

SECTION 18

AGRICULTURE

This section presents statistics on agricultural land, farms, and specific crops, livestock, dairy products, and poultry.

There were 4,300 farms in Hawaii as of 1970, with a total area of 2,340,000 acres. Both figures have declined appreciably during the past decade. The value of crop sales in 1970 was \$171 million, about 47 percent more than in 1960. Livestock sales amounted to \$42 million, or 25 percent more than the 1960 level. Combined crop and livestock sales ranged from \$28 million in Kauai County to \$66 million on the Big Island.

Major crops in 1970 were sugar (\$111 million in sales), pineapple (\$39 million), and vegetables and melons (\$7 million). Important products of livestock farms as of 1969 included cattle (\$13.7 million in sales), milk (\$12.9 million), and eggs (\$8.4 million). Coffee and rice production have declined sharply since the early years of the century, but macadamia nuts have increased rapidly.

Important sources for data on agriculture include the *United States Census of Agriculture* for 1969 and earlier years, the annual report on *Statistics of Hawaiian Agriculture* issued by the Hawaii Crop and Livestock Reporting Service, and publications of the Hawaii Agricultural Experiment Station, Hawaiian Sugar Planters' Association, and Pineapple Growers Association of Hawaii. National statistics appear in Section 23 of the *Statistical Abstract of the United States: 1971*.

Table 176.—AGRICULTURAL SUMMARY: 1900 TO 1969

Year	Number of farms, by size (in acres)					Farm acreage (thousands)			
	All farms	1 to 9	104.49	50 to 259	260 and over	Total acreage	In farms of 260 or more acres	Harvested cropland	Irrigated
1900	2,273	1,209	656	230	178	2,610	2,568	(NA)	724.6
1910	4,320	3,787		533		2,591	(NA)	(NA)	(NA)
1920	5,284	2,734	1,959	374	217	2,702	(NA)	(NA)	(NA)
1930	5,955	3,407	2,051	322	175	2,815	2,727	(NA)	(NA)
1940	4,995	2,870	1,691	263	171	2,486	2,411	184.6	132.7
1950	5,750	3,558	1,669	339	184	2,432	2,350	159.5	117.4
1959	6,242	3,569	1,988	432	253	2,461	2,364	176.4	141.2
1964	4,864	2,603	1,594	416	251	2,354	2,266	167.5	143.9
1969	3,896	2,024	1,281	389	202	2,058	1,982	178.7	145.6
Year	Average age of farm operators (years)	Tenant farmers		Regular hired workers ¹	Average value of land and buildings		Market value of agricultural products sold		
		Percent of all operators	Percent of farm acreage		Per farm (\$1,000)	Per acre (dollars)	Total (\$1,000)	Average per farm (\$1,000)	Percent of farms over \$2,500
1900	(NA)	58.2	1.5	(NA)	26.4	23	(NA)	(NA)	(NA)
1910	(NA)	71.9	(NA)	(NA)	19.2	32	(NA)	(NA)	(NA)
1920	(NA)	70.8	(NA)	(NA)	24.4	48	(NA)	(NA)	(NA)
1930	(NA)	72.5	21.7	(NA)	18.8	40	(NA)	(NA)	(NA)
1940	49.9	70.6	4.6	(NA)	22.6	45	(NA)	(NA)	(NA)
1950	47.8	57.5	1.7	21,597	34.0	80	164,554	28.6	(NA)
1959	49.5	38.7	1.6	14,403	(NA)	(NA)	152,334	24.4	(NA)
1964	51.0	41.1	2.6	12,375	98.9	205	187,505	38.5	46.4
1969	53.1	38.1	18.2	13,200	156.8	297	287,939	73.9	55.6
Year	Livestock and poultry on farms (thousands)				Quantity of crops harvested				
	Cattle and calves	Hogs and and pigs	Sheep and lambs	Chickens 4 mo. old and over	Sugar-cane (1,000 tons)	Pineapples (1,000 tons)	Rice (1,000 lb.)	Coffee (1,000 lb.) ²	Macadamia nuts (1,000 lb.) ³
1900	103	8	102	32	2,239	(NA)	33,442	(NA)	(NA)
1910	145	20	77	64	4,240	(NA)	41,828	9,834	(NA)
1920	137	24	43	65	4,863	150	29,572	19,884	(NA)
1930	138	31	32	271	7,471	355	7,582	19,950	5
1940	139	32	26	273	8,535	614	1,902	8,547	181
1950	156	65	14	472	7,889	655	658	4,648	704
1959	205	78	12	806	9,391	1,010	287	10,005	2,015
1964	218	68	12	1,045	10,741	924	—	9,679	7,015
1969	233	52	11	1,072	(NA)	(NA)	(NA)	(NA)	(NA)

NA Not available

¹Working 150 days or more. Data for 1964 and 1969 exclude farms with sales less than \$2,500 (which accounted for 152 hired workers in 1964).

²Parchment.

³Husked, unshelled.

Source: U.S. Bureau of the Census, *U.S. Census of Agriculture: 1959*, Vol. I, Part 50; *U.S. Census of Agriculture: 1964*, Vol. I, Part 50; *U.S. Census of Agriculture: 1969, Hawaii, County Data*.

Table 177.—AGRICULTURAL SUMMARY, BY COUNTIES: 1969

County	Number of farms, by size (in acres)					Farm acreage (thousands)				
	All farms	1 to 9	10 to 49	50 to 259	260 and over	Total acreage	In forms of 260 or more acres	Harvested cropland	Irrigated	
State total	3,896	2,024	1,281	389	202	2,058	1,982	178.7	145.6	
Hawaii	2,241	1,066	832	227	116	1,203	1,158	64.2	9.1	
Honolulu	768	555	153	32	28	147	138	31.2	41.1	
Kauai	375	185	125	47	18	273	265	28.3	42.5	
Maui	512	218	171	83	40	435	420	55.0	52.8	
County	Average age of farm operators (yrs.)	Tenant farmers			Regular hired workers ¹	Average value of land and buildings		Market value of agricultural products sold		
		Percent of all operators	Percent of farm acreage			Per farm (\$1,000)	Per acre (dollars)	Total (\$1,000)	Average per farm (\$1,000)	Percent of farms over \$2,500
State total	53.1	38.1	18.2	13,200	156.8	297	287,939	73.9	55.6	
Hawaii	53.6	38.9	16.7	3,752	90.0	168	85,833	38.3	52.9	
Honolulu	52.1	43.6	29.9	2,944	281.7	1,474	87,025	113.3	70.1	
Kauai	52.3	37.6	30.5	2,606	224.7	308	41,596	110.9	49.3	
Maui	52.5	26.5	10.3	3,898	212.1	250	73,485	143.5	50.0	
County	Livestock and poultry on farms (thousands)				Quantity of crops harvested ²					
	Cattle and calves	Hogs and pigs	Horses and ponies	Chickens 3 mo. old and over	Coffee (1,000 lb.) ³	Macadamia nuts (1,000 lb.) ⁴	Papayas (1,000 lb.)	Pineapples (1,000 tons)	Sugarcane (1,000 tons)	
State total	233	52.3	4.1	1,072	9,679	7,015	21,924	924	10,741	
Hawaii	133	6.3	2.4	149	9,679	6,778	15,853	—	4,690	
Honolulu	35	35.6	0.4	773	—	160	4,422	332	1,754	
Kauai	16	3.5	0.7	45	—	56	1,113	44	2,113	
Maui	48	6.9	0.6	104	—	21	533	548	2,184	

¹Working 150 days or more. Limited to farms with sales of \$2,500 and over.

²Refers to 1964; data for 1969 not yet available.

³Parchment.

⁴Husked, unshelled.

Source: U.S. Bureau of the Census, *U.S. Census of Agriculture: 1969, Hawaii, County Data*.

**Table 178.—NUMBER OF FARMS, FARM ACREAGE, AND VALUE OF CROP AND LIVESTOCK SALES
1960 TO 1970**

Area and year	Number of farms	Area in farms ¹ (1,000 acres)	Value of sales (\$1,000)		
			Crops and livestock	Crops	Livestock
The State:					
1960	6,600	2,600	149,859	116,338	33,521
1961	6,200	2,550	160,330	125,980	34,350
1962	5,700	2,500	170,355	136,101	34,254
1963	5,200	2,450	192,759	158,450	34,309
1964	5,100	2,450	176,354	140,752	35,602
1965	5,000	2,400	186,542	150,849	35,693
1966	4,900	2,400	197,263	160,008	37,255
1967	4,800	2,360	200,457	162,606	37,851
1968	4,700	2,350	205,424	167,118	38,306
1969	4,600	2,350	200,299	160,398	39,901
1970	4,300	2,340	212,753	170,914	41,839
Hawaii County:					
1960	3,600	1,521	39,219	31,224	7,995
1970	2,500	1,367	65,519	52,177	13,342
Kauai County:					
1960	600	315	21,169	18,734	2,435
1970	350	284	27,664	25,278	2,386
Maui County:					
1960	1,050	595	41,016	37,350	3,666
1970	600	536	57,907	54,424	3,483
Oahu:					
1960	1,350	169	48,455	29,030	19,425
1970	850	156	61,663	39,035	22,628

¹Includes land not in crop and pasture, such as farm houselots, roads, woodlots, etc.

Source: Hawaii Crop and Livestock Reporting Service, *Statistics of Hawaiian Agriculture* (U.S. Department of Agriculture, in cooperation with Hawaii State Department of Agriculture, annual).

Table 179.—ACREAGE IN CROP AND PASTURE, NUMBER OF FARMS, VOLUME OF CROP MARKETINGS, AND VALUE OF CROP SALES, BY CROP: 1960 TO 1970

Subject	The State		Counties, 1970			
	1960	1970	Hawaii	Kauai	Maui	Honolulu
Acreage (1,000 acres):						
Sugarcane	224.6	237.9	107.4	49.6	45.6	35.3
Pineapple	75.0	64.0	—	2.5	43.5	18.5
Vegetables and melons	3.4	3.2	1.1	0.1	0.8	1.2
Fruits (excl. pineapple)	2.6	3.2	2.2	0.2	0.3	0.5
Coffee	5.5	4.3	4.3	—	—	—
Macadamia nuts	3.8	8.7	8.7	—	0.1	—
Pasture	1,250	1,286	796	127	324	39
Number of crop farms:						
Sugar	988	717	703	7	3	4
Pineapple	135	59	—	27	30	2
Vegetables and melons	773	488	107	58	89	234
Fruits (excl. pineapple)	651	409	190	49	44	126
Coffee	1,128	760	760	—	—	—
Macadamia nuts	215	250	241	6	2	1
Taro	233	118	30	40	40	8
Volume of crop marketings:¹						
Sugar (unprocessed cane)	8,613	10,457	4,481	2,115	2,207	1,654
Pineapple (fresh equivalent)	884	916	—	—	—	—
Vegetables and melons	48,475	54,150	19,420	2,280	15,945	16,450
Fruits (excl. pineapple)	24,190	36,049	25,690	1,570	1,085	4,520
Coffee (parchment)	13,272	4,900	4,900	—	—	—
Macadamia nuts (in shell)	2,569	11,500	11,420	50	—	30
Taro	9,675	8,555	2,295	4,565	1,495	200
Value of crop sales (\$1,000):						
Sugar (unprocessed cane)	67,200	110,600	41,000	22,700	26,600	20,300
Pineapple (fresh equivalent)	36,100	38,700	—	1,500	24,000	13,200
Vegetables and melons	4,611	6,791	2,288	389	1,398	2,716
Fruits (excl. pineapple)	1,400	3,442	2,491	176	307	468
Coffee (parchment)	3,202	1,715	1,715	—	—	—
Macadamia nuts (in shell)	472	2,496	2,478	(W)	(W)	(W)
Others ²	3,353	7,170	2,205	495	2,119	2,351

W Withheld to avoid disclosure of individual operations.

¹Sugar and pineapple in 1,000 tons, other crops in 1,000 pounds.

²Chiefly flowers, foliage and nursery products (\$4,420,000 in 1970).

Source: Hawaii Crop and Livestock Reporting Service, *Statistics of Hawaiian Agriculture* (U.S. Department of Agriculture, in cooperation with the Hawaii State Department of Agriculture, annual).

**Table 180.—NUMBER OF LIVESTOCK FARMS, VOLUME OF LIVESTOCK MARKETINGS,
AND VALUE OF LIVESTOCK SALES, BY PRODUCT: 1960 TO 1970**

Subject	The State		Counties, 1970			
	1960	1970	Hawaii	Kauai	Maui	Oahu
Number of livestock farms:						
Cattle	1,820	1,410	580	210	370	250
Hogs	1,760	700	190	60	170	280
Milk	260	120	40	10	40	35
Eggs	900	240	90	20	70	60
Broilers	39	31	3	3	2	23
Honey	48	24		7	5	12
Volume of livestock marketings:						
Beef (1,000 lb. dressed weight)	25,001	32,210	20,189	2,900	6,598	2,523
Pork (1,000 lb. dressed weight)	8,831	8,691	1,117	310	1,260	6,004
Milk (million pounds)	120	135	(W)	(W)	(W)	114.5
Eggs (million eggs)	138	197	32.8	8.6	12.1	143.4
Broilers and chickens						
(1,000 lb. live weight)	6,592	7,798	(W)	(W)	(W)	6,790
Honey, beeswax (1,000 lb.)	285	219		153.7	32.7	32.4
Value of livestock sales (\$1,000):						
Cattle	9,837	13,729	8,679	1,204	2,821	1,025
Hogs	3,684	4,508	569	176	655	3,108
Milk	10,635	12,933	(W)	(W)	(W)	10,706
Eggs	6,911	8,372	1,485		1,006	5,881
Broilers and chickens	2,347	2,206	(W)	(W)	(W)	1,882
Others	107	91		58	7	26

W Withheld to avoid disclosure of individual operations.

Source: Hawaii Crop and Livestock Reporting Service, *Statistics of Hawaiian Agriculture*, (U.S. Department of Agriculture, in cooperation with Hawaii State Department of Agriculture, annual).

Table 181.—FLOWERS AND NURSERY PRODUCTS: 1970

County	Number of farms	Growing area (acres)	Wholesale value (\$1,000)	Commodity	Wholesale value (\$1,000)
The State	459	807	4,022.5	Cut and lei flowers	2,584.2
Hawaii	231	380	1,582.5	Anthurium	847.0
Kauai	17	18	66.2	Carnation	328.0
Maui	57	57	453.1	Orchid	736.7
Honolulu	154	352	1,970.7	Others	672.5
				Cut cultivated greens	194.0
				Potted plants	657.3
				Nursery products	587.0

Source: Hawaii Crop and Livestock Reporting Service, *Statistics of Hawaiian Agriculture 1970* (U.S. Department of Agriculture, in cooperation with Hawaii State Department of Agriculture, July 1971).

Table 182.—LAND USE PRODUCTIVITY RATINGS FOR MAJOR ISLANDS: 1968

Island and land use	Agricultural productivity rating (acres)						
	Total ¹	A (very good)	B (good)	C (moderate)	D (poor)	E (very poor)	
Six Islands	4,050,176	68,037	128,833	312,558	783,817	2,668,515	
Island:							
Kauai	354,112	10,038	30,276	28,458	30,525	249,276	
Oahu	388,928	24,584	32,286	21,986	19,728	228,218	
Molokai	167,104	702	—	4,519	40,405	120,309	
Lanai	89,280	—	—	4,849	20,219	63,777	
Maui	466,432	32,713	20,067	38,467	99,806	268,726	
Hawaii	2,584,320	—	46,204	214,279	573,134	1,738,209	
Land use:							
Pineapple	69,276	—	16,204	22,131	29,038	1,903	
Sugar cane	262,377	65,776	71,354	82,760	40,230	2,257	
Diversified agriculture	33,569	2,261	6,497	14,218	6,205	4,388	
Grassland grazing	492,905	—	22,905	116,641	175,186	178,173	
Wooded grazing	657,629	—	4,313	37,776	175,767	439,773	
Idle agricultural land	13,585	—	994	3,139	4,545	4,907	
Forest	289,039	—	1,729	7,864	58,877	220,569	
Forest reserve	1,190,954	—	1,603	14,596	237,389	937,366	
Recreation	17,248	—	798	657	4,630	11,163	
Game management	87,585	—	—	2,302	17,565	67,718	
National park	229,423	—	—	5,191	26,554	197,678	
Military	38,048	—	1,637	3,280	3,624	29,507	
Undeveloped subdivision	76,814	—	799	2,003	4,198	69,814	
Pali and barren land	503,308	—	—	—	9	503,299	
Quarry	1,462						
Water	8,063						
Urban: military	17,658						
Urban: civilian	61,233						
			} Not rated for productivity				

¹Includes quarry, water, and urban, which were not rated for productivity.

Source: Arthur Y. Ching and Tamotsu Sahara, *Land Use and Productivity Rating, State of Hawaii, 1968*, L.S.B. Circular No. 15 (University of Hawaii, Land Study Bureau, July 1969), pp. 20-21.