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Section 22

MANUFACTURES

This section presents statistics on the manufacturing segment of the economy, including sugar processing and pineapple canning. Additional information on manufacturing workers appears in Sections 12 and 15.

Sources for data on this subject include the *U.S. 2007 Economic Census*, the *U.S. Annual Survey of Manufactures*, publications of the Hawaii State Department of Agriculture and the Hawaii State Department of Taxation, and the *Hawaiian Sugar Manual* of the former Hawaiian Sugar Planters' Association, now the Hawaii Agriculture Research Center. *Historical Statistics of Hawaii*, Section 16, contains the figures for earlier years. Statistics for the nation as a whole appear in Section 21 of the *Statistical Abstract of the United States: 2012.*

Table 22.01-- STATISTICAL SUMMARY OF MANUFACTURES (NAICS 31-33): 2006 TO 2011

[In millions of dollars unless otherwise noted. Industry groups with 950 employees or more. Statistics based on the North American Industry Classification System (NAICS)]

Subject	2006	2007	2008	2009	2010	2011
All employees						
Number (1,000)	14.0	14.1	12.8	11.6	10.7	10.7
Payroll	503.8	511.5	490.6	445.9	429.6	431.0
Production workers						
Number (1,000) 1/	9.0	9.5	8.3	7.3	6.8	6.7
Hours (millions)	18.1	17.5	16.3	13.9	13.0	12.9
Wages	299.5	294.4	268.7	239.6	238.1	232.3
Value added by manufacture	2,049.1	3,013.7	1,707.6	1,688.0	1,391.4	1,456.6
Cost of materials 2/	5,301.5	5,812.5	6,647.0	4,239.1	5,044.0	6,353.3
Value of shipments 2/	7,301.0	8,799.3	8,528.2	5,928.6	6,399.1	7,694.5
Total capital expenditures	173.5	86.7	135.7	85.6	75.0	101.3

^{1/} For years 2006 to 2008, average number of production workers for the payroll periods that include the 12th of March, June, September, and December, plus other employees for the payroll period that includes the 12th of March.

Source: U.S. Census Bureau, *Annual Survey of Manufactures, Geographic Area Statistics, 2006* (December 2006) http://www.census.gov/mcd/asm-as3.html accessed March 5, 2008; Ibid, 2008 (March 2010) http://www.census.gov/econ/census07/www/get_data.html accessed June 9, 2010; Ibid, 2009 (December 2010) http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml? pid=ASM_2010_31AS101&prodType=table> accessed March 29, 2012; Ibid, 2011 (November 2012) http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml? pid=ASM_2010_31AS101&prodType=table> accessed March 29, 2012; Ibid, 2011 (November 2012) http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml? pid=ASM_2010_31AS101&prodType=table> accessed June 26, 2013.

^{2/} Aggregate of total cost of materials and total value of shipments includes extensive duplication, since products of some industries are used as materials of others.

Table 22.02-- DETAILED MANUFACTURING STATISTICS (NAICS 31-33): 2002 AND 2007

[Statistics based on the North American Industry Classification System (NAICS) which replaced the Standard Industrial Classification (SIC) system used in Economic Censuses prior to the 1997 Economic Census]

	Va	lue
ltem	2002	2007
Companies 1/	(NA)	942
All establishments 2/ 1 to 19 employees	929 772	984 813
20 to 99 employees 100 employees or more	135 22	148 23
All employees 3/ Total compensation (\$1,000) Annual payroll Total fringe benefits	13,200 512,860 421,269 91,591	14,127 674,489 511,486 163,003
Production workers, average for year On March 12 On May 12 On August 12 On November 12	8,865 8,858 8,830 8,880 8,859	9,487 9,671 9,478 9,416 9,383
Production-worker hours (1,000) Production-worker wages (\$1,000)	16,837 254,713	17,480 294,394
Total cost of materials (\$1,000) Materials, parts, containers, packaging, etc., used Resales Purchased fuels Purchased electricity Contract work	2,246,539 1,904,259 246,016 41,001 21,969 33,294	5,812,515 5,010,642 632,000 98,510 32,373 38,990
Quantity of electricity purchased for heat and power (1,000 kWh) Quantity of electricity generated less sold for heat and power (1,000 kWh)	204,563 356,114	193,390 (D)
Total value of shipments (\$1,000) Value of resales	3,460,199 280,656	8,799,266 730,979
Value added (\$1,000)	1,217,728	3,013,731
Total inventories, beginning of year (\$1,000) Finished goods Work-in-process Materials and supplies	366,172 195,042 74,346 96,784	761,942 485,768 (D) (D)

Continued on next page.

Table 22.02-- DETAILED MANUFACTURING STATISTICS (NAICS 31-33): 2002 AND 2007 -- Con.

	Va	lue
ltem	2002	2007
Total inventories, end of year (\$1,000)	370,990	776,859
Finished goods	237,652	542,393
Work-in-process	31,358	69,898
Materials and supplies	101,980	164,568
Gross value of depreciable assets (acquisition costs)		
at beginning of year (\$1,000)	1,386,417	1,788,164
Total capital expenditures (new and used)	82,960	86,735
Buildings and other structures	13,569	15,982
Machinery and equipment	69,391	70,753
Automobiles, trucks, etc., for highway use	5,399	6,713
Computers and peripheral data processing equipment	4,080	8,606
All other expenditures for machinery and equipment	59,912	55,434
Total retirements	33,527	88,206
Gross value of depreciable assets at end of year (\$1,000)	1,435,850	1,786,693
Depreciation charges during year (\$1,000)	76,908	83,345
Total rental payments (\$1,000)	51,216	49,759
Buildings and other structures	36,161	31,654
Machinery and equipment	15,055	18,105

NA Not available.

Source: U.S. Census Bureau, 2002 Economic Census, Manufacturing, Geographic Area Series, Hawaii, EC02-31A-HI (RV) (September 2005), table 5 http://www.census.gov/prod/ec02/ec0231ahi.pdf accessed October 6, 2005; 2007 Economic Census, Manufacturing, Geographic Area Series, Detailed Statistic for the State: 2007 (April 2010) http://www.census.gov/econ/census07/www/get_data.html accessed June 9, 2010.

D Withheld to avoid disclosing data for individual companies; data are included in higher level totals.

^{1/} For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

^{2/} Includes establishments with payroll at any time during the year.

^{3/} Average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Table 22.03-- STATISTICAL SUMMARY OF MANUFACTURING (NAICS 31-33), BY COUNTY: 2007

[For the State, industries with 100 employees or more; for the counties, industries with 500 employees or more. Statistics based on the North American Industry Classification System (NAICS) which replaced the Standard Industrial Classification (SIC) system used in Economic Censuses prior to the 1997 Economic Census]

		City and County of		
Subject	State total	Honolulu	Hawaii County	Maui County
All establishments 1/ With 20 employees or more	984 171	684 138	138 17	114 11
All employees Number Payroll (\$1,000)	14,127 511,486	10,996 398,932	1,516 53,572	1,319 50,718
Production workers Number 2/ Hours (1,000) Wages (\$1,000)	9,487 17,490 294,394	7,322 13,464 224,670	1,055 1,848 33,650	901 1,844 30,987
Value added by manufacture (\$1,000)	3,013,731	2,694,778	136,290	160,916
Cost of materials 3/ (\$1,000)	5,812,515	5,545,636	142,641	101,402
Value of shipments 3/ (\$1,000)	8,799,266	8,201,881	290,120	262,749
Total capital expenditures (\$1,000)	86,735	51,694	16,076	17,382

^{1/} Includes establishments with payroll at any time during the year.

Source: U.S. Census Bureau, 2007 *Economic Census, Manufacturing, Geographic Area Series, Industry Statistics for the States, Metropolitan and Micropolitan Statistical Areas, Counties, and Places:* 2007 (April 2010) http://www.census.gov/econ/census07/www/get_data.html accessed June 9, 2010.

^{2/} Average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

^{3/} Aggregate of cost of materials and value of shipments include extensive duplication since products of some industries are used as materials by others.

Table 22.04-- MANUFACTURING, BY SELECTED INDUSTRY GROUP (NAICS 31-33): 2011

[Industry groups with 950 employees or more. Statistics based on the North American Industry Classification System (NAICS)]

Subject	Total	Food NAICS 311	Food, bakeries & tortilla NAICS 3118	Printing & related support NAICS 323	Printing & related support NAICS 3231	Non- metallic mineral NAICS 327
All						
All employees	40.070	4.545	0.000	(NIA)	(NIA)	(NIA)
Number 1/	10,676	4,515	2,083	(NA)	(NA)	(NA)
Payroll (\$1,000)	430,960	143,057	48,637	(NA)	(NA)	(NA)
Production workers						
Number 1/	6,691	2,938	1,526	(NA)	(NA)	(NA)
Hours (1,000)	12,874	5,288	2,574	(NA) (NA)	(NA) (NA)	(NA)
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Wages (\$1,000)	232,283	77,984	33,012	(NA)	(NA)	(NA)
Value added (\$1,000)	1,456,574	490,258	110,946	(NA)	(NA)	(NA)
Total aget of materials						
Total cost of materials	0.050.000	554.000	70.407	/NIA)	(NIA)	(NIA)
(\$1,000) 2/	6,353,328	554,390	79,137	(NA)	(NA)	(NA)
Total value of shipments						
•	7,694,544	1,035,242	190,290	(NIA)	/NIA)	(NIA)
(\$1,000) 2/	7,094,044	1,030,242	190,290	(NA)	(NA)	(NA)
Total capital expenditures						
(\$1,000)	101,253	29,457	4,576	(NA)	(NA)	(NA)
(ψ1,000)	101,233	29,457	4,570	(INA)	(INA)	(INA)

NA Not available.

Source: U.S. Census Bureau, Annual Survey of Manufactures: Geographic Area Statistics: *Statistics for All Manufacturing by State: 2011 and 2010 <*http://www.census.gov/manufacturing/asm/index.html> accessed June 26, 2013.

^{1/} Average number of production workers for the March 12, June 12, September 12, and December 12 pay periods, plus other employees for the payroll period that includes the 12th of March.

^{2/} Aggregate of total cost of materials and total value of shipments includes extensive duplication, since products of some industries are used as materials of others.

Table 22.05-- MANUFACTURING, EMPLOYMENT AND WAGES (NAICS 31-33), BY SELECTED NAICS CODE: 2012

[Includes only establishments with payroll. Statistics based on the North American Industry Classification System (NAICS) which replaced the Standard Industrial Classification (SIC) system used in Economic Censuses prior to 1997]

			Annual	Total	
		Average	average	annual	Annual
NAICS		establish-	employ-	wages	wages per
code	Kind of business	ments	ment	(\$1,000)	employee
	Total	941	13,335	535,537	40,161
311	Food	301	6,063	176,882	29,173
3113	Sugar & confectionery product	20	788	29,930	37,966
3114	Fruit & vegetable preserving & specialty	18	306	8,277	27,048
3115	Dairy product	10	316	14,763	46,718
3116	Animal slaughtering & processing	17	419	13,623	32,501
3117	Seafood product prep. & packaging	5	63	1,311	20,835
3117	Bakeries & tortilla	139	2,257	55,863	24,753
3119	Other food	87	1,846	50,996	27,631
312	Beverage and tobacco product	29	883	40,797	46,199
3121	Beverage and tobacco product	29	883	40,797	46,199
314	Textile product mills	26	180	6,007	33,447
3141	Textile floadet fillis Textile furnishings mills	8	100	4,126	37,939
3149	Other textile product mills	18	71	1,881	26,551
315	Apparel	55	524	13,487	25,751
3152	Cut and sew apparel	51	512	13,255	25,731
3159	Accessories and other apparel	4	12	232	18,974
321	Wood product	24	199	6,606	33,141
3212	Plywood & engineered wood product	5	98	2,877	29,337
322	Paper	3	35	1,369	39,690
3222	Converted paper product	3	35	1,369	39,690
323	Printing & related support activities	101	824	29,756	36,105
3231	Printing & related support activities	101	824	29,756	36,105
325	Chemical	35	344	15,997	46,536
3251	Basic chemical	7	115	6,730	58,561
3256	Soap, cleaning compound, and toiletry	18	87	2,538	29,342
326	Plastics & rubber products	22	305	12,624	41,368
327	Nonmetallic mineral product	53	744	43,199	58,044
3273	Cement & concrete product	26	574	36,895	64,324
3279	Other nonmetallic mineral products	18	134	5,327	39,877
332	Fabricated metal product	40	331	16,967	51,326
334	Computer & electronic product	11	144	8,948	62,214
335	Electrical equipment & appliance	3	35	2,169	62,277
000	application	Ĭ		2,100	J_,_,,

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Table 22.05-- MANUFACTURING, EMPLOYMENT AND WAGES (NAICS 31-33), BY SELECTED NAICS CODE: 2012 -- Con.

NAICS code	Kind of business	Average establish- ments	Annual average employ- ment	Total annual wages (\$1,000)	Annual wages per employee
336	Transportation equipment Ship & boat building Furniture & related product Household and institutional furniture Miscellaneous Medical equipment & supplies Other miscellaneous	31	754	46,138	61,157
3366		25	731	44,722	61,200
337		57	379	15,983	42,171
3371		47	295	12,007	40,758
339		136	943	35,392	37,534
3391		37	261	12,229	46,794
3399		99	682	23,163	33,984

Source: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Wages, Annual Averages* 2012, table 10 http://www.bls.gov/cew/cewind.htm#year=2012&qtr=A&own=5&ind=10&size=0 accessed July 13, 2014.

Table 22.06-- GENERAL EXCISE TAX BASE FOR MANUFACTURING: 1987 TO 2013

[In thousands of dollars. Data exclude sugar processing, pineapple canning, and petroleum refining, and are on a cash basis accounting. Manufactured goods shipped out of State were exempted from the general excise tax by Act 239, SLH 1987, effective January 1, 1988. 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 income received in the 12-month period ending November 30]

Year	Tax base	Year	Tax base	Year	Tax base
1987	595,140	1996	622,889	2005	738,573
1988	629,303	1997	581,259	2006	781,626
1989	630,997	1998	535,371	2007	766,208
1990	728,387	1999	585,305	2008	795,352
1991	714,407	2000	586,039	2009	752,237
1992	714,470	2001	611,292	2010	708,787
1993	717,423	2002	612,658	2011	695,442
1994	618,238	2003	638,863	2012	646,969
1995	614,771	2004	642,245	2013	655,222
	,		,		

Source: Hawaii State Department of Taxation, "General Excise and Use Tax Base" (annual) and as revised. Beginning in 1997, http://www.state.hi.us/tax/a5_3txcolrptarchive.htm accessed June 30, 2014.

Table 22.07-- INDUSTRIAL AND HIGH-TECHNOLOGY PARKS, BY ISLAND: 2009 TO 2012

Subject	State total	Hawaii	Maui	Molokai	Oahu	Kauai
2009						
Neverbounding	0.5	4	_	4	40	
Number of parks Total acres	25 5,018.50	4 1,864.20	5 747.30	1 16.50	13 2,321.50	2 69.00
Developed acres	2,852.10	499.50	205.30	6.70	2,321.50	69.00
Number of tenants 1/	1,145	191	203.30	0.70	918	15
Number of owners	755	100	250	9	303	93
2010						
Number of parks	25	4	5	1	13	2
Total acres	4,983.52	1,864.22	777.30	16.50	2,256.50	69.00
Developed acres	2,932.10	569.50	205.30	6.70	2,081.60	69.00
Number of tenants 2/	1,125	207	20	(NA)	883	15
Number of owners 3/	537	111	194	9	213	10
2011						
Number of parks	25	4	5	1	13	2
Total acres	4,753.38	1,864.00	701.30	16.50	2,102.58	69.00
Developed acres	2,917.68	609.00	251.30	6.70	1,981.68	69.00
Number of tenants 4/	733	216	20	(NA)	482	15
Number of owners 5/	438	111	145	9	163	10
2012						
Number of parks	25	4	5	1	13	2
Total acres	4,748.88	1,864.00	701.30	16.50	2,098.08	69.00
Developed acres	2,927.38	614.00	251.30	(NA)	1,993.08	69.00
Number of tenants 6/	721	212	20	(NA)	474	15
Number of owners 7/	377	111	90	(NA)	166	10

NA Not available.

^{1/} Data on number of tenants not available for 6 parks: 4 on Maui, 1 on Oahu and 1 on Kauai.

^{2/} Data on number of tenants not available for 8 parks: 4 on Maui, 1 on Molokai, 2 on Oahu and 1 on Kauai.

^{3/} Data on number of owners not available for 3 parks: 1 on Maui, 1 on Oahu and 1 on Kauai.

^{4/} Data on number of tenants not available for 9 parks: 4 on Maui, 1 on Molokai, 3 on Oahu and 1 on Kauai.

^{5/} Data on number of owners not available for 7 parks: 2 on Maui, 4 on Oahu and 1 on Kauai.

^{6/} Data on number of tenants not available for 9 parks: 4 on Maui, 1 on Molokai, 3 on Oahu and 1 on Kauai.

^{7/} Data on number of owners not available for 7 parks: 3 on Maui, 1 on Molokai, 4 on Oahu and 1 on Kauai.

Source: Pacific Business News, Vol. 47, No. 46 (January 8, 2010), p. 15; Vol. 48, No. 47 (January 14, 2011),

p. 16; Vol. 50, No. 32 (October 5, 2012), p. 18; and Vol. 51, No. 33 (October 11, 2013), p. 18.

Table 22.08-- PINEAPPLE COMPANIES AND CANNERIES, AND SUGAR COMPANIES AND MILLS, 1955 TO 2013, AND BY ISLAND, 2012 AND 2013

	Pineapple (end of canning season)			gar iber 31)
Year	Companies	Canneries	Companies 1/	Mills
1955	10	8	28	26
1960	8	9	27	27
1965	6	6	25	27
1970	4	4	23	26
1975	3	3	16	17
1980	3	3	15	14
1985	3	2	14	12
1990	4	2	12	12
1995	3	1	8	10
2000	3	1	3	4
2005	3	1	2	2
2006	3	1	2	2
2007	2	-	2	2
2008	2	-	2	2
2009	2	-	1	1
2010	2/ 2	-	1	1
2011	2/ 2	-	1	1
2012	2/ 2	-	1	1
2013	2/ 2	-	1	1
ISLAND: 2012				
Hawaii	-	-	-	-
Maui	2/ 1	-	1	1
Oahu	2/ 1	-	-	-
Kauai	-	-	-	-
ISLAND: 2013				
Hawaii	-	-	-	-
Maui	2/ 1	-	1	1
Oahu	2/ 1	-	-	-
Kauai	-	-	-	-

^{1/} In operation; excludes cooperatives.

Source: Pineapple Growers Association of Hawaii, records; *Hawaiian Sugar Manual* (annual); Dole Food Company, records; Hawaii Agriculture Research Center, records; and Hawaiian Commercial & Sugar Company, records.

 $^{2/\,}$ Includes Dole Food Company Hawaii & Haliimaile Pineapple Company, might exclude smaller diversified farms.

Table 22.09-- SUGAR AND MOLASSES PRODUCTION: 1991 TO 2013

	Cane lan	d (acres)		Sugar produced (short tons)		
Year	Total area	Harvested area 1/	Cane used for sugar (short tons)	96° raw value	Equivalent refined	Molasses produced (short tons)
			,			
1991	155,609	67,716	5,852,668	724,100	676,744	202,214
1992	145,790	62,123	5,432,286	652,304	609,643	203,739
1993	121,322	64,705	5,506,072	677,405	633,103	211,658
1994	98,413	64,951	5,268,859	658,538	615,470	200,835
1995	81,957	48,507	3,952,347	492,346	460,147	163,305
1996	68,816	36,769	3,542,460	437,262	408,665	145,369
1997	67,820	32,033	2,923,594	356,917	333,575	131,173
1998	67,585	30,347	2,725,744	353,893	330,748	125,909
1999	60,758	35,329	2,891,499	367,532	343,495	141,481
2000	43,821	30,194	2,364,357	301,165	281,469	101,329
2001	50,410	19,293	1,876,613	246,203	230,101	85,894
2002	47,476	21,311	2,108,810	270,084	252,421	89,885
2003	47,733	19,851	2,029,761	261,009	243,939	89,631
2004	43,465	21,790	1,978,821	257,866	241,002	80,466
2005	40,145	21,735	1,754,581	252,342	235,839	72,675
2006	42,080	20,413	1,614,691	213,185	199,243	65,505
2007	41,762	20,385	1,492,357	206,008	192,535	62,231
2008	39,663	20,426	1,422,296	185,171	173,061	62,278
2009	39,812	20,244	2/ 973,876	176,208	164,684	2/ 40,631
2010	34,693	15,488	1,195,345	171,949	160,704	50,161
2011	35,532	15,063	1,286,373	182,582	169,801	51,106
2012	36,746	15,867	1,259,453	178,549	166,872	49,300
2013	35,556	15,443	1,351,087	191,351	178,837	53,365

^{1/} The average growth of a crop is 22 to 26 months. Only a portion of the total acreage in cane is harvested each year.

Source: Hawaiian Sugar Planters' Association, *Hawaiian Sugar Manual* (annual), and records; Hawaii Agriculture Research Center, records; and Hawaiian Commercial & Sugar Company, records.

^{2/} Gay & Robinson data not available.

Table 22.10-- VALUE OF SALES FOR PINEAPPLE AND SUGAR PRODUCTION: 1990 TO 2011

[In millions of dollars]

	Pineapple		Sugar	
Year	Canned fruit and juices 1/	Fresh market sales 2/	Raw sugar 96°	Commercial molasses
1990	161.6	54.3	319.0	9.9
1990	172.7	54.3 51.9	261.0	9.9 9.7
1992	141.8	55.9	229.2	9.7 8.4
1993	86.6	54.0	242.9	9.0
1994	81.1	53.0	239.2	8.7
1995	72.5	62.5	190.5	9.7
1996	78.2	68.8	160.8	8.0
1997	73.0	63.7	127.5	5.0
1998	81.3	63.8	130.3	2.8
1999	72.3	72.5	129.5	1.8
2000	60.8	71.4	93.1	2.8
2001	67.7	68.9	86.4	4.2
2002	71.0	73.0	95.9	4.4
2003	64.4	78.5	95.9	3.1
2004	57.3	65.9	91.7	2.4
2005	49.8	63.6	87.9	4.6
2006	(NA)	60.5	74.8	4.9
2007	(NA)	(D)	70.9	5.4
2008	(NA)	(D)	66.1	5.3
2009	`(D)	(D)	65.8	7.8
2010	(D)	(D)	104.2	5.4
2011	(D)	(D)	116.8	8.4

NA Not available.

Source: USDA National Agricultural Statistics Service, Hawaii Annual Statistics Bulletin (annual) http://www.nass.usda.gov/Statistics_by_State/Hawaii/Publications/Annual_Statistical_Bulletin/index.asp accessed June 17, 2013; and records.

D Data not shown separately to avoid disclosure of individual operations.

^{1/} Value of canned fruit and juices and by-product shipped out-of-State and sold within State.

^{2/} Includes "fresh cut". Prior to 2005, value FAS shipping point for outshipments, delivered wholesalers local sales.