

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 23 of the *Statistical Abstract of the United States: 2000*.

**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

Continued on next page.

**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

Continued on next page.

**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

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	50,651	162,460	122,808	159,287
Livestock, poultry, and their products	\$1,000	129,018	103,477	52,832	116,084
	\$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 1999**

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

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 Hawaiian Agriculture* (annual); and http://www.nass.usda.gov/hi/stats/t_of_c.htm.

Table 19.04-- VALUE OF CROP AND LIVESTOCK SALES: 1980 TO 1999

[\$1,000]

Year	All crops and livestock 1/	Crops				Livestock 1/
		All crops	Sugar (unprocessed cane)	Pine-apples (fresh equiv.)	Other crops 2/	
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	486,460	418,661	85,500	91,721	241,440	67,799
1998	493,442	420,734	87,400	92,776	240,558	72,708
1999	509,562	439,940	86,800	101,448	251,692	69,622

1/ 1995-98 Total livestock sales figures have been revised from previous year databook table.

2/ 1998 Total crops sales figures have been revised from previous year databook table.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual); and 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: 1989, 1997, 1998, AND 1999

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:					
1989	4,650	1,720	2,400	1,100	9,800
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
Hawaii County:					
1989	2,700	1,010	1,600	750	3,600
1997	3,300	870	1,800	700	2,450
1998	3,300	870	1,750	650	2,550
1999	3,300	870	1,850	600	2,400
Maui County:					
1989	600	360	250	100	2,550
1997	800	290	300	100	1,850
1998	800	290	350	150	1,950
1999	800	290	450	200	2,200
Oahu:					
1989	950	125	450	200	2,450
1997	900	80	500	300	1,900
1998	900	80	450	250	2,100
1999	900	80	500	300	2,100
Kauai County:					
1989	400	225	200	50	1,200
1997	500	200	200	100	850
1998	500	200	200	100	800
1999	500	200	250	100	900

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 Hawaiian Agriculture* (annual); *Hawaii Agricultural Labor* (quarterly); and http://www.nass.usda.gov/hi/stats/t_of_c.htm.

**Table 19.06-- VALUE OF CROP AND LIVESTOCK SALES, BY COUNTIES
OR ISLANDS: 1989, 1997, 1998 AND 1999**

[\$1,000]

County or island and year	All crops and livestock 1/	Crops				Livestock 1/
		All crops 2/	Sugar (unpro- cessed cane)	Pine- apples 3/ (fresh equiv.)	Other crops 3/	
State total:						
1989	585,048	493,261	210,300	98,310	184,651	91,787
1997	486,460	418,661	85,500	91,721	241,440	67,799
1998	493,442	420,734	87,400	92,776	240,558	72,708
1999	509,562	439,940	86,800	101,448	251,692	69,622
Hawaii County:						
1989	207,372	174,668	56,900	(Z)	117,768	32,704
1997	149,965	130,887	-	(Z)	130,887	19,078
1998	142,522	121,676	-	(Z)	121,676	20,846
1999	143,360	121,056	-	(Z)	121,056	22,304
Maui County:						
1989	133,042	124,781	66,400	32,863	25,518	8,261
1997	126,266	116,453	53,900	28,295	34,258	9,813
1998	135,373	124,816	58,700	28,413	37,703	10,557
1999	130,416	124,526	60,200	28,325	36,001	5,890
Oahu:						
1989	179,670	133,608	35,500	65,447	32,661	46,062
1997	142,256	107,347	-	63,426	43,921	34,909
1998	160,819	124,630	-	64,363	60,267	36,189
1999	178,784	141,892	-	73,123	68,769	36,892
Kauai County:						
1989	64,964	60,204	51,500	(Z)	8,704	4,760
1997	63,425	59,425	31,600	(Z)	27,825	4,000
1998	54,728	49,612	28,700	(Z)	20,912	5,116
1999	57,002	52,466	26,600	(Z)	25,866	4,536

Z Less than \$50,000.

1/ 1997-98 data have been revised from previous year databook table.

2/ 1998 data have been revised from previous year databook table.

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

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual);
and 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: 1989, 1997, 1998, AND 1999

Subject	1989	1997	1998	1999
Acreage in crop (1,000 acres):				
Sugarcane	170.8	68.7	67.6	67.0
Pineapples (land used for pineapple)	32.7	19.9	21.0	21.0
Vegetables and melons (harvested acreage)	5.0	6.5	6.6	8.2
Fruits, excluding pineapples 1/	7.4	8.0	7.6	8.1
Coffee	3.0	7.0	7.4	7.7
Macadamia nuts	22.3	20.2	20.2	19.9
All other crops 1/	4.8	13.3	15.9	16.2
Number of crop farms:				
Sugar	70	4	4	4
Pineapples	10	15	15	15
Vegetables and melons	525	1,000	880	1,020
Fruits (excluding pineapples)	709	1,043	1,515	1,373
Coffee	635	585	610	650
Macadamia nuts	675	800	800	800
Taro	150	160	180	190
Flowers and nursery products	710	670	745	855
Volume of crop marketings:				
Sugar, unprocessed cane (1,000 tons)	7,082	2,925	(2/)	(2/)
Pineapples, fresh equivalent (1,000 tons)	580	324	(2/)	(2/)
Vegetables and melons (1,000 lb.)	83,250	100,850	(2/)	(2/)
Fruits, excluding pineapples (1,000 lb.)	109,980	73,750	(2/)	(2/)
Coffee, parchment (1,000 lb.)	3,200	9,400	(2/)	(2/)
Macadamia nuts, in shell (1,000 lb.)	50,500	58,000	(2/)	(2/)
Taro (1,000 lb.)	6,500	5,500	(2/)	(2/)
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	210,300	85,500	87,400	86,800
Pineapples (fresh equivalent)	98,310	91,721	92,776	101,448
Vegetables and melons 1/	32,719	44,626	51,149	56,438
Fruits (excluding pineapples) 1/	23,074	29,564	24,530	28,216
Coffee (parchment)	12,480	28,200	24,700	21,000
Macadamia nuts (in shell)	44,945	43,500	37,375	37,855
Taro	1,996	2,805	3,180	3,604
Seed Crops 1/ 3/	(NA)	25,150	25,300	28,000
Flowers and nursery products 1/	62,206	66,655	73,207	75,363

NA Not Available

1/ 1998 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 Hawaiian Agriculture* (annual); and 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: 1999

Subject	Hawaii County	Maui County	Oahu	Kauai County
Acreage in crop (1,000 acres):				
Sugarcane	-	43.3	-	23.7
Pineapples (land used for pineapple)	(1/)	9.1	11.9	(1/)
Vegetables and melons (harvested acreage)	2.3	1.4	4.3	.2
Fruits, excluding pineapples	4.9	0.3	1.9	1.0
Coffee	3.2	(D)	(D)	(D)
Macadamia nuts	(D)	(D)	(D)	(D)
All other crops	2.3	1.9	10.9	1.1
Number of crop farms:				
Sugar	-	2	-	2
Pineapples	5	5	2	3
Vegetables and melons	600	145	230	45
Fruits (excluding pineapples)	805	251	174	143
Coffee	635	(D)	(D)	(D)
Macadamia nuts	(D)	(D)	(D)	(D)
Taro	100	13	12	65
Flowers and nursery products	376	154	245	80
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	-	60,200	-	26,600
Pineapples (fresh equivalent)	(2/)	28,325	73,123	(2/)
Vegetables, ginger root, herbs, and melons	18,569	9,519	27,419	931
Fruits (excluding pineapples)	15,547	1,056	8,535	3,078
Coffee (parchment)	9,300	(D)	(D)	(D)
Macadamia nuts (in shell)	(D)	(D)	(D)	(D)
Taro	632	(D)	(D)	2,236
Seed crops	(D)	(D)	(D)	(D)
Flowers and nursery products	41,578	9,617	22,654	1,514

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 Hawaiian Agriculture* (annual); and http://www.nass.usda.gov/hi/stats/t_of_c.htm.

Table 19.09-- SPECIALTY CROPS, FRUITS, AND VEGETABLES: 1999

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

Crop	Acreage harvested	Yield per acre (1,000 lb.)	Production (1,000 lb.)	Farm price (cents per lb.)	Value of sales (\$1,000)
Specialty crops:					
Coffee (1999-00)	6,400	1.6	10,000	210.0	21,000
Fresh herbs	2,900	...	5,398
Ginger roots	350	46.0	16,100	50.0	8,050
Macadamia nuts (1999-00)	18,900	3.0	64,000	59.1	37,855
Seed crops (1999-00)	3,500	...	6,200	...	28,000
Fruits:					
Bananas	1,420	17.3	24,500	35.0	8,575
Guavas	630	...	10,700	9.1	974
Papayas	1,940	21.9	42,400	37.6	15,929
Vegetables:					
Cabbage, Chinese	330	22.7	7,500	19.0	1,425
Cabbage, head	550	26.0	14,300	18.0	2,574
Cucumbers	470	12.3	5,800	43.0	2,494
Onions, dry	310	11.0	3,400	67.0	2,278
Onions, green	190	8.9	1,700	85.0	1,445
Peppers, green	200	15.0	3,000	53.0	1,590
Potatoes, sweet	340	8.5	2,900	63.0	1,827
Taro	1/ 500	...	6,800	53.0	3,604
Tomatoes	420	40.0	16,800	47.0	7,896
Watercress	1/ 35	...	970	115.0	1,116
Watermelons	570	20.0	11,400	21.0	2,394

1/ Acreage in crop.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual); and http://www.nass.usda.gov/hi/stats/t_of_c.htm.

**Table 19.10-- SUGARCANE ACREAGE, BY TYPE OF IRRIGATION:
1984 TO 2000**

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	-	-

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-- FRESH FRUIT AND VEGETABLE ARRIVALS IN HONOLULU,
BY SOURCE: 1995 TO 1997**

[1,000 pounds, net]

Source	1995	1996	1997 1/
Total arrivals 2/	297,800	294,525	283,578
From Hawaii	81,840	74,947	78,374
Oahu 3/	27,618	32,380	34,885
Other islands	54,222	42,568	43,488
Hawaii	27,451	24,574	24,766
Maui	12,434	9,352	9,039
Molokai	14,006	8,187	9,154
Kauai	330	455	531
From U.S. Mainland 4/	210,306	213,763	199,094
From foreign countries	5,653	5,815	6,110

Data subject to revisions.

1/ Preliminary figures.

2/ Ship and plane arrivals.

3/ Oahu refers to arrivals by truck to wholesalers only; excludes direct shipments deliveries from farmer to retail outlets.

4/ Mainland arrivals may include produce originating from foreign countries via US transshipment points.

Source: Hawaii State Department of Agriculture, Market Analysis and News Branch, *Honolulu Arrivals, Fresh Fruits and Vegetables, 1994-1996*, table 1, and records.

**Table 19.12-- LIVESTOCK INVENTORY, 1984 TO 1999, AND BY
GEOGRAPHIC AREAS, 1999**

[In thousands]

Year and geographic area	All cattle and calves 1/	Milk cows 1/	Hogs and pigs 2/	Chickens (excluding broilers) 2/	Bee colonies
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
GEOGRAPHIC AREAS: 1999					
Hawaii County	119.8	1.9	2.2	(D)	(NA)
Maui County	29.2	0.9	4.8	(D)	(NA)
Oahu	13.4	5.2	18.4	568	(NA)
Kauai County	10.6	0.7	2.6	(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 Hawaiian Agriculture* (annual);
and http://www.nass.usda.gov/hi/stats/t_of_c.htm.

Table 19.13-- NUMBER OF LIVESTOCK OPERATIONS, VOLUME OF LIVESTOCK MARKETINGS, AND VALUE OF LIVESTOCK SALES: 1989, 1997, 1998, AND 1999

Subject	1989	1997	1998	1999
Number of livestock operations, Dec. 31:				
Cattle 1/	900	830	830	830
Hogs	550	250	250	230
Milk	80	50	50	50
Eggs	55	55	55	55
Honey	11	23	29	28
Volume of livestock marketings:				
Beef (dressed weight; 1,000 lb.) 2/	34,450	10,024	(3/)	(3/)
Pork (dressed weight; 1,000 lb.)	7,716	4,579	(3/)	(3/)
Milk (million lb.)	151.5	119.3	(3/)	(3/)
Eggs (million)	226.6	172.0	(3/)	(3/)
Honey (1,000 lb.)	1,215	1,314	(3/)	(3/)
Value of livestock sales (\$1,000):				
Cattle 4/	31,483	14,323	16,861	16,607
Hogs 4/	7,911	4,902	5,235	5,072
Milk	31,588	29,479	33,293	31,223
Eggs	14,956	12,914	11,323	10,803
Honey	535	1,130	708	499

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

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

3/ This data series discontinued in 1998.

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

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual); and http://www.nass.usda.gov/hi/stats/t_of_c.htm.

Table 19.14-- NUMBER OF LIVESTOCK OPERATIONS AND VALUE OF LIVESTOCK SALES, BY COUNTIES OR ISLANDS: 1999

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	28	4	10	8
Eggs	28	8	15	4
Honey	14	(2/)	(2/)	14
Value of livestock sales (\$1,000):				
Cattle 3/	12,164	2,865	551	1,027
Hogs 3/	569	894	3,143	466
Milk	(D)	(D)	23,276	(D)
Eggs	(D)	(D)	7,821	(D)

D Withheld to avoid disclosure of individual operations.

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

2/ Oahu combined with Maui County to avoid disclosure of individual operations.

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

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual); and http://www.nass.usda.gov/hi/stats/t_of_c.htm.

**Table 19.15-- FLORICULTURE AND NURSERY PRODUCTS, 1992 TO 1999,
AND BY ISLANDS, 1996 TO 1999**

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:							
1992	686	2,497	3,880	22,025	13	1,890	69,679
1993	662	2,384	4,565	19,955	21	1,800	69,513
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 1/	745	2,679	2,810	24,200	9	2,050	73,207
1999	855	2,959	2,810	24,510	7	2,325	75,363
Islands, 1996:							
Hawaii	316	1,240	1,990	17,815	10	775	34,275
Kauai	52	69	60	345	0	60	1,965
Maui/Molokai	111	428	230	335	0	415	7,515
Oahu	211	475	540	4,910	0	350	25,115
Islands, 1997:							
Hawaii	312	1,363	2,000	18,805	10	875	34,501
Kauai	50	65	60	355	0	55	1,804
Maui/Molokai	106	308	235	345	0	295	8,219
Oahu	202	422	510	4,380	0	310	22,131
Islands, 1998: 1/							
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:							
Hawaii	376	1,946	1,950	20,435	7	1,425	41,578
Kauai	80	68	90	235	0	60	1,514
Maui/Molokai	154	436	325	605	0	415	9,617
Oahu	245	509	445	3,235	0	425	22,654

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

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary* (September 5, 2000), pp. 10 and 13.

**Table 19.16-- FLORICULTURE AND NURSERY PRODUCTS, BY
COMMODITY: 1999**

[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	68	1,000 dozens	1,289	6,496
Bird of Paradise	25	1,000 dozens	83	561
Ginger, red	60	1,000 dozens	226	807
Heliconias	58	1,000 dozens	78	582
Proteas	31	1,000 stems	2,466	1,438
Orchids:				
Sprays: Dendrobium	49	1,000 dozens	383	2,676
Potted: Dendrobiums	71	1,000 pots	1,149	6,194
Potted: Phalaenopsis	22	1,000 pots	207	1,153
Lei or individual flowers:				
Dendrobiums	27	Million blooms	21.7	663
Plumerias	10	Million blooms	45.0	931
Tuberoses	6	Million blooms	20.4	959
Foliage:				
Potted, primarily for-- Indoor or patio use	65	...	(NA)	14,896
Potted flowering plants:				
Bromeliads	17	1,000 pots	112	621
Chrysanthemums	4	1,000 pots	159	675
Poinsettias	29	1,000 pots	331	1,268
Plant rentals	32	...	(NA)	3,227

NA Not available.

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (September 5, 2000), pp. 3-8.

Table 19.17-- OUT-OF-STATE SALES OF FLORICULTURE AND NURSERY PRODUCTS: 1995 TO 1999

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

Type	1995	1996	1997	1998	1999
Total sales	38,985	38,390	41,400	47,180	45,945
Anthuriums, cut	10,395	9,705	10,945	9,795	10,685
Foliage, potted	9,910	9,500	10,320	12,220	12,785
Other flowers, nursery products	18,680	19,185	20,135	25,165	22,475

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (September 5, 2000), p. 14.

Table 19.18-- AGRICULTURAL LABOR: WORKERS ON FARMS, STATE OF HAWAII, 1993-2000

[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

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:
1989 TO 2000**

[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]

Year 1/	Amount	Year 1/	Amount	Year 1/	Amount
1989	326,400	1993	474,861	1997	505,557
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

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 1999

Year	Number of operations, Dec. 31	Acreage, Dec. 31	Production (1,000 lb.)	Value (\$1,000)
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

NA Not available.

Source: Hawaii State Department of Land and Natural Resources, Aquaculture Development Program (1970-1997), records and Hawaii State Department of Agriculture, Hawaii Agricultural Statistics Services (1998-1999), records.

**Table 19.22-- AQUACULTURE OPERATIONS, ACREAGE, PRODUCTION,
AND VALUE, BY COUNTIES: 1998 AND 1999**

Subject	State total	Hawaii	Maui	Honolulu	Kauai
1998					
Number of operations	105	44	12	46	3
Production (1,000 lb.)	2,243.0	(D)	(D)	(D)	(D)
Shellfish	700.4	458.3	(D)	(D)	(D)
Finfish	218.0	44.8	(D)	130.5	(D)
Algae	1,324.7	(D)	(D)	(D)	(D)
Value (\$1,000)	16,619.8	13,382.6	(D)	2,099.6	(D)
Shellfish	4,959.9	3,647.5	(D)	1,013.4	0.0
Finfish	958.0	(D)	(D)	(D)	(D)
Algae	8,294.9	(D)	(D)	(D)	0.0
Other 1/	2,406.9	1,476.5	(D)	279.5	(D)
1999					
Number of operations	100	42	10	44	(D)
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)

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 State Department of Agriculture, Hawaii Agricultural Statistics Service, records.