

## HISTORY OF AGRICULTURE IN HAWAII

This is a first attempt to assemble a history of agriculture in Hawaii. A history of U.S. agriculture can be found here and we have used their format. A brief history of Hawaii can be found here. We have worked to include what we could find, but we are always looking for more suggestions. Please contact Jim Hollyer with suggestions.

### Other Hawaii Agricultural Histories

#### [History of Sugar \(HARC\)](#)

<p><b>Pre-Contact (prior to 1778)</b></p>	<p>"Original settlers of Polynesia migrated through South-East Asia and Indonesia across Melanesia, before settling the Polynesian islands from 1000 BC to 500 AD. Hawaii was one of the last island groups to be settled. Archaeological evidence indicates the first Polynesians arrived in Hawaii from the Marquesas between 500 and 700 AD." (From a <a href="#">Guide to Natural History</a>).</p> <p>First settlers to Hawaii introduced pigs and chickens of Asian ancestry. They also bring "ʻApe (elephant's ear), ʻAwa (kawa), ʻAwapuhi Kuahiwi (shampoo ginger), Hau Ipu (gourd), Kalo (taro), Kamani (Alexandrian laurel), Ki (ti), Ko (sugar cane), Kou, Kukui (candlenut), Mai`a (banana), Milo (portia tree), Niu (coconut), Noni (Indian mulberry), ʻOhe (bamboo), ʻOhi`a `Ai (mountain apple), ʻOlena (turmeric), Olona, Pia (Polynesian arrowroot), ʻUala (sweet potato), Uhi (yam), ʻUlu (breadfruit), Wauke (paper mulberry)" with them. (From <a href="#">Canoe Plants of Ancient Hawaii</a>.)</p>
<p>1778-1800</p>	<p><b>1778</b></p> <p>Captain Cook brings an English sow and boar to Niihau on his first voyage. Captain Cook observes local chickens on Kauai.</p> <p><b>1790</b></p> <p>Sandalwood export trade starts.</p> <p><b>1792</b></p> <p>The orange brought to Hawaii.</p> <p><b>1793</b></p> <p>The first cattle, originating from California, were introduced by Capt. George Vancouver on his second trip in 1793. On this trip and again in 1794, a total of eight females and four males were landed on the island of Hawai'i. One male and one female died shortly after landing. After the initial importation, King Kamehameha I placed a taboo on the slaughter of cattle, so that by 1830 when it was removed, cattle were very numerous.</p>
<p>1800</p>	<p><b>1809</b></p> <p>The Parker Ranch had its beginnings in 1809, when John Palmer Parker, a sailor from Massachusetts arrived on the islands. He married a Hawaiian princess and began domesticating wild cattle and horses that roamed the Big Island.</p>

1810	<p><b>1810-1825</b> Height of sandalwood trade.</p> <p><b>1813</b> Don Francisco de Paula y Marin, Spanish advisor to King Kamehameha I, introduces coffee and pineapple to Hawaii.</p> <p><b>18??</b> John Wilkinson brings 30 of the so-called "Hawaiian coffee" plants from Brazil. This is believed to be the first introduction of this coffee type that was widely planted in Hawaii.</p>
1820	<p><b>1824</b> The mango tree brought to Hawaii.</p> <p><b>1828-29</b> H.N. Greenwell plants first coffee plant in Kona leading to the establishment of a coffee industry for Kona.</p>
1830	<p><b>1830</b> King Kamehameha I's kapu on slaughter of cattle removed due to large population.</p> <p><b>1830s</b> Coffee initiated as a commercial crop.</p> <p><b>1839</b> First forestry law in Hawaii passed, restricting the cutting of sandalwood.</p>
1840	<p><b>1840</b> Captain Thomas Cummins, a wealthy shipping merchant from England, began raising beef cattle and sheep in Waimanalo.</p> <p><b>1846</b> King Kamehameha III passes a law declaring forests to be government property.</p> <p><b>1848</b> The feudal landholding system was changed to allow fee simple ownership of land by private persons (Great Mahele).</p> <p><b>1849-1851</b> California gold rush brings a boom to Hawaii agriculture; Irish and sweet potatoes, onions, pumpkins, oranges, molasses, and coffee were shipped to the West Coast.</p>
1850	<p><b>1850</b> First publication of Transactions of the Royal Hawaiian Agricultural Society.</p> <p><b>1853</b> Hogs from Hawaii exported to California during gold rush, price was 4-6 cents per pound</p> <p><b>1856</b></p>

	<p>The Lihue sugar plantation on Kauai develops the first extensive irrigation system in Hawaii, which included a 10-mile long irrigation ditch and tunnel system.</p> <p><b>1858</b></p> <p>First experimentation with rice, which was an important crop in Hawaii in the latter half of the 19th century.</p>
1860	<p><b>1860s</b></p> <p>Drought, a variety of infestations, and labor shortages hinders coffee growth leading to the closures of nearly all plantations in the islands, except for Kona and Hamakua.</p> <p><b>1862</b></p> <p>The U.S. Department of Agriculture is established by President Abraham Lincoln.</p> <p><b>186??</b></p> <p>Claus Spreckels and his brother established the Bay Sugar Refinery in San Francisco, getting their raw sugar from the Hawaiian Islands.</p> <p><b>1868</b></p> <p>First Japanese workers come to Hawaii.</p> <p><b>1869</b></p> <p>First recorded commercial dairy.</p>
1870	<p><b>1870</b></p> <p>First plantings of Eucalyptus on Maui.</p> <p><b>1870s</b></p> <p>Water crisis in Honolulu.</p> <p><b>1876</b></p> <p>A reciprocity treaty between the Kingdom and the United States allowed for duty-free export of sugar, leading to a rapid expansion in sugarcane production.</p> <p><b>1876</b></p> <p>"Act for the Protection and Preservation of Woods and Forests", including watershed preservation, passed by Kingdom of Hawaii.</p> <p><b>1878</b></p> <p>The Waimanalo Sugar Company is founded. Rail tracks are laid out and three locomotive engines are brought in to haul cane to the mill and the wharf.</p> <p><b>1878</b></p> <p>Future Queen Liliuokalani composes "Aloha Oe". The melody was inspired during a visit to the Waimanalo sugar plantation.</p>

1880	<p><b>1880s-90s</b></p> <p>Plantings of Eucalyptus and ironwoods on Tantalus and in Nuuanu valley, above Honolulu.</p> <p><b>1881</b></p> <p>William H. Purvis introduces macadamia nuts to Hawaii.</p> <p><b>1882</b></p> <p>John Ackerman and Waldemar Muller canned pineapple commercially in Kona.</p> <p><b>1885</b></p> <p>Captain John Kidwell is credited as being the pioneer of the pineapple industry in Hawaii. He began crop development trials in 1885 when he planted in Manoa, Oahu.</p> <p><b>1889</b></p> <p>The first artesian well was drilled in Ewa, Oahu, ushering in groundwater irrigation of agricultural fields.</p>
1890	<p><b>1890</b></p> <p>Captain John Kidwell plants Smooth Cayenne pineapple near Pearl Harbor. Sold plants to Baldwin on Maui.</p> <p><b>1890s</b></p> <p>Strong economies in Europe and America results in rise of market prices for coffee creating a boom for Kona coffee.</p> <p><b>1892</b></p> <p>Hermann Widemann introduces a Guatemalan coffee variety that is more recently referred to as the "Kona typica."</p> <p><b>1892</b></p> <p>Kidwell and John Emmeluth build pineapple cannery in Waipahu.</p> <p><b>1895</b></p> <p>Hawaii Sugar Planters Association (HSPA) founded.</p> <p><b>1897</b></p> <p>150,000 pecks of pineapple exported at value of \$14,000.</p> <p><b>1898</b></p> <p>Alfred W. Eames arrives in Hawaii as one of the original "California Homesteaders" to begin pineapple cultivation. Eames first starts selling fresh pineapple in the year 1900, nearly a century ago. His company eventually became Del Monte Fresh Produce (Hawaii) Inc.</p> <p><b>1898</b></p> <p>Japanese coffee farmers establish the Kona Japanese Coffee Producers Association in an effort to improve processing and market a higher value product.</p> <p><b>1899</b></p> <p>Kunigoro Yokoyama plants 100 acres of the Guatemalan coffee variety in Kamalumu, Kona.</p>
1900	<p><b>1900</b></p> <p>James Drummond Dole purchases 61 acres in Wahiawa and began experimenting with pineapple</p>

	<p><b>1901</b> James Drummond Dole incorporates the Hawaiian Pineapple Company and begins growing fruit on 60 acres in Wahiawa.</p> <p><b>1901</b> Hawaii Agricultural Research Station (UH) established on outskirts of Honolulu.</p> <p><b>1902</b> Byron Clark founds Tropical Fruit Company (for pineapple).</p> <p><b>1903</b> Commercial egg production starts on Oahu with 1000 imported layers on one operation.</p> <p><b>1903</b> Territory of Hawaii, with the backing of the Hawaii Sugar Planters' Association, establishes a Board of Agriculture and Forestry, predating the USDA Forest Service by one year.</p> <p><b>1904</b> Hiring of first Territorial Forester (Ralph Hosmer); creation of first forest reserves to protect upper watershed areas. Forest reserves managed by fencing, feral animal elimination, and reforestation with native and exotic tree species.</p> <p><b>1905</b> Dole packs 125,000 cases of pineapple.</p> <p><b>1906</b> Hawaiian Pineapple Co. builds Iwilei Cannery.</p> <p><b>1906</b> Oahu Rail and Land Company agrees to link the railroad line between Wahiawa and Honolulu.</p> <p><b>1907</b> Dole builds Iwilei cannery for pineapple.</p> <p><b>1907</b> Establishment of the College of Agriculture and Mechanic Arts. Name changes to College of Hawaii in 1909 and to University of Hawaii in 1919.</p> <p><b>1907</b> Rice planting expands to 9,400 acres and output reaches almost 42 million pounds - rice is second largest crop in Hawaii.</p> <p><b>1909</b> Japanese laborers strike against Oahu sugar plantations.</p>
1910	<p><b>1910-14</b> Pineapple research carried on by pineapple companies and University of Hawaii.</p> <p><b>1910</b></p>

	<p>Japanese coffee farmers make-up 80% of the total farming population in Kona.</p> <p><b>1910</b></p> <p>Discovery of Mediterranean fruit fly stops exports of avocado and other products from Hawaii.</p> <p><b>1911</b></p> <p>Ginaca machine patented by Dole employee Henry Ginaca to process pineapple.</p> <p><b>1911</b></p> <p>Introduction of the Solo papaya from Barbados and Jamaica, on Oct. 7, 1911, (accession no. 2853) by Gerritt P. Wilder (of Honolulu) resulted in the complete transformation of the Hawaiian papaya industry. This small papaya, which was named Solo in 1919, replaced the earlier large-fruited forms, and by 1936 the Solo was the only variety grown commercially.</p> <p><b>1912</b></p> <p>Hawaiian Pineapple Packers' Association research station formed which became the Pineapple Research Institute.</p> <p><b>1914</b></p> <p>Pineapple Packers Association establishes alliance with HSPA for research.</p> <p><b>1919</b></p> <p>University starts an extension service without federal funding (see 1928).</p>
1920	<p><b>1920</b></p> <p>Hawaiian Homes Act established. Federal government set aside 200,000 acres of land state wide for homesteading by Hawaiians with 50% or more native blood. Author of the bill was Prince Jonah Kuhio Kalaniana'ole, Hawaii delegate to Congress. First homestead area settled was in Kalamaula on Molokai. Agricultural lots were established in Hoolehua, Molokai.</p> <p><b>1923</b></p> <p>Pineapple Packers Association establishes own experiment station.</p> <p><b>1924</b></p> <p>Labor riots at Hanapepe kill 16 workers and 4 policemen (July).</p> <p><b>1925</b></p> <p>Ernest Van Tassel leases 75 acres on Round Top in Honolulu (Nut Ridge) and begins a macadamia nut orchard, Hawaii's first macadamia nut farm.</p> <p><b>1928</b></p> <p>Establishment of the Federal-Hawaii Cooperative Agricultural Extension Service, with funds from the Smith-Lever Act.</p> <p><b>1929</b></p> <p>Depression leads to coffee bust; many debt-ridden coffee farmers declare bankruptcy.</p> <p><b>1929</b></p>

	<p>Ernest Van Tassel negotiates with Bishop Estate to obtain 100 acres of land in Keahoe Mauka for planting more than 7000 macadamia nut trees resulting in the first macadamia nut farm on the island of Hawaii.</p>
1930	<p><b>1930</b> Nine million cases of pineapple packed by eight canneries.</p> <p><b>1931</b> Ernest Van Tassel establishes a macadamia nut processing factory on Puhukaina Street in Kakaako; nuts sold as Van's macadamia nuts.</p> <p><b>1931</b> Twenty-five percent of the area of Hawaii in established Forest Reserves, both public and private lands.</p> <p><b>1933</b> Sugar production peaks with 254,563 acres planted.</p> <p><b>1934-1941</b> Civilian Conservation Corps reforestation efforts plant an average of two million trees per year in the forest reserves.</p> <p><b>1937</b> W.W. Jones and J.H. Beaumont reports in "Science," the first successful grafting of macadamia nuts that paved the way for mass production.</p> <p><b>1938</b> Debt ridden coffee farmers negotiate with American Factors (AMFAC) for an adjustment. Coffee farmers get a chance at a new start with American Factors reducing debts to 2% of original debts.</p> <p><b>1938</b> Pineapple Packers Association experiment station name changed to Pineapple Research Institute of Hawaii (PRI).</p>
1940	<p><b>1945</b> Hawaii swine population peaks at 90,000 head.</p> <p><b>1946</b> 6000 Filipino workers immigrated to Hawaii for jobs in sugar and pineapple.</p> <p><b>1946</b> "Great Sugar Strike" - 33 plantations struck -- 28,000 ILWU workers (September 1).</p> <p><b>1947</b> Hawaiian Pineapple Company consolidates its outlying camps by designing plans for Whitmore Village.</p> <p><b>1947</b> Newly organized unionized pineapple workers conducts their first labors strike.</p> <p><b>1947</b> Oahu farmers meet in October for the first time leading to the creation of the Hawaii Farm Bureau that was incorporated in December 1950.</p>

	<p><b>1948</b> First major all-island study of the characteristics of vegetable and fruit farms undertaken.</p> <p><b>1949</b> Territorial legislature creates Industrial Research Advisory Council to sponsor and finance studies, many have been in the area of diversified agriculture.</p> <p><b>1949</b> Castle and Cooke plants first grafted macadamia nut trees (January 3). By the early 50s, the company's orchard contained more than 3,000 macadamia nut trees.</p>
1950	<p><b>1950</b> Hawaii Farm Bureau Federation officially starts.</p> <p><b>1952</b> Frozen pineapple juice concentrate hits the shelves for the first time.</p> <p><b>1953</b> The territory establishes its first public-owned irrigation system in Waimanalo.</p> <p><b>1953</b> Mid 1950s-Castle and Cooke adds a new brand of macadamia nuts called "Royal Hawaiian," which is credited with popularizing the nuts in the U.S.</p> <p><b>1955</b> Pineapple production peaks with 76,700 acres planted.</p> <p><b>1955</b> Establishment of a cooperative program between the U.S. Department of Agriculture National Agricultural Statistics Service and the Agricultural Cooperative Extension Service at UH to provide agricultural statistics from a single government office.</p> <p><b>1956</b> Edward T. Fukunaga and John Beaumont publish research from the Kona Experiment Station revolutionizing coffee pruning throughout Central and South America.</p> <p><b>1957</b> The Hawaii Farm Bureau becomes a member of the American Farm Bureau Federation.</p> <p><b>1957</b> USDA Forest Service experiment station established for forestry research in Hawaii; eventually becomes the Institute of Pacific Islands Forestry.</p> <p><b>1957-58</b> The coffee industry peaks in production with 15 million pounds of green coffee beans.</p> <p><b>1958</b></p>

	<p>90-day ILWU sugar strike results in the closures of sugar mills at Kohala, Kahuku, Kilauea, and Ewa Beach.</p> <p><b>1959</b></p> <p>Establishment of the Sunset Coffee Cooperative and Pacific Coffee Cooperative to rebuild Kona's coffee industry.</p> <p><b>1959</b></p> <p>With statehood, federal funds became available for the development and growth of Hawaii's agricultural industries with funding for programs such as farm credit, natural resources, and statistical services.</p>
1960	<p><b>1960s (early)</b></p> <p>Hawaii pineapple growers supply over 80% of the world's output of canned pineapple.</p> <p><b>1961-1968</b></p> <p>Plantations of potential commercial timber species established in Waiakea forest reserve and Laupahoehoe forest reserve on the island of Hawaii.</p> <p><b>1962</b></p> <p>Cooperative Statistical program between U.S. Department of Agriculture National Agricultural Statistics Service and the Cooperative Extension Service at UH transfers to the Hawaii Department of Agriculture.</p> <p><b>1960s (mid)</b></p> <p>Kona Farmers Cooperative, previously known as Sunset and Pacific Coffee Cooperatives gets Superior Coffees in Chicago to purchase its entire crop at a premium price resulting in the construction of a roasting plant in Honolulu.</p> <p><b>1965</b></p> <p>CTAHR trials for Illinois Foundation Seeds and Cornnuts, Inc. led to establishment of Molokai Seed Service on 5 acre of Yoshida farm on Molokai for 'winter corn breeding'.</p> <p><b>1966</b></p> <p>Pineapple production begins to decline.</p> <p><b>1966</b></p> <p>Molokai Seed Service founded and the first winter corn seed nursery planted. This endeavor evolved a year later into the Hawaiian Research / Holden's organizations on Molokai. This organization serviced Cargill / PAG until 1997.</p> <p><b>1966</b></p> <p>Peak sugar production with 1,234,121 tons of raw sugar.</p> <p><b>1968</b></p> <p>Molokai Irrigation System completed.</p> <p><b>1968</b></p> <p>ILWU pineapple workers strike for 61 days.</p> <p><b>1968</b></p> <p>Trojan Seed Company establishes a corn research farm at Kihei, Maui, which evolved through ownership by Pfizer Genetics, and DeKalb to its present Monsanto Global Seeds business.</p>

	<p><b>1968</b> Pride Seeds / NK establishes a corn research farm on west Kauai. This has evolved through ownership by NK, and Sandoz Seeds to its present Novartis business formed by the merger of Ciba Seeds and NK in 1996.</p> <p><b>1968</b> Pioneer Hi-Bred, International establishes a corn research farm on west Kauai.</p> <p><b>1969</b> Establishment of the HCIA (Hawaii Crop Improvement Association) with help from CTAHR to bring together agencies, institutions and individuals involved in the production of seed.</p>
1970	<p><b>1970s</b> Pineapple cannery numbers go from 9 to 3.</p> <p><b>1971</b> Establishment of the Papaya Administrative Committee, a federal marketing order regulating Hawaii-grown papayas (May 15).</p> <p><b>1972</b> Funk's G Seed Company establishes a corn research farm on Molokai, which evolved through ownership by Ciba Seeds and merger with NK to relocate to the Kauai facility.</p> <p><b>1973</b> Pineapple Research Institute of Hawaii (PRI) station closes and pathology and nematology research transferred to University of Hawaii.</p> <p><b>1974</b> Pineapple task force formed for R&amp;D planning.</p> <p><b>1974</b> About 9,000 ILWU sugar workers strike for 39 days (March 9).</p> <p><b>1974</b> About 6,000 ILWU pineapple workers on Oahu, Maui and Lanai strike for 21 days (April 7).</p> <p><b>1974</b> Visions to become largest producer of macadamia nuts leads C. Brewer &amp; Company, Ltd. to purchase Castle &amp; Cooke's operation at Keaau.</p> <p><b>1975</b> The establishment of the state's first agricultural park at Pahoehoe.</p> <p><b>1976</b> Del Monte expands into the produce business with national distribution of fresh Hawaiian pineapple. This transition is accomplished with a focus on direct airfreight, or Jet Fresh, shipments.</p> <p><b>1977</b></p>

	1st Pineapple Industry Analysis completed.
1980	<p><b>1982</b> Formulation of the Ginger Commodity Group Association.</p> <p><b>1982</b> Ginger industry hits 100 acres of production for the first time, raising 3.6 million pounds at a record high price.</p> <p><b>1983</b> Del Monte Corp. folds Hawaii pineapple canning operations (September 3).</p> <p><b>1983</b> C. Brewer &amp; Company, Ltd., becomes largest producer of macadamia nuts in the world.</p> <p><b>1984</b> Del Monte opens a new Hawaiian pineapple juice concentrate processing plant in Kunia, Hawaii.</p> <p><b>1984</b> Garst Seed Company establishes a corn research farm at Kunia, Oahu.</p> <p><b>1986</b> Pineapple Research Institute of Hawaii (PRI) breeding program closes and pineapple germplasm transferred to National Germplasm Repository in Hilo.</p> <p><b>1986</b> CTAHR begins a state-wide coffee variety trial or experiment launching a new era in Hawaii's Coffee Industry, the next year one of the cooperators Kauai Coffee (A&amp;B) begins planting the largest irrigated mechanized coffee plantation in the world.</p> <p><b>1987</b> Enactment of the State Water Code sets precedence on the allocation of water with the shutdown of a plantation irrigation system.</p> <p><b>1989</b> Del Monte introduces Fresh-Cut Chilled Hawaiian Pineapple. This is the first nationally distributed, fresh-cut, refrigerated fruit item. It is tailored for both the convenience oriented consumer market and for the foodservice market; containing no additives and preservatives.</p> <p><b>1989</b> Hawaii Forest Industry Association founded.</p>
1990	<p><b>1991</b> 6th Pineapple Industry Analysis completed.</p> <p><b>1992</b> Ginger industry suffers major losses (65-75%) due to bacterial wilt and nematodes; losses estimated at 9 million pounds.</p>

**1992**

Dole Packaged Foods Co. closes Lanai plantation (October).

**1992**

Dole shuts Iwilei Cannery (December).

**1992**

Hawaii Tropical Forest Recovery (Federal ) Act enacted resulting in the development of a detailed action plan that brings the complexity of forestry into a comprehensive and coordinated planning process (October).

**1994**

Hamakua Sugar Co. harvests last crop (September 30).

**1994**

The Waiahole Ditch Contested Case sets the process for allocation of water by the state's Water Commission.

**1995**

Hilo Sugar closes.

**1995**

Oahu Sugar closes (April 9).

**1995**

First papaya shipment to Chicago for quarantine treatment employing irradiation (April 5).

**1995**

First shipment of foliage potted plants to Japan (November 28).

**1996**

Ka'u Sugar closes (March 27).

**1996**

Waialua Sugar closes (October 4).

**1997**

Cargill purchases the Funk's G/ Ciba facility and establishes its seed research business independently on Molokai.

**1997**

Hawaiian Research expands and establishes a farm at Haleiwa, Oahu.

**1997**

Farm value of diversified agriculture surpasses \$300 million mark for first time.

**1997**

Private, commercial eucalyptus plantations begin on former cane lands in Hamakua, Hawaii Island.

**1998**

Debut of transgenic papayas -- Rainbow and SunUp -- resistant to the Papaya Ringspot Virus (May 1).

**1998**

Ginger industry records a record year with production of 18 million pounds.

	<p><b>1998</b></p> <p>Federal rule change to allow commercial export of certain varieties of green bananas -- Brazilian, Valery, Williams -- to the U.S. Mainland and Guam (November).</p> <p><b>1998</b></p> <p>Hawaii's banana production reaches a record breaking 21 million pounds; a 53% increase from the previous year.</p> <p><b>1999</b></p> <p>Last sugar harvest in Lahaina, Maui (September 12).</p> <p><b>1999</b></p> <p>Today there are over 5,500 farms in Hawaii. In 1954, there were less than 3,700 such farms.</p> <p>Today we grow more than 40 crops commercially. That's compared to only 28 fruit and vegetables grown commercially in 1954.</p> <p>The state acquires ownership of the Waiahole Ditch guaranteeing a steady source of irrigation water at an affordable price allowing for growth of diversified agriculture in Central and Leeward Oahu (July 9).</p> <p>Pioneer expands and establishes a seed processing plant at Waialua, Oahu.</p> <p>The seed business has grown since 1966 to a \$27 million industry which is still growing and ranks seventh among diversified agricultural industries. In addition to corn, crops now include soybeans, sunflower, and sorghum.</p> <p>Hawaii's macadamia nut industry is the second largest in the world with 45% of the world's production.</p> <p>Hawaii continues to be the only state in the nation to grow coffee. Currently Hawaii produces 7.6 million pounds of green coffee annually with production on the islands of Hawaii, Kauai, Maui, Molokai, and Oahu.</p>
2000	

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