

## Section 19

# AGRICULTURE

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

There were 4,596 farms in Hawaii as of 1982, with a total area of 1.96 million acres. The value of crop sales in 1983 was \$479 million, or 175 percent higher than the total for 1973. Livestock sales amounted to \$86 million, or 56 percent more than the 1973 level. Combined crop and livestock sales in 1983 ranged from \$62 million in Kauai County to \$191 million on the Big Island. Major crops were sugar (\$266 million in sales, up 88 percent over the decade), pineapple (\$100 million, or 153 percent over the 1973 total), flowers and nursery products (\$36 million, or 442 percent more than in 1973), vegetables and melons (\$26 million, up 185 percent), and macadamia nuts (\$24 million, up 674 percent). Diversified crops, defined as all crops other than sugar and pineapple, rose from \$29 million in 1973 to \$113 million in 1983, or approximately 283 percent. About 680 farms sold \$36 million of flowers and nursery products in 1983, chiefly anthuriums, potted foliage, and orchids. Important products of livestock farms as of 1983 included cattle (\$29 million in sales), milk (also \$29 million), and eggs (\$14 million). In 1983, Hawaii produced 44 percent of the fresh market vegetables consumed locally, 20 percent of the fresh market fruits, 32 percent of the beef and veal, 25 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 268,500 pounds in 1983, with a value of more than \$1.3 million. Ten years earlier the corresponding figures had been only 4,400 pounds and \$15,000.

Statistics on Hawaiian agriculture exclude pakalōlō (marijuana) and other illicit plants. Authorities confiscated \$54 million worth of marijuana in 1983, but the proportion escaping detection is unknown.

Important sources for data on agriculture include the United States Census of Agriculture, most recently conducted as of 1982, the annual report on Statistics of Hawaiian Agriculture issued by the Hawaii Agricultural Reporting Service, and data compiled by the Hawaiian Sugar Planters' Association, 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: 1984.

Table 562.-- FARMS, LAND IN FARMS, AND LAND USE: 1982 AND 1978

Subject	1982	1978
Farms ..... number ...	4,596	4,310
Land in farms ..... acres ....	1,957,503	1,988,282
Average size of farm ..... acres ....	426	461
Value of land and buildings:		
Average per farm ..... dollars ..	778,322	413,948
Average per acres ..... dollars ..	1,826	897
Farms by size:		
1 to 9 acres .....	2,744	2,527
10 to 49 acres .....	1,261	1,211
50 to 179 acres .....	320	296
180 to 499 acres .....	126	146
500 to 999 acres .....	33	24
1,000 to 1,999 acres .....	33	32
2,000 acres or more .....	79	74
Land in farms according to use:		
Total cropland ..... farms ....	3,836	3,565
..... acres ....	346,179	333,262
Harvested cropland ..... farms ....	3,539	3,299
..... acres ....	155,981	158,639
Cropland used only for pasture or grazing ..... farms ....	399	272
..... acres ....	33,552	27,191
Other cropland ..... farms ....	856	1,089
..... acres ....	156,646	147,432
Woodland, including woodland pastured ... farms ....	147	146
..... acres ....	117,264	145,802
Pastureland and rangeland other than cropland and woodland pastured ..... farms ....	743	611
..... acres ....	1,132,809	1,143,095
Land in house lots, ponds, roads, wasteland, etc. .... farms ....	2,226	1,859
..... acres ....	361,251	366,123
Irrigated land ..... farms ....	1,547	1,493
..... acres ....	146,017	159,323

Source: U.S. Bureau of the Census, 1982 Census of Agriculture, Preliminary Report, Hawaii, AC82-A-15-000(P) (January 1984).

Table 563.-- FARM SALES AND INCOME: 1982 AND 1978

Subject	1982	1978
Market value of agricultural products sold ..... \$1,000 ..	558,846	419,251
Average per farm ..... dollars .	121,594	97,274
Crops, including nursery and greenhouse products .....		
\$1,000 ..	456,217	331,020
Grains .....	3,392	1,397
Hay, silage, and field seeds .....	830	450
Vegetables, sweet corn, and melons .....	18,704	15,337
Fruits, nuts, and berries .....	113,727	73,505
Nursery and greenhouse products .....	35,973	24,291
Other crops .....	283,591	216,040
Livestock, poultry, and their products .....	102,629	88,230
Poultry and poultry products .....	21,517	17,187
Dairy products .....	24,363	23,206
Cattle and calves .....	45,513	39,625
Sheep, lambs, and wool .....	82	(D)
Hogs and pigs .....	9,209	(D)
Other livestock and livestock products .....	1,945	742
Farms by value of sales:		
\$250,000 or more .....	161	130
\$100,000 to \$249,999 .....	194	150
\$40,000 to \$99,999 .....	345	314
\$20,000 to \$39,999 .....	471	380
\$10,000 to \$19,999 .....	610	568
\$5,000 to \$9,999 .....	654	677
Less than \$5,000 .....	2,161	2,091
Value of agricultural products sold directly to individuals for human consumption .....		
farms ..	550	457
\$1,000 ..	4,546	2,494
Farm-related income:		
Income from machine work, customwork, and other agricultural services .....		
farms ..	146	119
\$1,000 ..	1,963	1,200

D Withheld to avoid disclosing data for individual farms.

Source: U.S. Bureau of the Census, 1982 Census of Agriculture, Preliminary Report, Hawaii, AC82-A-15-000(P) (January 1984).

Table 564.-- CHARACTERISTICS OF FARM OPERATORS: 1982 AND 1978

Subject	1982	1978	
Farms by type of organization:			
Individual or family .....	number ....	3,853	3,614
	acres .....	481,214	656,332
Partnership .....	number ....	351	326
	acres .....	130,761	222,668
Corporation:			
Family held .....	number ....	272	233
	acres .....	507,280	377,595
Other than family held .....	number ....	80	93
	acres .....	492,941	595,644
Other -- cooperative, estate or trust, institutional, etc.	number ....	40	44
	acres .....	345,307	136,043
Tenure of operator:			
Full owners .....	farms .....	2,334	2,111
	acres .....	328,880	281,019
Part owners .....	farms .....	793	713
	acres .....	1,286,202	1,388,319
Owned land in farms .....	acres .....	537,796	603,654
Rented land in farms .....	acres .....	748,406	784,665
Tenants .....	farms .....	1,469	1,486
	acres .....	342,421	318,944
Operators by principal occupation and residence:			
Farming .....		2,565	2,239
Residence on farm operated .....		1,630	1,287
Residence not on farm operated .....		659	516
Other than farming .....		2,031	2,071
Residence on farm operated .....		1,046	890
Residence not on farm operated .....		780	660
Operators by age group:			
Under 25 years .....		35	51
25 to 34 years .....		631	535
35 to 44 years .....		794	600
45 to 54 years .....		803	1,005
55 to 64 years .....		1,325	1,270
65 years and over .....		1,008	849
Average age .....		52.7	52.7
Female operators:			
Farms .....	number ....	615	579
Land in farms .....	acres .....	129,674	132,173

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Table 564.-- CHARACTERISTICS OF FARM OPERATORS:  
1982 AND 1978 -- Con.

Subject	1982	1978
Operators by race:		
White .....	1,305	1,039
Black and other races .....	3,291	3,271
Operators reporting days of work off farm:		
Any .....	2,535	2,495
100 days or more .....	1,960	1,878

Source: U.S. Bureau of the Census, 1982 Census of Agriculture, Preliminary Report, Hawaii, AC82-A-15-000(P) (January 1984).

Table 565.-- IRRIGATION OF FARMS: 1982, 1978, AND 1974

Subject	1982	1978	1974
Irrigated farms .....			
number .....	1,544	1,493	889
Proportion of farms .....	33.6	34.6	29.4
Land in irrigated farms .....	645,774	600,255	648,948
Irrigated land .....	145,982	159,323	141,742
Average per farm .....	95	107	159
Harvested crop land .....	1,516	1,465	(NA)
farms .....			
acres .....	76,035	77,396	(NA)

NA Not available.

Source: U.S. Bureau of the Census, 1982 Census of Agriculture, Hawaii, AC82-A-11 (September 1984), p. 2.

Table 566. -- FARMS PRODUCTION EXPENSES, MACHINERY AND EQUIPMENT:  
1982 AND 1978

Subject	1982	1978
Selected farm production expenses:		
Livestock and poultry purchased .....	\$1,000 ... 17,581	12,930
Feed for livestock and poultry .....	\$1,000 ... 41,676	34,227
Commercially mixed formula feeds .....	\$1,000 ... 22,275	28,302
Seeds, bulbs, plants, and trees .....	\$1,000 ... 9,668	2,033
Commercial fertilizer .....	\$1,000 ... 33,477	26,530
Other agricultural chemicals .....	\$1,000 ... 16,417	13,700
Hired farm labor .....	\$1,000 ... 146,331	131,217
Workers working 150 days or more .....	farms .... 727	661
.....	number ... 10,257	11,380
Contract labor .....	\$1,000 ... 3,455	2,396
Customwork, machine hire, and rental of machinery and equipment .....	\$1,000 ... 6,415	5,022
Energy and petroleum products .....	\$1,000 ... 24,095	19,816
Gasoline and gasohol .....	\$1,000 ... 7,778	4,557
Diesel fuel .....	\$1,000 ... 9,465	5,222
Electricity .....	\$1,000 ... 4,102	8,211
Interest expense .....	\$1,000 ... 17,771	(NA)
Machinery and equipment:		
Estimated market value of all machinery and equipment .....	\$1,000 ... 190,233	172,521
Average per farm .....	dollars .. 41,727	41,047
Motortrucks, including pickups .....	farms .... 3,395	3,047
.....	number ... 7,546	7,318
Wheel tractors .....	farms .... 1,813	1,564
.....	number ... 3,365	3,003

NA Not available.

Source: U.S. Bureau of the Census, 1982 Census of Agriculture,  
Preliminary Report, Hawaii, AC82-A-15-000(P) (January 1984).

Table 567.-- CROPS HARVESTED: 1982 AND 1978

Subject	1982	1978
Sugarcane for sugar .....		
farms ..	188	328
acres ..	89,696	99,065
tons ...	8,950,242	9,213,485
Pineapples harvested .....		
farms ..	15	20
acres ..	23,141	25,314
tons ...	626,860	685,502
Taro .....		
farms ..	218	175
acres ..	417	426
pounds .	6,360,054	8,908,700
Vegetables harvested for sale .....		
farms ..	747	751
acres ..	4,675	5,509
Farms by acres harvested:		
0.1 to 4.9 acres .....	549	546
5.0 to 24.9 acres .....	157	146
25.0 to 99.9 acres .....	36	55
100.0 acres or more .....	5	4
Chinese cabbage .....		
farms ..	47	62
acres ..	413	563
Head cabbage .....		
farms ..	73	64
acres ..	768	781
Lettuce and romaine .....		
farms ..	96	94
acres ..	867	1,143
Land in orchards .....		
farms ..	1,826	1,438
acres ..	23,188	17,948
Farms by acres harvested:		
0.1 to 4.9 acres .....	1,159	875
5.0 to 24.9 acres .....	601	503
25.0 to 99.9 acres .....	47	46
100.0 acres or more .....	19	14
Bananas .....		
farms ..	534	397
Bearing and nonbearing acres ..	1,104	837
pounds .	5,564,165	6,670,317
Coffee .....		
farms ..	598	494
Bearing and nonbearing acres ..	1,582	1,585
Parchment pounds .	1,806,396	1,797,422
Papayas .....		
farms ..	343	256
Bearing and nonbearing acres ..	2,701	3,268
pounds .	50,258,158	70,680,121
Macadamia nuts .....		
farms ..	879	583
Bearing and nonbearing acres ..	15,472	10,149
Husked, unshelled pounds .	35,594,548	22,051,322

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Table 567.-- CROPS HARVESTED: 1982 AND 1978 -- Con.

Subject	1982	1978	
Nursery and greenhouse products, mushrooms, and sod grown for sale .....	farms ..	1,050	1,008
	sq. ft.	21,063,515	17,637,691
	acres ..	1,650	1,355
	\$1,000 .	35,973	24,291
Cut flowers and cut florist greens ..	farms ..	586	601
	sq. ft.	10,863,917	10,851,517
	acres ..	823	776
	\$1,000 .	14,751	11,438
Foliage and flowering plants .....	farms ..	361	358
	sq. ft.	6,130,313	4,582,418
	acres ..	517	360
	\$1,000 .	13,518	8,820
Nursery products .....	farms ..	177	104
	sq. ft.	1,258,657	763,080
	acres ..	292	203
	\$1,000 .	4,441	2,316

Source: U.S. Bureau of the Census, 1982 Census of Agriculture, Preliminary Report, Hawaii, AC82-A-15-000(P) (January 1984).



Table 568.-- LIVESTOCK AND POULTRY: 1982 AND 1978

Subject		1982	1978
Cattle and calves inventory .....	farms ...	1,040	839
	number ..	242,022	218,901
Cows and heifers that had calves .....	farms ...	825	696
	number ..	103,343	98,579
Beef cows .....	farms ...	784	659
	number ..	90,523	85,623
Milk cows .....	farms ...	89	76
	number ..	12,820	12,956
Heifers and heifer calves .....	farms ...	808	672
	number ..	66,844	60,871
Steers, steer calves, bulls, and bull calves .....	farms ...	940	744
	number ..	71,835	59,451
Cattle and calves sold .....	farms ...	817	740
	number ..	91,724	105,088
Cattle fattened on grain and concentrates sold .....	farms ...	103	45
	number ..	33,182	38,882
Dairy products sold .....	farms ...	31	32
	\$1,000 ..	24,363	23,206
Hogs and pigs inventory .....	farms ...	371	399
	number ..	49,029	50,071
Hogs and pigs used or to be used for breeding .....	farms ...	285	310
	number ..	6,779	7,267
Hogs and pigs sold .....	farms ...	319	352
	number ..	67,139	70,361
Feeder pigs sold .....	farms ...	67	86
	number ..	7,160	9,683
Litters of pigs farrowed between -- Dec. 1 of preceding year and Nov. 30 .	farms ...	289	316
	number ..	10,405	11,346
Dec. 1 of preceding year and May 31	farms ...	260	306
	number ..	4,975	5,740
June 1 and Nov. 30 .....	farms ...	251	285
	number ..	5,430	5,606
Sheep and lambs inventory .....	farms ...	33	13
	number ..	(D)	(D)
Sheep and lambs sold .....	farms ..	16	5
	number ..	1,891	(D)
Sheep and lambs shorn .....	farms ..	11	4
	number ..	2,175	(D)
Horses and ponies inventory .....	Wool pounds ..	15,683	(D)
	farms ...	505	365
	number ..	4,030	4,087

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Table 568.-- LIVESTOCK AND POULTRY: 1982 AND 1978 -- Con.

Subject	1982	1978
Chickens 3 months old or older inventory farms ...	199	141
number ..	928,790	1,243,801
Hens and pullets of laying age inventory .....	farms ...	137
number ..	(D)	1,065,586
Broilers and other meat-type chickens sold .....	farms ...	27
number ..	3,173,800	2,588,757

D Withheld to avoid disclosing data for individual farms.  
 Source: U.S. Bureau of the Census, 1982 Census of Agriculture, Preliminary Report, Hawaii, AC82-A-15-000(P) (January 1984).

Table 569.-- MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD, BY COUNTIES:  
 1982 AND 1978

Year	State total	Hawaii	Honolulu	Kauai	Mauai
Total sales (\$1,000):					
1982 .....	558,608	206,427	144,028	70,957	137,196
1978 .....	419,251	148,399	118,608	48,679	103,564
Sales per farm (dollars):					
1982 .....	121,569	81,302	147,570	173,066	204,771
1978 .....	97,274	65,490	112,639	131,920	166,502

Source: U.S. Bureau of the Census, 1982 Census of Agriculture, Hawaii, AC82-A-11 (September 1984), p. 108.

Table 570.-- FARMS, LAND IN FARMS, AND LAND USE, FOR COUNTIES: 1982

Subject	Counties <sup>1/</sup>			
	Hawaii	Hono- lulu	Kauai	Maui
Farms ..... number ..	2,539	976	410	671
Land in farms ..... acres ..	1,172,448	125,932	255,981	403,142
Average size of farm ..... acres ..	462	129	624	601
Value of land and buildings:				
Average per farm ..... dollars	639,819	389,732	1,833,704	1,223,547
Average per acre ..... dollars	1,385	3,017	2,930	2,037
Farms by size:				
1 to 9 acres .....	1,468	768	191	317
10 to 49 acres .....	746	141	136	238
50 to 179 acres .....	178	27	51	64
180 to 499 acres .....	68	17	16	25
500 to 999 acres .....	21	8	1	3
1,000 to 1,999 acres .....	13	8	7	5
2,000 acres or more .....	45	7	8	19
Land in farms according to use:				
Total cropland ..... farms ..	2,285	757	286	508
..... acres ..	135,861	50,614	51,868	107,836
Harvested cropland ..... farms ..	2,123	732	240	444
..... acres ..	59,648	(D)	24,039	(D)
Cropland used only for pasture or grazing .... farms ..	194	32	77	96
..... acres ..	17,434	(D)	2,670	(D)
Other cropland ..... farms ..	515	142	78	121
..... acres ..	58,779	22,696	25,159	50,012
Woodland, including woodland pastured ..... farms ..	79	22	13	33
..... acres ..	80,097	20,366	1,636	15,165
Pastureland and rangeland other than cropland and woodland pastured ..... farms ..	339	84	145	175
..... acres ..	788,037	27,873	108,759	208,140
Land in house lots, ponds, roads, wasteland, etc. .. farms ..	1,108	475	251	392
..... acres ..	168,453	27,079	93,718	72,001
Irrigated land ..... farms ..	485	525	182	355
..... acres ..	11,900	36,131	34,414	63,572

D Withheld to avoid disclosing data for individual farms.

<sup>1/</sup> Kalawao, not shown separately, did not have any farms in 1982.

Source: U.S. Bureau of the Census, 1982 Census of Agriculture, Preliminary Report for the State and each county, AC82-A-15-000(P) through 009(P) (all issued January 1984).

Table 571.-- NUMBER OF FARMS, FARM ACREAGE, AND VALUE OF CROP AND LIVESTOCK SALES: 1973 TO 1983

Year	Number of farms <u>1/</u>	Farm acreage <u>2/</u> (1,000)	Value of crop and livestock sales (\$1,000)				
			Crops and livestock	Sugar (un-processed cane)	Pine-apples (fresh equivalent)	Other crops	Live-stock
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 <u>3/</u>	4,400	1,960	507,555	230,800	94,364	103,983	78,408
1983 ..	4,400	1,960	565,907	266,500	100,376	112,618	86,413

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.

3/ Revised from Data Book 1983, table 492.

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

Table 572.-- NUMBER OF FARMS, FARM ACREAGE, AND VALUE OF CROP AND LIVESTOCK SALES, BY GEOGRAPHIC AREAS: 1973 TO 1983

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:							
1973 .....	4,300	2,300	265,771	141,900	39,600	29,002	55,269
1982 <u>3/</u> ..	4,400	1,960	507,555	230,800	94,364	103,983	78,408
1983 .....	4,400	1,960	565,907	266,500	100,376	112,618	86,413
Hawaii Co.:							
1973 .....	2,450	1,340	84,488	52,900	-	14,294	17,294
1982 <u>3/</u> .....	2,650	1,145	176,020	86,900	-	65,343	23,777
1983 .....	2,650	1,145	190,589	99,800	-	66,951	23,838
Mauai Co.:							
1973 .....	550	520	69,746	33,900	25,800	4,033	6,013
1982 <u>3/</u> .....	500	420	119,045	55,000	38,602	14,085	11,358
1983 .....	500	420	147,369	73,400	45,099	16,503	12,367
Oahu:							
1973 .....	900	152	76,353	24,300	13,500	8,917	29,636
1982 <u>3/</u> .....	1,000	125	152,003	37,900	55,762	19,792	38,549
1983 .....	1,000	125	166,436	40,900	55,277	25,154	45,105
Kauai Co.:							
1973 .....	400	282	35,184	30,800	300	1,758	2,326
1982 <u>3/</u> ....	250	275	60,487	51,000	(4/)	4,763	4,724
1983 .....	250	275	61,513	52,400	(4/)	4,010	5,103

1/ Farm definition revised in 1979.

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

3/ Revised from Data Book 1983, table 493.

4/ Less than \$50,000.

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

Table 573.-- ACREAGE IN CROP, NUMBER OF CROP FARMS, VOLUME OF CROP MARKETINGS, AND VALUE OF CROP SALES: 1973 TO 1983

Subject	1973	1982 <u>1/</u>	1983
Acreage in crop (1,000 acres):			
Sugarcane .....	226.6	204.8	194.3
Pineapples (land used for pineapple) .....	57.5	36.0	35.0
Vegetables and melons (harvested acreage) ..	3.6	4.1	5.1
Fruits, excluding pineapples .....	4.0	5.6	6.1
Coffee .....	2.9	2.0	2.0
Macadamia nuts .....	10.5	15.0	15.8
Miscellaneous crops .....	4.0	11.3	12.2
Number of crop farms:			
Sugar .....	538	285	230
Pineapples .....	33	18	18
Vegetables and melons .....	420	620	683
Fruits (excluding pineapples) .....	510	700	724
Coffee .....	770	620	610
Macadamia nuts .....	345	520	600
Taro .....	127	127	155
Flowers and nursery products .....	490	650	680
Volume of crop marketings:			
Sugar, unprocessed cane (1,000 tons) .....	9,645	8,808	8,926
Pineapples, fresh equivalent (1,000 tons) ..	810	670	722
Vegetables and melons (1,000 lb.) .....	61,952	72,740	89,400
Fruits, excluding pineapples (1,000 lb.) ...	45,398	70,820	78,900
Coffee, parchment (1,000 lb.) .....	3,040	990	2,500
Macadamia nuts, in shell (1,000 lb.) .....	12,124	36,720	36,420
Taro (1,000 lb.) .....	8,483	6,460	5,440
Value of crop sales (\$1,000):			
Sugar (unprocessed cane) .....	141,900	230,800	266,500
Pineapples (fresh equivalent) .....	39,600	94,364	100,376
Vegetables and melons .....	9,128	23,024	25,996
Fruits (excluding pineapples) .....	5,457	14,846	14,593
Coffee (parchment) .....	1,711	2,129	5,300
Macadamia nuts (in shell) .....	3,092	27,136	23,928
Taro .....	798	1,447	1,229
Field crops (not estimated separately) .....	1,962	4,651	5,207
Flowers and nursery products .....	6,674	30,600	36,165

1/ Revised from Data Book 1983, table 494.

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

Table 574.-- ACREAGE IN CROP, NUMBER OF CROP FARMS, VOLUME OF CROP MARKETINGS, AND VALUE OF CROP SALES, BY GEOGRAPHIC AREAS: 1983

Subject	Hawaii County	Maui County	Oahu	Kauai County
<b>Acreege in crop (1,000 acres):</b>				
Sugarcane .....	75.6	47.4	27.2	44.1
Pineapples (land used for pineapple) .....	-	24.4	10.6	(1/)
Vegetables and melons (harvested acreage) .....	1.9	1.8	1.3	0.1
Fruits, excluding pineapples .....	4.4	0.2	0.8	0.7
Coffee .....	2.0	-	-	-
Macadamia nuts .....	14.5	(D)	(D)	(D)
Miscellaneous crops .....	1.1	8.9	1.5	0.7
<b>Number of crop farms:</b>				
Sugar .....	219	3	3	5
Pineapples .....	-	13	2	3
Vegetables and melons .....	300	80	241	62
Fruits (excluding pineapples) .....	445	50	149	80
Coffee .....	610	-	-	-
Macadamia nuts .....	595	2	1	2
Taro .....	67	25	9	54
Flowers and nursery products .....	320	85	250	25
<b>Volume of crop marketings:</b>				
Sugar, unprocessed cane (1,000 tons) .....	3,840	2,232	1,187	1,667
Pineapples, fresh equivalent (1,000 tons) .....	-	509	213	(2/)
Vegetables and melons (1,000 lb.) .....	40,100	32,820	14,440	2,040
Fruits, excluding pineapples (1,000 lb.) .....	67,170	2,530	4,200	5,000
Coffee, parchment (1,000 lb.) .....	2,500	-	-	-
Macadamia nuts, in shell (1,000 lb.) .....	36,200	(D)	(D)	(D)
Taro (1,000 lb.) .....	740	(D)	(D)	3,450
<b>Value of crop sales (\$1,000):</b>				
Sugar (unprocessed cane) .....	99,800	73,400	40,900	52,400
Pineapples (fresh equivalent) .....	-	45,099	55,277	(3/)
Vegetables and melons .....	10,731	8,032	6,561	672
Fruits (excluding pineapples) .....	12,412	503	1,044	634
Coffee (parchment) .....	5,300	-	-	-
Macadamia nuts (in shell) .....	23,783	(D)	(D)	(D)
Taro .....	185	(D)	(D)	762
Field crops (not estimated separately) .....	39	3,145	539	1,484
Flowers and nursery products .....	14,316	4,489	16,939	421

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 1983.

Table 575.-- VEGETABLES, FRUITS, NUTS, COFFEE, AND TARO: 1983

Crop <u>1/</u>	Acreage harvested <u>2/</u>	Yield per acre (1,000 lb.)	Production (1,000 lb.)	Farm price (cents per lb.)	Value of sales (\$1,000)
<b>Vegetables and melons:</b>					
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
Eggplant .....	60	24.7	1,480	48.0	710
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
Green Peppers .....	80	14.9	1,190	53.0	631
Watercress .....	25	...	850	73.2	622
Tomatoes .....	260	30.0	7,800	34.7	2,707
Watermelons .....	310	12.5	3,860	19.9	768
<b>Fruits:</b>					
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 (1983-1984)	10,200	3.6	36,720	73.9	27,136
Coffee (1983-1984) .....	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, 1983 pp. 30-66.



Table 576.-- LIVESTOCK INVENTORY: 1973, 1982, AND 1983

[In thousands]

Type of livestock	1973	1982	1983
All cattle and calves <u>1/</u> .....	242	230	226
Milk cows <u>1/</u> .....	13	12	12
Hogs and pigs <u>2/</u> .....	61	49	48
Chickens (excluding broilers) <u>2/</u> ..	1,295	1,148	1,140
Bee colonies .....	3	8	9

1/ As of following January 1.

2/ As of December 1.

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

Table 577.-- LIVESTOCK INVENTORY, BY GEOGRAPHIC AREAS: 1983-1984

[In thousands]

Type of livestock	Hawaii County	Maui County	Oahu	Kauai County
All cattle and calves <u>1/</u> .....	135.8	40.9	33.3	16.0
Milk cows <u>1/</u> .....	1.5	1.0	9.4	0.5
Hogs and pigs <u>2/</u> .....	3.2	9.6	31.7	3.5
Chickens (excluding broilers) <u>2/</u> .	(D)	(D)	961.0	(D)

D Withheld to avoid disclosure of individual operations.

1/ As of January 1, 1984.

2/ As of December 1, 1983.

Source: Hawaii Agricultural Reporting Service, Statistics of Hawaiian Agriculture 1983, pp. 71, 80, and 85.

Table 578.-- NUMBER OF LIVESTOCK OPERATIONS, VOLUME OF LIVESTOCK MARKETINGS,  
AND VALUE OF LIVESTOCK SALES: 1973 TO 1983

Subject	1973	1982	1983
Number of livestock operations, Dec. 31:			
Cattle <u>1/</u> .....	960	750	750
Hogs .....	560	650	650
Milk .....	100	70	70
Eggs .....	80	55	55
Broilers .....	15	10	9
Honey <u>2/</u> .....	19	30	27
Volume of livestock marketings:			
Beef (dressed weight; 1,000 lb.) <u>3/</u> .....	31,617	29,048	31,985
Pork (dressed weight; 1,000 lb.) .....	7,433	8,557	7,693
Milk (million lb.) .....	136.4	106.4	143.7
Eggs (million) .....	208	202.2	197.3
Broilers and chickens (1,000 lb.) <u>4/</u> .....	6,031	8,571	8,947
Honey (1,000 lb.) <u>2/</u> .....	132	920	1,305
Value of livestock sales (\$1,000):			
Cattle <u>5/</u> .....	19,831	27,619	29,308
Hogs <u>5/</u> .....	4,737	8,465	7,775
Milk .....	16,472	21,908	28,869
Eggs .....	11,267	14,542	14,041
Broilers and chickens .....	2,856	5,240	5,529
Other .....	106	634	891

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

2/ 1982 figure revised from Data Book 1983, table 499.

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

4/ Ready-to-cook weight.

5/ 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 579.-- NUMBER OF LIVESTOCK OPERATIONS, VOLUME OF LIVESTOCK MARKETINGS,  
AND VALUE OF LIVESTOCK SALES, BY GEOGRAPHIC AREAS: 1983

Subject	Hawaii County	Maui County	Oahu	Kauai County
<b>Number of livestock operations, Dec. 31:</b>				
Cattle <u>1/</u> .....	335	205	70	140
Hogs .....	85	115	330	120
Milk .....	24	17	24	5
Eggs .....	26	6	19	4
Broilers .....	-	-	8	1
Honey .....	6	5	5	11
<b>Volume of livestock marketings:</b>				
Beef <u>2/</u> (dressed weight; 1,000 lb.) .....	20,827	7,115	1,815	2,228
Pork (dressed weight; 1,000 lb.) .....	731	1,802	4,588	572
Milk (million lb.) .....	(D)	(D)	112.2	(D)
Eggs (million) .....	(D)	(D)	165.1	(D)
Broilers and chickens <u>3/</u> (1,000 lb.) ....	-	-	(D)	(D)
Honey (1,000 lb.) .....	(D)	(D)	(D)	(D)
<b>Value of livestock sales (\$1,000):</b>				
Cattle <u>4/</u> .....	18,831	6,893	1,445	2,139
Hogs <u>4/</u> .....	785	1,922	4,435	633
Milk .....	(D)	(D)	22,496	(D)
Eggs .....	(D)	(D)	11,412	(D)
Broilers and chickens .....	-	-	(D)	(D)
Other .....	891	125	41	37

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 1983 pp. 5, 7, and 10.

Table 580.-- FLOWERS AND NURSERY PRODUCTS, 1981 TO 1983, AND BY ISLANDS, 1983

Island and year	Number of farms	Area					Value of sales (\$1,000)
		Total (acres)	Green-house (1,000 sq. ft.)	Artificial shade structure (1,000 sq. ft.)	Natural shade area (acres)	Open field (acres)	
<b>State total:</b>							
1981 .....	680	1,610	2,295	23,068	133	895	29,482
1982 .....	650	1,628	2,399	25,126	119	877	30,600
1983 .....	680	1,786	2,327	26,329	106	1,022	36,165
<b>Islands, 1983:</b>							
Hawaii .....	320	987	1,164	19,252	98	420	14,316
Kauai .....	25	30	15	103	3	24	421
Maui/Molokai	85	274	193	958	-	248	4,489
Oahu .....	250	495	955	6,016	5	330	16,939

Source: Hawaii Agricultural Reporting Service, "Record 1983 Sales for Flower and Nursery Products," Hawaii Flowers and Nursery Products, Annual Summary (July 2, 1984).

Table 581.-- FLOWERS AND NURSERY PRODUCTS, BY KIND OF FLOWER: 1983

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

Kind of flower	Number of farms	Number sold		Value of sales (\$1,000)
		Unit	Number	
Selected cut flowers:				
Anthuriums .....	210	1,000 dozens	2,054	6,035
Roses .....	7	1,000 dozens	561	1,761
Chrysanthemums, pompon .....	14	1,000 bunches	448	641
Orchids:				
Cut: Dendrobium sprays .....	60	1,000 dozens	123	774
Potted: Dendrobiums .....	90	1,000 pots	229	1,032
Lei flowers:				
Carnations .....	23	Million blooms	35.9	1,304
Vanda, Miss Joaquim .....	28	Million blooms	40.6	1,226
Tuberose .....	6	Million blooms	27.0	758
Foliage:				
Potted, primarily for --				
Indoor or patio use .....	80	...	(NA)	10,836
Landscape use .....	40	...	(NA)	845
Unfinished stock .....	24	...	(NA)	1,430
Potted flowering plants:				
Chrysanthemums .....	8	1,000 pots	218	743
Poinsettias .....	25	1,000 pots	150	513
Ornamentals and trees .....	42	...	(NA)	773

NA Not available.

Source: Hawaii Agricultural Reporting Service, "Record 1983 Sales for Flowers and Nursery Products," Hawaii Flowers and Nursery Products, Annual Summary (July 2, 1984).

Table 582.-- MARKET SUPPLY OF SPECIFIED FOODS: 1973 TO 1983

Commodity and year	Total market supply <u>1/</u>			Per capita market supply <u>2/</u>	Percent from Hawaii
	Total	Inship-ment	Hawaii		
<b>Fresh market fruits:</b>					
1973 .....	55,074	34,856	20,218	61.1	36.7
1982 .....	81,365	61,725	19,640	74.8	24.1
1983 .....	84,544	67,276	17,268	75.6	20.4
<b>Fresh market melons:</b>					
1973 .....	10,257	6,017	4,240	11.4	41.3
1982 .....	18,263	16,038	2,225	16.8	12.2
1983 .....	18,402	14,532	3,870	16.5	21.0
<b>Fresh market vegetables:</b>					
1973 .....	125,166	70,115	55,051	139.0	44.0
1982 <u>3/</u> .....	185,568	117,366	68,202	170.7	36.8
1983 .....	190,897	107,316	83,581	170.7	43.8
<b>Beef and veal: <u>4/</u></b>					
1973 .....	72,110	40,493	31,617	80.0	43.9
1982 .....	97,030	67,982	29,048	89.2	29.9
1983 .....	99,799	67,814	31,985	89.2	32.0
<b>Pork: <u>4/</u></b>					
1973 .....	23,866	16,433	7,433	26.5	31.1
1982 <u>3/</u> .....	34,976	26,419	8,557	32.2	24.5
1983 .....	36,000	28,307	7,693	32.2	21.4
<b>Chickens:</b>					
1973 .....	27,519	21,488	6,031	30.6	21.9
1982 .....	34,928	26,357	8,571	32.1	24.5
1983 .....	35,879	26,932	8,947	32.1	24.9
<b>Eggs:</b>					
1973 .....	18,504	1,204	17,300	20.5	93.5
1982 .....	22,250	5,400	16,850	20.5	75.7
1983 .....	21,600	5,158	16,442	19.3	76.1

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.

3/ Revised from Data Book 1983, table 503.

4/ Carcass weight equivalent.

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

Table 583.-- 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. 55-60; State of Hawaii Water Resources Regional Study, Hawaii Water Resources Plan (January 1979), p. 94.

Table 584.-- 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. 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]

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 .....	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 1/ .....	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 2/ .....	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 3/ .....	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 4/ .....	4.37	1.51	1.89	-	-	.76	.21
Hog .....	.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 5/ .....	.94	.09	.85	-	-	-	-
Urban 6/ .....	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 agric. use ...	10.06	2.01	1.56	.31	.43	4.48	1.27
Balance 7/ .....	2,428.89	1,577.01	230.50	68.97	75.46	220.32	256.63

Footnotes and source on next page.



Table 584.-- AGRICULTURAL, URBAN AND OTHER LAND USE, FOR THE SIX LARGEST ISLANDS: 1978-1980 -- Con.

- 1/ Unidentified field crops; also includes flowers and nursery.
- 2/ Includes areas used for rotation and replanting.
- 3/ Includes unidentified orchards.
- 4/ Includes dairy grazing areas.
- 5/ Unidentified livestock, also including grazing.
- 6/ Includes Rural District lands.
- 7/ Includes Conservation District lands.

Source: Hawaii State Department of Agriculture, Annual Report, Fiscal Year 1983, p. 27.

Table 585.-- FERTILIZER CONSUMPTION BY TYPE: 1978 TO 1983

[In tons. For years ended June 30]

Year	Total	Mixtures 1/	Direct application materials	
			Primary nutrient 2/	Secondary and micro-nutrient
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
1983 .....	136,839	95,856	40,114	869

1/ Fertilizers having various combinations of primary nutrients.

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

Source: Hawaii Agricultural Reporting Service, "Hawaii Fertilizer Consumption Drops to Lowest Level in Over Two Decades," Hawaii Fertilizer Use, December 8, 1983.

Table 586.-- FRESHWATER PRAWN FARMS, BY TYPE OF OPERATION AND ISLAND: DECEMBER 31, 1979 TO 1983

Operation and island	1979	1980	1981	1982	1983
All prawn farms .....	19	24	21	22	21
Type of operation:					
Full-time .....	7	8	8	8	7
Part-time .....	12	16	13	14	14
Island:					
Hawaii .....	-	4	4	4	3
Maui .....	-	-	-	-	1
Molokai .....	1	1	1	1	-
Oahu .....	17	16	13	13	13
Kauai .....	1	3	3	4	4

Source follows next table.

Table 587.-- FRESHWATER PRAWN ACREAGE, PRODUCTION, AND VALUE: 1973 TO 1983

Year	Acres of prawn ponds <sup>1/</sup>	Production (1,000 lb.)	Value (\$1,000)	Wholesale price per pound (dollars)
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
1983 .....	239	268.5	1,347.3	5.01

<sup>1/</sup> As of December 31.

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

Table 588.-- AQUACULTURE ACREAGE, PRODUCTION, AND VALUE, BY TYPE:  
1976 TO 1983

Subject and year	All types	Fresh-water prawns	Fish-ponds	Post-larvae <u>1/</u>	Other species <u>2/</u>
<b>Acreage:</b>					
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
1983 .....	496	239	217	2	38
<b>Production (1,000 lbs.): <u>3/</u></b>					
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
1983 .....	344.9	268.5	40.5	...	35.9
<b>Value (\$1,000):</b>					
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 .....	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
1983 .....	1,604.8	1,347.3	97.5	(NA)	160.0

NA Not available.

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.

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