

Section 19

AGRICULTURE

This section presents statistics on agricultural land, farms, crops, livestock, dairy products, and poultry. Related information appears in Section 6 (on land use), 11 and 15 (agricultural employment and earnings), and 22 (food processing).

There were 4,400 farms in Hawaii as of 1982, with a total area of 2.0 million acres. The value of crop sales in 1982 was \$434 million, or 133 percent higher than the total for 1972. Livestock sales amounted to \$78 million, or 69 percent more than the 1972 level. Combined crop and livestock sales in 1982 ranged from \$60 million in Kauai County to \$176 million on the Big Island. Major crops were sugar (\$231 million in sales, up 97 percent over the decade), pineapple (\$99 million, or 127 percent over the 1972 total), flowers and nursery products (\$31 million, or 483 percent more than in 1972), and macadamia nuts (\$27 million, up 788 percent). Diversified crops, defined as all crops other than sugar and pineapple, rose from \$25 million in 1972 to \$104 million in 1982, or approximately 315 percent. About 650 farms sold \$31 million of flowers and nursery products in 1982, chiefly anthuriums, potted foliage, and orchids. Important products of livestock farms as of 1982 included cattle (\$28 million in sales), milk (\$22 million), and eggs (\$15 million). In 1982, Hawaii produced 37 percent of the fresh market vegetables consumed locally, 24 percent of the fresh market fruits, 30 percent of the beef and veal, 24 percent of the chickens, none of the rice, and 76 percent of the eggs.

Aquaculture has been growing in importance in recent years. Freshwater prawn production amounted to 317,000 pounds in 1982, with a value of more than \$1.5 million. Ten years earlier the corresponding figures had been only 4,300 pounds and \$15,000.

Statistics on Hawaiian agriculture exclude pakalōlō (marijuana) and other illicit plants. Authorities confiscated \$31 million worth of marijuana in 1982, but the proportion escaping detection is unknown.

Important sources for data on agriculture include the United States Census of Agriculture, generally conducted at five-year intervals, the annual report on Statistics of Hawaiian Agriculture issued by the Hawaii Agricultural Reporting Service, and data compiled by the Hawaiian Sugar Planters' Association, Pineapple Growers Association of Hawaii, and Aquaculture Development Program of the 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 24 of the Statistical Abstract of the United States: 1982-83.

Table 490.-- AGRICULTURAL SUMMARY: 1964 TO 1978

Subject	1964	1969	1974	1978
Number of farms by size				
Total	4,864	3,896	3,020	4,310
Less than 10 acres	2,603	2,024	1,633	2,527
10 to 49 acres	1,594	1,281	872	1,211
50 to 179 acres	359	336	271	296
180 to 499 acres	168	140	127	146
500 to 999 acres	38	28	23	24
1,000 to 1,999 acres	22	17	24	32
2,000 or more acres	80	70	70	74
Farm acreage				
Total acreage (1,000)	2,354	2,058	2,119	1,988
Per farm (acres)	484	528	702	461
Total cropland (1,000)	370.9	379.8	351.6	333.3
Harvested cropland (1,000)	167.5	178.7	151.4	158.6
Irrigated land (1,000)	143.9	145.6	141.7	159.3
Other characteristics				
Average age of farm operators (years) .	51.0	53.1	55.4	52.7
Tenant operators (percent of total) ...	41.1	38.1	36.6	34.5
Regular hired workers 1/	12,375	13,200	11,497	11,380
Average value of land and buildings:				
Per farm (\$1,000)	98.9	156.8	340.6	413.9
Per acre (dollars)	205	297	485	897
Market value of agricultural products sold:				
Total (\$1,000,000)	187.5	285.6	609.8	419.3
Per farm (\$1,000)	38.5	73.3	201.9	97.3
Percent of farms over \$2,500	46.5	55.6	67.4	67.6

1/ Working 150 days or more on all farms.

2/ 1978 data exclude sales of forest products.

Source: U.S. Bureau of the Census, 1974 Census of Agriculture, Vol. I, Part 11 (1977), pp. 1, 2, and 16, and 1978 Census of Agriculture, Vol. I, Part 11 (1981), pp. 1, 2, 5, and 6.

Table 491.-- AGRICULTURAL SUMMARY, BY COUNTIES: 1978

Subject	State total	Hawaii	Hono- lulu	Kauai	Maui
Number of farms by size					
Total	4,310	2,266	1,053	369	622
Less than 10 acres	2,527	1,213	822	188	304
10 to 49 acres	1,211	745	161	114	191
50 to 179 acres	296	155	36	41	64
180 to 499 acres	146	85	16	11	34
500 to 999 acres	24	16	2	-	6
1,000 to 1,999 acres	32	13	9	5	5
2,000 or more acres	74	39	7	10	18
Farm acreage					
Total acreage (1,000)	1,988	1,154	126	286	422
Per farm (acres)	461	509	119	776	679
Total crop land (1,000)	333.3	129.5	(D)	(D)	96.6
Harvested cropland (1,000) ...	158.6	58.7	30.5	24.9	44.5
Irrigated land (1,000)	159.3	21.9	38.4	36.8	62.2
Other characteristics					
Average age of farm operators (years)	52.7	52.8	53.1	53.1	51.3
Tenant operators (percent of total)	34.5	33.9	40.3	38.5	24.4
Regular hired workers ^{1/}	11,380	2,961	2,758	2,095	3,566
Average value of land and buildings:					
Per farm (\$1,000)	413.9	405.5	300.6	498.7	586.4
Per acre (dollars)	897	796	2,519	643	864
Market value of agricultural products sold:					
Total (\$1,000)	419,251	148,399	118,608	48,679	103,564
Per farm (\$1,000)	97.3	65.5	112.6	131.9	166.5
Percent of farms over \$2,500	67.6	68.6	71.5	59.9	61.7

D Data withheld to avoid disclosing information for individual farms.

^{1/} Working 150 days or more on all farms.

Source: U.S. Bureau of the Census, 1978 Census of Agriculture, Vol. I, Part 11 (1981), pp. 107, 125, 126, 130, 131, 135, 136, 140, 141.

Table 492.-- NUMBER OF FARMS, FARM ACREAGE, AND VALUE OF CROP AND LIVESTOCK SALES: 1972 TO 1982

Year	Number of farms <u>1/</u>	Farm acreage <u>2/</u> (1,000)	Value of crop and livestock sales (\$1,000)				
			Crops and live-stock	Sugar (un-processed cane)	Pine-apples (fresh equivalent)	Other crops	Live-stock
1972 ..	4,300	2,300	232,497	117,300	43,900	25,055	46,242
1973 ..	4,100	2,300	266,161	141,900	39,600	29,392	55,269
1974 ..	3,800	2,200	575,432	442,300	40,259	34,964	57,909
1975 ..	3,900	2,150	377,575	237,000	41,616	40,688	58,271
1976 ..	4,000	2,100	327,820	164,700	52,983	47,815	62,322
1977 ..	4,100	2,050	325,182	144,200	62,249	53,715	65,018
1978 ..	4,300	1,980	380,655	182,700	63,090	62,308	72,557
1979 ..	4,300	1,980	441,253	217,600	69,409	75,780	78,464
1980 ..	4,300	1,970	634,101	385,100	76,596	91,181	81,224
1981 ..	4,400	1,965	489,502	207,500	89,745	104,103	88,154
1982 ..	4,400	1,965	512,642	230,800	99,484	104,010	78,348

1/ Data for 1974 and later years based on revised farm definition.

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

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

Table 493.-- NUMBER OF FARMS, FARM ACREAGE, AND VALUE OF CROP AND LIVESTOCK SALES, BY GEOGRAPHIC AREAS: 1972 TO 1982

Geographic area and year	Number of farms <u>1/</u>	Farm acreage <u>2/</u> (1,000)	Value of crop and livestock sales (\$1,000)				
			Crops and live-stock	Sugar (unpro-cessed cane)	Pine-apples (fresh equiv.)	Other crops	Live-stock
State total:							
1972	4,300	2,300	232,497	117,300	43,900	25,055	46,242
1981	4,400	1,965	489,502	207,500	89,745	104,103	88,154
1982	4,400	1,965	512,642	230,800	99,484	104,010	78,348
Hawaii Co.:							
1972	2,450	1,340	72,190	44,100	-	12,973	15,117
1981	2,650	1,150	163,730	76,800	-	63,912	23,018
1982	2,650	1,150	176,029	86,900	-	65,412	23,717
Mauai Co.:							
1972	550	526	67,886	29,200	29,800	3,743	5,143
1981	500	420	115,290	50,500	39,915	13,270	11,605
1982	500	420	119,084	55,000	38,642	14,084	11,358
Oahu:							
1972	900	152	62,803	18,600	13,300	6,725	24,178
1981	1,000	125	153,514	34,200	49,830	21,197	48,287
1982	1,000	125	157,042	37,900	60,842	19,751	38,549
Kauai Co.:							
1972	400	282	29,618	25,400	800	1,614	1,804
1981	250	275	56,968	46,000	(3/)	5,724	5,244
1982	250	275	60,487	51,000	(3/)	4,763	4,724

1/ Farm definition revised in 1979.

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

3/ Less than \$50,000.

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

Table 494.-- ACREAGE IN CROP, NUMBER OF CROP FARMS, VOLUME OF CROP MARKETINGS, AND VALUE OF CROP SALES: 1972 TO 1982

Subject	1972	1981	1982
Acreage in crop (1,000 acres):			
Sugarcane	229.6	216.1	204.8
Pineapples (land used for pineapple)	58.1	41.0	36.0
Vegetables and melons (harvested acreage) ..	3.0	4.2	4.1
Fruits, excluding pineapples	3.6	5.4	5.6
Coffee	2.9	1.8	2.0
Macadamia nuts	9.3	13.8	14.7
Miscellaneous crops	3.2	8.0	11.3
Number of crop farms:			
Sugar	577	360	285
Pineapples	36	18	18
Vegetables and melons	412	583	620
Fruits (excluding pineapples)	417	657	700
Coffee	770	625	620
Macadamia nuts	326	490	520
Taro	123	123	117
Flowers and nursery products	446	680	650
Volume of crop marketings:			
Sugar, unprocessed cane (1,000 tons)	9,929	8,831	8,808
Pineapples, fresh equivalent (1,000 tons) ..	947	636	670
Vegetables and melons (1,000 lb.)	50,903	73,330	72,740
Fruits, excluding pineapples (1,000 lb.) ...	38,119	83,010	70,810
Coffee, parchment (1,000 lb.)	3,640	2,210	1,050
Macadamia nuts, in shell (1,000 lb.)	13,110	33,360	36,720
Taro (1,000 lb.)	9,020	6,100	6,460
Value of crop sales (\$1,000):			
Sugar (unprocessed cane)	117,300	207,500	230,800
Pineapples (fresh equivalent)	43,900	89,745	99,484
Vegetables and melons	7,688	21,669	23,016
Fruits (excluding pineapples)	4,687	15,516	14,846
Coffee (parchment)	1,835	4,420	2,205
Macadamia nuts (in shell)	3,055	26,454	27,136
Taro	758	1,305	1,447
Field crops (not estimated separately)	1,608	5,107	4,651
Flowers and nursery products	5,244	29,482	30,559

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

Table 495.-- ACREAGE IN CROP, NUMBER OF CROP FARMS, VOLUME OF CROP MARKETINGS, AND VALUE OF CROP SALES, BY GEOGRAPHIC AREAS: 1982

Subject	Hawaii County	Mauı County	Oahu	Kauai County
Acreage in crop (1,000 acres):				
Sugarcane	83.2	47.5	29.2	44.9
Pineapples (land used for pineapple)	-	24.5	11.5	(1/)
Vegetables and melons (harvested acreage)	1.5	1.4	1.1	0.1
Fruits, excluding pineapples	3.9	0.2	0.8	0.7
Coffee	2.0	-	-	-
Macadamia nuts	13.5	(D)	(D)	(D)
Miscellaneous crops	1.0	8.9	0.7	0.7
Number of crop farms:				
Sugar	274	3	3	5
Pineapples	-	13	2	3
Vegetables and melons	241	78	249	52
Fruits (excluding pineapples)	424	37	157	82
Coffee	620	-	-	-
Macadamia nuts	515	2	1	2
Taro	35	29	4	49
Flowers and nursery products	310	80	235	25
Volume of crop marketings:				
Sugar, unprocessed cane (1,000 tons)	3,780	1,853	1,306	1,869
Pineapples, fresh equivalent (1,000 tons)	-	467	203	(2/)
Vegetables and melons (1,000 lb.)	34,510	25,230	11,380	1,620
Fruits, excluding pineapples (1,000 lb.) .	55,010	2,260	5,380	8,160
Coffee, parchment (1,000 lb.)	1,050	-	-	-
Macadamia nuts, in shell (1,000 lb.)	36,600	(D)	(D)	(D)
Taro (1,000 lb.)	880	(D)	(D)	4,360
Value of crop sales (\$1,000):				
Sugar (unprocessed cane)	86,900	55,000	37,900	51,000
Pineapples (fresh equivalent)	-	38,642	60,842	(3/)
Vegetables and melons	10,785	6,355	5,275	601
Fruits (excluding pineapples)	11,472	496	1,427	1,451
Coffee (parchment)	2,205	-	-	-
Macadamia nuts (in shell)	27,047	(D)	(D)	(D)
Taro	197	(D)	(D)	972
Field crops (not estimated separately) ...	12	3,029	226	1,384
Flowers and nursery products	13,559	3,925	12,776	299

D Withheld to avoid disclosure of individual operations.

NA Not available.

1/ Less than 500 acres.

2/ Less than 500 tons.

3/ Less than \$50,000.

Source: Hawaii Agricultural Reporting Service, Statistics of Hawaiian Agriculture 1982.

Table 496.-- VEGETABLES, FRUITS, NUTS, COFFEE, AND TARO: 1982

Crop <u>1/</u>	Acreage har-vested <u>2/</u>	Yield per acre (1,000 lb.)	Production (1,000 lb.)	Farm price (cents per lb.)	Value of sales (\$1,000)
Vegetables:					
Snap beans	130	7.7	995	80.0	796
Chinese Cabbage	330	23.7	7,820	14.4	1,126
Head Cabbage	540	25.5	13,800	14.1	1,946
Celery	75	42.0	3,150	19.4	611
Cucumbers	225	19.3	4,350	31.1	1,353
Ginger Root	100	36.3	3,630	92.3	3,350
Lettuce (head, semi-head)	650	14.5	9,400	26.2	2,463
Dry Onions	105	12.9	1,350	66.2	894
Green Onions	115	7.0	800	84.3	674
Watercress	25	...	850	73.2	622
Tomatoes	260	30.0	7,800	34.7	2,707
Fruits:					
Bananas	585	...	6,730	9.9	664
Guavas	720	8.0	5,750	28.6	1,645
Papayas	2,170	24.3	52,750	21.8	11,484
Macadamia nuts (1982-1983)	10,200	3.6	36,720	73.9	27,136
Coffee (1982-1983)	1,900	0.6	1,050	210.0	2,205
Taro	340	...	6,460	22.4	1,447

1/ Data shown for crops with sales in excess of \$600,000.

2/ Acreage bearing for macadamia nuts; acreage in crop for watercress and taro.

Source: Hawaii Agricultural Reporting Service, Statistics of Hawaiian Agriculture, 1982 pp. 28-65.

Table 497.-- LIVESTOCK INVENTORY: 1972, 1981, AND 1982

[In thousands.]

Type of livestock	1972	1981	1982
All cattle and calves <u>1/</u>	245	228	230
Milk cows <u>1/</u>	13	13	12
Hogs and pigs <u>2/</u>	58	55	49
Chickens (excluding broilers) <u>2/</u> ..	1,330	1,242	1,148
Bee colonies	4	7	8

1/ As of following January 1.

2/ As of December 1.

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

Table 498.-- LIVESTOCK INVENTORY, BY GEOGRAPHIC AREAS: 1982-1983

[In thousands.]

Type of livestock	Hawaii County	Maui County	Oahu	Kauai County
All cattle and calves <u>1/</u>	133.3	42.7	35.7	18.3
Milk cows <u>1/</u>	1.5	1.1	9.3	0.5
Hogs and pigs <u>2/</u>	3.8	8.8	32.1	4.3
Chickens (excluding broilers) <u>2/</u> .	(D)	(D)	971.0	(D)

D Withheld to avoid disclosure of individual operations.

1/ As of January 1, 1983.

2/ As of December 1, 1982.

Source: Hawaii Agricultural Reporting Service, Statistics of Hawaiian Agriculture 1982, pp. 71, 80, and 85.

Table 499.-- NUMBER OF LIVESTOCK OPERATIONS, VOLUME OF LIVESTOCK MARKETINGS,
AND VALUE OF LIVESTOCK SALES: 1972 TO 1982

Subject	1972	1981	1982
Number of livestock operations, Dec. 31:			
Cattle <u>1/</u>	970	750	750
Hogs	540	650	650
Milk	100	70	70
Eggs	90	55	55
Broilers	16	10	10
Honey	20	28	28
Volume of livestock marketings:			
Beef (dressed weight; 1,000 lb.) <u>2/</u>	32,183	28,666	29,048
Pork (dressed weight; 1,000 lb.)	8,357	8,708	8,557
Milk (million lb.)	134.6	147.9	106.4
Eggs (million)	204	221.3	202.2
Broilers and chickens (1,000 lb.) <u>3/</u>	6,359	9,046	8,571
Honey (1,000 lb.)	300	875	840
Value of livestock sales (\$1,000):			
Cattle <u>4/</u>	16,557	28,405	27,619
Hogs <u>4/</u>	4,524	8,382	8,465
Milk	14,494	30,320	21,908
Eggs	7,990	15,159	14,542
Broilers and chickens	2,540	5,307	5,240
Other	137	581	574

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

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

3/ Ready-to-cook weight.

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

Source: Hawaii Agricultural Reporting System, Statistics of Hawaiian Agriculture (annual).

Table 500.-- NUMBER OF LIVESTOCK OPERATIONS, VOLUME OF LIVESTOCK MARKETINGS,
AND VALUE OF LIVESTOCK SALES, BY GEOGRAPHIC AREAS: 1982

Subject	Hawaii County	Maui County	Oahu	Kauai County
Number of livestock operations, Dec. 31:				
Cattle <u>1/</u>	340	200	70	140
Hogs	75	100	360	115
Milk	24	17	24	5
Eggs	24	6	21	4
Broilers	-	-	8	2
Honey	3	5	8	12
Volume of livestock marketings:				
Beef (dressed weight; 1,000 lb.) <u>2/</u>	19,880	6,224	952	1,992
Pork (dressed weight; 1,000 lb.)	716	2,016	5,189	636
Milk (million lb.)	(D)	(D)	75.6	(D)
Eggs (million)	(D)	(D)	174.1	(D)
Broilers and chickens (1,000 lb.) <u>3/</u>	(D)	(D)	8,214	(D)
Honey (1,000 lb.)	(D)	(D)	(D)	(D)
Value of livestock sales (\$1,000):				
Cattle <u>4/</u>	18,907	6,043	756	1,913
Hogs <u>4/</u>	758	2,110	4,914	683
Milk	(D)	(D)	15,687	(D)
Eggs	(D)	(D)	12,160	(D)
Broilers and chickens	(D)	(D)	4,989	(D)
Other	404	105	43	22

D Withheld to avoid disclosure of individual operations.

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

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

3/ Ready-to-cook weight.

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

Source: Hawaii Agricultural Reporting System, Statistics of Hawaiian Agriculture 1982.

Table 501.-- FLOWERS AND NURSERY PRODUCTS, 1980 TO 1982, AND BY ISLANDS, 1982

Island and year	Number of farms	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:							
1980	640	1,477	1,753	19,567	130	858	27,688
1981	680	1,610	2,295	23,068	133	895	29,482
1982	650	1,628	2,399	25,126	119	877	30,559
Islands, 1982:							
Hawaii ...	310	912	1,270	19,425	104	333	13,559
Kauai	25	46	20	182	3	38	299
Maui	80	262	191	648	-	243	3,925
Oahu	235	408	918	4,871	12	263	12,776

Source: Hawaii Agricultural Reporting Service, "Flower and Nursery Products Number One Diversified Industry After Record Year," Hawaii Flowers and Nursery Products, Annual Summary (July 7, 1983).

Table 502.-- FLOWERS AND NURSERY PRODUCTS, BY KIND OF FLOWER: 1982

[Shown for commodities with value of sales over \$500,000.]

Kind of flower	Number of farms	Number of flowers sold		Value of sales (\$1,000)
		Unit	Number	
Cut flowers:				
Anthuriums	225	1,000 dozens	1,984	5,633
Roses	6	1,000 dozens	478	1,381
Chrysanthemums, pompon	17	1,000 bunches	439	546
Lei flowers:				
Carnations	29	Million flowers	33.7	1,206
Vanda, Miss Joaquim	31	Million flowers	79.7	1,185
Potted plants:				
Chrysanthemums	11	1,000 pots	214	681
Dendrobium orchids	91	1,000 pots	183	767
Other orchids	66	1,000 pots	312	1,415
Potted foliage	90	...	(NA)	8,820
Unfinished flower and foliage stock ..	42	...	(NA)	1,355

NA Not available.

Source: Hawaii Agricultural Reporting Service, "Flowers and Nursery Products Number One Diversified Industry After Record Year," Hawaii Flowers and Nursery Products, Annual Summary (July 7, 1983).

Table 503.-- MARKET SUPPLY OF SPECIFIED FOODS: 1972 TO 1982

Commodity and year	Total market supply <u>1/</u>			Per capita market supply <u>2/</u>	Percent from Hawaii
	Total	Inship-ment	Hawaii		
Fresh market fruits					
1972	51,978	32,823	19,155	59.8	36.9
1981	82,439	61,556	20,883	77.4	25.3
1982	81,365	61,725	19,640	75.1	24.1
Fresh market melons:					
1972	9,795	7,595	2,200	11.3	22.5
1981	14,155	12,545	1,610	13.3	11.4
1982	18,263	16,038	2,225	16.8	12.2
Fresh market vegetables:					
1972	113,502	67,133	46,369	130.5	40.9
1981	175,427	105,052	70,375	164.6	40.1
1982	186,498	117,366	69,132	172.0	37.1
Beef and veal: <u>3/</u>					
1972	78,534	46,351	32,183	90.3	41.0
1981	94,792	66,126	28,666	88.9	30.2
1982	97,030	67,982	29,048	89.5	29.9
Pork: <u>3/</u>					
1972	28,024	19,667	8,357	32.2	29.8
1981	34,632	25,924	8,708	32.5	25.1
1982	34,976	26,419	8,557	32.3	24.5
Chickens:					
1972	23,752	17,393	6,359	27.3	26.8
1981	32,896	23,850	9,046	30.9	27.5
1982	34,928	26,357	8,571	32.2	24.5
Eggs:					
1972	18,178	1,178	17,000	20.9	93.5
1981	20,906	2,464	18,442	19.6	88.2
1982	22,250	5,400	16,850	20.5	75.7

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.

3/ Carcass weight equivalent.

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

Table 504.-- AGRICULTURAL PRODUCTIVITY RATING AND ESTIMATED ANNUAL INLAND SOIL LOSS FOR MAJOR ISLANDS

Subject	Hawaii	Maui	Lanai	Molokai	Oahu	Kauai
Agricultural productivity rating (1,000 acres)						
Total	2,584.3	466.4	89.3	167.1	388.9	354.1
Very good	-	32.7	-	0.7	24.6	10.0
Good	46.2	20.1	-	-	32.3	30.3
Moderate	214.3	38.5	4.8	4.5	22.0	28.5
Poor	573.1	99.8	20.2	40.4	19.7	30.5
Very poor	1,738.2	268.7	63.8	120.3	228.2	249.3
Not rated <u>1/</u>	12.5	6.7	0.4	1.2	62.1	5.5
Inland soil loss (1,000 tons per year)						
Total erosion	2,287	2,357	1,242	2,373	1,355	2,493
Sediment yield <u>2/</u>	502	310	187	357	330	429

1/ Quarry, water, or urban.

2/ Total erosion minus amount deposited enroute to the point of measurement.

Source: Arthur Y. Ching and Tamotsu Sahara, Land Use and Productivity Rating, State of Hawaii, 1968, L.S.B. Circular No. 15 (University of Hawaii, Land Study Bureau, July 1969), pp. 20-21; State of Hawaii Water Resources Regional Study, Hawaii Water Resources Plan (January 1979), p. 94.

Table 505.-- AGRICULTURAL, URBAN AND OTHER LAND USE, FOR THE SIX LARGEST ISLANDS: 1978-1980

[Estimated area in thousands of acres, as measured from 1:24,000-scale quadrangle maps.]

Land use	Six-island total	Hawaii	Maui	Lanai	Molokai	Oahu	Kauai
Total land area ..	4,034.70	2,573.40	465.80	90.50	165.80	385.30	353.90
Agriculture <u>1/</u>	1,442.20	960.17	216.39	16.92	86.23	77.55	84.94
Sugarcane	251.05	104.13	54.92	-	-	38.68	53.32
Pineapple	44.54	-	11.11	16.82	3.61	12.98	.02
Field crops	17.88	11.06	2.40	-	1.27	2.82	.33
Veg and melons ..	7.09	2.48	1.90	-	1.09	1.55	.07
Forage and grain	3.51	2.32	-	-	.16	.80	.23
Flowers/nursery .	3.06	2.09	.49	-	.02	.43	.03
Flowers	2.28	1.94	.17	-	-	.17	-
Foliage/nursery	.78	.15	.32	-	.02	.26	.03
Other <u>2/</u>	4.22	4.17	.01	-	-	.04	-
Orchards	35.68	30.08	2.42	-	.08	1.51	1.59
Bananas	1.25	.15	.05	-	.01	.54	.50
Papayas <u>3/</u>	12.05	10.73	.01	-	.02	.55	.74
Macadamia nuts ..	16.93	14.73	2.18	-	.01	.01	-
Avocados .....	.73	.61	.11	-	.01	-	-
Coffee	2.44	2.44	-	-	-	-	-
Guava .....	.80	.13	-	-	-	.32	.35
Other <u>4/</u>	1.48	1.29	.07	-	.03	.09	-
Wetland crops .....	.67	.13	.15	-	.01	.07	.31
Aquaculture .....	.58	.12	.02	-	-	.35	.09
Livestock	1,091.80	814.65	145.37	.10	81.26	21.14	29.28
Feedlot	4.77	1.54	1.97	-	-	1.00	.26
Dairy <u>5/</u>	4.37	1.51	1.89	-	-	.76	.21
Hogs .....	.25	.01	.08	-	-	.13	.03
Poultry .....	.15	.02	-	-	-	.11	.02
Grazing	1,086.09	813.02	142.55	.10	81.26	20.14	29.02
Other <u>6/</u> .....	.94	.09	.85	-	-	-	-
Urban <u>7/</u>	163.61	36.22	18.91	4.61	4.11	87.43	12.33
Built-up	107.55	15.90	9.64	.33	1.29	71.60	8.79
Vacant	56.06	20.32	9.27	4.28	2.82	15.83	3.54
In ag use	10.06	2.01	1.56	.31	.43	4.48	1.27
Balance <u>8/</u>	2,428.89	1,577.01	230.50	68.97	75.46	220.32	256.63

Footnotes and source on next page.

Table 505.-- AGRICULTURAL, URBAN AND OTHER LAND USE, FOR THE SIX LARGEST ISLANDS: 1978-1980 -- Con.

1/ These data differ somewhat from the official statistics compiled from surveys of farmers and ranchers and published in Statistics of Hawaiian Agriculture (annual), cited elsewhere in this section.

2/ Unidentified field crops; also includes flowers and nursery.

3/ Includes areas used for rotation and replanting.

4/ Includes unidentified orchards.

5/ Includes dairy grazing areas.

6/ Unidentified livestock, also including grazing.

7/ Includes Rural District lands.

8/ Includes Conservation District lands.

Source: Total area from State Land Use Commission data in The State of Hawaii Data Book 1981, table 138. Agricultural and urban land use estimated by the Hawaii State Department of Agriculture from U.S. Geological Survey orthophoto quad sheets, 1977-1978, as field checked by the U.S. Soil Conservation Service, Hawaii, to December 1980. Non-agricultural and non-urban balance calculated as residual.

Table 506.-- FERTILIZER CONSUMPTION BY TYPE: 1973 TO 1982

[In tons. For years ended June 30.]

Year	Total	Mixtures 1/	Direct application materials	
			Primary nutrient 2/	Secondary and micro-nutrient
1973	171,199	105,722	62,983	2,494
1974	165,720	104,413	58,155	3,152
1975	180,704	106,713	70,984	3,007
1976	176,735	114,116	56,952	5,667
1977	191,022	118,821	65,718	6,483
1978	193,745	133,792	57,705	2,248
1979	181,105	119,866	58,783	2,456
1980	169,409	108,590	58,527	2,291
1981	150,137	102,546	46,863	728
1982	156,439	100,797	54,627	1,015

1/ Fertilizers having various combinations of primary nutrients.

2/ The primary nutrients are nitrogen, phosphate, and potash.

Source: Hawaii Agricultural Reporting Service, news release, "Hawaii Fertilizer Use" (February 18, 1983).

Table 507.-- FRESHWATER PRAWN FARMS, BY TYPE OF OPERATION AND ISLAND: DECEMBER 31, 1979 TO 1982

Operation and island	1979	1980	1981	1982
All prawn farms	19	24	21	22
Type of operation:				
Full-time	7	8	8	8
Part-time	12	16	13	14
Island:				
Hawaii	-	4	4	4
Molokai	1	1	1	1
Oahu	17	16	13	13
Kauai	1	3	3	4

Source follows next table.

Table 508.-- FRESHWATER PRAWN ACREAGE, PRODUCTION, AND VALUE: 1972 TO 1982

Year	Acres of prawn ponds ^{1/}	Production (1,000 lb.)	Value (\$1,000)	Wholesale price per pound (dollars)
1972	1.5	4.3	15.0	3.50
1973	1.5	4.4	15.3	3.50
1974	5	11.0	38.5	3.50
1975	26	40.3	140.9	3.50
1976	26	43.3	151.6	3.50
1977	33	54.9	206.0	3.75
1978	107	110.2	420.0	3.82
1979	275	205.0	787.3	3.84
1980	310	300.0	1,125.0	3.75
1981	260	240.0	1,031.0	4.30
1982	306	316.6	1,553.0	4.90

^{1/} As of December 31.

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

Table 509.-- AQUACULTURE ACREAGE, PRODUCTION, AND VALUE, BY TYPE:
1976 TO 1982

Subject and year	All types	Fresh-water prawns	Hawaiian fish-ponds	Post-larvae <u>1/</u>	Other species <u>2/</u>
Acreeage:					
1976	235	26	192		17
1977	246	33	192		31
1978	320	107	192		31
1979	493	275	192	1	25
1980	575	310	205	2	58
1981	547	260	199	2	86
1982	643	306	242	2	93
Production (1,000 lbs.): <u>3/</u>					
1976	94.0	43.3	19.7	...	31.0
1977	122.6	54.9	20.1	...	47.6
1978	178.5	110.2	23.3	...	45.0
1979	246.4	205.0	20.0	...	16.4
1980	320.0	300.0	20.0	...	31.0
1981	338.5	240.0	23.1	...	75.4
1982	551.2	316.6	33.8	...	200.8
Value (\$1,000):					
1976	210.0	151.6	18.5		39.9
1977	280.6	206.0	24.7		49.9
1978	524.7	420.0	32.7		72.0
1979 <u>4/</u>	1,531.3	787.3	22.0	500.0	222.0
1980	1,655.0	1,125.0	20.0	450.0	60.0
1981	1,868.5	1,031.0	23.0	610.0	204.5
1982	2,624.9	1,553.0	74.8	162.0	835.1

1/ Juvenile freshwater prawns and marine shrimp.

2/ Oysters, brine shrimp, carp and Chinese catfish, catfish, koi, tilapia, tropical fish and aquarium plants, and trout.

3/ Excludes items not sold by weight: post-larvae, brine shrimp, koi, tropical fish, and aquarium plants. Post-larvae individuals produced in 1982 numbered 14 million.

4/ Value of post-larvae estimated.

Source: Hawaii State Department of Land and Natural Resources, Aquaculture Development Program, information submitted July 16, 1982 and September 30, 1983.