

## Section 19

# AGRICULTURE

This section presents statistics on agricultural land, farms, crops, livestock, dairy products, poultry, and aquaculture. Related information appears in Sections 6 (land use), 12 and 15 (agricultural employment and earnings), and 22 (food processing).

Important sources for data on agriculture include the *United States Census of Agriculture*, most recently published for 1997, the annual report on *Statistics of Hawaiian Agriculture* issued by the Hawaii Agricultural Statistics Service, and data compiled by the former Hawaiian Sugar Planters' Association, now the Hawaii Agriculture Research Center, and the Aquaculture Development Program of the Hawaii State Department of Agriculture. Agricultural data for earlier years are summarized in *Historical Statistics of Hawaii*, Section 13. National statistics appear in Section 17 of the *Statistical Abstract of the United States: 2001*.

**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:  
1992 AND 1997**

Item		1992	1997
Farms	number	5,336	5,473
Land in farms	acres	1,588,843	1,439,071
Average size of farm	acres	298	263
Value of land and buildings:			
Average per farm	dollars	722,189	632,281
Average per acre	dollars	2,425	2,405
Estimated market value of all machinery and equipment:			
Average per farm	dollars	53,207	38,709
Farms by size:			
1 to 9 acres		3,410	3,456
10 to 49 acres		1,342	1,417
50 to 179 acres		313	318
180 to 499 acres		133	139
500 to 999 acres		34	43
1,000 acres or more		104	100
Total cropland			
	farms	4,735	4,882
	acres	293,371	292,107
Harvested cropland			
	farms	4,472	4,594
	acres	136,431	100,094
Irrigated land			
	farms	2,220	2,241
	acres	134,338	76,971
Market value of agricultural products sold			
Average per farm	\$1,000 dollars	552,054	496,935
Crops, including nursery and greenhouse crops	\$1,000	103,458	90,798
Livestock, poultry, and their products	\$1,000	453,410	401,411
		98,644	95,524
Farms by value of sales:			
Less than \$2,500		1,790	1,638
\$2,500 to \$4,999		754	743
\$5,000 to \$9,999		715	797
\$10,000 to \$24,999		863	989
\$25,000 to \$49,999		484	535
\$50,000 to \$99,999		291	323
\$100,000 or more		439	448

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**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:  
1992 AND 1997 -- Con.**

Item		1992	1997
Total farm production expenses	\$1,000	466,826	398,567
Average per farm	dollars	87,486	(NA)
Net cash return from agriculture sales for the farm unit	farms	5,336	(NA)
Average per farm	\$1,000 dollars	85,228 15,972	(NA) (NA)
Operators by principal occupation:			
Farming		2,926	3,052
Other		2,410	2,421
Operators by days worked off farm:			
Any		2,864	2,827
200 days or more		1,487	1,566
Livestock and poultry:			
Cattle and calves inventory	farms	874	829
	number	191,230	181,732
Beef cows	farms	655	625
	number	87,620	93,711
Milk cows	farms	57	44
	number	10,816	8,389
Cattle and calves sold	farms	699	660
	number	82,788	66,726
Hogs and pigs inventory	farms	253	248
	number	28,570	29,440
Hogs and pigs sold	farms	200	190
	number	47,831	38,066
Sheep and lambs inventory	farms	62	(NA)
	number	22,938	(NA)
Chicken inventory 1/	farms	177	140
	number	935,278	726,534
Broilers and other meat-type chickens sold	farms	14	9
	number	1,201,331	478,672

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**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:  
1992 AND 1997 -- Con.**

Item		1992	1997
Selected crops harvested:			
Sugarcane for sugar	farms	31	13
	acres	62,915	31,483
	tons	5,488,214	2,873,712
Pineapples harvested	farms	21	27
	acres	15,500	12,992
	tons	556,748	348,428
Vegetables harvested	farms	602	657
	acres	5,129	6,549
Land in orchards	farms	2,537	2,786
	acres	38,590	37,906

NA Not Available.

1/ Data for 1992 are for chickens 3 months old or older inventory.

Source: U.S. Dept. of Agriculture, National Agricultural Statistics Service, *1997 Census of Agriculture, Vol.1, Part 11, Hawaii* (March 1999), table 1, pp. 10-11.

**Table 19.02-- FARMS AND LAND IN FARMS, FOR COUNTIES: 1997**

Item		Hawaii	Honolulu	Kauai	Maui
Farms	number	3,319	880	468	806
Land in farms	acres	870,012	79,927	197,042	292,090
Average size of farm	acres	262	91	421	362
Value of land and buildings:					
Average per farm	dollars	574,464	565,361	847,704	818,342
Average per acre	dollars	2,192	6,225	2,013	2,258
Estimated market value of all machinery and equipment:					
Average per farm	dollars	21,997	33,250	81,111	88,989
Farms by size:					
1 to 9 acres		2,062	664	262	468
10 to 49 acres		893	156	135	233
50 to 179 acres		207	28	35	48
180 to 499 acres		71	17	22	29
500 to 999 acres		32	3	3	5
1,000 acres or more		54	12	11	23
Total cropland	farms	3,035	777	386	684
	acres	102,991	29,237	(D)	(D)
Harvested cropland	farms	2,897	749	343	605
	acres	32,410	15,355	20,086	32,243
Irrigated land	farms	857	629	275	480
	acres	7,425	16,303	18,212	35,031
Market value of agricultural products sold					
Average per farm	\$1,000 dollars	168,111	142,965	57,474	128,385
Crops, including nursery and greenhouse crops	\$1,000	129,018	103,477	52,832	116,084
Livestock, poultry, and their products	\$1,000	39,094	39,488	4,642	12,301

D Withheld to avoid disclosing data for individual farms.

Source: U.S. Dept. of Agriculture, National Agricultural Statistics Service, *1997 Census of Agriculture, Vol.1, Part 11, Hawaii* (March 1999), p.150.

**Table 19.03-- NUMBER OF FARMS, FARM ACREAGE, AND FARM  
EMPLOYMENT: 1980 TO 2000**

Year	Number of farms 1/	Farm acreage 2/ (1,000)	Farm employment 3/		
			Self-employed farm operators	Unpaid family members 3/	Hired workers
1980	4,300	1,970	3,400	1,100	10,550
1981	4,400	1,965	3,100	900	10,500
1982	4,500	1,960	2,600	1,300	13,000
1983	4,500	1,900	2,500	1,500	13,000
1984	4,600	1,850	2,200	1,300	11,800
1985	4,600	1,800	2,200	1,200	10,600
1986	4,600	1,750	2,050	1,200	9,700
1987	4,650	1,720	2,600	1,100	10,700
1988	4,650	1,720	2,600	1,100	10,300
1989	4,650	1,720	2,400	1,100	9,800
1990	4,700	1,680	2,500	1,000	9,600
1991	4,700	1,630	3,100	1,100	9,600
1992	4,800	1,590	3,100	1,300	9,500
1993	5,200	1,560	2,800	1,100	8,700
1994	5,300	1,530	2,700	1,200	8,100
1995	5,300	1,470	2,700	1,000	7,300
1996	5,400	1,440	2,700	1,000	7,400
1997	5,500	1,440	2,700	1,200	7,000
1998	5,500	1,440	2,700	1,200	7,400
1999	5,500	1,440	3,000	1,200	7,600
2000	5,500	1,440	3,100	1,000	7,800

1/ Based on farm definition of \$1,000 or more of agricultural sales.

2/ Includes land not in crop and pasture, such as farm house lots, roads, woodlots, etc.

3/ Working 15 or more hours per week.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual); and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.

**Table 19.04-- VALUE OF CROP AND LIVESTOCK SALES: 1980 TO 2000**

[\$1,000]

Year	All crops and livestock 1/ 2/	Crops				Livestock 1/
		All crops 2/	Sugar (unprocessed cane)	Pine-apples (fresh equiv.)	Other crops 2/ 3/	
1980	634,101	552,877	385,100	76,596	91,181	81,224
1981	489,502	401,348	207,500	89,745	104,103	88,154
1982	507,268	428,860	230,800	94,364	103,696	78,408
1983	568,414	481,926	266,900	100,376	114,650	86,488
1984	550,517	463,502	256,200	89,928	117,374	87,015
1985	528,649	445,826	222,400	90,530	132,896	82,823
1986	564,717	481,312	233,800	99,720	147,792	83,405
1987	557,298	469,565	218,000	99,286	152,279	87,733
1988	573,962	485,293	209,900	107,402	167,991	88,669
1989	585,048	493,261	210,300	98,310	184,651	91,787
1990	595,030	506,586	213,800	106,365	186,421	88,444
1991	551,382	464,139	174,900	107,775	181,464	87,243
1992	520,227	431,958	153,700	102,100	176,158	88,269
1993	506,475	421,593	163,000	79,850	178,743	84,882
1994	503,780	427,150	160,100	78,890	188,160	76,630
1995	493,385	421,089	127,700	87,360	206,029	72,296
1996	495,688	428,671	108,100	95,914	224,657	67,017
1997	488,159	420,360	85,500	91,721	243,139	67,799
1998	493,442	420,734	87,400	92,776	240,558	72,708
1999	512,992	443,111	86,800	101,448	254,863	69,881
2000	499,239	430,961	62,600	101,530	266,831	68,278

1/ 1999 Total livestock sales figures have been revised from previous year databook table.

2/ 1997 Total crops sales figures have been revised from previous year databook table.

3/ 1999 Total crops sales figures have been revised from previous year databook table.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual); and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.

**Table 19.05-- NUMBER OF FARMS, FARM ACREAGE, AND FARM EMPLOYMENT, BY COUNTIES OR ISLANDS: 1990, 1998, 1999, AND 2000**

County or island and year	Number of farms 1/	Farm acreage 2/ (1,000)	Farm employment 3/		
			Self-employed farm operators	Unpaid family members 4/	Hired workers
State total:					
1990	4,600	1,710	2,500	1,000	9,600
1998	5,500	1,440	2,700	1,200	7,400
1999	5,500	1,440	3,000	1,200	7,600
2000	5,500	1,440	3,100	1,000	7,800
Hawaii County:					
1990	2,650	1,005	1,550	600	3,500
1998	3,300	870	1,750	650	2,550
1999	3,300	870	1,850	600	2,400
2000	3,300	870	1,800	550	2,700
Maui County:					
1990	600	355	250	150	2,500
1998	800	290	350	150	1,950
1999	800	290	450	200	2,200
2000	800	290	500	150	2,000
Oahu:					
1990	950	125	450	250	2,450
1998	900	80	450	250	2,100
1999	900	80	500	300	2,100
2000	900	80	500	200	2,200
Kauai County:					
1990	400	225	200	50	1,150
1998	500	200	200	100	800
1999	500	200	250	100	900
2000	500	200	300	50	950

1/ Based on farm definition of \$1,000 or more of agricultural sales.

2/ Includes land not in crops and pasture, such as farm house lots, roads, woodlots, etc.

3/ Data not comparable among years shown due to changes in survey periods; sum of county estimates may not add due to rounding.

4/ Working 15 hours or more per week.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual); *Hawaii Agricultural Labor* (quarterly); and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.



**Table 19.06-- VALUE OF CROP AND LIVESTOCK SALES, BY COUNTIES  
OR ISLANDS: 1990, 1998, 1999 AND 2000**

[\$1,000]

County or island and year	All crops and livestock 1/	Crops				Livestock 1/
		All crops 1/	Sugar (unpro- cessed cane)	Pine- apples 2/ (fresh equiv.)	Other crops 2/	
State total:						
1990	588,844	500,400	213,800	99,255	187,345	88,444
1998	493,442	420,734	87,400	92,776	240,558	72,708
1999	512,992	443,111	86,800	101,448	254,863	69,881
2000	499,239	430,961	62,600	101,530	266,831	68,278
Hawaii County:						
1990	197,997	168,580	55,000	(Z)	113,580	29,417
1998	142,522	121,676	-	(Z)	121,676	20,846
1999	144,470	121,939	-	(Z)	121,939	22,531
2000	154,454	128,379	-	(Z)	128,379	26,075
Maui County:						
1990	144,488	135,654	69,600	36,975	29,079	8,834
1998	135,373	124,816	58,700	28,413	37,703	10,557
1999	131,265	125,375	60,200	28,325	36,850	5,890
2000	116,998	110,603	43,900	29,445	37,258	6,395
Oahu:						
1990	181,083	135,899	36,800	62,280	36,819	45,184
1998	160,819	124,630	-	64,363	60,267	36,189
1999	179,299	142,407	-	73,123	69,284	36,917
2000	181,494	149,538	-	72,085	77,453	31,956
Kauai County:						
1990	65,276	60,267	52,400	(Z)	7,867	5,009
1998	54,728	49,612	28,700	(Z)	20,912	5,116
1999	57,933	53,390	26,600	(Z)	26,790	4,543
2000	46,293	42,441	18,700	(Z)	23,741	3,852

Z Less than \$50,000.

1/ 1999 data have been revised from previous year databook table.

2/ County data may fail to add exactly to State total.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual);  
and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.

**Table 19.07-- ACREAGE IN CROP, NUMBER OF CROP FARMS, VOLUME OF CROP MARKETINGS, AND VALUE OF CROP SALES:  
1990, 1998, 1999, AND 2000**

Subject	1990	1998	1999	2000
Acreage in crop (1,000 acres):				
Sugarcane	162.0	67.6	67.0	60.0
Pineapples (land used for pineapple)	30.9	21.0	21.0	20.7
Vegetables and melons (harvested acreage)	5.3	6.6	8.2	6.4
Fruits, excluding pineapples 1/	7.0	7.6	8.0	7.1
Coffee	5.3	7.4	7.7	7.9
Macadamia nuts	22.6	20.2	19.9	18.4
All other crops	4.6	15.9	16.2	15.9
Number of crop farms:				
Sugar	55	4	4	3
Pineapples	10	15	15	15
Vegetables and melons	485	880	1,020	580
Fruits (excluding pineapples)	735	1,515	1,373	1,254
Coffee	620	610	650	670
Macadamia nuts 1/	690	800	750	650
Taro	140	180	190	185
Flowers and nursery products 1/	710	745	765	755
Volume of crop marketings:				
Sugar, unprocessed cane (1,000 tons)	6,538	(2/)	(2/)	(2/)
Pineapples, fresh equivalent (1,000 tons)	575	(2/)	(2/)	(2/)
Vegetables and melons (1,000 lb.)	84,920	(2/)	(2/)	(2/)
Fruits, excluding pineapples (1,000 lb.)	105,310	(2/)	(2/)	(2/)
Coffee, parchment (1,000 lb.)	2,700	(2/)	(2/)	(2/)
Macadamia nuts, in shell (1,000 lb.)	50,000	(2/)	(2/)	(2/)
Taro (1,000 lb.)	5,800	(2/)	(2/)	(2/)
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	213,800	87,400	86,800	62,600
Pineapples (fresh equivalent)	99,255	92,776	101,448	101,530
Vegetables and melons	35,805	51,149	56,438	59,761
Fruits (excluding pineapples) 1/	23,779	24,530	28,525	31,364
Coffee (parchment)	7,020	24,700	21,000	23,055
Macadamia nuts (in shell)	41,000	37,375	37,855	29,500
Taro	2,262	3,180	3,604	3,710
Seed Crops 1/ 3/	(NA)	25,300	30,500	35,400
Flowers and nursery products 1/	70,347	73,207	75,725	83,380

NA Not Available

1/ 1999 data have been revised from previous year databook table.

2/ This data series discontinued in 1998.

3/ Seed crops have been included in this table, replacing field crops of previous years.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual); and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.

**Table 19.08-- ACREAGE IN CROP, NUMBER OF CROP FARMS, AND VALUE OF CROP SALES, BY COUNTIES OR ISLANDS: 2000**

Subject	Hawaii County	Maui County	Oahu	Kauai County
Acreage in crop (1,000 acres):				
Sugarcane	-	36.9	-	23.1
Pineapples (land used for pineapple)	(1/)	11.6	9.1	(1/)
Vegetables and melons (harvested acreage)	1.8	1.3	3.1	.2
Fruits, excluding pineapples	4.1	0.3	1.7	1.0
Coffee	3.3	(D)	(D)	(D)
Macadamia nuts	(D)	(D)	(D)	(D)
All other crops	1.9	1.9	11.0	1.1
Number of crop farms:				
Sugar	-	1	-	2
Pineapples	5	5	2	3
Vegetables and melons	250	120	160	50
Fruits (excluding pineapples)	705	231	162	156
Coffee	650	(D)	(D)	(D)
Macadamia nuts	(D)	(D)	(D)	(D)
Taro	85	15	15	70
Flowers and nursery products	365	140	215	35
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	-	43,900	-	18,700
Pineapples (fresh equivalent)	(2/)	29,445	72,085	(2/)
Vegetables, ginger root, herbs, and melons	17,910	9,569	30,836	1,446
Fruits (excluding pineapples)	17,522	1,102	8,985	3,755
Coffee (parchment)	15,200	(D)	(D)	(D)
Macadamia nuts (in shell)	(D)	(D)	(D)	(D)
Taro	506	(D)	(D)	2,520
Seed crops	(D)	(D)	(D)	(D)
Flowers and nursery products	47,811	9,947	24,161	1,461

D Withheld to avoid disclosure of individual operations.

1/ Less than 50 acres.

2/ Less than \$50,000.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual); and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.

**Table 19.09-- SPECIALTY CROPS, FRUITS, AND VEGETABLES: 2000**

[Data shown for crops with sales in excess of \$1,000,000]

<b>Crop</b>	<b>Acreage harvested</b>	<b>Yield per acre (1,000 lb.)</b>	<b>Production (1,000 lb.)</b>	<b>Farm price (cents per lb.)</b>	<b>Value of sales (\$1,000)</b>
Specialty crops:					
Coffee (2000-01)	6,800	1.3	8,700	265.0	23,055
Fresh herbs	...	...	2,900	...	5,380
Ginger roots	270	50.0	13,500	66.0	8,910
Macadamia nuts (2000-01)	18,400	2.8	56,000	59.0	29,500
Seed crops (2000-01)	2,750	...	4,450	...	35,400
Fruits:					
Bananas	1,550	18.7	29,000	36.0	10,440
Guavas	680	...	15,900	12.9	2,051
Papayas	1,650	33.0	54,500	29.4	16,007
Vegetables:					
Beans, Snap	210	5.7	1,200	91.0	1,092
Cabbage, Chinese	320	22.5	7,200	21.0	1,512
Cabbage, head	540	27.0	14,600	19.0	2,774
Corn, sweet	440	5.5	2,400	55.0	1,320
Cucumbers	400	14.3	5,700	44.0	2,508
Onions, dry	340	12.6	4,300	71.0	3,053
Onions, green	150	10.0	1,500	86.0	1,290
Peppers, green	200	14.0	2,800	55.0	1,540
Potatoes, sweet	260	9.6	2,500	60.0	1,500
Squash, Italian	180	12.2	2,200	47.0	1,033
Taro	1/ 470	...	7,000	53.0	3,710
Tomatoes	500	33.0	16,500	52.0	8,580
Watercress	1/ 45	...	970	110.0	1,067
Watermelons	560	22.5	12,600	25.0	3,150

1/ Acreage in crop.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual); and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.

**Table 19.10-- SUGARCANE ACREAGE, BY TYPE OF IRRIGATION:  
1984 TO 2001**

Year	Total cane land	Irrigated cane land		Unirrigated cane land
		Drip	Furrow or overhead	
1984	188,396	86,925	26,325	75,146
1985	187,858	89,129	24,323	74,406
1986	184,179	90,877	19,526	73,776
1987	180,967	88,812	18,602	73,553
1988	177,693	88,387	17,791	71,515
1989	170,816	86,030	16,687	68,099
1990	161,991	83,252	15,129	63,610
1991	155,608	80,366	13,745	61,497
1992	145,790	76,132	13,008	58,777
1993	121,322	74,557	11,595	35,170
1994	98,413	68,547	10,753	19,113
1995	81,957	62,462	8,416	11,079
1996	68,816	56,147	7,511	5,158
1997	67,820	55,585	7,115	5,120
1998	67,585	55,828	6,620	5,137
1999	60,758	51,234	4,602	4,922
2000	43,821	43,821	-	-
2001	50,410	50,410	-	-

Source: Hawaiian Sugar Planters' Association, records; Alexander & Baldwin, Inc., "Water to the Roots," *Ampersand*, Spring 1987, pp. 3-6; and Hawaii Agriculture Research Center, records.

**Table 19.11-- LIVESTOCK INVENTORY, 1984 TO 2000, AND BY  
GEOGRAPHIC AREAS, 2000**

[In thousands]

<b>Year and geographic area</b>	<b>All cattle and calves 1/</b>	<b>Milk cows 1/</b>	<b>Hogs and pigs 2/</b>	<b>Chickens (excluding broilers) 2/</b>	<b>Bee colonies</b>
1984	221	12	47	1,195	9
1985	209	11	55	1,210	9
1986	199	12	50	1,185	9
1987	203	12	47	1,212	9
1988	212	12	43	1,217	9
1989	205	11	39	1,216	9
1990	215	11	36	1,183	10
1991	200	10	34	1,213	10
1992	178	11	35	1,109	9
1993	165	11	33	1,012	9
1994	175	11	35	981	9
1995	178	11	34	933	8
1996	174	10	28	876	8
1997	172	10	29	863	9
1998	180	9	29	747	8
1999	173	9	28	721	8
2000	164	8	26	722	7
GEOGRAPHIC AREAS: 2000					
Hawaii County	114.4	(NA)	4.0	(D)	(NA)
Maui County	26.3	(NA)	5.2	(D)	(NA)
Oahu	12.8	(NA)	15.0	570	(NA)
Kauai County	10.5	(NA)	1.8	(D)	(NA)

NA Not available.

D Withheld to avoid disclosing data for individual operations.

1/ As of January 1 of the following year.

2/ As of December 1.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual);  
and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.

**Table 19.12-- NUMBER OF LIVESTOCK OPERATIONS, VOLUME OF LIVESTOCK MARKETINGS, AND VALUE OF LIVESTOCK SALES: 1990, 1998, 1999, AND 2000**

Subject	1990	1998	1999	2000
Number of livestock operations, Dec. 31:				
Cattle 1/ 2/	900	830	800	800
Hogs	500	250	230	230
Milk	80	50	50	50
Eggs	55	55	55	55
Honey	12	29	28	33
Volume of livestock marketings:				
Beef (dressed weight; 1,000 lb.) 3/	29,071	(4/)	(4/)	(4/)
Pork (dressed weight; 1,000 lb.)	6,850	(4/)	(4/)	(4/)
Milk (million lb.)	148.6	(4/)	(4/)	(4/)
Eggs (million)	227.5	(4/)	(4/)	(4/)
Honey (1,000 lb.)	1,570	(4/)	(4/)	(4/)
Value of livestock sales (\$1,000):				
Cattle 1/ 5/	28,735	16,861	16,806	19,204
Hogs 5/	7,252	5,235	5,072	4,425
Milk	30,760	33,293	31,270	28,102
Eggs	16,115	11,220	10,803	10,636
Honey 1/	738	708	512	635

1/ 1999 data have been revised from previous year databook table.

2/ Includes beef, dairy, and dairy replacement operations.

3/ Includes slaughter cattle, but excludes calves shipped out-of-state.

4/ This data series discontinued in 1998.

5/ Excludes interfarm sales; includes out-of-state sales of slaughter cattle and feeder calves.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual); and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.

**Table 19.13-- NUMBER OF LIVESTOCK OPERATIONS AND VALUE OF LIVESTOCK SALES, BY COUNTIES OR ISLANDS: 2000**

Subject	Hawaii County	Maui County	Oahu	Kauai County
Number of livestock operations, Dec. 31:				
Cattle 1/	470	170	60	100
Hogs	70	60	70	30
Milk	(D)	(D)	10	(D)
Eggs	(D)	(D)	15	(D)
Value of livestock sales (\$1,000):				
Cattle 2/	14,138	3,230	556	1,280
Hogs 2/	475	935	2,637	378
Milk	(D)	(D)	19,387	(D)
Eggs	(D)	(D)	7,509	(D)

D Withheld to avoid disclosure of individual operations.

1/ Includes beef, dairy, and dairy replacement operations.

2/ Excludes interfarm sales; includes out-of-state sales of slaughter cattle and feeder calves.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual); and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.



**Table 19.14-- FLORICULTURE AND NURSERY PRODUCTS, 1994 TO 2001,  
AND BY ISLANDS, 1998 TO 2001**

Island and year	Number of farms	Growing area					Wholesale value (\$1,000)
		Total (acres)	Green-house (1,000 sq. ft.)	Artificial shade structure (1,000 sq. ft.)	Natural shade area (acres)	Open field (acres)	
State total:							
1994	660	2,290	3,770	21,600	18	1,690	67,005
1995	705	2,698	3,770	24,215	15	2,040	68,175
1996	690	2,212	2,820	23,405	10	1,600	68,870
1997	670	2,158	2,805	23,885	10	1,535	66,655
1998	745	2,679	2,810	24,200	9	2,050	73,207
1999 1/	765	2,712	2,910	25,695	15	2,040	75,725
2000	735	2,719	3,235	25,180	7	2,060	82,684
2001	790	3,049	3,175	26,660	9	2,355	87,976
Islands, 1998:							
Hawaii	355	1,660	1,975	19,620	9	1,155	39,153
Kauai	40	53	75	295	0	45	1,360
Maui/Molokai	145	452	280	475	0	435	8,951
Oahu	205	514	480	3,810	0	415	23,743
Islands, 1999: 1/							
Hawaii	355	1,568	1,970	21,450	15	1,015	42,462
Kauai	35	93	90	265	0	85	1,547
Maui/Molokai	150	498	365	620	0	475	9,851
Oahu	225	553	485	3,360	0	465	21,865
Islands, 2000:							
Hawaii	335	1,456	2,425	20,675	6	920	47,499
Kauai	50	140	70	340	1	495	1,266
Maui/Molokai	145	539	345	685	0	130	9,918
Oahu	205	584	395	3,480	0	515	24,001
Islands, 2001:							
Hawaii	360	1,621	2,265	22,010	9	1,055	51,283
Kauai	60	164	115	295	0	155	1,911
Maui/Molokai	150	592	425	730	0	565	9,866
Oahu	220	672	370	3,625	0	580	24,916

1/ Data have been revised from previous year databook table.

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary* (May 22, 2002), pp. 10 and 13.

**Table 19.15-- FLORICULTURE AND NURSERY PRODUCTS, BY  
COMMODITY: 2000**

[Shown for commodities with value of sales over \$500,000 and growers with total sales of  
\$10,000 or more]

Commodity	Number of farms having sales	Number sold		Value of sales (\$1,000)
		Unit	Number	
Selected cut flowers:				
Anthuriums	64	1,000 dozens	1,010	7,357
Bird of Paradise	26	1,000 dozens	101	690
Ginger, pink	46	1,000 dozens	81	542
Ginger, red	53	1,000 dozens	137	750
Heliconias	54	1,000 dozens	65	671
Proteas	25	1,000 stems	1,915	1,392
Roses	9	1,000 stems	5,144	2,057
Orchids:				
Sprays: Dendrobium	49	1,000 dozens	340	2,335
Sprays: Oncidiums	37	1,000 dozens	56	536
Potted: Dendrobiums	74	1,000 pots	1,065	6,528
Potted: Phalaenopsis	24	1,000 pots	143	1,030
Lei or individual flowers:				
Dendrobiums	26	Million blooms	19.9	615
Plumerias	12	Million blooms	21.7	538
Tuberoses	7	Million blooms	22.1	987
Vanda, Miss Joaquim	7	Million blooms	14.0	503
Foliage:				
Potted, dracaena	31	...	(NA)	6,648
Potted, palms	44	...	(NA)	8,434
Unfinished foliage stock	12	...	(NA)	702
Potted flowering plants:				
Anthuriums	28	1,000 pots	182	677
Bromeliads	18	1,000 pots	111	593
Chrysanthemums	6	1,000 pots	178	738
Poinsettias	31	1,000 pots	334	1,292
Plant rentals	37	...	(NA)	3,374
Landscape plants	98	...	(NA)	10,601

NA Not available.

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (May 22, 2002), pp. 3-9.

**Table 19.16-- FLORICULTURE AND NURSERY PRODUCTS, BY  
COMMODITY: 2001**

[Shown for commodities with value of sales over \$500,000 and growers with total sales of  
\$10,000 or more]

Commodity	Number of farms having sales	Number sold		Value of sales (\$1,000)
		Unit	Number	
Selected cut flowers:				
Anthuriums	62	1,000 dozens	992	6,904
Bird of Paradise	28	1,000 dozens	103	695
Ginger, red	55	1,000 dozens	142	755
Heliconias	52	1,000 dozens	62	598
Proteas	26	1,000 stems	1,278	1,122
Orchids:				
Sprays: Dendrobium	49	1,000 dozens	415	2,990
Sprays: Oncidiums	35	1,000 dozens	83	813
Potted: Dendrobiums	76	1,000 pots	1,176	6,608
Potted: Phalaenopsis	24	1,000 pots	154	926
Lei or individual flowers:				
Dendrobiums	26	Million blooms	21.0	672
Plumerias	13	Million blooms	30.1	723
Tuberoses	6	Million blooms	18.8	915
Foliage:				
Potted, dracaena	32	...	(NA)	8,443
Potted, palms	45	...	(NA)	8,280
Potted flowering plants:				
Anthuriums	25	1,000 pots	177	609
Bromeliads	18	1,000 pots	139	616
Chrysanthemums	5	1,000 pots	176	737
Poinsettias	35	1,000 pots	328	1,272
Plant rentals	42	...	(NA)	3,098
Landscape plants	109	...	(NA)	12,851

NA Not available.

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (May 22, 2002), pp. 3-9.

**Table 19.17-- OUT-OF-STATE SALES OF FLORICULTURE AND NURSERY PRODUCTS: 1997 TO 2001**

[\$1,000. Based on F.O.B. island value. Includes both wholesale and retail sales]

<b>Type</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
Total sales	41,400	47,180	45,945	49,450	54,870
Anthuriums, cut	10,945	9,795	10,685	10,600	11,000
Dendrobiums, sprays	3,545	3,820	2,875	3,395	3,500
Foliage, potted	10,320	12,220	12,785	13,525	16,200
Heliconias	820	955	970	1,400	1,270
Dendrobiums, potted	3,510	4,360	4,120	3,850	4,930
Proteas	2,025	2,405	2,130	1,930	1,480
Other flowers, nursery products	10,235	13,625	12,380	14,750	16,490

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (May 22, 2002), p. 14.

**Table 19.18-- AGRICULTURAL LABOR: WORKERS ON FARMS, STATE OF HAWAII, 1993-2001**

[Figures are averages based on January, April, July, and October surveys]

Year	Farm employment			Hired Workers by type of farm			
	Total 1/	Self-Employed farm operators	Unpaid workers 2/	Hired workers 1/	Sugar	Pineapple	Other
1993	12,600	2,800	1,100	8,700	2,500	1,400	4,800
1994	11,950	2,700	1,200	8,100	2,300	1,300	4,500
1995	11,000	2,700	1,000	7,300	1,700	1,200	4,400
1996	11,100	2,700	1,000	7,400	1,400	1,200	4,800
1997	10,900	2,700	1,200	7,000	1,200	1,300	4,500
1998	11,300	2,700	1,200	7,400	1,200	1,200	5,000
1999	11,800	3,000	1,200	7,600	1,200	1,300	5,200
2000	11,900	3,100	1,000	7,800	1,000	1,200	5,600
2001	11,800	3,300	1,100	7,400	800	1,200	5,500

1/ Sum of hired workers by type of farm may not add to hired workers total due to rounding.

2/ Includes family members and others working 15 or more hours per week.

Source: Hawaii Agricultural Statistics Service, Hawaii Agricultural Labor, Quarterly, various issues.

**Table 19.19-- GENERAL EXCISE TAX BASE FOR PRODUCING:  
1990 TO 2001**

[In thousands of dollars. Data are on a cash basis accounting. "Producing" refers to the raising and production of agricultural products in their natural state, the production of natural resource products, fishing, and aquaculture]

<b>Year 1/</b>	<b>Amount</b>	<b>Year 1/</b>	<b>Amount</b>	<b>Year 1/</b>	<b>Amount</b>
1990	317,337	1994	467,174	1998	478,201
1991	301,884	1995	457,538	1999	501,501
1992	408,662	1996	479,009	2000	519,272
1993	474,861	1997	505,557	2001	499,896

1/ Calendar year in which reported, including "prior years" reports. Income received in December is reported the following January, hence these annual totals generally refer to an "income year" ended November 30.

Source: Hawaii State Department of Taxation, "General Excise and Use Tax Base" (annual tabular release).

**Table 19.20-- AGRICULTURAL CHEMICALS USED, INCLUDING  
FERTILIZER: 1987 TO 1997**

Chemicals used		1987	1992	1997
Any chemicals, fertilizer, or lime used 1/	farms	4,105	4,476	4,531
Commercial fertilizer	farms	3,524	4,028	4,051
	acres on which used	225,457	200,723	133,927
	\$1,000	30,717	30,574	25,653
Agricultural chemicals	farms	3,881	3,853	3,834
	\$1,000	18,233	20,396	17,187
Sprays, dusts, granules, fumigants, etc., to control --				
Insects on hay and other crops	farms	2,008	1,790	1,604
	acres on which used	68,150	53,593	34,673
Nematodes in crops	farms	663	489	350
	acres on which used	15,792	15,587	11,086
Diseases in crops and orchards	farms	1,151	1,018	1,033
	acres on which used	(D)	21,036	33,343
Weeds, grass, or brush in crops and pasture	farms	2,887	2,820	2,685
	acres on which used	235,871	178,422	122,576
Chemicals used for defoliation or for growth control of crops or thinning of fruit	farms	212	157	184
	acres on which used	57,481	40,292	15,184

D Withheld to avoid disclosing data for individual farms.

1/ Data for 1987 include farms on which lime was applied alone or together with fertilizer and/or chemicals.

Source: U.S. Department of Agriculture, *1997 Census of Agriculture*, AC97-A-11, *Hawaii*, (March 1999), p. 23.

**Table 19.21-- AQUACULTURE INDUSTRY OPERATIONS: 1970 TO 2000**

<b>Year</b>	<b>Number of operations, Dec. 31</b>	<b>Acreage, Dec. 31</b>	<b>Production (1,000 lb.)</b>	<b>Value (\$1,000)</b>
1970	2	193	20	11
1971	2	193	17	17
1972	2	193	18	23
1973	3	203	34	34
1974	4	213	41	136
1975	10	234	82	178
1976	14	235	94	210
1977	25	246	123	281
1978	25	320	178	525
1979	23	493	246	1,531
1980	37	575	320	1,655
1981	41	547	338	1,868
1982	44	643	551	2,625
1983	42	496	345	1,605
1984	47	474	441	2,300
1985	48	465	583	2,780
1986	44	444	1,015	3,549
1987	45	437	1,689	6,263
1988	44	477	1,170	5,560
1989	46	479	1,264	6,835
1990	53	489	1,452	9,241
1991	71	595	1,207	6,884
1992	83	615	1,272	7,134
1993	90	640	1,296	7,469
1994	105	605	990	9,036
1995	107	635	1,410	13,307
1996	117	695	1,992	15,656
1997	110	(NA)	(NA)	16,600
1998	105	(NA)	2,243	16,620
1999	100	(NA)	2,404	18,102
2000	85	(NA)	2,898	22,170

NA Not available.

Source: Hawaii State Department of Land and Natural Resources, Aquaculture Development Program (1970-1997), records and Hawaii Agricultural Statistics Services, Statistics of Hawaii Agriculture (annual) and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)> (1998-2000).



**Table 19.22-- AQUACULTURE OPERATIONS, ACREAGE, PRODUCTION,  
AND VALUE, BY COUNTIES: 1999 AND 2000**

Subject	State total	Hawaii	Maui	Honolulu	Kauai
1999					
Number of operations	100	42	10	44	4
Production (1,000 lb.)	2,404.0	1,583.0	(D)	(D)	(D)
Shellfish	996.0	475.0	(D)	222.0	(D)
Finfish	215.0	86.0	(D)	114.0	(D)
Algae	1,193.0	1,022.0	(D)	(D)	(D)
Value (\$1,000)	18,102.0	13,377.0	(D)	(D)	(D)
Shellfish	6,393.0	3,513.0	(D)	1,370.0	(D)
Finfish	1,010.0	562.0	(D)	408.0	(D)
Algae	7,883.0	7,573.0	(D)	(D)	(D)
Other 1/	2,816.0	1,829.0	(D)	241.0	(D)
2000					
Number of operations	85	37	9	35	4
Production (1,000 lb.)	2,898.0	1,583.0	(D)	(D)	(D)
Shellfish	1,190.0	450.0	(D)	359.0	(D)
Finfish	440.0	(D)	(D)	72.0	(D)
Algae	1,268.0	1,035.0	(D)	(D)	(D)
Value (\$1,000)	22,170.0	16,009.0	(D)	2,985.0	(D)
Shellfish	7,677.0	3,571.0	(D)	2,123.0	(D)
Finfish	2,302.0	(D)	(D)	349.0	(D)
Algae	8,447.0	7,653.0	(D)	(D)	(D)
Other 1/	3,744.0	(D)	(D)	(D)	(D)

D Not shown to avoid disclosure of individual operations, but combined and included in the state total.

1/ Nonfood products: ornamental fish, seedstock, other.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaii Agriculture* (annual);  
and <[http://www.nass.usda.gov/hi/stats/t\\_of\\_c.htm](http://www.nass.usda.gov/hi/stats/t_of_c.htm)>.