

**Table**  
**Number**   **Table Name**

(Click on the table number to go to corresponding table)

Narrative

<a href="#">19.01</a>	Farms, Land in Farms, and Selected Items: 1997 and 2002
<a href="#">19.02</a>	Farms and Land in Farms, by County: 2002
<a href="#">19.03</a>	Number of Farms, Farm Acreage, and Farm Employment: 1980 to 2004
<a href="#">19.04</a>	Value of Crop and Livestock Sales: 1980 to 2004
<a href="#">19.05</a>	Number of Farms, Farm Acreage, and Farm Employment, by County: 1994, 2002 to 2004
<a href="#">19.06</a>	Value of Crop and Livestock Sales, by County: 1994, 2002 to 2004
<a href="#">19.07</a>	Acreage in Crop, Number of Crop Farms, and Value of Crop Sales: 1994, 2002 to 2004
<a href="#">19.08</a>	Acreage in Crop, Number of Crop Farms, and Value of Crop Sales, by County: 2004
<a href="#">19.09</a>	Specialty Crops, Fruits, and Vegetables: 2004
<a href="#">19.10</a>	Sugarcane Acreage, by Type of Irrigation: 1993 to 2005
<a href="#">19.11</a>	Livestock Inventory, 1984 to 2004, and by County, 2004
<a href="#">19.12</a>	Number of Livestock Operations and Value of Livestock Sales: 1994, 2002 to 2004
<a href="#">19.13</a>	Number of Livestock Operations and Value of Livestock Sales, by County: 2004
<a href="#">19.14</a>	Floriculture and Nursery Products, 1997 to 2005, and by County, 2002 to 2005
<a href="#">19.15</a>	Floriculture and Nursery Products, by Commodity: 2005
<a href="#">19.16</a>	Out-of-State Sales of Floriculture and Nursery Products: 2001 to 2005
<a href="#">19.17</a>	Agricultural Labor: Hired Workers on Farms by Type of Farm, 1993 to 2005
<a href="#">19.18</a>	General Excise Tax Base for Producing: 1994 to 2005
<a href="#">19.19</a>	Agricultural Chemicals Used, Including Fertilizer: 1992, 1997, and 2002
<a href="#">19.20</a>	Aquaculture Industry Operations: 1970 to 2004
<a href="#">19.21</a>	Aquaculture Operations, Acreage, Production, and Value, by County: 2003 and 2004

## 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 2002, the annual report on *Statistics of Hawaii 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: 2006*.

**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:  
1997 AND 2002**

Item	Unit	1997	2002
Farms	number	5,473	5,398
Land in farms	acres	1,439,071	1,300,499
Average size of farm	acres	263	241
Value of land and buildings: 1/			
Average per farm	dollars	632,281	842,875
Average per acre	dollars	2,405	3,507
Estimated market value of all machinery and equipment: 1/			
Total	\$1000	211,775	186,163
Average per farm	dollars	38,709	35,568
Farms by size:			
1 to 9 acres		3,456	3,440
10 to 49 acres		1,417	1,309
50 to 179 acres		318	335
180 to 499 acres		139	146
500 to 999 acres		43	61
1,000 acres or more		100	107
Total cropland	farms	4,882	4,755
	acres	292,107	211,120
Harvested cropland	farms	4,594	4,522
	acres	100,094	109,461
Irrigated land	farms	2,241	2,231
	acres	76,971	69,194
Market value of agricultural products sold	\$1000	496,935	533,423
Average per farm	dollars	90,798	98,819
Crops, including nursery and greenhouse crops	\$1000	401,411	445,356
Livestock, poultry, and their products	\$1000	95,524	88,067
Farms by value of sales:			
Less than \$2,500		1,638	1,407
\$2,500 to \$4,999		743	714
\$5,000 to \$9,999		797	916
\$10,000 to \$24,999		989	1,056
\$25,000 to \$49,999		535	506
\$50,000 to \$99,999		323	314
\$100,000 or more		448	485

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**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:  
1997 AND 2002 -- Con.**

Item	Unit	1997	2002
Farm by type of organization:			
Family or individual		4,583	4,629
Partnership		328	225
Corporation		497	472
Operators by days worked off farm:			
Any		2,827	2,612
200 days or more		1,566	1,661
Operators by principal occupation:			
Farming		3,052	3,125
Other		2,421	2,273
Average age of principal operator	years	55.0	56.5
Total farm production expenses 1/	\$1000	398,567	450,946
Livestock and poultry:			
Cattle and calves inventory	farms	829	748
	number	181,732	154,308
Beef cows	farms	625	578
	number	93,711	83,277
Milk cows	farms	44	27
	number	8,389	6,465
Cattle and calves sold	farms	660	550
	number	66,726	60,739
Hogs and pigs inventory	farms	248	204
	number	29,440	23,364
Hogs and pigs sold	farms	190	158
	number	38,066	33,231
Broilers and other meat-type chickens sold	farms	9	17
	number	478,672	881,112

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**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:  
1997 AND 2002 -- Con.**

Item	Unit	1997	2002
Selected crops harvested:			
Sugarcane for sugar	farms	13	2
	acres	31,483	(D)
	tons	2,873,712	(D)
Pineapples harvested	farms	27	34
	acres	12,992	10,211
	tons	348,428	314,626
Vegetables harvested	farms	657	633
	acres	6,549	6,554
Land in orchards	farms	2,786	2,833
	acres	37,906	34,908

D Withheld to avoid disclosing data for individual farms.

1/ Data are based on a sample of farms.

Source: U.S. Dept. of Agriculture, National Agricultural Statistics Service, *2002 Census of Agriculture, Vol.1, Part 11, Hawaii* (June 2004), table 1, pp. 6-7.

**Table 19.02-- FARMS AND LAND IN FARMS, BY COUNTY: 2002**

Item	Unit	Hawaii	Honolulu	Kauai	Maui
Farms	number	3,216	794	565	823
Land in farms	acres	821,276	70,705	151,828	256,690
Average size of farm	acres	255	89	269	312
Value of land and buildings: 1/					
Average per farm	dollars	724,308	738,577	1,068,439	1,251,598
Average per acre	dollars	2,822	8,358	3,989	4,112
Estimated market value of all machinery and equipment: 1/					
Average per farm	dollars	23,981	37,543	66,074	58,849
Farms by size:					
1 to 9 acres		2,009	574	352	505
10 to 49 acres		818	152	127	212
50 to 179 acres		207	34	38	56
180 to 499 acres		90	15	21	20
500 to 999 acres		38	5	11	7
1,000 acres or more		54	14	16	23
Total cropland	farms	2,908	681	474	692
	acres	90,778	29,103	30,510	60,729
Harvested cropland	farms	2,791	656	426	649
	acres	55,529	13,757	11,771	28,404
Irrigated land	farms	908	545	316	462
	acres	9,041	13,703	19,595	26,855
Market value of agricultural products sold	\$1000	187,736	179,321	41,855	124,511
Average per farm	dollars	58,375	225,845	74,080	151,289
Crops, including nursery and greenhouse crops	\$1000	143,924	149,050	35,737	116,645
Livestock, poultry, and their products	\$1000	43,812	30,271	6,118	7,866

1/ Data are based on a sample of farms.

Source: U.S. Dept. of Agriculture, National Agricultural Statistics Service, *2002 Census of Agriculture, Vol.1, Part 11, Hawaii* (June 2004), p.185.

**Table 19.03-- NUMBER OF FARMS, FARM ACREAGE, AND FARM  
EMPLOYMENT: 1980 TO 2004**

Year	Number of farms 1/	Farm acreage 2/ (1,000)	Farm employment 3/		
			Self-employed farm operators	Unpaid family members	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	1,420	3,000	1,200	7,600
2000	5,500	1,380	3,100	1,000	7,800
2001	5,500	1,350	3,300	1,100	7,400
2002	5,500	1,320	4/ 3,000	4/ 1,100	7,500
2003	5,500	1,300	(NA)	(NA)	7,300
2004	5,500	1,300	(NA)	(NA)	7,400

NA Not available.

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.

4/ Beginning July 2002, estimates for self-employed and unpaid workers have been discontinued due to a change in the national labor statistics program. 2002 data are the average of January and April estimates.

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)> accessed June 16, 2006.

**Table 19.04-- VALUE OF CROP AND LIVESTOCK SALES: 1980 TO 2004**

[Thousands of dollars]

Year	All crops and livestock	Crops				Livestock
		All crops	Sugar (unprocessed cane)	Pine-apples (fresh equiv.)	Other crops	
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	493,342	420,634	87,300	92,776	240,558	72,708
1999	512,992	443,111	86,800	101,448	254,863	69,881
2000	1/ 499,771	431,482	62,200	101,530	267,752	1/ 68,289
2001	1/ 502,178	437,438	57,800	96,337	283,301	1/ 64,740
2002	1/ 514,338	1/ 453,400	64,300	100,616	1/ 288,484	1/ 60,938
2003	1/ 520,473	1/ 461,680	64,400	1/ 101,470	1/ 295,810	1/ 58,793
2004	516,124	452,552	61,500	79,934	311,118	63,572

1/ Revised from previous *Data Book*.

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)> accessed June 16, 2005.



**Table 19.05-- NUMBER OF FARMS, FARM ACREAGE, AND FARM EMPLOYMENT, BY COUNTY: 1994, 2002 TO 2004**

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:					
1994	5,300	1,530	2,700	1,200	8,100
2002	5,500	1,320	5/ 3,000	5/ 1,100	7,500
2003	5,500	1,300	(NA)	(NA)	7,300
2004	5,500	1,300	(NA)	(NA)	7,400
Hawaii:					
1994	3,100	920	1,700	650	3,000
2002	3,250	830	5/ 1,700	5/ 600	2,450
2003	3,250	820	(NA)	(NA)	2,750
2004	3,250	820	(NA)	(NA)	2,700
Honolulu:					
1994	900	90	500	350	2,050
2002	800	70	5/ 550	5/ 250	2,100
2003	800	70	(NA)	(NA)	2,150
2004	800	70	(NA)	(NA)	2,200
Kauai:					
1994	450	200	200	50	1,050
2002	600	160	5/ 250	5/ 100	750
2003	600	150	(NA)	(NA)	750
2004	600	150	(NA)	(NA)	650
Maui:					
1994	850	320	250	100	2,000
2002	850	260	5/ 500	5/ 150	2,250
2003	850	260	(NA)	(NA)	1,650
2004	850	260	(NA)	(NA)	1,850

NA Not available.

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/ Sum may not add to state totals due to rounding.

4/ Working 15 hours or more per week.

5/ Beginning July 2002, estimates for self-employed and unpaid workers have been discontinued due to a change in the national labor statistics program. 2002 data are the average of January and April estimates.

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)> accessed June 16, 2005.

**Table 19.06-- VALUE OF CROP AND LIVESTOCK SALES, BY COUNTY:  
1994, 2002 TO 2004**

[Thousands of dollars]

County or island and year	All crops and livestock	Crops				Livestock
		All crops	Sugar (unprocessed cane)	Pine-apples 1/ (fresh equiv.)	Other crops 1/	
State total:						
1994	503,780	427,150	160,100	78,890	188,160	76,630
2002	2/ 514,338	2/ 453,400	64,300	100,616	2/ 288,484	2/ 60,938
2003	2/ 520,473	2/ 461,680	64,400	2/ 101,470	2/ 295,810	2/ 58,793
2004	516,124	452,552	61,500	79,934	311,118	63,572
Hawaii:						
1994	161,475	140,770	35,800	(D)	104,970	20,705
2002	2/ 155,651	2/ 128,426	-	(D)	2/ 128,426	27,225
2003	2/ 159,592	2/ 132,331	-	(D)	2/ 132,331	2/ 27,261
2004	172,965	143,045	-	(D)	143,045	29,920
Honolulu:						
1994	160,678	119,958	30,600	53,690	35,668	40,720
2002	2/ 179,778	2/ 153,725	-	70,992	2/ 82,733	2/ 26,053
2003	2/ 178,852	2/ 154,228	-	2/ 71,029	2/ 83,199	2/ 24,624
2004	163,154	138,085	-	51,957	86,128	25,069
Kauai:						
1994	54,438	49,975	35,200	(D)	14,775	4,463
2002	(D)	2/ 40,854	13,000	(D)	2/ 27,854	(D)
2003	(D)	2/ 47,077	13,500	(D)	2/ 33,577	(D)
2004	(D)	47,466	15,300	(D)	32,166	(D)
Maui:						
1994	127,189	116,447	58,500	25,150	32,797	10,742
2002	(D)	2/ 130,395	51,300	29,624	2/ 49,471	(D)
2003	(D)	2/ 128,043	50,900	2/ 30,441	2/ 46,702	(D)
2004	(D)	123,956	46,200	27,977	49,779	(D)

D Data not shown to avoid disclosure of individual operations but included in State total.

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

2/ Revised from previous *Data Book*.

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)> accessed June 16, 2006.

**Table 19.07-- ACREAGE IN CROP, NUMBER OF CROP FARMS, AND VALUE OF CROP SALES: 1994, 2002 TO 2004**

Subject	1994	2002	2003	2004
Acreage in crop (1,000 acres):				
Sugarcane	121.1	47.5	47.8	43.0
Pineapples (land used for pineapple)	22.3	19.1	16.0	13.0
Vegetables and melons (harvested acreage)	5.3	6.8	6.4	6.7
Fruits, excluding pineapples	6.6	6.6	6.4	6.0
Coffee	6.8	7.2	7.3	7.7
Macadamia nuts	20.2	18.0	18.0	18.0
All other crops	5.7	8.2	9.0	9.7
Number of crop farms:				
Sugar	24	2	2	2
Pineapples	15	25	25	30
Vegetables and melons	580	600	570	620
Fruits (excluding pineapples)	836	1,099	1,426	1,290
Coffee	585	710	715	750
Macadamia nuts	650	650	650	650
Taro	180	150	150	130
Flowers and nursery products	660	870	1/ 865	920
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	160,100	64,300	64,400	61,500
Pineapples (fresh equivalent)	78,890	100,616	1/ 101,470	79,934
Vegetables and melons	36,105	61,659	64,173	67,892
Fruits (excluding pineapples)	23,611	25,267	26,819	24,736
Coffee (parchment)	12,040	23,250	24,070	19,880
Macadamia nuts (in shell)	36,225	30,210	32,330	40,115
Taro	2,806	3,294	2,700	2,808
Seed crops	9,640	48,145	1/ 49,160	60,200
Flowers and nursery products	67,005	95,715	1/ 95,601	94,525

1/ Revised from previous *Data Book*.

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)> accessed June 16, 2006.

**Table 19.08-- ACREAGE IN CROP, NUMBER OF CROP FARMS, AND VALUE OF CROP SALES, BY COUNTY: 2004**

Subject	Hawaii	Honolulu	Kauai	Maui
Acreage in crop (1,000 acres):				
Sugarcane	-	-	8.2	34.8
Pineapples (land used for pineapple)	(1/)	7.5	(1/)	5.5
Vegetables and melons (harvested acreage)	1.7	3.8	0.3	0.9
Fruits, excluding pineapples	3.8	0.8	0.9	0.5
Coffee	3.8	(D)	(D)	(D)
Macadamia nuts	(D)	(D)	(D)	(D)
All other crops	3.0	2.9	1.9	1.9
Number of crop farms:				
Sugar	-	-	1	1
Pineapples	15	2	8	5
Vegetables and melons	253	188	72	107
Fruits (excluding pineapples)	687	147	196	260
Coffee	710	(D)	(D)	(D)
Macadamia nuts	(D)	(D)	(D)	(D)
Taro	30	10	65	25
Flowers and nursery products	425	235	80	180
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	-	-	15,300	46,200
Pineapples (fresh equivalent)	(D)	51,957	(D)	27,977
Vegetables, ginger root, herbs, and melons	18,859	37,661	1,740	9,632
Fruits (excluding pineapples)	18,666	2,605	1,992	1,473
Coffee (parchment)	14,880	(D)	(D)	(D)
Macadamia nuts (in shell)	(D)	(D)	(D)	(D)
Taro	288	(D)	2,079	(D)
Seed crops	(D)	(D)	(D)	(D)
Flowers and nursery products	50,455	31,658	2,865	9,547

D Withheld to avoid disclosure of individual operations.

1/ Less than 50 acres.

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)> accessed June 16, 2006.

**Table 19.09-- SPECIALTY CROPS, FRUITS, AND VEGETABLES: 2004**

[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 (2004-05)	5,800	1.0	5,600	355.0	19,880
Ginger root (2004-05)	120	42.5	5,100	80.0	4,080
Fresh herbs	(X)	(X)	3,900	(X)	6,975
Seed crops (2004-05)	3,870	(X)	6,800	(X)	60,200
Macadamia nuts (2004-05)	17,800	3.2	63,000	73.0	41,245
Fruits:					
Bananas	1,000	16.5	16,500	49.0	8,085
Papayas	1,235	29.0	35,800	34.5	12,361
Guavas	500	(X)	8,100	14.4	1,166
Vegetables:					
Beans, Snap	170	5.3	900	114.0	1,026
Cabbage, Chinese	260	20.4	5,300	31.0	1,643
Cabbage, head	360	25.0	9,000	30.0	2,700
Corn, sweet	540	3.3	1,800	58.0	1,044
Cucumbers	400	14.8	5,900	53.0	3,127
Onions, dry	180	8.9	1,600	149.0	2,384
Onions, green	130	12.3	1,600	97.0	1,552
Peppers, green	240	13.3	3,200	69.0	2,208
Sweet potatoes	400	11.5	4,600	47.0	2,162
Taro	1/ 370	(X)	5,200	54.0	2,808
Tomatoes	600	28.0	16,800	66.0	11,088
Watermelons	510	19.8	10,100	24.0	2,424
Watercress	1/ 30	(X)	850	127.0	1,080

X Not applicable.

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)> accessed June 16, 2006.

**Table 19.10-- SUGARCANE ACREAGE, BY TYPE OF IRRIGATION:  
1993 TO 2005**

Year	Total cane land	Irrigated cane land		Unirrigated cane land
		Drip	Furrow or overhead	
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	-	-
2002	47,476	47,476	-	-
2003	47,733	47,733	-	-
2004	43,465	43,465	-	-
2005	40,145	40,145	-	-

Source: Hawaii Agriculture Research Center, records.

**Table 19.11-- LIVESTOCK INVENTORY, 1984 TO 2004, AND BY COUNTY, 2004**

[In thousands]

Year and county	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	3/ 178	11	35	981	9
1995	3/ 174	3/ 10	34	933	8
1996	3/ 172	10	28	876	8
1997	3/ 180	3/ 9	29	863	9
1998	3/ 173	9	29	747	8
1999	3/ 164	9	28	721	8
2000	3/ 150	3/ 7	26	722	7
2001	3/ 152	3/ 7	27	659	8
2002	3/ 151	7	24	625	7
2003	3/ 156	3/ 6	23	600	7
2004	155	6	22	598	8
2004 4/					
Hawaii County	116.0	3.0	1.4	(D)	(NA)
Honolulu County	8.0	2.7	13.0	467	(NA)
Kauai County	12.0	(5/)	2.2	(D)	(NA)
Maui County	19.0	(5/)	5.4	(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.

3/ Revised from previous *Data Book* due to error.

4/ Sum of county estimates may not add to State total due to rounding.

5/ Equals less than 50.

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)> accessed June 16, 2006.

**Table 19.12-- NUMBER OF LIVESTOCK OPERATIONS AND VALUE OF LIVESTOCK SALES: 1994, 2002 TO 2004**

Subject	1994	2002	2003	2004
Number of livestock operations, Dec. 31:				
Cattle 1/	850	750	750	800
Hogs	300	210	210	250
Milk	60	30	30	30
Eggs	55	80	80	80
Honey	17	30	29	31
Value of livestock sales (\$1,000):				
Cattle 2/	19,700	18,326	17,192	22,125
Hogs 2/	6,175	4,788	4,345	4,463
Milk	31,747	22,467	21,449	20,175
Eggs	13,959	3/ 8,854	9,396	10,665
Honey	432	1,057	3/ 1,157	1,083

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

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

3/ Revised from previous *Data Book* .

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)> accessed June 16, 2006.



**Table 19.13-- NUMBER OF LIVESTOCK OPERATIONS AND VALUE OF LIVESTOCK SALES, BY COUNTY: 2004**

Subject	Hawaii	Honolulu	Kauai	Maui
Number of livestock operations, Dec. 31:				
Cattle 1/	470	50	120	160
Hogs	70	80	40	60
Milk	14	6	4	6
Eggs	37	15	8	20
Honey	16	(D)	(D)	(D)
Value of livestock sales (\$1,000):				
Cattle 2/	16,609	670	1,914	2,932
Hogs 2/	407	2,715	482	859
Milk	(D)	12,349	(D)	(D)
Eggs	(D)	8,126	(D)	(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)> accessed June 16, 2006.

**Table 19.14-- FLORICULTURE AND NURSERY PRODUCTS, 1997 TO 2005,  
AND BY COUNTY, 2002 TO 2005**

County 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:							
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	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	88,597
2002	870	3,648	3,030	30,415	10	2,870	95,715
2003	865	3,890	2,540	27,465	16	3,185	95,601
2004 1/	920	3,830	2,620	26,560	-	3,160	95,178
2005	905	3,895	2,025	27,370	-	3,220	100,600
County, 2002:							
Hawaii	420	2,180	2,210	24,125	10	1,565	49,870
Honolulu	230	709	330	5,055	-	585	32,106
Kauai	65	193	90	495	-	180	2,633
Maui	155	566	400	740	-	540	11,106
County, 2003:							
Hawaii	395	2,408	1,895	21,295	16	1,860	50,206
Honolulu	230	701	230	5,035	-	580	31,092
Kauai	80	180	65	360	-	170	3,067
Maui	160	601	350	775	-	575	11,236
County, 2004: 1/							
Hawaii	425	2,404	1,990	20,840	-	1,880	50,414
Honolulu	235	638	255	4,660	-	525	32,173
Kauai	80	234	90	310	-	225	3,056
Maui	180	554	285	750	-	530	9,535
County, 2005:							
Hawaii	405	2,388	1,420	21,350	-	1,865	53,487
Honolulu	245	769	240	4,720	-	655	32,406
Kauai	75	204	110	520	-	190	2,991
Maui	180	534	255	780	-	510	11,716

1/ Revised from previous *Data Book*.

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, various issues. See also <<http://www.nass.usda.gov/hi/flower/flower.pdf>> accessed July 12, 2006.

**Table 19.15-- FLORICULTURE AND NURSERY PRODUCTS, BY  
COMMODITY: 2005**

[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	58	1,000 dozens	602	5,180
Ginger, red	64	1,000 dozens	134	995
Heliconias	58	1,000 dozens	69	741
Proteas	27	1,000 stems	1,635	1,928
Orchids:				
Sprays: Dendrobiums	49	1,000 dozens	401	3,153
Sprays: Oncidiums	28	1,000 dozens	59	674
Potted: Dendrobiums	76	1,000 pots	1,132	5,992
Potted: Oncidiums	46	1,000 pots	403	2,942
Potted: Phalaenopsis	23	1,000 pots	80	717
Lei or individual flowers:				
Dendrobiums	21	Million blooms	17.3	588
Plumerias	14	Million blooms	14.6	506
Foliage:				
Potted, dracaena	26	(X)	(NA)	7,028
Potted, palms	45	(X)	(NA)	8,141
Ti leaves, cut	38	1,000 leaves	5,600	581
Potted flowering plants:				
Anthuriums	15	1,000 pots	101	525
Poinsettias	30	1,000 pots	360	1,644
Plant rentals	43	(X)	(NA)	4,931
Landscape plants	151	(X)	(X)	20,826

X Not applicable.

NA Not available.

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (June 28, 2006), pp. 3-9. See also <<http://www.nass.usda.gov/hi/flower/flower.pdf>> accessed July 12, 2006.

**Table 19.16-- OUT-OF-STATE SALES OF FLORICULTURE AND NURSERY PRODUCTS: 2001 TO 2005**

[Thousand of dollars. Based on F.O.B. island value. Includes both wholesale and retail sales. Does not include sales of cut flowers, leis, etc., purchased within the State and hand carried out]

<b>Type</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Total sales	52,100	47,870	50,940	1/ 47,585	49,865
Anthuriums, cut	8,800	7,700	8,500	6,475	6,315
Dendrobiums, sprays	3,500	3,400	3,600	3,900	4,030
Foliage, potted	15,800	10,700	11,000	11,300	13,200
Heliconias	1,020	1,040	1,200	1,200	1,000
Dendrobiums, potted	4,900	4,510	4,590	1/ 4,645	4,335
Proteas	1,560	1,620	1,800	1,715	2,000
Other flowers, nursery products	16,520	18,900	20,250	1/ 18,350	18,985

1/ Revised from previous *Data Book*.

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (June 28, 2006), p. 14. See also <<http://www.nass.usda.gov/hi/flower/flower.pdf>> accessed July 12, 2006.

**Table 19.17-- AGRICULTURAL LABOR: HIRED WORKERS ON FARMS BY TYPE OF FARM, 1993 TO 2005**

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

Year	Hired workers 1/	Hired workers by type of farm		
		Sugar	Pineapple	Other
1993	8,700	2,500	1,400	4,800
1994	8,100	2,300	1,300	4,500
1995	7,300	1,700	1,200	4,400
1996	7,400	1,400	1,200	4,800
1997	7,000	1,200	1,300	4,500
1998	7,400	1,200	1,200	5,000
1999	7,600	1,200	1,300	5,200
2000	7,800	1,000	1,200	5,600
2001	7,400	800	1,200	5,500
2002	7,500	900	1,300	5,400
2003	7,300	700	1,200	5,300
2004	2/ 7,300	700	1,200	2/ 5,400
2005	7,000	700	1,100	5,200

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

2/ Revised from previous *Data Book*.

Source: Hawaii Agricultural Statistics Service, *Hawaii Agricultural Labor*, Quarterly, various issues, <<http://www.nass.usda.gov/hi/speccrop/aglabor.htm>> accessed March 7, 2006.

**Table 19.18-- GENERAL EXCISE TAX BASE FOR PRODUCING:  
1994 TO 2005**

[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>
1994	467,174	1998	478,201	2002	522,418
1995	457,538	1999	501,501	2003	543,561
1996	479,009	2000	519,272	2004	550,949
1997	505,557	2001	499,896	2005	571,480

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 19.19-- AGRICULTURAL CHEMICALS USED, INCLUDING FERTILIZER:  
1992, 1997, AND 2002**

[Data are based on a sample of farms]

Chemicals used	Unit	1992	1997	2002
Any fertilizer, manure or chemical used 1/	farms	4,476	4,531	4,586
Commercial fertilizer 2/	farms	4,028	4,051	4,326
	acres on which used	200,723	133,927	127,996
	\$1,000	30,574	25,653	17,791
Agricultural chemicals	farms	3,853	3,834	3,627
	\$1,000	20,396	17,187	16,134
Sprays, dusts, granules, fumigants, etc., to control -- Insects on hay and other crops 3/	farms	1,790	1,604	1,840
	acres on which used	53,593	34,673	41,616
Nematodes in crops	farms	489	350	275
	acres on which used	15,587	11,086	8,169
Diseases in crops and orchards	farms	1,018	1,033	800
	acres on which used	21,036	33,343	30,824
Weeds, grass, or brush in crops and pasture	farms	2,820	2,685	2,820
	acres on which used	178,422	122,576	101,258
Chemicals used for defoliation or for growth control of crops or thinning of fruit	farms	157	184	216
	acres on which used	40,292	15,184	26,378

1/ Data for 1997 exclude lime and manure.

2/ Expense data for 1997 exclude lime.

3/ Data for 1997 include treatment of crops, including hay, but not other land.

Source: U.S. Department of Agriculture, *1997 Census of Agriculture, Hawaii*, (March 1999), p. 23 and U.S. Department of Agriculture, *2002 Census of Agriculture, Hawaii*, (June 2004), p. 32.

**Table 19.20-- AQUACULTURE INDUSTRY OPERATIONS: 1970 TO 2004**

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
2000	85	(NA)	2,898	22,170
2001	80	(NA)	(NA)	22,200
2002	70	(NA)	(NA)	25,180
2003	85	(NA)	(NA)	27,650
2004	100	(NA)	(NA)	28,100

NA Not available.

Source: Hawaii State Department of Land and Natural Resources, Aquaculture Development Program (1970-1997), records and 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)> (1998-2004) accessed June 16, 2006.



**Table 19.21-- AQUACULTURE OPERATIONS, ACREAGE, PRODUCTION,  
AND VALUE, BY COUNTY: 2003 AND 2004**

Subject	State total	Hawaii	Honolulu	Kauai	Maui
2003					
Number of operations	85	31	40	4	10
Production (1,000 lb.)	(NA)	(NA)	(NA)	(NA)	(NA)
Shellfish 1/	1,312	572	349	(D)	(D)
Finfish	397	(D)	(D)	(D)	(D)
Algae	(X)	(X)	(X)	(X)	(X)
Value (\$1,000)	27,650	19,639	4,674	(D)	(D)
Shellfish	9,719	5,508	2,096	(D)	(D)
Finfish	1,740	(D)	(D)	(NA)	(D)
Algae	11,848	10,923	(D)	(NA)	(D)
Other 2/	4,343	(D)	(D)	(D)	(D)
2004					
Number of operations	100	39	46	4	11
Production (1,000 lb.)	(NA)	(NA)	(NA)	(NA)	(NA)
Shellfish 1/	956	450	(D)	(D)	(D)
Finfish	484	(D)	(D)	(D)	(D)
Algae	(X)	(X)	(X)	(X)	(X)
Value (\$1,000)	28,100	21,211	5,201	(D)	(D)
Shellfish	8,326	5,593	(D)	(D)	(NA)
Finfish	1,975	(D)	(D)	(NA)	(D)
Algae	12,602	11,702	(D)	(NA)	(D)
Other 2/	5,197	(D)	(D)	(NA)	(D)

NA Not available.

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

X Not applicable.

1/ Some shellfish products sold by pieces, pounds not given.

2/ Non-food products: ornamental fish, seedstock, brood stock, and other. Items not sold by weight.

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)> accessed June 16, 2006.