

CAROL A. MACLENNAN

## Foundations of Sugar's Power: Early Maui Plantations, 1840-1860

BY ALL STANDARDS in the world sugar economy of the mid-nineteenth century, Hawai'i's commercial sugar experiments were largely failures. The Hawaiian king, island governors, foreign-born Chinese, American merchants, and retired ship captains were the first to experiment with commercial production. Sugar establishments of the 1840s and 1850s on Maui, Hawai'i, and Kaua'i represent the early formation of a powerful industry that transformed political and economic life by the end of the century.

Production on Maui was probably the most active during this time. Plantations in Wailuku, Makawao, Honua'ula, Hāna, and Lahaina provide us with the detail necessary to tell the story of early commercial sugar.<sup>1</sup> Most accounts of the sugar industry skip this early period—partly because of the paucity of documentation, but also because very few of the successful enterprises emerged from this period. This is a mistake. Some of the most important developments paving the way for the large industrial plantation of the 1890s occurred at this time.

### WHY STUDY FAILURE AND NOT SUCCESS?

Hawai'i's sugar history is usually written as a success story: beginning with Kōloa on Kaua'i, sugar plantations overcome obstacles, grow

*Carol A. MacLennan is associate professor of anthropology at Michigan Technological University in Houghton, Michigan.*

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in size, and assume their destined economic position in Hawaiian society. This view of history is reinforced by the fact that at the century's end the power of sugar to shape political and economic life was nearly absolute. The tendency, then is to examine the successful enterprise and all the historical forces that pushed sugar to the forefront of Hawai'i's history. This framework promotes a heroic view of sugar's rise to power—not necessarily a realistic account.

Some important information, therefore, remains unexamined and some important questions aren't asked. Stories of commercial sugar experimentation that ended in failed partnerships, operational breakdowns, and periods of idle mills and uncultivated fields reflect a period of political and economic transformation. Plantation organization was makeshift. Investments in technology were small and primitive compared with other sugar-producing regions in the world at the time. Owners were inexperienced as managers and as financiers. And, the major variables important to success—land, labor, and water—were not always available or certain.

Hawai'i's early sugar history must be placed in the context of its times. The Hawaiian government had embarked upon a major drive to promote commercial agriculture beginning in the early 1840s. This coincided with establishment of the constitutional monarchy. Rhetoric of that decade resonates with the vision of a commercial society. King Kamehameha III's 1847 speech to the legislature links commercial agriculture with the future development of the Hawaiian people:

I recommend to your most serious consideration, to devise means to promote the agriculture of the islands, and profitable industry. . . . What my native subjects are greatly in want of, to become farmers, is capital, with which to buy cattle, fence in the land and cultivate it properly.<sup>2</sup>

Infused with Western notions of development and industry, this thinking resembles that of William L. Lee, a New Englander, adviser to the king, and a major figure in the land reforms that led to the Mahele. Lee wrote Kamehameha in 1847:

It is my firm conviction that this silent and bloodless revolution in the landed tenures of Your Kingdom, will be the most blessed change that

has ever fallen to the lot of Your Nation. It will remove the mountain of depression that has hitherto rested on the productiveness of your soil, unbind the fetters of industry and wealth, and give a life and action to the dormant resources of your Kingdom. . . . I most sincerely believe that, this great measure by raising the Hawaiian nation from a state of hereditary servitude, to that of a free and independent right in the soil they cultivate, will promote industry and agriculture, check depopulation, and ultimately prove the salvation of Your People. . . .<sup>3</sup>

While the king and his advisers both pushed the commercial development of agriculture, their purposes probably differed. Kamehameha III often spoke of the need to strengthen the Hawaiian population, bolster the independence of the nation through trade and export, and build the financial capacity of the new government. Western advisers such as William Lee envisioned a radical change in the moral economy. Pursuing a cultural goal of "civilization," they interjected more narrow New England ideals of yeoman farmers, free labor, and private property in their advice to the king on how best to maintain independence and build a new economy. For the time being during the 1840s and 1850s, the shared desire to promote commercial agriculture obscured their differences on how to achieve Hawaiian prosperity.

In fact, Kamehameha and Western advisers such as Lee envisioned a marketplace filled with different commodities offered for sale to the Pacific trade. The Royal Hawaiian Agricultural Society, commissioned by the king, was busy during the early 1850s promoting experimentation and marketing of many products. Sugar plantations represented only one of many, and not always the most important, commercial ventures of the period. Revenues came also from Irish potatoes, pulu, goat skins, fungus, wheat, poi, rice, coffee, and a general vegetable trade. Some products satisfied internal markets (wheat, poi, rice); others targeted whaling vessels in the ports of Honolulu, Lahaina, Hilo, and Kawaihae (potatoes, vegetables, sugar syrup, and molasses). A few were bound for markets in the Pacific trade such as China (sugar, pulu, fungus), Oregon, and California (sugar, molasses, pulu, goat skins, coffee).

It is also important to remember that commercial agriculture itself, in spite of the rhetoric, represented a relatively limited part of

the Hawaiian economy of the 1840s and 1850s. Most of the population was devoted primarily to what anthropologist Marshall Sahlins calls the “poi economy” of taro, sweet potato, and other crops. Most agricultural production was still geared for use and not export.<sup>4</sup> Evidence suggests that this was by choice of many Hawaiian planters who remained in rural districts. As discussed later, even under pressure to pay taxes and work on sugar plantations, Hawaiians preferred to control their own labor and mix traditional agricultural with wage work. From the point of view of foreign planters, this became an impediment to the advancement of sugar interests. As long as land, labor, and water resources were controlled by traditional Hawaiian local economies, they were either unavailable or, if available, inadequate to commercial agriculturalists.

Two things resulted from the general failure of commercial sugar ventures in the 1840s and 1850s. First, the Hawaiian government, already committed to promoting Western-style commerce, embarked upon a series of political and administrative reforms that ameliorated the problems facing export agriculture. In some instances, reforms were targeted directly toward enhanced sugar production. Second, the failures of early plantations encouraged the development of a planter class (many from missionary families) who applied different operational and financial strategies to the plantations of the 1860s. A survey of sugar ventures on Maui from 1840 to the early 1860s illustrates just how critical the failed plantations were to later developments.

#### THE KING'S MILL AND OTHER HAWAIIAN VENTURES

The first sugar ventures were either Hawaiian-owned or regulated by Hawaiian rulers. In most instances, they were managed by either Chinese sugar boilers or American shopkeepers in rural districts. Operating under traditional economies of land use and labor control, these unsuccessful plantations provide a preview of the tension inherent between commercial and traditional Hawaiian agricultures.

The most interesting example is the King's Mill (Kamehameha III), which was built in Wailuku sometime in 1839–40. Its purpose was probably to encourage the commercial cultivation of sugar by native Hawaiians in the district, and it illustrates an early effort to blend



FIG. 1. King Kamehameha III played an active part in promoting the development of sugar and other commercial agricultural activities in the Islands. (Hawai'i State Archives.)

Hawaiian and foreign agriculture. In his 1839 station report for Wailuku, missionary Richard Armstrong wrote:

[T]he King has given out small lots of land, from one to two acres, to individuals for the cultivation of cane. When the cane is ripe, the King finds all the apparatus for manufacturing & when manufactured takes the half. Of his half one fifth is regarded as the tax due to the aupuni (government) & the remaining four fifths is his compensation for the manufacture. These cane cultivators are released from all other demands of every description on the part of chiefs.<sup>5</sup>

He observed that about eighty acres had been planted. But in the following year, Armstrong believed that the venture was failing:

The whole concern has been badly managed on the part of the King or rather his agents. Contrary to the advise of both myself & Mr. Richards a Chinaman has been employed at an immense disadvantage to the King to manufacture the cane into sugar; But the Chinaman has as yet but very little preparation made for his work & will not grind a stick of cane for months to come, while the cane is rotting on the ground.<sup>6</sup>

The king signed an agreement with several native planters under an "acre system." A blend of Western-style written contract and Hawaiian labor rules, the agreement stipulated responsibilities for growing and carting cane to the mill. Punishment for disobedience was spelled out:

[T]his document informs you of the removal of the acre man from the acre, who will not listen, who agrees but does no work after the agreeing; of not working at the place pointed out for working cane; who does not work in emergency work in the two or three days and does not finish . . . this is the punishment against those that work like this, the half prison days will be counted from this time to the time of your removal from the prison . . . and the payment of half a dollar for the year 1839 and the year 1840. These words will be carried into effect if all of the directions of the lunas are not carried out.<sup>7</sup>

Three months later, additional terms were imposed on the "acre men":

The wood shall be hewed by the sugar planters so that their sugar can be cooked, and shall bring it to the place where the carts can go. Then, it shall be for the King's carts to go after it, together with the one who owns the wood, and he is to load it on the cart, and the bullock driver shall take it to the mill. The wood owner shall keep the bullock driver in food. . . . [On] the harvesting of the cane: The King's carts shall go to the place near the cane, where the cart can go properly, and the one who owns the cane shall do the harvesting, and load the car, then, his work is finished, but he shall provide the bullock driver with food. . . . [C]oncerning the luna . . . this is his duty: he shall look after the cane properly. . . . and he shall teach the planters so that they will do their planting properly. . . . And should they not take care according to the document, then it must be the luna who is to punish them, according to the agreement. . . .<sup>8</sup>

In 1840, the king ordered an iron mill from the United States, and it was erected by August.<sup>9</sup> Hung & Co. in 1841 advertised the sale of sugar and sugar syrup from its 150-acre plantation in Wailuku. More than likely, this was sugar from the King's Mill.<sup>10</sup>

Records indicate that operations did not go smoothly. Food shortages led the Chinese manager to request a lease of the fish ponds in Wailuku in order to keep the men working for him.<sup>11</sup> Sent to arbitrate disputes in the cane fields, the king's representative, Boaz Mahune, found problems between the Chinese and men working under the chiefs.<sup>12</sup>

The mill probably continued until at least 1844, but under different management. An unknown correspondent wrote to the Legislative Council:

I wish to let you know, that you entrusted the Sugar Mill of Wailuku to me, I worked it in the year '43, and 12 hundred dollars and more was received. With this money I bought and received the tools and implements to carry on said work. . . .<sup>13</sup>

The King's Mill experiment hints at problems that faced sugar ventures during these early years. Difficulties in coordinating mill operations and field work were common among all early planters. Once ripened and cut, cane deteriorates quickly and must be speedily carted to the mill and ground immediately. Organizing and feeding a

sizable labor force to cultivate and cut the cane required a labor discipline and an available food supply that was not necessarily obtainable from the local native economy.

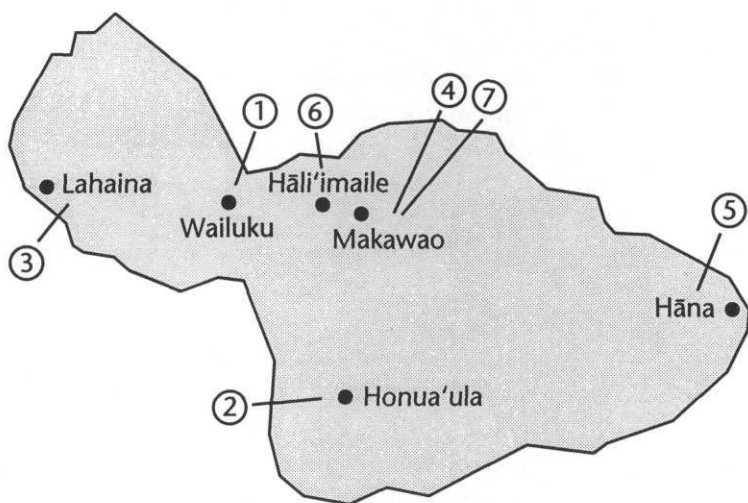
We have less information on other Hawaiian sugar initiatives started in the early 1840s. The king made a different type of arrangement for cane cultivation at Honua'ula, East Maui (in an area now known as 'Ulupalakua). An agreement between Captain Michael J. Nowlein, formerly of London, to grow and manufacture cane for the king was signed August 25, 1841. The agreement stipulated that Nowlein would manufacture the king's cane in Honua'ula for ten years. The king also gave him two farms to be held "in the same manner as the konohikis of this country," but which would revert to the king when Nowlein stopped manufacturing sugar. Nowlein agreed to furnish the mill, the pots, and all other articles for manufacture of sugar. The sugar, molasses, and other agricultural products were to be divided equally between the grower of the cane and Nowlein. The king agreed to cultivate fifty acres for the mill from his own lands.<sup>14</sup> There is no information concerning this property until 1845, when Captain Lincoln L. Torbert became a planter, on land leased from the king. Within a year, Torbert ended up with ownership of the mill.<sup>15</sup>

Other Hawaiian growers planted sugar in Lahaina and Makawao. In 1837, Lahaina missionary Dwight Baldwin noted in his station report that three mills were in operation at Lahaina, two owned by "common" natives. "The sugar & molasses of the higher chiefs are all made at the mills of the common natives."<sup>16</sup> Twelve years later, in 1849, he reported that "a sugar mill is in good operation & many natives are preparing respectable fields of cane."<sup>17</sup>

In the Makawao, East Maui, area, Hawaiians also grew cane for the Lahaina market. By 1849, one observer noted that there were six sugar plantations in the Makawao area, growing about seven hundred acres of cane total and employing two hundred native Hawaiians during a large part of the year. Two hundred of those acres (just under one-third of the total) belonged to Hawaiians, cultivated by them.<sup>18</sup>

Sugar establishments owned by foreigners were in the minority during the 1840s and were principally in Makawao and Hāna. Leasing land at \$50 per year for fifty years from Hoapili, governor of Maui in 1838, Edwin Miner and William McLane started a plantation. The





**1 King's Mill, Wailuku.** Started by Kamehameha III in 1839. Ceased operation about 1844.

**2 King's Plantation, Honua'ula.** Mill of Michael Nowlien built in 1841 on leased land. L. L. Torbert became owner in 1846. Sold to James Makee in 1859. Continued sugar operations until the 1870s.

**3 Lahaina Planters and Mills.** Hawaiians grew sugar and ran small mills as early as 1837. Continued into the early 1850s.

**4 Miner & McLane Plantation, Makawao.** Started in 1838 by Edwin Miner and William McLane under agreement with Hoapili. John T. Gower became a partner in 1849. The partnership ended in the 1850s.

**5 A. B. Howe Plantation, Hāna.** Howe bought land in 1850 and set up an iron mill in 1852. G. B. Judd bought in 1852. The mill burned in 1854 and plantation closed. Land sold to Neeham, Cook, and Unna in 1861. Revived as Hāna Plantation.

**6 Hāli'imaile Plantation.** Started in 1849 by A. W. Parsons and Stephen Reynolds on leased land. New mill set up in 1852. Reynolds died in 1857, and Charles Brewer II bought and renamed it Brewer Plantation. Sold to Judd, Wilder, and Judd in 1863. Mill burned in 1864, and machinery was sent to O'ahu.

**7 East Maui Plantation, Makawao.** Started in 1850 by Robert Wood and A. H. Spencer. Eventually bought by C. Brewer & Co. and closed in 1885. Land sold to Haiku Sugar Co.

FIG. 2. Locations of Major Sugar Plantations on Maui, 1840-1860.

governor guaranteed them rights to obtain water for their animals and to hire and house workers free of *konohiki* demands, and he agreed to build for them a road to the sea for their ox carts. No one could live on the land without the permission of Miner and McLane. In return, Miner and McLane were to obey all laws and construct a school for all people in their employ.<sup>19</sup> McLane and Miner actively grew and manufactured sugar until they were joined by John T. Gower in 1849. All three individuals were also store owners in the Makawao district.

Small sugar operations in Hāna during the late 1840s were owned by foreigners. In 1847 O'ahu Governor Kekūanao'a requested a lease on behalf of a "foreigner" from the Privy Council for fifty years at \$.50 an acre—which was granted.<sup>20</sup> A year later, it was reported that a number of foreigners in Hāna had petitioned the minister of interior for a road, requesting the use of prison labor.<sup>21</sup> Earliest reports of actual sugar growing are in the 1848 Hāna mission station report:

Formerly the people—many of them—raised corn beans & various other articles for market in exchange for which they received some cloth and some money. At that time there was an increase of cultivation on their own lands. But since Foreigners have come in and begun the growing of sugar cane, corn, beans, & coffee the people have dropped their own plantations and are now laboring for these new comers at the rate of 1 yd of poor cotton cloth per day.<sup>22</sup>

These experiments in sugar on Maui can be viewed in the context of continued participation by the Hawaiian kings and *ali'i* in commercial trade in the Pacific. Sandalwood trade of the 1820s, vegetable trade with whalers in Hawaiian ports, the cutting of wood from forests for sale in town and to the whaling fleet—all brought cash to those Hawaiians who controlled the land and the labor of others.<sup>23</sup>

#### RADICAL CHANGES IN LAND AND LABOR

The Hawaiian elite continued to control agricultural commerce until about 1850. A series of legal acts that included the land reforms of the Mahele, legalization of indentured servitude, and new methods

of tax assessment and collection radically altered commercial (as well as traditional) agriculture. At mid-century, foreigners began to dominate the sugar trade in Hawai'i. Spurred by legalization of land sales to foreigners and the booming California market of 1850–51, foreign-owned sugar plantations sprang up throughout the islands in Lihue, Hilo, and Makawao. Hawaiians who remained in rural locations and were able to secure title to small landholdings found themselves increasingly strapped for the cash necessary to pay taxes. Some sought plantation work.

Much like the native Hawaiian sugar ventures of the 1840s, these plantations were also experimental. Many of them either failed or encountered severe financial losses. Ownership changed frequently. Partners had little understanding of what it took to finance a sugar operation. Managers taught themselves how to organize a plantation and manufacture sugar (a delicate chemical process) by trial and error. Sugar mills broke down, burned down, and generally proved inadequate. Drought became a problem on Maui and Kaua'i. Hawaiian workers were reluctant to commit to permanent plantation employment. Generally, these plantations were unable to compete in the sugar markets of the 1850s.

The legalization of sale of Hawaiian lands to foreigners in 1850 changed sugar production on Maui.<sup>24</sup> A part of the *Mahele*, this piece of legislation (authored by William L. Lee) came at a time when the Hawaiian government needed increased revenues. Intense pressure to build roads, wharves, harbors, and jails during the 1850s made the government and crown lands (belonging to the king) attractive sources of cash. The resulting mix—cash for government and land for would-be agriculturalists—led to a “land rush” on the islands of Maui and Hawai'i, where these lands were more abundant.

The Hawaiian king appointed land agents in districts where land sales to Hawaiians and, after 1850, to foreigners were encouraged. John Richardson, a part-Hawaiian Wailuku taro farmer and Maui circuit judge, and, later, John T. Gower, an American, sugar planter, and store owner in Makawao, served as land agents on Maui. According to policies of the Interior Department, each agent determined the price of land to be sold, arranged for its survey (usually by ex-missionary W. P. Alexander), and received a commission on all sales. Little over-

sight of these land sales existed, making mismanagement of the funds easy. Interior Department records, for instance, indicate that John Gower pocketed the income from land sales he arranged. Although the government discovered his practice and even hounded him for payment of the funds, Gower remained in the position as land agent. Eventually, he left Hawai'i in disgrace after the Hawaiian government was unable to retrieve his debt.<sup>25</sup> By the mid-1860s, most available government land suited for agriculture had been sold. Within a short time, many of these lands in Wailuku, Hāna, and Makawao made their way into sugar cane cultivation.

Life in rural Hawaiian communities began to change as a result of the Mahele. Increasing numbers of Hawaiians reluctantly sought jobs as day workers on nearby plantations through the 1850s. Others migrated to distant plantations as contract workers for three- to six-month periods. There they were housed and fed by plantation managers and worked twelve-hour, six-day weeks.<sup>26</sup>

Pressure for Hawaiians to seek the cash offered by plantation work came from new laws and rules regulating property and taxation. Sahlins, in his study of Anahulu valley, reports that by 1860, many of the Hawaiians who remained on their lands were severely constrained by the division of lands into private parcels. Prevented from access to forests, upland pasture and farming lands, and the coastal fishing areas, they found it increasingly difficult to meet their basic needs.<sup>27</sup>

By 1860, each adult Hawaiian male paid a combined tax of at least \$5.00 per year. After the Mahele, the Hawaiian government shifted from a labor tax to a cash system. Tax collectors for each district would enumerate and collect poll, school, road, dog, horse, cart, property, and other taxes. During the earlier years, some taxes were paid in kind and road taxes were paid in labor. By 1860, cash became a requirement for all but road taxes, which were still paid in labor on the local roads.<sup>28</sup>

Hawaiian debt to foreign (usually American) store owners also encouraged entry into plantation employment. On Maui, stores were licensed not only in the port of Lahaina, but also in the more remote districts of Makawao, Hāna, and Wailuku. Many store owners were also planters, such as John T. Gower, William McLane, and Edwin Miner in Makawao.<sup>29</sup>

### MAUI SUGAR OPERATIONS DURING THE 1850S

The California gold rush stimulated a small boom in commercial agriculture in 1850–51—particularly in potatoes and sugar. Honolulu businessmen financed several new plantations on Maui. In 1851 seven plantations were counted in Makawao. Three mills operated at Honua‘ula (‘Ulupalakua). Three mills were located in Hāna.<sup>30</sup>

By the end of the decade, the boomlet had become a depression. The California market supplied its own vegetable trade. And sugars from Manila and Peru competed with the more inferior Hawaiian sugars. Plantations folded. In one instance, planter John T. Gower of Makawao was forced to auction his small plantation for \$3,010—at one-tenth the amount he had invested.<sup>31</sup>

In 1857 only two plantations remained on Maui: Brewer Plantation and East Maui Plantation—both at Makawao. They were characteristic of the time: powered by mules, about 1,200 acres of cane and pasture land each, a capital investment of \$50,000 each, employing forty to fifty Hawaiians, and producing 150 tons of sugar.<sup>32</sup> The plantations at Hāna and Honua‘ula (‘Ulupalakua) had ceased operations. Eventually, these sites reopened under new owners. In spite of difficult years, Maui was still the largest sugar producer. Production figures for 1858 show Maui’s estimated sugar tonnage at eight hundred, with Kaua‘i at four hundred and Hawai‘i at three hundred.<sup>33</sup>

Brief descriptions of Maui’s major sugar establishments of the 1850s illustrate some important features of the sugar business at that time.

#### *Brewer Plantation*

The Brewer plantation began in 1849 as the Hāli‘imaile Plantation, operating on leased land which was subsequently purchased. The owners were Stephen Reynolds, a Honolulu merchant, and Alfred W. Parsons, a merchant and judge in Lahaina. Reynolds bought out Parsons, sold his interest to Robinson & Co., and then repossessed the plantation when Robinson could not meet its obligations. Hāli‘imaile experienced difficulties ranging from a mill that broke down regularly to drought, insufficient workforce, and conflict among Chinese and Hawaiian workers.<sup>34</sup> After Reynolds’s death, C. Brewer II bought the property and mill, changing the name to the Brewer Plantation.

*East Maui Plantation*

Dr. Robert Wood, an American physician, and A. H. Spencer started their plantation around 1850 on cane lands purchased from William Crowenburg.<sup>35</sup> Wood, who also purchased the Kōloa Plantation on Kaua'i, resided in Honolulu, while Spencer managed the operation. Dr. Wood was the beneficiary of a direct loan from the Privy Council for start-up of East Maui Plantation. The \$5,000 was secured by his interest in the plantation venture.<sup>36</sup>

*Torbert Plantation*

At Honua'ula, several miles away from Makawao, was the Torbert Plantation (sometimes called the 'Ulupalakua Plantation). Having bought out Michael J. Nowlein and purchased the lands he leased in 1845 plus additional acreage, Lincoln L. Torbert owned the single plantation in that district. By about 1859, unable to dig out from significant debt, he sold his plantation to Captain James Makee and went to work for the Brewer Plantation as its manager.

*Howe Plantation*

Hāna, a more remote region on East Maui, had a few independent growers and at least one mill, which was owned by A. B. Howe, an auctioneer in Honolulu, and Gerrit P. Judd, minister of finance and Howe's future father-in-law. The plantation operated between the years 1850 and 1853-54. George Wilfong, a retired whaler, was the manager. Howe purchased his initial lands in 1850 from a man who had planted sixty acres of cane and put up a primitive mill in grass houses. Wilfong added lands through lease and purchase. He manufactured the sugar as syrup and sent it to B. F. Bolles and Co. in Lahaina, who then sold it to whaling vessels. In 1852 Howe added a train of cast-iron sugar kettles (previously whaling ship try-pots were used) and an iron mill. At that time he had 150 acres in cane, making between sixty and seventy tons of sugar. But after grinding the first crop with the new mill, both the sugar house and boiling house burned down, and with it fifty tons of sugar. The plantation was then abandoned.

These summaries highlight three typical features of the early commercial plantations: (1) Planters closely tied to the king's inner circle of advisers benefited from increased access to capital and land. (2) The financial vulnerability of undercapitalized plantations left them ill-prepared for major setbacks. (3) The general inability of many planters to coordinate operations between the mill and the fields created inefficiencies that easily brought on financial ruin.

#### HELP FROM THE GOVERNMENT

Directly and indirectly, the Hawaiian government aided the new planters—all foreigners—in their sugar ventures with loans and access to lands. After legalizing land sales to foreigners in 1850, the Hawaiian government granted loans to planters. Both the Hāna and the East Maui plantations benefited from this policy. The Privy Council approved direct loans to American planters who made requests for cash to finance their plantation purchases and expansions in 1850 and 1851.

In January 1851, Dr. R. W. Wood asked for a \$5,000 loan from the Treasury Board to be secured by a mortgage of his interest in the East Maui Plantation.<sup>37</sup> In December of that year, J. F. B. Marshall and W. L. Lee requested a loan for \$3,000 from the Hawaiian government at 1 percent per month for two years for the Lihue Plantation on Kaua'i.<sup>38</sup> Within two months their requests were granted. A. B. Howe was granted \$3,000 in loans for his Hāna plantation in January of 1852. Ledgers in the Finance Department reveal that a number of agriculturalists and a few merchants received direct loans from the Hawaiian Treasury.<sup>39</sup> All loans were payable in 1853–54. In total, twelve individuals were granted loans ranging from \$400 to \$12,120 (this one went to Kamehameha III). Most loans were for \$2,000–\$3,000 with interest.<sup>40</sup> According to the minister of finance, money was difficult to find at this time: "money is not to be had in these islands except in small sums, for short periods and at a high rate of interest."<sup>41</sup>

Access to land, especially during the 1850s sale of government and crown acreage, was also easier for those planters with ties to the king and his advisers. The means by which G. P. Judd, minister of the interior, acquired Hāna lands is illustrative.

In 1850, Judd applied to the Privy Council to purchase "all the unsold lands belonging to the Government in the District of Hāna." Due to confusion over native claims in Hāna, however, the Privy Council asked William P. Alexander, the government surveyor on Maui, to survey the lands and determine quality and market value and also "to report the quantity as near as possible occupied by natives or which they may wish to buy."<sup>42</sup> At the same time, other foreigners (S. O. Spalding, Robert P. Bracy, William G. Needham, and E. J. Relk) applied to purchase land in Hāna. Due to increased pressure for land sales in Hāna, the king and the Privy Council passed a resolution in December of 1850, stating that no land in Hāna should be sold until the claims of the natives were first surveyed by W. P. Alexander.<sup>43</sup> Pressure for sale of government lands in Hāna intensified. Two years later, in 1852, native rights to lands were still undetermined according to Interior Department correspondence.<sup>44</sup>

Yet, Judd was able to purchase 223 acres of government lands in Hāna in 1851. By 1860 his several purchases from the government, numbering five in all, totaled 641 acres, costing him a total of \$436. In 1860 he sold all 641 acres to Needham, Thomas Cook, and August Unna for \$2,500.<sup>45</sup>

#### FINANCIAL INSTABILITY: NOTES FROM EAST MAUI PLANTERS

One of the greatest problems facing planters of the 1850s was limited capital. Establishing a plantation required an investment that would, at best, not see a return for two to three years. In fact, most planters waited more than ten years for a profit. Delays occurred at all stages in the process of sugar manufacture: acquiring land, planting, ordering a mill, constructing the buildings, cultivating the cane, harvesting, carting the cane to the mill, grinding, shipping sugar and molasses to market, and selling. One major expense was to feed, house, and pay a labor force during the two to three years before the first sugars of a plantation sold.

Stephen Reynolds, a Honolulu merchant and owner of two plantations, kept a journal of his financial activities. His account of the Hāli'imaile Plantation (later known as the Brewer Plantation) is instructive. Between 1849, when he purchased one-half interest in Hāli'imaile, until his death in 1857, he engaged in a complex set of



lending and borrowing arrangements in order to keep his plantation afloat. Reynolds recorded in his journal on October 20, 1849:

Agreed with Alfred W. Parsons to buy half of all his plantation with all the cattle, carts, implements, Leases &c. . . . for half of 1441 acres. . . . = \$7,525 to advance for expenses, without interest, to offset his services, to receive proceeds of all produce until it shall pay for all expenses. . . .<sup>46</sup>

Five years later, Reynolds reflected:

Destitute of means, or say cash, to do anything with. What am I to do, I know not!! Hope my Sugar Mill will do a little soon. Five years ago I was well off. Now overhead and ears in debt.<sup>47</sup>

Reynolds's problems typified those of other planters, particularly on Maui. His journal is rich with detail about the financial dealings between himself and other plantation owners and lenders. Money constantly flowed back and forth in the forms of notes, cash due, and renegotiated debts that included yet new lenders. Reynolds was part of a circle of East Maui plantation owners who manufactured sugar in the 1850s and exchanged notes. As an agent/merchant, Reynolds also bought sugar from other planters (Chinese planters on Hawai'i) and sold it for a profit to ship captains bound for overseas ports.

Reynolds's journal also contains information of numerous financial deals between the planters of the Makawao area of East Maui from 1849 to 1854. A year-by-year account of these transactions illustrates the financial interactions of early planters:

*1849.* Reynolds purchased one-half interest in Parsons's Hāli'imaile plantation.

*1850.* Reynolds purchased one-half interest in old Stevens plantation on Kaua'i, which became the Tobey Plantation. That same year, he sold his share of the Hāli'imaile Plantation to Captain P. Perry and a Mr. Robinson for \$30,000, making a substantial profit.

*1851.* Reynolds purchased a sugar mill at a cost of \$3,000. He was asked by L. L. Torbert to buy his plantation on Maui at Honua'ula. He refused due to lack of money. In April, he had a positive balance on Hāli'imaile Plantation of \$220. He visited Hāli'imaile and toured with Perry (the owner), looking for a site of a new mill. He also visited Spen-



FIG. 3. Stephen Reynolds, a Honolulu merchant and plantation owner, described in his journal many of the financial problems of the early sugar plantations. (Hawaiian Historical Society.)

cer's mill and Gower's mill. He took up Perry's and Robinson's notes for Hāli'imaile Plantation at \$9,102 (seems to have been owner of the plantation again). He also assumed Gower's notes on his plantation. Reynolds consulted with David M. Weston about a centrifugal separator at a cost of \$600–\$800 dollars. Gower plantation creditors met: S. N. Castle, A. Bishop, Gulick. He noted that Gower owed him \$3,100 and that Torbert owed him \$5,000. He did not expect he would be paid. He began construction of sugar works at Hāli'imaile.

1852. Hāli'imaile (Perry and Robinson's mortgage) was sold at auction. Reynolds bought it for \$12,300. The mill was completed. He found bills at Hāli'imaile amounted to almost \$15,000, besides the mill. He hired a new manager and asked Perry to leave.

1853. He offered Hāli'imaile Plantation to a joint stock company at \$40,000. No response. The manager noted that the mill was in poor condition, needed food, supplies; Chinese complained of not enough rice.

1854. Tried to get mill up and running again after a breakdown of the gear system. He estimated that Hāli'imaile ground seven hundred pounds of sugar that year. The mill broke down again.

After 1855, Reynolds's health broke down and he returned to Massachusetts, dying in 1857. Probate accounts show that the plantation was in debt at that time to thirteen Hawaiian and fifteen Chinese workers, plus merchants who had furnished supplies. The plantation was purchased by C. Brewer II and renamed the Brewer Plantation.

What is clear from this accounting is the financial interdependency of planters in the 1850s. Torbert, Gower, Reynolds, Wood—all lent each other funds, took over notes, and frequently met to resolve payments of past debt. The journal shows that Dr. Wood and Reynolds were also in constant negotiation with each other on Kaua'i. Wood, owner of Kōloa Plantation, and Reynolds, owner of Tobey Plantation, had grinding contracts and talked several times about merging the two plantations.<sup>48</sup>

## ORGANIZING PRODUCTION

The successful manufacture of sugar was difficult for even the best of the 1850s plantations. The major obstacle was organizing a system of

production that did not, through waste and inefficiencies, cost large sums of money to maintain. Absolutely critical was coordination between the mill and the field. Mill technology had to be efficiently powered by water or animals, of adequate capacity, and reliable. Enough labor had to be on hand at just the right moment to guarantee a rapid harvest. Precise timing and organization were required to prevent the cane from deterioration after cutting. Sugar production was, in effect, an industrial enterprise.

The mill and its technology dominated the attention of the plantation manager of the 1850s. It proved to be the major stumbling block in achieving the industrial-like organization required to produce the quality of sugar demanded in the markets. And Hawaiian sugar planters knew this. Other issues concerned plantation managers, such as labor shortages, lack of rain, dwindling wood supplies, unexpected costs of repair and downtime of the mill. But none of these was as inhibiting to the plantation as the quality of the mill and the employees who manufactured the sugar.

Inexperience in sugar boiling and liming increased the costs of these early plantations. Technical mastery of heat was the key to a profitable sugar operation. The sugar boiler was the most important employee. The boiling house, where the juice from the crushed sugar was reduced, clarified, and crystallized, was the center of the mill.<sup>49</sup> The size and structure of the mid-nineteenth century mill set rigid limits on how much cane could be harvested at any one time. Acreage, planting schedules, and the size of the labor force were determined by mill capacity. If the mill was powered by mule or oxen instead of steam or water, its capacity was significantly reduced.

Many of the early foreign owners also managed their own mills (Gower, Torbert, Miner, Spencer) and boiled the sugars themselves. They came to agriculture and manufacture with no experience. Many, if not most of them, were retired from the whaling trade as either ship captains or merchants. Originating from New England, they were familiar with small agricultural establishments based on household labor that produced goods for local markets. The organization of the "plantation" as a well-timed operation, employing thirty to fifty workers year-round, dependent upon a chemical and mechanical process for the finished product, and growing a tropical crop for export to a distant market, was alien. Their model was the yeoman

farmer. As a result, sugar planting in the 1850s was largely accomplished by trial and error. Often error led to business failure.

Plantations also lacked the more productive technologies used in Louisiana and some Caribbean sugar regions. One important mill technology was the centrifugal separator.

This machine is not only one of great utility, inasmuch as it enables the planter to dispense with long drying houses, and rows of boxes and tubs; but its chief excellence consists in returning to the boilers, within forty-eight hours after the first boiling, all of the syrups and molasses that do not grain, consequently the sugar of the second boiling is not injured by fermentation, as it invariably is when drained in any other way.<sup>50</sup>

Centrifugals produced competitive sugars in the world market, but the separator was too expensive for Hawaiian planters. In addition, it required cultivation of large acreages of sugar in order to pay for the investment. Most planters realized they could not raise the capital or find the workers to run such an operation. Only two plantations in the 1850s installed centrifugals—Kōloa and East Maui—both owned by Dr. Wood.

Inadequate capital for current technology, lack of technical knowledge, and inability to organize adequate field operations to support the larger mills were all factors in the primitive state of Hawaiian sugar operations in the 1850s.

#### THE NEXT-GENERATION SUGAR PLANTATION

The next-generation plantation included steam engines, centrifugals, greatly expanded acreages, a larger workforce of Hawaiians, Chinese, and Japanese (one hundred or more workers), and increased investment by Honolulu merchants. The Civil War in the United States, which devastated the Louisiana sugar industry, brought a boom to Hawai'i that began in 1860 and lasted six years. Whole new districts on Maui opened to plantation development: Lahaina, Wailuku, Waihee. O'ahu, Hawai'i, and Kāua'i also witnessed rapid growth in the number of plantations. Meanwhile, trade in other commercial products such as potatoes, pulu, and vegetables for the whalers, declined

dramatically by 1870. Promotion of commercial agriculture gave way to subsidization of sugar interests by the Hawaiian government.

Hawai'i's industrial plantations began to emerge in the 1860s, coming to maturity by the turn of the century. Truly organized as factory systems, where management principles of precise timing, organized systems of labor recruitment and control, and application of scientific and engineering principles to the production process, all became goals of a new planter class. Commercial sugar experiments brought corrective measures to the small sugar industry which, almost invisibly, established the building blocks for the gradual rise of sugar's dominance over the Hawaiian political and economic landscape. Several critical changes in government and plantation management after 1860 paved the way.

The Hawaiian government became directly involved in promotion of sugar plantations through immigration policies, police and court enforcement of labor contracts, building of roads and wharves, and reforming land and water laws to benefit Western agricultural practice over that of traditional Hawaiian farmers. Plantation owners sought innovative methods of capitalizing their industry. Joint stock companies replaced partnerships. Merchant houses became agents (factors) that eventually became so powerful that they made production decisions and supervised the plantation manager, managed marketing arrangements, and secured the labor force from abroad. Plantation managers became scientists and engineers as new technologies were developed and imported to improve the grade of sugars and bring water to plantations. Hawaiians found themselves less able to maintain independent economies in the rural districts as plantations gobbled up land, water, and commercial resources. Hawaiian resistance to dependence on wage work brought an organized government-industry drive to strengthen labor control on plantations and import workers from China and Japan. Gradually the push from tax requirements brought more Hawaiians into the plantation workforce. Industrial communities emerged around plantation centers, with whole populations of Hawaiians, Chinese, and Japanese tied to the rhythm of sugar manufacture.

All of these developments had serious consequences not only for the economy of Hawai'i, but for its nationhood as well. And many of these changes find their roots in the commercial sugar ventures of earlier decades.

## NOTES

I would like to acknowledge the superb research assistance of Jodie Kakazu in using government documents in the Hawai'i State Archives.

- <sup>1</sup> On other islands, there were plantations near Hilo run by Chinese, another financed by the governor of the island of Hawai'i and located in Waimea, and the Kōloa Plantation on Kaua'i. Archival information on the Maui plantations, however, illustrates some of the most informative points about early sugar.
- <sup>2</sup> P 1 May 1847.
- <sup>3</sup> William L. Lee Letterbooks, 14 Dec. 1847, AH.
- <sup>4</sup> Marshall Sahlins, *Anahulu: The Anthropology of History in the Kingdom of Hawaii* (Chicago: U of Chicago P, 1992).
- <sup>5</sup> Wailuku Station Report, 1839, HMCS.
- <sup>6</sup> Wailuku Station Report, 1840, HMCS.
- <sup>7</sup> Interior-Land, 23 July 1840, translated. Signed Kamehameha III, Kekauluohi. AH.
- <sup>8</sup> Agreement signed by Kamehameha III and the "acre persons" (translated), 23 Sept. 1840, Interior-Misc., AH.
- <sup>9</sup> P 8 Aug. 1840.
- <sup>10</sup> No leases to this company exist in the Interior records. Leases were a common means by which foreigners ran sugar establishments in the 1840s. There are records of leases for sugar growing to Miner and McLane and to L. L. Torbert.
- <sup>11</sup> John Pake to King Kamehameha III (translated), 21 Mar. 1840, Interior-Misc., AH.
- <sup>12</sup> Boaz Mahune to Paul Kānoa, 28 Nov. 1840, Interior-Misc., AH.
- <sup>13</sup> Interior-Misc., Doc. #433, no date. Probably 1844. AH.
- <sup>14</sup> Interior-Land, 25 Aug. 1841. AH.
- <sup>15</sup> Judd to Nowlein, 2 Oct. 1845, Interior-Letterbook, AH.
- <sup>16</sup> Lahaina Station Report, 1837. HMCS.
- <sup>17</sup> Lahaina Station Report, 1849. HMCS.
- <sup>18</sup> P 25 Aug. 1849.
- <sup>19</sup> Interior-Public Lands, 10 Sept. 1838. AH.
- <sup>20</sup> Interior-Letterbook, 30 June 1847. AH.
- <sup>21</sup> Robertson to Kanehoa, 16 Nov. 1848, Interior-Letterbook, AH.
- <sup>22</sup> Hāna Station Report, 1848. HMCS
- <sup>23</sup> Sahlins, *Anahulu*, documents a significant trade that was controlled by a rural elite and utilized a system of "forced labor" during the whaling era. Goods such as firewood and vegetables were shipped from the Anahulu valley on O'ahu to Honolulu. It is likely that such a system existed on Maui and Hawai'i to support the whaling trade in Lahaina and Hilo.
- <sup>24</sup> Two excellent treatments of the Mahele and changes in the economy and land tenure during the 1840s are Sahlins, *Anahulu*, and Lilikala Kame'eleihiwa, *Native Land and Foreign Desires* (Honolulu: Bishop Museum P, 1992).
- <sup>25</sup> E. P. Bond to minister of interior, 5 Nov., 15 Nov., 1 Dec. 1856; J. T. Gower to minister of interior, 22 Dec 1864; T. W. Everett to minister of interior, 24 July 1879, Interior-Misc., AH.

- <sup>26</sup> There are numerous references in the Royal Hawaiian Agricultural Society (RHAS) reports, 1850–56, to Hawaiian disinterest in plantation work.
- <sup>27</sup> Sahlins, *Anahulu* 149–51.
- <sup>28</sup> Department of Taxation. AH. Assessment records, in which amounts collected for all taxes are recorded for each individual, begin with about 1856 for most districts. Property was not taxed until 1859.
- <sup>29</sup> Dept. of Interior. Licenses. AH. Ledgers begin listing the granting of store, plantation, and other licenses by island and district beginning in 1854.
- <sup>30</sup> W. P. Alexander, letter to Wm. Alexander, 27 Jan. 1851, Lahaina Restoration Files, HMCS.
- <sup>31</sup> W. P. Alexander, letter to Wm. Alexander, 2 Aug. 1852, Lahaina Restoration, HMCS.
- <sup>32</sup> *PCA* 23 July 1857.
- <sup>33</sup> *PCA* 2 Dec. 1858.
- <sup>34</sup> Stephen Reynolds, Journal. HHS.
- <sup>35</sup> Marshall and Lee to Judd, 30 Dec. 1851, Finance Dept., AH.
- <sup>36</sup> Wood to Judd, 3 Jan. 1851, Finance Dept., AH. The practice of lending cash to sugar planters appears to have occurred only during 1850–51. Generally loans were for two years at 1 percent interest. Other beneficiaries who were new plantation owners were A. B. Howe (\$3,000 for Hāna Plantation) and J. F. B. Marshall and William L. Lee (\$3,000 for Lihue Plantation). Records are in Finance Dept. correspondence for 1850–52.
- <sup>37</sup> Wood to Judd, 3 Jan. 1851, Finance Department, AH.
- <sup>38</sup> Marshall and Lee to Judd, 30 Dec. 1851, Finance Dept., AH.
- <sup>39</sup> "Bills Receivable Belonging to the Hawaiian Treasury," Sept. 1853, Finance Dept., AH.
- <sup>40</sup> Finance Dept., 7 Sept. 1853. AH.
- <sup>41</sup> Minister of Finance Report to the Legislature, 1852. AH.
- <sup>42</sup> Interior-Letterbook, 14 Oct. 1850. AH.
- <sup>43</sup> W. Goodale to W. P. Alexander, 21 Dec. 1850, Interior-Letterbook, AH.
- <sup>44</sup> Interior-Letterbook, 31 Aug. 1852. AH.
- <sup>45</sup> See Kame'elehiwa, *Native Land* 303.
- <sup>46</sup> Stephen Reynolds, Journal, 20 Oct. 1849. HHS.
- <sup>47</sup> Reynolds, Journal, 15 Apr. 1854. HHS.
- <sup>48</sup> Reynolds, Journal, 1849–54. HHS.
- <sup>49</sup> Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Penguin Books, 1985) 47; also see J. H. Galloway, *The Sugar Cane Industry: An Historical Geography from its Origins to 1914* (New York: Cambridge UP, 1989).
- <sup>50</sup> Royal Hawaiian Agricultural Society, Annual Reports, 1852, p. 124.