

A Market Feasibility Study
Executive Summary

Hawai'i-Grown Tea



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Overview

This report is a feasibility study for developing tea into a viable and sustainable industry for the state of Hawai'i. It examines the economic potential of a Hawai'i tea industry and provides guidelines for the development of the industry to a mature stage in the product's life cycle. It will do the following:

- Review the viability of growing tea in Hawai'i and examine how current producers are conducting business
- Identify the current and potential markets for Hawai'i tea
- Identify the obstacles in three developmental market stages and the possible strategies to overcome these constraints
- Offer policy, research, and extension education recommendations.

The information for this report was compiled from both primary and secondary sources. Primary sources of data include a convenience survey of specialty tea retailers and consumers, as well as interviews with researchers and growers. Representatives from Hawai'i-based tea shops, tea services, and resorts were also interviewed.

Secondary sources of data include published information by the University of Hawai'i's College of Tropical Agriculture and Human Resources (CTAHR) and other publications. Sales figures are based on a tea industry report compiled by Packaged Facts, a publisher of market research. CTAHR's Mealani Research Station tea financial analysis developed by the CTAHR Agribusiness Incubator Program (AIP) was used as a baseline to determine the potential profitability of a tea farm.



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Tea is grown best in tropical and subtropical climates with high and evenly distributed rainfall. In tropical climates, tea plants need at least 60 inches (1,500 mm) of rainfall per year with less than three months of dry season.

Tea is one of the oldest and most popular beverages in the world, the most widely consumed after water. Tea is a product of the *Camellia sinensis* plant. For the highest quality tea, the tip or bud and the first two leaves are usually harvested for processing; the lower, more mature leaves can be used but are considered to be of lower quality. There are a number of different types of teas that come from the *Camellia* plant, which are differentiated by processing method and degree of oxidation. The most popular are black, green, and oolong teas. Less well known types include white and Puer tea.

There is a high level of tea production throughout the world. China is the largest producer, followed by India and Kenya (FAOSTAT 2008). Tea is grown best in tropical and subtropical climates with high and evenly distributed rainfall. In tropical climates, tea plants need at least 60 inches (1,500 mm) of rainfall per year with less than three months of dry season (den Braber, Sato, and Lee 2010). However new transplants can require up to 120 inches (3,000 mm) of rainfall. Thus, water is integral to the success of cultivating tea plants.

The optimal temperature for tea to grow ranges between 64° to 90°F (18° to 30°C). Above 90°F (32°C) and below 55° (13°C), growth is limited. Tea also requires a lot of sunlight for quality production. The ideal day length is around 11¼ hours, indicating that it can be harvested year round (without a dormancy period) in areas 15° to 18° from the equator. The plant itself prefers acidic soil with a pH between 4.5 and 5.0. Optimum shoot growth occurs between 75% and 90% relative humidity. In addition, environmental factors such as strong wind, frequent frost, and excessive rainfall can have an adverse effect on producing a high-quality tea.

Globally, most tea growers prefer elevation above 1,500 ft (>500 m) with rainfall less than 80 inches (2,000 mm) per year, but Hawai'i has a wide range of elevations and rainfall in which the *Camellia sinensis* plant can grow (Zee et al. 2003). Hawai'i's location, climate and environment generally have the characteristics required for optimal tea cultivation as long as sufficient irrigation is available. For example, CTAHR plantings do well at the college's Mealani Research Station in Kamuela in Hawai'i County at an elevation of 2,800 ft. and an annual rainfall of 65 inches plus irrigation, as well as at the CTAHR Volcano station, also in Hawai'i County, at an elevation of 4,000 ft. and an annual rainfall of 120 inches.



Tea in Hawai‘i

History

Camellia sinensis was introduced into Hawai‘i in 1887 and was first commercially cultivated by the Hawaiian Coffee and Tea Co. in 1892 (CTAHR 2007). Tea as a commodity did not expand beyond this planting, however, because the business was not profitable, unlike other crops such as pineapple and sugar cane. Further exploration of tea as a potential industry for Hawai‘i didn’t occur until the 1960s. By the 1980s various test crops were planted on the Big Island, Maui, Kaua‘i, and O‘ahu, but it was found that due to high production costs and low global commodity prices, tea would not be viable as a commodity. However, research conducted by CTAHR over the last two decades has encompassed many aspects of growing, processing, and marketing tea. Various cultivars of tea from around the world result in different tea qualities, grow best in different conditions, and can be resistant to disease and other problems, and the initial focus was on selecting varieties that would be suitable for Hawai‘i’s conditions. Within the past decade or so it has become clear that while tea cannot survive as a commodity crop in the Islands, it is well positioned to succeed as a specialty product.



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Hawai‘i’s Tea Industry Today

An Internet search conducted to ascertain representative numbers finds 19 farmers currently growing tea in the state of Hawai‘i. Table 1 presents a profile of these producers. Of the 19 growers, 14 have developed businesses for the product and 10 are producing and marketing tea products. Note, however, that there are other growers beyond this 19, who are experimenting with growing and processing tea but do not yet have a Web presence.

Four Hawai‘i growers have collaborated to form a collective, in which their products are processed and marketed under a common label in order to take advantage of economies of scale. Each package possesses an additional label that specifies where the contents were grown in an attempt to differentiate each farmer’s product.

CTAHR’s Mealani Research Station has about half an acre of tea trees, a small portion of which—four to five rows—is planted at double density. Currently four varieties are released by CTAHR in Hawai‘i: Bohea, Yabukita, Yutaka Midori, and Benikaori; these are considered to be of consistently high quality.

The Hawai‘i Tea Society (HTS), a non-profit organization with membership open to tea growers and enthusiasts, is committed to performing services associated with tea cultivation, culture, and arts preservation. The HTS provides its members with education, legislative and grant support, and assistance with tea propagation. It has dedicated a portion of its efforts to



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acquiring a trademark through the state for “100% Hawai‘i-Grown Tea” which all growers can put on their products to combat the negative impact on brand quality resulting from flavored “Hawaiian” blends containing no Hawai‘i-grown tea.

Loose-leaf brewing tea currently being processed and marketed in Hawai‘i carries Internet prices from \$132.16 to \$573.92 per pound, while selected prices in other market channels range from under \$100 up to \$4,800 per pound, depending on the harvest and type of tea.

The cultivation and processing of tea requires a high level of knowledge and skill in order to produce a consistent and high-quality product. Except for the CTAHR research stations, all processing of tea in Hawai‘i is currently done by hand, resulting

in a highly artisanal product. To date, there has not been a serious threat to the industry from insects and disease. However, the importation of plant materials increases the risk of introducing and spreading pests and microorganisms that may be harmful to the industry and to Hawai‘i’s environment.

Table 1. Profile of Current Hawai‘i-Grown Tea Producers

Characteristic	Number of Farms	Percentage of Total Farms
Type of Operation		
Independent	15	79%
Collective	4	21%
Location		
Big Island	17	89%
Kaua‘i	1	5%
Maui	1	5%
Features		
Organic	6	32%
Sustainability	6	32%
Hand-Picking/ -Processing	19	100%
Web Site	10	53%
Producing	10	53%
Selling Wholesale	7	37%
E-commerce	9	47%



CASE STUDY

Nilgiri Estate Tea

Nilgiri, a mountainous region in Southern India, began growing tea as a commodity during the 1920s, when large multinational companies set up large plantations (Venugopal 2004). By the 1930s the Indian government had created the Tea Board of India, a government organization responsible for controlling the land used for tea; exports of plants, products, and seeds; grants; and inspection (Tea Board of India 2006). Local individuals began to grow tea on small plots of land ranging from half an acre to 10 acres to sell to the company to process and market. In the 1970s, the local community began to form cooperatives with central processing facilities, which protected the growers by guaranteeing a fair price. By the late 1980s there were 13 cooperatives among 9,000 growers (Bhowmik 1989). At the time the market could handle the supply because of a strong trade agreement between India and what was then the U.S.S.R., so the farmers and cooperatives enjoyed high commodity prices.

In the early 1990s, after the fall of the U.S.S.R., demand decreased while the global supply of commodity tea continued to rise, with increased production from countries such as China and Sri Lanka. Prices dropped significantly, and growers had difficulty covering costs. Over half a century of mass monoculture had degraded the soil in Nilgiri, and farmers began to look for other options to support their communities.

Researchers investigated possible ways to either reduce costs for these farms or increase the price of their products. It was found that the cooperative model had already reduced costs as much as it could, but that there was opportunity in the conversion of the industry from commodity to specialty (J. Neilson 2006). In order to accomplish this goal and increase the price of products, it was necessary to focus on increased quality and marketing. The Tea Board became more involved in the production of tea in order to control supply and quality. Growers were empowered with education in village self-help groups. Government grants became available through the Tea Board to improve processing techniques and replace antiquated machinery.

Growers are now encouraged to develop the quality of their products by creating their own path for excellence (Jain 2003). Currently Nilgiri estates are creating their own category of tea with its own unique characteristics and quality, similar to Puer tea. Over the past years, teas from this region have been performing better in the market; they are seen in most specialty retail outlets in the U.S. and are identified as Nilgiri estate teas, yielding a higher price. Through this process the growers are revitalizing the image of teas from India and converting a dying commodity industry into a thriving specialty industry.

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Supply of Hawai'i-Grown Tea

Extrapolating from the double-density plantings at the Mealani Research Station, it is assumed that each farm could support 9,680 plants per acre. At this density, each acre should be able to produce at least 2,420 pounds of processed tea per year. Applying these numbers to the known acreage or tree count of each farm, it is estimated that the maximum total supply for the 10 known actively producing farms could be around 26,968 pounds per year. However, since the Mealani plot is probably the best-case scenario and most growers are not planting at this density, the actual supply is much smaller, so 5,000 pounds per year will be used for analysis purposes in this report.



Extrapolating from the double-density plantings at the Mealani Research Station, it is assumed that each farm could support 9,680 plants per acre.

Within the next five years, it is expected that the other nine known farms will be at maturity. Using Mealani as the framework again, the total maximum supply in five years has the potential to be 35,000 pounds per year. In all likelihood, though, the actual production level will probably be 12,000 to 15,000 pounds per year.

While the industry may attract new producers who will be planting their own tea fields, the plants will take five years to reach full maturity. Therefore, a possible solution to the problem of sufficient supply is to consider harvesting and processing the third and fourth tea leaves instead of the traditional bud and first two leaves. This can double a tree's yearly yield; however, if this option is chosen, a grading system should be implemented to differentiate between the premium quality of the top leaves and the lesser quality of the secondary leaves.

Product Development

Many aspects of growing tea and various parts of the tea plant can be used to generate other sources of revenue and related industries. The following are a few examples of possible tea-related products and uses:

- Fresh tea leaves for culinary purposes, such as mixed with other foods, as an herb, or to smoke foods
- Tea used for flavoring candies, liquor, ice cream, pastries, and other items
- Tea for cosmetics and for pharmaceutical and medicinal purposes
- Tea in spa treatments
- Tea extracts used for industrial products such as dyes and detergents
- Oil pressed from tea seeds for use in salad dressings and cosmetics
- Oil cake from pressed tea seed oil for cattle silage
- Tea farms and processing facilities as tourist destinations
- Ancillary products such as teapots and cups, measuring spoons, and other items packaged for gifts



Market Analysis

The U.S. does not have a prominent domestic tea industry: Besides Hawai'i, there is only one commercial producer in South Carolina and several smaller operations in the western U.S. Therefore the country imports practically all it consumes. In 2008, it was the fourth largest importer in the world, with about 116,746 tons, most of it from China. Recent trends indicate the popularity of tea is growing in America. Between 2001 and 2009, the per capita tea consumption in the U.S. increased from 0.87 to 0.96 pound per year. Part of the demand for tea originates from its perceived health qualities.

Packaged Facts indicates that loose-leaf tea represented 5.4% of tea sales in the U.S. in 2008. Utilizing these measures, it can be estimated that loose-leaf specialty tea sales was about \$72.15 million in 2008 and that by 2014 it will be about \$133.5 million. Hence, specialty tea, including the loose-leaf form, is well positioned for financial growth.



Specialty teas include a large category of teas that are grown in a region known for exceptional quality.

Specialty Tea Trends

Specialty teas include a large category of teas that are grown in a region known for exceptional quality. These products tend to yield a higher price and in the U.S. are most commonly found in specialty outlets or online. The global volume of specialty tea has the possibility to double in the next five years. For this reason many growers that have customarily been in the commodity business are switching over and focusing on producing a higher quality product.

An increasingly popular trend is to categorize tea by the region where the *Camellia* tree is grown. For example, Darjeeling tea is a popular tea that is categorized and defined by the name of the town in which the tea plant grows. Similarly, Puer tea is named after the Puer county near the province of Yunnan in China. Being classified by year and region of production, much like wine, Puer tea is able to differentiate itself from the main categories of teas. Both Puer and Darjeeling tea have value-added characteristics that enhance the reputation of the product. These qualities are distinct enough to differentiate them from other types of tea.



In a price analysis of nine different specialty tea retailers it was found that prices range from \$26.40 to \$814.20 per pound. Prices were extracted from e-commerce sites of the companies and converted to per-pound amounts.

In a convenience survey, a sample of 46 consumer respondents was asked about characteristics that have the most influence on specialty tea purchases. The characteristics that influence their purchase motivations in order from most important to least important, based on the averages of responses, were quality, sustainability, origin, price, organic, hand-picked leaves, hand-rolling, and age of plantation. According to this survey, specialty tea trends favor high-quality teas with competitive prices that originate from areas known for their quality that are employing sustainable agriculture practices. It should be noted that this survey is not random and may not be representative of typical specialty tea retailers or consumers.



The specialty tea segment is the newest to the U.S. market as growers are converting to artisan operations. Interest from operators, hoteliers, entrepreneurs, and consumers has been the driver of this segment.

Target Market

The general tea market in the U.S. has four main segments: supermarket, ready-to-drink, food service, and specialty tea, each with its own demand and supply functions shaping market performance. The specialty tea segment is the newest to the U.S. market as growers are converting to artisan operations. Interest from operators, hoteliers, entrepreneurs, and consumers has been the driver of this segment.

Two target markets have been identified for U.S. domestic specialty tea: aging baby boomers and wealthy, educated youth. Baby boomers are becoming more conscious of their health and putting more attention into their purchases, switching from coffee to tea and from tea bags to specialty loose-leaf tea. The specialty tea market has the most potential for growth within this demographic because they are willing to spend more on products they believe are better for them.

The second target market that was determined in this study, educated youth, is a much different market than baby boomers. These individuals, with incomes higher than \$150,000, are connoisseurs of specialty tea and devotees of novelty, and they are always looking for new products to try.



Development Stages for Hawai'i-Grown Tea

Three stages have been identified for Hawai'i-grown tea. Stage 1 is the emerging stage, which describes the existing status of the Hawai'i-grown tea industry. Stage 2 is the growth stage, where this tea becomes more and more popular within the U.S. domestic specialty tea market. Stage 3 is the mature stage, at which tea is created as a sustainable domestic specialty crop in Hawai'i for global consumption. Each stage is here illustrated with a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis.

Stage 1: Emergence

In the first stage, Hawai'i-grown tea is developing its own characteristics and establishing a high quality standard in order to find a niche market of consumers with higher disposable income who have a preference for specialty tea. The targeted group includes local residents as well as domestic and international tourists. Tourism is well established; both locals and tourists are willing to purchase tea at a premium price if they perceive that Hawai'i tea differs from other teas. The differences can be quality, image, taste, packaging or other characteristics. Among these, quality is the most important characteristic that attracts repeat customers.

In the first stage, Hawai'i-grown tea is developing its own characteristics and establishing a high quality standard in order to find a niche market of consumers with higher disposable income who have a preference for specialty tea.

Table 2. SWOT Analysis for Stage 1

<p>STRENGTHS</p> <ul style="list-style-type: none"> • Made in Hawai'i • Exotic Hawai'i image • Year-round growing season • Relationship with high-end tea service providers • Clean and pesticide-free growing environment • Novelty • Exclusivity 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> • High production costs • Farmers' lack of adequate experience, knowledge, and training • Inconsistency in flavor/quality • Lack of standardized characteristics and grading system • Lack of promotion and consumers' public awareness • Lack of brand protection of the word "Hawai'i"
STAGE 1 SWOT	
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Growing trend toward buying local in Hawai'i • Increasing demand for specialty teas • Growing consumer and product trends toward high-end natural products • Tourism offers another channel of distribution 	<p>THREATS</p> <ul style="list-style-type: none"> • Beverage substitutes: energy drinks and coffee • Competition from alternative souvenirs • Hawai'i-grown teas cannot be differentiated from "Hawaiian" flavored or labeled teas • Blended teas devalue brand • Backlash from companies that currently use Hawai'i on their label • Natural threats such as insect infestation and drought



Stage 2: Growth

At this stage, public awareness of “Hawai’i-Grown” specialty tea has been established. The tea made in Hawai’i is carried and offered by local and domestic high-end tea retailers and tea service providers.

Table 3. SWOT Analysis for Stage 2

<p>STRENGTHS</p> <ul style="list-style-type: none"> • The label “Hawai’i” is associated with exotic • Improved farmer skills leading to consistent quality • Only Hawai’i farmers can claim “Hawai’i-grown” • High-quality product • Recognized among specialty teas as a unique product 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> • Increased costs • May have difficulty accessing capital to increase operations • Lack of management training in expanding operations from family-run to commercial/employee-based business • Lack of cooperative marketing strategy
<p>STAGE 2 SWOT</p>	
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Growing U.S. tea industry • First mover as a U.S. specialty tea • Domestic consumer base that can be educated about specialty teas • Agriculture has ability to fix prices and market accordingly • Other uses of tea plant • Tourism and agritourism are marketing and promotional opportunities 	<p>THREATS</p> <ul style="list-style-type: none"> • Competition from other specialty teas • Competition from other substitute souvenirs • Shortage of necessary labor • Lack of differentiation between “Hawaiian” labeled or flavored teas and Hawai’i-grown • Blending with other types of tea

Stage 3: Maturity

In Stage 3, Hawai’i-grown tea is recognized as a global tea category. As it moves to a mature stage, the unpredictability of the global marketplace may influence the situation of the Hawai’i-grown tea industry.

Table 4. SWOT Analysis for Stage 3

<p>STRENGTHS</p> <ul style="list-style-type: none"> • Uniqueness and image of Hawai’i has global appeal • High quality and reputation for high quality • Hawai’i-grown tea established as one of few U.S. specialty teas • Established loyal consumer base 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> • Lack of international management experience • Might be subject to price volatility when competing with foreign specialty teas
<p>STAGE 3 SWOT</p>	
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Potential of increased Asian tourism offers opportunity to penetrate Asian market • Hawai’i-grown tea can be a first mover in global market as U.S. specialty tea • Opportunities for tourism and agritourism 	<p>THREATS</p> <ul style="list-style-type: none"> • Failure to maintain quality of product • Subject to international trade regulation • Cost of transportation and tariffs may affect margins and discourage international retailers from carrying Hawai’i-grown tea. • Keeping international repeat sales



Financial Analysis

Many variables are involved in starting a tea plantation because it is a relatively new crop in Hawai'i with unique requirements. Costs of these requirements vary depending on the location of the farm and climate; for instance, rainfall varies greatly on the Big Island, and therefore some areas require irrigation while others do not. The financial analyses presented here utilized estimates provided by AIP on the Mealani Research Station tea plantings, including tree density, acreage yield, and processing and equipment costs, as well as non-farm expenditures such as overhead, inflation, depreciation, loans, and labor. The price for finished tea is \$400 per pound.

Processing

A cash flow statement was created using three different scenarios of how a farmer might enter the Hawai'i tea industry. The first model assumes that a farmer has access to capital to purchase equipment and build a certified kitchen in order to mechanize the processing of the tea. The second and third scenarios are more representative of the typical farm plantation. The second scenario depicts a farmer opting to hand-process the tea leaves, while the final scenario illustrates the farmer harvesting the crop only and paying for it to be processed. While all three scenarios reach positive cumulative cash flows within five years, and each has good profitability by the time the trees reach maturity, they vary in other metrics.

Purchasing equipment and hand-processing have payback periods by year 5, but “harvest only” reaches positive cumulative cash flows by year 4. On the other hand, “purchase equipment” has the highest net profit margins. Among the three scenarios, hand-processing tends to have the lowest numbers in terms of net profit margins and cumulative cash flows; thus a farmer’s best option is to purchase equipment for mechanized processing or harvest the plants only.

Both the “harvest only” and “purchase equipment” scenarios have advantages and drawbacks. On one hand, a huge capital expenditure is required to acquire the necessary equipment and facility. On the other hand, the harvest-only farmer has less capital risk but reduced long-term profitability.



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Table 5. Comparison of Net Profit Margin and Cumulative Cash Flows in Three Scenarios

Net Profit Margin				Cumulative Cash Flows			
Year	Purchase Equipment	Hand-Process	Harvest Only	Year	Purchase Equipment	Hand-Process	Harvest Only
0	N/A	N/A	N/A	0	-705,000	-44,000	-44,000
1	N/A	N/A	N/A	1	-792,843	-62,714	-62,714
2	N/A	N/A	N/A	2	-890,081	-86,150	-86,150
3	48%	-2%	23%	3	-709,322	-85,446	-64,909
4	73%	43%	43%	4	-129,335	-536	19,552
5	78%	46%	47%	5	703,291	124,637	147,214



Table 6. Comparison of Cumulative Cash Flows, Net Income, and Net Profit Margin Between Varying Plant Densities, “Purchase Equipment” Scenario

Cumulative Cash Flows				Net Income				Net Profit Margin		
Year	9,680/acre	3,000/acre	Increase/-Decrease	Year	9,680/acre	3,000/acre	Increase/-Decrease	Year	9,680/acre	3,000/acre
0	-705,000	-656,570	48,430	0	0	0	0	0	N/A	N/A
1	-792,843	-743,143	49,700	1	-123,093	-119,401	3,692	1	N/A	N/A
2	-890,081	-839,072	51,009	2	-132,488	-128,758	3,730	2	N/A	N/A
3	-709,322	-868,587	-159,265	3	164,182	-62,344	-226,529	3	48%	-63%
4	-129,335	-782,601	-653,266	4	588,455	53,158	-535,297	4	73%	23%
5	703,291	-628,880	-1,333,217	5	857,415	120,893	-736,522	5	78%	38%

Table 7. Comparison of Cumulative Cash Flows, Net Income, and Net Profit Margin Between Varying Plant Densities, “Harvest Only” Scenario

Cumulative Cash Flows				Net Income				Net Profit Margin		
Year	2,500/half-acre	4,840/half-acre	Increase/-Decrease	Year	2,500/half-acre	4,840/half-acre	Increase/-Decrease	Year	2,500/half-acre	4,840/half-acre
0	-44,000	-61,774	-17,774	0	0	0	0	0	N/A	N/A
1	-62,714	-81,033	-18,319	1	-20,914	-22,347	-1,433	1	N/A	N/A
2	-86,150	-106,517	-20,367	2	-25,636	-28,573	-2,937	2	N/A	N/A
3	-64,909	-76,492	-11,583	3	19,040	26,936	7,896	3	23%	17%
4	19,552	35,905	16,353	4	82,261	109,308	27,047	4	43%	29%
5	147,214	208,389	61,175	5	125,462	169,396	43,934	5	47%	33%



The Mealani Research Station’s example probably demonstrates the maximum yield under ideal conditions.

Planting Density

The “purchase equipment” and “harvest-only” scenarios can be further examined to discover which variables had the greatest effect on cash flows and profitability. For instance, variable costs such as labor and processing were inflated to ascertain their effects on several financial metrics. As expected, increasing these variable costs hurt profitability to various extents, but the venture remained profitable.

The most sensitive variable in both scenarios was yield production. In fact, the key to financial success is how efficiently the farmers’ fields are set up. The Mealani Research Station’s example probably demonstrates the maximum yield under ideal conditions. As the yield decreases, the cost of production increases. Thus, maximizing the yield with an appropriate planting density is integral to the success of the Hawai’i-grown tea industry. This is even more critical since planting density is difficult to alter once fields have been established. Under present market conditions, Hawai’i-grown tea can command a \$400/lb. price with a high demand; more production will increase sales. Thus, growers are able to absorb increasing variable costs while maintaining high net profit margins.



Recommendations

Hawai'i-grown tea is a small, fragmented, and nascent industry with an estimated 0.14% of the loose-leaf tea market in the U.S. There is potential for growth in the future: in Hawai'i, particularly in relation to the visitor market; in the continental U.S.; and internationally. The following recommendations are offered to guide the growth, accelerate the development, and sustain the economic viability of the Hawai'i tea industry.

- **Protect the brand.** The distinctiveness and quality of 100% Hawai'i-grown tea can easily be eroded and lost without regulatory and other protection. Should this occur, the industry may not be able to command the high prices in the specialty tea market and may decline economically because of the high cost of production in the state. Agricultural policy, legislation, and legal strategies should be implemented to protect the “100% Hawai'i-Grown Tea” label in a way that is effective and difficult to distort. This might take the form of trademarks and copyrights that are binding within the state and beyond its borders.
- **Ensure the quality.** The quality of tea sold as Hawai'i-grown is currently inconsistent and still developing. There are no industry standards, and this lack jeopardizes the real and perceived image of quality that should be cultivated for tea grown in Hawai'i. Quality standards will protect the product and the high prices it is able to command in the marketplace. With industry participation, an independent body should be formed to develop standards for Hawai'i-grown tea and to monitor adherence to the standards.
- **Create a new category of tea.** Although the teas processed in Hawai'i are counterparts to green, oolong, black, and white teas, they also possess different qualities. Because the other teas are well established, with their own distinctive tastes, when Hawai'i tea is labeled as one of the other types of tea, it may suffer in comparison—not because of its quality, but because the Hawai'i tea does not taste the same as the prototype. For this reason, it might be desirable to create a new Hawai'i-grown tea designation with its own unique characteristics.
- **Promote Hawai'i-grown tea.** Promotion and marketing are essential to public awareness of a product and to growing an industry. With public and private support, personnel and resources should be allocated to promote Hawai'i-grown tea and its related products through the media, events, activities, and in other ways.
- **Provide financial supports.** Start-up costs for farmers and processors entering the tea industry can be considerable. Agricultural subsidizes and low-cost loans for land and equipment can nurture the success of this nascent industry. As well, the types and structure of the financial assistance can guide the operational efficiency of the industry. For example, funds in support of cooperative tea processing, rather than individual processing, could yield higher returns and lower production costs because of economies of scale.



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In the short and long terms, the health and viability of Hawai‘i’s tea industry is greatly dependent on research and education that are focused specifically on this agricultural commodity.

- **Invest in research and education.** In the short and long terms, the health and viability of Hawai‘i’s tea industry is greatly dependent on research and education that are focused specifically on this agricultural commodity. While there is a good foundation of knowledge relating to tea production, there is and will be a continuing need for research to improve cultivation and processing methods, prevent and resolve insect and disease problems, and enhance quality development—all of which, if left unattended, could greatly delay and/or harm the industry. Moreover, this is a fledgling industry that will involve individuals with little knowledge of tea; therefore, educational outreach to all members is essential—from farmers to processors to retailers—on production methods, financial education, disease identifica-

tion, sources of assistance, sale strategies and outlets, and other topics. Establishing a mechanism to provide a continuing source of revenue, perhaps supported by the sale of tea and tea products, for research and educational outreach would ensure dedicated support specifically for this industry.

- **Develop new and related tea products.** Much of this report has focused on the leaves of the tea plant targeted for the specialty market. The image and brand of the product is established by the aforementioned, which creates markets and establishes price points for related products, some of which were mentioned previously in this report. To capitalize on an expanding interest and consumer base for Hawai‘i-grown tea, there should be a concerted effort to develop the “related products” segment of the industry as well. This has the potential to mutually benefit the driving specialty beverage aspect of the industry and the state’s overall economy. The recommendations relating to quality controls, financial supports, continuous research and education, and other points in this report apply to related tea products as well.
- **Collaborate for the common good.** Growing and sustaining an industry can best be accomplished by public, private, and academic partnerships that have the will and can implement actions across domains to pave the way for success. This requires an understanding of industry needs, the operational contexts within and external to the state, and the commitment to resolve and overcome barriers that impede progress. It also requires the participation of industry members, policymakers, regulators, researchers, and outreach educators to focus with laser-intensity on Hawai‘i-grown tea and its economic viability. But above all, it requires private tea operators to collaborate on actions that benefit the whole of the industry, recognizing that these actions may curtail the range of independent activities but in the long term will benefit everyone in the industry.



Citation

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