	Hospitality
Core	• Classes/Tours • Farm stays • Farm-to-table dinners/tastings	• U-pick/cut • Farm stands	• Festivals on farms • Corn mazes/ Hay rides	• Classes/Tours • Horseback riding	• Farm stays • Farm-to-table dinners/tastings
Peripheral	• Ag museums off farm • Ag fairs off farm	• Farmers markets	• Farm weddings • Art/Photography	• Hiking • Art/Photography • Fishing/Hunting • Wildlife viewing	• Outfitter services on farm

Table 2. Core and peripheral agritourism activities

Each of the five categories of agritourism depicted in Figure 12 and Table 2 consists of activities that are stratified by whether they are core or peripheral. Core activities are those that occur on a working farm and generally accepted as being deeply connected to agriculture, while peripheral activities are those with less agreement on whether the activities should be considered agritourism. Despite the varied definitions and classifications, common themes that characterize agritourism include activities that are recreational, educational, occur on a working farm and engage visitors (Arroyo et al., 2013; Che et al., 2005; Ollenburg & Buckley, 2007; Tew and Barbieri, 2012).

The County of Hawai'i defines agritourism as: "visitor-related commercial activities or periodic special events designed to promote agricultural activities conducted on a working farm, ranch, or agricultural products processing facility." The Hawai'i County definition of agritourism identifies the farm setting as including working farms, ranches, or agricultural-product processing facilities, but does not mention farmers markets or nurseries (Figure 13) located away from a working farm. Furthermore, agritourism activities are lumped under the general phrase, "visitor-related commercial activities" and the definition does not identify the broad range of agritourism activities included in Figure 12, such as direct sales and hospitality. The conceptual framework in Figure 12 brings to light the complexity of agritourism and offers a model for ranking priority activities in agritourism.

> **Agritourism**: "Visitor-related commercial activities or periodic special events designed to promote agricultural activities conducted on a working farm, ranch, or agricultural products processing facility."
>
> Hawai'i County Code §25-1-5, p. 25-2

The hospitality component of agritourism is undeveloped and discouraged in Hawai'i County, and this issue is discussed in detail in Chapter 5. Farm stays of 21 days or less and farm-to-table dinner events are not permitted on agricultural lands in Hawai'i County without a special permit. However, hospitality activities are permitted on other islands in the state, like Maui and Kaua'i. The absence of hospitality activities in Hawai'i County's definition for agritourism translates into an agritourism policy that does not recognize these activities as legitimate components of agritourism. Furthermore, "producers" and "farmers" are not clearly defined in the Hawai'i County Code (§25-1-5), leading to contention over who counts as a "real" farmer, which may impact the farmer's ability to obtain agritourism permits. Lamie et al. (2021) suggested that the way agritourism is defined and identified by government and policymakers affect how agritourism

enterprises are treated and perceived by taxing and regulating authorities. Furthermore, the authors state:

> If the definitions are too loose, they can result in an erosion of overall tourism product quality. If too restrictive, they can result in agritourism being considered too elitist or too small to matter. This has led to confusion and controversy as agritourism has grown in popularity and has been appropriated … for marketing and other purposes. (p. 2)

It is clear from the literature that agritourism is complex and that the definition continues to be discussed and debated. The lack of clarity is limiting for the development of the agritourism industry. Therefore, it is important for governments and policymakers to more clearly define agritourism in order to create good policies that not only protect agricultural lands and rural areas from encroaching development but also enable farmers to benefit from tourism activities to support and perpetuate the practice of agriculture. A detailed analysis of Hawai'i County's agritourism policy is provided in Chapter 5.

Figure 13. Agritourism can occur in nursery settings like Akatsuka Orchid Gardens (Source: A. Fa'anunu)

[Depicted in Figure 13, are sustainable tourism students from the University of Hawai'i at Hilo, College of Business and Economics visiting Akatsuka Orchid Gardens to learn about how farmers and agritourism operators can engage with tourism in more sustainable ways]

CHAPTER 4
Methods

[Depicted on the Chapter 4 section cover are cattle along the Kohala coast of Hawai‘i Island]
Photo Credit: Hawai‘i Tourism Authority

4 METHODS

4.1 Study Setting and Sample Size

This study took place on the island of Hawai‘i from November 2017 until November 2020 and conducted concurrently to the development of the Hawai‘i Farm Trails mobile app. The island was chosen because it accounts for about two thirds (58.5%) of all farmland in the State of Hawai‘i and has the majority (58%) of all farms in Hawai‘i (Melrose et al., 2015). Land use zoning and agritourism policies differ by county; therefore, focusing on only one county adjusts for this variability. Due to a lack of data on agritourism businesses on the island, a database of farms engaging with tourism was created. Approximately 106 agritourism farms on Hawai‘i Island were identified based on internet research on farms engaging with tourism. Farms with contact information were contacted by e-mail, telephone or in-person to gather current information about the agritourism operation.

The agritourism farm database contains information gathered online about each farm’s agritourism operation, which includes: the business location and contact information; social media and website information; the main agritourism products of the farm, and other relevant information about the business. Since the purpose of the study was to understand the challenges and opportunities for agritourism on the island, the research focused on farms that were currently conducting agritourism. An assumption was made that agritourism operations would likely have a presence on the internet for marketing purposes. Therefore, the initial database did not include agritourism farms that could not be identified on the internet.

Primary data were collected from several sources: 1) in-depth interviews with agritourism operators; 2) a focus-group meeting with agritourism operators; and 3) consultations with experts from select agencies and organizations in areas relating to agritourism. Secondary data on existing agritourism farms were gathered from websites on the internet and from social media sites like Facebook and Instagram. Other data were gathered from peer-reviewed papers and reports on agriculture and tourism previously conducted on the island. Geographical Information Systems (GIS) technology was also used to estimate land-use calculations and generate maps for the study.

4.2 Data Collection

4.2.1 *In-depth Interviews*

Of the 106 farm businesses in the agritourism database, 24 individuals representing 18 agritourism businesses (17%) were selected for in-depth, open-ended interviews that generally lasted 1.5 hours to 2 hours. Initially, three farm businesses from each of the six districts on the island were expected to participate in interviews. However, it became evident that agritourism businesses are not equally distributed throughout the island. Instead, the number and type of agritourism operations vary by geographic region; for example, coffee farmers are located predominantly on the western side of the island in Kona, ranches occur on the northern and southern sides of the island, diversified agriculture and tropical fruit production are concentrated along the eastern coast of Hāmākua and Hilo, and the orchid and cut-flower industry is predominantly on the Puna-Volcano side of the island (Figure 10).

As agritourism is a broad area that encompasses diversity in activities, farm settings, crops, products, farm size, location, levels of contact with visitors, and business models, purposive sampling was used to select participants representing this diversity. Participants had expertise in

numerous areas including: select crops such as coffee, banana, sandalwood, orchids/cut flowers; emerging crops like cacao, tea, and honey; diverse farm settings including conventional working farms, ranches, a nursery, and farmers markets; farms incorporating regenerative and sustainable agricultural practices including certified organic and tree-planting practices; farms with retail stores and farm stands; farmers markets with varying business models; passive experiences such as destination weddings; recreational horseback riding experiences; animal farms with cattle and goats; farms emphasizing quality over quantity; farms that exhibited variability in permit application success; and farms offering hospitality services through farm stays. Two farms with restaurants were contacted to be interviewed; however, the owner of one restaurant passed away and the other was difficult to connect with due to the COVID-19 pandemic. Therefore, this form of agritourism is not covered in this report.

4.2.2 *Focus-Group Meeting*

A focus-group meeting to discuss the challenges and opportunities for agritourism in Hawai‘i County was conducted in East Hawai‘i and attended by 14 individuals representing various agritourism farms. The focus-group meeting for West Hawai‘i was cancelled due to the COVID-19 pandemic. The meeting was held at the University of Hawai‘i at Hilo’s College of Business and Economics and lasted for 3.5 hours. The meeting was set up as a workshop where participants were introduced to the existing provisions of the County of Hawai‘i’s agritourism ordinance. After the presentations, participants discussed the challenges and opportunities they encountered in their practice with particular attention to agritourism policies and the permitting process.

4.2.3 *Expert Consultations*

Staff members of various agencies and departments were consulted on certain topics including agritourism, tourism, agriculture, planning and permitting, and real estate. Consultations were made through face-to-face meetings, telephone communication, and e-mail. Eight experts were consulted, representing the Hawai‘i Agritourism Association, Hawai‘i County Department of Planning, the Hawai‘i Tourism Authority, Hawai‘i Farm Trails, Hilo Brokers Limited, and the University of Hawai‘i at Hilo’s College of Agriculture, Forestry, and Natural Resource Management. In August 2020, the author participated in hosting a statewide agritourism webinar sponsored by the Hawai‘i Tourism Authority and the University of Hawai‘i’s, GoFarms Hawai‘i program. The webinar targeted each county in Hawai‘i and was well attended by individuals and local businesses across the state. A session on planning and permitting for agritourism was conducted by county planners from the various counties’ planning departments. The presentations provided valuable insights about the land use policies that regulate agricultural lands and the permitting processes of each county.

4.3 Data Collection Instruments

The focus of this study was to understand the challenges and opportunities for agritourism on the island rather than to test a hypothesis. Therefore, the study was not quantitative but rather a qualitative approach was taken to understand the broad range of challenges and opportunities for the industry. For the in-depth interviews, a set of questions surrounding the following topics was used to guide talk-story sessions:

- Farmer/business demographics

- Farm history, operation, and competitive advantage
- Agritourism products & services
- Reasons for engaging in agritourism
- Short-term goals of business (1–5 years)
- Long-term goals of business (in 10 years)
- Opportunities agritourism offers small farmers
- Challenges encountered in agritourism
- Existing conditions of hosting capacity (daily/weekly/monthly/annually)
- Needs to improve hosting capacity
- Permit application experience and recommendations for improvement
- Policy cap on agritourism earnings
- Farmer time & effort spent on agritourism
- Contribution of agritourism to farm earnings
- Benefits of agritourism to farmer
- Contribution of agritourism to food security and food sovereignty
- Agritourism visitor experience
- Agritourism impacts on local communities
- Best practices to reduce impacts to local communities & environment
- Recommendations for improving the agritourism industry

The interviews were voluntary, informal, semi-structured, and followed a talk-story style (Steele, 2012). Interviews usually lasted 1.5 to 2 hours, with some extending longer. In some instances when interviews exceeded the time frame, the researcher returned for a second, follow-up interview. Interviews were recorded and manually transcribed verbatim. Due to the sensitivity of particular topics, all interviews remain anonymous and quotes highlighted in the report do not identify specific individuals. For the focus-group meeting, two note takers independently took notes of the discussions. The facilitator (author) also took notes on a whiteboard that was recorded. For expert consultations, meeting memos were prepared and sent to each interviewee to verify the accuracy of meeting notes. Participants could withdraw from the study at any time.

4.4 Data Analysis

This research used a grounded theory approach (Bernard, 2006). Each transcribed interview was analyzed using thematic analysis. Transcriptions were coded into themes using a directed content analysis approach. Semi-structured interviews aimed to address certain themes, as listed above, so these themes were coded first; then, after the interviews, other themes that emerged from the data (the transcripts of the interviews) were coded (Hsieh & Shannon, 2005). The main themes have been translated into the subsequent chapters of this report.

4.5 Limitations

During the time period in which this research was conducted, two events created setbacks and challenges for data collection: 1) the 2018 Kīlauea volcanic eruption event; and 2) the 2020 COVID-19 pandemic. These events led to the cancellation and rescheduling of some planned interviews and meetings. Though the bulk of data collection occurred before the COVID-19

pandemic, some data were collected during the pandemic. In 2020, an in-depth interview and an expert consultant meeting were conducted using the online meeting platform Zoom. While meeting online in this way diverged from the original design of the study, the technology enabled data collection during the disaster events. Follow-up studies could assess the impact of the pandemic on agritourism.

CHAPTER 5
Planning & Permitting For Agritourism

[Depicted on the Chapter 5 section cover is an array of tropical fruits including plantain, papaya, avocado, mango, orange, and star fruit]
Photo Credit: K. Mausio

5 PLANNING & PERMITTING

5.1 Overview

Land use policies impact agritourism operations. Hawai‘i has a unique system of classifying and managing its lands where state and county agencies hold distinct roles and responsibilities. All lands in the State of Hawai‘i are classified into four major land use district types: Conservation, Agricultural, Urban, and Rural. Figure 14 depicts these land use districts on the island of Hawai‘i, where the majority of the land area is in Conservation (49%) and Agricultural (45.8%) Districts, and the remaining area is in Urban (4.9%) and Rural (0.3%) Districts (Robinson, 2019). The boundaries of these districts are defined by the Land Use Commission (LUC) and each district type has rules to govern the uses and activities that are permitted on these lands under Hawai‘i Revised Statutes (HRS) §205.

5.2 State Policies Relating to Agritourism

Two state laws are relevant to agritourism in Hawai‘i: HRS §165: Hawai‘i Right to Farm Act and HRS §205: State Land Use Commission. These laws address the Hawai‘i State Planning Act objectives to foster the “growth and development of diversified agriculture throughout the State” and to develop “an agricultural industry that continues to constitute a dynamic and essential component of Hawai‘i’s strategic, economic, and social well-being” (State of Hawai‘i Planning Act, 1978). To achieve these objectives, the Act states that the policies of the State of Hawai‘i should include the following:

- Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.
- Foster increased public awareness and understanding of the contributions of agriculture as a major sector of Hawai‘i’s economy.
- Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawai‘i’s food producers and consumers in the State, nation, and world.
- Increase the attractiveness and opportunities for an agricultural education and livelihood.
- Expand Hawai‘i’s agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.
- Promote economically competitive activities that increase Hawai‘i’s agricultural self-sufficiency, including the increased purchase and use of Hawai‘i-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104.
- Increase and develop small-scale farms.

(Hawai‘i State Planning Act, 1978)

Figure 14. State land use district map, Hawai‘i Island

The purpose of HRS §165 is to support agriculture and reduce the loss of agricultural resources by limiting opportunities for farming operations to be a nuisance (Hawai'i Right to Farm Act, 2017). As non-agricultural activities extend into agricultural areas, agricultural operations often become the subject of lawsuits that may lead to the loss of land for agricultural use.

HRS §165-2 also defines "Farming Operations" as including but not limited to:

1. Agricultural-based commercial operations as described in HRS §205-2 (d) (115);
2. Noises, odors, dust, and fumes emanating from a commercial agricultural or an aquacultural facility or pursuit;
3. Operation of machinery and irrigation pumps;
4. Ground and aerial seeding and spraying;
5. The application of chemical fertilizers, conditioners, insecticides, pesticides, and herbicides; and
6. The employment and use of labor.

The HRS §205: State Land Use Commission law is also relevant to agritourism because it establishes the state land use districts and designates permissible uses and activities within the Agricultural Districts (State Land Use Commission,1976). The law authorizes the counties to manage zoning in all state land use districts except Conservation Districts. HRS §205 also authorizes the county planning commissions to permit certain unusual and reasonable uses within Agricultural and Rural Districts that fall outside the permitted uses for these districts. Under HRS §205, counties can make decisions on petitions to amend district boundaries on land 15 acres or less in Rural, Urban, or Agricultural Districts. However, amendments to land greater than 15 acres must be addressed at the State Land Use Commission. Counties may also require environmental assessments for agricultural tourism uses and activities.

5.2.1 Agricultural-Based Commercial Operations

Agricultural-based commercial operations are permitted under HRS §205 and include the following (Table 3):

1. Road-side stands
2. Retail activities
3. Retail food establishments
4. Farmers markets
5. Food hubs

Though state polices trump county laws, the existing zoning code for permitted uses in the Agricultural Districts in Hawai'i County (Section 25-5-72) only includes the first two items: road-side stands and retail activities . The code has not been amended to be consistent with HRS §205 and does not specifically include retail food establishments, farmers markets, or food hubs as defined by HRS §205. Under the existing county code, a food hub might be classified as "agricultural products processing, major & minor." Farmers markets and retail food establishments are still not permitted uses under Section 25-5-72.

Agriculture-Based Commercial Operations	Description
1. Road-side stand	• Unenclosed structure • Agriculture and value-added products
2. Retail activities	• Enclosed structure • Agriculture, value-added, logo items, & other food items
3. Retail food establishment†	• Prepares & serves food for sale • Does NOT include serving of meals (restaurant)
4. Farmers market†	• Outdoor market selling only products from HI
5. Food hub†	• A facility containing a commercial kitchen, for storage, processing, distribution, & sale of agricultural products

† Permitted in HRS §205, but not permitted in the Hawai'i County Zoning Code.

Table 3. Agriculture-based commercial operations (HRS §205-2 (15))

5.2.2 Agritourism Provisions in HRS §205

While lands in the Agricultural Districts are intended for agriculture, agritourism is also allowed, but ONLY if the following conditions are met:

1. The agritourism activity is accessory and secondary to the farming operation;
2. The county has adopted ordinances to regulate agricultural tourism.

"**Agricultural tourism** [can be] conducted on a working farm, or a farming operation…for the enjoyment, education, or involvement of visitors."

-Hawaii State Land Use Commission, 1976

Hawai'i County's agritourism ordinance satisfies condition 2.

5.2.2.1 *Overnight Accommodations*

Overnight accommodations offering 21 days or less for any one stay on agricultural lands within a county are permitted by HRS §205 only in a county that includes at **least three islands**, and has adopted ordinances regulating agritourism activities. While Hawai'i County has an agritourism ordinance, it only has one island. Furthermore, Hawai'i County's agritourism ordinance DOES NOT permit overnight accommodations without a special permit. Therefore, short-term overnight accommodations are allowed in other counties like Maui and Kaua'i but not in Hawai'i County.

5.3 Hawai'i County Policy relating to Agritourism

5.3.1 Chapter 25: Hawai'i County Zoning Code (County Code)

The counties administer and enforce land uses, as well as zoning of the lands in the Agriculture, Rural, and Urban Districts, but not the Conservation Districts, under HRS §46-4

(County Zoning, 1957) and HRS §205. Zoning is the method by which counties can control land use, and zoning must be consistent with state policies and regulations, including generally permitted uses designated by the LUC, pursuant to HRS §205-2 (Hawai'i Rural Development Council and Office of Hawaiian Affairs, 2015). The Hawai'i County Zoning Code, also known as Chapter 25 or the County Code, lists the permitted uses within each zone and also the required setbacks, height limits, parking areas, and other controls. The zoning also controls density; for example, an A-5a zone is an agricultural zone with a minimum lot size of 5 acres. Zoning must be consistent with state policy, laws, and regulations. Special Permits and Use Permits potentially allow a wide range of other uses and can be issued for any "unusual and reasonable" use, such as weddings and bed-and-breakfast operations (see Section 5.5.1.2). Counties also have jurisdiction over shoreline management area (SMA) permits and shoreline setback variances, for uses that occur on or adjacent to coastal shoreline areas.

5.3.2 Agritourism Permit Requirements & Processes

5.3.2.1 *Permitted Agritourism Activities*

In 2006, an agritourism bill was initiated by the Hawai'i County Council. The existing provisions of the bill are included in Section 25-4-15 of the County Code and detail the permitted uses for agritourism in Hawai'i County (Appendix A). Accordingly, agritourism is permitted **as long as the activities are accessory or secondary** to agricultural processing facilities in the following zoning districts: CG, CDH, CV, CN, ML, MG, MCX, A, FA, IA, RA, and APD (see page vii for acronyms). Agritourism activities are also allowed as accessory and secondary to agricultural activities in A, FA, IA, RA, and APD districts. Thus, agritourism is permitted as a secondary or accessory activity in the majority of the Agriculture District areas, except for areas zoned as Open or Residential, as shown in red in Figure 15.

Newly established farms may be exempt from the provisions in Table 3 if they provide evidence of "sufficient" investments made in the planting of agricultural crops and/or livestock. However, the terms "new" and "sufficient" are not defined in the ordinance. Permitted uses within the Agricultural Districts listed in Section 25-4-15 of the Hawai'i Zoning Code are depicted in Table 4 and summarized into ten categories in this section:

1. **Earnings from agriculture:** To implement agritourism, an agricultural activity or agricultural processing facility must have a minimum of $10,000 in verifiable gross sales in the year prior to agritourism activities. These sales do not include income from the sale of non-agricultural activities or from agritourism activities. "New" agricultural activities or agricultural processing facilities are exempt from this requirement. However, evidence is required that sufficient investment has been made in the planting of crops, acquisition of livestock, or construction of agricultural products to achieve the expected gross sales.
2. **Number of visitors:** An agricultural tourism operation shall have a maximum of 30,000 visitors, annually. The policy does not provide daily, weekly, or monthly limits to manage the number of visitors at a location more evenly throughout the year.

Figure 15. Areas in Agricultural District where agritourism is NOT permitted (red)

Permitted Use	**Existing Regulation** (Section 25-4-15)
1. Earnings from agriculture*	• Experienced operation: Earn >/= $10,000 in gross sales • New operation: Evidence of >/= $10,000 investment in agricultural operation
2. Number of visitors	• Maximum of 30,000 visitors per year
3. Hours of operation	• 8:00 AM–6:00 PM
4. Vehicular access	• Legal access to public highway (private road/easement) • Parking/loading/turn-around area must be on-site
5. Agritourism footprint	• Shall not exceed 1,000 square feet (Does not include parking or vehicular access)
6. Revenues from agritourism	• Revenues from agritourism cannot exceed revenues from agricultural product sales (Waived in unforeseen events, such as natural disasters)
7. Product origin	• Sale of agricultural products grown on Hawai‘i Island • Sale of processed agricultural products with main ingredient grown on Hawai‘i Island
8. Promotional non-agricultural products	• Sale of non-agricultural products that promote farm products, for example, T-shirts and hats
9. Annual events	• Annual, non-profit events to promote agricultural industry or an area are allowed in A, FA, IA, RA, & APD districts
10. Events	• Events not allowed in A, FA, IA, and RA: weddings, parties, restaurants, schools, catered events, overnight housing

Table 4. Permitted agritourism activities in Hawai‘i County Agricultural District

3. **Hours of operation:** An agritourism operation shall operate only between 8:00 AM and 6:00 PM daily. This provision does not consider that Hawai‘i is subject to seasonal variances in daylight.
4. **Vehicular access**: All parking, loading and unloading, and vehicular turnaround areas for the agritourism operation shall be located off public roads and must be provided by the agritourism operator.
5. **Agritourism footprint:** The total area of developed spaces to be used for agritourism shall not exceed 1,000 square feet. The footprint for agritourism includes developed spaces primarily for agritourism activities including covered decks, verandas, tents or canopies, and gazebos, whether newly constructed or within existing structures. The agritourism footprint does not include parking and vehicular access areas.
6. **Revenues from agritourism:** Gross revenues from agritourism activities shall not exceed the gross revenues from agricultural activities and/or agricultural products. However, this requirement can be waived under two conditions:

i. In the event of unforeseen environmental or economic conditions, gross revenues from agritourism may exceed gross revenues from agricultural activity for two years.
ii. A "new" agricultural activity or agricultural products processing facility may have gross revenues from agritourism activities that exceed gross revenues from agricultural activities or products.

7. **Product origin:** The sale of products as part of an agritourism operation is permitted as long as the agricultural products were grown on the island of Hawai'i. Processed agricultural products may also be sold for agritourism purposes as long as the main ingredient was grown on the island of Hawai'i.
8. **Promotional non-agricultural products:** Incidental sales of non-agricultural promotional items, such as coffee mugs and tee shirts, shall be permitted as long as:
    i. The items are specifically promotional to the site's agricultural activities and/or products.
    ii. The gross revenues from the sale of non-agricultural promotional items shall be included with the gross revenues from the agricultural tourism activities.
9. **Annual events:** Annual events that promote an agricultural industry or agricultural area that is organized on a not-for-profit basis are permitted in the A, FA, IA, RA, and APD (see districts without a plan approval.
10. **Events:** Agritourism in the A, FA, IA, and RA districts shall not include weddings, parties, restaurants, schools, catered events, or overnight accommodations, unless allowed by special permit or use permit.

5.3.2.1 *Un-Permitted Agritourism Activities*

An agritourism activity that is not in compliance with Section 25-4-15 of the County Code or that has not obtained the necessary permits is considered illegal. However, un-permitted agritourism activities in the A, IA, FA, RA, or APD districts may pursue a Special Permit. Other provisions for non-conforming uses are listed in Section 25-4-15.

5.3.2.2 *Documents Needed for an Agritourism Permit*

The following items are needed for an agritourism permit and are detailed in Section 25-4-15 of the County Code:

- Application for Plan Approval (Appendix B)
- Site Plan
- Building Floor Plans & Elevations
- Site Drainage Plan
- Certificate of Clearance
- Other requested items by the Director of the Planning Department.

In addition to these documents, the application should have sufficient information to meet the following provisions:

1. A statement of whether the operation will allow visits by buses;
2. Adequate off-street parking, loading/unloading, and turn-around space to accommodate all specified tour transportation modes, including buses, if they are allowed, shall be provided and shown on the site plan;

3. The property must have an existing legal access to a public highway, via a private road or easement, and new driveways shall meet applicable county or state standards;
4. New and existing facilities to be utilized principally for the agricultural tourism activity shall be clearly indicated on the plot plan and shall not exceed 1,000 square feet in total area, not including parking and vehicular accesses; and
5. Proof of income from agricultural activities and/or agricultural products processing, or investment, as required under Section 25-4-15 (d) (1). (Ord. No. 08-155, sec. 4., 2008)

Agritourism operators must also be compliant with other regulations and requirements:

- **Environmental Laws (HRS Chapter 343)** – These laws protect the public and environment from potential impacts of development projects, such as traffic, noise, and pollution. There are eight conditions that trigger HRS Chapter 343 and are found here: (https://www.capitol.hawaii.gov/hrscurrent/Vol06_Ch0321-0344/HRS0343/HRS_0343-0005.htm)
- **Special Management Areas (SMA) (HRS §205A)** – Farms within sensitive coastal zone management areas must be compliant with county rules regulating these areas. (https://www.capitol.hawaii.gov/hrscurrent/vol04_ch0201-0257/hrs0205a/hrs_0205a-.htm)
- **Public Health Safety** – Raw fruits and vegetables can be sold on farms without being processed through a commercial kitchen. However, food altered from its original state that is cooked and packaged and considered "high risk" must be processed in a commercially certified kitchen. A food establishment permit must be obtained from the Department of Health.
- **Building Permits** – Plans to erect, construct, enlarge, alter, repair, convert, move, or demolish any building or structure greater than 1,000 square feet requires a permit. (https://www.dpw.hawaiicounty.gov/home/showdocument?id=14) (https://www.dpw.hawaiicounty.gov/resources/forms-permit-applications)
    - **Electrical & Plumbing Permits** – Separate permits must be obtained for electrical or plumbing work.
    - **Temporary Structures**
    - **Signs** – Signs erected on a farm must be permitted.
- **Taxes** – All businesses must comply with federal, state, and local taxes

5.4 Opportunities

Hawai‘i Island’s agritourism ordinance is conservative compared to the policies of other Hawaiian Islands. For example, overnight accommodations, weddings, and other events are not allowed on agricultural lands on Hawai‘i Island but these activities are permitted on Maui. From a management perspective, conservative policies support slow and controlled growth, which protects the sense of place of agricultural lands and maintains the quality of life of rural communities. Conservative policies also provide opportunities for research to inform policies that protect agricultural lands from urban development. While certain agritourism activities may benefit farmers financially, the impact of those practices on surrounding communities and the environment must also be considered.

There are opportunities to learn from the experience of other islands to better understand how Hawai‘i Island can protect agricultural lands but also support the success of local farmers. For example, research on other islands to understand the impact of overnight accommodations on the farmer and the surrounding communities and environment could provide valuable insights into how this issue should be addressed on Hawai‘i Island. Similarly, pilot studies on Hawai‘i Island with existing farms conducting certain events, such as weddings and catered events, may be critical to understanding the potential and long-term impacts of these activities. Findings could inform good policies that keep agriculture the primary activity on agricultural lands in the future while also supporting the success of local farmers.

Considering the potential value of the agritourism industry to supporting green and sustainable growth on Hawai‘i Island, there is a need for relationship-building among the stakeholders of the agritourism industry. Specifically, there is an opportunity to develop the relationships between farmers and their local planning department. Currently, farmers must work directly with the department on all land use matters. However, farmers meet with general planners and are referred to available staff. An agritourism office that specializes in and works specifically with farmers pursuing agritourism would help streamline land use permitting processes and strengthen relationships and connections between farmers and the department.

> “The Big Island is probably the hardest county to get a permit for the farm tours. Honolulu, easy. Maui, a little easier. We are the worst.”
>
> – Banana Farmer

5.5 Challenges

5.5.1 Agritourism Policies

The Hawai‘i County agritourism ordinance, as well as HRS §205, is aimed at protecting agricultural lands so that the primary use of these lands is agriculture production. Therefore, agritourism, a hosting activity, remains secondary and accessory to agriculture production and farming operations. However, some provisions of the Hawai‘i County policy may inhibit rather than support the ability of farmers to succeed financially. These provisions are discussed in more detail in this section:

1. Monetary restrictions on agritourism activities
2. Restriction of specific events: overnight accommodations, weddings, and catered events
3. Hours of operation
4. Product origin for retail on the farm

> “[Agritourism] can be 10 to 15 [times] more than what the cattle produces.”
>
> – Cattle Rancher

5.5.1.1 *Monetary Restrictions on Agritourism Activities*

To start an agritourism operation, an experienced farm must meet a minimum requirement of $10,000 in verifiable gross sales from agricultural production in the year prior to initiating agritourism. Originally, the intention of the monetary criterion might have been to assess the commitment of the farmer to agriculture as the primary activity on the farm. However, in 2017, almost two thirds (59.1%) of all farms on Hawai‘i Island earned less than $10,000 (Figure 8). Most farms on Hawai‘i Island are nine acres or less. Therefore, the provision does not consider the economies of scale that characterize Hawai‘i’s farming industry (Azizi & Lincoln, 2021). In other words, generating profits from the sale of generic agricultural products alone is very difficult for small-scale farmers, and the $10,000 minimum requirement does not make sense in this context. Instead, the provision excludes the very segment of the farming sector that may most need alternatives such as agritourism for financial security.

Similarly, the requirement that agritourism sales cannot exceed sales from agricultural activities does not consider economies of scale. This requirement also assumes that the levels of effort that a farmer puts into agriculture production and into agritourism activities to produce the same amount of money are equivalent. On the contrary, this is like comparing apples and oranges because agritourism is a higher yielding activity than the sale of agricultural produce. As explained by the cattle rancher in the excerpt above, for example, agritourism can generate 10 to 15 times more money than the sale of cattle.

Also, the amount of revenues that a farmer earns from agritourism varies depending on the farm’s business model. For instance, a tour that costs $20 will require more effort from the farmer to make the same amount of revenue as a tour that costs $700 (see Section 8.1.1). The latter scenario may enable a farmer to host only once or twice a week to meet their financial needs, allowing them to potentially spend the rest of the week farming. Therefore, earning more from agritourism does not necessarily translate into agritourism as the primary activity on the farm. Rather, the high yielding quality of agritourism might make it a more efficient secondary activity in terms of earnings, which would allow the farmer to devote more time to the primary activity of farming.

Furthermore, the requirement that earnings from agritourism cannot exceed those from agricultural production also assumes that a farm operation is represented by a single individual whose time must be divided between agricultural production and hosting visitors. This assumption ignores the reality that a farm can be a business entity with the capacity to hire employees to tend to the primary activities of farming. Capping how much a farm earns from various activities discourages innovation and entrepreneurship and sends the message that farming cannot be a lucrative practice. This is concerning when the perpetuation of agriculture as a practice is at risk in Hawai‘i, where the average age of farmers is 60.1 years (Aoki, 2019). More young people might consider farming as a possible livelihood and career pathway if farming was more lucrative and offered live-able wages.

In short, using revenue as a measure of primary versus secondary activities on a farm is problematic. All farmers consulted in this study felt that farmers should be able to capitalize on their farm. Several farmers pointed out that Hawai‘i has a free-market economy so farmers should be rewarded for their hard work but are instead being penalized. Therefore, other criteria should be explored that more accurately measure the extent of farming practices on the farm. Since the goal of land use policy is to ensure that agriculture remains the primary focus of agricultural lands, measures relating to the area of land under active cultivation should be considered. For example, Bishop Estate requires some of its lessees to have at least 50 percent of certain properties in active cultivation by a certain time period. It is important to highlight that financial sustainability (see Chapter 6) is critical to the ability of farmers to continue to practice agriculture as the main activity on a farm, and the monetary restrictions imposed by current policies on agritourism make it more difficult to achieve this goal.

> “We [make] over one and a half million over all, but now we cut back on the farming because it is getting harder and harder to make money [from farming].”
>
> – Cacao Farmer

5.5.1.2 *Restriction of Specific Events: Overnight Accommodations, Weddings, & Catered Events*

Certain activities, such as having visitors stay in overnight accommodations or holding weddings and catered events, are not permitted on agricultural lands in Hawai‘i County due to the potential impacts of these activities on surrounding communities and the natural environment. These events attract visitors and if unmanaged, could create traffic, noise, pollution, and other external impacts. From a land use standpoint, these events are also considered secondary to the intended primary use of agricultural lands – agricultural production. Currently, a special permit must be obtained to allow for these events to occur on agricultural lands.

While a special permit may be pursued to allow weddings on a farm, the process is lengthy and expensive. The permit application process is similar to conducting an environmental assessment to ensure that the proposed activities will not negatively impact the surrounding environment and neighborhood. In the Agricultural District, a farmer must also obtain the approval of every resident within 500 feet of the farm’s property line. If the farm is in an Urban District, every resident within 300 feet of the farm’s property line must be notified of proposals for un-permitted uses. After the application is submitted, a permit hearing is scheduled with the County of Hawai‘i Planning Department. Some farmers hire consultants to ensure that correct processes and regulations are followed. One farmer pursuing this process spent over $40,000 in consultant fees and the application process exceeded 18 months. Despite the farmer’s investment, the

application for a special permit was denied. The special permit application process is perceived as formidable resulting in some farmers pursuing agritourism activities illegally.

5.5.1.3 *Hours of Operation*

Agritourism activities can only be conducted between 8:00 AM and 6:00 PM. This provision automatically eliminates farm-to-table dinner events from occurring on agricultural farms and does not consider the impact of seasons on daylight hours. Farm-to-table events are becoming popular in Hawai'i and seen as a strategy to address Hawai'i's food insecurity problem. According to Lamie et al. (2021), farm-to-table dinners and tastings are categorized as "core" educational and hospitality activities. In this context, the educational value and contribution of farm-to-table events to Hawai'i's food system should be considered.

5.5.1.4 *Product Origin for Retail on the Farm*

Different codes have inconsistent regulations on the permitted origin of products sold through the agritourism component of farm businesses, roadside stands, and agriculture-based commercial operations. Section 25-4-15 (d) (7) states that "sales of agricultural **products grown on the island of Hawai'i**, and processed agricultural products where the main ingredient was **grown on the island of Hawai'i**, shall be allowed as part of the agricultural tourism operation." Furthermore, promotional products to market the business, including but not limited to coffee mugs and tee shirts, are permitted. However, Section 25-5-72 (a) (21) states that agricultural products sold at a roadside stand must be **grown on the premises**. Additionally, agriculture-based commercial operations permit the sale of products **grown in the State of Hawai'i**. The inconsistency in county and state policies is confusing and policies should be amended to provide consistency and clarity.

> "[We need] less government. Don't regulate us to death."
>
> – Cacao Farmer

5.5.2 Agritourism Permits

The county's permit requirements and processes were identified by agritourism farmers as among the greatest challenges they face in conducting agritourism. There was consensus among agritourism farmers that there was too much "red-tape" and that policies regulating agritourism were restrictive. Some farmers shared the sentiment that the county was afraid to give out permits. Frustration with the existing permitting process and with the local government entities that issue permits was a common theme in the farmers' interviews. More specifically, farmers were frustrated by: the high cost of permits to the farmer; the length of time it takes to get a permit; incompetency of County workers due to lack of knowledge of the land use laws; and inconsistent information from County workers about permit requirements. Farmers reported often receiving different information depending on the planner consulted on a particular day.

According to Hawai‘i County Planning Department staff, only five farmers have been permitted to conduct agritourism by the County’s East Hawai‘i office (Personal Communication, April 20th, 2021). For farmers with permits, the length of time it took for permit approval ranged from nine months to four years. However, this range does not distinguish between special permits, plan approval for agritourism, or certification for agriculture-based commercial operations. However, not all farmers had a negative experience with agritourism permit applications. Two farmers felt that they had a positive experience because of how they approached County workers. Another farmer explained that the permit process only took him nine months, which he attributed to assistance from the Hawai‘i Agritourism Association (HATA) staff who helped him with his permit application.

Farmers’ remarks during interviews suggested a general lack of awareness and understanding among some farmers about the permit requirements for agritourism. General themes surrounding this topic included: a lack of awareness that a permit was required for conducting agritourism; the understanding that the permit application was the responsibility of the owner of the land rather than the lessor; and that some policies did not make sense as to why a permit was needed. Participants shared that many farmers turn a blind eye to agritourism permit requirements, which they see as too “humbug” and complicated. Farmer responses also indicated a lack of accessible materials that clearly translate the provisions of Section 25-4-15 into layman’s terms that a farmer can easily understand.

Therefore, education materials and programs to increase farmer awareness about the agritourism process and requirements are needed. As part of this study, a brochure was developed outlining the step-by-step processes for obtaining an agritourism permit in Hawai‘i County. Figure 16 shows the front of the brochure and Figure 17 shows the back of the brochure.

> “I talked to a guy this morning who is trying to form a network of farmers …to solve some of the problems. Everyone is facing the same level of incompetency coming from the County. The contractors, the farmers, the guys up the hill. It’s crazy.
>
> – Goat Farmer

> “Some of the [permit] issues that were a little crazy was, I need a permit for my pop-up tent. Why do I need a permit for my pop-up tent? We don’t have any structure[s] so I don’t know why I need permitting for my pop-up tent. I don’t know why I need ADA parking. Our farm tour says it is a walking tour.…That didn’t make sense. I had to hire [the Hawaii Agritourism Association] to explain to them (i.e., the Planning Department) that I’m a for-real farmer.”
>
> – Banana Farmer

> “The biggest problem that we encountered was the County said that the first building on a plot of land [had] to be commercial if there’s not a house on it already. That’s not true.…In 2013, Governor Abercrombie signed a bill into law that made it easier for farmers to get going. Reduced a lot of the permitting and the red tape. But the County was very adamant about it that the first building on this property was going to be commercial if there wasn’t a house on it. So, we explored building this as a commercial building and not as an agriculture accessory building, which is what it is.”
>
> – Goat Farmer

5.6 Summary & Recommendations

- The county's permit requirements and processes were identified by agritourism farmers as among the greatest challenges they face in conducting agritourism. There was consensus among agritourism farmers that there was too much "red-tape" and that policies regulating agritourism were too restrictive, leading many farmers to conduct agritourism without permits. Therefore, there is a strong need to streamline agritourism permit processes and procedures.
- The study found a general lack of awareness and understanding among some farmers about the County's permit requirements for agritourism. Similarly, there is a lack of educational materials in layman's terms about the County's agritourism policy, permit processes and requirements, indicating a need for educational materials and programs to increase farmer awareness on the topic.
- Confusion about the agritourism permitting process may be attributed to the fact that there are three possible routes for pursuing an agritourism permit in Hawai'i County depending on whether the activity is:
    - 1) an agriculture-based commercial activity;
    - 2) a permitted tourism activity; or
    - 3) an un-permitted agritourism activity.

  A brochure developed as part of this study (Figure 16 and Figure 17) provides step-by-step guidelines for obtaining an agritourism permit under each category, which may reduce inefficiencies and streamline the permitting process.
- The permitting process can be costly for the farmer and it requires significant research so collaborations with University of Hawai'i at Hilo faculty and students through student internships and research projects could be beneficial for all parties.
- The County's current definition of agritourism is limited and does not account for unconventional farm settings such as farmers markets or nurseries located away from a working farm, nor does it identify the broad range of activities that agritourism encompasses, such as direct sales and hospitality. Furthermore, key terms that appear in the County's agritourism ordinance (Section 25-5-72), such as "producer or farmer," "experienced farm," and "new farm," are not defined in the policy. Clearly defining these key terms is foundational for creating good and clear policies.
- Though state law trumps county law, several provisions of the Hawai'i County Code (Section 25-5-72) are not consistent with the state's land use law (HRS §205). Agriculture-Based Commercial Operations (road side stands, retail activities, retail food establishments, farmers markets, and food hubs) are permitted on agricultural lands by HRS §205. However, the County Code does not include retail food establishments, farmers markets, and food hubs as permitted uses on agricultural lands. Furthermore, HRS §205 requires that products for retail in the state should originate in the State of Hawai'i; however, in the County of Hawai'i, the required origin of products that can be sold for retail on a farm differs for a farm stand, for agritourism retail, and for an agriculture-based commercial activity. The lack of consistency between Hawai'i County law and state law is confusing and limiting for Hawai'i Island farmers.

- Hawai‘i County’s agritourism policy has two monetary restrictions that are misleading and that limit rather than support farmer success:
    - 1) Gross revenues from agritourism activities shall not exceed gross revenues from agricultural activities; and
    - 2) A farming operation must earn a minimum of $10,000 in verifiable gross sales from agricultural produce in the year prior to conducting agritourism activities.

  These monetary restrictions do not consider the economies of scale that characterize Hawai‘i’s industry. The majority (59.1%) of all farms on Hawai‘i Island earned less than $10,000 in 2017 and most farms were nine acres or less. Therefore, generating profits from the sale of generic agricultural products alone is very difficult for small-scale farmers and these monetary restrictions exclude the very segment of the farming sector that may most need alternatives such as agritourism for financial security. Furthermore, using gross revenue as a measure for the extent of agricultural activity on a farm to ensure that agriculture remains the primary activity on the farm, is inaccurate and misleading for various reasons discussed in Section 5.5.1.1. Rather, other metrics for measuring the extent of agricultural activity such as “farm area under active cultivation,” should be considered. Removing these monetary restrictions from Section 25-5-72 would allow farmers to become more financially secure.
- The identity of a farmer as a “real farmer” versus a “gentleman farmer” may play a role in decisions for the allocation of agritourism permits. However, these two terms are discretionary and not defined in the Hawai‘i County Code. Both terms must be defined and distinguished. Requiring that at least 50 percent of agricultural land on a farm is under active cultivation in order to conduct agritourism would ensure that agriculture remains the primary activity of agricultural lands regardless of the identity of the farmer.
- The County’s permitting process for agritourism is necessary to ensure that communities and the environment are protected from potential negative impacts resulting from commercial activities. However, agritourism appears to be a low priority for the County as evidenced by farmer frustrations with the Planning Department and a lack of monitoring and enforcement of agritourism rules and regulations by the County. Currently, monitoring and enforcement of rules are complaint-driven. Unless rules are monitored and enforced, agritourism activities will continue illegally and therefore be unregulated with potential harm to rural communities and the environment.
- The hospitality (food and accommodations) component of agritourism (farm stays, farm-to-table dinners and tasting events, and catered events after 6:00 PM) is not permitted in Hawai‘i County, though it is permitted in other counties like Maui and Kauai. Chase et al. (2018) suggest that hospitality activities are core agritourism activities. However, illegal short-term vacation rentals - catering to visitors in general have been a challenge for the state of Hawai‘i, disrupting residential communities and exacerbating the affordable housing crisis. Studying the impact of farm stays on other islands where they are permitted, such as Maui and Kaua‘i, could provide insights into how Hawai‘i Island can best address this issue so as to benefit farmers while avoiding negative impacts.

Recommendations

1. **Streamline agritourism permit processes and procedures.**
   i. Increase access to education materials that make it easier to navigate the agritourism permitting processes and requirements, including through wider dissemination of the brochure in Figure 16 and Figure 17.
   ii. Provide periodic informational and training workshops about the permit application process and requirements to be conducted by the Planning Department or other agritourism stakeholders like Hawai‘i Farm Trails or the Hawai‘i Agritourism Association. Trainings should provide opportunities for farmers to ask questions and receive expert feedback.
   iii. Address permit application needs by pursuing mutually beneficial collaborations between farmers and the University of Hawai‘i at Hilo faculty and students through student internships and research projects.

2. **Amend the existing agritourism ordinance to create a better and more effective agritourism policy for Hawai‘i County.**
   i. Revise the Hawai‘i County definition of agritourism to more accurately reflect the complexity of agritourism by:
      - including unconventional farm settings such as farmers markets or nurseries located away from a working farm;
      - considering direct sales and hospitality as agritourism activities; and
      - defining key terms in the policy including, “producer or farmer,” “experienced farm,” and “new farm.”
   ii. Amend the County Code to address inconsistencies between County and State regulations on agritourism. Specifically:
      - allow retail food establishments, farmers markets, and food hubs to be permitted uses on agricultural lands; and
      - allow products that originate in the State of Hawai‘i to be sold on agricultural lands.
   iii. Remove the two monetary restrictions on agritourism and use an alternative, non-monetary measure for agriculture production on a farm, such as farm area under active cultivation.

3. **Develop a mechanism that distinguishes between “gentleman farmers” and “real farmers” to ensure that agricultural practices remain the primary activity on agricultural lands.**
   i. Define and distinguish between “real” and “gentleman” farmers.
   ii. Amend Section 25-4-15 to require at least 50 percent of the property to be under active cultivation as a precursor for agritourism.

4. **Prioritize agritourism as a viable strategy for leveraging tourism to support Hawai‘i County’s local food system.**

i. Allocate funding to the Hawai‘i County Planning Department to build its capacity to address the agritourism needs of the County. Capacity building may include increasing efforts in the following areas:
    - Hire and train planners to be proficient and competent in land-use and agritourism policies, processes, and procedures.
    - Build relationships and trust with local farmers and agritourism stakeholder entities, such as the HTA, HATA, and HFT, by hosting and facilitating regular workshops, trainings, and networking events in agritourism.
    - Monitor and enforce agritourism policies actively and regularly - to protect agricultural lands and rural communities from negative impacts of tourism activities.

5. **Provide research opportunities and funding to conduct pilot projects to better understand the impact of agritourism on agriculture, land use, and rural communities.**
    i. Support pilot studies on Hawai‘i Island to better understand how hospitality activities on farms may impact small farms, land use, agricultural practices, and rural communities and the environment.
    ii. Study the impact of farm stays on other islands where they are permitted, such as Maui and Kaua‘i, to provide insights for Hawai‘i Island.

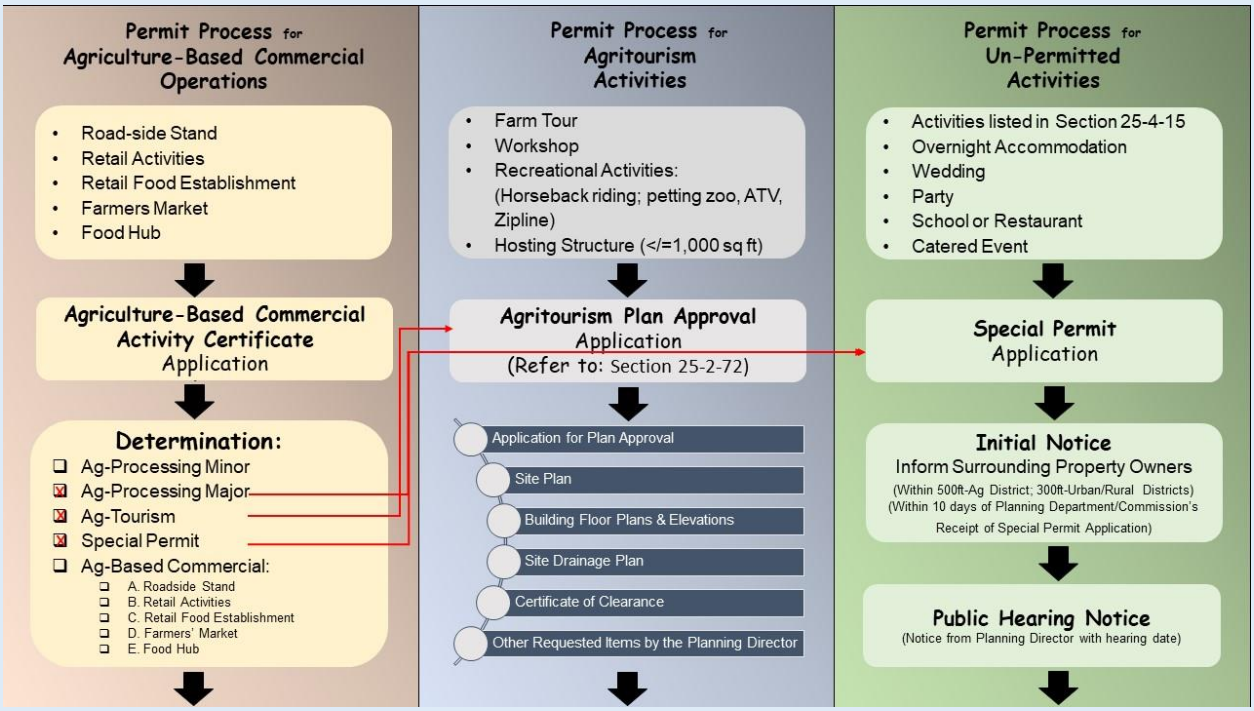

Figure 16. Hawai'i County agritourism permitting process brochure (front)

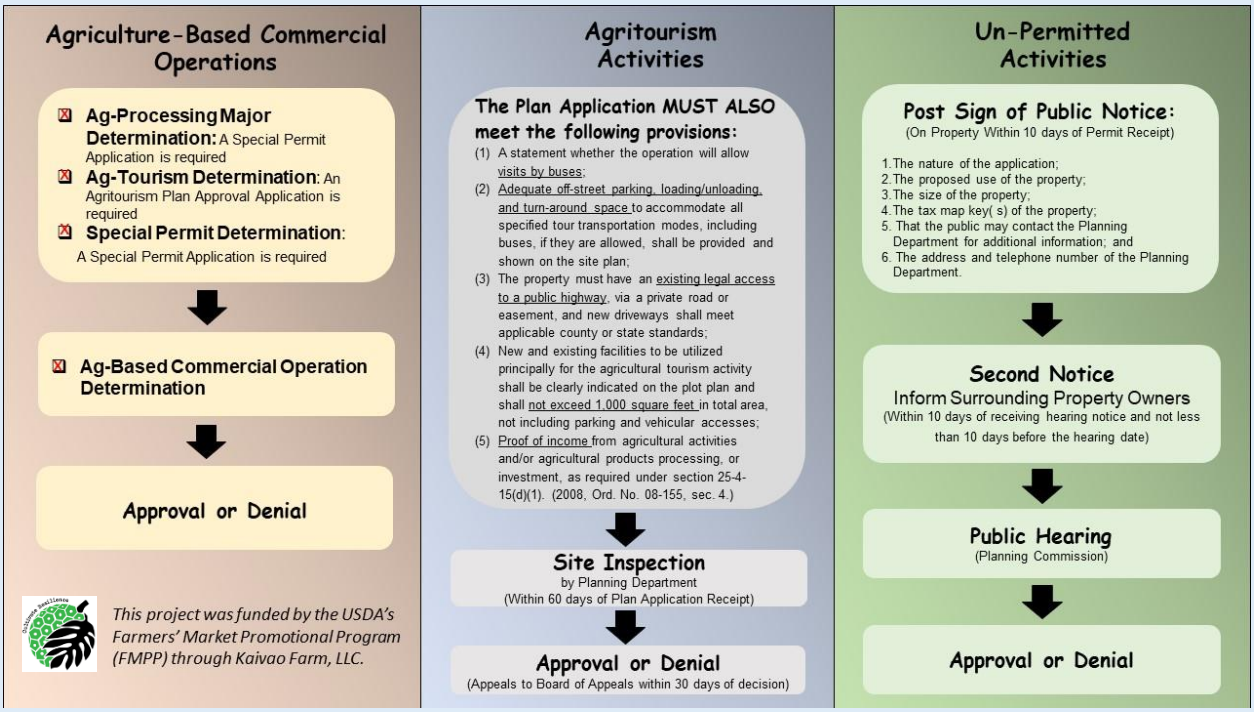

Figure 17. Hawai'i County agritourism permitting process brochure (back)

CHAPTER 6
Financial Sustainability

[Depicted on the Chapter 6 section cover is vanilla featuring vanilla beans from which vanilla extract and other value-added products are made]

Photo Credit: A. Fa‘anunu

6 FINANCIAL SUSTAINABILITY

6.1 Overview

Many new crops have been introduced to Hawai‘i but few are economically viable for small farms as generic commodities due to the costs of production, including labor, land availability, and other inputs (Elevich & Love, 2013). Also, new start-ups and farms with seasonal crops, such as breadfruit, are restricted by the fruiting season. In 2017, the majority (66%) of Hawai‘i farms were only one to nine acres, so farm size restricts the ability to scale up production (Fleming, 2005; USDA, 2019). Similarly, most (77%) Hawai‘i Island farmers in 2017 earned less than $25,000 and only 13 percent of farmers earned more than $50,000. The lower cost of producing crops outside Hawai‘i also makes it difficult for small Hawai‘i farms to remain competitive. Therefore, economies of scale limit the ability of many Hawai‘i farms to produce sufficient agricultural yields for financial security. These data suggest that farming alone does not provide live-able wages so farmers must pursue other avenues to support their livelihood.

6.2 Agritourism’s Contribution to Farm Security

Agritourism is a potential strategy to address the financial security of Hawai‘i Island farms. Prior to the COVID-19 pandemic, most Hawai‘i Island farms participating in this study reported that direct agritourism sales (selling directly to visitors) accounted for more than half (50–80%) of farm earnings. Only a few farms had 15 percent or less of farm sales come from direct tourism, and these farms had established, off-island markets. However, off-island markets were restaurants and hotels in O‘ahu and Maui. Therefore, these farms were also highly dependent on the tourism industry, but indirectly. Dependence on tourism also varied by the farm’s main crop. For example, cacao farmers are highly affected by tourism because target markets are visitors, whereas banana farmers are less impacted as the consumers tend to be local residents.

> “After a while, it seemed like this was a hobby farm because I’m never making any money [but] we really believe we are showing this can be done. Maybe not the economic part yet, because we are pioneers.”
>
> –Tea Farmer

Due to the limited number of agritourism farms on the island, it was difficult to gather representative data. Therefore, more data from a larger pool of agritourism farms are needed to better understand the financial contribution of agritourism to farm security. Nevertheless, the existing data suggest that agritourism is a significant source of revenue for agritourism farms, particularly those with 20 acres of land or less.

6.3 Agritourism as a High Yield Activity

Agritourism is often a higher yielding activity than the sale of generic crops, so farmers might be better able to meet their financial needs from a consistent agritourism schedule every week. For example, hosting tours two days a week could enable a farmer to meet his/her financial needs and work on the farm for the rest of the week without worrying about financial sustainability. This model may be ideal for new start-ups that are still waiting for their crops to grow, as well as farms with seasonal crops. If

> “Because we produce a high-value crop in a market that is new, it [the value of honey] is building. We have lost $15,000 a year for years and now we have almost broken even. Agritourism helped us break even. Almost.”
>
> – Beekeeper

done correctly, agritourism can enable farmers to meet their financial needs and have more time for farming. Therefore, incorporating agritourism into a farmer's business model should be encouraged.

6.4 Comparative Advantage

Farmers engaging in agritourism also become entrepreneurs who must be proficient in business management, finance, and marketing. Agritourism involves not only hosting skills but also knowledge of the various functions of business to better manage the operation in the long-term. For example, a beekeeper engaging in agritourism must not only maintain the bees and bee yards, but hire beekeepers, tour guides to conduct tours, and personnel to pack produce and manage promotional activities, including updating websites and social media sites. If the business expands, the company must manage its financial accounts, new products, and more employees. These are distinct sets of skills that set agritourism farmers apart from conventional farmers or farmers not engaging in agritourism. The business experience gives agritourism operators a comparative advantage in entrepreneurial activities over conventional farmers.

6.5 Economies of Scope

Agritourism can diversify production and reduce price risks by making use of the potential for "economies of scope" to stimulate alternative and more resilient pathways of development, particularly for small-scale farmers (Roest et al., 2018). Economies of scope can be defined as, "the decrease in the total cost of production when a range of products are produced together rather than separately," or cost savings from variety, not volume (Corporate Financial Institute Team (2021, p.1). Some forms of agritourism, such as retailing, restaurants, and hospitality, create economies of scope for farms. Agritourism provides farmers with opportunities to be more financially sustainable and address economies of scale and scope through increased farm sales from:

1. direct farmer-to-consumer sales;
2. diversification of farm products through value-added production; and
3. generation of multiple revenue streams.

Despite the potential benefits of diversification, many challenges inhibit farmers from exploring agritourism activities. The following sections explore the opportunities and challenges within each of these areas in detail and highlight areas of need to increase the capacity of farmers.

"We are different from other farmers because we do it all. We kind of do everything: wholesale, retail, bulk, farming. Everything is there."

– Beekeeper

"You can sell [your product] at full value [because] you are making it directly rather than selling it through a retailer or store at 50 percent."

–Beekeeper

6.5.1 Direct Farmer-to-Consumer Sales

Opportunities

Agritourism enables farmers to sell their products directly to consumers and increase their profits by 100 percent. Farmers may sell directly to consumers through farmers markets or events, gift stores, and farm stands on their farms, or on-line. Since the distribution channel of farmer-to-consumer is very short with no intermediaries involved, farmers can sell products this way at full value. Short distribution channels also reduce Hawai‘i’s carbon footprint, a significant point to consider when 85 to 90 percent of the food for local consumption is imported (Loke & Leung, 2013; Office of Planning & DEBDT, 2012). On-line stores provide many opportunities for farmer-to-consumer sales that expand target markets beyond domestic markets into and across international borders.

> “Most retail stores generally up the price 100 percent. That is normal. With tea, for some reason, they want to be able to [increase] 1,000 percent. People aren’t going to pay that.” –Tea Farmer

Technology has changed how people connect with each other through social media applications, and virtually anyone on the globe is only a few clicks away. Similarly, business strategies have evolved to address changes in consumer behavior. E-commerce platforms have transformed how retailing occurs: farmers can sell commodities through a website while consumers can shop on their phones, eliminating the need for a physical store. Many tools are now available to help farmers gather market and consumer data electronically to refine and improve their products and services to better meet consumer needs and demand. Digital media have also enhanced marketing capabilities, giving farmers multiple ways of communicating with consumers, promoting their products, and distributing their products appropriately and efficiently. Similarly, technology, such as mobile applications, has made it easier for consumers to shop, compare prices, and pay for goods and services on-line. Thus, technology offers many opportunities for farmers to expand farm sales beyond the farm, globally.

Most Hawai‘i Island agritourism farmers engage in direct farmer-to-consumer sales at their farms, ranches, agricultural festivals and events, farmers markets, and also electronically. However, many farmers are not tech savvy and need assistance in developing, integrating, and maintaining e-commerce platforms, social media, and e-marketing. Some farmers also sell their products to wholesalers at half price or less because they may not have the capacity to vertically integrate value-added production. For example, due to a lack of capacity, a coffee farmer may choose to sell unprocessed coffee cherry to a coffee wholesaler rather than process it and sell the prepared coffee beans directly to consumers. However, if value-added production is pursued, as discussed in more detail in Section 6.5.2, the farmer can make more by selling processed coffee beans or brewed coffee directly to consumers at full value.

The origin of the products that farmers can sell on their land matters to Hawai‘i Island farmers. Otherwise, anyone could open a produce store on agricultural land. Under this scenario, it may not be the farmer who benefits but someone else who is making money from the farmer that further increases the length of the distribution chain. Some farmers are concerned that if anyone can open a store and sell non-farm products on their agricultural lands, development could run rampant and diverge from the intent of the Agricultural District zoning. Similar concerns have been raised about the origin of products at farmers markets (Kimura & Suryanata, 2016). As discussed in Section 5.5.1.4, Hawai‘i County’s agritourism ordinance only allows the sale of Hawai‘i-grown

produce on agricultural lands for agriculture-based commercial operations. For agritourism retail, the product origin is the Island of Hawai‘i, and products must be grown on the premises to be sold at a farm stand. However, active monitoring and enforcement is necessary.

Challenges

Hawai‘i consumers are often unaware of the presence and value of emerging crops due to their short time on the market, such as Hawai‘i-grown honey, tea (Figure 18), breadfruit, and cacao. Emerging crops in Hawai‘i are often priced lower than their actual value in order to compete in the market as new products. For these crops, educating the public is important to create market demand. Agritourism becomes an important avenue for educating local consumers about emerging crops.

One of the main barriers for direct farmer-to-consumer retail is marketing capacity. Many farmers are not adequately trained in marketing functions or do not have the staff to develop and manage marketing strategies that effectively communicate the value of farm commodities and reach target markets. Proficiency in e-marketing and e-commerce are required for effective marketing, particularly if a farm has an online store. Therefore, farmer trainings in website development, tour scheduling, social media advertising, pricing, packaging, and other important components of marketing are needed.

Financial management is also necessary for maintaining retail activities efficiently and effectively, and maintaining accurate and transparent financial accounting. Technological infrastructure to manage numerous financial transactions with consumers and suppliers is necessary for conducting business. Therefore, in addition to knowing how to operate accounting software (e.g., Quickbooks) and develop a consistent bookkeeping system, farmers must also be up-to-date on annual state and federal taxes, general excise taxes (GET), annual business filings, and other requirements to be in good standing.

> “Whole leaf tea. It is a new ag product. Most people had Lipton’s tea bag tea.… Most people have not tasted that tea is much more than a tea bag in Lipton’s. It can actually alter you. If we were to sit here quietly, not talk, just sip tea, you would feel that you would have a change of consciousness from tea like this. [This is] my observation, of people who come on the farm for tours.”
>
> – Tea Farmer

Figure 18. Whole leaf tea - an emerging crop. (Source: https://www.bigislandtea.com/buy-our-tea**)**

6.5.2 Value-Added Products

Opportunities

> "The beauty of agritourism…is the value-added. It really helps the farm survive. You aren't competing so much with other commodities." – Banana Farmer

Small farms can be competitive by adding value to their operations through altering the characteristics or qualities of generic crops. Value-added products enable farmers to diversify their farm products by transforming farm inputs into new goods, services, or ideas, which can be sold at higher prices than the cost of the inputs. For example, the value of a cup of coffee compared to coffee cherry is 7:1 by weight, which means that a farmer can make seven times the income from selling brewed coffee compared to selling cherry (Elevich & Love, 2013; Smith et al., 2009). However, this ratio does not account for production costs, though it suggests that the value of brewed coffee is captured through processing (Elevich & Love, 2013). The processes of adding value include harvesting, processing, packaging, selling, and providing services. Processing methods are diverse and may include post-harvest activities such as cleaning, sorting, grading, and packaging for storage. More advanced processing methods include fermenting, drying, extracting, milling, juicing, roasting, candying, flavoring, pickling, waxing, refining, freezing, curing, brewing, decaffeinating, and preserving (Elevich & Love, 2013). Thus, a small farm that specializes in taro cultivation, for example, can add value by expanding into food processing and transforming generic taro into numerous products such as taro flour, taro chips, taro pudding, and other culinary innovations.

> "[When] we started value-added, I started packing….[Our company] had no time for packing and [was]n't interested….I put my own money into it to get it going. It was just me….When the mite [infestation] happened, [we] lost half of their hives – half of the population was gone. Now … [our company] needs … the value-added. It's very hard for farmers to do value-added. [Farmers] could not fit that into their schedule." – Beekeeper

Participating in value-added production not only expands the types of products the farm specializes in, but also expands the range of farm activities that can be shared with visitors through agritourism. The processes of transforming generic crops into value-added products can become key components of a farm tour that enhance the agritourism offerings of a farm. These processes also become opportunities to educate visitors about the connection between manufactured goods and their farm origins. For example, many people eat chocolate but many people may not know that chocolate derives from the cacao plant. Thus, opportunities emerge to create one-of-a-kind experiences that are meaningful, educational, and transformative. Agritourism enables small farms that cannot scale up due to size to reach goals of financial sustainability by shifting their orientation from production to service.

> "The number one thing when you have a value-added product is…you create a brand. Value-added plus the brand. People will say, "Oh yeah, I've seen that one." The branding is really important….With social media, a lot of brands are getting out there." – Cacao Farmer

	Value-Added Products						
CROPS	1	2	3	4	5	6	7
Breadfruit	Whole fruit	Flour	Chips	Mousse	Pies	Cookies	Pancake mix
Cacao	Cacao beans	Flavored/ chocolate	Nibs	Chocolate-dipped cookies	Chocolate drinks	Brewing cacao	
Coffee	Whole bean	Ground coffee	Peaberry grade	10% vs. 100%	Flavored/ Macadamia		
Goat Milk	Cheese	Carmel candy	Toffee candy	Fudge	Salve	Soap	
Honey	ʻŌhiʻa lehua honey	Macadamia nut honey	Lehua with vanilla bean honey	Exfoliating mud mask	Honey bar soaps	Hand salve	Lip balm

Table 5. Examples of the range of value-added products of different crops in Hawaiʻi

Engaging in value-added production is also fun and fulfilling for some farmers who welcome the ability to pursue their passions. Agritourism offers opportunities for farmers to interact with visitors and conduct market research as visitors try different products and provide feedback. The ability to learn through trial and error and integrate customer feedback enables farmers to continuously hone their products to create brands with unique qualities. For example, a beekeeper experimenting with honey created from pollen collected from different types of flowers can use tastings during farm tours to better understand consumer preferences and identify the most popular products. Therefore, value-added production can lead to unique branding that identifies and differentiates products in the marketplace.

All agritourism farms participating in this study engaged in value-added production, though the extent varied depending on the size and capacity of the farm. Table 5 lists value-added products of some agritourism farms in Hawaiʻi.

> "What we used to do when we first started was pick the coffee and…we had a small mill when we first started. ….We separated the cherry skin of the beans, we fermented the beans, but as far as drying it in dry mill…where they separate the dry husk and grade every single coffee bean, it was [done] mainly through a middleman that we had to send it to.…Just last year, we got our own dry mill where we do everything here on site, except for [the] decaffeinating process."
>
> – Coffee Farmer

Challenges

> 'I have had to go through two audits now. Third-party audits because I sell to coffee farms.…We sold to Safeway and…had to have an audit for it….Everyone is going to have to do that [food safety certification] to sell to any retail operation."
>
> – Coffee Farmer

The start-up cost for value-added production can be significant and often involves additional resources, skills, and requirements that may be synonymous to starting a separate business. Many processing activities require a certified kitchen, equipment, and new facilities that call for capital investments. Artisan skills, such as making chocolate (Figure 19 to 21), tea, and honey, take years of training and experience to develop. For some products, processing costs exceed returns and it may take years before a business breaks even.

Venturing into value-added food production also requires compliance with food safety regulations, especially for "high risk" food products or food sold to retail establishments like grocery stores, food trucks, restaurants, shops, and distributors. "High risk" food products include refrigerated cakes and pies, fermented food, dried meat and seafood, and other hot or refrigerated foods. These foods must be prepared in a certified kitchen. A food business must also undergo safety training and have food establishment permits for certified kitchen use from the Department of Health. A certified kitchen on agricultural lands must comply with County of Hawai'i land use regulations, so building a new certified kitchen can be an expensive and lengthy process. Compliance may entail completing the following: hazardous material removal; plan approvals for equipment, electrical, and plumbing layout; verification of potable water supply, toilet facilities, and wastewater system removal; obtaining permits for the building, electrical, and plumbing; and obtaining plan approval from the Department of Health. Some farmers who cannot afford their own certified kitchen can access one for a fee, such as the Hilo Farmers Market kitchen.

Time is also a challenge for Hawai'i Island farmers who must balance the agricultural upkeep of the farm with managing value-added production. Farmers work long hours, with most reporting working more than 40 hours per week. For some, time constraints limit their ability to expand value-added endeavors. Thus, many farmers may be reluctant or lack the capacity to expand into value-added production even though the endeavor could be lucrative in the long-term.

Figure 19. Processing cacao beans to make chocolate

Figure 20. Cacao–chocolate tour at Hamākua Chocolate Farm (Source: A. Floro)

Figure 21. Chocolate to taste at Hawaiian Crown (Source: A. Faʻanunu)

6.5.3 Multiple Revenue Streams

Agritourism can occur in different forms through various activities, making it possible to create multiple revenue streams on a farm. Agritourism activities may include: farm tours; workshops; retail through gift stores, farm stands, and farmers markets; passive experiences on the farm like weddings and conferences; recreation and adventure including horseback and ATV rides, nature walks, and ziplines; and hospitality services such farm accommodations and farm-to- table dinner events. Diverse sources of income increase farm resilience or the ability to endure the many unpredictable variables affecting agriculture, such as disasters (natural and man-made), disease, pests, and climate. Since service is often easier to establish than manufacturing goods, agritourism is an option to generate farm income, particularly among small and new start-up farms with limited capacity. Similarly, agritourism is an attractive option for farms with long-term crops while they are waiting for the crops to produce. Thus, agritourism can jumpstart a farm operation and provide the financial means to not only set up the farm but also develop its capacity to be financially sustainable in the long-term.

> "We…bring people here from all over the world. They would come, [and we] take them through…a tour of the farm and talk about sustainable farming, [share] what we are doing. Then, we sit and let them experience our product…have a cup of tea with them and impart some stories about what is happening here on Hawai'i.…After that, we go out to pick [green tea leaves]. When they finish picking, [we leave] the leaves to wilt…it takes anywhere from a half an hour to an hour to wilt depending on the conditions. Then we…invite them to have lunch with us…and the next thing you know, we would be rolling tea, firing tea, finishing tea. They get here at 9 AM, and…with a snap of the finger it [is] 4 o'clock in the afternoon and we all felt like we won the lottery. It [i]s so fun.
>
> You have a lot to talk about when you have a farm and [when] you try to do it the right way…so many mistakes…the learning curve [is steep]."
>
> – Tea Farmer

> "There is a fine line between creating a guest experience and just standing there and preaching at people."
>
> – Soap Maker

6.5.3.1 *Farm Tours*

Opportunities

A farm tour is an experience where visitors tour a farm setting and learn more about the farm. Figure 22 shows farms on the Hawai'i Farm Trails mobile app that conduct farm tours. Tours range from one hour to a whole day and can be self-guided or part of a group. The cost of tours at Hawai'i farms ranges from $0 to $700, and price is often related to the length of the tour. Tours may be passive like van tours, offering minimal contact with the farm site, or they can be more active, with visitors participating in farm activities and interacting closely with the farmers. Some farms that focus on value-added products, such as coffee, honey, tea, vanilla, and chocolate, have opportunities to engage visitors actively. Many farms have modeled this well in Hawai'i and may add a tasting component to the experience, allowing visitors to sample their products. For example, a cacao tour may involve learning about the plant in the field (Figure 20), and then about the process of transforming cacao beans into chocolate, ending with visitors tasting the chocolate

(Figure 21). Such a process allows visitors to choose from a variety of products, flavors, and blends, which they might otherwise not experience at a conventional store.

A good tour can be educational, transformative, and meaningful. Tours become opportunities to educate visitors not only about the farm, its various activities, and agriculture, but also to discuss important global and local issues such as: food security; climate change; politics; Hawaiian history and culture; and behaviors that nurture a more just and sustainable world. Some Hawai'i Island farmers incorporate regenerative practices such as tree planting, where visitors plant native species like sandalwood (*Santalum paniculatum*) and koa (*Acacia koa*) during a tour. Tree plantings become an opportunity for visitors to reciprocate and give back to Hawai'i and also sequester carbon to offset their visit and mitigate climate change. At one farm, plants are named after the person who plants them and visitors are invited to return to Hawai'i and visit their plant. Visitors may also receive updates on their plant electronically. Not only do these strategies nurture good farmer-visitor relationships and encourage customer loyalty, they also teach visitors to be more mindful and responsible.

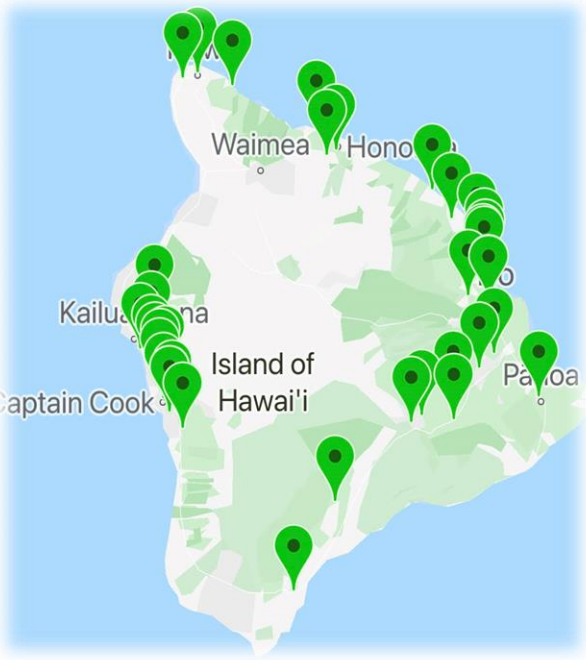

Figure 22. Hawai'i Farm Trails network of farms (Source: www.Hawaiifarmtrails.com)

Thus, tours have the potential to create change in visitor perspectives and can leave visitors feeling excited, educated, and inspired. These feelings may affect not only how visitors conduct themselves in Hawai'i and when they return home, but also visitor spending. Some farms offer free tours as a marketing strategy to attract visitors to the farm, and a good tour can result in significant visitor spending at the farm's gift shop, farm stand, or on-line store.

Virtual Tours

Virtual tours have emerged as a strategy for conducting tours remotely without being on the farm. Immersive technology creates or extends reality by leveraging 360-degree space, enabling users to look in any direction, see content, and feel their senses stimulated (Wikipedia, n.d.). A simulated world creates a feeling of being physically at the site without actually being on-site. The idea of virtual tours began appearing among Hawai'i farms in response to the COVID-19 pandemic. Virtual tours enabled farms to continue conducting tours but in a safe manner. Virtual tours are still in their infancy, but have the potential to become a significant part of tourism in the future and another activity for farms to leverage.

Virtual tours also address climate change and the need to reduce global carbon emissions, to which the tourism industry is a significant contributor (Hall et al., 2017). Also, immersive technology becomes a strategy to protect farms from pests and plant diseases that can be transmitted by visitors, such as fire ants and Rapid 'Ōhi'a Death (ROD). Virtual tours also expand target markets and reach audiences who may not be able to travel, due, for instance, to physical

or financial constraints. Finally, shifting to virtual tours gives farmers more time to produce food rather than host. Once a tour is recorded, a farmer can direct their time elsewhere. Thus, virtual tours may play a significant role in the future of tourism.

Challenges

Creating real, meaningful, and transformative tours, whether in person or virtual, takes time. Also, well-trained personnel who are passionate and knowledgeable are key to delivering a quality experience. Farmers may need additional training to create quality tours. The busy schedules of farmers may also limit their ability to conduct tours. Thus, additional tour guides who are well trained and who can deliver quality tours are needed to make agritourism a mainstay of the farm. Virtual tours may be an option for farmers but the technology for virtual immersive reality is expensive, and access to the technology is critical for this aspect of tourism to take off. Farmers will need assistance in creating their tours and also in determining the ideal price point for the tours.

Though tours may be one of the most common ways of directly interacting with visitors, less than 3 percent of all farms on Hawai‘i Island engage in agritourism directly through tours. Most farmers do not engage with visitors because they do not have the capacity to do so or are not interested in hosting. There is an opportunity here to leverage tourism intermediaries and tour guides to conduct tours on these types of farms, where the farmer offers the farm as a destination and tour companies conduct the tours. While the farmer does not need to be part of the hosting, he/she can receive a certain percentage of the fee and benefit financially. However, many issues, such as insurance, liability, safety, and farmer compensation need to be addressed, so careful planning is needed. A community-based approach, bringing farmers and tourism intermediaries to the table to create a plan that leads to a win-win situation for both stakeholders, is key. Funding to support this research and planning endeavors is also needed.

> “[A virtual tour] expands the ability for tourism.…Bringing in human beings with our big feet…to our island everywhere, we are bringing in more interruption to an already very fragile ecology.…[A virtual tour] is a way where agritourism can expand [but] not at the cost of the farmer’s day trying to make his farm look pretty so people will want to come.
>
> This type of distancing from stomping all over the world may be a way to preserve what is left on this planet. It has to start in small areas. I believe this isolation that has been forced upon us has given all of us the chance to think about some things. How can we do things differently?
>
> All of this VR [virtual reality] immersive experience, is to reduce the carbon footprint in the world. Even retail…malls are outdated except in winter locations. There will be more warehousing and internet purchasing.…We have the ability to do it online. We have the mind’s capacity to take away the screen and immerse ourselves and learn.…It is a really great educational tool.
>
> – Tea Farmer

Some provisions of the Hawai‘i County agritourism ordinance also limit the ability of farmers to conduct tours, particularly the requirements that a farming operation earn a minimum of $10,000 in verifiable gross sales from agricultural produce in the prior year, and that the gross revenues from agritourism activities do not exceed those from agricultural activities. A farming operation may be exempt from these provisions if it is new and can provide evidence that “sufficient” investments have been made in the planting of agricultural crops and/or livestock. In

the event of unforeseen environmental or economic conditions, gross revenues from agritourism may exceed gross revenues from agricultural activity for two years. Refer to Chapter 5 for information on agritourism polices, planning, and permitting in Hawai‘i County.

6.5.3.2 *Workshops*

Opportunities

Workshops are another way for farmers to actively share farm activities with visitors. Workshops are opportunities for farmers to share their knowledge and expertise by teaching others in a group setting for a fee. For example, a goat dairy may offer cheese-making workshops, or a beekeeping operation can hold workshops not only to educate visitors about bees but also to train other beekeepers (Figure 23). Many Hawai‘i Island farmers support education and contribute to building the capacity of the local community this way. Often, farms will waive the fee for school groups. Some farms also help other farmers, especially new farmers, to learn farming techniques, particularly among farms that belong to an association where their individual success results in the group’s success.

> “We used to tell everyone how to grow tea. We realized we have been giving away our services for 15 years. It is time to start consulting. It is very rewarding. We have helped start probably about 42 farms - 25 in Hawai‘i. Not all succeeded.”
>
> –Tea Farmer

Figure 23. Beekeeping workshop in Hilo attended by youth (Source: A. Floro)

Challenges

Several challenges limit the ability of farmers to conduct workshops, including use permits, determining workshop fees, and labor. As with other forms of agritourism, a farmer conducting workshops for a fee must acquire the required use permits from the County of Hawai‘i Planning Department to host groups on a farm within the agricultural district (see Chapter 5). Even after permits are obtained, farmers often struggle with understanding the monetary value of their workshops and need assistance in determining workshop fees. Also, workshops are dependent on the availability of personnel to host the workshops, and the busy schedule of farmers is limiting.

6.5.3.3 *Retail: Gift Stores & Farm Stands*

Opportunities

Gift stores and farm stands (Figure 24) selling a variety of farm products enable farmers to engage in retail on their farm. Retail products may include agricultural produce grown on the farm, value-added products, and promotional products, such as apparel and accessories with the farm's logo and brand. Gift stores and farm stands provide opportunities for visitors to shop for souvenirs to take home at the end of their experience. Visitors will identify with brands that they have experienced and will more likely return to the brand, especially if the experience was good.

Gift stores become spaces where farms can also connect with potential future customers. While at the gift store, visitors can sign up for a monthly newsletter or be directed to the farm's on-line store. Some businesses offer promotions to encourage visitors to buy from them well after the farm tour. A monthly subscription service for products to be shipped to the consumer enables the business to expand its market and stay connected to customers. Thus, a customer living in Europe can continue to enjoy products from the farm in Hawai‘i and remain connected to the farm through monthly subscriptions despite the distance. Kona coffee farms represent this model well with tours generally ending at the gift store and giving visitors time to sample products, browse, and buy souvenirs.

Figure 24. Farm stand at Kulike Forest Farm (Source: K. Mausio)

Challenges

Challenges for retail include obtaining the appropriate use permits and food safety permits, the cost to build structures, and the availability of products to sell on a consistent basis. Farms can overcome the challenge of building physical structures for retailing by offering on-line shopping through a website. However, the farm must have a consistent supply of products and inventory to support on-line retail and be proficient in managing e-commerce activities.

6.5.3.4 *Retail: Farmers Markets*

Farmers markets are examples of direct farmer-to-consumer markets and represent alternatives to industrial systems of food production and distribution (Hinrichs, 2000). Farmers markets offer a consistent market for local farmers to sell their produce. Nationally, most farmers receive less than 10 percent of the money spent by consumers, according to research on the food dollar (Wilde, 2013). However, farmers receive a higher percentage of the food dollar through farmers markets and food hubs (Azizi & Lincoln, 2021). While farmers markets generally attract many visitors, they also serve local residents and many offer electronic benefit transfer (EBT) services for poorer communities. Therefore, farmers markets are important components of Hawai‘i’s local food system. In 2020, there were approximately 24 farmers markets on Hawai‘i Island, as shown in Figure 25.

Opportunities

Farmers markets on Hawai‘i Island have diverse forms of business ownership. While some farmers markets are privately owned, such as the Hilo Farmers Market (Figure 26), others are community driven. The Pana‘ewa Farmers Market and the Maku‘u Farmers Market are both examples of non-profit organizations formed by Hawaiian Homestead Associations on Hawai‘i Island to address the needs of local communities. The Maku‘u Farmers Market is of particular interest because it is the largest farmers market in Hawai‘i. It was initially formed to support more sustainable livelihoods for Hawaiian homesteaders in Puna and provide beneficiaries with a market to sell their products from their agricultural lands. In addition to being a farmers market, the organization also serves as a community and culture center.

Figure 25. Farmers markets on Hawai‘i Island (Source: www.Hawaiifarmtrails.com)

Though the Maku‘u Farmers Market was initially founded to build the capacity of local Native Hawaiians, the market also serves the larger and diverse population of the Puna District. The market opens weekly on Sundays and is one of the most visited markets on the island. Also considered a resilience hub, Maku‘u Farmers Market plays an important role in offering services to Puna residents during disasters, such as Hurricane Iselle and the volcanic eruption in 2018. During the COVID-19 pandemic, the market adhered to Center for Disease Control (CDC) guidelines while remaining partially open, particularly to allow community members with EBT to access fresh and local food while also supporting permanent vendors. In addition, the organization has strong ties with local schools such as Kua o Ka Lā and Nawahīokalaniopu‘u charter schools. With roots in Native Hawaiian culture and located on Department of Hawaiian Home Lands (DHHL), the organization teaches cultural practices to youth and local residents

including hula, planting food plants, and preparing traditional Hawaiian food. Capacity-building programs have emerged through the organization to reconnect communities to the land and to each other. Thus, Maku‘u Farmers Market is a representative model of a market that goes beyond providing access to local food, to building community resilience.

Though the market could open more than once a week, it practices co-opetition, or cooperation among competitors, with other farmers markets within the district, with whom it also shares vendors. The market has about 280 to 300 vendors who also attend other farmers markets on other days of the week. Therefore, operating only once a week enables farmers markets in other areas like Kalapana, Pāhoa, and Hilo to also operate. This model enables the availability and accessibility of local foods to be more evenly distributed throughout the district of Puna rather than localized in one area.

> “Regulations make it hard once you sell food products.…The process to become a vendor is hard. Going from being a farmer to a seller becomes hard. As a vendor, to sell food, you need your Board of Health, insurance, GET. For Board of Health, you have to update regularly and also go through inspections. After all the expenses, they [vendors] don’t really make that much. Each vendor is different and they go through so much.…There are so many fees and permits, it makes it hard for a small business owner to succeed. Big barrier.”
>
> – Farmers Market Owner

Challenges

Like other businesses that sell food, farmers market vendors must operate as small businesses, subject to strict Department of Health (DOH) and United States Department of Agriculture requirements and certifications. Processed foods must be prepared in certified kitchens, and many vendors do not have their own certified kitchens. Some farmers markets provide certified kitchens, such as the Hilo Farmers Market, and some are state-owned though most certified kitchens are privately-owned. Therefore, vendors must often lease space in a certified kitchen. In addition, vendors must have up-to-date GET licenses, have insurance, and pay fees to be a vendor at the farmers market. Therefore, with the many permit requirements and fees, it can be difficult for a vendor to make a profit.

Figure 26. Hilo Farmers Market (Source: Smartrippers, n.d.)

While some farmers markets are challenged with not having enough vendors, larger farmers markets experience management issues when there are many vendors. Competition among vendors has led to conflicts that require intervention from farmers market management. As such, some farmers markets provide liability insurance but still require each vendor to also carry their own insurance. Also, acquiring vendors offering diverse products can be challenging, which also contributes to competition among vendors. Farmers markets must also compete against imported foods that are so prevalent in Hawai‘i, where 85 to

95 percent of food for consumption is imported (Leung & Loke, 2008). Therefore, visitors contribute to the long-term sustainability of vendors at the farmers markets.

6.5.3.5 *Passive Experiences: Weddings & Conferences*

Opportunities

Farms are ideal locations for events such as conferences and weddings, where visitors may enjoy a farm setting though their experience may be passive. Conferences are permitted as annual events on agricultural lands, and some farms have hosted agricultural conferences on their farms. In 2019, 458,171 visitors came to Hawai‘i for meetings, conventions, and incentives (MCI) accounting for 4.5 percent of total air visitors to Hawai‘i. Most MCI visitors came from the western US (33.7%), the eastern US (30.3%), or Japan (18.6%). Of these visitors, most visited O‘ahu (61.1%) and Maui (28.1%), followed by the Island of Hawai‘i (17.1%) and Kaua‘i (9%). Most MCI visitors stayed in hotels (87.6%) and also spent more compared to visitors who traveled to Hawai‘i for pleasure. Though only 17.1 percent of MCI visitors chose Hawai‘i Island, developing this sector could attract high-yielding visitors, and farms are ideal venues offering diverse, outdoor experiences for attendees.

> “When we originally bought the property, there was no coffee here at all. We planted it ourselves and then it was pretty quickly after that, we realized the coffee could not pay our mortgage. We could not sustain ourselves on coffee alone. So, events [would] allow us to continue to farm coffee and also give us an outlet to sell it [our coffee]. We sell [coffee] at events, we sell it to our customers, we gift it to people. [Take] Napa.…They get booked out for private events probably 100 days or more a year [while] they are growing grapes, producing wine. They are a winery for real. That is what I [would like to be]. Coffee alone would not be profitable enough.”
>
> – Coffee Farmer

Wedding tourism, or those who travel to get married or for a honeymoon, has become popular globally in recent years and is estimated to continue growing due to increasing divorce rates and later-in-life marriages (Major et al., 2010). A large proportion of this market originates in the United States, Germany, Italy, France, or Scandinavia, and Hawai‘i is among the top destinations for these travelers (Major et al., 2010; Poon, 2009). In 2019, 99,097 (1%) of Hawai‘i’s visitors traveled to Hawai‘i to get married. However, this number does not include visitors who also traveled to Hawai‘i to attend a wedding; therefore, the number of visitors traveling for a wedding is underestimated. Of those traveling to get married, most (68.2%) visited O‘ahu and Maui (26.6%), followed by the Island of Hawai‘i (14.7%) and Kaua‘i (12.1%) (HTA, 2019).

Destination wedding events create and support jobs locally for wedding specialists including florists, caterers, photographers, videographers, and musicians. In contrast to domestic weddings where the wedding event happens on a single day, destination weddings bring wedding parties who take the opportunity to also take a vacation in Hawai‘i and may stay for a week or longer. Extended stays contribute to local hospitality and transportation businesses (Major et al., 2010). While many weddings take advantage of beach venues at hotels, particularly in O‘ahu and Maui, farm and ranch settings offering a mauka (upland) experience would diversify offerings for Hawai‘i’s wedding tourism industry and create a unique niche for weddings on Hawai‘i Island. Also, weddings can be held any day of the week at a farm, whereas most existing wedding venues are only open on weekends. Thus, destination weddings are an untapped market for tourism on Hawai‘i Island, and creating wedding venues at farm locations in rural areas away from residential areas may potentially be a win-win situation with reduced impacts on residential neighborhoods. Figures 27 and 28 show a wedding venue at Puakea Ranch.

> “To be zoned ag, to get the ag tax benefits, you just need to be performing ag things. You don’t need to be making any money on it. That is important because some farmers don’t make any money .and you can’t put the burden on them…because what if they can’t because of farming difficulties? That also then allows for people that have literally never sold anything and never intend to, to get by on ag land and get the ag tax breaks. It’s complicated.”
>
> – Coffee Farmer

> “If you have enough money that you [can] just buy a million-dollar property, put a house on it – [maybe] you’re retirees – you [don’t] even [need to] apply for a permit to do a bed and breakfast or a wedding. You would never even want to do that because you…have enough money to just be rich and live in your house. The only people [the agritourism policy] is hurting are the people who are trying to actually make it [work] with their ag[riculture] property. If they [the County] keep with these hard rules, what they are going to end up with is every single property is just going to be rich people who want a big yard. A 20-acre yard. The rules for…ag[riculture] lands are low. Just my banana trees alone and my chicken coop would be enough. I could just have that.”
>
> – Coffee Farmer

Challenges

The greatest challenge for passive experiences like conferences and wedding events on farms in Hawai‘i County is the legal restriction on these activities on agricultural lands, as stated in the agritourism ordinance, and as detailed in Chapter 5. Conferences can only be held as annual events, and weddings are explicitly not permitted within the areas zoned A, FA, IA, and RA. Similarly, catered events, parties, schools, or overnight accommodations are not permitted in these zones, except with a special use permit. Also, an agritourism activity can only occur between 8:00 AM and 6:00 PM. Similarly, farm-to-table dinner events are not allowed. All of these restrictions make it difficult to have conferences or weddings on a farm. As also detailed in Chapter 5, special permits may be sought for events like weddings, but the process is complex, lengthy, and expensive, making it difficult for many farmers to pursue.

Figure 27. A wedding at Puakea Ranch (Source: https://www.puakearanch.com/)

Figure 28. Wedding set-up on the ranch (Source: https://www.puakearanch.com/)

Figure 29. Annual Pana‘ewa Stampede (Source: A. Fa‘anunu)

Figure 30. Merrie Monarch Parade (Source: https://www.noelmorata.com)

6.5.3.6 *Outdoor Recreation & Adventure*

Opportunities

Cattle ranching began in Hawai‘i during the plantation era (Maly & Wilcox, 2000). Large cattle ranches characterized the rural landscape of Hawai‘i Island from Kohala to South Point, and paniolo (cowboy) culture emerged during this time. In 2020, there were 667 cattle ranches of all sizes in Hawai‘i (Griffith, 2020). On Hawai‘i Island, few large ranches remain, mostly in the districts of Kohala and Ka‘ū, with some in Kona. Notable ranches include Parker and Kahua in Kohala and Kuahiwi Ranch in Ka‘ū. Smaller, family-owned ranches occur throughout the island and keep the practices of paniolo culture alive. Many cattle farms and ranches showcase paniolo culture at regular rodeo events and also at the annual Merrie Monarch Festival, which are opportunities to share this aspect of Hawai‘i with residents and visitors (Figures 29 & 30).

Figure 31. Local keiki (kids) enjoy outdoor recreational activities (Source: A. Floro)

Figure 32. Petting zoo (Source: A. Floro)

Farms and ranches are ideal settings for recreation and adventure, and some sites on Hawai‘i Island offer a range of agritourism activities including: horseback, wagon, and ATV rides; petting zoos; nature walks; and zipline adventures. Ranches are a good fit for recreational activities as farm animals can be integrated into activities. Some ranches, such as Pa‘ani Ranch, serve as a fun venue for events like birthdays, graduations, or for family outings that ‘ohana (families) and children can enjoy (Figures 31 and 32). Ziplines and trails for nature walks may be added to increase the recreational offerings of farms and ranches. Some botanical gardens on the island feature these amenities.

Challenges

Ranching has many challenges. The practice requires many acres of land because each cow needs about an acre or more, depending on the quality of the grass (Figure 33). The cost to operate a ranch can be high due to property taxes, animal feed, and regular maintenance and upkeep like fencing. Though the price of locally grown beef ranges from $1.05 to over $2.00 per pound, some farmers make less than a dollar per pound (Yerton, 2021). Also, many local cattle ranchers have difficulty accessing slaughterhouses that return profits to farmers. Most ranchers in Hawai‘i export their beef, including four-month-old calves sent to feedlots in the Continental USA; before being slaughtered (Yerton, 2021). Stringent USDA regulations and the prevalence of middlemen who charge buyers significantly more than the farmers' wholesale price, challenge the financial sustainability of ranching in Hawai‘i. Therefore, agritourism offers alternative revenue streams to help ranchers be more financially secure.

Figure 33. Sunrise on Pa‘ani Ranch (Source: https://www.facebook.com/paaniranchatv/photos)

"In the cattle business, we need to have [a lot of] land – 1 acre per cow.…I have 100 heads of cattle. [If] you have about 70 cows, you are going to produce 70 calves at $400 [per animal or]…$28,000.… [You] spend for labor, feed, and all these other [costs] which comes down to $20,000. [This] is a low income for anybody....You [make] nothing. … [I] have a large acreage, [and I can] … capitalize on the land…by having ATVs, horseback rides, ziplines.…[Agritourism] can be 10 to 15 [times] more than what the cattle produces.

There is not a slaughterhouse that can… sell our [local beef and] return a profit because of USDA regulations…and guidelines you have to follow and comply with. It is ridiculous. They need to start making it easy for us ….We try to get a dollar a pound but we have been getting like 89 cents or less.

Some of the farms and ranches are… sending their cattle out to slaughterhouses and buyers like Tyson. All in the mainland. Because … [each cow is] recorded, you now go to a slaughterhouse that has exporting credentials and then your cattle go to China.…Foreign governments are willing to pay four to fifty dollars a pound.… Somebody is making a lot of money from the beef here. Our beef. The farmer is not getting that.…Somebody in the middle is making it and not us.…The middleman bought them from you…and made three times what he paid you.…America is known for supplying the world…[but] the farmers are not getting their money."

– Cattle Rancher

6.5.3.7 *Hospitality (Farm Stays)*

Opportunities

The first national law defining agritourism was passed in Italy in 1985, and the policy highlighted overnight accommodations as a means to diversify income sources for farms in rural areas (Lamie et al., 2021). Overnight accommodations on farms or farm stays are prevalent in different regions of the world, enabling visitors to have an overnight experience on a farm. Overnight accommodations on agricultural lands are not allowed on the island of Hawai‘i. However, a farm can pursue a special permit to allow farm stays on their agricultural properties. Although only a handful of farms have gone through the permitting process on Hawai‘i Island, many farms offer overnight accommodations without permits. Of farms offering farm stays, overnight accommodations accounted for 50 percent or more of the earnings of these farms. Therefore, farm stays have the potential to provide significant financial security for a farm in Hawai‘i.

Farm stays are central to a business model that supports economies of scope for small farmers. In addition to accommodation services, farm stays can provide alternative pathways for revenue generation by: 1) creating demand for farm products that can be bought by guests for their own consumption or through meals provided by the farm for guests; and 2) creating a more robust farm tour experience that allows visitors a deeper farm life experience in Hawai‘i. Whether the farm stay is the result of a farm tour, or the farm stay results in visitors participating in the farm’s tour, the extended stay at the farm creates opportunities for visitors to support other income-generating aspects of the farm. With more time to relax and enjoy the farm, visitors are able to have real and meaningful experiences. Farmers offering farm stays also enjoy interacting with and developing relationships with their visitors. The ability of small farms to venture into such entrepreneurial activities not only increases their financial security but also injects economic growth into rural communities.

Challenges

Land-use policies for agricultural lands vary by county, and Hawai‘i County’s policies are among the most conservative in the state. Overnight accommodations are not allowed in the county unless a special permit is obtained, which limits the ability of farmers to expand into entrepreneurial activities in hospitality. However, as described in Chapter 5, most small-scale farmers in Hawai‘i do not have the capacity to undergo these permit processes. As a result, many farmers carry out these activities anyway without the proper permits, which creates the potential for situations that endanger environmental and public safety.

> “A lot of farmers I know, they want to follow the law. They aren’t trying to be criminals. Breaking a zoning rule hardly makes someone a criminal. You want to be in compliance. You don’t want to invest all this money, time, and love into something that is going to get taken away because of a violation. Most people want to follow the rules [and] we need to make the rules follow-able. Right now, you cannot follow the rules and succeed.…We should be making it easier for farmers to make more money so they can follow all those other rules.”
>
> –Coffee Farmer

Therefore, there is a need to revise policies to enable small-scale farmers to engage in agritourism activities to support their financial security while also ensuring social and environmental well-being. However, a better understanding of the potential impacts of farm stays on economic, social, and environmental integrity locally is needed to inform decision-making at the policy level.

> "We don't really do it [farm stays] because as soon as you start inviting people onto your land, a farm is not an entirely safe place. You can fall and hurt yourself. Can you imagine bringing tourists in, or someone stays there, and they decide to go for a walk? There are liabilities.… We've got enough real problems with the crop and keeping our head above water. It could be a revenue stream, which appears to be how a farmer can exist."
>
> – Tea Farmer

6.6 Marketing & Promotion

Farms can promote their farm and farm products directly and indirectly through agritourism processes including: tours; retail stores on-site, at farmers markets, and on-line; and magazine articles on the farm and its products. For this reason, some farms offer free tours as a strategy to attract visitors. Digital technology has also made it easier for small-scale businesses to expand their marketing strategy at affordable costs. However, many farmers are not tech savvy and need training to in website design, tour scheduling; social media advertising, product development and pricing, packaging and labeling (Figure 34), and other important components of marketing.

> "[We] also get people who start buying online because of [agritourism]. [We] get magazines … coming and wanting to talk about it, then your business gets out there and people know about it where they wouldn't otherwise. I don't think it is just the tours. It is also having retail here."
>
> – Beekeeper

Figure 34. Value-added vanilla-honey (Source: A. Fa'anunu)

6.7 Cooperatives, Associations, & Food Hubs

Hawai‘i’s cacao industry is young, and most cacao growers, like the majority of all farmers on the island, run small-scale operations with less than ten acres. Even when production is efficient, a business can fail to make profits if production costs are too high due to input costs, high overhead costs, and exposure to agricultural risks (Fleming et al., 2009). Unless a cacao farmer considers vertical integration by expanding into value-added products such as chocolate as a final end-user product, it is easiest for a small farmer to sell beans to a buyer whether as pods, wet beans, or dry beans. A cacao study found that having a reliable, economically viable, and socially responsible buyer to whom farmers can sell their beans is critical for a sustainable cacao industry on Hawai‘i Island (Fleming et al., 2009). Various cacao associations have emerged to address this issue.

> “If you want to make money in cacao …as a cacao farmer that is selling processed dried beans, then you probably want to have at least 20 acres of cacao.…If you are selling chocolate bars to make a living, you need to go retail and you need to go really big. We knew we didn’t want to do that. We always wanted to be a boutique farm and do super high quality and unusual stuff … that other people aren’t able to do.”
>
> – Cacao Farmer

> “The Hawai‘i Tea Society had someone from USDA come talk about co-ops. One thing he said which was really interesting was: “Look around the room. Who here could you work with?” ….As I looked around the room I thought, these people are frightened, greedy, and I don’t like their approach to cooperation. I thought we couldn’t work with them and we have. We aren’t just tea farmers. We have two other farms growing tea the way we grow. They are bringing their leaves to us to process to sell.”
>
> – Tea Farmer

Others have noted that cooperatives and models of co-opetition may offer solutions to address Hawai‘i’s challenge of economies of scale (Azizi & Lincoln, 2021; Lincoln, 2020). Similarly, associations and cooperatives have developed for other crops such as coffee, tea, orchids, and breadfruit. Participants of the study who are intimately involved in the local cacao and tea industries indicated that while the co-op model sounds ideal, it can be difficult to operate a co-op and that good leadership is key for success. Mechanisms to support the growth of co-op models for agriculture in Hawai‘i, are needed. The Hawai‘i ‘Ulu Cooperative and Hawai‘i Farm Trails are highlighted here.

Hawai‘i ‘Ulu Cooperative

The Hawai‘i ‘Ulu (Breadfruit) Cooperative (HUC) is an example of an emerging co-op that has achieved much in a short time to pave the way for breadfruit in Hawai‘i. The Hawai‘i ‘Ulu Cooperative (HUC) was formed in 2016 to build a network of small-scale, diversified farms that grow breadfruit on Hawai‘i Island and to improve community access to ‘ulu, a highly nutritious traditional food crop that some consider to be a “super food” (D. Shapiro, personal communication, June 11, 2021). By working together, the co-op offers consistent, high-quality ‘ulu products that are delicious, local, healthy, accessible, and sustainable. The organization also buys breadfruit companion agroforest crops from small farmers, such as taro and sweet potato.

The HUC is committed to the revival of ‘ulu to strengthen Hawai‘i’s food security and support the value of mālama ‘āina (stewarding the land) by using environmentally responsible growing and production methods. Distributed throughout the island’s numerous microclimates, the organization has more than 100 member farms that grow at least six distinct breadfruit varieties. Thus, the HUC takes advantage of variable harvesting seasons to supply ‘ulu virtually year-round. The organization has created a market for small, individual ‘ulu farmers. With the motto, *Farmer owned, ‘āina grown – from our trees to your table*, the HUC has become a food hub that could potentially be a model agriculture-based co-operative for Hawai‘i Island.

Hawai‘i Farm Trails

Hawai‘i Farm Trails (HFT) is a newly formed, regenerative enterprise committed to providing users with the tools to connect to Hawai‘i’s agricultural landscape. The organization emerged from the development of the Hawai‘i Farm Trails mobile app that consists of a network of agritourism farms throughout the State of Hawai‘i. Two other platforms, Hawai‘i FarmStand and Project Kanu, have developed around the app. The organization believes that keeping farms in business is the key to improving local food security and is the basis for an island community’s resilience. Therefore, purchases on the organization’s website go back to assisting farmers through promotional and capacity-building programs (K. Mausio, personal communication, April 10, 2021). Hawai‘i Farm Trails and this study were funded by the same USDA grant to develop the capacity of Hawai‘i’s agritourism industry. Explore Hawai‘i Farms and Markets: The free mobile app connects visitors and residents with agriculture-related activities in Hawai‘i. Guests can explore farms and ranches through farm visits and tastings, farmers markets, and agricultural events. The app offers curated driving trails for those who want to explore a region for its agricultural attractions

Hawai‘i FarmStand: This online marketplace allows consumers to order value-added products crafted by farms from all over Hawai‘i, such as coffee, tea, chocolate, macadamia nuts, honey, and seasonings. The platform offers a gifting farm box program with options to choose virtual farm tour videos, which came about as a farm-to-your-table response to restricted travel during the pandemic.

Project Kanu – Food Trees for the Future

Project Kanu helps visitors and residents take responsibility for their own carbon-producing activities while paying it forward through the planting of food trees. Individuals or companies can sponsor farmers to grow food trees, starting with the high-yielding, nutritious ‘ulu (breadfruit).

Hawai‘i Farm Trails brings together farms across the State of Hawai‘i to leverage tourism to support local agriculture. The network of farms creates a more robust agritourism industry, while the mobile app supports each individual farm to become more visible to consumers through free marketing and capacity-building projects. HFT has the potential to be a hub providing a variety of different capacity-building services for agritourism farms in Hawai‘i. Funding to support projects through HFT would significantly contribute to building agritourism growth in Hawai‘i.

6.8 Summary and Recommendations

- Findings suggest that tourism, whether directly or indirectly, can increase the financial security of Hawai‘i Island farms. Most farms participating in the study reported that direct agritourism sales, or the sale of goods and services directly to visitors, accounted for more than half (50–80%) of farm earnings. A few farms participated in indirect agritourism sales through established, off-island markets, such as restaurants and hotels in O‘ahu and Maui. However, more data from a larger pool of agritourism farms are needed to better understand the financial contribution of agritourism to farm security.
- Crops that target the visitor industry, such as cacao-chocolate, are more likely to be susceptible to visitor industry fluctuations compared to crops that target local consumers, such as taro, breadfruit, and banana.
- Agritourism is a higher yielding activity than the sale of generic crops and some farmers make up to 15 times more from agritourism than from the sale of agricultural products. Agritourism enables new farms still waiting for crops to grow, farms with seasonal crops, and very small farms that cannot scale up due to size, to reach goals of financial security by shifting their orientation from production to service since the latter is easier to implement. If done correctly, a consistent agritourism schedule every week can enable farmers to meet their financial needs and have more time for farming.
- Agritourism enables Hawai‘i Island farmers to be more financially secure and address economies of scale and scope through increased farm sales from:
    - direct farmer-to-consumer sales;
    - diversification of farm products through value-added production; and
    - generation of multiple revenue streams.
- Agritourism can occur in different forms through various activities to create multiple revenue streams on a farm. Agritourism activities may include: farm tours; workshops; retail through gift stores, farm stands, and farmers markets; passive experiences on the farm like weddings and conferences; recreation and adventure including horseback and ATV rides, nature walks, and ziplines; and hospitality services such farm accommodations and farm-to-table dinner events. Diverse sources of income increase farm resilience or the ability to endure the many unpredictable variables affecting agriculture, such as disasters (natural and man-made), disease, pests, and climate.
- Agritourism enables farmers to sell their products directly to consumers at farmers markets, gift stores, farm stands, or on-line and increase profits by 100 percent. The distribution channel of farmer-to-consumer can be very short with no intermediaries involved so farmers can sell products at full value. Short distribution channels also reduce Hawai‘i’s carbon footprint.
- There are several barriers to direct farmer-to-consumer retail including:
    - **Value-added production capacity**: Some farmers sell their products to wholesalers at half price or less due to limited capacity to vertically integrate value-added production.
    - **Marketing capacity**: Marketing extends from product development to distribution and many farmers are not tech savvy, adequately trained in marketing functions or lack the staff to develop and manage marketing strategies that effectively communicate the value of farm commodities and reach target markets. E-commerce platforms have transformed how retailing occurs allowing consumers

to shop on their phones, eliminating the need for physical stores. Digital media have also enhanced marketing capabilities, giving farmers multiple ways of communicating with consumers, promoting their products, and distributing their products appropriately and efficiently. Technology enables farmers to expand farm sales beyond the farm and across international borders, however, trainings are needed to build farmer capacity in marketing on topics including website development; tour scheduling; social media advertising, product development and pricing, packaging, and other important components of marketing.

    - **Financial management capacity** is also necessary for maintaining retail activities efficiently and effectively, and maintaining accurate and transparent financial accounting. In addition to knowing how to operate accounting software (e.g., Quickbooks) and develop a consistent bookkeeping system, farmers must also be up-to-date on annual state and federal taxes, GET, annual business filings, and other requirements to be in good standing.

- Value-added products enable farmers to diversify their farm products by transforming farm inputs into new goods, services, or ideas and sold at higher prices than the cost of the inputs. Participating in value-added production not only expands the types of products the farm specializes in, but also expands the range of farm activities that can be shared with visitors through agritourism. Transforming generic crops into value-added products can become key components of a farm tour that enhance farm offerings. These processes also become opportunities to educate visitors about the connection between manufactured goods and their farm origins. Engaging in value-added production is also fun and fulfilling for some farmers who welcome the ability to pursue their passions.
    - The start-up cost for value-added production can be significant and often involves additional resources, skills, and requirements. Many processing activities around food production require a certified kitchen, equipment, new facilities that call for capital investments and compliance with food safety regulations. Additionally, artisan skills, such as making chocolate, tea, and honey, take years of training and experience to develop.
- Farm tours can be educational, transformative, and meaningful providing opportunities to educate visitors not only about the farm, its various activities, and agriculture, but also to discuss important global and local issues such as: food security; climate change; politics; Hawaiian history and culture; and behaviors that nurture a more just and sustainable world. Tours vary in length, cost, and level of visitor participation in farm activities. Some tours incorporate regenerative practices such as tree plantings, where visitors plant native species during a tour - an opportunity for visitors to reciprocate and give back to Hawai‘i as well as sequester carbon to offset their carbon footprint.
    - Creating real, meaningful, and transformative tours takes time and also requires well-trained personnel who are passionate and knowledgeable. Farmers may need additional training to create quality tours and assistance in determining the ideal price point for the tours. The busy schedules of farmers may limit their ability to conduct tours so additional tour guides who are well trained to deliver quality experiences are needed to make agritourism a mainstay of the farm.
    - Approximately less than three percent of all farms on Hawai‘i Island engage in agritourism directly through tours. Most farmers do not engage with visitors because they either do not have the capacity or are not interested in hosting.

However, tourism intermediaries and tour guides could fill this gap by conducting tours on farms for a fee. Issues relating to insurance and liability, safety, and farmer compensation will need to be addressed, so careful planning is needed.

- Virtual tours are still in their infancy but immersive technology could become a significant part of tourism in the future to: reduce global carbon emissions, reduce the spread of invasive species and diseases like fire ants and Rapid ʻŌhiʻa Death (ROD) and reach audiences who are unable to travel due to physical or financial constraints. However, the technology for virtual immersive reality is expensive and access to the technology is critical for virtual tourism to take off.
- Workshops are opportunities for farmers to share their knowledge and expertise by teaching others in a group setting for a fee. Many Hawaiʻi Island farmers support education and waive the fee for school groups. Some farmers help other farmers, especially new farmers, to learn farming techniques. However, use permits, availability of workers, and how to price workshop fees, are challenges for some farmers wanting to implement workshops.
- Retail is another strategy for engaging visitors on a farm and products may include agricultural produce grown on the farm, value-added products, and promotional products using the farm's logo and brand. Gift stores and farm stands enable farmers to engage in retail on the farm and where visitors shop for souvenirs at the end of a tour. At the gift store, visitors may be encouraged to buy products well after the farm tour by signing up for newsletters, a subscription service, or be directed to the farm's on-line store. Challenges for retail include use and food safety permits, building costs, and sufficient inventory.
- Farmers markets are direct farmer-to-consumer markets that are not necessarily located on the farm and there were approximately 24 farmers markets on Hawaiʻi Island in 2020. Farmers markets represent alternatives to industrial systems of food production and distribution. Farmers markets offer a consistent market for local farmers to sell their produce and farmers receive a 100 percent profit compared to selling produce to wholesalers. While farmers markets generally attract many visitors, they also serve local residents and some offer EBT services.
    - Farmers markets have diverse forms of business ownership; some are privately-owned, state-owned or operate as non-profit organizations. Makuʻu Farmers Market goes beyond providing access to local food, to also serving as a resilience hub for local communities.
    - Farmers market vendors who sell processed foods are subject to strict DOH and USDA requirements where food must be prepared in certified kitchens. Many vendors do not own certified kitchens and must lease space in a certified kitchen. Other costs including GET, insurance, and vendor fees for market use make it difficult to generate a profit.
    - Some farmers markets are challenged with not having enough vendors while larger farmers markets experience management issues from too many vendors. Competition among vendors may lead to conflict so some farmers markets may provide liability insurance but still require each vendor to carry their own insurance. Farmers markets must also compete against imported foods that are so prevalent

in Hawai‘i. Therefore, visitors contribute to the long-term sustainability of vendors at the farmers markets.

- Farms are ideal locations for conference and wedding events where visitors may passively enjoy a farm setting.
    - Conferences are permitted as annual events on agricultural lands, and some Hawai‘i Island farms have hosted agricultural conferences on their farms. Though only 17.1 percent of visitors who traveled to Hawai‘i for meetings and conventions chose Hawai‘i Island, developing this sector in Hawai‘i County could attract high-yielding visitors. Farms are ideal venues offering diverse, outdoor experiences for attendees.
    - Hawai‘i is a top destination for wedding tourism and the industry is expected to grow; however only 14.7 percent of all wedding tourists to Hawai‘i chose Hawai‘i island in 2019.
    - Destination wedding events create and support jobs locally for wedding specialists including florists, caterers, photographers, videographers, and musicians. Domestic weddings usually occur on a single day whereas destination weddings bring wedding parties who may also vacation in Hawai‘i and stay for a week or longer thereby supporting local hospitality and transportation businesses.
    - Most Hawai‘i weddings in O‘ahu and Maui take advantage of beach venues at hotels but farm and ranch settings experiences would diversify Hawai‘i’s wedding tourism industry. Destination weddings are an untapped market for tourism on Hawai‘i Island and wedding venues at farm locations away from residential areas may offer ideal venues with reduced neighborhood impacts.
    - The greatest challenge for passive experiences like conferences and wedding events on farms in Hawai‘i County is that conferences can only be held as annual events, and weddings are explicitly not permitted within the areas zoned A, FA, IA, and RA. Similarly, catered events, parties, schools, or overnight accommodations are not permitted in these zones, except with a special use permit. Also, agritourism activities can only occur between 8:00 AM and 6:00 PM so farm-to-table dinner events are not allowed. Special permits may be sought for weddings, but the process is complex, lengthy, and expensive, making it difficult for many farmers to pursue.
- Farms and ranches are ideal settings for recreation and adventure, and some sites on Hawai‘i Island offer a range of agritourism activities including: horseback, wagon, and ATV rides; petting zoos; nature walks; and zipline adventures. Some ranches, such as Pa‘ani Ranch, are fun venues for birthdays, graduations, or for family outings that ‘ohana and children can enjoy. Smaller, family-owned ranches occur throughout the island and keep the practices of paniolo culture alive. Ranching has many challenges including difficulty accessing slaughterhouses that return profits to farmers, as well as stringent regulations and middlemen who make it challenging to earn a profit.
- The first national law defining agritourism was passed in Italy in 1985, and the policy highlighted overnight accommodations to diversify income sources for farms in rural areas. However, overnight accommodations for 21 days or less on agricultural lands are not allowed on the island of Hawai‘i though a farm can pursue farm stays through a special

permit. Only a handful of farms have permits on Hawai‘i Island suggesting that many farms offer overnight accommodations illegally.
    - Of farms offering farm stays, overnight accommodations accounted for 50 percent or more of the earnings of these farms suggesting that farm stays might provide significant financial security for a farm in Hawai‘i.
    - Farm stays support economies of scope for small farmers by providing alternative pathways for revenue generation including: 1) creating demand for farm products through meals provided by the farm for guests; and 2) creating a robust farm tour experience that allows visitors a deeper farm life experience in Hawai‘i. Farmers offering farm stays also enjoy interacting with and developing relationships with their visitors.
- Time is a challenge for Hawai‘i Island farmers who must balance the agricultural upkeep of the farm with managing value-added production. Farmers work long hours, with most reporting working more than 40 hours per week. For some, time constraints limit their ability to expand value-added endeavors even though the endeavor could be lucrative in the long-term.
- Cooperatives and models of co-opetition may offer solutions to address Hawai‘i’s challenge of economies of scale. Participants of the study who are intimately involved in the local cacao and tea industries indicated that while the co-op model sounds ideal, it can be difficult to operate a co-op. Therefore, good leadership, as well as more education initiatives, such as short courses or trainings about cooperatives, are needed.

Recommendations

1. **Increase product diversification and economies of scope.**
    i. Make it easier for farmers to engage in value-added production by:
        - Statewide investments in building infrastructure, facilities, and technology for value-added production, such as commercial kitchens, dehydrators, and mills, are limited and expensive on Hawai‘i Island; and
        - Offering farmer trainings in operations management for effective and efficient packaging, storing and inventory, and distribution.
    ii. Conduct pilot research projects to better understand some forms of agritourism that create economies of scope and the impact of these activities on land use and surrounding communities.

2. **Build the capacity of networks, associations, food hubs, and cooperatives, to address economies of scale.**
    i. Encourage and support the development of new networks, associations, food hubs, and cooperative models for emerging crops.
    ii. Learn from the experience of trailblazing entities, such as the Hawai‘i ‘Ulu Cooperative and Hawai‘i Farm Trails.

3. **Support farmer entrepreneurship.**
    i. Provide entrepreneurship-training for farmers in the functions of business, particularly in marketing and financial management.
        - Hawai‘i Farm Trails plays an important role in marketing agritourism operations, especially for farms that have limited staff and capacity to market themselves; therefore, the entity should be supported to continue marketing farmers in its network.
    ii. Develop a business resource center that is accessible to existing and potential agritourism farmers through student internships, as well as on-line executive education and courses at the UHH's CoBE. Certifications awarded at course completion could aid farmers to build their resumes to further develop their organizational capacity for acquiring grants and other benefits.
    iii. Develop stakeholder collaborations. Agritourism stakeholders should work together to provide entrepreneurial training for farmers. Funding support from all levels of government to implement these tasks is needed.
    iv. Encourage policies that support farmer entrepreneurship. Some existing provisions of the agritourism policy for Hawai‘i County discourage farmer entrepreneurship. These provisions should be revised to encourage and support farmer entrepreneurship so that farmers can be financially secure in the long-term. **See Section 5.6, Recommendation 2 in Chapter 5.**

4. **Create quality in-person and virtual tours that are authentic, meaningful, and transformative.**
    i. Develop educational materials on how to develop quality tours.
    ii. Educate and train existing and potential tour guides by tapping into the Sustainable Tourism Certificate program at the UHH's CoBE and to provide tour-guide training for students through internships with local businesses. Engaging young, bright, and passionate university students in tour-guiding experiences might provide students with skills to start their own tour operation after graduation.
    iii. Explore virtual tours by supporting farmer access to technology and providing trainings for how to develop virtual tours.
    iv. Develop a mechanism for bringing farmers and tourism intermediaries together to deliver tours on non-agritourism farms.

5. **Build the capacity of farmers markets.**
    i. Assist farmers market vendors to be successful through vendor workshops to become successful entrepreneurs .
    ii. Assist individual farmers market entities to provide adequate infrastructure and facilities including commercial kitchens, permanent tent structures, roads, and parking areas, though government assistance.
    iii. Learn from the experience of successful farmers market models such as Maku‘u Farmers Market in Puna, a financially self-sustaining organization.

6. **Explore the potential of passive agritourism experiences such as weddings and conferences.**
    i. Conduct pilot research studies to explore the potential of weddings and conferences on farms and further studies should be conducted to understand the potential impact of passive agritourism experiences on land use and surrounding communities.

CHAPTER 7
Community Resilience & Social Well-being

[Depicted on Chapter 7 section cover are participants in a workshop hosted by the Pana‘ewa Farmers Market in Hilo]
Photo Credit: J. Rawlins

7 COMMUNITY RESILIENCE & SOCIAL WELL-BEING

7.1 Opportunities

7.1.1 Improved Amenities for Local Communities

> "Where we are is very rural. There's not much there. People in the neighborhood enjoy having a place to come to and bring their friends and their visitors. People like supporting the local producers."
>
> – Beekeeper

Agritourism is not just for visitors, but for residents as well. The amenities and experiences that Hawai'i Island agritourism farmers provide are also regularly accessed and enjoyed by local communities, including families, children, elders, schools, and community groups. Hawai'i Island is characterized by rural communities with fewer built attractions compared to urban Honolulu. Thus, agritourism farms, farmers markets, agriculture-based festivals and events, outdoor recreation opportunities, and locally sourced restaurants in a farm setting become important places offering diverse activities that local residents can visit and experience with friends and family. Agritourism farms offer unique experiences that are ideal for family outings and also for milestone celebrations such as graduations and birthdays. These include but are not limited to: petting zoos; pony and horseback rides; chocolate and coffee tastings; classes teaching artisan skills such as making chocolate, soap, or tea; and zip lines or nature walks in botanical garden settings.

> "[Our farm is] very much a community farm. We have a lot of family, work-trader[s] and friend[s] and renter[s] so we're trying to also [build] a healthy… neighborhood where there's kids, there's older people, there's limited income and we're all here for each other."
>
> – Permaculture Farmer

There are also opportunities to host more passive experiences in farm or natural settings, such as picnics, parties, intimate gatherings, and weddings. Local residents also need wedding venues, and farm wedding venues expand their choices. However, as discussed in Chapter 5, only a few farms on Hawai'i Island are permitted to hold weddings, and events after 6:00 PM are not allowed on agricultural lands in Hawai'i Island (see Section 5.5.1.3), which also limits the ability of farms to support hospitality services.

7.1.2 Access to Locally Grown Food

Farmers markets are important alternative sources of local produce, including produce that may not be offered at conventional stores. Many residents prefer to shop at the local farmers markets on a regular basis to access locally grown produce and also to support local farmers. Hawai'i Island has about 24 farmers markets around the island, and each offers a unique experience. Some farmers markets, such as Maku'u Farmers Market in

Figure 35. 'Awa propagation workshop at the Pana'ewa Farmers Market (Source: J. Rawlins)

Puna and the Pana‘ewa Farmers Market in Hilo, also serve as resilience hubs that offer a number of different services, aimed at building the capacity of local communities and in particular, Native Hawaiians. These markets provide workshops and other services that teach skills and enable ‘ohana (families), kūpuna (elders), and keiki (children) to connect to the land and to each other (Figure 35). Thus, agritourism in this form is an important capacity-building service for many communities.

Some agritourism farms also provide Community Supported Agriculture (CSA) services, a concept that has emerged in recent years where local residents order farm products directly from farmers on a regular basis. The CSA component of a farm caters to local communities and not necessarily to the visitor industry, which is a way for agritourism farms to continue to serve local communities. In 2020, many CSAs emerged on Hawai‘i island, though not all of them were agritourism operations. The COVID-19 pandemic led to the development of CSAs to provide farm boxes of local produce to local residents.

7.1.3 Local Pride

Residents can also take visiting family and friends (VFRs) to visit farms, farmers markets, and festivals and events surrounding agriculture. During these occasions, residents often act as tour guides and ambassadors for their communities, which keeps residents educated about their home and connected to their special places. These processes may nurture a sense of pride among residents about their island and perhaps develop a deeper understanding of the value created by agritourism spaces for Hawai‘i. When agritourism can offer meaningful experiences for residents to enjoy with VFRs, it provides opportunities to develop positive engagement of residents with tourists and potentially increase resident satisfaction with the industry. Furthermore, infrastructure improvements to support agritourism operations, including improved roads, parking spaces, and access to utilities, can also benefit local communities.

7.1.4 Domestic Tourism & Hospitality Services

Domestic tourism has often taken a backseat to international tourism in Hawai‘i. However, domestic tourism gives rise to the “staycation” culture that is common on Hawai‘i Island during the school holidays and the off-peak tourism season. During this time, local families often take advantage of discounted kama‘āina (local resident) rates at local hotels and support local jobs by filling empty hotel rooms. It is common for residents from the eastern side of the island, which has fewer white, sandy beaches and a cooler, rainier climate, to staycation at hotels along the Kona and Kohala coasts. Families often get away for a few days of sun and beach, making such occasions a common experience for Hawai‘i Island youth. Farm stays could diversify the island’s staycation experience offerings with more rural and mauka (mountain) experiences for local families. Farm stays may appeal to residents on the Kona side of the island, who may appreciate something different than the typical beach experience.

The eastern side of the island generally experiences less tourism compared to the western side of the island. In 2019, approximately 80.9 percent of visitors to Hawai‘i Island visited Kona (HTA, 2019). This distribution of tourism is likely due in part to limited hospitality infrastructure on the eastern side. Farm stays in the eastern regions of the island could increase the robustness of the domestic tourism offerings of the island. By providing accommodations in farm settings, agritourism can contribute to maintaining the rural sense of place, unlike the massive resort

developments that characterize the Kona and Kohala coast. Farm stays are hospitality services that may connect local residents with nature and agriculture.

> "I do a lot of school groups, kupunas, different things that the groups can come [and do]. It gives them something to do and learn." –Beekeeper

Short-term vacation rentals on Hawai'i Island have received close scrutiny with the recent passing of a short-term vacation rental policy (Bill 108). However, farm stays are unique and distinctly different from typical short-term vacation rentals in that the experience is on a farm rather than a residential area, and it can contribute significantly to the financial security of rural residents. However, to prevent rampant development and urbanization of farmlands from hospitality activities, further studies are warranted to better understand how farm stays could be incorporated as core activities of local farms in appropriate and sustainable ways. Learning from the experiences on other islands like Maui, where hospitality services are permitted on farms, may provide insights into how overnight accommodations impact surrounding communities and land use.

7.1.5 Agritourism as a Medium for Education

> "The main goal would just be the education of where everyone's coffee comes from.…So many people drink coffee every day, every morning, sometimes in the afternoon and not know where [it] is from, how it is processed, the difference between medium roast, medium dark. Stuff like that." –Coffee Farmer

Agritourism offers significant potential to build community capacity through education. All participating farmers in this study supported education, and many actively and consistently hosted local schools, families, and kūpuna. Many farmers feel a sense of responsibility to give back in this way, and often host education programs with local schools at no charge. Farm visits provide place-based learning experiences that enable students, from kindergarten to the college level, to experience farm life and stewardship practices that may inspire youth to become interested in the natural environment, agriculture, and science. Experiences at local farms enable students to learn directly from farmers through "doing." Visiting farms is exciting for many students, especially if the experience is hands-on and students become actively involved in farm activities.

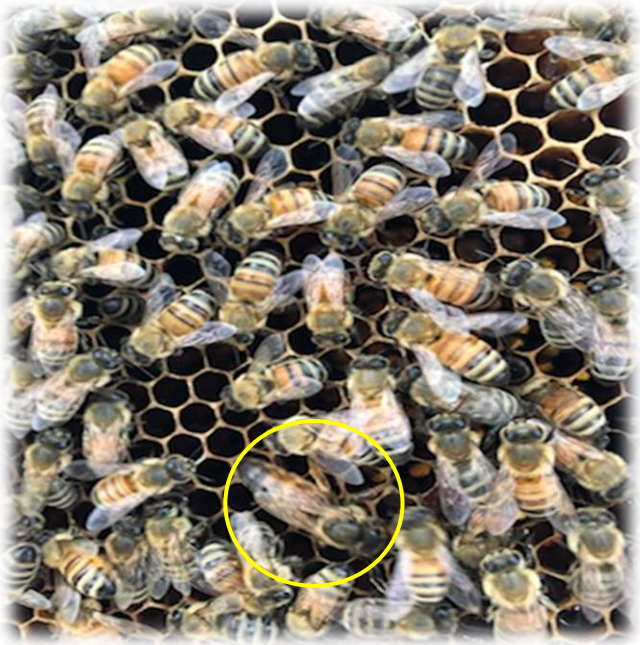

Figure 36. An observation hive with the colony's queen bee circled (Source: A. Floro)

For many agritourism farmers, education is a key component of sharing what the farm does with visitors and residents. Education is particularly important for farms with new and emerging crops, where consumers must be educated about the product. A beekeeper shared that when she first started making honey, she would attend the farmers

markets every weekend to educate the general public about honey and introduce them to its producer: the bees. A bee colony can be transported in an observation hive from the farm to a market stall (Figure 36. For consumers, seeing what a colony looks like and differentiating between the visibly larger queen bee and her workers can be a captivating experience.

Value-added products that consumers can experience are important in engaging their interest. For example, the ability to taste honey products heightens the senses while learning about the incredible story of how honey is produced by bee colonies as part of their lifecycle. Storytelling is an effective way of conveying meaning, and understanding the story behind honey creates value for the products that small farmers produce and for the important work that farmers do in food production. Farming is not easy, and many consumers do not understand the extent of work involved to produce the food sold at the grocery store.

Agritourism is an opportunity to also educate and raise awareness about important ecological issues. For example, bees provide the important ecosystem service of pollinating crops to feed the world, globally. However, some species of bees are threatened by extinction due to habitat loss, disease, and exposure to pesticides from unsustainable farming practices (Panziera et al., 2022). Therefore, when consumers are aware of these issues, practicing organic and regenerative farming adds value to the products and offers a comparative advantage for small farm operations. Many participants of the study specialize and invest in sustainable practices such as agroforestry, permaculture, and the use of organic fertilizers.

However, organic farming is often more labor intensive and more expensive for small farms. Certain agritourism operations, like orchid nurseries, consume a significant amount of energy, use a lot of water, and use inorganic nutrients. Environmentally friendly solutions can be implemented to mitigate these practices, such as shifting to the use of solar energy and recycled water. Sustainable agricultural practices not only set local produce apart from cheaper imported foods, but enable small farmers to add value to their tours by teaching visitors about such practices and to become ambassadors for change. Therefore, incentive programs such as tax breaks and subsidies could encourage more farmers to integrate sustainable farming methods into their practices.

Through agritourism and regular interaction with the public, farmers become important representatives of the farming community. Agritourism serves as an education platform to raise awareness about sustainable agricultural

> “We want to do education. We want to take these two decades of creating a tea forest and teach people.”
>
> –Tea Farmer

> “I just did it [agritourism] as a way of educating people about honey. I think a lot of people [don’t] understand what honey [i]s. In America, for years, the industry … just packaged it in a squeeze bottle called honey. It was truly just a sweet filler. Nobody understood the distinction between the queen, the food flowers, the flavors that honey [has]. That is why I like doing the markets. This is a way of … letting people know what it takes. The bees, how amazing creatures they are. It is … promoting what you do and having people understand what goes into it.”
>
> –Beekeeper

practices. Therefore, investing in training programs aimed at farmer education is key to producing farmers who are well-educated about a range of sustainable and regenerative practices. Furthermore, farmers who integrate these practices on their farms can teach workshops that train other farmers to consider the long-term impacts of farming practices, thus leveraging farmer experience while building relationships and networks among farmers.

7.2 Challenges

7.2.1 Multinational Food Corporations Devalue Local Food

External forces undermine the true value of locally produced food. In Hawai‘i, 85 percent of all food for consumption is imported (Loke & Leung, 2013). According to some farmers, large, multinational food corporations like Walmart sell alternative, imported food products cheaply, pushing local farmers out of business. For example, a small farmer must sell a dozen locally produced organic eggs at twice the cost of imported eggs in order to cover costs and make a profit. Therefore, education plays an important role in raising awareness among consumers about the true value of locally grown foods and the importance of consumer choices in supporting local farmers to keep local agriculture alive. A local beekeeper hopes that the education she provides shifts consumer perceptions that honey is nothing more than a sweet filler in a plastic bottle when they come to appreciate honey bees and their important role in pollinating food crops globally. Experiencing products first-hand at a farm and interacting with a farmer through agritourism is an opportunity for the consumer to be transported into a world of learning about where food comes from and how it is produced.

> “I hear from a lot of farmers, “It’s so hard to find labor.” That’s not true. It is hard to find labor at the rate that they can afford to pay. I understand why they have to pay at that rate because you cannot pay a lot if you aren’t making a lot. … The minimum wage is not even relevant to our business at all in my opinion. People ask me, “With the minimum wage hikes, if we went to a $15.00 minimum wage in Hawai‘i, would that affect you?” It wouldn’t. Every single person [we hire] makes over $15 an hour. That doesn’t affect us at all. It shouldn’t because we’re able to make that revenue. For a lot of farmers, I don’t think they really feel like they have the option. … I think a lot of it is age dependent.”
>
> –Coffee Farmer

> “We cannot find people that really want to work and feel like it is worth making a career. … When you look [at the] census, there is not an occupation [for] farmer. No farmer added to the list. … At least three times a year, I get a thick questionnaire from the government asking me about farming. I don’t have time for a government that doesn’t even acknowledge farmers then expects us to fill out three forms a year about farming.”
>
> – Tea Farmer

7.2.2 Lack of Labor in Farming

Caring for the land also means caring for the people working the land. It is difficult to make money in farming but most Hawai‘i farmers value farming for the lifestyle. However, labor was identified by participants as one of the greatest challenges farmers face in Hawai‘i. In 2017, about 34 percent of farmers in Hawai‘i County

> “We made personal decisions in the beginning to do things pono [in the right way]. That meant that even when we weren’t making money, we were paying our workers as much as we could.”

earned less than $2,500 from the sale of agricultural products (Figure 8). Most Hawai‘i Island farmers surveyed (77%) in 2017 earned less than $25,000 and only 13 percent of farmers earned more than $50,000 (Figure 8). These data suggest that it is difficult to earn a living from farming on the island of Hawai‘i.

Farmer perspectives and experience on the topic of labor varied among participating farmers. While most farmers indicated that labor costs are the greatest barrier to farm operations, others explained that the challenge for many farm owners is finding laborers willing to work for low wages. Also, good workers are difficult to find. For some products, such as coffee, seasonal workers are needed annually to harvest coffee cherry. Several farmers explained that the key to finding good workers is to pay them well and treat them well. For example, a participating farm pays its employees at least $20 per hour.

Another farm provides worker housing, which required an initial investment to obtain the permits and build the structures. However, the ability to provide good wages and amenities such as employee housing is dependent on the farm's earned revenues, and because most farms earn less than $25,000 per year, the goal of offering good wages and amenities for employees is difficult to achieve for many farms. Therefore, agritourism offers opportunities to increase farm earnings that could have multiplier effects in this way.

> "One of the hardest things we have found in farming, is there is no status in farming. … I think agritourism is about sharing the stories of farmers to increase the status of farming in our world." – Tea Farmer

Another challenge for farmers that is related to labor is that farming as a practice has low status in western society. According to the farmer quoted above, for instance, the US Census does not list farming as an occupation, which the farmer sees as an indication that the government does not recognize farming as a legitimate career.

> "What we really believe about farming is the first-generation farmer gets the land and gets the crop, the second generation on the same farm is the one who is going to make money." – Tea Farmer

7.2.3 Intergenerational Knowledge Transfer

The perpetuation of agriculture and the farming lifestyle is important for Hawai‘i Island farmers. Many farmers hope that their children will carry on the family business and continue to pursue the goals and vision of the farm. Some believe that financial success in farming takes time and occurs after several generations. One farmer explained that the first-generation farmer is the pioneer, the one who gets the operation started, such as by purchasing the land and planting the initial crops, and it is only the second generation, who inherits the land, who will reap the financial benefits over time. Several farmers emphasized that certain trees and crops take a long time to mature and may even span several generations. Therefore, success in farming can be viewed as a long-term investment. However, farmers worry that the youth are not interested in farming. Some feel that their children are not interested in farming because they have grown up seeing their parents struggle to make a living.

Thus, children tend to grow up and pursue other livelihoods that are easier and more profitable for themselves. Some farmers believe, through their own experiences as parents, that to engage children in farming long-term, children must be exposed to farming at an early age (Figure 37). Also important is that farming be experienced and seen by children as an enjoyable and fun lifestyle rather than a chore. Furthermore, a farmer believed that allowing children to grow up with the freedom to choose their livelihood rather than feeling forced into the family business by their parents might be a more successful approach.

There is optimism that more youth will become interested in farming with new waves of environmental consciousness and awareness about the value of farming and food security for survival. A long-time farmer of 40 years shared that he has seen a shift in how society views farming, from being considered a low-paying industry dominated by migrant workers to becoming cool. He believes that the locally grown food movement and more awareness of the importance and value of farmers to society are changing perceptions about farming to be more positive. While this trend is promising, many farmers stressed the importance for farmers to be successful entrepreneurs. Children need successful models demonstrating that farming can be profitable and that a good life can be had in farming. These farmers' views support the need to review and reconsider existing agritourism policies that restrict the amount of money that farmers can earn from agritourism, so that such policies can be revised to encourage farmer entrepreneurship and financial success.

Figure 37. Keiki planting breadfruit (Source: A. Fa'anunu

"For parents that are farming, not too many of the kids want to farm [or] take over … because they see it as hard work. I think if you could make it look like more of a lifestyle and you like the lifestyle, that's rewarding. [That's] different."

–Banana Farmer

"You have to think more long-term. Longer, for it to work. If you think too short-term, it will be hard to reach your goals."

–Cacao Farmer

"It is changing now. Now it is cool to be a farmer. It's chang[ing]. Now people understand the value of the farm community.…[However,] the local kids aren't taught that farming is cool or profitable…how come they don't have a farm program to help educate the kids on farming? The Hawaiian roots is farming."

– Cacao Farmer

"My children…they went to college on the mainland and they have not come back.…I think it was because they saw how hard it was. At the beginning, before we started the value-added, it was just a struggle all the time. I think they just look at that like why would we want to do that. Be stressed and broke."

– Beekeeper

7.2.1 Minority Representation & Equity

The total number of agritourism operations (n = 106) identified in this study accounts for less than three percent of all farms on Hawai‘i Island (n = 4,250). While this percentage may not represent all agritourism operations on the island, it suggests that most farmers on the island are not participating in agritourism. The majority of farmers who participated in this study were at least 60 years of age and older, which is consistent with the average farmer age of 60.1 in Hawai‘i. In 2017, only 8 percent of all farmers in the State of Hawai‘i were Native Hawaiian or Pacific Islander. In 2012, women farmers accounted for 30 percent of farmers in the USA (USDA, 2012). The extent to which young people, ethnic minorities and women participate in agritourism on Hawai‘i Island is unclear, and a larger study sample from across the state is needed to understand farmer demographics. However, because most agritourism farms are family farms, the potential for women farmers to participate in agritourism is high.

> “How I would love to encourage women particularly to farm, especially on this island. … Nothing made me as strong as farming. As a woman, that is a great thing to feel strong. Now my friends who are the same age as I am, they have a hard time carrying their own suitcase. I can. It is almost like a side benefit I didn’t know was going to happen.”
>
> – Tea Farmer

> “Some farmers … don’t talk much. They should not be doing agritourism. They should keep their head down and do what they are doing. If you can’t involve education in agritourism, then I personally feel you shouldn’t even be doing it. In that case, you are kind of ripping off the visitor. If you are a quiet farmer that doesn’t have much to say … then why in god’s name are you inviting people? We are inviting people because we want to share the story.”
>
> – Tea Farmer

Agritourism involves hosting visitors, which can require many resources and skills that conventional farmers may lack. Financial resources to afford start-up costs and obtain agritourism permits are needed, as well as a set of skills for hosting. The financial requirement alone is a barrier for most farmers. In addition, many farmers have no interest in hosting visitors and only want to farm. To be a sustainable form of tourism, agritourism must be accessible to groups who are underrepresented in farming, as well as to farmer populations who are currently underrepresented in agritourism. Therefore, all measures to improve Hawai‘i Island’s conditions for agritourism must pay attention to equity and representation. In addition, creative collaborations between different sectors of tourism could create new opportunities for agritourism to become more diverse, such as the collaboration between tour operators and conventional farmers suggested in Section 6.5.3.1.

7.3 Summary and Recommendations

- Agritourism offers many benefits for local residents including:
    - **Access to amenities and infrastructure**: Local communities regularly access and enjoy agritourism amenities and infrastructure, and agritourism farms offer unique experiences that are ideal for family outings and milestone celebrations, such as graduations and birthdays. Local residents also seek venues for passive experiences like picnics, parties, intimate gatherings, and weddings; however, current policies place many limits on the ability of farms to make these amenities available to the community.
    - **Access to local food and capacity-building services**: Many residents prefer to shop at local farmers markets regularly to access locally grown produce and support local farmers. Some farmers markets also serve as resilience hubs, offering numerous community capacity services that connect people to the land and to each other. Agritourism in this form offers important services for many communities, but is challenged by competition from conventional supermarkets.
    - **Community Supported Agriculture (CSA)**: CSAs provide farm boxes of local produce to residents. Some agritourism farms also provide CSA services, and many new CSAs emerged on Hawai‘i Island after the COVID-19 pandemic began.
    - **Sense of pride**: Agritourism can nurture a sense of pride and appreciation among residents about their island and the value created by local agricultural activities.
    - **Domestic tourism**: Hawai‘i Island has a “staycation” culture during the school holidays and off-peak tourism season where local families leverage discounted kama‘āina (local resident) rates at local hotels for a few days of sun and beach on the Kona and Kohala coasts. Farm stays could support and diversify the island’s staycation options, and offer rural and mauka (mountain) experiences.
    - **Sustainable tourism development**: Hawai‘i Island has a skewed distribution of tourism, with many more visitors to West Hawai‘i (80.9%) than to East Hawai‘i (19.1%), likely due in part to limited hospitality infrastructure on the east side. Farm stays could help even out this distribution and contribute to the financial security of small farms that support local agriculture and maintain the sense of place of rural communities. Therefore, farm stays represent sustainable development that is unique and distinct from typical short-term vacation rentals. However, further research is needed to understand how farm stays could become core farm activities without leading to rampant development and negative environmental impacts.
    - **A medium for education**: Education is a key component of sharing what a farm does with visitors and residents, especially for farms with new and emerging crops, where consumers must be educated about new products. Through education, agritourism also serves as a medium to build community capacity and raise awareness about important ecological issues, such as climate change and the value of sustainable farming methods. Furthermore, value-added products that consumers can experience are important for building interest. For example,

visitors' senses can be engaged by tasting honey products while learning about the incredible story of how honey is produced by bee colonies.

        - All participating farmers in this study supported education, and many actively and consistently host local schools, families, and kūpuna. Many farmers feel a sense of responsibility to give back through education and often host education programs with local schools at no charge. Farm visits provide place-based learning experiences that enable students, from kindergarten to the college level, to experience farm life and stewardship practices that may inspire youth to become interested in the natural environment, agriculture, and science.
    - **Agritourism farmers as sustainability advocates**: Organic farming is often more labor intensive and more expensive for small farms; however, many participants of the study specialize and invest in sustainable practices such as agroforestry, permaculture, and the use of organic fertilizers. Sustainable agricultural practices not only set local produce apart from cheaper imported foods, but enable small farmers to add value to their tours by teaching visitors about such practices and to become ambassadors for change. Programs to recognize and reward farmers for their contribution to society should be implemented and encouraged, such as tax credits, subsidies, and certificate programs for regenerative agricultural practices. The Hawai'i Organic Food Production tax credit allows organic farmers to claim up to $50,000 in tax credit but farmers must adhere to the USDA organic certification process requirements and many farmers do not know of this benefit; therefore, greater awareness about the program is needed.
- Agritourism operators face various challenges including:
    - **Labor costs and labor shortages**: Labor costs and shortages were identified by participants as among the greatest challenges they face. Agricultural census data also suggest that earning a living from farming is difficult in Hawai'i; in 2017, for instance, 34 percent of farmers in Hawai'i County earned less than $2,500 from the sale of agricultural products, 77 percent earned less than $25,000, and only 13 percent earned more than $50,000. Furthermore, some farmers who participated in this study shared that finding good laborers and workers who are willing to work for low wages is challenging, particularly for harvesting seasonal crops. Some suggested solutions include making it easier for farmers to provide worker housing to offset the living expenses of their farm workers.
    - **Stigma associated with farming**: Farming as a practice has low status in western society, which discourages entry into the industry.
    - **Competition from multinational corporations (MNCs)**: Many MNCs like Walmart sell cheap, imported food products that devalue local foods and push local farmers out of business. Featuring the stories of local farmers regularly in local media and social media enables local consumers to know about and value local brands.
    - **Intergenerational knowledge transfer**: The perpetuation of agriculture and the farming lifestyle is important for Hawai'i Island farmers and many farmers hope that their children will carry on the family business and continue to pursue the goals

and vision of the farm. Farmers acknowledged that a farm's success may take several generations to achieve, and some participating farmers worry that the youth are not interested in farming due in part to seeing their parents struggle to make a living. Some farmers believe that to engage children in farming long-term, children must be exposed to farming at an early age, children must experience farming as a fun lifestyle rather than a chore, and children must be allowed to grow up with the freedom to choose their livelihood rather than feeling forced into the family business by their parents.

- Despite the challenges, some farmers are optimistic about the future of farming and believe that increasing environmental consciousness and awareness about the value of farming and food security is shifting public perceptions about farming, from the view that it is a low-paying industry dominated by migrant workers who lack better options to the more positive view that it is a "cool" activity. Farmers cited the importance of having successful models demonstrating that farming can provide a good and lucrative life; therefore, revising existing agritourism policies that restrict how much farmers can earn from agritourism is key to encourage farmer entrepreneurship and financial success.

Recommendations

1. **Create incentive programs to support and encourage sustainable agricultural practices in agritourism.**
   i. Create a Hawai'i Regenerative Farmer Certificate Program with rewards for certified farmers.
   ii. Raise awareness about Hawai'i's Organic Foods Production tax credit.
   iii. Target all levels of government to provide a tax break for Hawai'i farmers who produce food locally.
   iv. Target all levels of government, particularly the Department of Agriculture and the USDA, to provide subsidies for Hawai'i farmers who produce food locally.

2. **Raise awareness about the benefits of locally produced food over imported foods.**
   i. Encourage and support the sale of local products and encourage private businesses in hospitality and local government programs that supply food, such as the Department of Education, to source a certain percentage of their food supply from local vendors.
   ii. Create educational materials through diverse media, such as cartoons and videos, about the true value and benefits of locally grown foods.

3. **Increase the status of farming in Hawai'i.**
   i. Pay farm workers livable wages.
   ii. Make it easier for farmers to provide employee housing on their properties to offset the high cost of living in Hawai'i.
   iii. Share farmer stories through marketing campaigns to raise awareness about the value of agriculture.
   iv. Revise existing policies and create new policies that support the financial success of

farmers through agritourism. **See Chapter 5, Recommendation 2.**

4. **Increase the engagement of youth in agriculture to perpetuate the practice.**
   i. Develop programs that engage youth in agriculture at early ages, such as week-long farming camps for youth during school breaks that depict farming as fun and exciting.
   ii. Share successful farming models with youth through farm-to-school programs and farm tours to demonstrate that farming can be lucrative.

5. **Increase the participation of underrepresented farmers and local communities in agritourism.**
   i. Conduct a statewide survey to understand the participation levels and barriers to participation of underrepresented groups in agritourism.

6. **Promote agritourism activities around food staples, such as ʻulu (breadfruit), taro, sweet potato, banana, and papaya, that support food security in Hawaiʻi.**
   i. Leverage tourism intermediaries like tour companies to enable non-agritourism farmers who specialize in staple crops to participate in agritourism. **See Chapter 6, Recommendation 4.iv**.

CHAPTER 8
Environmental Quality & Sustainability

[Depicted on the Chapter 8 section cover are crops planted in a Pacific agroforest at Kaivao Farm, Hawai‘i Island]
Photo Credit: A. Fa‘anunu

8 ENVIRONMENTAL QUALITY AND SUSTAINABILITY

Agritourism has been suggested to be a sustainable venture that is capable of delivering an array of benefits in the three dimensions of sustainability: economic, social, and environmental (Arroyo et. al, 2013). While the previous chapters focused on the economic and social aspects of agritourism, this chapter explores the environmental dimension. The following sections discuss opportunities and challenges for increasing environmental well-being through agritourism on Hawai'i Island. Recommendations are offered as actions to address challenges and grow opportunities.

8.1 Opportunities

8.1.1 Quality Over Quantity

> "If we make a tea that is consistently focusing on high quality, we will attract drinkers that have a disposable income. We have had helicopter tours from the Four Seasons bringing people who fly in, spend a half an hour here, drink tea, … walk [around] and talk to them all about the tea … We serve them tea and out they go. That was good agritourism."
>
> – Tea Farmer

Quality, the degree to which a good or service meets the demands and requirements of customers, is an important criterion and goal for agritourism in Hawai'i. In a capitalistic world, the value of goods, services, and ideas is reflected through price. Thus, good quality is often associated with high prices. Some farms in Hawai'i have demonstrated that developing high quality products and experiences and charging high prices that reflect their value is a model that works well for them. Thus, while a cup of tea might cost a little over $5.00 at Starbucks, a local tea farm that has created a high-quality tea can command $1,500 for a kilogram of tea in London and sell tea in New York for $65 per pot. Similarly, a sandalwood farm has invested heavily in creating unique and one-of-a-kind experiences for which people willingly pay $700 per person.

While the stereotype that there is no money in farming is widespread these models demonstrate quite the opposite: There is money to be made in farming. However, only a few farms have been successful at implementing such models. Only two farms in the study offer experiences at this price range while the majority of agritourism operators on Hawai'i Island charge between $0 to $100 per person for farm tours. For both farms, value-added products are key components of the experiences they offer. Also, they invested significant time and resources to developing high quality products, as well as to finding the target markets willing to pay the prices they required. Furthermore, such high-end products and experiences must have an absolute advantage in that they cannot be had or found elsewhere. This approach might be attractive for small-scale farmers who lack the ability to produce enough to be profitable.

> "We have tried to target a higher end market. The challenge…is that I am working, farming all day. How do I market and farm [at the same time]? That would require cooperation with other farmers if we really wanted to do it right."
>
> –Tea Farmer

Charging high prices enables farmers to focus on quality rather than quantity. This concept can be illustrated through the comparison of the two different scenarios shown below.

Scenario A: Cost of Farm Tour = $700
Weekly: 10 visitors; $7,000

Scenario B: Cost of Farm Tour = $20
Weekly: 350 visitors; $7,000

Monthly:	40 visitors; $28,000	**Monthly:**	1,400 visitors; $28,000
Yearly:	480 visitors; $364,000	**Yearly:**	16,8000 visitors; $364,000

In Scenario A, a farmer charging $700/tour and hosting 10 people once a week can generate $7,000 in gross sales weekly; $28,000 monthly; and potentially $364,000, annually. Assuming 10 visitors per week and a constant supply of visitors, 40 visitors can be expected per month and 480 visitors per year. In contrast, in Scenario B, a farm tour that costs $20/person must host 350 people per week, 1,400 people per month, and 16,800 people per year to make the same amount in gross sales. To host 350 visitors weekly, a farmer must accommodate 70 people per day, 5 days per week. To make this possible, the farmer in Scenario B must either host one large group of 70 people or several smaller groups every day. The "canned tour" experience develops under this scenario, where large tour buses are needed, several tour guides may be required, and the amount of time that visitors have on the tour is limited. One-on-one time with the farmer becomes difficult to achieve, tours may be rushed and superficial, and tour guides may become overworked, leading to high turnover. This scenario represents mass tourism, where quality becomes compromised to accommodate large numbers of visitors.

In Scenario A, high prices also weed out visitors who may not be entirely interested in an agritourism experience. Spending $700 versus $20 on an experience requires planning and commitment on the visitor's end because the experience may take up to a whole day of their time on the island. Thus, high prices self-select for a target market that is more likely to be committed and ready for the agritourism experience, which leads to a more enjoyable experience for farmers. While profits are desirable and the goal of many farm businesses, farmers also value their own time and want to provide good, quality experiences for their visitors. Farmers recognize that agritourism is not for everyone and prefer to host those who are willing to learn and be engaged. Therefore, the ability to tap into this segment of the visitor industry is key.

"We want to be engaged by people that are interested at a higher level as opposed to maybe the cruise ship sort of thing. [Price] self-selects for us … people who really want to be a part of the whole process and that makes it a more enjoyable experience for us. We definitely aren't going for mass tourism. Because it is a three-hour long tour, that is a big chunk of time. It's a commitment on their part and it is a commitment on ours because it takes us an hour to set up and half hour to tear down after each tour. With that being said, we only do it once or twice a week."

– Cacao Farmer

"When [cruise ship visitors] come in by the thousands on one boat, each one of our farms … we only need 10 people on each farm. That is 10 a week, 40 in a month. If you can promote yourself on a good circle going this way, it will just keep building."

– Cattle Rancher

"Ninety-eight/ninety-nine percent of the visitors we've had have been amazing. Really enjoyable, wonderful, smart, engaged. We love that. We have only had a couple of experiences where it was … a mismatch. I try to be really clear with everyone and upfront."

– Cacao Farmer

High prices also allow the farmer in Scenario A to allocate more days out of the week to farming. In Scenario B, if the farmer is involved in hosting, then he/she spends more time hosting than farming. Therefore, investing in quality and charging prices that reflect the value of the products and services offered shifts the focus from the visitor to the farmer. This model helps farms be more financially sustainable while giving the farmers more control over how their time is spent during the week. Scenario A offers more time for the farmer to spend on other activities, including farming, that may increase their quality of life. The ability to set a tour schedule on a business website that specifies the date and time for the tours rather than accept drop-in tours also enables farmers to have more control over the hosting process.

However, creating unique, quality products often require investments in time, resources, and research and development. Targeting high-end markets requires marketing skills that many farmers do not have. Similarly, many farmers are hesitant to raise their prices for fear of losing customers. To shift from quantity to quality, farmers need training, particularly in the following areas: developing innovative, one-of-a-kind products and experiences; identifying and maintaining the appropriate target markets and customers; and understanding the value (prices) of their products and services. Support through the availability of technology and equipment for developing value-added products, such as dehydration processors, mills, and commercial kitchens, is also needed to make this model affordable and possible for farmers.

> "We [wanted] to come out with a real price that reflected the incredible, extraordinary quality of Hawai'i. … Everybody loves Hawai'i. We are just such a unique situation. It has an exotic flavor to it."
>
> –Tea Farmer

> "Two tours a week, one workshop a week, [is] about all I wanted to do because there is so much farming to do." – Beekeeper

8.1.1.1 *Ka'ū Coffee*

Ka'ū Coffee began appearing at international cupping events in the 2000s, and though it was introduced so recently, the brand is a rising star and a future rival of Kona coffee. Ka'ū offers prime climatic conditions for coffee cultivation, which is promising for the district. While the Kona coffee season ends in December, the coffee season in Ka'ū extends until April. The establishment of the Ka'ū Coffee Mill LLC, a full-service coffee mill with milling and roasting facilities, has played an important role in the growth of the Ka'ū coffee industry. The mill buys cherries from small-scale coffee growers, which has become an economic stimulus for the towns of Pāhala and Wood Valley (Ka'ū Coffee Mill, n.d.). In 2009, the first Ka'ū Coffee Festival launched, and it has become an annual event that showcases the brand.

8.1.1.2 *Hawai'i Cacao*

> "Because our land and labor are so expensive [in Hawai'i,] the price point for cacao is much higher here than it is anywhere else in the world."
>
> – Cacao Farmer

Similarly, Hawai'i-grown cacao is highly competitive and an emerging high-quality product on the cacao-chocolate market. In 2008, the price premium of Hawai'i-grown cacao was two to four times higher than fine flavor cacao traded in world markets (Fleming et al., 2009). Consultations with cacao farmers in 2019 indicated that the price premium for Hawai'i cacao is currently among the highest in the

world due to the high production costs in Hawai‘i. As with coffee, the climate in Hawai‘i is ideal for the cultivation of cacao, which grows in regions 20 degrees north and south of the equator.

8.1.1.3 *Hawai‘i Whole-Leaf Tea*

Hawai‘i-grown tea, particularly whole-leaf tea, is also a novel crop with a high value growth potential. Prime climatic conditions along the mountain slopes of Hawai‘i Island and the connection of tea to health bodes well for the future of the industry. The medicinal qualities of teas made from some endemic plant species that occur nowhere else in the world, such as māmaki (*Pipturus albedus*), make these products promising as well.

8.1.1.4 *Aquaculture Products*

Aquaculture is an emerging and undeveloped area of agritourism on Hawai‘i Island. The facilities at the Natural Energy Laboratory of Hawai‘i Authority (NELHA) in Kona offer tours around some existing aquaculture projects including octopus research, abalone production, and salt (pa‘akai) production. Located near the Keāhole International Airport in Kona, the facility is situated ideally for curated trails in the proximity of the airport. Increasing need to protect marine resources may create greater demand for aquaculture production in the future, which suggests high growth potential for agritourism in aquaculture.

8.1.1.5 *Certified Organic*

The value of Hawai‘i brands is high and even higher for some certified organic products. The price for inorganic 100 percent Kona coffee ranges from $20 to $60 per pound but certified organic Kona coffee can be upwards of $50 per pound. The high value of some certified organic products reflects high costs of production because organic agriculture is labor intensive. Also, consumer demand for organic produce in Hawai‘i has followed national and international trends in increasing over time (Radovich et al., 2009). In 2016, the organic food and beverage industry was worth $43 billion in the USA, and it continues to grow (GoFarmsHawai‘i, n.d.). Future growth in the demand for organic produce bodes well for organic growers and is supported by Hawai‘i’s Organic Foods Production tax credit, which allows certified organic farmers to claim up to $50,000 in tax credits. However, certified organic farms must comply with USDA organic regulations and the process can be lengthy and challenging.

In 2018, one of the largest certified organic Kona coffee farms on Hawai‘i Island charged $55 for a pound of packaged, certified organic 100 percent Kona coffee (Figures 39). Approximately 98 percent of the farm’s sales came from the sale of these products to restaurants on O‘ahu and Maui. Only 2 percent of farm earnings came from farm tours; however, the revenues generated were significant enough to continue the tour service. The farm’s success can be attributed to the superior quality of the certified organic coffee, which took time to develop. Thus, organic certification can be a significant marketing asset that gives farmers a competitive advantage. However, obtaining and maintaining organic certification is a costly endeavor. The greatest threats to the operation include high labor costs and the threat posed by blended 10 percent Kona coffee to the consumer perception of the quality of the Kona coffee brand.

There is significant potential to leverage the Hawai‘i brand and develop diverse, high-quality products locally. While Kona coffee has had the time to develop the brand to what it is today, there is potential to learn from this experience and to develop policies to protect the integrity of

other local brands. Furthermore, there is a niche in certified organic products that can increase the quality and value of farm products, which can be expected to increase with trends towards environmental awareness surrounding sustainable agriculture (Figure 38).

> "You eat a tomato here and you eat a tomato on the mainland and there is a difference. We have an amazing quality of all products that we could share. Instead, what … we import 95 percent of all of agriculture products. It is confusing to me to think about how things could be so backwards. People who grow things in Hawai'i, we could just feed everybody in Hawai'i."
>
> – Tea Farmer

Figure 38. Certified organic māmaki tea (Source: A. Fa'anunu)

Figure 39. Certified organic coffee farm, Kealakekua, Kona (Source: A. Fa'anunu)

8.1.1.6 *International Conferences, Trade Shows, and Contests*

The participation of individual farms and farmers in international conferences, trade shows, and contests expands the reach of local brands, and placing in contests brings awareness to Hawai‘i products, globally (Figure 40). The experience also gives farmers opportunities to network and learn new methods to expand and maintain their competitive edge. For some Hawai‘i farms, placing in international tasting competitions provides new opportunities to market their brand and products locally. Therefore, financial support to encourage Hawai‘i farmers to attend international conferences and participate in trade shows and contests by local and state governments and agencies would help farmers refine their approach, improve the quality of their products and services, and grow innovation.

Figure 40. Buddha’s Cup brand coffee: International winner at contest in Paris (Source: A. Fa‘anunu)

8.1.2 Climate Change & Environmental Well-being

Agritourism has been suggested as a possible sustainable adaptation option for climate change that allows farmers to explore alternative sources of revenue rather than depend on intensive and unsustainable agricultural practices (Mahaliyanaarachchi et al., 2019). Therefore, agritourism may promote the idea of "working smarter, not harder" that moves away from intensive and extractive agricultural practices. Not all farmers who participated in the study felt that they contribute to addressing Hawai'i's food insecurity problem; however, all farmers that participated in in-depth interviews felt that they contribute to improving environmental well-being, mitigating climate change, and creating more sustainable futures for Hawai'i. Therefore, agritourism farms may serve as kīpuka (oases) of green spaces and models that showcase different strategies of more sustainable agricultural practices.

> "Once you take care of the ecology, it becomes rich and everything else is successful after that. The tourists will come. The money will come. Having that foundation of a healthy ecosystem, that is what it is really based on."
>
> – Cacao Farmer

> "That's kind of the definition of the word permaculture. It's not just about the plants. The whole focus is on life and vitality and that includes human beings. It includes everything from microbes to large animals … It's all been about building soil. Building compost. Planting trees that can add their leaf and carbon and nutrients to the soil. We're soil farmers. Long-range focus. We are focused on long-term solutions.
>
> We can't solve the world's problems, but maybe we can make a little model where things work a little better so maybe we can figure out how to grow plants without [using] chemicals. We CAN make clean energy. We CAN have healthy relationships."
>
> – Permaculture Farmer

Participating farmers were concerned about climate change as a threat to agriculture. Some farms actively try to mitigate climate change by incorporating tree plantings into agritourism activities, and encourage visitors to plant trees as a way of giving back and restoring the land. Tree plantings may also increase the authenticity of the farm experience. However, many visitors are not familiar with how to plant trees, and this activity can be time-consuming. Therefore, agritourism farms must be well-prepared ahead of time to host tree planting activities and may require that holes are dug prior to the planting event to fit into a tour. Hawai'i Farm Trails encourages visitors and residents to take responsibility for reducing their own carbon footprints through tree planting activities on the app's platform, Project Kanu. Individuals or companies can sponsor farmers to grow food trees, starting with the high-yielding, nutritious 'ulu (breadfruit). There is significant potential to engage Hawai'i's many visitors to participate in and support carbon sequestration projects to off-set carbon-producing tourism activities. Project Kanu is a model example of how agritourism can become a more responsible and sustainable form of tourism in Hawai'i.

Shortening the food distribution chain by buying local also reduces the global carbon footprint. Agritourism farms can play an important role in this process. While most agri-tours on Hawai'i Island target visitors, other forms of agritourism such as farmers markets and farms that offer retail through a gift store, farm stand, or CSA also promote buying local.

8.2 Challenges

8.2.1 Food Security

Food insecurity is a major challenge for Hawai‘i, where 85 percent of food for consumption is imported (Loke & Leung, 2013). Agritourism is a relatively new field of study in the United States and a critical knowledge gap exists regarding the efficacy of agritourism as a viable means of increasing food security (Collins, 2000; Harvey, 2011; Hepburn 2013). While the challenges and opportunities of agritourism are well documented, there is limited research on how agritourism promotes food security. Instead, the relationship between agritourism and food security is usually inferred (Timms, 2006; Wiley, 1998).

> “It [cacao] is a non-essential item. Yes, you can eat a few cacao beans every day but it is not a complete food. It has the bromines and all the great things that are good for you but it is not a complete food. It’s a choice that I made [to focus on this]. Coffee is the same way. Coffee is a luxury item for some.”
>
> – Cacao Farmer

> “No, I don’t [contribute to solving our food insecurity problem].…My cattle goes out of the country. It is not consumed here. I am not contributing to [solving] Hawai‘i’s problem.”
>
> – Cattle Rancher

This study found that most participating farmers with agritourism farms providing direct tourism on Hawai‘i Island feel that they do not significantly contribute to addressing Hawai‘i’s food insecurity problem. These farmers reported that their products are non-essential food items, such as chocolate, coffee, and honey, that do little to make Hawai‘i more food secure. Instead, non-essential foods tend to appeal to the palate of visitors. Farmers who export most of their produce, such as cattle ranchers, also felt that they do not increase food security in Hawai‘i. Furthermore, findings suggest that the majority of farmers on the island are not engaging with visitors directly but may engage with visitors indirectly through the sale of their products to businesses that serve the visitor industry. The study suggests that most farms producing crops that would sustain and increase food security in Hawai‘i, such as taro, papaya, breadfruit, banana, and sweet potato, are not engaging in agritourism.

Research on the Caribbean islands is consistent with these findings and suggests that the type of agritourism that is most appealing to visitors is unachievable for most farmers, makes inconsequential contributions to island food security, and privileges wealthy farmers (Thomas et al., 2018). According to Thomas et al. (2018), agritourism in its current form is not yet a viable solution for the food security issues of Caribbean countries. However, some participating agritourism farmers on Hawai‘i Island felt that their efforts increase food security for their communities. These include farmers markets and farms that focus on regenerative agriculture and on growing food forests. Some farmers focusing on non-essential products like cacao and coffee explained that although their major crops do not address food insecurity, other crops that they grow in their agroforest, such as breadfruit, feed their communities. A goat farmer who specializes in producing cheese from goat milk explained that although his farm produces a non-essential food item, his business could contribute to making Hawai‘i more food secure if his products could replace imported cheeses to Hawai‘i.

> “[We have] a permaculture farm. We are just trying to grow as much food as we can.”
>
> – Permaculture Farmer

Therefore, while some forms of agritourism may be unachievable for most conventional farmers in Hawai‘i, there is potential to increase the contribution of agritourism to food security by tapping into the agritourism potential of farmers markets and farms that grow staple crops. While 85 percent of food for consumption in Hawai‘i is imported, 99 percent of staple foods are imported (Azizi & Lincoln, 2021). Projects that aim to increase the engagement and participation of these staple-food-producing farms in agritourism could increase the contribution of agritourism to food security in Hawai‘i.

8.2.2 Hawai‘i Brand – Kona Coffee

Hawai‘i is a well-known destination with global appeal. Hawai‘i Island is home to Kona Coffee, a hallmark Hawai‘i brand that represents high quality coffee worldwide. Coffee grown in Kona accounts for only 1 percent of the global coffee market yet it is a $48 million industry in Hawai‘i (Collections of Waikīkī, 2021). The price for 100 percent Kona coffee is competitive, and it is higher for certified organic 100 percent Kona coffee. The steep price tag and high reverence for the brand is attributed to: Hawai‘i’s prime location with nutrient-rich volcanic soil for coffee cultivation; the high cost and labor-intensive harvesting process; and the superior quality of the hand-picked beans (Collections of Waikīkī, 2021). Hawai‘i’s location and climate make it the only state in the USA to produce coffee, so Hawai‘i dominates USA-made coffee. The majority of agritourism farms on the Kona coast are coffee growers that specialize in producing high quality Kona coffee sourced locally from their own farms or from beans bought from other Kona farmers.

Coffee marked as Kona coffee is usually available as 100 percent or 10 percent Kona coffee. Blended Kona coffee has become more common on the market, which has led to concern over the impact of blended products on the quality of the Kona Coffee brand. The Kona Coffee trademark is owned by the State of Hawai‘i’s Department of Agriculture, and the labeling of Hawai‘i-grown coffee is regulated by Hawai‘i Revised Statutes (HRS) Chapter 486. The law requires that a coffee package containing 10 percent or more by weight of Hawai‘i-grown coffee must declare the Hawai‘i geographic origin(s) of the coffee. Anyone can use the Kona Coffee name as long as the packages contain at least 10 percent by weight of Kona-grown coffee.

> “Nobody regulates. All there is, [are] labeling laws at the state level. It can be 10% Kona or 100% Kona.…There is no one at the state level policing that it is even 10% in the bag. Their answer is, “because we don’t have enough money [to regulate”]. … We have been trying to change the labeling laws to 50:50…for 23 years…and we can’t because of the big corporations in the state.”
>
> – Coffee Farmer

The minimum requirement of 10 percent by weight of Kona-grown coffee to use the Kona Coffee brand means that Kona Coffee branded products can be made mostly from coffee beans grown outside of Hawai‘i where coffee is significantly cheaper. Many Kona coffee growers believe that the labeling misleads consumers to think that they are purchasing 100 percent Kona coffee when it might be only 10 percent (State of Hawai‘i Department of Agriculture, 2009). Furthermore, there is concern among farmers that the state does not sufficiently regulate labeling laws. Thus, Kona coffee farmers are concerned that blended products using the Kona Coffee brand threaten to dilute the perceived quality of the brand. Farmers have lobbied to increase the minimum percentage weight of Hawai‘i-grown coffee from 10 percent to at least 50 percent, but their efforts have been unsuccessful. In 2021, two bills

(HB461 & SB130) proposing to increase the minimum blend requirement to 51 percent of Kona-grown coffee for the Kona Coffee brand both died in the house when the House Economic Development Committee failed to schedule a hearing, and at the senate when the Senate Commerce and Consumer Protection Committee deferred the bills (Kona Coffee Farmers Association, 2021). Yet farmers continue to call on the State of Hawai‘i to take more responsibility in protecting the Kona Coffee brand, which serves as a model for other emerging, Hawai‘i-grown crops and products like Ka‘ū coffee, Hawai‘i cacao, and Hawai‘i tea.

> “If you own the trademark, you need to protect the name Kona. It is your responsibility.”
>
> – Coffee Farmer

8.3 Summary and Recommendations

- Quality is an important goal for agritourism in Hawai‘i. Some farms in Hawai‘i have demonstrated that developing high quality products and experiences and charging high prices that reflect their value is a model that works well for them. However, only two farms in the study have offered agritourism products/experiences in the upper price range, while the majority of agritourism operators on Hawai‘i Island charge from $0 to $100 per person for farm tours.
- Charging high prices for commodities enables farmers to prioritize quality over quantity. High prices weed out visitors who may not be entirely interested in an agritourism experience. Farmers value their own time and want to provide good, quality experiences for their visitors. Some farmers also recognize that agritourism is not for everyone and prefer to host visitors who are willing to learn. Therefore, targeting the segment of the visitor industry that is interested in agritourism is key. High prices also enable farmers to be more financially secure, host less frequently, and possibly allocate more days of the week to farming. Thus, greater financial security may allow farmers more control over how their time is spent.
- Farmers also have more control over the hosting process when they can schedule tours on specific dates and times rather than having to accommodate drop-in tours.
- Value-added products are key components of quality experiences. Creating unique, quality products and experiences often requires investments in time, resources, and research and development. Targeting high-end markets requires marketing skills that many farmers lack. Some farmers are also hesitant to raise their prices for fear of losing customers. To shift focus from quantity to quality, farmers need training, particularly in the following areas: developing innovative, one-of-a-kind products and experiences; identifying and maintaining the appropriate target markets and customers; and understanding the value and appropriate pricing of their products and services. The cost of technology and equipment for developing value-added products (e.g., dehydration processors, mills, commercial kitchens) limits farmers from engaging in value-added production. Therefore, farmer access to such technology and equipment is necessary.
- Large tour buses can lead to the “canned tour” experience where one-on-one time with the farmer becomes difficult to achieve, tours may be rushed and superficial, and tour guides may become overworked, leading to high turnover. The “canned tour” scenario represents mass tourism, where quality is compromised to accommodate large numbers of visitors.
- The value of Hawai‘i brands is high and even higher for some certified organic products. For example, inorganic 100 percent Kona Coffee ranges from $20 to $60 per pound but certified organic Kona Coffee can be upwards of $50 per pound. Demand for certified organic products is expected to grow in the future with increasing public awareness about sustainability. Hawai‘i’s Organic Foods Production tax credit allows certified organic farmers to claim up to $50,000 in tax credits; however, USDA organic regulations are challenging, and high labor costs in Hawai‘i limit farmers’ ability to provide certified organic products.

- There is significant potential to leverage the Hawai‘i brand and develop diverse, high-quality products locally. Kona Coffee is a hallmark Hawai‘i brand that represents high quality coffee worldwide and is available as 100 percent or 10 percent Kona Coffee. Though Kona Coffee accounts for only one percent of the global coffee market, it is a $48 million industry in Hawai‘i. However, many coffee farmers are concerned that the 10 percent Kona Coffee blend undermines the 100 percent Kona Coffee brand. Farmers are concerned that the State of Hawai‘i, which owns the Kona Coffee trademark, does not sufficiently regulate labeling laws to protect the integrity of the 100 percent Kona Coffee brand. Efforts to increase the minimum percentage weight of Hawai‘i-grown coffee to at least 50 percent have been unsuccessful. Learning from the Kona Coffee experience can inform the development of policies to protect the integrity of other local products like Hawai‘i cacao and chocolate.
- The reach of local brands can be expanded through the participation of individual farms and farmers in international conferences, trade shows, and contests. These events are opportunities for farmers to network, learn new methods, and expand and maintain their competitive edge. Therefore, financial support from state and local governments for Hawai‘i farmers to attend and participate in such events would help farmers refine their approach, improve the quality of their products and services, and support local innovation.
- Several emerging areas for agritourism on Hawai‘i Island include Ka‘ū Coffee, Hawai‘i cacao and chocolate, honey, whole-leaf tea, aquaculture, and certified organic products.
- Participating farmers in the study were concerned that climate change threatens agriculture. Some farms offer tree planting activities to mitigate climate change and for visitors to give back to Hawai‘i. Tree planting activities may also increase the authenticity of the farm experience; however, many visitors are not familiar with how to plant trees, and this activity can be time-consuming. Therefore, agritourism farms must be well-prepared to host tree planting activities (e.g., digging holes prior to the event) to fit the tour timeframe. There is significant potential to engage Hawai‘i’s robust visitor industry to participate in and support carbon sequestration projects to off-set carbon-producing tourism activities. Hawai‘i Farm Trails’ Project Kanu is a model example of carbon sequestration through agritourism.
- Shortening the food distribution chain by buying local also reduces the global carbon footprint. While most agri-tours on Hawai‘i Island target visitors, other forms of agritourism, such as farmers markets and farms that offer retail through a gift store, farm stand, or CSA, also promote buying local. Therefore, agritourism farms can play an important role in reducing greenhouse gas emissions.
- Most participating agritourism farmers providing direct tourism on Hawai‘i Island felt that they do not significantly contribute to addressing Hawai‘i’s food insecurity problem. These farmers reported that their products are non-essential food items, such as chocolate, coffee, and honey, that do little to make Hawai‘i more food secure. Instead, non-essential foods tend to appeal to the palate of visitors. Farmers who export most of their produce, such as cattle ranchers, also felt that they do not increase food security in Hawai‘i; however, all farmers that participated in in-depth interviews felt that they contribute to improving environmental well-being, mitigating climate change, and creating more sustainable futures for Hawai‘i. Therefore, agritourism farms may serve as kīpuka (oases)

of green spaces and models that showcase different strategies of more sustainable agricultural practices.

- Findings suggest that the majority of farmers on Hawai‘i Island do not engage with visitors directly but may engage with visitors indirectly through the sale of their products to businesses that serve the visitor industry. Similarly, farmers producing staple crops that would sustain and increase food security in Hawai‘i rarely engage in agritourism.
- Nevertheless, several participating agritourism farmers who participate in farmers markets, practice regenerative agriculture, and grow food forests felt that their efforts increase food security for their communities. Some farmers producing non-essential products like cacao and coffee explained that although their major crops do not address food insecurity, other crops that they grow in their agroforest, such as breadfruit, feed their communities.
- Some forms of agritourism may be unachievable for most conventional farmers in Hawai‘i but there is potential to increase the contribution of agritourism to food security by tapping into the potential of farmers markets and farms that grow staple crops. Imports supply 85 percent of all food for consumption in Hawai‘i, but this number increases to 99 percent for staple foods (Azizi & Lincoln, 2021). Projects that aim to increase the engagement and participation of these staple-food-producing farms in agritourism could increase the contribution of agritourism to food security in Hawai‘i.

Recommendations

1. **Provide support to enable Hawai‘i agritourism to focus on quality rather than quantity.** Actions to create quality products and meaningful experiences in Hawai‘i agritourism include but are not limited to the following:
   i. Provide farmer training in key areas:
      - Developing innovative, one-of-a-kind products, tours, and experiences.
      - Identifying and maintaining appropriate target markets.
      - Understanding the value (pricing) of products and services.
   ii. Provide infrastructure, facilities, and technology that farmers can access for value-added production.
   iii. Promote the participation of farmers in international conferences, tasting competitions, and trade shows.
   iv. Protect the integrity of Hawai‘i brands like Kona Coffee by mandating they consist of at least 50 percent Hawai‘i-grown products.

2. **Promote agritourism programs that reduce carbon emissions.**
   i. Shorten the supply chain by buying local products. **See Section 7.3**
   ii. Support programs that encourage and assist farmers to integrate tree planting into agritourism experiences.
   iii. Support projects and programs that encourage sustainable agricultural practices.

3. **Promote programs and projects that increase the contribution of agritourism to food security in Hawai‘i.**
    i. Increase the participation of farmers growing staple crops in farm tours. **See Section 7.3**
    ii. Increase support for farmers markets.
    iii. Support future studies to understand the connection between agritourism and food security.
    iv. Protect the integrity of Hawai‘i brands like Kona Coffee to consist of at least 50 percent of Hawai‘i-grown products.

CHAPTER 9
References

[Depicted on the Chapter 9 section cover are orchids]
Photo Credit: Hawai‘i Tourism Authority

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CHAPTER 10
List of Appendices

[Depicted on the Chapter 10 section cover is an access road through farm lands in Pāhoehoe Ahupuaʻa, Hawaiʻi Island]
Photo Credit: A. Faʻanunu

Appendix A

Section 25-4-15:
Agricultural Tourism

Appendix B

Application for Plan Approval

Appendix A

Section 25-4-15: Agricultural Tourism

Section 25-4-14. Flag lots.

A flag lot shall be permitted when sufficient street frontage is not available for more than one building site, provided the following conditions are met:

(1) The access drive connecting the building site with the street shall have a minimum width of fifteen feet.
(2) The access drive shall be the sole access for only one building site, unless dual access is approved by the director after consultation with the director of public works.
(3) The building site area, including the access drive, shall be the minimum building site area required for the zoning district.
(4) The minimum yards for a flag lot, excluding the access drive, shall be the minimum side yards required for a building site in the applicable zoning district.

(1996, ord 96-160, sec 2; ratified April 6, 1999; am 2001, ord 01-108, sec 1.)

Section 25-4-15. Agricultural tourism.

(a) Agricultural tourism is permitted as an accessory use to agricultural processing facilities in the CG, CDH, CV, CN, ML, MG, and MCX districts.
(b) Agricultural tourism is permitted as an accessory use to agricultural activities and agricultural processing facilities in the A, FA, IA, RA, and APD districts, subject to plan approval and in conformance with section 25-4-15(d).
(c) Agricultural tourism activities in A, FA, IA, RA, and APD districts that do not conform to section 25-4-15(d) shall obtain a special permit in the state land use agricultural or rural districts, or a use permit in the state land use urban district.
(d) Agricultural tourism operations shall comply with the following regulations:
    (1) The agricultural activity or agricultural products processing facility must have a minimum of $10,000 in verifiable gross sales, exclusive of any income from agricultural tourism activities or any other non-agricultural activities, for the year preceding the commencement of the agricultural tourism activity or, in the case of a new agricultural activity or agricultural products processing facility, provide evidence to the director's satisfaction that sufficient investment has been made in the planting of crops, acquisition of livestock, or construction of agricultural products processing facilities, that the agricultural activity or agricultural processing facility will achieve the minimum required gross sales;
    (2) Agricultural tourism activities shall not commence prior to 8:00 a.m. or continue past 6:00 p.m. daily;
    (3) The agricultural tourism operation shall have a maximum of thirty thousand visitors annually;
    (4) All visitor and employee parking, loading/unloading, and vehicular turn-around areas shall be located off-street;

(5) The total area of spaces, including covered decks, lanais, tents or canopies, and gazebos, whether newly constructed or within existing structures, to be utilized principally for the agricultural tourism activity, but not including parking and vehicular access areas, shall not exceed one thousand square feet;

(6) Gross revenues from agricultural tourism shall not exceed the gross revenues of the associated agricultural activity and/or agricultural products processing facility, including revenues from adjacent parcels under the same ownership, except where it can be demonstrated to the director's satisfaction that the gross agricultural products/processing income is less than fifty percent of the total income due to unforeseen environmental or economic conditions for not more than two consecutive years, or, in the case of a new agricultural activity or agricultural products processing facility, that sufficient investment has been made so that it is reasonable to project that the operation's gross revenues from agricultural tourism will not exceed fifty percent of gross revenues, and provided further, that the sale of all items which include agricultural products grown or processed by the associated agricultural activity or agricultural processing facility shall be included in the gross revenues of the associated agricultural activity or agricultural processing facility;

(7) Sales of agricultural products grown on the island of Hawaiʻi, and processed agricultural products where the main ingredient was grown on the island of Hawaiʻi shall be allowed as part of the agricultural tourism operation. Incidental sales of non-agricultural promotional items, including but not limited to, coffee mugs, tee shirts, etc., shall be permitted provided:

(A) The items are specifically promotional to the site's agricultural activities and/or product; and

(B) The gross revenues from the sale of non-agricultural promotional items shall be included with the gross revenues from the agricultural tourism activities;

(8) Agricultural tourism in the A, FA, IA, and RA districts shall not include weddings, parties, restaurants, schools, catered events, or overnight accommodations, unless allowed by special permit or use permit; and

(9) Annual events that promote an agricultural industry or agricultural area, and organized on a not-for-profit basis, are permitted in the A, FA, IA, RA, and APD districts without plan approval.

(e) Any agricultural tourism activity that is not in compliance with the regulations under section 25-4-15(d) or appropriately permitted as provided by section 25-4-15(c) shall be considered illegal under this chapter, unless otherwise noted herein.

(f) Any agricultural tourism activity in the A, IA, FA, RA, or APD districts, existing prior to the effective date of this section and conforming to the standards contained in section 25-4-15(d) and that has not received plan approval, may continue such use until May 20, 2010. After this date, continued use without having received plan approval shall be considered illegal under this chapter.

(g) Any agricultural tourism activity in the A, IA, FA, RA, or APD districts, that does not conform to the standards in section 25-4-15(d), and which has not previously received a special permit or use permit for such activity, may continue such use until May 20, 2010, and, if an application for a special permit or a use permit has been received and accepted by May 20, 2010, may continue such use until final action has been taken on the application. After May 20, 2010, or denial of the application, whichever occurs later, continued use shall be considered illegal under this chapter.

(h) Any agricultural tourism activity that is currently operated under a special permit may continue to operate under the terms and conditions of the special permit, or apply to void the special permit and, if the permit is voided, operate under the standards of section 25-4-15(d).

(i) An agricultural tourism activity that obtains plan approval, but becomes non-compliant with the standards of section 25-4-15(d) because of an increase in the number of visitors, shall apply for a special permit, but may continue to operate until a final decision is made on the special permit application.

(j) An agricultural tourism activity which has received plan approval shall submit financial records to the director on request to verify compliance and shall maintain a count of visitors which shall be furnished to the director on request.

(k) The director may use observations of visitor arrivals, including bus traffic, in estimating whether an agricultural tourism activity complies with section 25-4-15(d)(3), and may require that an activity allowed with plan approval apply for a special permit based on such observations. In that case, the activity may continue until a final decision is made on the special permit.

(2008, ord 08-155, sec 9; am 2009, ord 09-143, sec 2.)

Section 25-4-16. Short-term vacation rentals.

(a) Short-term vacation rentals; where permitted, specific prohibitions.
  (1) Short-term vacation rentals shall be permitted in the:
    (A) V, CG, and CV districts;
    (B) Residential and commercial zoning districts, situated in the General Plan Resort and Resort Node areas; and
    (C) RM district, for multiple family dwellings within a condominium property regime as defined and governed by chapters 514A or 514B, Hawai‘i Revised Statutes.
  (2) Private covenants prohibiting use of any unit as a short-term vacation rental shall not be invalidated by this chapter.

(b) Registration of all short-term vacation rentals.
  (1) Short-term vacation rentals in existence on or before April 1, 2019 shall register with the director and pay a one-time fee of $500. The registration form and associated fee shall be submitted to the planning department no later than September 30, 2019.
  (2) Any new short-term vacation rental established in a zoning district after April 1, 2019, where such use is permissible pursuant to this

Appendix B

Application for Plan Approval

County of Hawai‘i Planning Department

www.hiplanningdept.com · planning@hawaiicounty.gov

East Hawai‘i Office · 101 Pauahi Street, Suite 3 · Hilo, Hawai‘i 96720
Phone (808) 961-8288 · Fax (808) 961-8742

West Hawai‘i Office · 74-5044 Ane Keohokalole Hwy · Kailua-Kona, Hawai‘i 96740
Phone (808) 323-4770 · Fax (808) 327-3563

APPLICATION FOR PLAN APPROVAL

LEGAL LANDOWNER(S): _____

LANDOWNER'S SIGNATURE(S): _____ DATE: _____

PRINTED NAME OF SIGNER(S): _____ TITLE: _____
(*if for a Corp.,LLC, Trust or Partnership)*

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

PHONE NO.: _____ EMAIL: _____

Any entity acting on behalf of the recorded landowner must also provide written/signed authorization.

APPLICANT (please print): _____ Written/signed letter of authorization attached: ☐ YES

APPLICANT'S SIGNATURE: _____

APPLICANT'S INTEREST, IF NOT OWNER: _____

PRINTED NAME OF SIGNER: _____ TITLE: _____
(*if for a Corp. L.L.C., Trust or Partnership)*

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

PHONE NO.: _____ EMAIL: _____

PROPOSED USE: _____

STREET ADDRESS OF PROPERTY: _____

CITY: _____ STATE: _____ ZIP CODE: _____

TAX MAP KEY: (3) _____ LAND AREA: _____ ZONING: _____

STATE LAND USE DISTRICT: _____ SPECIAL MANAGEMENT AREA: ☐ YES ☐ NO

- For Agricultural Tourism: please see attached Section 25-2-75 that lists the required information to be submitted with your Plan Approval Application.
- For Telecommunication Antennas: please see attached Section 25-4-12 for required information to be submitted with your Plan Approval Application.

Application for Plan Approval
Required Submittals

This application must be accompanied by additional items as specified on the second page.

Pursuant to the Zoning Code (Article 2, Divisions 1 and 7) and the Planning Department's Rules of Practice and Procedure, this application form, with original signatures, must be accompanied by:

1. A site plan, drawn to scale and fully dimensioned, indicating clearly the following information:
   (a) The location and dimension of the building site (the entire legal lot of record) with TMK No.;
   (b) The location, size, and use of all existing and proposed structures;
   (c) All yards and open spaces (building setback lines) and distance of buildings from property lines;
   (d) Location, height, and material of all fences and walls;
   (e) The location, number, and dimensions of all on-site parking and loading spaces, ADA parking/ access aisle signage, pavement for parking and access way surfaces, drainage control facilities, waste collection enclosures, and vehicle circulation plan including points of street access;
   (f) The location, general nature, and type of all exterior lighting, including shielding devices;
   (g) All proposed landscaping and planting, meeting requirements of Planning Dept. Rule 17;
   (h) All proposed street dedication and improvement, if any;

2. Building floor plans and elevations (front, rear, and side views), drawn to scale, of all existing and proposed above-ground structures, indicating height above finish grade;
3. A site drainage plan previously approved by the Director of Public Works in accordance with Section 25-2-72(3) of the Zoning Code, based on the improvements proposed in this application;
4. A certification of clearance from the Director of Finance that the real property taxes and all other fees relating to the subject parcel(s) have been paid and that there are no outstanding delinquencies; and
5. Any other information required by the director.

Note: Accessible Parking Spaces shall be designed and installed in accordance with all current Federal and State standards and requirements for a facility or site. The following links below are provided to assist you in determining current Federal and State requirements for number of stalls, access aisle, striping, signage, and loading zone. These links are not inclusive and are provided by the County for public education and information purposes. The Planning Department makes no representation for the completeness or correctness of this list.

State of Hawaii Disability and Communications Access Board:
http://health.hawaii.gov/dcab/parking and http://health.hawaii.gov/dcab/files/2013/05/DCAB-Parking-Brochure-11-29-12A.pdf
Hawaii Revised Statutes Section 103-50:
http://www.capitol.hawaii.gov/hrscurrent/Vol02_Ch0046-0115/HRS0103/HRS_0103-0050.htm
Hawaii Administrative Rules Title 11, Chapter 219:
http://health.hawaii.gov/dcab/files/2013/01/Hawaii-Administrative-Rules-Title-11-Chapter-219-Parking-for-Persons-With-Disabilities1.pdf
U.S. Department of Justice: https://www.ada.gov/2010ADAstandards_index.ht
U.S. Dept. of Housing and Urban Development:
http://portal.hud.gov/hudportal/HUD?src=/program_offices/fair_housing_equal_opp

If any of the above federal and state laws recommend and require more stringent parking standards for persons with disabilities than those contained in this section, those requirements shall be followed.

Application for Plan Approval
Required Submittals

THIS PROJECT SHALL COMPLY WITH ALL REQUIREMENTS OF PERMITS/APPROVALS GRANTED BY THE PLANNING DIRECTOR, PLANNING COMMISSION OR COUNTY COUNCIL.

Section 25-2-74. Plan approval application requirements for telecommunication antennas.

In addition to the application requirements for plan approval contained in section 25-2-72, an application for plan approval for a telecommunication antenna or tower shall contain the following information:

(1) A plot plan showing the location of the proposed antenna or tower;
(2) Building plans for the tower, certified by a licensed structural engineer, verifying that the tower, together with the initial antennas and other equipment proposed to be installed thereon, will have a hard survivability for sustained winds of one hundred miles per hour;
(3) A statement from the Federal Aviation Administration that the application has not been found to be a hazard to air navigation; and
(4) A statement from the Federal Communications Commission that the application complies with the regulations of the Commission or a statement that no such compliance is necessary.

Note: For use regulations governing telecommunication antennas, see Hawaii County Code, Chapter 25 (Zoning) and Section 25-4-12. Telecommunication antennas or towers.

Section 25-2-75. Plan approval application requirements for agricultural tourism.

In addition to the application requirements for plan approval contained in section 25-2-72, an application for plan approval for agricultural tourism operations shall include sufficient information to ensure the following provisions are met:

(1) A statement whether the operation will allow visits by buses;
(2) Adequate off street parking, loading/unloading, and turn-around space to accommodate all specified tour transportation modes, including buses, if they are allowed, shall be provided and shown on the site plan;
(3) The subject property must have an existing legal access to a public highway, which may be via a private road or easement, and new driveways shall meet applicable county or state standards;
(4) New and existing facilities to be utilized principally for the agricultural tourism activity shall be clearly indicated on the plot plan and shall not exceed one thousand square feet in total area, not including parking and vehicular accesses; and
(5) Proof, acceptable to the director, of income from agricultural activities and/or agricultural products processing, or investment, as required under section 25-4-15(d)(1). (2008, Ord. No. 08-155, sec. 4.)

Note: For use regulations governing agricultural tourism operations, see Hawaii County Code, Chapter 25 (Zoning) and Section 25-4-15. Agricultural tourism