

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 1992, 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 Land and Natural Resources. 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: 1996*.

**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:
1987 AND 1992**

Item		1987	1992
Farms	number	4,870	5,336
Land in farms	acres	1,721,521	1,588,843
Average size of farm	acres	353	298
Value of land and buildings:			
Average per farm	dollars	603,435	722,189
Average per acre	dollars	1,707	2,425
Estimated market value of all machinery and equipment:			
Average per farm	dollars	41,208	53,207
Farms by size:			
1 to 9 acres		2,855	3,410
10 to 49 acres		1,401	1,342
50 to 179 acres		341	313
180 to 499 acres		128	133
500 to 999 acres		31	34
1,000 acres or more		114	104
Total cropland			
	farms	4,170	4,735
	acres	327,396	293,371
Harvested cropland			
	farms	3,837	4,472
	acres	152,719	136,431
Irrigated land			
	farms	1,827	2,220
	acres	148,884	134,338
Market value of agricultural products sold			
Average per farm	\$1,000 dollars	609,741	552,054
Crops, including nursery and greenhouse crops	\$1,000	125,203	103,458
Livestock, poultry, and their products	\$1,000	498,317	453,410
		111,424	98,644
Farms by value of sales:			
Less than \$2,500		1,402	1,790
\$2,500 to \$4,999		674	754
\$5,000 to \$9,999		745	715
\$10,000 to \$24,999		911	863
\$25,000 to \$49,999		476	484
\$50,000 to \$99,999		287	291
\$100,000 or more		375	439

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**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:
1987 AND 1992 -- Con.**

Item		1987	1992
Total farm production expenses	\$1,000	495,759	466,826
Average per farm	dollars	101,840	87,486
Net cash return from agriculture sales for the farm unit	farms	4,869	5,336
Average per farm	\$1,000 dollars	113,904 23,394	85,228 15,972
Operators by principal occupation:			
Farming		2,816	2,926
Other		2,054	2,410
Operators by days worked off farm:			
Any		2,728	2,864
200 days or more		1,476	1,487
Livestock and poultry:			
Cattle and calves inventory	farms	1,003	874
	number	211,045	191,230
Beef cows	farms	724	655
	number	83,427	87,620
Milk cows	farms	73	57
	number	11,836	10,816
Cattle and calves sold	farms	807	699
	number	101,315	82,788
Hogs and pigs inventory	farms	372	253
	number	47,564	28,570
Hogs and pigs sold	farms	307	200
	number	69,019	47,831
Sheep and lambs inventory	farms	42	62
	number	21,908	22,938
Chicken 3 months old or older inventory	farms	181	177
	number	(D)	935,278
Broilers and other meat-type chickens sold	farms	12	14
	number	2,069,316	1,201,331

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**Table 19.01-- FARMS, LAND IN FARMS, AND SELECTED ITEMS:
1987 AND 1992 -- Con.**

Item		1987	1992
Selected crops harvested:			
Sugarcane for sugar	farms	79	31
	acres	79,234	62,915
	tons	7,934,181	5,488,214
Pineapples harvested	farms	18	21
	acres	22,262	15,500
	tons	683,182	556,748
Vegetables harvested	farms	710	602
	acres	5,587	5,129
Land in orchards	farms	2,128	2,537
	acres	33,564	38,590

(D) Withheld to avoid disclosing data for individual farms.

Source: U.S. Bureau of the Census, *1992 Census of Agriculture, Geographic Area Series, Hawaii, State and County Data*, cited in Release 92-A29-HI (November 7, 1994).

Table 19.02-- FARMS AND LAND IN FARMS, FOR COUNTIES: 1992

Item		Hawaii	Honolulu	Kauai	Maui
Farms	number	3,157	892	437	850
Land in farms	acres	926,607	91,998	214,452	355,786
Average size of farm	acres	294	103	491	419
Value of land and buildings:					
Average per farm	dollars	495,001	1,144,965	730,246	1,118,184
Average per acre	dollars	1,686	11,101	1,488	2,671
Estimated market value of all machinery and equipment:					
Average per farm	dollars	28,617	51,619	109,908	117,143
Farms by size:					
1 to 9 acres		1,960	696	249	505
10 to 49 acres		858	136	116	232
50 to 179 acres		188	28	37	60
180 to 499 acres		74	17	18	24
500 to 999 acres		22	5	4	3
1,000 acres or more		55	10	13	26
Total cropland					
	farms	2,893	764	345	733
	acres	116,068	43,587	(D)	(D)
Harvested cropland					
	farms	2,752	745	309	666
	acres	52,950	20,692	23,758	39,031
Irrigated land					
	farms	842	579	258	541
	acres	13,013	27,196	32,580	61,549
Market value of agricultural products sold					
Average per farm	\$1,000 dollars	187,593	150,527	49,166	164,767
Crops, including nursery and greenhouse crops	\$1,000	59,421	168,752	112,509	193,844
Livestock, poultry, and their products	\$1,000	158,360	98,312	43,454	153,285
	\$1,000	29,233	52,215	5,713	11,483

D Withheld to avoid disclosing data for individual farms.

Source: U.S. Bureau of the Census, *1992 Census of Agriculture, Geographic Area Series, Hawaii, State and County Data*, cited in Release 92-A29-HI and related county releases.

Table 19.03-- NUMBER OF FARMS, FARM ACREAGE, AND FARM EMPLOYMENT: 1980 TO 1995

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	4,800	1,590	2,800	1,100	8,700
1994	4,800	1,590	2,700	1,200	8,100
1995	4,800	1,590	2,700	1,000	7,300

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 records.

Table 19.04-- VALUE OF CROP AND LIVESTOCK SALES: 1980 TO 1995

[\$1,000]

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	490,692	419,108	127,700	87,360	204,048	71,584

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual) and records.

Table 19.05-- NUMBER OF FARMS, FARM ACREAGE, AND FARM EMPLOYMENT, BY COUNTIES OR ISLANDS: 1985, 1993, 1994, AND 1995

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:					
1985	4,400	1,950	2,200	1,200	10,600
1993	4,800	1,590	2,800	1,100	8,700
1994	4,800	1,590	2,700	1,200	8,100
1995	4,800	1,590	2,700	1,000	7,300
Hawaii County:					
1985	2,550	1,140	1,400	800	3,500
1993	2,800	929	1,800	650	3,300
1994	2,800	929	1,750	700	3,050
1995	2,800	929	1,750	550	2,550
Maui County:					
1985	550	420	250	150	2,950
1993	700	355	300	150	2,100
1994	700	355	300	150	2,000
1995	700	355	300	150	1,850
Oahu:					
1985	925	120	450	250	2,750
1993	900	92	550	300	2,300
1994	900	92	500	350	2,050
1995	900	92	500	250	1,900
Kauai County:					
1985	375	275	150	50	1,300
1993	400	214	200	100	1,050
1994	400	214	250	100	1,100
1995	400	214	200	150	1,050

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).

**Table 19.06-- VALUE OF CROP AND LIVESTOCK SALES, BY COUNTIES
OR ISLANDS: 1985, 1993, 1994 AND 1995**

[\$1,000]

County or island and year	All crops and livestock	Crops				Livestock
		All crops	Sugar (unpro- cessed cane)	Pine- apples 1/ (fresh equiv.)	Other crops 1/	
State total:						
1985	528,349	445,526	222,400	90,530	132,126	82,823
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	490,692	419,108	127,700	87,360	204,048	71,584
Hawaii County:						
1985	171,582	149,460	69,800	(Z)	79,155	22,122
1993	166,309	140,610	39,000	(Z)	101,610	25,699
1994	161,475	140,770	35,800	(Z)	104,970	20,705
1995	145,189	128,018	12,200	(Z)	115,818	17,171
Maui County:						
1985	131,464	119,249	63,600	36,380	19,309	12,215
1993	131,703	118,702	62,700	24,890	31,112	13,001
1994	126,253	115,511	58,500	25,150	31,861	10,742
1995	124,847	114,262	59,400	24,775	30,087	10,585
Oahu:						
1985	160,678	117,263	35,700	54,150	27,363	43,415
1993	162,086	119,906	29,700	54,923	35,283	42,180
1994	160,677	119,957	30,600	53,690	35,667	40,720
1995	162,394	122,827	21,000	62,585	39,242	39,567
Kauai County:						
1985	64,625	59,554	53,300	(Z)	6,299	5,071
1993	46,377	42,375	31,600	(Z)	10,775	4,002
1994	55,375	50,912	35,200	(Z)	15,712	4,463
1995	58,262	54,001	35,100	(Z)	18,901	4,261

Z Less than \$50,000.

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

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual).

Table 19.07-- ACREAGE IN CROP, NUMBER OF CROP FARMS, VOLUME OF CROP MARKETINGS, AND VALUE OF CROP SALES: 1985, 1993, 1994, AND 1995

Subject	1985	1993	1994	1995
Acreage in crop (1,000 acres):				
Sugarcane	187.9	132.2	121.1	83.8
Pineapples (land used for pineapple)	34.5	22.0	22.3	20.8
Vegetables and melons (harvested acreage)	5.4	5.3	5.3	6.0
Fruits, excluding pineapples	6.5	6.9	6.6	7.0
Coffee	2.1	7.0	6.8	6.7
Macadamia nuts	20.0	20.1	20.2	20.3
All other crops	8.6	5.3	5.7	6.6
Number of crop farms:				
Sugar	155	35	24	9
Pineapples	18	20	15	15
Vegetables and melons	715	510	580	690
Fruits (excluding pineapples)	805	787	836	924
Coffee	620	580	585	580
Macadamia nuts	610	650	650	650
Taro	155	190	180	190
Flowers and nursery products	670	662	660	705
Volume of crop marketings:				
Sugar, unprocessed cane (1,000 tons)	7,916	5,508	5,266	3,953
Pineapples, fresh equivalent (1,000 tons)	565	370	365	345
Vegetables and melons (1,000 lb.)	89,620	82,880	80,350	89,100
Fruits, excluding pineapples (1,000 lb.)	80,980	93,510	96,650	83,520
Coffee, parchment (1,000 lb.)	1,850	2,900	4,300	5,400
Macadamia nuts, in shell (1,000 lb.)	42,000	48,500	52,500	50,000
Taro (1,000 lb.)	6,860	6,000	6,100	6,800
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	222,400	163,000	160,100	127,700
Pineapples (fresh equivalent)	90,530	79,850	78,890	87,360
Vegetables and melons	30,034	34,645	36,105	38,604
Fruits (excluding pineapples)	12,794	22,173	23,611	28,218
Coffee (parchment)	5,180	6,525	12,040	16,200
Macadamia nuts (in shell)	30,480	32,980	36,225	37,000
Taro	1,578	2,760	2,806	3,264
Field crops (not estimated separately)	8,198	9,827	10,048	12,738
Flowers and nursery products	44,162	69,513	67,005	67,704

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual).

Table 19.08-- ACREAGE IN CROP, NUMBER OF CROP FARMS, VOLUME OF CROP MARKETINGS, AND VALUE OF CROP SALES, BY COUNTIES OR ISLANDS: 1995

Subject	Hawaii County	Maui County	Oahu	Kauai County
Acreage in crop (1,000 acres):				
Sugarcane	2.4	42.6	8.0	30.8
Pineapples (land used for pineapple)	(2/)	9.5	11.3	(2/)
Vegetables and melons (harvested acreage)	2.0	2.0	1.9	0.1
Fruits, excluding pineapples	5.5	0.2	0.5	0.8
Coffee	1.8	(1/)	-	1/ 4.9
Macadamia nuts	(D)	(D)	(D)	(D)
All other crops	2.1	2.2	0.8	1.5
Number of crop farms:				
Sugar	1	2	2	4
Pineapples	7	3	2	3
Vegetables and melons	335	95	235	25
Fruits (excluding pineapples)	652	74	128	70
Coffee	570	(1/)	-	1/ 10
Macadamia nuts	(D)	(D)	(D)	(D)
Taro	109	20	9	52
Flowers and nursery products	333	106	220	46
Volume of crop marketings:				
Sugar, unprocessed cane (1,000 tons)	430	1,678	709	1,136
Pineapples, fresh equivalent (1,000 tons)	(3/)	188	157	(3/)
Vegetables and melons (1,000 lb.)	28,760	36,110	23,790	440
Fruits, excluding pineapples (1,000 lb.)	66,320	1,880	3,880	11,440
Coffee, parchment (1,000 lb.)	2,500	(1/)	-	1/ 2,900
Macadamia nuts, in shell (1,000 lb.)	(D)	(D)	(D)	(D)
Taro (1,000 lb.)	1,400	(D)	(D)	4,160
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	12,200	59,400	21,000	35,100
Pineapples (fresh equivalent)	(4/)	24,775	62,585	(4/)
Vegetables and melons	14,267	13,760	10,283	294
Fruits (excluding pineapples)	22,255	1,031	2,353	2,579
Coffee (parchment)	11,500	(1/)	-	1/ 4,700
Macadamia nuts (in shell)	(D)	(D)	(D)	(D)
Taro	657	(D)	(D)	1,997
Field crops (not estimated separately)	102	4,382	754	7,500
Flowers and nursery products	32,474	7,767	25,658	1,805

D Withheld to avoid disclosure of individual operations.

2/ Less than 50 acres.

1/ Kauai, Maui, and Molokai combined to avoid disclosure of individual operations.

3/ Less than 500 tons.

4/ Less than \$50,000.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture 1995*.

Table 19.09-- SPECIALTY CROPS, FRUITS, AND VEGETABLES: 1995

[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 (1995-96)	5,400	1.0	5,400	300.0	16,200
Fresh herbs	1,120	260.0	1,886
Ginger roots	135	43.0	5,800	87.0	5,046
Macadamia nuts (1995-96)	19,300	2.6	56,000	66.1	37,000
Seed crops (1995-96)	1,700	...	3,050	...	12,230
Fruits:					
Bananas	930	14.0	13,000	40.0	5,200
Guavas	750	...	16,400	14.5	2,378
Papayas	2,435	20.9	50,800	36.4	18,494
Vegetables:					
Cabbage, Chinese	370	21.1	7,800	23.5	1,833
Cabbage, head	600	21.5	12,900	22.0	2,838
Cucumbers	400	10.0	4,000	40.0	1,600
Onions, dry	210	11.0	2,300	114.0	2,622
Onions, green	220	6.8	1,500	96.0	1,440
Peppers, green	200	12.0	2,400	58.0	1,392
Potatoes, sweet	320	8.8	2,800	55.0	1,540
Taro	1/ 550	...	6,800	48.0	3,264
Tomatoes	240	25.0	6,000	48.5	2,910
Watercress	1/ 40	...	1,200	115.0	1,380
Watermelons	800	25.5	20,400	17.0	3,468

1/ Acreage in crop.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture 1995*.

**Table 19.10-- SUGARCANE ACREAGE, BY TYPE OF IRRIGATION:
1984 TO 1994**

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

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

**Table 19.11-- GOVERNMENT PAYMENTS FOR AGRICULTURE:
1985 TO 1995**

[\$1,000]

Year	Amount	Year	Amount	Year	Amount
1985	1,184	1989	396	1993	2,018
1986	2,810	1990	657	1994	700
1987	344	1991	730	1995	566
1988	465	1992	734		

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual).

**Table 19.12-- FRESH FRUIT AND VEGETABLE ARRIVALS IN HONOLULU,
BY SOURCE: 1991 TO 1993**

[1,000 pounds, net]

Source	1991	1992	1993
Total arrivals	291,626	298,959	306,650
From Hawaii	86,410	80,421	83,898
Oahu 1/	26,347	24,924	20,190
Other islands 2/	60,063	55,497	62,988
Hawaii 2/	26,853	26,407	29,643
Maui 2/	15,565	14,249	15,409
Molokai 2/	17,457	14,603	17,866
Kauai 2/	188	238	70
From U.S. Mainland 2/	198,149	211,082	213,981
From foreign countries 2/	7,067	7,456	8,771

1/ Wholesalers' truck receipts.

2/ Ship and plane arrivals.

Source: Hawaii State Department of Agriculture, Market News Service, *Honolulu Arrivals, Fresh Fruits and Vegetables, 1991* (April 1993), table 1, and records.

**Table 19.13-- LIVESTOCK INVENTORY, 1985 TO 1995, AND BY
GEOGRAPHIC AREAS, 1995**

[In thousands]

Year and geographic area	All cattle and calves 1/	Milk cows 1/	Hogs and pigs 2/	Chickens (excluding broilers) 2/	Bee colonies
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	171	10	34	933	8
GEOGRAPHIC AREAS: 1995					
Hawaii County	119.3	1.7	2.1	(D)	(NA)
Maui	20.0	1.0	7.8	(D)	(NA)
Molokai and Lanai	6.6	-	(3/)	(D)	(NA)
Oahu	14.3	6.7	20.4	756	(NA)
Kauai County	10.8	0.5	3.7	(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/ Combined with Maui.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual).

Table 19.14-- NUMBER OF LIVESTOCK OPERATIONS, VOLUME OF LIVESTOCK MARKETINGS, AND VALUE OF LIVESTOCK SALES: 1985, 1993, 1994, AND 1995

Subject	1985	1993	1994	1995
Number of livestock operations, Dec. 31:				
Cattle 1/	850	850	800	800
Hogs	650	350	350	350
Milk	90	60	60	60
Eggs	55	55	55	55
Honey	22	18	21	17
Volume of livestock marketings:				
Beef (dressed weight; 1,000 lb.) 2/	33,764	10,924	9,324	7,895
Pork (dressed weight; 1,000 lb.)	7,859	5,849	5,907	6,239
Milk (million lb.)	139.8	138.5	136.9	139.4
Eggs (million)	220.5	210.6	195.0	186.0
Honey (1,000 lb.)	1,184	1,593	1,098	1,032
Value of livestock sales (\$1,000):				
Cattle 3/	26,632	26,860	19,700	14,639
Hogs 3/	7,995	6,293	6,175	6,672
Milk	28,310	32,035	31,747	32,146
Eggs	14,020	15,005	13,959	13,516

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

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

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).

Table 19.15-- NUMBER OF LIVESTOCK OPERATIONS, VOLUME OF LIVESTOCK MARKETINGS, AND VALUE OF LIVESTOCK SALES, BY COUNTIES OR ISLANDS: 1995

Subject	Hawaii County	Maui County	Oahu	Kauai County
Number of livestock operations, Dec. 31:				
Cattle 1/	410	190	60	140
Hogs	60	70	160	60
Milk	30	5	15	10
Eggs	25	7	19	4
Honey	12	2	-	3
Volume of livestock marketings:				
Beef (dressed weight; 1,000 lb.) 2/	3,780	2,055	1,362	698
Pork (dressed weight; 1,000 lb.)	453	1,584	3,363	839
Milk (million lb.)	(D)	(D)	98.8	(D)
Eggs (million)	(D)	(D)	149.2	(D)
Honey (1,000 lb.)	(D)	(D)	-	(D)
Value of livestock sales (\$1,000):				
Cattle 3/	9,287	3,504	966	882
Hogs 3/	465	1,668	3,565	974
Milk	(D)	(D)	22,672	(D)
Eggs	(D)	(D)	10,507	(D)

D Withheld to avoid disclosure of individual operations.

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

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

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

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture 1995*.

**Table 19.16-- FLORICULTURE AND NURSERY PRODUCTS, 1992 TO 1994,
AND BY ISLANDS, 1994**

Island and year	Number of farms	Growing area					Wholesale value (\$1,000)
		Total (acres)	Greenhouse (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	67,894
Islands, 1994:							
Hawaii	304	1,175	2,715	16,330	18	720	31,348
Kauai	40	106	105	390	0	95	1,842
Maui/Molokai	102	499	310	505	0	480	7,913
Oahu	214	510	640	4,375	0	395	26,791

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary* (June 13, 1995), pp. 8 and 11.

Table 19.17-- OUT-OF-STATE SALES OF FLORICULTURE AND NURSERY PRODUCTS: 1990 TO 1994

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

Type	1990	1991	1992	1993	1994
Total sales	37,734	40,920	41,890	40,740	36,775
Anthuriums, cut	11,185	10,595	11,355	11,115	10,310
Foliage, potted	8,525	9,595	10,015	9,655	9,090
Other flowers, nursery products	18,024	20,730	20,520	19,970	17,375

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (June 13, 1995), p. 13.

**Table 19.18-- FLORICULTURE AND NURSERY PRODUCTS, BY
COMMODITY: 1994**

[Shown for commodities with value of sales over \$650,000 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	61	1,000 dozens	885	7,338
Birds of Paradise	28	1,000 dozens	108	702
Proteas	20	1,000 stems	2,042	858
Orchids:				
Sprays: Dendrobium	49	1,000 dozens	402	3,017
Potted: Dendrobiums	50	1,000 pots	667	3,922
Lei or individual flowers:				
Vanda, Miss Joaquim	16	Million blooms	24.9	692
Dendrobiums	30	Million blooms	24.6	752
Foliage:				
Potted, primarily for--				
Indoor or patio use	77	...	(NA)	12,934
Landscape use	66	...	(NA)	3,982
Unfinished stock	24	...	(NA)	708
Potted flowering plants:				
Poinsettias	29	1,000 pots	231	961
Ornamentals and trees	43	...	(NA)	3,868
Plant rentals	42	...	(NA)	3,860

NA Not available.

Source: Hawaii Agricultural Statistics Service, *Hawaii Flowers & Nursery Products, Annual Summary*, (June 13, 1995), pp. 3-7.

**Table 19.19-- MARKET SUPPLY OF SPECIFIED FOODS:
1985, 1994, AND 1995**

Commodity and year	Market supply 1/				
	Total	Inshipment	From Hawaii	Per person 2/	From Hawaii, percent of total
Fresh market fruits:					
1985	94,513	68,083	26,430	83.1	28.0
1994	186,564	103,586	83,058	145.6	44.5
1995	201,351	102,551	98,800	156.6	49.1
Fresh market vegetables:					
1985	201,122	121,602	79,520	176.8	39.5
1994	227,890	161,935	65,955	177.8	28.9
1995	222,307	154,557	67,750	172.9	30.5
Beef and veal: 3/					
1985	105,084	71,156	4/ 33,928	92.4	32.3
1994	115,580	106,284	4/ 9,296	90.2	8.0
1995	115,844	107,949	4/ 7,895	90.1	6.8
Pork: 3/					
1985	37,927	30,068	7,859	33.3	20.7
1994	43,546	37,691	5,855	34.0	13.4
1995	43,493	37,254	6,239	33.8	14.3
Eggs, shell:					
1985	22,217	3,842	18,375	19.5	82.7
1994	20,527	4,210	16,317	16.0	79.5
1995	19,844	4,344	15,500	15.4	78.1

1/ Eggs in 1,000 dozens; other foods in 1,000 pounds.

2/ Eggs in dozens; other foods in pounds. Based on de facto population estimates: 1,137,800 for 1985, 1,281,675 for 1994, and 1,285,856 for 1995.

3/ Carcass weight equivalent.

4/ Excludes slaughter cattle and calves shipped out-of-state.

Source: Hawaii Agricultural Statistics Service, *Statistics of Hawaiian Agriculture* (annual).

Table 19.20-- LAND EVALUATION RATING, FOR SIX MAJOR ISLANDS: 1985

[Thousand acres. The Land Evaluation and Site Assessment Commission land evaluation rating is a composite index, scaled from 0 to 100, based on measurements of soil productivity and the suitability of land for agricultural purposes. Data exclude Kahoolawe, Niihau, Lehua, Kaula, and the Northwestern Hawaiian Islands]

Land evaluation rating	Six-island total	Hawaii	Maui	Lanai	Molokai	Oahu	Kauai
Total area	4,042	2,579	466	90	166	386	355
90 to 100	66	-	17	3	7	39	-
80 to 89	137	17	39	11	16	33	20
70 to 79	189	95	20	20	6	27	40
60 to 69	212	125	36	(Z)	9	22	20
50 to 59	221	113	64	3	10	12	18
40 to 49	309	227	40	6	10	18	7
30 to 39	605	543	29	1	3	11	17
20 to 29	492	282	55	48	50	30	26
10 to 19	1,813	1,176	165	15	55	194	206
Under 10	-	-	-	-	-	-	-
Mean rating	32.8	29.8	40.8	36.7	37.6	40.1	32.9

Z Less than 500 acres.

Source: Land Evaluation and Site Assessment Commission, *A Report on the State of Hawaii Land Evaluation and Site Assessment System* (February 1986), Exhibit A.

Table 19.21-- EMPLOYMENT IN AGRICULTURE: 1900 TO 1995

[Data for 1940 and later years include forestry and fisheries]

Year	Number	Percent of total	Year	Number	Percent of total
1900	55,931	62.0	1960	15,981	7.6
1910	54,742	54.1	1970	13,161	4.6
1920	54,803	49.0	1980	14,560	3.5
1930	61,811	40.1	1990	16,509	3.1
1940	54,629	35.5	1995	11,150	2.0
1950	31,806	19.0			

Source: Robert C. Schmitt, *Historical Statistics of Hawaii* (1977), pp. 122-124; present volume, tables 12.06, 12.10 and 12.12.

**Table 19.22-- GENERAL EXCISE TAX BASE FOR PRODUCING:
1986 TO 1996**

[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
1986	250,954	1990	317,337	1994	467,174
1987	274,202	1991	301,884	1995	457,538
1988	298,261	1992	408,662	1996	479,009
1989	326,400	1993	474,861		

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, as revised 3/25/97).

**Table 19.23-- AGRICULTURAL CHEMICALS USED, INCLUDING
FERTILIZER: 1982 TO 1992**

Chemicals used		1982	1987	1992
Any chemicals, fertilizer, or lime used 1/	farms	3,532	4,105	4,476
Commercial fertilizer 2/	farms	3,158	3,524	4,028
	acres on which used	228,984	225,457	200,723
	\$1,000	33,477	30,717	30,574
Agricultural chemicals 2/	farms	3,084	3,881	3,853
	\$1,000	16,417	18,233	20,396
Sprays, dusts, granules, fumigants, etc., to control --				
Insects on hay and other crops	farms	1,702	2,008	1,790
	acres on which used	45,671	68,150	53,593
Nematodes in crops	farms	654	663	489
	acres on which used	9,638	15,792	15,587
Diseases in crops and orchards	farms	1,067	1,151	1,018
	acres on which used	18,085	(D)	21,036
Weeds, grass, or brush in crops and pasture	farms	2,385	2,887	2,820
	acres on which used	213,551	235,871	178,422
Chemicals used for defoliation or for growth control of crops or thinning of fruit	farms	165	212	157
	acres on which used	50,455	57,481	40,292

D Withheld to avoid disclosing data for individual farms.

1/ Data for 1987 and 1982 include farms on which lime was applied alone or together with fertilizer and/or chemicals.

2/ Data for 1982 exclude cost of custom applications.

Source: U.S. Bureau of the Census, *1992 Census of Agriculture, Geographic Area Series, Hawaii, State and County Data*, AC92-A-11 (October 1994), table 15, p. 21.

Table 19.24-- AQUACULTURE INDUSTRY OPERATIONS: 1970 TO 1995

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

Source: Hawaii State Department of Land and Natural Resources, Aquaculture Development Program, records.

**Table 19.25-- AQUACULTURE OPERATIONS, ACREAGE, PRODUCTION,
AND VALUE, BY COUNTIES: 1994 AND 1995**

Subject	State total	Hawaii	Maui	Honolulu	Kauai
1994					
Number of operations	105	34	18	42	11
Acreage (Dec. 31)	605	150	30	400	25
Production (1,000 lb.)	990.1	630.3	60.1	288.9	10.8
Shellfish	140.4	4.0	46.0	88.6	1.8
Finfish	175.3	98.4	14.1	53.8	9.0
Algae	674.4	527.9	(NA)	146.5	-
Other 1/	(NA)	(NA)	(NA)	(NA)	(NA)
Value (\$1,000)	9,036.3	6,865.5	328.1	1,794.2	48.5
Shellfish	2,974.8	2,092.4	272.0	596.9	13.5
Finfish	942.2	489.3	56.1	361.8	35.0
Algae	4,606.0	4,280.0	(NA)	326.0	-
Other 1/	513.3	3.8	(NA)	509.5	(NA)
1995					
Number of operations	107	40	18	38	11
Acreage (Dec. 31)	635	175	35	400	25
Production (1,000 lb.)	1,409.6	1,055.9	50.1	303.6	(NA)
Shellfish	414.6	262.1	40.0	112.5	(NA)
Finfish	125.2	40.0	10.1	75.1	(NA)
Algae	869.8	753.8	-	116.0	(NA)
Other 1/	(NA)	(NA)	(NA)	(NA)	(NA)
Value (\$1,000)	13,306.5	11,402.2	279.1	1,625.2	(NA)
Shellfish	3,462.4	2,569.6	240.2	652.6	(NA)
Finfish	769.5	342.3	38.2	389.0	(NA)
Algae	8,685.9	8,428.7	-	257.2	(NA)
Other 1/	388.7	61.6	0.7	326.4	(NA)

NA Not available.

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

Source: Hawaii State Department of Land and Natural Resources, Aquaculture Development Program, records.