

Section 22

MANUFACTURES

This section presents statistics on the manufacturing segment of the economy, including sugar processing and pineapple canning.

The number of manufacturing establishments in Hawaii increased from 697 in 1967 to 773 in 1972 and 949 in 1977. The value added by manufacture rose from \$326 million in 1967 to \$410 million in 1972, \$786 million in 1977, and \$1,249 million in 1980. Three-fourths of all manufacturing activity in the State in 1977 was on Oahu. Food processing — mostly sugar and pineapple — accounted for more than 44 percent of the value added by manufacture in that year. Between 1972 and 1982, the general excise and use tax base increased 54 percent for sugar processing, 49 percent for pineapple canning, and 72 percent for all other manufacturing. There were three pineapple canneries and 15 sugar mills in Hawaii in mid-1982. The production of canned pineapple fruit and juices in 1981 amounted to 18 million actual cases, well below the levels of earlier years. Sugar production in 1982 amounted to 983,000 short tons, somewhat below the level of other recent years. The value of sugar production (including commercial molasses) was \$352 million, compared with the record of \$677 million set in 1974. Important manufactures other than food processing include apparel (\$37 million in value added in 1980), printing and publishing (\$134 million), and chemicals and allied products (\$35 million).

Sources for data on this subject include the United States Census of Manufactures, most recently conducted (but not yet published) for 1982, the Annual Survey of Manufactures, and publications of the Hawaii State Department of Agriculture and Department of Taxation, Hawaiian Sugar Planters' Association, and Pineapple Growers Association of Hawaii. Historical Statistics of Hawaii, Section 16, reviews the figures for earlier years. Statistics for the nation as a whole appear in Section 29 of the Statistical Abstract of the United States: 1982-83.

Table 564.--MANUFACTURES: 1971 TO 1981

Year	All employees		Production workers		
	Number (1,000)	Payroll (millions of dollars)	Number (1,000)	Hours (millions)	Wages (millions of dollars)
1971 ..	24.4	176.6	17.5	34.3	105.7
1972 ..	24.8	191.1	17.7	33.1	113.7
1973 ..	24.3	195.5	17.5	31.9	117.9
1974 ..	22.5	210.4	15.8	28.8	116.6
1975 ..	23.7	236.7	16.9	30.6	133.0
1976 ..	24.2	266.4	17.1	30.8	153.9
1977 ..	25.0	276.8	17.4	31.3	160.5
1978 ..	23.7	285.2	17.4	30.9	173.0
1979 ..	(NA)	(NA)	(NA)	(NA)	(NA)
1980 ..	26.5	(NA)	(NA)	(NA)	(NA)
1981 ..	26.4	(NA)	(NA)	(NA)	(NA)
Year	Number of establish- ments	Value added by manufacture (millions of dollars)	Cost of materials ^{1/} (millions of dollars)	Value of shipments ^{1/} (millions of dollars)	New capital expenditures (millions of dollars)
1971 ..	(NA)	435.0	465.9	899.9	28.0
1972 ..	773	410.0	548.3	955.6	46.7
1973 ..	(NA)	496.1	592.9	1,086.4	36.6
1974 ..	(NA)	913.8	952.9	1,848.2	50.2
1975 ..	(NA)	685.4	1,116.2	1,800.3	51.5
1976 ..	(NA)	700.3	1,156.8	1,854.8	55.6
1977 ..	949	785.5	1,176.1	1,974.0	44.4
1978 ..	(NA)	782.9	1,284.8	2,063.1	46.0
1979 ..	(NA)	(NA)	(NA)	(NA)	(NA)
1980 ..	(NA)	1,249.1	(NA)	3,470.0	(NA)
1981 ..	(NA)	(NA)	(NA)	3,626.3	(NA)

NA Not available.

^{1/} Aggregate cost of materials and value of shipments figures for manufacturing industries include extensive duplication, since products of some industries are used as materials by others.

Source: U.S. Bureau of the Census, 1978 Annual Survey of Manufactures, Statistics for States, Standard Metropolitan Statistical Area, Large Industrial Counties, and Selected Cities, M78(AS)-6 (September 1981), p. 101; 1981 Annual Survey of Manufactures, Origin of Exports of Manufactured Products, M81(AS)-5 (May 1983), pp. 14-17; and unpublished data supplied June 15, 1983.

Table 565.-- MANUFACTURES, BY GEOGRAPHIC AREAS: 1977

Geographic area	All establishments <u>1/</u>		All employees <u>1/</u>		Value added by manufacture (million dollars)	Value of shipments <u>2/</u> (million dollars)
	Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)		
State total .	949	231	25.0	276.8	785.5	1,974.0
COUNTIES						
Honolulu	759	191	19.6	215.2	585.8	1,581.5
Others	190	40	5.4	61.6	199.7	392.5
Hawaii	99	16	2.4	30.4	83.1	157.7
Kauai	26	6	0.7	8.2	25.4	70.3
Maui	64	18	2.3	22.9	91.1	164.4
URBAN PLACES <u>3/</u>						
Hilo	61	8	0.7	8.9	13.7	32.4
Honolulu	657	159	17.1	183.9	416.8	1,106.4
Kahului	17	6	(D)	(D)	(D)	(D)
Wailuku	23	6	0.5	4.8	8.8	17.3
Waipahu	13	5	0.7	7.0	7.9	33.2

(D) Withheld to avoid disclosing operations of individual companies.

1/ Including central administrative offices and auxiliaries.

2/ Aggregate value of shipments for industry groups (2- and 3-digit) and for all manufacturing industries includes extensive duplication, since products of some industries are used as materials by others.

3/ With 450 manufacturing employees or more.

Source: U.S. Bureau of the Census, 1977 Census of Manufactures, Geographic Area Series, Hawaii, MC77-A-12 (October 1980), p. 12-4.

Table 566.-- MANUFACTURES, BY SELECTED INDUSTRY GROUP: 1978

SIC code	Industry	All employees		Production workers		
		Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)
	All industries	23.7	285.2	17.4	30.9	173.0
20	Food and kindred products .	10.8	120.7	8.3	14.9	78.5
2033	Canned fruits and veg. ..	3.5	28.9	3.1	5.1	23.3
206	Sugar, confection. products	3.7	46.9	2.8	6.0	33.2
2061	Raw cane sugar	3.2	41.6	2.3	5.2	29.8
23	Apparel, textile products .	3.3	24.4	2.9	5.2	18.4
27	Printing and publishing ...	2.5	37.1	1.3	2.3	18.8
28	Chemicals, allied products	.4	5.2	.2	.3	2.1
34	Fabricated metal products .	.4	5.8	.2	.6	3.7
35	Machinery, except electric	.3	2.7	.2	.6	1.8
37	Transportation equipment ..	.7	13.3	.7	.6	11.1
--	Administrative, auxiliary .	.6	16.2	-	-	-
SIC code	Industry	Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories (million dollars)
	All industries	782.9	1,284.8	2,063.1	46.0	183.9
20	Food and kindred products .	371.2	495.3	865.3	27.7	77.8
2033	Canned fruits and veg. ..	81.3	101.6	182.9	2.9	34.4
206	Sugar, confection. products	176.7	181.0	357.8	17.8	21.4
2061	Raw cane sugar	129.6	155.1	284.7	17.1	12.1
23	Apparel, textile products .	45.9	33.1	78.8	.7	13.8
27	Printing and publishing ...	97.9	37.8	135.1	2.4	6.5
28	Chemicals, allied products	21.7	32.8	52.0	1.6	10.1
34	Fabricated metal products .	(Z)	40.3	41.1	.3	10.9
35	Machinery, except electric	3.6	3.4	6.6	.7	1.6
37	Transportation equipment ..	28.4	20.7	49.0	(D)	2.0
--	Administrative, auxiliary .	-	-	-	-	-

D Withheld to avoid disclosing information on individual companies.

Z Less than half the unit of measurement shown.

Source: U.S. Bureau of the Census, Statistics for States, Standard Metropolitan Statistical Areas, Large Industrial Counties, and Selected Cities, 1978 Annual Survey of Manufactures, M78(AS)-6 (September 1981), p. 102.

Table 567.-- VALUE ADDED BY MANUFACTURE FOR SELECTED MAJOR
INDUSTRY GROUPS: 1980

[In millions of dollars.]

SIC code	Industry	Value added
	All industries	1,249.1
20	Food and kindred products	630.2
23	Apparel and other textile products	37.3
24	Lumber and wood products	12.5
27	Printing and publishing	134.1
28	Chemicals and allied products	35.3
30	Rubber and miscellaneous plastics products	1.4
34	Fabricated metal products	31.9
37	Transportation equipment	16.2

Source: U.S. Bureau of the Census, 1980 Annual Survey of Manufactures, unpublished data supplied June 15, 1983.

Table 568.-- INDUSTRIAL PARKS AND AREAS, BY ISLANDS: 1980

Island	Number of industrial parks and areas	Acres	
		Total	Developed
State total	35	3,218.9	3,065.7
Hawaii	6	633.3	633.3
Maui	5	193.5	169.7
Lanai	-	-	-
Molokai	-	-	-
Oahu	21	2,330.1	2,242.7
Kauai	3	62.0	20.0
Niihau	-	-	-

Source: Hawaii State Department of Planning and Economic Development, Industrial Parks and Areas in Hawaii 1980.

Table 569.-- GENERAL EXCISE TAX BASE FOR SUGAR PROCESSING,
PINEAPPLE CANNING, AND MANUFACTURING: 1972 TO 1982

[In thousands of dollars. Data are on a cash basis accounting and may be distorted by cutoffs, out-of-period adjustments (assessments and error corrections), taxpayer reporting in wrong categories, and computer problems.]

Year reported <u>1/</u>	Total	Sugar processing	Pineapple canning	Manufacturing <u>2/</u>
1972	638,059	205,962	124,265	307,833
1973	692,715	213,095	123,597	356,023
1974	934,613	454,660	103,686	376,268
1975	1,166,923	605,521	131,655	429,748
1976	783,751	275,078	95,488	413,186
1977 <u>3/</u> ...	862,412	284,000	111,942	466,470
1978 <u>3/</u> ...	917,163	291,000	131,665	494,498
1979	1,035,159	305,738	164,200	565,221
1980 <u>4/</u> ...	1,349,149	527,379	195,766	626,004
1981	1,218,516	415,442	172,342	630,732
1982	1,033,845	317,880	185,367	530,598

1/ Calendar year in which reported, including "prior years" reports. Income received in December is reported the following January and hence these annual totals generally refer to an "income year" ended November 30.

2/ Excludes sugar processing, pineapple canning, and petroleum refining.

3/ Partly estimated.

4/ Revised from 1981 edition, table 511.

Source: Hawaii State Department of Taxation, "General Excise and Use Tax Base" (annual tabular release).

Table 570.-- PINEAPPLE COMPANIES AND CANNERIES AND SUGAR COMPANIES AND MILLS: 1972 TO 1982

Year	Pineapple <u>1/</u>		Sugar <u>2/</u>	
	Companies	Canneries	Companies <u>3/</u>	Mills
1972	4	4	21	23
1973	3	3	19	21
1974	3	3	17	20
1975	3	3	16	17
1976	3	3	16	17
1977	3	3	16	16
1978	3	3	15	14
1979	3	3	15	14
1980	3	3	15	14
1981	3	3	15	14
1982	3	3	15	14
ISLANDS: 1982				
Hawaii	-	-	5	5
Maui	1	1	3	3
Oahu	2	2	2	2
Kauai	-	-	5	4

1/ As of end of canning season.

2/ As of December 31.

3/ Excludes United Cane Planters' Cooperative, which consists of small independent growers.

Source: The Pineapple Growers Association of Hawaii, records; Hawaiian Sugar Planters' Association, records.

Table 571.-- HAWAIIAN PINEAPPLE PRODUCTION: 1970-71 TO 1981

[In thousands. Hawaiian pack only; excludes overseas production by Hawaiian companies. Compilation of these statistics was suspended after 1981.]

Year <u>1/</u>	Canned fruit		Canned juice		Frozen concentrate	
	Actual cases	Standard cases <u>2/</u>	Actual cases	Standard cases <u>3/</u>	Equivalent 6/10 cases	Standard cases <u>3/</u>
1970-1971 ..	17,718	12,028	10,590	8,100	1,016	929
1971-1972 ..	17,961	12,537	11,004	8,400	789	722
1972-1973 ..	15,891	11,108	9,282	7,400	633	580
1973-1974 ..	14,042	9,550	8,470	6,600	886	810
1974-1975 ..	11,584	8,110	5,643	4,400	438	400
1975-1976 ..	12,142	8,200	6,173	4,800	471	520
1976-1977 ..	12,160	8,270	7,295	5,600	346	320
1977-1978 ..	12,482	8,490	8,403	5,750	294	270
1978-1979 ..	11,142	7,620	7,386	5,760	290	265
1979	10,930	7,470	7,699	6,010	308	280
1980	9,918	6,940	8,114	6,410	237	215
1981	9,759	6,830	7,997	6,320	219	200

1/ Pack year ended May 31 through 1978-1979 and calendar years 1979, 1980 and 1981.

2/ 24 No. 2 1/2 can, 45-lb. cases.

3/ 24 No. 2 1/2 can, 42 1/2-lb. cases.

Source: The Pineapple Growers Association of Hawaii, Pineapple Fact Book/Hawaii 1973 (January 1973), p. 18, and records; Hawaii Agricultural Reporting Service, Statistics of Hawaiian Agriculture (annual), and records.

Table 572.-- EMPLOYMENT AND EARNINGS IN THE PINEAPPLE INDUSTRY: 1976 TO 1981

[Includes field and cannery employment and earnings.]

Year	Full-time equivalent employment	Total wages and salaries (dollars)	Earnings per full-time equivalent employee (dollars)
1976 ...	4,657	44,918,405	9,645
1977 ...	4,924	52,413,689	10,645
1978 ...	4,953	55,397,760	11,185
1979 ...	4,979	61,751,124	12,402
1980 ...	4,861	66,737,788	13,729
1981 ...	4,675	70,207,745	15,018

Source: Hawaii Employers Council, unpublished estimates.

Table 573.-- SUGAR AND MOLASSES PRODUCTION: 1972 TO 1982

Year	Cane land (acres)		Cane used for sugar (short tons)	Sugar produced (short tons)		Molasses produced (short tons)
	Total area	Harvested area		96° raw value	Equivalent refined	
1972 ...	229,611	108,456	9,929,068	1,118,883	1,045,708	307,543
1973 ...	226,580	108,189	9,645,452	1,128,529	1,054,723	301,500
1974 ...	224,227	95,826	9,082,684	1,040,742	972,677	293,380
1975 ...	221,426	105,125	9,485,299	1,107,199	1,034,788	301,335
1976 ...	221,551	99,926	9,172,649	1,050,457	981,757	275,352
1977 ...	220,729	96,770	8,994,388	1,033,739	966,132	284,349
1978 ...	220,697	99,355	9,263,190	1,028,933	961,641	310,238
1979 ...	218,773	100,610	9,632,135	1,059,737	990,430	325,831
1980 ...	217,718	97,358	9,214,136	1,023,232	956,313	315,088
1981 ...	216,099	97,573	8,831,477	1,047,541	979,031	311,719
1982 ...	204,750	89,261	8,807,998	982,913	918,610	273,780

Source: Hawaiian Sugar Planters' Association, HSPA Sugar Manual 1983, pp. 4-5.

Table 574.-- AVERAGE RAW SUGAR PRICE AND SUGAR INDUSTRY EMPLOYMENT AND EARNINGS: 1972 TO 1982

Year	Average raw sugar price ^{1/} (cents per lb.)	Hourly-rated employees		Industry wide strikes (weeks)	Average daily earnings ^{2/} (dollars)	
		Average number ^{3/}	Total man-days		Wages	Employee benefits
1972 ...	9.10	8,127	1,934,563	-	29.09	11.23
1973 ...	10.30	7,900	1,897,369	-	30.86	12.48
1974 ...	29.43	7,700	1,744,346	6	34.41	15.81
1975 ...	22.49	7,800	1,937,973	-	37.34	15.66
1976 ...	13.31	7,500	1,854,272	-	43.12	17.28
1977 ...	11.11	7,200	1,660,298	3	43.92	19.97
1978 ...	13.74	7,200	1,771,530	-	47.06	21.28
1979 ...	15.20	7,065	1,762,838	-	50.49	22.21
1980 ...	30.18	7,076	1,793,237	-	56.72	24.68
1981 ...	19.74	7,282	1,806,020	-	61.51	27.71
1982 ...	19.94	6,816	1,519,732	-	65.11	30.83

^{1/} Average New York raw sugar price computed over all the days of the year (Hawaiian basis). The New York spot price was suspended from November 2, 1977 to August 20, 1979; figures for that period are based on Clearing Association settlement prices.

^{2/} For non-supervisory employees.

^{3/} Adults only.

Source: Hawaiian Sugar Planters' Association, HSPA Sugar Manual (annual), as revised.

Table 575.-- VALUE OF SALES AND GOVERNMENT PAYMENTS FOR PINEAPPLE AND SUGAR PRODUCTION: 1972 TO 1982

[In millions of dollars. Calendar year data unless otherwise specified.]

Year	Pineapple		Sugar		
	Canned fruit and juices <u>1/</u>	Fresh market sales <u>2/</u>	Value of production		Government sugar support payments
			Raw sugar 96 ⁰	Commercial molasses	
1972 ..	140.5	4.9	176.6	8.1	9.7
1973 ..	135.0	7.4	203.8	18.4	9.5
1974 ..	118.2	8.85	659.2	17.4	8.6
1975 ..	126.6	10.08	354.6	11.5	-
1976 ..	130.0	14.49	245.5	11.5	-
1977 ..	140.0	21.58	219.1	7.7	48.7
1978 ..	133.4	29.45	269.5	15.7	8.1
1979 ..	176.3	30.08	322.2	23.5	-
1980 ..	192.2	34.34	566.4	27.7	-
1981 ..	172.0	45.59	314.2	13.7	-
1982 ..	151.0	55.04	343.9	7.6	-

1/ Value of canned fruit and juices and by products shipped out-of-State and sold within State. Prior to 1979, data are for pack years beginning June 1.

2/ Value FAS shipping point for outshipments, delivered wholesalers local sales.

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