UNITED STATES DEPARTMENT OF LABOR W. N. DOAK, Secretary

> BUREAU OF LABOR STATISTICS ETHELBERT STEWART, Commissioner

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LABOR CONDITIONS IN THE TERRITORY OF HAWAII 1929–1930



MARCH, 1931

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LABOR CONDITIONS IN THE TERRITORY OF HAWAII, 1929-1930

The organic law of the Territory of Hawaii entitled "An act to provide a government for the Territory of Hawaii," approved April 30, 1900, and amended April 8, 1904, reads as follows:

It shall be the duty of the United States Commissioner of Labor to collect, assort, arrange, and present in reports in 1905 and every five years thereafter, attistical details relating to all departments of labor in the Territory of Hawaii, especially in relation to the commercial, industrial, social, educational, and sanitary conditions of the laboring classes, and to all such other subjects as Congress may by law direct. The said commissioner is especially charged to ascertain the highest, lowest, and average number of employees engaged in the various industries in the Territory, to be classified as to nativity, sex, hours of labor, and conditions of employment, and to report the same to Congress.

In compliance with the above statute a survey of labor conditions in Hawaii was made in February, March, and April of 1930 by representatives of the Bureau of Labor Statistics, the results of which are presented in this report. The data for the sugar and pineapple industries are for the industrial season of 1929. The wages, hours of labor, and general information for other industries are as of 1929 or the spring of 1930.

General Economic and Social Conditions

Racial Characteristics of the Population

The Territory of Hawaii consists of 12 principal islands, of which 9 are inhabited and covered by the census enumeration. Only 6 of these, however, are of consequence industrially. The total population of these islands and the number of farms therein as reported by the census of 1930 are as follows:

 TABLE 1.—Population and number of farms in the Territory of Hawaii according to 1930 census, by islands

Island	Popula- tion	Number of farms	Island	Popula- tion	Number of farms
Oahu Hawaii Maui	• 202, 887 73, 325 48, 756	1, 174 3, 422 581 480	Niihau Midway Kahoolawe	136 36 2	1 0 0
Kauai Molokai Lanai	35, 806 5, 032 2, 356	480 275 9	Total	368, 336	5, 942

IV

The Bureau of the Census has not yet published the racial distribution of this population. However, the Governor of Hawaii in his report for 1929 gives an estimated report of the population of the Territory which comes so close to that of the census that, by applying the percentages in the governor's estimate to the figures of the census, a racial grouping is arrived at which probably is sufficiently accurate for all practical purposes. Table 2 gives the estimated population June 30, 1929, the percentage thereof in the various racial groups, of which all or a majority are American citizens, and the number in such racial groups in 1930 based on such percentages:

TABLE 2.—Population of the Territory of Hawaii in 1930, by racial groups, based

Racial group	Estimated population June 30, 1929		Number in 1930
Hawaiian Caucasian-Hawaiian	Number	Per cent	based on June 30, 1929, estimate
Tawailan Asiatic Hawailan Asiatic Hawailan Portuguese Porto Rican Spanish Other Caucasian Dhinese apanese Korean Tillpino ther Total	$\begin{array}{c} 20,479\\ 16,687\\ 10,598\\ 29,717\\ 6,923\\ 1,851\\ 38,006\\ 25,211\\ 137,407\\ 6,393\\ 63,869\\ 508 \end{array}$	$5.73 \\ 4.66 \\ 2.96 \\ 8.31 \\ 1.93 \\ .52 \\ 10.63 \\ 7.05 \\ 38.42 \\ 1.79 \\ 17.86 \\ .14 \\ 1$	$\begin{array}{c} 21,106\\ 17,164\\ 10,903\\ 30,609\\ 7,109\\ 1,915\\ 39,154\\ 25,968\\ 141,515\\ 6,593\\ 65,785\\ 515\end{array}$
	357, 649	100.00	368, 336

Accepting the June 30 and December 31, 1929, count made by the Hawaiian Sugar Planters' Association covering the race, sex, and marital condition of all persons on the 41 sugar plantations in that association, we have another line upon the racial distribution of the population of the Territory. The count of 101,115 in June, and also of 99,693 in December, is 27 per cent of the 1930 population of the Islands. (For details of the count see Table 14, p. 19.)

A copy of the pay roll for May, 1929, of the 41 sugar plantations in the association shows the distribution by races and by the islands on which these plantations are located, as given in Table 3. The minors employed are not segregated by race and the adult females are so segregated only as to the Japanese.

The 11,608 male Filipinos on the May, 1929, pay rolls of the plantations on the island of Hawaii were 68.0 per cent of the 17,064 males of all races on the rolls of the plantations on the island in that month, and the 440 females of the Japanese race were 90 per cent of the 489 females on the May, 1929, rolls. In the month there was a total of 52,426 employees on the pay rolls of the plantations on all islands, consisting of 49,890 adult males, 1,636 adult females, and 900 minors. The 34,681 male Filipinos on all islands were 69.5 per cent of the 49,890 adult males of all races on all islands, and the 1,384 adult female Japanese were 84.6 per cent of the 1,636 females of all races on all

GENERAL ECONOMIC AND SOCIAL CONDITIONS

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TABLE 3.- Number and per cent of employees on pay rolls of sugar plantations. May, 1929, by sex, race, and islands

	Hawaii (18 plantations)		Maui (6 plantations)		Oahu (8 plantations)		Kauai (9 plantations)		Total (41 plantations)	
Sex and race	Num- ber	Percent	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Percent	Num- ber	Percent
ADULT MALES										
Fillpino		68.0	6,917	66.8	7,887	68.4	8, 269		34, 681	69. 5
Portuguese		20.0	2,063	19.9	2, 192	19.0 2.7	1, 538	14.1 3.2	9,208	18.3
American	345	2.0	320	3.1	353	3.1	247	2.3	1, 265	2.8
hinese	272	1.6	181	1.7	347	3.0	168	1.5	968	1.9
Porto Rican	355	2.1	174	1.7	135 105	1.2	143 87	1.3	807 548	1.6
Korean	228	1.0	73	1.0	105	1.2	81	.7	517	1.0
opanish	32	.2	20	.2	8	. 07	25	.2	85	.5
All others	57	.3	14	.1	59	. 5	27	.2	157	
Total	17,064	100.0	10, 358	100.0	11, 528	100.0	10, 940	100.0	49, 890	100.0
ADULT FEMALES			1	1.1				1	2.2	h
All others	440	90.0	319 61	83.9	415	82.7	210	79.2	1, 384	84.6
	49	10.0	01	10. 1		11.5		20.8	202	10.9
'Total	489	100.0	380	100.0	502	100.0	265	100.0	1,636	100. 0
MINORS			-	1						
Males, regular	117		73		92		70		352	
Males and females, school ¹	14 172		124		3 80		2 153		19 529	
vinies and remaies, school 1	172		124		80		153		529	
Total	303		197		175		225		900	
Total, adult males and fe- males, and minors	17, 856		10, 935		12, 205		11, 430		52, 426	

¹ School children who work intermittently,

Another guide to the racial distribution within the industries is that of the pay rolls of two pineapple canneries in Honolulu. One of these at the peak of employment in 1929 had 4,378 workers, of whom 2,355 were males and 2,023 were females. The racial distribution of the 4,378 employees was: Japanese, 30 per cent; Filipinos, 15.2 per cent; Koreans, 4.3 per cent; Chinese, 21.1 per cent; Hawaiians, 17 per cent; and others (which would include all races classified as Caucasian, namely, Americans, Portuguese, Spaniards, etc.), 12.4 per cent. (See Table 36, p. 78.)

Another large cannery in Honolulu, having a somewhat more minute racial distribution of employees, was found to employ 42.1 per cent Japanese, 16.4 per cent Hawaiian, 11.7 per cent Filipino, 9.7 per cent Chinese, 7.6 per cent Portuguese, 6.8 per cent part Hawaiian, 2.6 per cent American, 2.2 per cent Korean, and some other races none of whom, however, constituted more than one-half of 1 per cent of the total. (See Table 31, p. 69.) The figures for the canneries indicate the racial distribution within the city of Honolulu.

As showing the difference between the rural and urban population, particularly as it affects the Filipino, figures collected for two of the larger pineapple plantations, which during the peak period of 1929 employed 4,248 persons, show that 30.5 per cent of them were Japanese, 55 per cent Filipinos, 5.4 per cent Koreans, 4.7 per cent Chinese, only eight-tenths of 1 per cent Hawaiians, and 3.6 per cent other races. (See Table 36, p. 79.)

Living Conditions in Honolulu

The city of Honolulu contains 68 per cent of the population of the island of Oahu upon which it is situated, and 37 per cent of the entire population of the Territory. The industrial, social, and living conditions of the city of Honolulu are therefore a very essential part of any such survey as that undertaken by the Bureau of Labor Statistics.

One is impressed first by the general appearance of cleanliness and roominess. For the most part the streets are wide and are kept exceptionally clean. While the number of automobiles per capita of population is probably as great as that in any city on the mainland, the width of the streets prevents congestion and permits of unusual facilities for parking.

That section of the older part of the city which conforms most closely to what is usually designated as the slum section contains many blocks of severe congestion, but even in these districts not only are the streets kept clean but the interior of even the more congested homes and tenements strikes one as unusually clean and well kept.

The population is essentially oriental, as indicated by the figures of racial distribution shown above, and yet the atmosphere of racial antagonism is most conspicuously absent except for a feeling of unrest among the other races, including the American, toward the growing proportion of Filipinos among the population of the city.

Savings Bank Accounts

A tabulation of savings accounts in a bank in Honolulu, June 30, 1927, 1928, and 1929, by races, is given in Table 4:

TABLE 4.—Savings	oank accounts in a bank in Honolulu, June 30, 1927, 1928,	
The second s	and 1929, by races	

Race	Estimate lation (J	ed popu- lune 30)		Accoun	Total deposits		
	Number	Per cent	Number	Per cent	A verage amount	Amount	Par
Japanese:							-
1927	100 040		California -			-	1
1928	132, 242	39.6	32, 929	29.4	\$152.64	\$5, 226, 522, 81	10
1020	134, 600	38.6	36, 549	29.0	168. 31	6, 151, 387. 76	
1929 Chinese:	1 141, 515	38.4	51, 711	34.3	160.03	9 975 976 00	10
1097	0.00				100.00	8, 275, 376. 83	23
1927	25, 198	7.5	14, 371	12.9	327, 34	1 501 001 01	
1928	25, 310	7.2	15, 150	12.0	338.11	4, 704, 261. 91	17.
1929	1 25, 968	7.1	16, 269	10.8		5, 122, 413. 35	10.
			10, 209	10.8	328.93	5, 351, 290. 93	16.
1927	45, 576	13.7	20,062	17.0		and the second second	
1928	46, 704	13.4		17.9	98.44	1, 974, 992, 00	17.
1949	1 49, 173		20, 238	16.1	115.57	2, 339, 008, 18	9
Ortuguese.	1 49, 113	13.3	16, 299	10.8	115.72	1, 886, 122. 90	7.7.8.
1927						1	. 04
1928	28, 417	8.5	9, 506	8.5	346.09	3, 290, 009, 90	TR
1929	29, 117	8.4	10,672	8.4	328.35	3, 504, 122, 03	1.00
ilipino:	1 30, 609	8.3	10,900	7.2	331. 21	3, 610, 138. 87	19.
1097	1.1.1.1.1.1.1.1	1			001.01	0,010,100.81	10
1927	52, 124	15.6	7,558	6.8	218, 22	1 040 040 04	
1928	60,078	17.2	9,176	7.3		1, 649, 346. 91	0.
1929	1 65, 785	17.9	11, 962	7.9	228.34	2, 095, 269, 31	2
In others.		11.0	11, 502	1.9	218.32	2, 611, 507, 49	7.
1927	49,863	15.1	07 105			and the second sec	
1940	52, 958	15.2	27, 435	24.5	373.86	10, 257, 086, 35	37.
1929	1 55, 286		34, 258	27.2	352. 22	12, 066, 233. 71	in.
	- 00, 200	15.0	43, 522	28.9	314.55	13, 689, 757, 87	2316.
Total:						The second second of	think.
1927	000 100						
1928	333, 420		111, 861	100.0	242, 28	27, 102, 219, 88	100.1
1090	348, 767	100.0	126,043	100.0		31, 278, 434, 34	
1929	1 368, 336			100.0		35, 424, 194, 80	100

· Dased on estimate June 30, 1929

² Including part Hawallan.

This table shows a relatively small proportion of money in the avings bank by the Japanese and a relatively large proportion by the Chinese. In this connection a statement furnished this bureau by the postmaster at Honolulu showed that the amount of money orders issued in Hawaii in the last year for which figures were available and payable in Japan was \$306,930.23. The amount of orders issued in Japan and paid at the Honolulu office was \$2,066.25. The amount of money orders issued in Hawaii and payable in China was \$2,849.38. The amount of money orders issued in China and paid at the Honolulu office was \$162.29. This shows that while the Chinese in Hawaii are sending practically no money back to China, the Japanese, on the other hand, are sending very large sums back to Japan.

Recreational Facilities

If one rides in a street car along Waikiki Beach to the Royal Hawaiian Hotel and beyond, the first impression is that the public is excluded from this marvelous beach and that it is reserved for the guests of the hotels fronting on the beach. As a matter of fact, there are at not too frequent intervals narrow pathways, marked more or less distinctly "Public Walk," which lead down to the beach, the use of which is entirely free to the whole population.

In addition to Waikiki Beach, which stretches along the seaside for a very considerable distance, there are four other beaches available to the public. There are 17 parks and playgrounds within the reach of the whole population, and these parks have a total area of approximately 200 acres.

At the request of this bureau a statement was prepared by the parks and public grounds department of the city and county of Honolulu under date of March 17, 1930, listing the parks and beaches, with what are believed to be conservative estimates as to the average daily and yearly patronage of each. The statement follows:

and in the second se	Atten	dance
	Daily	Yearly
PLAYGROUNDS		
Anla	200	70,000
In Moana	125	43, 500
Mother Waldron	350	122, 500
leretania Street	115	40,000
Dole	210	73, 50
Pern		35, 00
wilei (private playground)		26, 25
Kaimuki Park	175	71, 25
Kaiulani	55	20,00
Kalihi Hospital	48	16, 80
Kalihi-Kai	155	54, 500
Kalihi-Waena	135	44,00
Camamalu		85,00
Kauluwela	0.0	195,00
auoa		28,000
Mollili Makiki	75	26, 25

	Frontage (feet)	Yearly attendance
BEACHES Diamond Head Park Reserve Public baths (Waikiki) Waikiki Beach along seaside Kuhio Park Beach (between public baths and seaside) Aala Moana Beach (Kakaako) Aala Moana Beach (Kakaako) Note.—Government provides right of way to all the beach frontages on Oahu. Anyone can get to the beach at will ZOO	2,000 1,000 3,000 250 3,000	5, 000 40, 000 109, 500 10, 000 43, 500
Kapiolani Park Zoo (Waikiki) LILIUOKALANI GARDENS Between Kuakini and School Street, Liliha and Nuuanu Avenue—an original "swimmin" 'ole"	*	150, 000 12, 000

In this connection it should be stated that for recreational purposes the city of Honolulu and the Island of Oahu are practically coterminous.

Agricultural Products for Home Consumption

While it is true that the Territory of Hawaii still imports a very considerable percentage of its food, the following figures from a statement compiled by the Agricultural Extension Service of the University of Hawaii covering the agricultural produce raised and consumed during 1929 in the Territory of Hawaii, give a very clear idea of the amount and value of home production.

TABLE 5.—Agricultural produce raised and consumed during 1929 in the Territory [Wholesale market values quoted; estimates based on all available data, both published and first hand]

Сгор		Unit	Amount or number	Value
Field crops: Sugar (granulated and brown). Pineapples. Coffee. Bananas Rice.	Poi	n	27, 148	\$2, 542, 0: 33, 00
Taro	d	0	$\begin{array}{c}1,500,000\\10,500,000\\1,400,000\\10,000,000\\12,000,000\\15,000\end{array}$	390, 00 210, 00 70, 00 200, 00 240, 00
Algaroba. Sweet potatoes. White potatoes.	do	nd.	15,000 30,000 100,000 2,000,000 500,000	75,00 150,00 150,00 750,00 30,00 12,50
Miscellaneous field crops—Para grass at	Pour	nd	1,000 75,000 5,000	10, 000 9, 7/4 400, 000 25, 000
Pasturage equivalent in feed value	do		10,000 7,891 15,000	80,000 189,384 60,000 750,000
A vocados Papayas Citrus			66, 668 2, 000, 000 250, 000	100, 000 50, 000 5, 000

GENERAL ECONOMIC AND SOCIAL CONDITIONS

TABLE 5.—Agricultural produce raised and consumed during 1929 in the Territory of Hawaii-Continued

Crop	Unit	Amount or number	Value
Orchard crops-Continued. Macadamia and other nuts. Orapes. Miscellaneous fruits-figs, lichees, mangoes, breadfruit, etc Watermelons. Fred. Coconuts. Miscellaneous crops-ginger, mushrooms. Arestock: Beef, dairy. Beef, drage. Beef, veal. Swine. Mutton. Mitk. Outry: Chickens. Ducks. Turkeys. gs. Surges.	do Cord Bag do Head Pound do Pound do Head Head do Dozen	5,000 1,500,000 2,000,000 2,000,000 2,000 10,000 10,000 12,500,000 12,500,000 147,000 15,000 10,000 10,000 10,000 10,000 10,000	\$2,500 30,000 200,000 27,500 10,000 2,199,000 1,152,000 1,500,000 7,500 1,500 5,000 200,000 100,000 50,000
iees, honey. danufactured commodities: Taro—mano, jams, jellies, preserves auhaja—woven mats, hats, etc	Pound	5,000	2,000 100,000 10,000
Total			13, 343, 674

Poultry Products¹

There are in the Territory over 400 poultry producers, with flocks ranging from 50 to over 9,000 birds. With the smaller producers poultry is usually a side line, while the larger ones raise poultry as a regular business. The industry is not confined to one or two nationalities, as for instance are rice and taro, but is undertaken rather extensively by many races, as is indicated in the following table:

TABLE 6.—Number of producers of poultry and size of flocks, by race of producers

Size of flock	Number of pro- ducers	Japanese	Chinese	Hawaiian and part Hawaiian	Caucas- ian	Portu- guese
50 to 100 fowls	243 70 60 22 23	105 40 46 9 3	89 14 4 0 2	21 7 3 4 2	16 5 4 7 15	12 4 3 2 1
Total	418	203	109	• 37	47	22

The poultry industry, although not so important as some of the other industries, is one which deserves a great deal of thought and consideration. There are in the Territory approximately 200,000 fowls with an annual egg production of over 1,500,000 dozen, valued at over \$900,000, and the industry is rapidly forging ahead. Poultry raising is not confined to any particular locality, as is the Kona coffee industry, for instance, but is undertaken rather extensively on nearly every island in the group. During the last few years the industry

¹ Data on this subject from H. C. Wong, county extension agent,

has witnessed quite a change-the number of birds has increased, the methods of raising are more scientific, and the returns are greater than

Investigations of proper methods of feeding are gradually placing the feeding of the fowls on a rather exact basis. The care and shelter required for a flock is becoming a subject of popular interest and nearly every poultryman is beginning to know the advantage of the care which should be given a flock used in egg production.

The approximate number and value of fowls in the Territory in 1928 and 1929 are shown in Table 7.

TABLE 7. - Approximate number of fowls and total egg production and value thereof in the Territory of Hawaii, 1928 and 1929

Islands	Numbe	er of fowls	Total egg	production	Value of egg	production
	1928	1929	1928	1929	1928	1929
Oahu Maui Hawaii. Kauai Molokai Total	115, 457 34, 958 19, 630 6, 045 4, 101	$129, 312 \\ 39, 153 \\ 21, 984 \\ 6, 770 \\ 4, 593$	Doz. 909, 230 275, 209 163, 573 47, 600 32, 296	Doz. 1, 018, 719 308, 332 173, 128 63, 313 36, 181	\$521, 173, 63 173, 077, 68 88, 059, 96 27, 284, 32 18, 512, 18	\$583, 929, 76 176, 735, 99 99, 237, 93 30, 558, 53 20, 738, 38
	180, 191	201, 812	1, 427, 908	1, 589, 673	828, 107. 77	911, 199. 69

Hog Industry on Oahu¹

A survey of the hog industry on the island of Oahu showed that there are approximately 18,000 head available for consumption, valued at nearly \$350,000. The hogs are distributed among 196 piggeries, the latter ranging in size from 20 to 3,000 head. The breeds are so badly mixed among most of the piggeries that it is hard to say which breed is predominant. In the few cases where true breeds or only the first generation crosses are kept, the most popular breeds are the Berkshires and the Duroc Jerseys.

This industry is practically in the hands of the Japanese, who con-

stitute about 90 per cent of the raisers, although there are a few large piggeries owned by persons of other nationalities. Most of the hogs are swill fed, with a few of the larger piggeries using commercial feed for their stock. In the Japanese piggeries the husband usually gets the swill early in the morning and then goes to work for his employer. The wife tends to the rest of the work, cleaning the pens, boiling the swill, and feeding the hogs.

As to market arrangements, most of the piggeries have none. The idea of grade standards is totally disregarded, the weights and prices being largely determined by guesswork. In a few of the larger piggeries, however, the hogs are graded as prime (125 to 175 pounds) and those over 175 pounds.

Practically all of the lands are leased lands, ranging in size from one-fourth to four or more acres. Most of the houses thereon are supplied with running water and electricity. The chief fuel is wood.

¹ Data on this subject from H. C. Wong, county extension agent.

Rice Industry

The rice industry in Hawaii dates as far back as 1859, when Mr. Holstein, of the Hawaiian Agricultural Society, bought a piece of land in Nuuanu Valley on which to carry out some experimental work on various crops, of which rice was one. Rice had been introduced previous to this date, but the first successful attempt was made by Mr. Holstein. His success took the islands by storm, and for several years the people went rice crazy. Taro lands were absorbed by rice planters in rapid succession, and for a time it seemed as if the islands were to have a taro famine. This lasted only for a few years, however, as losses and other discouraging factors began to make their appearance. The taro industry came back with a boom, reaching its height in 1865, when the rice industry made an attempt to regain lost ground. This time it was more successful and remained so until other industries came into being, when the industry began to decline.

Although rice is still believed to be the world's greatest crop (with a normal annual production of over 300,000,000 pounds), in Hawaii the industry, instead of increasing, is rapidly declining. Rice is the surest and most regular of the great crops and probably the most staple food of the greatest number of people. At first glance, one would think that with the oriental population of the Territory, the industry should be in a very flourishing condition, but surveys have proved that each year the total acreage in rice cultivation is greatly reduced.

Rice culture began in the unrecorded past, yet the methods of cultivation, in so far as science and technique are concerned, have seen very little change. This is probably the sole reason why it is a dying industry, when the pineapple and sugarcane industries are advancing so rapidly. In 1907 when the pineapple industry was still in its infancy, there were at least 10,000 acres of rice under extensive cultivation, and rice was the second ranking crop in the Territory. But to-day the Territory can not even produce enough for its own local consumption and has to import large quantities from California and Japan.

Almost all of the rice produced here is cultivated by Chinese and Japanese, and as long as it is cultivated under the same crude methods employed by the natives back in the Orient centuries ago, rice will never be on a profit-producing basis.

As things stand, the future of the industry looks very dark. A survey has proved that in the last few years the total acreage has decreased at least 50 per cent, and, as stated above, most of the planters are Chinese and Japanese, ranging in age from 40 to 65 years. The future will present another big problem, that regarding the labor supply. While laborers of oriental descent are absolutely barred from immigrating into the Territory and no other race is in position to take up this work, the younger generation of these oriental producers are not seeing their way clear to follow up the work of their predecessors.

In the following table an attempt is made to show the consumption per capita of each of the oriental races of the Territory as compared with the total consumption of the other races. The figures are based on the home consumption of the students of the University of Hawaii, as in the student body of that university are represented all the oriental races mentioned in the table.

It may be noted that of the oriental races the Filipinos consumed more rice per capita than any other, and the Chinese consumed the least.

TABLE 8.—Consumption of rice per capita, 1927, by races

Nationality	Population	Consumption (pounds) per capita	Total pounds consumed	Total value
Japanese	131, 071	240	31, 457, 040	\$1, 994, 374. 05
Chinese Filipino	25, 198 52, 124	185.04 300	4,672,638	296, 245. 24 991, 398. 48
Korean	6, 214	199.92	1, 242, 302	78, 761. 94
Asiatic-Hawaiian Other races	9, 437 87, 275	133. 92 66. 66	1, 258, 141 5, 817, 751	79, 766. 14 369, 845. 41

Summary of Average Hours and Earnings in the Territory of Hawaii, 1929-30

Sugar plantations, including sugar mills, and pineapple plantations and canneries are the outstanding industries in the Hawaiian Islands. They are generally looked upon as constituting all of Hawaii's industries. Many other industries are, however, rapidly developing.

In the 1929-30 study of industrial conditions in the Hawaiian Islands by the Bureau of Labor Statistics, wage data covering hours and earnings were collected for 67,802 employees in 21 industries. Based on the 1930 census of the islands, the number included in the study is 18 per cent of the total population of the Territory of Hawaii. It includes practically all employees on the sugar plantations, on steam railways, on street railways, in coffee mills, in slaughtering and meat-packing establishments, in the manufacture of tin cans and of overalls and shirts, more than 85 per cent of the total number of employees on pineapple plantations and in pineapple canneries, and at least 50 per cent of the employees of the other industries included in the study; and it constitutes more than 85 per cent of all wage earners on the islands. All industries of material importance in number of wage earners were covered in the study. The bureau, in studies of industries in the States, usually collects wage figures for from 20 to 50 per cent of the total number of wage earners in each industry.

Average full-time hours per week, earnings per hour, and full-time earnings per week are shown in Table 9 for males in each of the 21 industries, for females in each of the 8 in which they were employed, and also for both sexes combined. Average full-time hours per week are not shown for sugar plantations because of the great variation of hours by kinds of work. (See Table 25, p. 51.) The averages in the table are by industry, presented in the order of importance in number of employees, beginning with sugar plantations with a total of 49,671 and ending with manufacture of overalls and shirts, with only 17 employees.

Adult males on sugar plantations earned in May, 1929, at the basic rates and with bonus for attendance an average of \$1.84 per day. These earnings and those for females do not include the perquisites (estimated at a cost of \$28 per month to the plantations) of houses, fuel, water, and medical and hospital service furnished without charge by the plantations to employees.

The average full-time hours for all the 3,477 employees on the pineapple plantations (3,316 males and 161 females) were 60 per week. The males earned an average of 22.7 cents, the females an average of 11.6 cents, and both sexes together an average of 22.5 cents per hour. Average full-time earnings per week were \$13.62 for males, \$6.96 for females, and \$13.50 per week for males and females combined. The earnings in the table include those at the basic rates and the bonus combined. They do not include the estimated value of perquisitesrental value of houses, value of fuel, water, and medical and hospital service furnished by the plantations to the employees.

The average full-time hours of males ranged by industries from 44

per week in printing and publishing, machine shops, and foundries to 06.4 per week in dairies; and of females ranged from 44 per week in printing and publishing to 60 per week on pineapple plantations, in pineapple canneries, and in tin-can manufacture.

The average earnings per hour of males ranged by industries, exeluding plantations, from 17.4 cents in the making of overalls and shirts, to 91.5 cents in printing and publishing; of females, ranged from 14.1 cents in coffee mills to 37.8 cents per hour in printing and publishing; and of both sexes ranged from 21.3 cents in coffee mills

to 85.7 cents in printing and publishing.

The average full-time earnings per week of males ranged by indus-tries from \$7.86 in overalls and shirts to \$40.26 in printing and publishing; of females ranged from \$6.96 on pineapple plantations to \$16.63 in printing and publishing; and of both sexes, ranged from \$11.74 in coffee mills to \$37.71 in printing and publishing.

TABLE 9.—Number of employees and average hours and earnings in the Territory of Hawaii, 1929–30, by industry

	Nun	ber of	em-	Avera	ge full s per v	-time zeek	Ave	rage per l	earni	ings	Averagearning	gs per v	ime veek
Industry	Male	Fe- male	Total	Male	Fe- male	Total	Mal		e- ale	Fotal	Male	Fe- male	Total
incapple plantations incapple canneries uilding construction cam railways toad building toagshore labor team laundries Tincan manufacturing theticity Manufacturing	47, 300 3, 316 3, 937 906 660 383 381 102 220	1, 474 161 3, 579 178 48	3,477 7,516 906 660 383 381 280	60. 0 49. 6 51. 1 49. 3 54. 0 54. 0 54. 0 60. 0	60. 0 	60.0 49.0 51.1 49.3 54.0 54.0 60.4 45.	7.22 3.26 3.50 1.44 3.550 440 440 440 440 1.77	71 . 06 46 06 68 16 01 01	1.30 116 .168 .190 .243	\$1.82 7.225 .224 .506 .446 .506 .468 .272 .373 .707 .544	25. 27 22. 46 24. 06 31. 89	10.08	13. 30 13. 44 25. 10 22. 79 24. 95 25. 27 14. 69
ture and distribution Street railways Printing and publishing: Newspaper and book and job Stock raising Machine shops Gas Manufacturing	- 19- 19- 19- 14	4 2 1	4 21 - 19 - 14	6 52. 8 44. 53. 1 44.	5 0 44. 0 	- 52. 0 44. - 53. - 44. - 48.	0	915 275 685 478	. 378	. 857 . 275 . 685	40. 26 14. 58 30. 14	16. 63	
and distribution Dry dock Dairies Coffee mills Flaughtering and meat	1000000	4	12	12 48. 14 45. 14 66. 14 55. 66 44. 26 51	0 4 3 55 0	- 45 - 66 - 55 - 44	.0 . .4 . .1 .	578 - 299 - 307 649 - 347 -	. 14	. 571 . 29 . 21 . 21 . 64	9 19.8 3 16.9 9 28.5	5 8 7.7 6	19.8
overalls and shirt mak		1	16	-		. 2 4	-	. 174	. 30		7.8	36 13.8	8 13.

I Includes 349 male minors, 19 female minors, and 529 minors whose sex was not reported.
Range, according to kind of work, from 33 to 72—average not computed. (See Table 25, p. 51.)
Per day for adults at basic rates and with bonus, but not including perquisites (rental value of houses, under the second second

Sugar Industry

Sugar Production

The principal industry of the Territory of Hawaii is the growing, harvesting, and milling of sugarcane. The annual report of the Governor of Hawaii for the fiscal year ending September 30, 1928, shows 130,968 acres of land in these islands harvested in sugarcane. The tons of cane harvested were 7,710,508, from which 897,396 tons of raw sugar were produced. The tons of cane produced per acre were 58.87 and of raw sugar, 6.85, while the tons of cane per ton of raw sugar were 8.59. The average tonnage of cane per acre as applied to the entire Territory is somewhat misleading, owing to the fact that the island of Hawaii, which is the largest island of the group and contains the largest sugarcane acreage, had a very low yield (49.17 tons) in comparison with the other islands; Oahu, for instance, had an average yield of 79.35 tons of cane per acre, some of the plantations and parts of plantations yielding as much as 100 tons per acre.

Hawaiian production of cane per acre, however, is not comparable with the yield of the other sugar-producing countries of the world. Hawaii's sugarcane producing period of time is nominally 18 months, though in very many instances the period extends to 20 and even 22 months. In all the other sugarcane growing countries of the world the rated output of cane is the number of tons per acre per annum-that is, the yield is calculated on the planted area and not on the harvested acreage, as in Hawaii. The yield of raw sugar per ton of sugarcane, however, is somewhat greater in Hawaii, due both to the development and cultivation of high grades of cane and to the better methods of milling.

The production of cane sugar in Hawaii in 1929 was 913,670 short tons. The production for each of the years from 1837 to 1929 is

Production in the Hawaiian Islands, which was less than 11,000 short tons each year from 1837 to 1872, reached 57,088 tons in 1882; 108,112 tons in 1886; 221,828 tons in 1896; 289,544 tons in 1900, the year in which the islands were annexed to the United States; 360,038 tons in 1901, an increase of 24 per cent in the first year the islands were a part of the United States; 617,038 tons in 1914, the year of the beginning of the World War; 701,433 tons in 1924; 811,333 tons in 1927; and reached 904,040 short tons in 1928.

TABLE 10.—Hawaiian sugar production (in tons of 2,000 pounds), 1837 to 1929 [Source: "Story of Sugar," rev. ed., June, 1929]

Year	Number of tons	Year	Number of tong
1837			
1838	12	1849	10.20
839	44	1850	327
840	50	1851	375
841	180	1852	11
842-1843	30	1853	356
844	572	1854	321
345.	257	1855	351
846	151	1856	1.05
47	150	1857	277
48	297	1858	3.50
	250	1859	005
1 First record of exportation	200 []	1009	911

SUGAR INDUSTRY

TABLE 10.—Hawaiian sugar production (in tons of 2,000 pounds), 1837 to 1929-Continued

Year	Number of tons	Year	Number of tons
160	572	1895	147, 627
101	1, 281	1895	221, 828
402	1, 503	1897	251, 120
(C)	2,646	1898	229, 414
464	5, 207	1899	282, 807
	7,659	1900	289, 544
66.	8,865	1901	360, 035
67	8, 564	1902	355, 611
68	9, 106	1903	457, 991
00	9, 151	1904	367. 475
70	9, 392	1905	426, 428
(7)	10,880	1906.	429, 213
72	8,498	1907	440,017
174	11, 565	1908	521, 123
174	12, 283	1909	535, 150
78	12, 540	1910	518, 127
70	13.036	1911	566, 821
477	12,788	1912	595, 258
178	19, 215	1913	546, 798
(79	24, 510	1914	617.038
	31, 792	1915	646, 445
181	46, 895	1916	593, 483
482	57,088	1917	644, 574
	57,053	1918	576.842
184	71, 327	1919	603, 583
184	85, 695	1920	556, 871
480	108, 112	1921	539, 196
187	106, 362	1922	609,077
88	117, 944	1923	545, 606
	121, 083	1924	701, 433
100	129, 899	1925	776,072
01	137, 492	1926	787, 246
02	131, 308	1927	811, 333
1061	165, 411	1928	904.040
104	153, 342	1929	2 913, 670

¹ Hawaiian Sugar Planters' Association.

The production of cane sugar on each of the four principal islands (Hawaii, Maui, Oahu, and Kauai) and on the four combined in each of the years from 1920 to 1929 is shown in Table 11:

TABLE 11.-Tons (2,000 pounds) of raw sugar produced each year, 1920 to 1929, on each island and on all islands

Name of island	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Hawaii Maui Oshu Kagai		115, 599	123, 847 153, 777	113,069 147,663	155, 364 188, 532	269, 125 169, 994 202, 460 134, 493	158, 950 213, 705	172, 043 224, 004	192, 113 249, 069	198, 300 236, 955
All islands	556, 871	539, 196	609, 077	545, 606	701, 433	776, 072	787, 246	811, 333	904, 040	913, 670

Increase in Output per Man-day or Man-year

The increase during recent years in output per man-day or per man-year throughout all the sugar plantations of Hawaii is remark-Able. In so far as this increased production results from the improvement in types of sugar cane now grown over types formerly grown it reaches even to the small growers or farmers who produce only a few tores of cane and sell such cane to the plantations having grinding mills.

A plantation on the island of Oahu, with practically the same labor force, produced 40,000 tons of raw sugar in 1920 and 70,136 tons in

1929. This company in 1922 produced an average of 49.09 tons of cane per acre; in 1928 the average was 94.07 tons per acre, while on many of its separate fields the production was over 100 tons per acre. Measured in tons of 96 degree raw sugar 6.68 tons per acre were produced in 1922 and 12.28 tons in 1928.

Another plantation, on the island of Hawaii, increased its output of raw sugar from 6.7 tons per man-year in 1900 to 24.22 tons per manyear in 1929. This increase was due to several factors. Several years ago a pest or blight of some sort practically destroyed the sugarcane on the island. Since that time the Hawaiian Sugar Planters' Association has built up a most remarkable laboratory for developing types of cane that will be more adapted to Hawaiian soil, more prolific in sugar content or yield, and more immune from pests.

Machinery is used at every stage of production, beginning with the clearing of the ground. Plowing is now done with four, five, and six disk plows, arranged in tandem and drawn by 62-horsepower caterpillar tractors, which plow from 14 to 24 inches deep. The soil is thus put in a condition which would have been impossible formerly and at a great deal less expenditure of man power.

Some of the more striking methods by which greater production has been secured with practically a stationary labor force are the greater use of much better fertilizers; the more systematic and extensive use of irrigation; the practice—quite general though not universal—of burning the blades from the lower part of the stalk instead of stripping it by hand, as formerly; the use of enormous cranes, each one of which, operated by two men, performs the work of 35 men, in loading the cane onto the cars for transportation to the grinding mill; and more efficient methods of laying tracks upon which these cars are conveyed to the mills.

The planters' association has established a bureau which is constantly turning out minor labor-saving devices which in the aggregate do much to increase output of the labor force, if not actually reducing the force.

Irrigation and Fertilization

It is surprising to learn that land so rich as that found for the most part in the Territory of Hawaii should require an enormous amount of fertilizing, and that, with the tremendous amount of rainfall common in most parts of the Territory, irrigation should be necessary. However, when it is realized that from 80 to 90 tons of sugarcane are removed from an acre of land and that 87 per cent of the weight of this cane consists of extractable juice, one is not unprepared to learn that it requires 4,000 tons of water to mature the cane for a ton of sugar. When it is realized that in the fertile fields of Illinois not more than 2½ tons of corn per acre, not counting the stalks—incidentally, neither are the weight of the blade and seed of sugarcane counted are taken from the soil, as against 90 tons of sugarcane per acre from the soil of Hawaii, one can readily believe that no natural unaided soil fertility could be found anywhere in the world to stand such a strain.

Source of Labor Supply

The source of labor supply for the sugarcane industry in the Territory of Hawaii has shifted many times, being originally the Hawaiian Islands, and subsequently China, Japan, Portugal, Spain, Porto Rico, and Korea. The present tendency is to depend almost exclusively upon the Philippine Islands as the source of labor supply.

Table 12, secured from the immigration bureau at Honolulu, shows the Filipinos arriving at and departing from Hawaii over a period of years:

TABLE 12.—Filipinos arriving at and departing from Hawari, 1922 to 1929

putu) is "I want	Arriving	from-	Depart	ing to-		Arriving	from—	Departi	ng to—
Fiscal year end- ing June 30—	Orient	Main- land	Orient	Main- land	Fiscal year end- ing June 30-	Orient	Main- land	Orient	Main- land
1022	8, 675 6, 530 5, 915	38 9 40	2,074 925 2,694	98 937 2, 118	1927 1928 1929	6, 875 12, 572 9, 593	78 132 180	3, 671 4, 008 4, 809	2, 254 1, 515 2, 374
1925	10, 369 4, 995	93 90	2,769 2,715	831 2, 888	Total	65, 524	660	23, 665	13, 015

Table 13 shows the Filipinos arriving at and departing from Hawaii, by age and sex.

TABLE 13.—Filipinos arriving at and departing from Hawaii, 1925 to 1929, by age and sex

and the second se				Arri	ving from	m		-		
ANSING -	(Orient					Mainla	nd	
Fiscal year ending June 30-	Und	er 16	Ove	er 16		Unde	er 16	Ove	r 16	
	Male	Female	Male	Female	Total	Male	Fe- male	Male	Fe- male	Total
1925 1026 1027	219 62 60 81 76	105 10 26 57 54	9, 414 4, 794 6, 404 12, 254 9, 320	631 129 385 180 143	10, 369 4, 995 6, 875 12, 572 9, 593	4 3 3 8	6 1 6 15	76 78 75 117 135	7 9 2 6 22	93 90 78 133 180
Total	498	252	42, 186	1,468	44, 404	18	28	481	46	57
July 1 to Dec. 31, 1929	35	31	3, 218	87	3, 371	0	3	98	4	10

an logit				De	parting	to—				_
			Orient				Ma	inland		
Fiscal year ending June 30-	Und	er 16	Ove	or 16		Und	er 16	Ove	r 16	
Rom.	Male	Female	Male	Female	Total	Male	Fe- male	Male	Fe- male	Total
1925 1926 1927 1928 1927	190 139 352 388 351	198 103 309 405 324	2, 122 2, 208 2, 585 2, 742 3, 787	259 265 425 473 347	2, 769 2, 715 3, 671 4, 008 4, 809	25 85 68 28 -31	18 50 83 35 27	751 2, 436 2, 023 1, 405 2, 268	37 317 80 47 48	831 2, 888 2, 254 1, 515 2, 374
Total	1,420	1, 339	13, 444	1,769	17,972	237	213	8, 883	529	9,862
July 1 to Dec. 31, 1929	169		2, 130	153	2, 582	0	1	621	16	63

There is much discussion and a considerable feeling as to the advisability of the continuance of this immigration. The rapid development of the pineapple industry makes it no longer solely a sugarcane question. Formerly the sugar growers engaged the Filipino on his native heath and paid for his transportation to Hawaii, but this practice has been abandoned. The Hawaiian Sugar Planters' Association now has its agents in the Philippines engaging labor, but these workers must pay their own way to Hawaii. Upon arrival, they are given a contract or agreement that if they will work on the sugar plantations for a period of three years, their return expense to the Philippines, should they wish to return, will be paid by the sugar planters' association.

From the plantation managers' point of view Filipino labor is reasonably satisfactory, although there is not complete unanimity of opinion among such managers. For instance, a manager of a plantation on the island of Hawaii said to his board of directors:

We were well supplied with labor all through the season and work was kept well in hand. Our Filipinos are a restless lot, changing around from place to place. We trust that the suggested change in the contracts, whereby it is required of them to stay at least one year continuously at the place they are assigned to, will work out to the benefit of all concerned.

The following statement from an official of the association is interesting as bearing upon this question:

With the Filipino labor there is a continuous and from the standpoint of employers undesirable amount of shifting from one plantation to another. Due to the fact that Filipinos have relatives in great numbers and to remote degrees of consanguinity, we find men shifting from one plantation to another, giving an their excuse that they want to be with a cousin, uncle, or brother, or some other connection on a second plantation. In our agreements with the laborer which we make after the arrival of Filipinos in Hawaii, we promise to return them to the Philippines after three years' work on plantations, providing they have complied with the terms of the work agreement. These terms require that they must have worked one year on one plantation and do not prohibit their moving between plantations. We send back as having completed the contract hundreds and even thousands of men whose work record must be secured from two, three, four, and maybe more plantations during the period of employment here. Within the last year we have caused our work agreement to be slightly changed, requiring the man to work the first year on the plantation to which first assigned, but even then a transfer is permitted, providing the man applies for it and it is approved. so that if he has good reason to move he may do so without forfeiting his rights. If he doesn't desire to apply for the transfer, he may move anyhow, but of course under those conditions he wouldn't have the benefits of his work agreement.

A study of length of service in Hawaii of Filipinos who returned to the Philippines for various reasons during the labor year October 1, 1928, to September 30, 1929, discloses the following:

Of 132 cases of sick men reported to the sugar planters' association as being discharged from hospitals but unable to go back to work, and desirous of returning to their homes in the Philippines, the length of service on sugar plantations averaged 51 months; their average stay on the islands was 65 months, and they had worked on an average of 1.7 different plantations.

Of the contract Filipinos who had fulfilled their contracts 1,922 desired to be returned during the year. The average sojourn of these men on the islands was 54 months, their average service on sugar plantations was 53½ months, and they had worked on an average of 1.4 plantations. The required service to secure the right to free return is 36 months of 20 days, or 720 days' work on plantations. Of 1,366 laborers who paid their passage back to the Philippines, having forfeited their right to free return by "deserting," i. e., jumping their contracts, or by other conduct, the average stay on the islands was 36 months, the average employment on plantations was 27 months, and the average number of plantations on which employed was 1.5.

Unquestionably the sugar plantations of Hawaii are a great boon to the individual Filipinos who take advantage of the higher wages paid. Whether or not the Philippine Islands are the better for this drawing off of their younger and more physically fit male population raises a question this bureau does not feel called upon to answer.

The social question created in Hawaii is, however, quite distinct from the problem of labor supply for any one or two or all of its industries. Employees of the former immigrations were at the outset single men, or men immigrating for the purpose of severing marital obligations they no longer cared to carry. The Chinese, however, were accepted by the native Hawaiians, and considerable intermarriage of Chinese men with Hawaiian women occurred. The Americans had set the example in intermarriage with Hawaiian women even back in the missionary days. Later on a considerable number of Chinese women immigrated and became the wives of the Chinese workers. The Japanese were able in the course of time more or less to remedy the social situation so far as they were concerned through the "picture bride" device.

This large excess and continuing large importation of single men creates a social question which in the long run must become a bigger problem than either the sugar or pineapple industry or both. A labor policy more comprehensive than merely securing plenty of labor for the sugar and pineapple industries will sooner or later force itself upon Hawaii.

There is a social side of the labor problems that will eventually override the purely industrial side, especially when industry is narrow either in its scope or ownership. It must happen—indeed is now happening—that the employers will have the conviction forced upon them that married men are better and ultimately cheaper plantation habor, as well as safer and better citizens. It is not within the power of industry to ignore over a long period of time the fact that man is a social being.

It is neither socially, industrially, nor economically wise for Hawaii to import such a proportion of its total food supply as it does now. The tendency in 1-crop or in 2-crop districts to ignore everything but the principal industry is not of course confined to Hawaii. Cuba, mother sugarcane country, imports from the United States fruits which grow wild in Cuba. The distance between Hawaii and the mainland of the United States, or any other country for that matter, is so great that importations of articles necessary for the sustenance of life and the ordinary comforts of living add so greatly to the cost of these things that eventually these livings costs will defeat the purposes of a cheap labor supply drawn from no matter where.

Census of Sugar Plantations

The Hawaiian Sugar Planters' Association, which includes all except a very few small and unimportant plantations on the Hawaiian Islands, takes a census of the plantations and camps thereon as of June 30 and December 31 each year.

The census figures in Table 14 show the number of persons in the "married group," and in the "single group," and also in both of these groups combined, of each race on the plantations on each island and on all the islands, and also the number of houses owned by the plantations, the number rented by the plantations, and the total number furnished by them to employees and families for use as homes. No rental was charged by the plantations for the use of the houses. An official of the association estimated the average cost to the employer of furnishing the houses to employees at \$20 per month

On June 30, 1929, the married group of Japanese employees on the plantations on the island of Hawaii included 2,680 men, 2,557 women, and 7,654 children, a total of 12,891 persons of that race. They were housed in 1,907 homes owned by the plantations and 403 rented for them by the plantations. On June 30, 1929, there were 50,045 men, 14,129 women, and 36,941 children, or a total of 101,115 persons of all races on the plantations on all the islands, and they were housed in 18,637 buildings owned by the plantations and 951 houses rented by the plantations.

The great majority of the Filipinos on the plantations are single men. On the island of Hawaii 10,237, or 79 per cent of the total of 12,957, of that race were single men; on Maui, 6,226 or 67 per cent were single men; on Oahu, 5,938 of the total of 11,207 were single men; and on Kauai, 7,408 of the total of 9,989 on that island were single men. On all islands, 29,809 or 68.6 per cent of the 43,433 Filipinos on all plantations were single men.

				June 3	June 30, 1929					~	Decemb	December 31, 1929		
Island, race, and marital condition		Number	Number of persons	SUC	Number to emp	Number of houses furnished to employees and families	furnished families	Z	Number of persons	of perso	sa	Number to emp	Number of houses furnished to employees and families	urnished amilies
	Men	Wo- men	Chil- dren	Total	Owned by plan- tations	Rented by plan- tations	Total furnished by plan- tations	Men	Wo- men	Chil- dren	Total	Owned by plan- tations	Rented by plan- tations	Total furnished by plan- tations
на wan apanese: Married group. Single group.	2,680	2, 557 130	7, 654	12, 891 1, 296	1, 907	403 66	2, 310	2, 536 1, 082	2, 441 146	7, 510	12, 487 1, 274	1,955	348 47	2, 303
Total	3, 797	2, 687	7, 703	14, 187	2, 360	469	2, 829	3, 618	2, 587	7, 556	13, 761	2, 385	395	2, 780
'llipino: Married group Single group	10, 237	119 119	1, 441 1	2, 718 10, 230	492 1,683	12 45	504 1, 728	650 10, 271	594 4	1,413	2, 657 10, 278	484 1, 730	17 46	501 1, 776
Total	10, 903	612	1,442	12, 957	2, 175	57	2, 232	10, 921	598	1,416	12, 935	2, 214	63	2.277
hinese: Married group Single group	46	40	165	251 266	88	0 Q	44 92	41 257	40	157	260	35		42 96
Total	308	44	165	517	125	11	136	298	43	157	498	124	14	138
Corean: Married group	56	50	174	280	45 65	64.69	47 68	48 159	48	187	283	46 53	64 m	48 56
Total	241	51	175	467	110	5	115	207	49	194	450	66	5	104
orto Riean: Married group	191	174	456 2	821 118	150	4.0	154 49	201 105	180	479 4	860	154 48	4.63	158 51
Total	300	181	458	939	193	10	203	306	191	483	980	202		200

TABLE 14.

TABLE 14.—Census of persons (employees and families) and houses on 41 sugar plantations in the Territory of Hawaii, June 30, and December 31, 1929, by island, race, and marital condition—Continued

				June	30, 1929						Decem	ber 31, 192)	
Island, race, and marital condition		Num	ber of pe	ersons	Numbe to em	er of houses ployees an	furnished d families		Number	r of pers	ons	Numbe to emi	r of houses bloyees and	furnished families
	Mer	Wo		Total	Owned by plan- tations	Rented by plan- tations	Total furnishe by plan tations	Ivien	Wo- men	Chil- dren	Total	Owned by plan- tations	Rented by plan- tations	Total furnished by plan-
Portuguese:			-							-				tations
Married group	489	48	7 3 1, 371 3 10	2, 347 203	366 55	53 13	419 68	518 152	510 35	1, 365	2, 393 192	385	48	433
Total	636	53	1, 381	2,550	421	66	487	070				56	12	68
awalian:							101	670	545	1, 370	2, 585	441	60	501
Married group Single group	117 53			534 56	86 20	23 12	109 32	112 61	107	314	533	75	26	
Total	- 170	116	304	590	106				· · · ·		70	30	9	101 39
leriean.					100	35	141	173	114	316	603	105	35	140
Married group	- 78	157 7	230	550 85	149 56	7	156 56	158	157 11	222	537	158	5	140
Total	- 241	164	230	635	205						93	53		53
other: Married group						7	212	240	108	222	630	211	5	210
Single group Total	- 43	31 1	76	144 44	28 30		28 30	32 50	32	72	136	26 35	1	27 36
races:	- 80	32	76	188	58		58	82	32	72			1	36
Married group		19								14	186	61	2	63
Married group Single group Total	4, 445	4, 222 198	11, 869 65	20, 526 12, 494	3, 262 2, 491	509 151	3, 771 2, 642	4, 296 12, 219	4, 109	1, 719	20, 124	3, 318 2, 524	458	3, 776
	16, 676	4, 420	11, 934	33, 030	5, 753	660	6, 413	16 515	4 207				128	2, 652
							v, 110	10,010	4, 327 1	1, 786 3	2, 628	5, 842	586	6, 428

and the second se															
WAUT	1	1	1 1	1		1				1 1	1	-	-		
Japanese: Married group Single group.	1, 682 781	1.661	5, 345	8, 688 895	1, 599 249	77 15	1, 676 264	1, 729 640	1, 679 91	5, 269 4	8, 677 735	1, 548 247	96- 25	1, 644 272	
Total	2, 463	1, 775	5, 345	9, 583	1, 848	92	1, 940	2, 369	1,770	5, 273	9, 412	1, 795	121	1, 916	
Filipino: Married group Single group.	839 6, 226	704 11	1, 500	3, 043 6, 237	644 1, 090	6 13	650 1, 103	870 6, 601	656 5	1, 424	2, 950 6, 606	596 1, 164	7 17	603 1, 181	
Total.	7, 065	715	1, 500	9, 280	1, 734	19	1, 753	7, 471	661	1, 424	9, 556	1, 760	24	1, 784	
Chinese: Married group Single group	35 198	29 2	108	172 200	27 90	6 7	33 97	39 191	35 2	110	184 193	27 79	68	33 87	
Total	233	31	108	372	117	13	130	230	37	110	377	106	14	120	
Korean: Married group Single group	<u>50</u> 70	51	183	284 70	51 33	1	51 34	48 72	48	179	275 72	47 32	1	47 33	
Total	120	51	183	354	84	1	85	120	48	179	347	79	1	80	
Porto Rican: Married group Single group	143 59	127 14	361	631 73	115 23	2	117 24	151 52	123 11	367	641 63	118 26	1	119 26	
Total	202	141	361	704	138	3	141	203	134	367	704	144	1	145	
Portuguese: Married group Single group	414	429 71	1, 434	2, 277 184	389 22	14 2	403 24	415 106	428 53	1, 393	2, 236 159	379 27	14 1	393 28	
Total	527	500	1, 434	2, 461	411	16	427	521	481	1, 393	2, 395	406	15	421	
Iawaiian: Married group Single group	158	158 7	430	746 62	119 15	22 2	141 17	156 35	154 11	418	728 46	129 17	19 1	148 18	
Total	213	165	430	808	134	24	158	191	165	418	774	146	20	166	
American: Married group Single group	106 37	104 15	140	350 52	102 18	2	104 18	110 37	117 23	149	376 60	109 23	2	111 23	
Total	143	119	140	402	120	2	122	147	140	149	436	132	• 2	134	
All oth <mark>er:</mark> Married group Single group	61 10	53 15	156	270 25	55 7	- 1	56 7	50 7	47 5	126	223 12	43 3	2	45 3	
Total	71	68	156	295	62	1	63	57	52	126	235	46	2	48	

LABOR CONDITIONS IN HAWAII, 1929-1930

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				June 3	0, 1929					;	Decemb	er 31, 1929		
Island, race, and marital condition	1	Number	of pers	ons		of houses loyees and		N	umber	of perso	ns		of houses oyees and	
	Men	Wo- men	Chil- dren	Total	Owned by plan- tations	Rented by plan- tations	Total furnished by plan- tations	Men	Wo- men	Chil- dren	Total	Owned by plan- tations	Rented by plan- tations	Total furnished by plan- tations
MAUI—continued All races: Married group Single group	3, 488 7, 549	3, 316 249	9, 657	16, 461 7, 798	3, 101 1, 547	130 41	3, 231 1, 588	3, 568 7, 741	3, 287 201	9, 435	16, 290 7, 946	2,996	147 53	3, 143 1, 671
Total	11, 037	3, 565	9,657	24, 259	4, 648	171	4, 819	11, 309	3, 488	9, 439	24, 236	4, 614	200	4, 814
Japanese: OAHU Married group Single group	1, 651	1, 617 142	4, 819	8, 087 856	1, 542 156	33 2	1, 575 158	1, 589	1, 579	4, 764	7, 932	1,406	32	1, 438
Total	2, 362	1, 759	4, 822	8, 943	1, 698	35	1, 733	2, 333	1, 719	4,764	8, 816	1, 592	40	1,632
Filipino: Married group Single group	1, 734 5, 938	1, 121 21	2, 390	5, 245 5, 962	1, 219 879	13 2	1, 232 881	1, 649 5, 782	1, 098 21	2, 457	5, 204 5, 803	1, 239 1, 019	14	1, 253 1, 021
Total	7, 672	1, 142	2, 393	11, 207	2, 098	15	2, 113	7, 431	1, 119	2, 457	11,007	2, 258	16	2, 274
Chinese: Married group Single group	44 347	34	109 1	187 348	40 74	2 4	42 78	43 290	32	100	175 290	40 72	1	41 73
Total	391	34	110	535	114	6	120	333	32	100	465	112	2	114
Korean: Married group Single group	64 72	55 1	221	340 73	74 13	1	74 14	63 54	52 3	207	322 57	65 20		65 20
Total	136	56	221	413	87	1	88	117	55	207	379	85		85

TABLE 14.— Census of persons (employees and families) and houses on 41 sugar plantations in the Territory of Hawaii, June 30, and December 31, 1929, by island, race, and marital condition—Continued

and the second se														
Porto Rican: Married group	107	93 14	291	491	85	1	86	108 44	98 13	270	476 57	87 12	2	89 12
Single group	151	107	291	549	96	1	97	152	111	270	533	99	2	101
Portuguese: Married group	290	271 18	770	1, 331 94	257 9	2	259 9	258 90	250 19	680	1, 188 109	240 21	1	241 21
Total	365	289	771	1, 425	266	2	268	348	269	680	1, 297	261	1	262
Hawailan: Married group Single group	56	53 2	125	234 35	49 10	9	58 10	48 40	47	115	210 43	49 13	1 1	50 14
Total	- 89	55	125	269	59	9	68	88	50	115	253	62	2	64
American: Married group	155	155	243	553 73	150 30	1	151 30	146 63	149 14	208	503 77	138 30	1	139 30
Single group	214	169	243	626	180	1	181	209	163	208	580	168	1	169
Total All other: Married group Single group	25	24 1	36	85 19	23 4		23 4	25 19	22 5	38 4	85 28	22 11		22 11 ·
Total	43	25	36	104	27		27	44	27	42	113	33		33
All races:	4, 126	3, 423	9,004	16, 553 7, 518	3, 439 1, 186	61 9	3, 500 1, 195	3, 929 7, 126	3, 327 218	8, 839 4	16, 095 7, 348	3, 286 1, 384	52 12	3, 338 1, 396
Single group Total	11, 423	3, 636	9,012	24, 071	4, 625	70	4, 695	11, 055	3, 545	8, 843	23, 443	4, 670	64	4, 734
Japanese: Married group	1, 196	1, 147	3, 330 54	5, 673 562	1, 032 251	18 8	1, 050 259	1, 161 492	1, 128	3, 304 33	5, 593 594	1, 027 290	21 15	1,048
Total	1, 660	1, 191	3, 384	6, 235	1, 283	26	1, 309	1, 653	1, 197	3, 337	6, 187	1, 317	36	1, 353
Filipino: Married group Single group	696 7,408			2, 572 7, 417	541 1, 022	8	541 1, 030	685 7, 174	579 2	1, 320 ·2		527 1, 027	<u>1</u>	527 1, 028
Total			1, 277	9, 989	1, 563	8	1, 571	7, 859	581	1, 322	9, 762	1, 554	1	1, 555

LABOR CONDITIONS IN HAWAII, 1929-1930

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SUGAR INDUSTRY

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		_		June	30, 1929			n the Territory of Hawaii, June 30, and December Continued December 31, 1929								
Island, race, and marital condition		Numt	per of pe	rsons	Numb to em	er of houses ployees and	s furnished d families		Numbe	r of per		Numbe	er of houses	furnished		
	Men	Wo- men	Chil- dren	Total	Owned by plan- tations	- by plan.	Total furnished by plan- tations	Men	Wo- men	Children	Total	Owned by plan- tations	Repted	Total furnished by plan-		
KAUAI—continued Married group Single group		12 1	39 2	65 220	11 64		11	16	14	40				tations		
Total Korean:	231	13	41	285	75		64	191	1	40 2	70 194	13 71		13 71		
Married group					15		75	207	15	42	264	84		84		
Single group		23 1	76	123 65	23 25		23 25	22 56	21	81	124	21				
	88	24	76	188	48		48	78	1		57	27		21 27		
Married group.	92	83	0.5.1					18	22	81	181	48		48		
Single group	44	3	254 1	429 48	77 19		77	92 44	88	251	431	81		-		
TT119116SO:	136	86	255	477	96	1	97		6		50	20	1	81 21		
Married group Single group	294 65	285	802 19	1, 381	248			136	94	251	481	101	1	102		
Tota]		27		111	248	12	260 20	311 63	285 33	769 14	1, 365	248	11	259		
W81197	359	312	821	1, 492	268	12	280	374	318		110	23	Ĩ	209		
Married group. Single group.	73	70	193	336	66 -		66	====			1, 475	271	12	283		
Total	97	71		29	12	2	00 14	77 25	72	149	298 31	74	2	76		
			197	365	78	2	80	102	75	152	329	12		12		

American: Married group Single group.	- 130	131 14	182	443 53	122 30	1	123 30	131 28	132 15	178	441 43	124 22		124 22
Total	169	145	182	496	152	1	153	159	147	178	484	146		146
All other: Married group Single group	53	55 3	105	213 15	44 4		44 4	50 10	50 5	108	208 15	46 4		-
Total	65	58	105	228	48		48	60	55	108	223	50		50
All races: Married group Single group	2, 572 8, 337	2, 412 96	6, 251 87	11, 235 8, 520	2, 164 1, 447	31 19	2, 195 1, 466	2, 545 8, 083	2, 369 135	6, 200 54	11, 114 8, 272	2, 161 1, 496	34 18	2, <mark>195</mark> 1, 514
Total	10, 909	2, 508	6, 338	19, 755	3, 611	50	3, 661	10, 628	2, 504	6, 254	19, 386	3, 657	52	3, 709
ALL ISLANDS Japanese: Married group Single group	3, 073	6, 982 430	21, 148 106	35, 339 3, 609	6, 080 1, 109	531 91	6, 611 1, 200	2, 958	446	20, 847 83	3, 487	5, 936 1, 153	497 95	6, 433 1, 248
Total.	10, 282	7, 412	21, 254	38, 948	7, 189	622	7, 811	9, 973	7, 273	20, 930	38, 176	7, 089	592	7, 681
Filipino: Married group Single group	3, 935 29, 809	3, 042 35	6, 601 11	13, 578 29, 855	2, 896 4, 674	31 68	2, 927 4, 742	3, 854 29, 828	2, 927 32	6, 614 5	13, 395 29, 865	2, 846 4, 940	38 66	2, 884 5, 006
Total	33, 744	3, 077	6, 612	43, 433	7, 570	99	7, 669	33, 682	2, 959	6, 619	43, 260	7, 786	104	7, 890
Chinese: Married group Single group	139 1, 024	115 7	421 3	675 1, 034	117 314	13 17	130 331	139 929	121 6	407 2	667 937	115 311	14 16	129 327
Total	1, 163	122	424	1, 709	431	30	461	1,068	127	409	1, 604	426	30	456
Korean: Married group Single group	194 391	179 3	654 1	1, 027 395	193 136	2 5	195 141	181 341	169 5	654 7	1, 004 353	179 132	24	181 136
Total	585	182	655	1, 422	329	7	336	522	174	661	1, 357	311	6	317
Porto Rican: Married group Single group	533 256	477 38	1, 362 3	2, 372 297	427 96	7 8	434 104	552 245	489 41	1, 367 4	2, 408 290	440 106	7 4	447 110
Total	789	515	1, 365	2, 669	523	15	538	797	530	1, 371	2, 698	546	11	557

TABLE 14.—Census of persons (employees and families) and houses on 41 sugar plantations in the Territory of Hawaii, June 30, and December 81, 1929, by island, race, and marital condition—Continued

				June :	30, 1929						Decemi	per 31, 1929		
Island, race, and marital condition		Numb	er of per	rsons	Number to emp	of houses loyees and	furnished families		Number	of per	sons	Number to emp	of houses loyees and	furnished families
	Men	Wo-			Owned by plan- tations	Rented by plan tations	Total furnished by plan- tations	¹ Men	Wo- men	Children		Owned by plan- tations	Rented by plan- tations	Total furnished by plan- tations
ALL ISLANDS—continued ortuguese: Married group Single group	- 400		4, 377		1, 260 106	81 15	1, 341 121	1, 502	1, 473	4, 207	7, 182	1, 252	74	1, 326
Total	- 1,887	1, 634	4, 407	7, 928	1, 366	96	1, 462	1,913	1, 613	4, 226	7,752	1, 379		1,467
awailan: Married group. Single group	- 404	396 11	1,050	1, 850 182	320 57	54 16	374 73	393 161	380 24	996	1, 769	327	48 11	375
Total	- 569	407	1,056	2, 032	377	70	447	554	404	1,001	1, 959	399	59	458
merican: Married group Single group	- 213	547 50	795	1, 896 263	523 134	11	534 134	545 210	555 63	757	1,857	529 128	8	438
Total	767	597	795	2, 159	657	11	668	755	618	757	2,130	657	8	665
l other: Married group Single group		163 20	373	712 103	150 45	1	151 45	157 86	151 15	344 4	652 105	137 53	3	140 54
Total	259	183	373	815	195	1	196	243	166	348	757	190	4	194
l races: Married group Single group	14, 631 35, 414	13, 373 756	36, 781 160	64, 785 36, 330	11, 966 6, 671	731 220	12, 697 6, 891	14, 338 35, 169	13, 092 772	36, 193 129	63, 623 36, 070	11, 761 7, 022	691 211	12, 452 7, 233
Total	50, 045	14, 129	36, 941	101, 115	18, 637	951	19, 588				225	18, 783	902	19, 685



FIGURE 1.-FURROWING OUT CONTOUR LINES FOR PLANTING

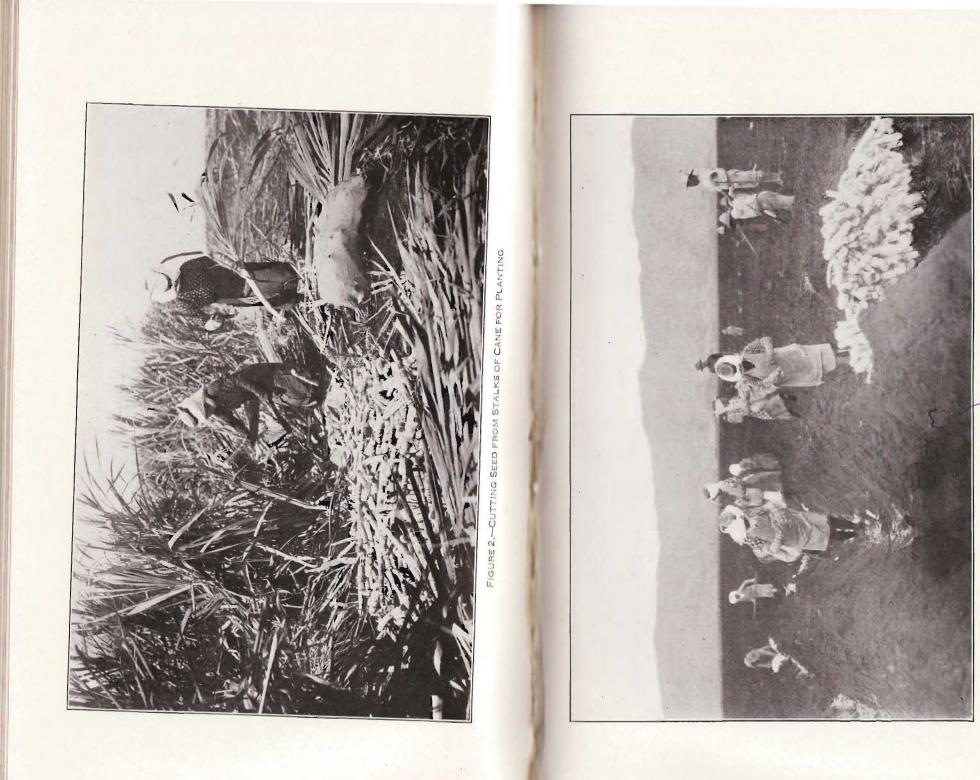
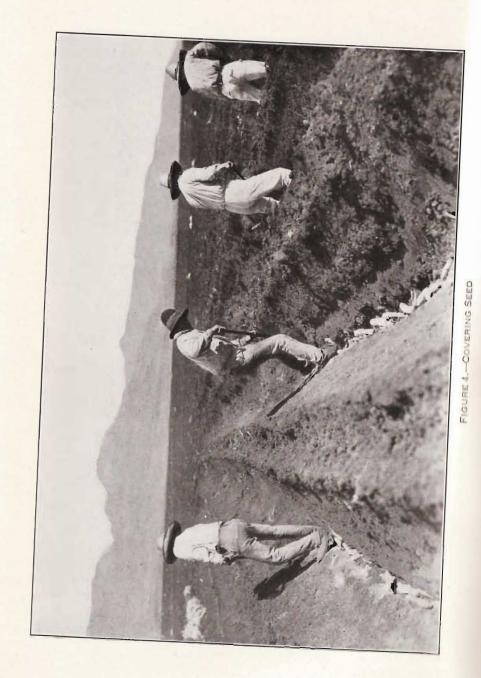


FIGURE 3.-DROPPING SEED



Methods of Cultivation

The growing of a crop of sugarcane on a sugar plantation in the Hawaiian Islands requires from 18 to 24 months, or from 4 to 12 months longer than on a plantation in any other of the principal cane-sugar producing localities in the world. On a Hawaiian plantation there may at certain periods in each year be plowing, harrowing, and fertilizing in one or more fields; planting cane in other fields; cultivating in still other fields; and cutting, piling, loading, and hauling cane to sugar mills from still other fields.

Sugarcane raising in Hawaii is "factoryized" agriculture. Piece or contract work is general, and the work processes are specialized to make this method of labor remuneration possible. The processes are divided into sections so as to form a basis for a piece rate. The ultimate purpose, or objective, of the piece-rate system is to enable the plantation management to determine in advance, as nearly as possible, the final labor cost of a short ton of clean cane at the grinding mill.

The ground is plowed from 14 to 24 inches deep. The first plowing on the larger plantations is usually with tractors, and where conditions permit, it is done on the basis of from 60 to 75 cents per acre, according to conditions. The subsequent harrowing is made another piece-rate unit. The furrowing for planting, another unit, may be puid for by the acre or the row (fig. 1). The first fertilization is upon the basis of an acre, a row, or a bag of fertilizer. Planting consists of placing cuttings of selected cane stalks in the furrows. These cuttings, which consist of three joints to each piece, are placed in the bottom of the furrow and covered with two or three inches of soil. After a preliminary irrigation, the cultivator contractor takes charge of the field (figs. 2, 3, 4, and 5).

In the cultivation of the crop during the growing of the cane, beginning with the first hoeing or weeding after the appearance of the tender shoots from the eyes or buds of the cuttings that were placed in furrows in newly planted fields or "ratoons" (shoots) from the buds on the short stubs of old stalks of the preceding crop, and continuing to maturity when the cane is ready for cutting, the work is done either by "short-term" or "long-term" contract.

A short-term contract applies to a piece of work, such as the hoeing of one or more fields of a certain number of acres, or the irrigating or fertilizing of the same, at a specified rate per acre.

The long-term contract covers all of the cultivation of the cane on one or more fields from the beginning to maturity. Such contractors are paid a certain rate per ton of cane produced on the field or fields, the rate being based on the known number of tons of cane produced in preceding years or crops. Rates per ton vary from field to field.

Long-Term Cultivation Contracts

In order to understand the operation of the cultivation contract, or the so-called "long-term" contract, it is necessary to go back a little in the working methods. First, a plantation is divided into fields. The size of these fields may vary on the same plantation from 50 to 280 acres, and only one-half of the fields are harvested each year. One plantation, for instance, with 11,350 acres actually producing cane is divided into 77 fields. Each field is carried separately on the company's books and represents a single long-term

contract. When the preliminary work has been done, a contract is let to a person who, with the assistance of the company in making his selections, organizes a cultivating gang, usually one man for each 10 acres in the field. These men agree to weed, irrigate, and fertilize this field-bring the cane to the point of cutting or harvesting (fig. 6). The payment for this is based upon the ton of clean cane delivered from the particular field at the grinding mill. Since this cultivation con-tract may extend over a period of from 18 to 22 months, advance payments must be made on the contract. These advance payments are uniform, amounting to \$1 per day per man for the work actually performed in the field, and are made monthly on the basis of 30 days per month. The advances are increased 10 per cent for attendance of 23 or more days per month. If a man works 23 days in a month, he is paid \$23 plus \$2.30 for attendance, or \$25.30. Final settlement is made when the cane is harvested and weighed at the mill, complete records of days worked per man and per gang being kept. The men of the crew are paid the difference between the number of tons produced times the tonnage rate and the amount advanced during the time of the contract. The amount paid as a bonus for attendance is not deducted.

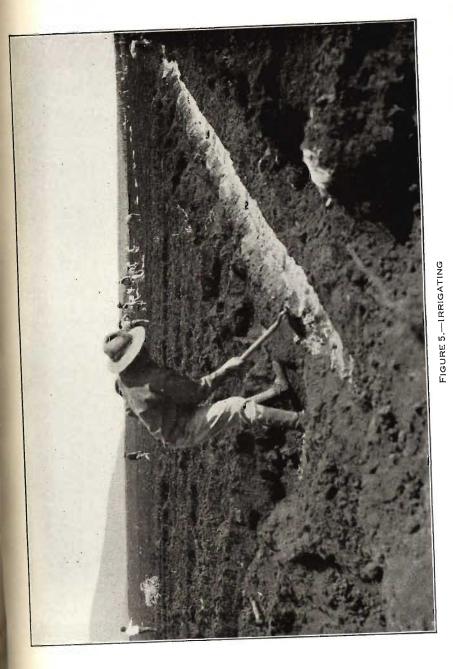
Productivity of the soil, type of cane, and difficulties met with in cultivation or irrigation influence the setting of the piece or tonnage rate for the long-term contract men or cultivators. Thus on one plantation where the average tonnage yield per acre for the 1929 crop was 86.88 and the average tonnage contract price for cultivation was \$1.009 per ton of clean cane, there were certain fields where the price was 95 cents per ton, but the yield for that field was 109.85 tons per acre.

The days of cultivation per acre also vary, as one field may be more weedy than others and require more man-days' work per acre. On a plantation where the average number of man-days worked per acre for the entire plantation was 32.44, the lowest number of mandays per acre for the fields was 20.86 and the highest, 41.48.

All of these conditions must be considered in fixing a piece rate that will enable the men to earn about the same amount of money per day on final settlement and at the same time keep a fairly uniform labor cost per ton of cane, or ultimately per ton of raw sugar.

Some gangs are unable to keep up with the work, or get temporarily behind, say, with weeding. The management then furnishes a few extra men for a brief period, charging this up to the contract, except that in the case of temporary sickness of a man or two additional assistance is sometimes furnished without charge. Men sometimes quit or "desert" after the work is started, usually in the early period of the contract; but these menforfeit their share in the final settlement, but of course have had their \$1 a day advance plus bonus of 10 cents per day for 23 or more days' attendance in month. This \$1 per day, therefore, is not only an advance payment on contract to enable the men to live during the production of the crop, but is also a guaranteed minimum wage.

When the crop is raised, the next step is to burn over the fields to destroy as far as possible the blades which grow near the ground and hinder the work of cutting (fig. 7). The burning also destroys insects, and really benefits the cane if the cutting is done within 72 hours after the burning. Cane may, however, be cut without burning, but in



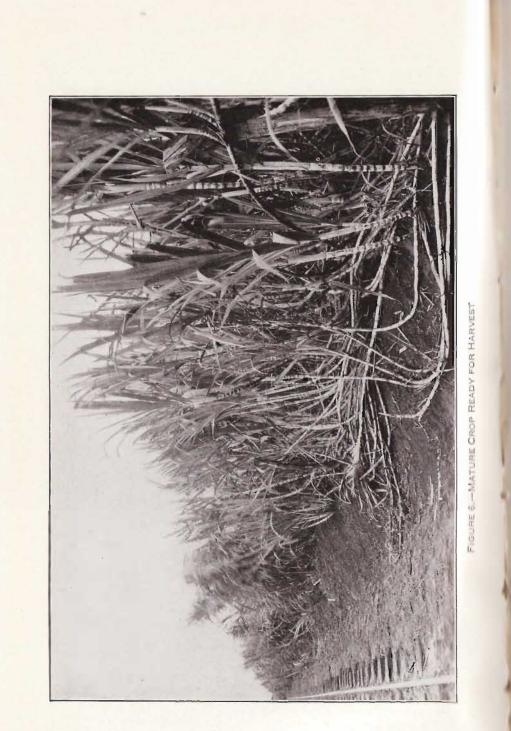
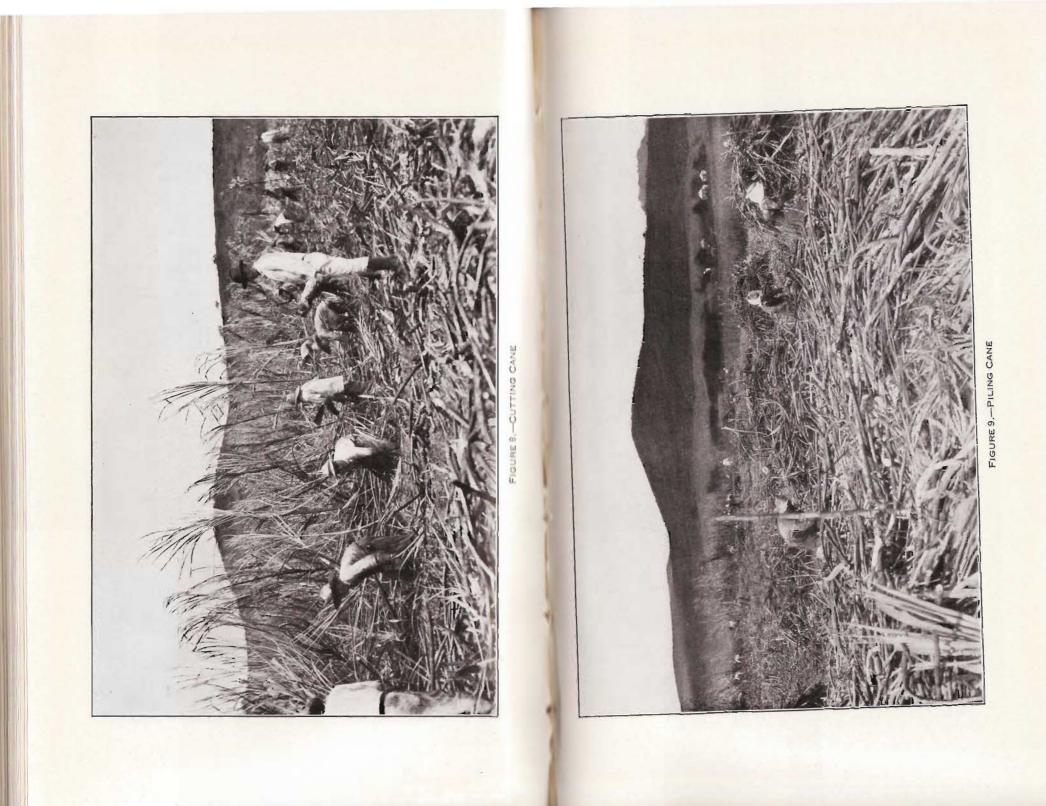




FIGURE 7.-BURNING CANE







SUGAR INDUSTRY

such case the piece rate for cutting is higher, and the piling rate is also higher because the excess leaves or blades litter the ground and make it more difficult to pick out the pieces of cane for piling. Cutting is done by gangs or by individuals. When gangs are employed the piece rate is based upon a ton of clean cane at the mill, but individual cutting is paid for by the row. The cutting is done with a broad, thin-blade machete, which has a hook on the end of the blade, weighs two or three pounds, and is kept very sharp. Sugarcane talks, which grow 18 to 20 feet high in good soil, must not only be tut off at the ground but each stalk must be cut in two, the lengths being eight or nine feet, the cutter throwing the cane on the ground behind him (fig. 8).

The piling of the cane is another process and forms a separate piece-rate unit (fig. 9). The piles are of given dimensions, each pile containing from 2,000 to 2,200 pounds. When the cutting is done by pangs tickets are placed upon each pile showing the cultivator's contract number, the cutter gang number, and the piler gang number. Where cutting is done by the row, the piles are not ticketed for the cutter.

Loading is done by hand upon cars or by machines (mechanical loaders—see fig. 10). Hand loading is very hard work. The cars hold approximately 4 tons of cane. Usually the cars are hauled by mules on temporary tracks to the permanent tracks upon which small engines operate in moving cane to sugar mill (fig. 11). The temporary tracks are laid in the field by track-laying crews, which also work at piece rates.

The cane tops are cut for feed for the mules. This, too, is piecework, paid at the rate of 1 cent a bundle.

Where the cane is transported from the field to the grinding mills by means of flumes, the cane is tied into bundles weighing from 60 to 80 pounds each; these are carried to the edge of the flume but not placed in the flume itself by the cutters (figs. 12 and 13). The following statement by the manager of a "flume plantation" describes the operation:

Forty-five cents a ton is paid for cutting and piling yellow Caledonian cane alongside flumes—47 and 49 cents for yellow-tip cane because this weighs less than yellow Caledonian. Price varies because of field conditions. The cane rut from two rows by two men is piled into one row.

It is tied into bundles weighing 60 to 80 pounds. All cane on this plantation is carried from the fields to the sugar mill by the water flowing in the flumes. The flume is a long V-shaped, continuous trough made of planks. A section of the flume will last for the carrying of four or five crops of cane. That part of the flume system near the sugar mill is of permanent construction and is not V-shaped, but is a much larger trough in which a stronger current of water flows. The cane is flumed by "day" labor. The day force receives \$43 and the night force \$45 per month, plus the "turnout" bonus of 10 per cent to those who turn out for work 23 or more days in the month. The "day" men also act as guards for the flumes to see that the floating sections of cane stalks do not clog the flume. They also pick up any pieces of cane that may fall from the flume. A "day" man may act as a guard one day and flume cane the next.

Another statement from a manager of a plantation on another island follows. While there is some repetition, these statements from those immediately in charge give a good picture of the situation:

In 1929 this company had an average of 3,114 employees on its pay roll, 203 of whom were skilled, the great majority of the remainder being unskilled, though some were semiskilled. There were 185 women and boys. The women

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are engaged on the lighter kinds of work. Japanese women usually work part time, helping their husbands. Most of the boys work on Saturdays and during school vacation.

Eighty-three per cent of the men have been on the plantation one year or longer. The labor turnover in 1929 was 27 per cent, a reduction from 80 per cent in 1923. The heaviest turnover is among the single men.

An effort is made to seasonalize operations on the plantation so as to bring about employment the year round. Ninety-five per cent of the field work is done on the piece-price basis. The long-term sugar cane crop requires from 20 to 24 months, though the agreement is for 18 months because most of the work is completed within that period. No charge is made for fertilizer used on contractwork. Each man in a crew of workers is paid according to the number of days he works. There is a minimum guaranty of \$1 per day, but less than 5 per cent of the men fail to earn more than the minimum. A "turnout" of 23 days in a month entitles an employee to a bonus of 10 per cent of earnings. Men on a long contract may at slack times work on a short contract. The cane is cut and bundled by hand, but is loaded mostly by machine. Efficiency has been increased 20 per cent by machine loading. An official of another company has stated that each loading machine saves the work of 35 men. There are usually five in a loading crew, one to man and watch the machine with four on the ground.

Each field has a foreman. A gang of 25 has a foreman and assistant foreman. They share in the earnings of the gang and in addition they are paid a bonus based upon the earnings of the group. A gang of 25 men is expected to cultivate 250 acres.

The company owns all the houses in which its employees live. In fact, it is the company's policy not to sell houses to its employees. There is no charge for rent, light, fuel, or water. One-family houses are the rule, though there are some exceptions. There are still some barracks occupied by single men who themselves take care of their quarters. It is the policy of the company to get away from housing employees in barracks.

The company provides free hospitalization, with a resident physician-surgeon, and five nurses. There are few serious accidents.

Cost of production items in order of importance are: (1) Labor; (2) water; and (3) fertilizer.

One hundred and thirty-five million gallons of water are required daily to irrigate the 11,000 acres on this plantation. The tunnels are cut through the mountains from the windward or wet side of the island (the side on which the rainfail is heavy), in order to provide ample water supply. Between \$6,000,000 and \$7,000,000 has been invested for this purpose. The water is pumped to a height of 350 feet. Some gravity water is also available on this plantation.

On plantations where flumes are not used for floating the cane to the sugar mill, it is necessary to construct permanent as well as temporary railway tracka. There are 65 miles of main line tracks on this plantation.

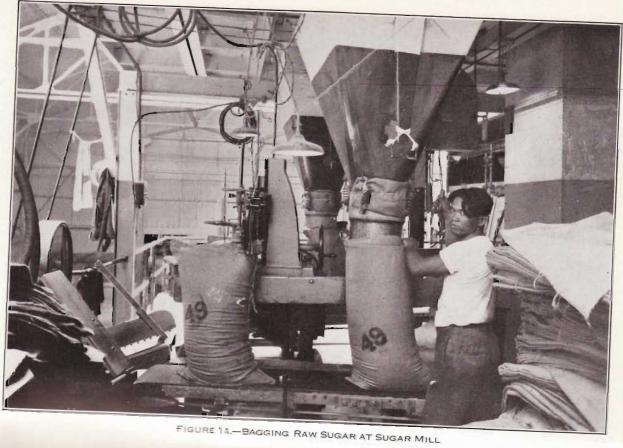
Notwithstanding the fertile land on this plantation, great quantities of fertilizer are used. This not only brings about an increased crop for the particular year, but conserves the fertility of the soil for future years. It is maintained that the company puts into the soil more than it takes out and that the productivity is greater now than it was some years ago.

The work, except on one plantation in the Hawaiian Islands, emine with the bagging and shipping of raw sugar from the sugar mills to refineries in California (figs. 14 and 15).

Wage Rates

Piece rates for the cutting of cane, whether based upon a ton of clean cane at the grinding mill or upon a row of cane in the field, me further based or rather perhaps differentiated upon the basis of the character of the cane itself and upon the quantity of work performed by the gang. For instance, H-109 is very heavy cane, with large stalks and comparatively thin rind, and does not break and lie on the ground to the same extent as some of the other canes. The general rate for cutting this cane is 18¼ cents per ton where the field has been burned over, thus clearing away the blades and rubbish for the cutter where fields are poorly burned, the rate is 21½ cents. This rate is increased on a quantity basis; on some plantations the production





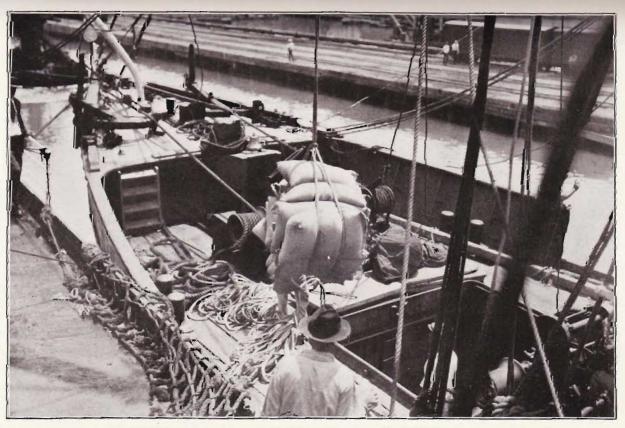
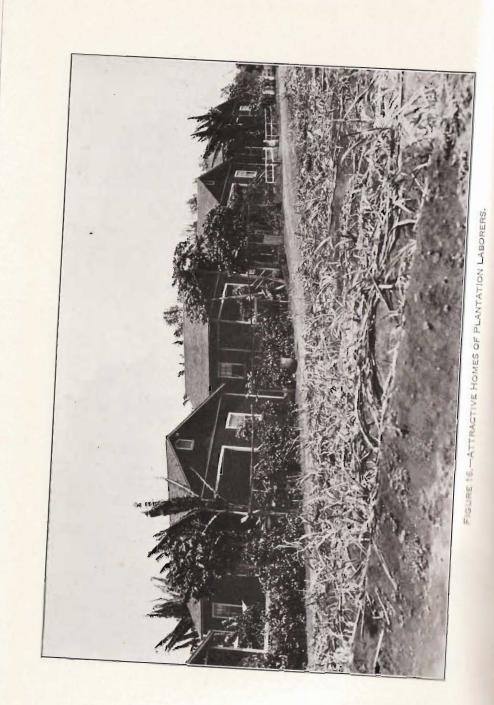


FIGURE 15.--UNLOADING RAW SUGAR FROM SHIP TO SUGAR REFINERY AT CROCKETT, CALIF.



SUGAR INDUSTRY

bonus applies when 140 tons or more are cut per man per month, and on other plantations when 200 tons or more are cut per man per month. The type of cane known as D-1135 has a smaller stalk, and hence takes more strokes of the machete to cut a ton. It has a harder rind than H-109 and requires a harder blow. The principal types of cane in use are H-109, D-1135, Badilla, Caledonia, Yellow Tip, POJ-36 and H-456, each with a different piece rate for cutting. The different cutting rates for burned and unburned fields constitute a standardized differential rate.

To indicate the extent to which piecework is applied, the harvesting rates for the crop of 1930, as given by one of the plantations, follows:

F	larvesting	rates on	one p	lantation j	for the	sugar	crop of	1930
---	------------	----------	-------	-------------	---------	-------	---------	------

	Kate per on (cents)
Tabaing humad agang	
Lahaina burned cane	1 1 90
H-109 burned cane	1 20
Str. Mexican burned cane	.)
Green cane	1 27
Half burned cane	1 22
Loading cane:	
Up to and including 200 tons	. 25
For every additional ton over 200 tons	35
Picking up cane:	
Camp 1 and camp 5	110
Kihei	65
Railroad pick ups	40
Railroad pick ups	18
"Pile up"	. 10
Operating loading machine	4
Piling cane for machine:	
Up to and including 200 tons	. 18
Every additional ton over 200 tons	. 28
Hauling cane:	
Hand-loaded fields	71/4
Machine-loaded fields	5. 6
	0.0

Long-term contract rates-1930

Plant cane up to 7½ acres per man	2 \$1.	10
Ratoon cane up to 8½ acres per man	2 1.	15

The rates of pay for more or less skilled labor on the same plantation are as follows:

	Per month	1	Per month
Machinists		Policeman	
Blacksmiths	• 4. 00	Timekeepers	175.00
	⁵ 185. 00	Electricians	175. 00-270. 00
Welders	3 10. 00	Chemist	
Carpenters	3 2. 50-4. 00	Head chemist	300.00
Locomotive engineers_	110.00-125.00	Pump engineer and	
Nurses			600.00
Steam-plow engineers_		Head carpenter	400.00
Sugar boiler	200.00	Assistant carpenter	190.00

Attendance Bonus and Other Wage Supplements

Based on the total number of days worked in 1929 by all employees on the 41 plantations covered, long and short term contractors repre-

Per ton

<sup>Five cents additional for every ton in excess of 140 tans cut per man per month.
Deduction of a cents per ton for each acre exceeding limit specified.
Rate per day.
Minum rate per day.
Maximum rate.</sup>

33

aparles II allande

sent 48 per cent and day laborers 52 per cent of the total employees. Based on money earned, including bonus, contractors represent 56 per cent and day laborers 44 per cent of the total.

In addition to the earnings there is an attendance bonus, known generally in the industry as a "turnout bonus," of 10 per cent which applies to all workers whether or not they are pieceworkers. The male worker who shows up for duty 23 days or more and the female worker for 15 days or more out of the possible working time during the month has 10 per cent added to his piece-rate earnings or his day-rate wages. The possible working-days, or days that the plant was in operation, therefore, becomes a very essential element, and is shown for all plantations, by islands, in Table 15.

TABLE	15.—Number	of	possible	plantation islands	working-days,	1929,	by	months	and	

	Number of working-days in plantations in-							
Month -	Hawaii	Maui	Oahu	Kauai	All islands			
January February March A pril May June June July September October November December	24 26 26 27 25 25 26 27 24 23 23 23 23 23	26 24 26 27 25 26 27 25 26 27 25 26 24 24	26 24 25 26 27 25 26 27 24 27 24 24 23	26 24 26 27 25 26 27 25 26 27 25 27 25 27 24 23	25 24 26 27 25 26 27 24 26 27 24 26 27 24 23			
Total	3001/2	306	304	306	303			
A verage	25	251/2	253/10	251/2	251			

The figures in Table 16 show for the 41 sugar plantations the number of adult males of each race, the number of adult females of the Japanese race and of all other races, and the number of minors of each sex and all races, on the May, 1929, pay rolls for each and for all islands. It also shows for each sex and race the per cent which, by attendance at work on 23 or more days in May by males and 15 or more by females, qualified for or earned the attendance bonus of 10 per cent. For example, an employee who worked on 23 or more days in a month earned at his basic rate \$39 plus a bonus of 10 per cent of such earnings-\$3.90-or a total of \$42.90. Had he worked 22 days or less he would not have earned the bonus of \$3.90.

There was only one American adult male on the pay rolls of the plantations on the island of Hawaii in May, 1929. He did not work on as many as 23 days in the month, and therefore the percentage of Americans qualifying for the bonus was 0.0. Forty-six, or 86.8 per cent, of the 53 Americans on Maui; 6, or 27.3 per cent, of the 22 on Oahu; 9, or 81.8 per cent, of the 11 on Kauai; and 61, or 70.1 per cent, of the 87 Americans on all islands qualified for the bonus.

By working 23 or more days in May, 1929, 79.4 per cent of the adult males on the island of Hawaii; 80.5 per cent of those on Maui; 89.2 per cent on Oahu; 85.2 per cent on Kauai; and 83.1 per cent of

the 47,300 on all islands earned the attendance bonus. In the month 81.3 per cent of the 1,474 adult females, 82.8 per cent of the 349 male minors, 84.2 per cent of the 19 female minors, and 83.1 per cent of the 49,142 men, women, and minors earned the bonus.

Time 16 Number of	f employees 1 of sugar	r plantations on each and all islands,
TABLE IN. IV under of	qualifying for bonus,	r plantations on each and all islands, May, 1929, by sex and race
and per cont	quarty gring juing	

	Haw	aii	Ma	ui	Oal	u	Kau	iai	All isl	ands
Sex and race	Num- ber on pay rolls	Per cent quali- fying for bonus	Num- ber on pay rolls	Per cent quali- fying for bonus	Num- ber on pay rolls	Per cent quali- fying for bonus	Num- ber on pay rolls	Per cent quali- fying for bonus	Num- ber on pay rolls	Per cent quali- fying for bonus
ADULT MALES American Spanish Portuguese	1 28 452 3,254 11,583 138 227 342 254 1	0.0 57.1 89.8 77.7 80.0 79.7 83.3 69.0 71.7 100.0	53 20 312 1, 963 6, 904 149 73 171 171 176 13	86.8 95.0 92.6 88.1 77.8 81.9 75.3 80.7 78.4 76.9	22 5 193 2.005 7,817 66 122 128 334 26	27.3 80.0 92.2 92.2 89.6 59.1 87.7 82.0 77.5 46.2	11 23 272 1, 446 8, 255 61 80 141 161 18	81. 9 95. 7 91. 2 86. 6 85. 0 93. 4 76. 3 89. 4 69. 6 77. 8	87 76 1, 229 8, 668 34, 559 414 502 782 925 58	70. 1 80. 3 91. 2 84. 9 82. 9 79. 2 82. 1 77. 4 74. 7 63. 8
Total	16,280	79.4	9,834	80.5	10,718	89.2	10, 468	85.2	47,300	83.
ADULT FEMALES Japanese All others	415 43	76.6 55.8	299 31	84. 9 67. 7	382 57	86.6 78.9	201 46	86.1 69.6 83.0	1, 297 177	83. 68. 81.
Total	458	74.7	330	83.3	439	85.6	247	83.0	1, 4/4	01.
MINORS Male Female	117	74.4	73	87.7	89		70			84.
Grand total	16, 869	79.3	10, 237	80.6	11, 249	89.0	10, 787	85.1	49,142	83.

¹ Does not include employees on monthly basis.

Because the money paid as attendance bonus is reported on the books of the company in lump sum only it is impossible to distribute it among the 83.1 per cent who qualified for the bonus. The necessity of distributing it over all of the employees has the result, therefore, of slightly decreasing the pay of the 83.1 per cent while slightly increasing the pay of the 16.9 per cent who did not earn the attendance bonus. That this result does not materially alter the daily earnings is evidenced by the fact that inclusion of the nonbonus-earning workers (16.9 per cent) reduces the per cent of bonus paid on the actual pay roll in May to 7.47 instead of 10, the per cent added to the pay of those earning the bonus.

In addition to the money wages the employees are furnished with a house, rent free, and with free fuel and light and water. Hospital treatment and medical care are also given free of charge. Some of the companies have separate hospitals of their own, while the Hawaiian Sugar Planters' Association has a very fine hospital in Honolulu.

The character of the houses has improved very much during recent years, and is constantly improving as the old types of shacks become uninhabitable and are replaced by houses of modern construction. Although too many shacks still exist and clubhouses or bachelor quarters are in some instances badly crowded, it can be said that practically all of the managers of these plantations realize that good living conditions make more efficient workers, that sanitary conditions mean fewer lost days from sickness, and that the better the home conditions the less the labor turnover; the latter, of course, is to be avoided as far as possible. (See fig. 16.)

Deserters

During the period of the long-term contracts of a representative sugar plantation in the islands one or more of the men of some of the crews left before the completion of the contract. Such men were called "deserters." Table 17 shows for each of the years from 1925 to 1929, the number of deserters; the aggregate and average number of man-days worked by them; the number of fields cultivated; and the number of fields in which there were no deserters.

The number of deserters decreased from 426 in 1925 to 338 in 1926 and from year to year to only 71 in 1929. The decrease between 1925 and 1926 was 21 per cent and between 1925 and 1929 was 83 per cent. The number of fields in which there were no deserters increased from only 1 of the 38 in 1925 to 15 of the 41 in 1929.

TABLE 17.—Number of deserters,¹ aggregate and average man-days worked by them, and number of fields in crop and number having no deserters, for one representative sugar plantation, 1925 to 1929

Year	Number of deser- ters	Aggregate man-days worked by deserters	A verage man- days worked	Number of fields in crop	Number of fields with no deserters
1925	426	21, 551, 56	50, 59	38	1
1926	338	12, 044, 46	35, 63	41	2
1927	140	4, 698, 61	33, 56	40	11
1928	98	3, 091, 00	31, 54	40	10
1929	71	2, 068, 50	29, 13	41	18

1 Workers leaving before completion of contract.

Short-term Contract Rates

The piece rates for so-called short-term contracts are even more minutely worked out than for the long-term cultivation contracts. In this connection it should be said that the so-called "short-term" contract is a misnomer. There is no signed contract in these cases the jobs are simple piecework ones, which may last one or a number of days or even less than a day. A statement of rates in 1929 follows:

SUGAR INDUSTRY

Short-term contract rates, 1929

Boxes, irrigating, per acre\$1. 25 Special, per acre\$2. 00, \$2. 50, \$3. 00, \$6. 00 Repairs, each\$0. 20, \$0. 50 Cane tops, per bundle\$0. 50, \$1. 00, \$1. 25, \$1. 50, \$1. 75, \$6. 50 Clearing land, per acre\$0. 50, \$1. 00, \$1. 25, \$1. 50, \$1. 75, \$6. 50
Special per acre \$2,00,\$2,50,\$3,00,\$6,00
Benairs each \$0 20 \$0 50
Cana tons ner bundle
Clearing land por agree \$0.50 \$1.00 \$1.25 \$1.50 \$1.75 \$6.50
Ditching, per foot \$0. 005, \$0. 0075, \$0. 01, \$0. 015, \$0. 025, \$0. 03
Dicting, per 1000
Fertilizing, per acre \$0. 50, \$0. 60, \$1. 10, \$1. 15, \$1. 20, \$1. 25
Special, per bag
Fertilizing: Spreading and covering, per acre_ \$1. 10, \$1. 20, \$1. 25, \$1. 50, \$1. 75
Experiment, per acre\$3.00 Fertilizing: Trenching, spreading, and covering, per acre\$1.60, \$2.00, \$2.25
Pertinging: Trenching, Spreading, and covering, per acre 51, 00, 52, 00, 52, 25
Fertilizing: Weighing, mixing, spreading, and covering (experiment), per
acre\$2.50 Gates, large\$0.90 Repairs\$0.35
Gates, large \$0.90
Repairs\$0.35
Gates, small \$0, 40
Repairs\$0.20
Repairs \$0. 20 Hilling up, per acre \$2. 25, \$3. 00, \$3. 50, \$4. 00,
\$4. 50, \$5. 00, \$5. 25, \$5. 50, \$6. 00, \$6. 50, \$7. 00, \$8. 00, \$9. 00
Irrigating, per acre\$0.75.
Irrigating, per acre\$0. 75, \$0. 80, \$1. 00, \$1. 25, \$1. 50, \$1. 75, \$2. 00, \$2. 50, \$3. 00, \$3. 50
Nitrate, rebagging, per 100 bags
Nitrate, rebagging, per 100 bags\$1. 25 Nitrate, unloading, per ton\$0. 20, \$0. 25
Special \$6.00
Pipes
$\begin{array}{c} \text{Training, per are} \\ \text{Solutions out per are} \\ Solutions out pe$
1.48 mg out, per acre- 54. 00, \$4. 50, \$5. 00, \$6. 00, \$6. 50, \$7. 00, \$8. 00, \$8. 50, \$9. 00
Rock, loading, per ton \$0, 53, 00, \$0, 00, 00, 50, 50, 50, 50, 50, 50, 50, 5
Sand, loading, per car\$0. 50
Seed, cutting, per bag \$0.04½-\$0.12
Seed, dipping, per 100 bags \$0. 50, \$0. 60, \$0. 621/2
Tramways, digging, per acre \$0. 25, \$0. 50, \$1. 00, \$1. 25, \$1. 50, \$2. 00
Trenching, per acre
Weeding, per acre\$1. 00, \$1. 50, \$2. 00, \$2. 25, \$2. 50,
\$3. 00, \$3. 50, \$4. 00, \$4. 50, \$5. 00, \$5. 50, \$7. 00, \$7. 50, \$8. 00
Wood, cutting, per cord\$1. 25, \$1. 40, \$1, 65
Wood, loading, per cord \$0. 20, \$0. 25, \$0. 35
Wood, unloading, per cord\$0. 10

Short-term contract piecework rates which were paid in 1930 by a representative sugar plantation for certain kinds of contract work are shown in Table 18.

The rates paid for cutting, piling, or loading cane by hand increased with the increase in each classified group of average tons handled per man in a month by each gang or group. Example: A rate of 18% cents per ton was paid for cutting burned cane when the average per man ranged from 1 to 119 tons per month; of 19 cents for an average from 120 to 139 tons per month; of 20 cents for an average from 140 to 159 tons per month; of 21 cents for an average from 160 to 179 tons per month; and of 22 cents for an average of 180 or more tons per month. Burned cane is cane in a field fired for the purpose of burning the blades from the stalk, thus reducing the amount of work and making it possible to handle more units per man-day. Higher rates were paid for unburned cane and for a variety generally known as D-1135 than for burned cane. Fields are usually burned before cutting, except when wet weather or other causes make it impossible.

For installing portable track the rates were 20 cents for one rail and 40 cents for one switch.

TABLE 18.—Short-term contract piecework rates on a representative sugar plantation

	R	lates paid for-	-
Kind of work and amount done per man per month	Burned	Unburned cane	D-1135 cane
Cutting cane (tons per month per man):	Cents	Cents	Cents
1 to 119	18, 25	24.25	20.00
120 to 139	19.00	25.00	20. 75
140 to 159	20.00	26.00	21. 7
160 to 179	21,00	27.00	22.7
180 or more	22.00	28.00	23.7!
Loading cane, by hand (tons per month per man):	22.00	20.00	40. 1
1 to 89	25.00	27.00	27.00
90 to 99	25. 25	27.25	27.2
100 to 119	25. 50	27.50	27.50
120 to 129	25.75	27.75	27.7
130 to 149	26.00	28.00	28.00
150 to 159	26. 25	28, 25	28, 23
160 to 169	26, 50	28, 50	28. 50
170 to 189	26.75	28.75	28.7
190 to 199	27.00	29.00	29.0
200 to 229	27. 50	29.50	29.5
230 or more	28.00	30,00	30.00
Piling cane for loading machines (man-days per month):	20.00	00,00	00.0
1 to 89	20.00	22.00	22.00
90 to 99	20, 25	22. 25	22. 2
100 to 119	20. 50	22.50	22. 5
120 to 129	20. 75	22.75	22. 7
130 to 149	21.00	23.00	23. 00
150 to 159	21, 25	23. 25	23. 2
160 to 169	21, 50	23. 50	23. 50
170 to 189	21.75	23.75	23. 7
190 to 199	22.00	24.00	24. 0
200 to 229	22. 50	24.50	24. 54
230 or more	23.00	25.00	25. 0
Hauling cane in field (per ton)	3. 50-5. 00	3, 50-5, 00	3. 50-5. 0
Picking up scattered cane in field (per ton)	40.00	45.00	0.00-0.0
Picking up scattered cane along main line railroad (per ton)	50.00	50,00	50.0

Labor Cost

Table 19 shows for each of five representative sugar plantations and for the five combined the labor cost per ton of cane and per ton of raw sugar in 1928, by kinds of work.

The kinds of work are: Clearing and plowing (clearing, steam plowing, steam-plow repairs, furrowing, mule plowing and harrowing, and repairs to mule plows); preparing and planting (preparing and ditching, cutting seed, hauling seed, seed cane, cane planting and replanting); water supply (pump expense, pump repairs, pump-pipeline maintenance, supply-ditch maintenance, and transmission line repairs); cultivating (irrigating, hilling up (hand), weeding and hoeing, cutting back, insect extermination, hilling up plowing); fertilizing (applying fertilizers and manuring); harvesting and delivering cane to sugar mill (cutting cane (hand and mechanical), loading cane, hauling cane, fluming cane, mechanical cane loading); manufacturing of raw sugar from cane and bagging it for shipment (mill expense, mill repairs and maintenance, containers and twine, mill electric power, fuel).

In addition the table shows the total labor cost to the time the cane is ready for cutting; the total labor cost of cane up to delivery at the sugar mill; the total cost of raw sugar in bags; the general repair cost, including sundry expense and accounts, sanitation, salaries and other expense; salaries alone; general repairs, sanitation, and sundry expense accounts, excluding salaries; and the grand total cost per ton of cane and of sugar. The labor cost of clearing and plowing ranged from 9.7 cents per ton of cane and 91 cents per ton of sugar on plantation No. 5 to 17.8 cents per ton of cane and \$1.332 per ton of sugar on plantation No. 2. The average cost for the five plantations combined was 14.5 cents per ton of cane and \$1.102 per ton of sugar.

The cost of preparing and planting ranged from 7.2 cents per ton of cane and 50.7 cents per ton of sugar on plantation No. 1 to 15.4 cents per ton of cane and \$1.447 per ton of sugar on plantation No. 5. The average for the five plantations was 11.4 cents per ton of cane and 86.6 per ton of sugar.

The cost of cultivating ranged from \$1.02 per ton of cane and \$9.552 per ton of sugar on plantation No. 5 to \$1.689 per ton of cane and \$12.668 per ton of sugar on plantation No. 2.

The total average labor cost for the five plantations was \$3.745 per ton of cane and \$28.389 per ton of raw sugar. The labor cost of clearing and plowing was 3.9 per cent of the total labor cost; the cost of preparing and planting, 3 per cent; the water supply expense, 4.6 per cent; the cost of cultivating, 39.5 per cent, of fertilizing, 1.4 per cent, and of harvesting, 23.9 per cent; the sugar-mill expense, 9 per cent; salaries, 4 per cent; and general repairs, sanitation, etc., 10.7 per cent.

TABLE 19.—Labor cost, tons of cane and sugar produced, and labor cost per ton of cane and sugar on five sugar plantations, 1928, by kind of work

		Tons prod	luced	Labor cost per ton of—	
Kind of work, and plantation number	Labor cost	Cane	Sugar	Cane	Sugar
earing and plowing:		502, 659, 48	71, 720. 00	\$0. 132	\$0.924
Dispitation No 1	\$66, 299. 38	340, 012, 68	45, 326, 00	.178	1. 332
Disstation No.9	00,010.00	186, 306, 96	25, 246. 07	. 149	1.10
Diantation No 3	MI, OAAIAI	172, 311. 86	20, 122, 65	. 161	1.37
Plantation No 4	15, 157, 29	156, 025, 91	16, 652. 00	. 097	. 91
Plantation No. 5	10, 107. 29	100, 050, 01			
Total	197, 370. 08	1, 357, 316. 89	179.066.72	. 145	1.10
in and planting:		FOO 650 40	71, 720. 00	.072	. 50
Diantation No.1	36, 335. 75	502, 659. 48	45, 326, 00	. 138	1.0
		340, 012. 68	25, 246. 07	.114	.8
		186, 306. 96	20, 122. 65	. 153	1.3
Diantation No 4		172, 311. 86 156, 025. 91	16, 652. 00	. 154	1.4
Plantation No. 5	_ 24,094.78	100, 020, 91	10,002.00		
Total	154, 993. 41	1, 357, 316. 89	179, 066. 72	. 114	.8
				107	1.1
ater supply:	84, 137. 62	502, 659. 48	71, 720. 00	. 167	1.3
Plantation No. 1 Plantation No. 2		340, 012. 68	45, 326. 00	. 185	1.0
Plantation No. 2	21, 903. 46	186, 306. 96	25, 246. 07	.118	2.0
Plantation No. 4		172, 311. 86	20, 122. 65	. 164	1.3
Plantation No. 4	25, 529. 09	156, 025. 91	16, 652. 00	. 104	1.0
		1, 357, 316. 89	179, 066. 72	. 174	1.3
Total					
ultivating:	741, 943. 87	502, 659. 48	71, 720. 00		10.
Disptation No 1		340, 012. 68	45, 326. 00		12.
		186, 306. 96	25, 246. 07		12.
Dispersion No 3		172, 311.86	20, 122. 65		
Diantation NO 4		156, 025. 91	16, 652. 00	1.020	9.
Plantation No. 5			179, 066, 72	1.479	11.
Total	2,007,040.70	=		=	=
1 111 James		502, 659, 48	71, 720. 00	. 054	
The star No. 1	26, 890. 44		45, 326. 00		
			25, 246. 07		
					s 1 .
					5 .
Plantation No. 5	5, 466, 60				
Total		1, 357, 316. 80	179, 066, 7	2 . 052	- 1

TABLE 19.—Labor cost, tons of cane and sugar produced, and labor cost per ton of cane and sugar on five sugar plantations, 1928, by kind of work—Continued

	Taba	Tons pro	oduced		cost pe
Kind of work, and plantation number	Labor cost	Cane	Sugar	Cane	Sugar
otal—All kinds of work listed above: Plantation No. 1	\$955, 607. 06	502, 659. 48	71, 720. 00	\$1.901	\$13.32
Plantation No. 2	765, 666. 63	340, 012, 68	45, 326, 00	2,252	16.89
Plantation No. 3	385, 868. 55	340, 012. 68 186, 306. 96	45, 326. 00 25, 246. 07	2.071	15. 28
Plantation No. 4	330, 414. 83	172, 311. 86	20, 122. 65	1.918	16. 42
Plantation No. 5	229, 308. 97	156, 025. 91	16, 652. 00	1.470	13.77
Total	2, 666, 866. 04	1, 357, 316. 89	179, 066. 72	1.965	14.89
arvesting: Plantation No. 1	423, 260. 68	502 659 48	71 720 00	. 842	5. 90
Plantation No. 2	306, 568, 61	502, 659. 48 340, 012. 68	71, 720. 00 45, 326. 00 25, 246. 07	. 902	6. 70
Plantation No. 3	249, 482. 60	186, 306. 96	25, 246. 07	1.339	9.88
Plantation No. 4	249, 482. 60 129, 252. 17	186, 306. 96 172, 311. 86	20, 122, 65	. 750	6. 42
Plantation No. 1 Plantation No. 2 Plantation No. 3 Plantation No. 4 Plantation No. 5	104, 013. 75	156, 025. 91	16, 652. 00	. 667	6. 24
Total	1, 212, 577. 81	1, 357, 316. 89	179, 066. 72	. 893	6. 77
otal—All kinds of work listed above (up to and including harvesting):					
Plantation No. 1 Plantation No. 2 Plantation No. 3	1, 378, 867. 74	502, 659. 48	71, 720. 00 45, 326. 00 25, 246. 07 20, 122. 65	2,742	19. 22
Plantation No. 2	1, 072. 235. 24	340, 012. 68	45, 326.00	3.154	23. 6/
Plantation No. 3	635, 351. 15	340, 012, 68 186, 306, 96 172, 311, 86	25, 246. 07	3, 410	25, 10
Plantation No. 4 Plantation No. 5	459, 667. 00 333, 322. 72	172, 311, 86 156, 025, 91	20, 122, 65 16, 652, 00	2.668 2.136	22. 8- 20. 0
		Contraction of the second		2. 858	
Total fanufacturing raw sugar:	3, 879, 443. 85	1, 357, 316. 89	179, 066. 72	2. 000	21. 6
Ianufacturing raw sugar: Plantation No. 1	182, 733. 24	502, 659. 48 340, 012. 68 186, 306. 96 172, 311. 86	71, 720, 00 45, 326, 00 25, 246, 07	. 364	2. 5
Plantation No. 2	112, 164. 49	340, 012. 68	45, 326.00	. 330	2.4
Plantation No. 2 Plantation No. 3	73, 336. 38	186, 306, 96	25, 246. 07	. 394	2.0
Plantation No. 5	182, 733. 24 112, 164. 49 73, 336. 38 42, 194. 66 45, 594. 46	172, 311, 80	20, 122, 75 16, 652, 00	. 245 . 292	2. 7
Total	456, 023. 23	1, 357, 316. 89	179, 066. 72	. 336	2. 5-
otal—All kinds of work listed above (up to and					-
including the making of raw sugar):		500 ATO 10		0.107	
Plantation No. 1	1, 561, 600. 98 1, 184, 399. 73	502, 659. 48	11, 720.00	3.107 3.483	21.77 26.11
Plantation No. 3	708, 687. 53	186, 306, 96	71, 720. 00 45, 326. 00 25, 246. 07	3. 804	28.0
Plantation No. 1	50, 861. 66	340, 012, 68 186, 306, 96 172, 311, 86 156, 025, 91	20, 122, 65	2.913	24.0
Plantation No. 5	378, 917. 18	156, 025. 91	16, 652. 00	2. 429	24. 04 22, 77
Total	4, 335, 367. 08	1, 357, 316. 89	179, 066. 72	3. 194	24. 91
eneral repairs and sundry expense accounts:					1/2724
Plantation No. 1	187, 999. 34	502, 659. 48	71, 720. 00	. 374	364
Plantation No. 2 Plantation No. 3	236, 725. 83 119, 075. 58	340, 012. 68	45, 326. 00 25, 246. 07	. 696 . 639	20
Plantation No. 4	118, 654. 66	186, 306. 96 172, 311. 86	20, 122. 65	. 689	6.00
Plantation No. 5.	85, 513. 73	156, 025. 91	16, 652, 00	. 548	6.1
Total	747, 969. 14	1, 357, 316. 89	179,066.72	. 551	4.1
alaries:				-	
Plantation No. 1	58, 510. 08	502, 659, 48	71, 720.00	. 118	1.19
Plantation No. 2 Plantation No. 3	50, 333. 41 41, 151. 41	340, 012, 68 186, 306, 96	45, 326.00 25, 246.07	. 148	- 14
Plantation No. 4	30, 957, 99	172, 311. 86	20, 122, 65	. 221	1.8
Plantation No. 5	22, 204. 41	156, 025. 91	16, 652. 00	.142	- 1 B
Total	203, 157. 30	1, 357, 316. 89	179, 066. 72	. 150	1.1
eneral repairs, sanitation, and sundry expense					
accounts (not including salaries): Plantation No. 1	129, 489, 26	502, 659. 48	71, 720, 00	. 258	10 M
Plantation No. 2	186, 392. 42	340, 012, 68	45, 326, 00	. 548	4.1
Plantation No. 3	77, 924. 17	186, 306. 96	25, 246, 07	4.18	8.0
Plantation No. 4	87, 696. 67	172, 311.86	20, 122, 65	, 509	4.8
	63, 309. 32	156, 025. 91	16, 652, 00	. 400	8.0
Plantation No. 5		1, 357, 316.89	179, 066, 72	. 401	0.11
Total	544, 811. 84	1,001,010.00		And in case of the local diversion of the loc	and the second se
Total rand total: Plantation No. 1	t and the second		71 720 00	3, 481	114.00
Total rand total: Plantation No. 1 Plantation No. 2	1, 749, 600. 32	502, 659, 48 340, 012, 68	71, 720, 00 45, 320, 00	3, 481 4, 180	It I
Total rand total: Plantation No. 1 Plantation No. 2	t and the second	502, 659, 48 340, 012, 68 186, 306, 96	71, 720, 00 45, 326, 00 25, 246, 07	4, 180	
Total rand total: Plantation No. 1 Plantation No. 2 Plantation No. 3 Plantation No. 4	1, 749, 600. 32 1, 421, 125. 56 827, 763. 11 620, 516. 32	502, 659, 48 340, 012, 68 186, 306, 96 172, 311, 86	45, 326, 00 25, 246, 07 20, 122, 65	4, 180 4, 443 3, 601	
Total rand total: Plantation No. 1 Plantation No. 2 Plantation No. 3	1, 749, 600. 32 1, 421, 125. 56 827, 763. 11	502, 659, 48 340, 012, 68 186, 306, 96	45, 326, 00 25, 246, 07	4, 180	89. 1

SUGAR INDUSTRY

It is considered worth while to include a summary of the record (Table 20) of a year's crop as harvested by a plantation, showing the segregation of the plantation into fields for cultivating purposes, the nationality of the contractors, the size of the contracting gangs, the number of acres allotted to each field or contractor, and all of the significant items of expense, by fields, that go into the production of a crop of sugar cane from the time the seed is planted—at which time the so-called long-term contractor takes possession—up to the time the cane is ready to cut, which is not a part of the long-term contractor's work.

In explanation of Table 20, which shows the settlements made with contract cultivators, it will be noted that column 1 gives the nationality of the contractors; columns 2, 3, and 4 give the area in acres, and whether planted or in ratoons (under long or short term cultivator contracts); column 5 gives the average number of men in the gang which cultivated the field; column 6 gives the number of acres cultivated per man (column 4 divided by column 5); column 7 shows the average number of cultivator man-days per acre (column 19 divided by column 4); column 8 gives the tons of cane and seed produced (seed is cane cut to lengths and used in planting) and column 9 the average tons produced per acre (column 8 divided by column 4); in column 10 is the contract price per ton of cane; column 11 shows the amount earned by contractors (column 8 multiplied by column 10); columns 12 and 13 give the number of shares (man-days⁶ of plantation labornot contract workers) and the amount of earnings, while columns 14 and 15 show the number of shares (man-days) and amount of earnings withheld because of deserters (members of gang leaving service before completion of contract); column 16 gives the monthly cash advances during the period of cultivation (\$1 for each man-day worked, see columns 19 and 20); column 17 shows the settlements on completion of contract (amount earned as shown in column 11 less amount earned by plantation labor as shown in column 13, amount withheld for deserters as shown in column 15, and amount advanced as shown in column 16); column 18 shows the number of cultivator man-days paid off; in column 19 the cultivator man-days are the total days worked in cultivating the fields by contractors; in columns 20, 21, and 22, the cash payments per man-day show the amount advanced for each man-day worked during the period of cultivation, the additional amount paid on completion of contract and the total amount for each man-day worked; column 23 gives the total number of shares or man-days (cultivator man-days worked, column 19, plus plantation labor, column 12); and column 24 gives the tons of cane per share or man-day (column 8 divided by column 23).

⁶ A share or man-day is a day's work, the length of the day varying according to the usual number of hours for the various kinds of work.

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TABLE 20.—Statement of settlements made with contract cultivators on a sugar plantation crop of 1929

_	2	A	rea in acres	S	Average	Acres	Culti-
Field	Race of contractors	Plant	Ratoons (long- term)	Total	number of men in gang	culti- vated per man	vator man-days per acre
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
io. 1	Japanese and Filipino		161.00	161.00	16.00	10.00	39.60
0. 2	Filipino		163.00	163.00	16.00	10.00	37.8
0. 3	do		103.15	103.15	9.00	11.47	33. 9:
0. 4	Japanese and Filipino		174.78	174.78	16.00	10.92	35.1
0. 5	Filipino		121.70	121.70	12.00	10.14	38. 4:
0. 6	do		126.50	126.50	12.00	10.54	37.43
0. 7	Japanese and Filipino	184.20		184.20	20.00	9.21	41. 4
0. 8	do		169.00	169.00	16.75	10.08	. 34. 19
0. 9	do		196.00	196.00	18.00	10.90	32. 3
	do		121.10	121.10	11.75	10.30	35.0
0. 11	Filipino		120.00	120.00	12.00	10.00	37.4
0. 12	Japanese		54.25	54.25	5.00	10.85	31. 5
0. 13	do		47.98	47.98	4.00	12.00	26. 4:
0. 14	do		12.20 134.60	12.20 134.60	} 11.00	13.34	20. 80
0. 15	Japanese and Filipino.		134.00	134.00	15.00	11.84	27.1
0. 10	do		202.42	202. 42	17.00	11. 90	27.10
0. 17	do	140 25	202.42	149.25	13.50	11.90	34.6
0. 13	do	149.20	123. 20	123.20	12.00	10 26	36.4
0. 19	Filipino and Korean	********	134.80	134.80	13.00	10.00	37.4
0. 20	Korean and Filipino		98.64	98.64	10.00	9.86	32.70
0. 22			271.72	271.72	24.00	11.32	28. 30
	do		188.63	188.63	15.50	12.16	31. 4
0. 20	do	65.60	65.97	131. 57	13.00	10.12	37, 3
0. 25	do Filipino	00.00	161.59	161. 59	14.25	11.33	30, 4
0. 26	do	125.79	101.00	125.79	13.00	9.68	38, 7
0. 20	do	-20.10	172.77	172.77	15.00	11.50	36, 2
0. 28	do		228.74	228.74	20.00	11.43	34, 30
0.29	Japanese		141.00	141.00	11.50	12.26	20, 8
0. 30			182.00	182.00	17.00	10, 70	30.0
	do		110.70	110.70	10.25	10.80	31. 71
0. 32	do	3.75	112.00	115.75	10.50	11.00	31. 00
0.33	Korean		131.16	131.16	12.00	11.00	34, 0
0. 34	Japanese and Filipino	115.15		115.15	12.00	9.60	36. 7
0. 35	do		187.00	187.00	17.00	11.00	32. 0
0. 36	do		218.13	218.13	20.00	10.96	34, 6
0. 37	do		1 163.00	163.00	15.00	10.87	30, 10
0. 38	do		1 174.35	174.35	15.00	11.62	23, 54
0. 39	do		1 155. 72	155.72	13.25	11.75	27. 6/
0. 40	do		1 125. 47	125.47	11.25	11. 15	28, 0
0. 41	do		1 242. 60	242.60	21.50	11.28	27, 94
Total:		12-1-1-					200
1929 crop		643.74	2 5, 474. 53	6, 118. 27	561.00	10.90	32. 44
1928 erop		896.92	3 5, 242. 36	6, 139. 28	556. 29	11.03	30. 40
1927 crop		810.88	\$ 5, 250. 91	6, 061. 79	562.91	10.77	33, 34
1926 crop		1, 257.08	\$ 4, 867. 57	6, 124. 65	583.25	10.51	30, 90
			63, 981. 51	6, 100. 45	594.75	10.25	31, 09

SUGAR	INDUSTRY	÷.		
			2.27	

 TABLE 20.—Statement of settlements made with contract cultivators on a suger plantation crop of 1929—Continued

	Cane and produc		Contract		Plantatio	on labor	Withheld of dese	because
Field	price	Total Average per acre price per cane contractor		Number of shares (man- days)	Earnings	Number of shares (man- days)	Earnings	
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
No. 1	14, 450. 65	89.60	\$1.05	\$15, 173, 17	122.25	\$285.42 377.25		
No. 2 No. 3 No. 4	13, 565, 30 9, 305, 75	82.77 .90.17	1.05 1.08 1.00	14, 243, 55 10, 051, 83 15, 916, 60	167.75 89.00 175.50	249.33 442.00	104.25	\$187.80
No. 4	15, 823. 44	88. 93 81. 50	1.00	9, 934. 57	95.00	197.82		
No. 5	9, 930, 50 11, 957, 74	94.44	1.00	11, 957.74	108.50	267.84		208.35
No. 6 No. 7	19, 843, 52	106.43	. 95	18, 851, 35	553. 50	1, 273. 35	160.25 25.50	48.30
No. 8	16, 968. 03	99.33	1.00	16, 969. 34 17, 832. 07	83.75 89.00	242.39 246.97	188.75	334.95
No. 9	17, 832. 07	90.69 94.63	1.00	11, 502. 42	57. 50	153.62		
No. 10 No. 11	11, 502. 42 9, 526. 03	78.71	1.05	10,002.33	81.75	178.83		28.90
No. 12	4, 186, 65	76.83	1. 10	4.605.32	39.25 40.75	103.17 157.04	17, 75	20. 00
No. 13	5, 044, 59	105, 14	1.00	5,044.59	8.50	25.70		
No. 14	1, 099. 45 11, 769. 32	90.12 86.73	1.00	11, 769. 32	61.00	259.42	13.75	44.70
No. 15 No. 16	16, 543. 99	92.18	1.00	16, 545. 33	101.00	339. 53	104.00	245. 55
No. 17	17, 673. 14	86.78	1.00	17, 673. 52	95.75 304.75	303.07 876.87	119,75	224.80
No. 18	16, 082. 02	105.80	.98	15, 762. 27 13, 341. 98	94.50	275. 23	84.50	161.55
No. 19	13, 341. 98 13, 040, 28	108, 30 96, 74	1.00	13, 301. 08	141.50	363.08	259.25	405.90
No. 20 No. 21	8, 743. 99	88.64	1.05	9, 181. 19	106.00	292.14	176.50	309.95 108.80
No. 22	17, 069. 50	62.82	1.00	17, 069, 50	1, 419. 75	2. 660. 80 2. 146. 62	129.00	100.00
No. 23	11, 765. 72	62.37	1.00	11, 765. 72 12, 696. 11	296.25		15.50	22.30
No. 24	12, 696, 11 15, 141, 28	95.92 93.37		15, 141. 28	288. 50	838, 48	106.25	202. 50
No. 25 No. 26	13, 902, 05	109.85		13, 215, 16	71.25		20.00	29.30
No. 27	14, 949. 65	86. 53		15, 697, 13 20, 037, 92	109.00			
No. 28	20.037.92	87.50 78.70	1.00	11. 188. 29		288. 54	128.25	204.30
No. 29	11, 188. 29 17, 240, 60	94. 72		17, 240. 60	76.00	236.65	226.00	477.75
No. 30 No. 31	10. 344. 04	93.10	1.00	10, 344. 04	54. 50			6. 50
No. 32	9, 949. 22	85.68		9, 949. 22 13, 675. 48	55.25	5 150, 72	0.10	
No. 33	13, 675. 45	103.91	1.00	10, 756. 9	81.00	202.12	10.00	14.95
No. 34		95. 2		17, 945. 7	5 120.5	354.30		89.10
No. 35		101.10	6 1.00		808.5		54.00 27.00	27.60
No. 37	11, 124. 03	68.2			3 742.7 2 543.0	1, 380. 07		87.85
No. 38	11, 272. 02	64. 5 62. 8	6 1.05 5 1.05			0 1, 143. 80	1.00	
No. 39 No. 40		70.9	0 1.05	9, 351, 1	0 577.7	5 1, 319. 30	13.00	
No. 41	15, 445. 07	63. 6		16, 217. 3	2 831.7	5 1, 772. 77	16.00	10.10
Total: 1929 crop	- 534, 308. 99 579, 485, 21	86.8 94.3	8 1.00	6 583, 270. 4	2 6,007.2	0 25, 212, 2 5 17, 946, 6	5 2, 068, 50 2 3, 091, 0	6, 142. 60
1928 crop 1927 crop			1 1.0	13 537, 150, 9	8 5, 870.0	0 14, 496. 1	3 4, 698. 6 7 12, 044. 4	
1926 crop	465, 767. 50	74.5	8 1.0	05 468, 097. 6	8 5,008.7	5 10, 545, 2 5 14, 297, 6		
1925 crop	475, 419.88	77.9	3 1.0	13,021.1	0,000.1	- 14 - Parts &	and an other set	111111

¹ Short-term ratoon contract. ² Includes 861.14 acres short term. ³ Includes 850.65 acres short term. ⁴ Includes 848.44 acres short term. ⁶ Includes 1,041.36 acres short term., ⁶ Includes 800.44 acres short term.

-207	Monthl	ments o		ultivator nan-days	-	Cash pa per ma	yments n-day	S	Total	Tons
Field	advance	es contrac basis	Number paid of	r Total worked	I In a van		le- To	tal	shares (man- days)	per share (man- day)
	(16)	(17)	(18)	(19)	(20) (21) (2	2)	(23)	(24)
No. 1 No. 2 No. 3 No. 4 No. 6 No. 6 No. 7 No. 8 No. 9 No. 10 No. 11 No. 14 No. 15 No. 14 No. 15 No. 16 No. 17 No. 18 No. 19 No. 16 No. 16 No. 17 No. 18 No. 20 No. 21 No. 22 No. 23 No. 20 No. 21 No. 22 No. 23 No. 24 No. 255 No. 33 No. 34 No. 35 No. 34 No. 35 No. 38 No. 39 No. 39 No. 31 No. 32 No. 33 No. 34 No. 38 No. 39 No. 30 <td>$\begin{array}{rrrr} -6, 166, 22, \\ 3, 498, 7, \\ -3, 498, 7, \\ -4, 765, 22, \\ -4, 735, 7, 70, 20, \\ -5, 7, 70, 20, \\ -5, 5, 770, 20, \\ -6, 337, 60, \\ -4, 248, 454, \\ -4, 491, 75, \\ -1, 713, 75, \\ -1, 713, 75, \\ -1, 258, 25, \\ -2, 706, 95, \\ -4, 821, 20, \\ -4, 248, 487, 25, \\ -5, 2, 706, 95, \\ -4, 821, 20, \\ -4, 487, 25, \\ -5, 2, 706, 95, \\ -4, 821, 20, \\ -4, 487, 25, \\ -5, 2, 768, 25, \\ -4, 821, 20, \\ -4, 487, 25, \\ -5, 2, 768, 25, \\ -4, 821, 20, \\ -4, 487, 25, \\ -5, 2, 768, 25, \\ -4, 821, 20, \\ -4, 487, 25, \\ -5, 2, 768, 25, \\ -4, 821, 20, \\ -5, 838, 35, \\ -5, 173, 20, \\ -5, 603, 20, \\ -5, 983, 00, \\ -5, 983, 00, \\ -5, 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1929 crop 1928 crop 1927 crop 1926 crop 1925 crop	86, 623, 10 3 02, 209, 20 3 84, 984, 55 2	12, 558, 10 1 13, 535, 25 1 55, 462, 10 1	83, 532, 80 97, 511, 99 72, 946, 97	198, 486, 84 186, 623, 80 202, 210, 60 184, 991, 43 194, 648, 74	1.00 1.00 1.00 1.00 1.00	1.59 2.03 1.59 1.47 1.39	2.59 3.03 2.59 2.47 2.39	209, 19 192, 63 208, 08 190, 00	1.05	2, 55 3, 00 2, 55 2, 45

TABLE 20.—Statement of settlements made with contract cultivators on a sugar plantation crop of 1929—Continued

Labor Turnover, 1929

Table 21 shows the number of adult males, adult females, minors, and the total of these three classes of employees on the pay rolls of 41 sugar plantations in each month in 1929, and the average per month for the year. It also shows the turnover rate per month and for the year of accessions and of separations (the per cent that the number added to the pay rolls in each month was of the number on the pay rolls in the month, and also the per cent that the number dropped from the pay rolls in each month was of the number on the rolls in the month).

In January, 1929, there were 46,985 adult males on the pay rolls of these plantations. In the month 1,947, or 4.14 per cent, were added

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to the rolls and 1,088, or 2.32 per cent, were dropped from the rolls. There were 1,426 adult females on the rolls in the month and 176, or 12.34 per cent, were added and 67, or 4.7 per cent, were dropped from the rolls. There were 445 minors on the rolls in the month and 61, or 13.71 per cent, were added and 46, or 10.34 per cent, were dropped from the rolls in the month. The accessions in the month of men, women, and minors together were 4.47 per cent of the 48,856 on the rolls and the separations were 2.46 per cent.

The accessions of adult males in 1929 were 31.58 per cent of the average number on the rolls in the year; of adult females, 73.35 per cent; of minors, 111.67 per cent; of all three classes combined, 33.55 per cent. The separations of adult males were 33.13 per cent of the average number of the men; of adult females, 78.65 per cent of the women; of the minors, 171.37 per cent of the minors; and of men, women, and minors together were 35.76 per cent of the average for all three classes combined.

TABLE 21.-Labor turnover on sugar plantations, 1929, by sex and months

	Adı	ult ma	les	Adu	ut fem	ales		Minor	s		Total	
Month	N		nover	Num-		nover ate		ra	nover te	N		nover ato
	Num- ber	Ac- ces- sion	Sepa- ration	ber	Ac- ces- sion	Sepa- ration	Num- ber	Ac- ces- sion	Sepa- ration	Num- ber	Ac- ces- sion	Separation
January. February. March. April. May. June. June. Juny. August. September. October. November. December.	46, 985 47, 123 47, 219 47, 392 47, 300 47, 000 46, 490 46, 017 45, 106 44, 572 44, 071 45, 072	4. 14 2. 76 2. 48 3. 05 2. 43 2. 49 2. 10 1. 76 1. 60 2. 15 2. 24 4. 32	$\begin{array}{c} 2.\ 32\\ 2.\ 21\\ 2.\ 25\\ 9\\ 2.\ 59\\ 2.\ 79\\ 2.\ 89\\ 3.\ 12\\ 2.\ 84\\ 3.\ 55\\ 3.\ 26\\ 3.\ 15\\ 2.\ 27\\ \end{array}$	1, 426 1, 499 1, 513 1, 492 1, 474 1, 569 1, 517 1, 452 1, 280 1, 201 1, 150 1, 180	$\begin{array}{c} 12.34\\ 7.27\\ 6.15\\ 5.23\\ 3.53\\ 9.24\\ 5.41\\ 3.10\\ 3.05\\ 3.41\\ 4.96\\ 9.07\end{array}$	4.70 3.34 4.43 5.09 4.27 3.57 6.33 8.06 14.92 10.66 8.43 7.63	445 446 447 405 368 458 618 476 476 476 476 408 421 478	$\begin{array}{c} 13.\ 71\\ 4.\ 71\\ 17.\ 45\\ 5.\ 43\\ 4.\ 62\\ 21.\ 83\\ 4.\ 69\\ 5.\ 88\\ 7.\ 56\\ 2.\ 70\\ 7.\ 36\\ 15.\ 27\\ \end{array}$	10.344.4811.6316.795.984.373.886.9380.2517.406.652.51	48, 856 49, 068 49, 179 49, 289 49, 142 49, 027 48, 625 47, 945 46, 862 46, 181 45, 642 46, 730	4.47 2.92 2.73 3.13 2.48 2.89 2.24 1.84 1.70 2.18 2.35 4.56	$\begin{array}{c} 2.46\\ 2.27\\ 2.38\\ 2.78\\ 2.86\\ 2.92\\ 3.23\\ 3.04\\ 4.64\\ 3.58\\ 3.31\\ 2.41\\ \end{array}$
1929	1 46, 196	31. 58	33. 13	11, 396	73.35	78.65	1454	111.67	171.37	148,046	33, 55	35. 76

Average for year.

Table 22 shows for each month in 1929 the number of men, women, boys, and the total number of all employees on a representative sugar plantation in the Hawaiian Islands and also the averages per month for the year; the number of days the plantation was in operation; the aggregate and average days worked; and the per cent that the average days worked were of the days the plantation was in operation

In January there were 2,982 men, 177 women, and 23 boys, or a total of 3,182 employees on the plantation. The plantation was in operation 26 days in the month. The men worked an average of 23.3 days in the month, or 89.6 per cent of the 26 days the plantation was in operation. The women worked an average of only 16 days in the month, or 61.5 per cent of the 26 days of operation. The boys worked an average of 22.7 days in the month, or 87.3 per cent of the 26 days of operation. The 3,182 men, women, and boys together worked a total of 72,749.8 days in the month, or an average of 22.9 days, or

88.1 per cent of the 26 days of operation. In the month the men worked an average of 2.7 days less than full time, the women an average of 10 days, the boys an average of 3.3 days, and all together worked an average of 3.1 days less than the 26 days of operation. The difference between the days the plantation was in operation and the average days worked in the month was due to various causes, such as sickness or other disability, voluntary absence, entering service anywhere from 1 to 25 days after the plantation had been in operation, or leaving service one or more days before the end of the month.

 TABLE 22.—Number of employees, days of operation, and days worked each month for a representative sugar plantation, 1929

	Nu	mber of	emplo	yees	Aggregat	e days	worke	l in mor	th by
Month	Men	Wom- en	Boys	Total	Men	Wom	en E	loys	Total
January February March April May June June August September October November December		177 172 163 165 159 153 181 145 139 131 125 136	23 24 27 30 27 97 82 62 30 29 30 34	3, 182 3, 206 3, 322 3, 294 3, 259 3, 270 3, 174 2, 973 2, 858 2, 872 2, 877 3, 087	69, 403. 5 62, 337. 8 69, 322. 0 72, 458. 3 76, 569. 5 70, 192. 0 66, 106. 0 65, 894. 3 56, 424. 0 62, 458. 0 51, 082. 8 57, 881. 8	2, 824 2, 577 2, 874 2, 806 2, 957 2, 673 2, 730 2, 783 2, 730 2, 783 2, 381 2, 385 1, 731 1, 817	0 4 5 5 8 1,4 0 1,3 .0 1,3 .0 5	91. 5 10. 5 61. 5 92. 0 103. 8 53. 0 178. 0 166. 3 160. 0 194. 8	72, 749, 8 65, 406, 3 72, 706, 4 75, 826, 3 80, 118, 3 74, 269, 6 74, 269, 6 70, 289, 4 70, 055, 3 70, 055, 3 59, 371, 3 65, 503, 8 53, 309, 1 60, 304, 9
Average per month	2, 919	154	41	3, 115	65, 010. 8	2, 545	.2 7	69. 9	68, 325, 9
Month	Aver	cage day month	s work by—	ed in	Planta- tion days of opera-	in m	onth a		worked
	Men	Wom- en	Boys	Total	tion	Men	Women	Boys	Total
January February	23.3 20.7 22.1	16.0 15.0 17.6	22.7 20.5 18.9 18.7	22.9 20.4 21.9 23.0	26 24 25 26	89.6 86.3 88.4 90.0	61.5 62.5 70.4 65.4	87.3 85.4 75.6 71.9	88.1 85.0 87.0 88.8
March April May	23. 4 24. 9 23. 2 22. 7 23. 8 21. 0 23. 0 18. 8 19. 8	17.0 18.6 17.5 15.1 19.2 17.1 18.2 13.9 13.4	10.7 21.9 14.5 17.7 22.2 18.9 22.8 16.5 17.8	24.6 22.7 22.1 23.6 20.8 22.8 18.5 19.5	27 25 26 27 23 27 24 25	92. 2 92. 8 87. 3 88. 1 91. 3 85. 2 78. 3 79. 2	68.9 70.0 58.1 71.1 74.3 67.4 57.9 53.6	68. 1 82. 2 82. 2 84. 4 68. 8	01.000 8.77 90 84778

Employees, Days of Operation and Days Worked, and Earnings, 1920

In May, 1929, the 41 sugar plantations of the Hawaiian Sugar Planters' Association had a total of 52,426 employees, including 49,890 adult males, 1,636 adult females, 352 male minors, 19 female minors, and 529 school minors⁷ whose sex was not reported. The plantations include all on the Hawaiian Islands of importance in number of employees and in number of tons of sugar produced. The days worked and earnings in May, 1929, were available for 49,671 employees who were not on a monthly basis, including 47,300 adult males, 1,474 adult females, 349 male minors, 19 female minors, and 529 school minors whose sex was not reported. Similar data were also available for employees not on a monthly basis in each month in 1929, data for whom are included in this report.

The days worked in May for 2,755 employees who were on a monthly basis (paid monthly rates or salaries) were not of record and available. These employees include 2,590 adult males, 162 adult females and 3 male minors, and include plantation officials, office force of clerks, bookkeepers, storekeepers, foremen, etc. Data for them are not included in this report.

Table 23 presents figures for May, 1929, in comparison with those for the entire year, for each of the 41 plantations included in this report—for 18 plantations on the island of Hawaii, 6 on Maui, 8 on Oahu, and 9 on Kauai—for the total of those given for each island, and also for the 41 plantations on all four islands combined.

This table shows: (1) The number of employees that were on the pay rolls in May and the average number per month in 1929; (2) the number of days the plantations were in operation in May and in 1929; (3) the total number of days that were worked by employees in May and in 1929; (4) the average number of days per month that the plantations were in operation in 1929; (5) the average number of days that employees worked per month in May and in 1929; (6) the per cent that the days worked by employees in May and in 1929 were of the days that the plantations were in operation in May and in 1929; (7) the average amount, including bonus, that was earned per day and per month per employee in May and in 1929; (8) the amount that was paid to employees in May and in 1929 as a bonus for working 23 or more days per month; (9) the per cent that the bonus was of the earnings at basic rates in May and in 1929.

Plantation No. 1 on the island of Hawaii had a total of 1,218 employees, "not on a monthly basis," on its pay rolls in May, 1929, and an average of 1,262 employees per month in 1929. The plantation was in operation 27 days in May and 309 days in 1929. This and all other plantations were on a 6-day week basis. The 1,218 on the rolls in May worked a total of 25,786 days, or an average of 21.2 days in the month. This average was 78.52 per cent of the 27 (full-time) days that the plantation was in operation in the month. The employees on the plantation in 1929 worked a total of 305,943 days. Based on the average of 1,262 employees per month and the days worked by employees in the year, an average of 20.2 days per month was worked in 1929. The plantation was in operation 309 days in 1929 or an average of 25.8 days per month. The average of 20.2 days per month worked by employees was 78.29 per cent of the average of 25.8 (full-time) days per month that the plantation was in operation in 1929.

Average earnings as given in this table include the earnings of employees at basic rates, and also a bonus of 10 per cent of such earnings which was paid monthly to each employee who worked 23 or more days in the month. In May the bonus amounted to \$2,838 or 8.37 per cent of the amount earned by the 1,218 employees at basic rates. In 1929 the bonus amounted to \$32,784 or 8.07 per cent of the amount

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⁷ School children who work intermittently.

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earned by all employees on the pay rolls of this plantation in that year. Including the bonus, average earnings on the plantation were \$1.42 per day in May and \$1.44 per day in 1929 and \$30.16 per month in May and \$29 per month in 1929.

The 49,671 employees on the pay rolls on the 41 plantations in May earned, including the bonus, an average of \$1.82 per day and \$43.31 per month. Averages in 1929 were \$1.66 per day and \$36.24 per month. Average earnings ranged by plantations from \$1.33 to \$2.78 per day in May and from \$1.14 to \$2.16 per day in 1929; also from \$29.24 to \$67.84 per month in May and from \$22.58 to \$46.75 in 1929. In May the bonus amounted to \$149,573 or 7.47 per cent of the earnings at basic rates. The amount paid as bonus in 1929 was \$1,452,499 or 7.24 per cent of the earnings in the year at basic rates. The agrinos nor day and new month on the sector in Table 5.40 per

The earnings per day and per month as shown in Table 23 do not include the rental value of the clean, sanitary, and comfortable homes, each of three or four rooms, nor the value of fuel, water, medical and hospital service for sickness or accidental injury of any kind furnished by the plantations to all employees and families. (See Table 14 for number of houses owned and furnished to employees without rental charge; see also fig. 16.) An official of the Hawaiian Sugar Planters' Association estimated that the cost per month to the plantations per home for families was \$20; of fuel and water, \$4; of medical and hospital service, \$4; or a total of \$28 per month. Single employees were also housed—some three, four, or five to a house, in houses like those furnished to families and others in boarding houses. Medical and hospital service were also furnished to single employees at an estimated cost to the plantations of \$2 per month per person.

The rate for overtime on all plantations was the same as for regular working time, and the rate for Sunday and holidays for day laborers was one and one-half times their regular rate.

TABLE 23.—Number of employees, days of operation, and days worked, average carnings, and attendance bonus, on sugar plantations, May, 1929, and year 1929

Island and plantation		ber of loyees	days tion	aber of planta- was in ration		of days by em-	A ver- age days per month planta-		oyees	Per cen age d worke month average opera	lays d per were of days of	A ve carnin day cluc boi	in- ling	ings mon clue	ge earn- s per th in- ding nus	Atte	adance onus	bonu of eau at b	cent s was rnings basic tes
7.	May, 1929	A ver- age per month in 1929	May, 1929	1929	May, 1929	1929	tion was in opera- tion, 1929	May, 1929	1929	May, 1929	1929	May, 1929	1929	May, 1929	1929	May, 1929	1929	May, 1929	1929
ПАЖАН No. 2. No. 3. No. 4. No. 4. No. 6. No. 7. No. 8. No. 9. No. 10. No. 11. No. 12. No. 13. No. 14. No. 15. No. 16. No. 17. No. 18. No. 19. No. 19. No. 19. No. 19. No. 10. No.	1,016 945 1,575 603 1,520 884 947 668 891 671 679 303	$\begin{array}{c} 1,262\\ 601\\ 1,046\\ 948\\ 1,634\\ 734\\ 594\\ 1,487\\ 917\\ 924\\ 664\\ 863\\ 626\\ 626\\ 626\\ 715\\ 301\\ 417\\ 872\\ 2,546 \end{array}$	$\begin{array}{c} 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\ 27.\ 0\\$	309. 0 300. 5 300. 0 301. 0 302. 0 294. 0 307. 0 306. 0 301. 0 308. 0 274. 0 299. 0 298. 0 298. 0 308. 0 298. 0 308. 0 308. 0 308. 0 308. 0 308. 0 308. 0 308. 0 308. 0 307. 0	$\begin{array}{c} 25,786\\ 14,211\\ 22,644\\ 21,958\\ 36,483\\ 17,664\\ 15,018\\ 34,046\\ 19,298\\ 22,709\\ 15,878\\ 20,135\\ 16,260\\ 15,946\\ 6,444\\ 9,932\\ 20,237\\ 54,807\\ 54,807\end{array}$	$\begin{array}{c} 305, 943\\ 154, 782\\ 254, 990\\ 233, 094\\ 423, 589\\ 186, 801\\ 160, 824\\ 375, 627\\ 218, 183\\ 241, 321\\ 173, 393\\ 214, 321\\ 160, 002\\ 182, 050\\ 74, 406\\ 106, 162\\ 226, 920\\ 629, 191 \end{array}$	25. 8 25. 0 25. 0 25. 1 25. 2 24. 5 25. 5 25. 1 25. 7 25. 1 25. 7 22. 9 24. 7 25. 7 22. 8 24. 9 25. 7 24. 9 25. 7 24. 9 25. 7 25. 6	$\begin{array}{c} 21, 2\\ 23, 9\\ 22, 3\\ 23, 2\\ 23, 2\\ 23, 6\\ 24, 9\\ 22, 4\\ 21, 8\\ 24, 0\\ 23, 8\\ 24, 2\\ 23, 5\\ 24, 2\\ 23, 5\\ 21, 3\\ 23, 3\\ 22, 1\end{array}$	20. 2 21. 5 20. 3 20. 5 21. 6 21. 2 22. 6 21. 1 19. 8 21. 8 21. 8 21. 8 21. 8 21. 2 20. 7 21. 2 20. 6 21. 2 21. 7 20. 6	78. 52 88. 52 82. 59 85. 93 85. 93 85. 93 87. 41 92. 22 82. 96 80. 74 85. 89 88. 15 83. 70 89. 63 87. 04 78. 89 85. 19 86. 30 81. 85	$\begin{array}{c} 78,29\\ 80,00\\ 81,20\\ 81,67\\ 86,53\\ 93,00\\ 82,42\\ 77,65\\ 86,85\\ 80,54\\ 80,54\\ 80,54\\ 80,54\\ 80,54\\ 80,54\\ 80,14\\ 80,16\\ 85,48\\ 84,44\\ 80,47\\ \end{array}$	$\begin{array}{c} \$1.42\\ 1.53\\ 1.61\\ 1.51\\ 1.67\\ 1.43\\ 1.72\\ 1.43\\ 1.34\\ 1.58\\ 1.74\\ 1.58\\ 1.58\\ 1.46\\ 1.61\\ 1.61\\ 1.70\\ \end{array}$	$\begin{array}{c} \$1. 44\\ 1. 42\\ 1. 50\\ 1. 44\\ 1. 63\\ 1. 35\\ 1. 14\\ 1. 56\\ 1. 49\\ 1. 56\\ 1. 52\\ 1. 49\\ 1. 56\\ 1. 57\\ 1. 50\\ 1. 61\\ \end{array}$	\$30. 16 36. 72 35. 88 35. 11 38. 57 32. 14 37. 25 32. 14 37. 97 41. 30 37. 27 38. 17 37. 05 29. 96 38. 26 37. 65 37. 46	\$29, 00 30, 52 30, 48 29, 44 35, 30 29, 78 28, 35 22, 58 32, 69 33, 32 35, 01 36, 89 33, 32 32, 15 32, 19 33, 32 32, 15 32, 94 33, 22 32, 59 33, 17	$\begin{array}{c} \$2, \$38\\ 1, 839\\ 2, 921\\ 2, 701\\ 4, 685\\ 2, 194\\ 1, 986\\ 2, 825\\ 1, 974\\ 2, 246\\ 1, 974\\ 2, 246\\ 1, 975\\ 1, 287\\ 7, 7, 542\\ \end{array}$	\$32, 784 17, 901 28, 255 25, 140 49, 522 20, 993 19, 623 38, 398 9, 820 26, 921 20, 273 22, 267 18, 471 21, 069 7, 841 12, 908 23, 202 81, 397	$\begin{array}{c} 8.37\\ 9.21\\ 8.71\\ 8.86\\ 9.314\\ 8.33\\ 8.42\\ 3.88\\ 8.53\\ 7.71\\ 7.25\\ 8.37\\ 8.57\\ 8.57\\ 8.59\\ 8.58\\ 8.83\\ \end{array}$	8.07 8.85 7.97 8.12 7.71 8.07 8.21 4.12 8.07 8.21 4.12 8.02 7.84 7.97 8.29 8.11 8.42 7.30 8.74
Total	17, 041	17, 150	27.0	300.9	389, 456	4, 321, 480	25.1	22.9	21.0	84.81	83.67	1.58	1, 50	36.05	31. 39	46, 852	476, 795	8.26	7.97
МАUI No. 19 No. 20 No. 21 No. 22 No. 23 No. 24 Total	536 2, 339 1, 271 2, 441	211 3, 558 537 2, 306 1, 274 2, 398 10, 284	27.0 27.0 27.0 27.0 26.0 27.0 26.8	308. 0 306. 0 308. 0 305. 0 304. 0 302. 0 305. 5	4,912 87,379 12,332 54,584 28,687 56,570 244,464	57, 419 968, 242 138, 402 608, 256 322, 406 603, 705 2, 698, 430	25. 7 25. 5 25. 7 25. 4 25. 3 25. 2 25. 2	24.9 24.4 23.0 23.3 22.6 23.2	22.7 22.7 21.5 22.0 21.1 21.0 21.9	92.22 90.37 85.19 86.30 86.92 85.93 88.06	88, 33 89, 02 83, 66 86, 61 83, 40 83, 23 85, 88	$ \begin{array}{c} 1, 33 \\ 2, 04 \\ 1, 45 \\ 2, 15 \\ 1, 86 \\ 2, 26 \\ \end{array} $	1,56 1,80 1,43 1,88 1,73 2,02 1,83	33. 11 49. 74 33. 40 50. 13 42. 06 52. 26 48. 32	35.40 40.75 30.76 41.30 36.50 42.33 40.09	499 11,077 1,336 7,550 3,408 7,711 31,581	5, 745 103, 359 14, 278 71, 475 36, 247 66, 488 297, 592	8. 29 6. 64 8. 07 6. 88 6. 81 6. 43 6. 73	6. 8 6. 3 7. 7 6. 6 5. 7 6. 4

[Data for 2,755 employees who were paid monthly rates not included]

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445 745 77.0 305.0 10,844 125,640 25.4 24.4 25.0 90.37 90.55 1.40 1.40 34.26 32.25 1.255 34.4 25.5 24.4 22.8 90.71 89.41 1.53 1.40 34.26 34.25 1.255 1.4 940 10,942 26.9 3.06.3 2.903,197 25.5 24.4 22.8 90.71 89.41 1.53 1.60 37.41 34.15 31,888 320,	Island and plantation Island and plantation No. 25 No. 25 No. 25 Total Total Total Total No. 33 No. 33 No. 33 No. 33 No. 33 No. 33 No. 33 No. 35 No.		Number of employees fay, Aver- fay, Aver- ages (932 1,991 (1,1122 (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) (1,1122) 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Average Daily Earnings, 1929, by Kinds of Work

Average earnings per day in 1929, including the attendance bonus, are presented in Table 24 for the various kinds of work, for adult males, adult females, and minors, and also for all employees combined on 41 sugar plantations in the Hawaiian Islands. The bonus amounted to about 7¼ per cent of the earnings at basic rates.

The employees on sugar plantations are of three classes—short-term contractors, long-term contractors, and day laborers.

Short-term contractors may work at one or more of the 10 different kinds of work listed in the table under this classification. The contracts are for short periods and apply to "planting cane," "fertilizing," "irrigating," "cutting," or "loading," etc., on one or more fields at a contract price per acre, per ton, etc.

Long-term contractors cultivate cane during the entire growing period of many months. They are paid for the number of tons of cane produced at a specified contract rate per ton.

Day laborers, as the term implies, are time workers. They are paid for the number of units of time (days) worked at any one or more of the five different kinds of work listed in the table under "Day laborers."

The average earnings of short-time contractors doing the work of planting cane on the plantations in 1929 were \$1.40 per day for adult males, \$1.16 for adult females, 92 cents for minors, and \$1.38 per day for men, women, and minors combined.

The average earnings of the males doing the different kinds of shortterm contract work ranged from \$1.40 per day for planting cane to \$2.93 per day for "portable track" contract work. Portable tracks are temporary railway lines used in hauling cane from the fields to permanent tracks leading to the sugar mills. The portable tracks are moved from field to field and reconstructed for use as needed.

The average earnings of those doing all short-term contract work was \$1.85 per day for adult males, \$1.43 for adult females, \$1.06 for minors, and \$1.83 per day for all employees.

The average earnings of long-term contractors were \$2.07 per day for adult males, \$1.55 for adult females, 85 cents for minors, and \$2.05 per day for all employees.

The average earnings of day laborers ranged by kinds of work, from \$1.08 to \$3.53 per day for adult males; from 68 cents to \$2.87 per day for adult females; from 61 cents to \$2.33 per day for minors; and from 90 cents to \$3.53 per day for all day laborers.

The above rates do not include the rental value of homes, nor the value of fuel, water, medical and hospital services furnished by the plantations without cost to the employees.

48

on sugar plantations, May,

and days worked, average earnings, and altendance bonus, 1929, and year 1929—Continued

operation,

Number of employees, days of

TARLE 23.

TABLE 24.—Average earnings per day, including bonus, of men, women, and minors on 41 sugar plantations, 1929, by kind of work

Kind of work	Adult males	Adult females	Minors	Total
Short-term contracts:				
Planting cane	\$1.40	\$1. 16	\$0.92	\$1.38
Fertilizing	1.71	1. 25	1.12	1.66
Irrigating	1.43	1. 22	1.09	1. 42
Cutting cane	1.73	1. 27	1.12	1. 73
Loading cane	2.11	1.68	1.23	2.00
Hauling or fluming cane	2.09	1.36	1.12	2.06
Cultivating (short term)	1.40	1.12	. 97	1.38
Construction work	2.62	1, 40	1.52	2.63
Other contracts	1.93	1.31	1.31	1.80
Portable track	2.93	2. 14	1.76	2. 90
Total, short-term contractors	1.85	1. 43	1.06	1.83
Long-term contractors	2.07	1.55	.85	2.05
Day laborers:				
Day laborers, field hands	1.10	. 83	.70	1. 05
Basic-rate day laborers, other	1.08	. 68	.61	. 90
Other unskilled	1.37	. 79	. 97	1. 30
Semiskilled	1.89	. 86	1.66	1, 89
Skilled	3. 53	2.87	2.33	3. 53
Total, day laborers	1. 51	. 88	.75	1.46
Grand total	1.68	1. 19	. 79	1.60

Regular Full-Time Hours, 1929, per Day and Week

The regular hours of operation per day and per week in 1929, as established by a regular time of beginning and of quitting work on each day per week, less the regular time off duty for the midday dinner or lunch, were obtained for each of the several kinds of work on the sugar plantations in the Hawaiian Islands, and such hours per day and week are shown in Table 25.

The regular full-time hours per day ranged from 5½ for the employees on one plantation who were engaged in loading cane to 12 for the employees on 4 plantations who were employed at hauling or fluming cane, and also for the sugar-mill workers on 23 plantations. The 10-hour day was more frequent than any other, the next in order being the 9-hour day.

Regular full-time hours per week ranged from 33 for the employees on one plantation who did the work of loading cane to 72 per week for employees on 3 plantations who worked at hauling or fluming cane, and also for the sugar-mill workers on 19 plantations. On many plantations the hours per day were less on one of the 6 days per week than on the other 5.
 TABLE 25.—Number of sugar plantations having specified full-time hours per day and per week, by kinds of work

allo de la contra				Cultiv	ating							
Full-time hours	Plant- ing cane	Fer- tiliz- ing	Irri- ge- ting	Long- term con- tracts	Short- term con- tracts	Cut- ting cane	Load- ing cane	Haul- ing or flum- ing cane	Con- struc- tion work	Porta- ble track	Sugar mill	Other work
er day:							1					
ar day: 51/2		ĩ										
61/2		1					4	1				
7		1					1					
71/4		1					1					
73/4				1	4	8	11	1	3	3		
8 81/4	2 1 4	7 2 3 1			1 5		4	1	3	1		
81/2	4	3		2	5	1 5 2 16	42	4	3	52		
83/4	114	11		6	1 8	16	8	5	5	9		
91/4	2	î	42		1 1			1	512	1		
91/2				1	1	1	1	1	1			
934	1 14	1 8	1 14	16	8	4	4	11	17	5	5	1
10 10 ¹ ⁄4	î	ĩ	1	2							1	
101/2								1			6	
11								4			2 23	
12												
Total	40	39	22	28	30	39	38	32	32	26	37	
er week:			-									
33								1				
35		1										
39		î										
41							-					
42431/2		- 1					-					
45		_ 1					-		1			
461/2								2				
47						- 17						
48	- 2			- 1	4							
491/2	1 2	i î		1						i		-
501/2					-			1	1			-
51	- 2	1		- 1			3 2 4 3 8	1		1		-
521/2	- 4			_ 1			2	2	1	2 3		
53	- 4	. 3	3	1			± 3	1	2	1 2		-
531/2	-		3	2 4	i i	i i	8	15	221			2
551/2	-	2 1	i 1	2	-	1	1		1	1 1		-
.56				1		-				1		
561/2						i	1		1	1		
58					1		1	1	1		-	-
581/2	1	5	4	1 6 2	6	1 3 1 4	î	1	3	4	2	1
591/2		1 8	i	2	6 2 8	1	3	3	9 1	2	1 1	5
60	-		1 4 1 3 1	6	8	1						
61	-				1							1
62									1			
65												1
651/2												3
00											1	1
671/2												1
70				1								1
70%					1							1
71									3		1	1
							1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		A			
72										32 2	6 3	7

1 Mostly women on 1 plantation.

Pineapple Industry

In number of wage earners, in amount paid as wages, and in value of products, the pineapple industry in the Hawaiian Islands is second to the sugar industry and includes both the growing and the canning of pineapples.

Pineapples were introduced and cultivated in the islands to a rather limited extent during the period from 1886 to 1900, but canning did not begin until 1901 when about 2,000 cases of 24 cans each were canned and placed on the market. The Smooth Cayenne variety is generally grown, because those engaged in the industry consider it superior in flavor and less fibrous than others. The number of cases increased from year to year to approximately 50,000 in 1905; to 625,000 in 1910; to 1,700,000 in 1913, the year before the beginning of the World War; and to more than 9,000,000 cases in 1929, thus showing the rapid growth and the present importance of the industry.

In a folder published by one of the companies engaged in the growing and canning of pineapples, it is stated that "Hawaii is the pineapple's paradise, for here it thrives best and attains that sweetness and lusciousness of flavor not present in pineapples grown in other lands." After one has visited plantations on the islands and eaten the ripe fruit immediately after it has been picked, one is not inclined to question the accuracy of this statement.

Pineapple Plantations

Description of Work and Definition of Occupations

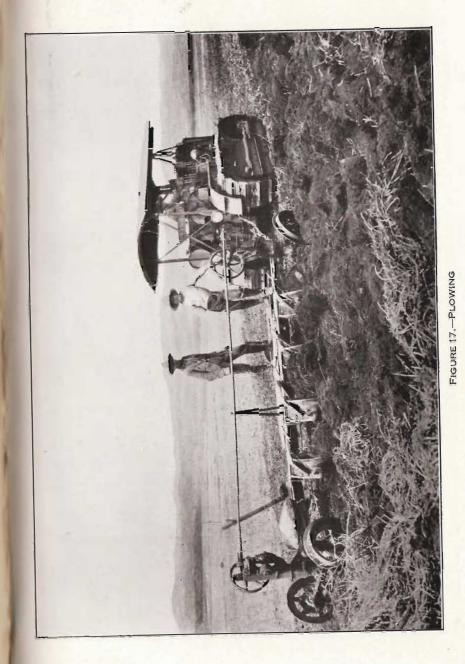
Pineapple plantations in the islands have an estimated area, a stated by the Governor of Hawaii in his report for the fiscal year ending June 30, 1929, of 88,000 acres, or 137¹/₂ square miles, with 49,356 acres in actual cultivation in that year. The estimated area is conservative. Plantations are divided into plots of land called "field." After cultivation and picking of two or three crops each field is left uncultivated for a time to rest and recuperate.

The growing of pineapples is highly developed, with production in some fields of as much as 36 tons of fruit per acre. The plantation, as well as the canneries, are equipped with modern labor-saving machinery, a great deal of which is automatic and of a highly special ized type, particularly in the canneries.

Various types of tractors are used in clearing the land of carbin and stone, and in plowing (fig. 17), subsoiling, and harrowing. In this report the employees who operate the tractors are classified "tractor drivers," and those helping them are classified as "tractor drivers' helpers."

After being plowed and harrowed fields are laid out in parallel manuform 4 to 6 feet in width. After the rows are given the necessary application of fertilizer they are generally covered with an a phale treated mulch paper three feet in width (fig. 18). The paper is the to prevent the growth of weeds near the plants, to hold more than attract heat, and thus make available all the fertilizer and products soil in the rows for the development and growth of the fruit producting plants.

The ground is now ready for planting. Holes are made through the paper and to the proper depth in the soil, equal distances apart.



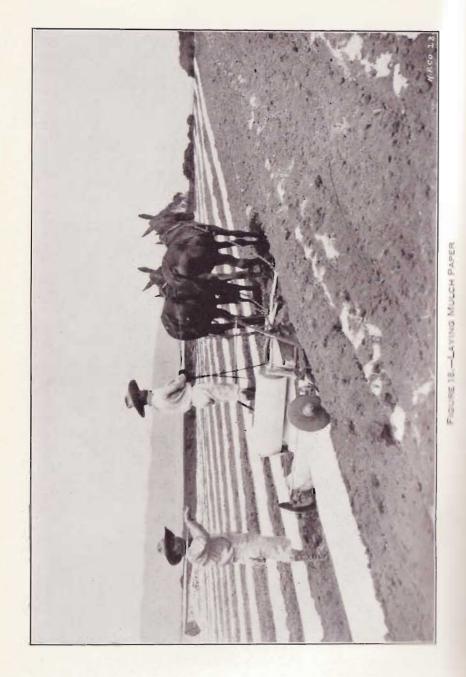


FIGURE 19.-PLANTING THROUGH PAPER

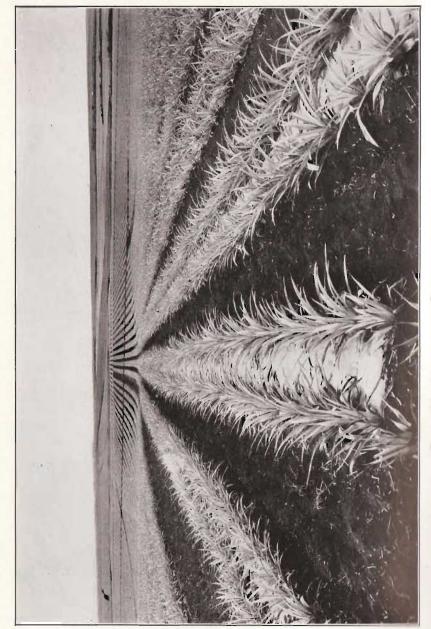


FIGURE 20 - STARTING OF A PINEAPPLE PLANTATION

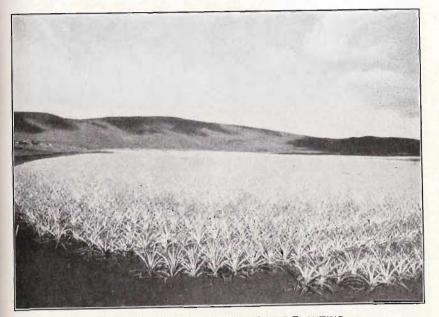
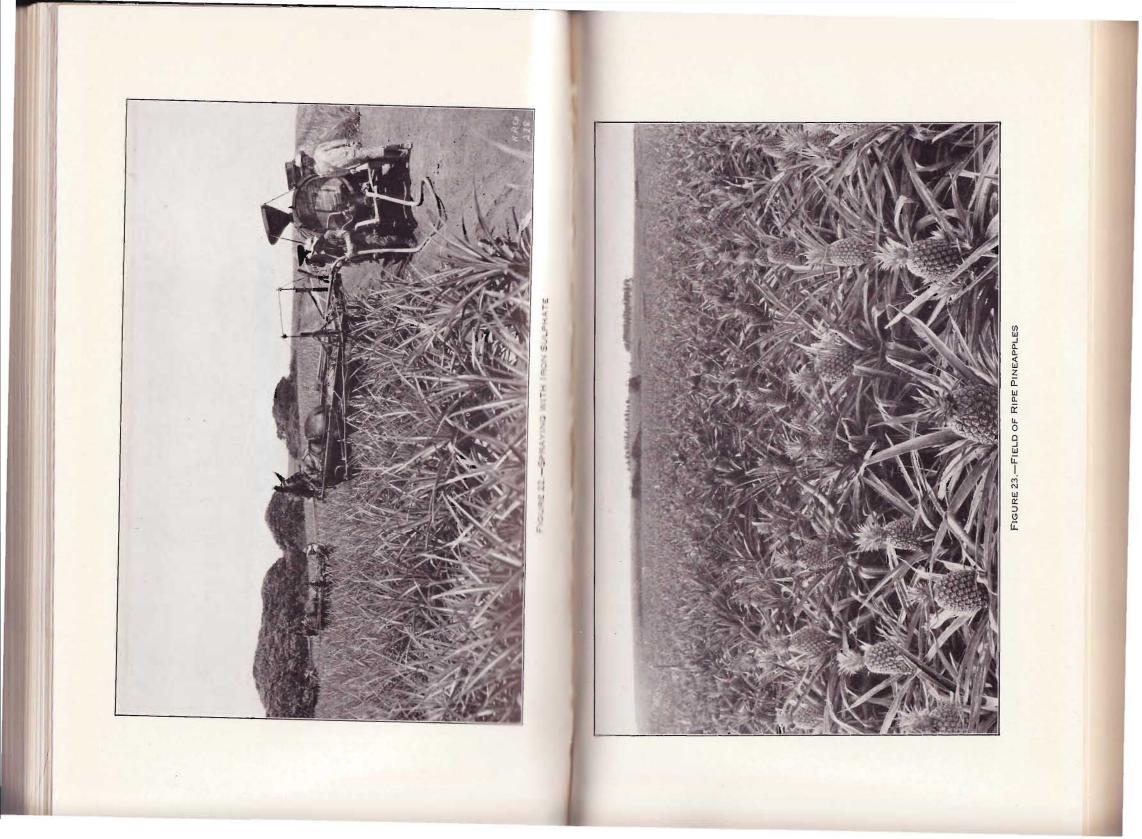


FIGURE 21.-TWELVE MONTHS AFTER PLANTING



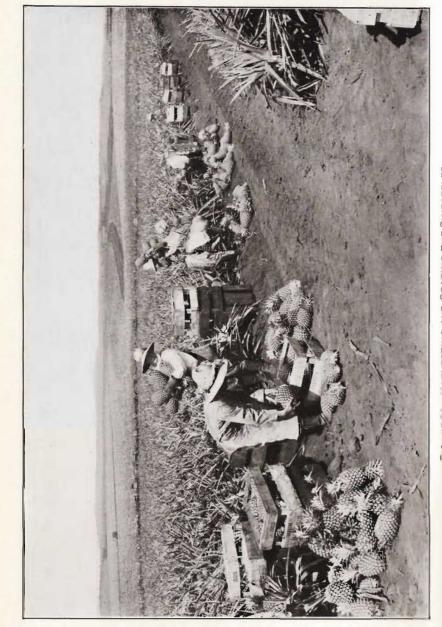


FIGURE 24. - HARVESTING AND CRATING THE PINEAPPLES

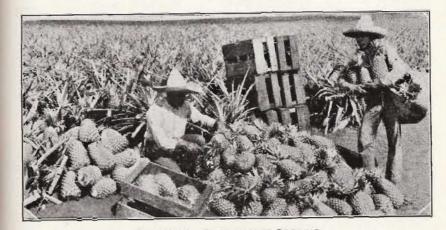


FIGURE 25.-CUTTING OFF CROWNS

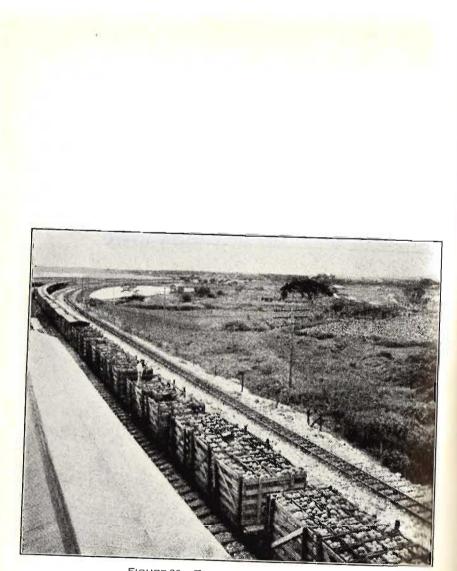


FIGURE 26.—TRAINLOAD TO CANNERY

certain part of a ripe pineapple ("crown") or of the pineapple plant ("slip" or "sucker") is then placed in each hole and firmly set in the pround (fig. 19). The "crown" is the top of the fruit; the "slip" is the part of the plant which grows in clusters at the base of the stalk supporting the fruit, and the "sucker" sprouts through the leaves of the plant. The crowns, slips, and suckers used in planting are carefully selected and gathered from healthy and productive plants (figs. 20 and 21).

The following employees usually change from one kind of work to another as needed and are generally called "field hands" or "laborers": Employees who apply the fertilizer to the rows: cover the rows with mulch paper; set the pineapple crowns or parts of plants in the ground; hoe, weed, and cultivate the ground between the strips or rows of paper during the growing season; pick the ripe fruit from the plants; cut the crowns from the fruit; sort the fruit into three grades according to size in diameter; fill empty boxes with fruit; load trucks and trailers attached to the trucks with boxes of fruit for delivery to canneries or to barges for transfer from one harbor to another and finally to the canneries: and trim crowns, slips and suckers used in planting for the growing of pineapples. In this report they are classified as "laborers, field, men"; "laborers, field, women"; "laborers, field, minors, male"; and "laborers, field, minors, female." On some plantations the work of trimming crowns, slips, and suckers is frequently done by women. Other plantation occupations for which hours and earnings are shown in the report are lunas (foremen), truck drivers, truck driver's helpers, and teamsters.

"Luna" is the usual occupational term applied to a plantation employee who is in charge of a small group of employees. Such an employee may or may not work along with the others in the group in addition to supervising the work. On some plantations or in different departments on the same plantation he may be called foreman, field luna, overseer, station luna, or team luna.

"Truck drivers" operate auto trucks used in the construction and maintenance of roads on the plantations, in the delivery of supplies to the plantations and of pineapples to railroad cars or boats for transportation to canneries, in delivery of fruit directly to canneries, and in other plantation work.

"Truck drivers' helpers" assist truck drivers.

"Teamsters" drive horses or mules hitched to vehicles used in light hauling on the plantation.

During the growing of the pineapple plants, machine sprayers apply a tonic of iron sulphate to the plants when and as needed (fig. 22). The employees who operate the machine sprayers were included in the group designated in the report as "other employees" because they were too few in number to warrant tabulation as a separate occupation and because they do other field work when not spraying plants (figs. 23 to 26).

When the boxes are filled with fruit only a single grade is placed in a box. Each empty box weighs about 13 pounds and each one filled with fruit weights approximately 75 pounds.

Each plantation has a well-equipped shop for the repair of tractors, trucks, and other machinery, and also employees to repair plantation buildings of various kinds, including the houses owned by the plantation and occupied by employees and families without rental charge,

stores, etc. (figs. 27 and 28). The occupations of the shop for which figures are shown separately are blacksmiths, blacksmiths' helpers, carpenters, carpenters' helpers, painters, plumbers, plumbers' helpers, and repairers (auto mechanics). Employees in other occupations in the shop too few in number to warrant tabulation as a separate occupation are included in a miscellaneous group designated as "other employees" in the report.

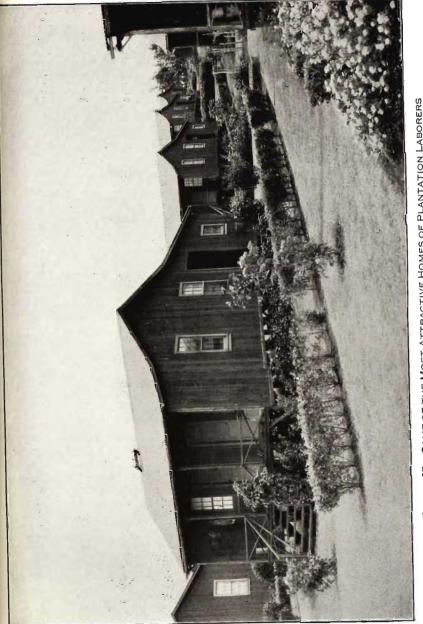
Hours and Earnings, 1929

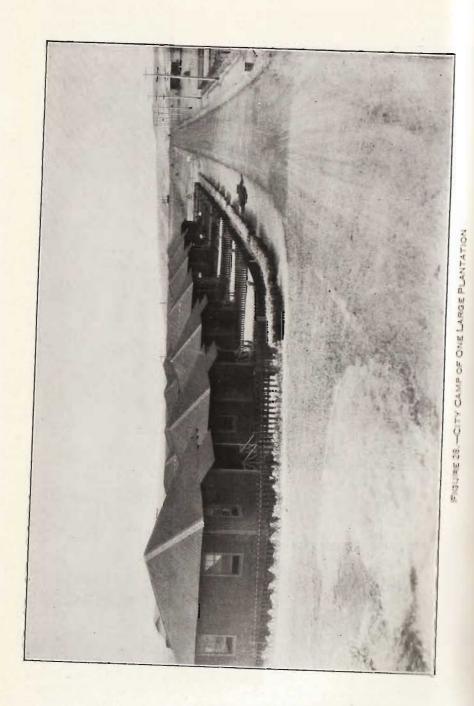
The average number of days on which employees worked in a pay period of one month in 1929, the average full-time hours per week and month and the average hours that were actually worked in the pay period, the per cent that the hours actually worked were of the average full-time hours, the average earnings per hour, the average fulltime earnings per week and in the pay period, and the average actual earnings in the pay period are presented in Table 26 for the employees in each of the important occupations on pineapple plantations on the islands of Maui and of Oahu, and on both islands combined. Like figure are also shown for a miscellaneous group of "other employees." This group includes a considerable number of employees in other occupations, each too few in number of employees to warrant separate tabulation as an occupation.

The averages in the table are for 3,316 males and 161 females on 4 of the largest plantations-2 on the Island of Maui and 2 on Oahuand are shown separately so that comparison may be made, one island with the other.

The regular full-time hours per week in 1929 of employees in each occupation on each plantation, except those included in the group of "other employees," were 10 per day or 60 per week. The hour of a small number of "other employees" on one or two plantations were more than 10 per day and 60 per week. These employees were too few in number to affect materially the average full-time hours per week of any plantation as a whole, or the average hours of all employees included in this study. The averages for the 28 "other employed male," on the island of Maui were 61.4; for the 134 "other employed male," on Maui and Oahu combined were 60.3; for males and also for all males and females combined on Maui were 60.1 per week.

The 2,289 "laborers, field, adult males," the most important occupation on the plantations in number of employees, worked an average of 16.6 days and 160.7 hours in one month and earned an average of \$31.51 in the month and an average of 19.6 cents per hour. Ilad they worked their average full time of 264.1 hours at the same hourly rate that was earned in the 160.7 hours in the pay period they would have earned an average of \$51.76, or had they worked a full time week of 60 hours the earnings would have averaged \$11.76. The 160.7 hours actually worked in the month was 60.8 per cent of the average of 264.1 full-time hours in the pay period of one month. The 271 adult male field laborer on the plantations on Maui carned and average of 19.2 cents per hour and, had they worked their average full time of 270 hours at the same rate per hour, they would have earned an average of \$51.84 in the one-month pay period, while the 2,018 on the plantations on Oahu earned an average of 19.7 cents per hour and had they worked a full-time month of 263.3 hours at the same rate would have earned \$51.87.





The 500 males in all occupations on the plantations on Maui worked an average of 19 days and 193.1 hours in the pay period of one month and earned an average of \$42.74 or 22.1 cents per hour. For the 2,816 males on the plantations on Oahu the averages are 18.5 days, 183.6 hours, \$41.83, and 22.8 cents, respectively. The 36 females on Maui worked an average of 12.4 days and 120.7 hours in the onemonth pay period and earned an average of \$10.33 in the month or 8.6 cents per hour. For the 125 females on Oahu the averages are 6.9 days, 64 hours, \$8.48, and 13.3 cents, respectively. The industry total at the end of the table shows that the 3,477 employees on the 4 plantations that were included in the study worked an average of 18.1 days and 180 hours in a pay period of one month and earned an average of \$40.43 or 22.5 cents per hour.

The rate for overtime and for work on Sunday and holidays on two plantations was the same as for regular working time and applied to all employees, and on two other plantations was one and one-half times the regular rate and applied to all employees.

TABLE 26.—Average days worked, average full-time	e and actual hours and earnings
in one month, per cent of full time actually worked	
on pineapple plantations, 1929, by occupation, se	x, and island

100	5		Aver- age num-		ige full- hours—	Aver-	Per		A vera time es	ige full- arnings	Aver-
Occupation, sez, and island	Num- ber of estab- lish- ments	Num- ber of em- ploy- ees	ber of days on which employ- ees worked in month	week	Per month	Aver- age hours actually worked in month	cent of full	A ver- age earn- ings per hour	Per week	Per month	Aver- age actual earn- ings in month
Blacksmiths, male: Maui Oahu	2 2	26	26. 5 26. 3	60. 0 60. 0	270. 0 260. 0	262.5 261.4	97.2 100.5	\$0.407 .399	\$24. 42 23. 94	\$109.89 103.74	\$106.94 104.33
Total	4	8	26.4	60. 0	262.5	261.7	99.7	. 401	241.06	105.26	104.98
Blacksmiths' help- ers, male: Maui Oahu Total	22	24	22. 0 24. 3 23. 5	60. 0 60. 0 60. 0	270. 0 260. 0 263. 3	221. 5 242. 4 235. 4	82.0 93.2 89.4	. 213 . 341	12.78 20.46 18.06	57.51 88.66 79.25	47. 15 82. 58 70. 77
Carpenters, male: Maui. Oahu	2 2	13 9	19. 4 23. 1	60. 0 60. 0	203. 3 270. 0 265. 6	195. 3 262. 6	72.3 85.3	.383 .410	22.98 24.60	103. 41 108. 90	74. 79 92. 87
Total	4	22	20.9	60.0	268.2	208.1	77.6	. 395	23.70	105.94	82.18
C'arpenters' helpers, male: Maui Oahu	1 2	2 6	22. 0 19. 5	60. 0 60. 0	270. 0 263. 3	238. 3 193. 3	88.3 73.4	. 252 . 313	15.12 18.78	68. 04 82. 41	59. 94 60. 47
Total	3	8	20. 1	60.1	265.0	204.6	77.2	. 295	17.70	78.18	60.34
Laborers, field, adult, male: ¹ Maui Oahu		271 2, 018	17. 0 16. 5	60. 0 60. 0	270. 0 263. 3	164. 0 160. 3	60. 7 į 60. 9	. 192 . 197	11. 52 11. 82	51. 84 51. 87	31. 51 31. 51
Total	4	2, 289	16.6	60.0	264.1	160.7	60.8	. 196	11.76	51.76	31. 51

1 Includes planters, cultivators, fertilizers, fruit pickers, plant gatherers, cultivator contractors, cleanersup, etc.

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LABOR CONDITIONS IN HAWAII, 1929-1930

TABLE 26.—Average days worked, average full-time and actual hours and earnings in one month, per cent of full time actually worked, and average earnings per hour on pineapple plantations, 1929, by occupation, sex, and island—Continued

	N	NY.	8	er- ge m-	Ave	erage fu e hours	-				Avtim	verage fu le earnin	ull- gs—	_
Occupation, sex, and island	Nur be of esta lish men	r be o b- en i- plo	r of d f o h- wh y- emp s ee	ich loy- s ked	Per weel	Per k mont	Ave age hou actus work in mon	e urs ally ted	Per cent o full time worked in month	ear ing pe	e n- s r Pe	er Pe ek mor		Aver- age actual earn- ings in month
Laborers field. minors, male: ² Maui. Oahu	-	2 5		. 9 . 7	60. 0 60. 0		0 154. 0 89.		57. 1 33. 0	\$0. 08	15 \$5. 1 7 4. 0		95	\$13.00 6.89
Total	-	3 5	5 15	.6	60.0	270.0	150.	8	55.8	. 08	5 5.1			1.14
Laborers, field, adult, female: Maui Oahu		2 19		.8	60. 0 60. 0	270. 0 265. 2	65. 59.	56	24.3 22.5	.11	1 6.6	6 29.9	7	12.75 7.28 8.39
Total	- 4	1 13	5 6	.5	60.0	265.9	60.	4	22.7	. 13				
Laborers, field, minors, female: ² Maui Oahu		17			60. 0 60. 0	270.0	182. 120.	4	67.6 44.5	. 07	4.5	0 20.2	5	8. 22
Total	2	26	16.	6	60.0	270.0	160.		59.6					9.89
Lunas or foremen, or field lunas or overseers, male: Maui. Oahu	22	20	24.	2 0	30. 0	270.0	239. 4			. 077	-			12.38
			27.		30, 0	265.5	274.7	7	88.7 103.5	. 331	19.86		3	79, 57 90, NB
Total	4	185	27.	1 6	30.0	266.0	270.8	3	101.8	. 331	19.86	88. 0	5	89, 61
Painters, male: Maui Oahu	1	31	17. 8.		0.0	270. 0 270. 0	176.7 80.0		65. 4 29. 6	. 371	22. 26 18. 42			65, 48 24, 53
Total	2	4	15.	3 6	0.0	270.0	152.5	-	56.5	. 362	21.72		-	The second se
Plumbers, male: Maui Oahu	1 2	12	26. 0 26. 1		0.0	270. 0 260. 0	267. 0 253. 0	T	98.9 97.3	. 411	24.66	110.97	-	55. 36 100. 78 134, 65
Total	3	3	26. 3	6	0.0	263.3	257.7	1	97.9	. 490	29.40	129, 02	-	And in case of the local division of the loc
Repairers (auto mechanic), male: Maui	2 2	6 13	24. 5 25. 6	60). 0	270. 0 265. 4	247.7 258.9		91.7 97.6	. 316	18.96 26.10	85. 32 115. 45	1	20. 84 78-38
Total	4	19	25.3	60	0.0	266.8	255.4		95.7	. 399	23.94	106.45	-	evenid .
Teamsters, male: Maui Oahu	2 2	19 243	22. 3 21. 7		.0	270. 0 263. 1	223.7 224.3		82. 9 85. 3	. 254	15. 24	68.58	-	01.00
Total	4	262	21.7	60		263.6	224.2	-				64. 99	_	AK 166
Tractor drivers, male: Mani	2							-	85.1	. 247	14.82	65, 11	-	h.h. #¥
Oanu	2	11 38	25.7 23.1	60. 60.	0	270.0	296.3 263.4			. 298	17.88	80, 46	1	2.27
Total	4	49	23.7	60.		265.9	270.8	-		_		83, 38	-	1.10 M
Tractor drivers' helpers, male: Maui	2	9	24.9	60.	===	70.0		-		. 310	18, 60	82, 43	-	14.00
Canu	2	39	24. 5	60.		68.5	278.6 275.5		13. 2)2. 6	222 245	13, 32 14, 70	59, 94 65, 78	1	12
Total	4	48	24.5	60.	0 2	68. 8	276, 1	10		241	14, 40	64.76	-	0. 64
2 Includes plant and	No.			1			-	-					-	and and a state of the local division of the local division of the local division of the local division of the

² Includes plant and slip gatherers, hoers, and weeders.

PINEAPPLE INDUSTRY

 TABLE 26.—Average days worked, average full-time and actual hours and earnings in one month, per cent of full time actually worked, and average earnings per hour on pineapple plantations, 1929, by occupation, sex, and island—Continued

	Num-	Num	Aver- age number	A vera time	age full- bours—	Aver-	Per	Aver-		ge full- urnings-	Aver-
Occupation, sex, and island	ber of estab- lish- ments	ber of em- ploy- ees	of days on which employ- ees worked in month	Per week	Per month	age hours actually worked in month	cent of full time worked in month	age earn-	Per week	Per month	age actual earn- ings in month
Truck drivers, male: Maui Oahu	22	17 66	25. 2 24. 0	60. 0 60. 0	270. 0 266. 4	306. 2 255. 8	113. 4 96. 0	\$0.317	\$19.02 18.06	\$85.59 80.19	\$97. 03 77. 03
Total	4	83	24.2	60.0	267.1	266. 2	99.6	. 305	18.30	81.47	81.13
Truck drivers' help- ers, male: Maui Oahu	22	44 97	21. 0 20. 3	60. 0 60. 0	270.0	250. 0 213. 4	92.6 81.7	. 209	12.54 13.68	56. 43 59. 58	52. 18 48. 69
Total	4	141	20.5	60.0	264.0	224.8	85.2	. 221	13.26	58.34	49.77
Other employees, male: Maui Oahu	22	28 106	23. 5 23. 8	61. 4 60. 0	275. 7 260. 2	243. 1 240. 5	88. 2 92. 4	. 269 . 244	16. 52 14. 64	74. 16 63. 49	65. 39 58. 80
Total	4	134	23.7	60.3	263.4	241.1	91.5	. 250	15.08	65.85	60.18
All employees, male: Maui Oahu	2 2	500 2, 816	19. 0 18. 5	60. 1 60. 0	270. 3 263. 4	193. 1 183. 6	71. 4 69. 7	. 221 . 228	13. 28 13. 68	59. 74 60. 06	42. 74 41. 83
Total	4	3, 316	18.6	60.0	264.5	185.1	70.0	. 227	13.62	60.04	41.96
All employees, fe- male: Maui Oahu	2 2	36 125	12. 4 6. 9	60. 0 60. 0	270. 0 265. 5	120. 7 64. 0	44. 7 24. 1	. 086	5. 16 7. 98	23. 22 35. 31	10. 33 8. 48
Total	4	161	8.1	60.0	266.5	76.6	28.8	. 116	6.96	30.91	8.89
All employees, male and female: Maui. Oahu.	22	536 2, 941	18.5 18.0	60. 1 60. 0	270. 3 263. 5	188. 2 178. 5	69. 6 67. 7	. 216 . 226	12.98 13.56	58. 38 59. 55	40. 57 40. 41
Total	4	3, 477	18.1	60.0	264.6	180.0	68.0	. 225	13.50	59. 54	40. 43

Average earnings per month and per day.—Table 27 shows for each of two of the most important pineapple plantations in the Hawaiian Islands the per cent that the number of employees on the pay rolls in each month in 1929 was of the average number per month on the rolls in the year; the average number of days that were worked per employee each month in the year and the per cent that the average for each month was of the average for the year; the average earnings per employee per month and per day and the per cent that the average per month or per day for each month was of the average per month or day for the year.

Employment—that is, the number of persons on the pay rolls was 35 per cent higher in July on plantation A and 28.4 per cent higher on plantation B than the average per month for the year; 25.8 per cent higher in August on plantation A and 40.8 per cent on plantation B; 17.7 per cent higher in September on plantation A and

8 LABOR CONDITIONS IN HAWAII, 1929–1930

49.9 per cent on plantation B. During these months more than 85 per cent of the annual crop of pineapples ripen, are picked, sorted as to size, and delivered to the canneries.

In April employment on plantation A was only 78.2 per cent, and in January on plantation B only 57.8 per cent, of the average per month for the year.

TABLE 27.—Per cent of employees, average number and per cent of days worked	
and average earnings per month and per day and per cent thereof, 1929, by month	1
and plantation	

	Em- ploy-		ge days ked	Average per n		Per	day
Plantation and month	ees—per cent of average for 1929	Num- ber	Per cent of average for 1929	Amount	Per cent of average for 1929	Amount	Per cent of average for 1929
PLANTATION A							
January	87.0	21.5	109.7	\$50.08	102.7	\$2.33	93, 1
February	82.1	15.0	76.5	36.80	75.5	2.45	98, 4
March	79.1	20.8	106.1	49.37	101.2	2.38	95.4
April	78.2	20.4	104.1	48.94	100.3	2.40	96, -
May	78.6	20.7	105.6	50.49	103.5	2.44	98,
une	108.1	22.0	112.2	57.83	118.6	2.63	105,
uly	135.0	21.6	110.2	58.83	120.6	2.73	100,
ugust	125.8	. 20.3	103.6	51.82	106.3	2.55	102.
eptember	117.7	19.6	100.0	50.49	103.5	2.58	103.1
October	106.4	20.8	106.1	50.80	104.2	2.44	98. 1
November	101.8	16.0	81.6	36. 51	74.9	2.29	92,
December	100.5	15.9	81.1	36.65	75.1	2.31	92.1
Average for year	100.0	19.6	100.0	48.77	100.0	2.49	100. (
PLANTATION B							
anuary	57.8	20.0	92.2	42.85	90.1	2.14	97.1
ebruary	70.1	18.3	84.3	37.94	79.8	2.08	94.
farch	75.8	26.4	121.7	57.84	121.6	2.19	99,
pril	78.9	22.8	105.1	48.99	103.0	2.15	97.
lay	72.6	24.9	114.7	53.79	113.1	2.16	108,
une	80.7	24.0	110.6	53.05	111.5	2. 21	100,
uly	128.4	24.6	113.4	54.75	115.1	2.22	100,
ugust	140.8	25.9	119.4	57.75	121.4	2.23	101,
eptember	149.9	18.6	85.7	41.93	88.2	2.25	102.
October	107.1	22.2	102.3	51.26	107.8	2.31	105.
ovember	117.7	17.2	79.3	37.53	78.9	2.18	- 99.
December	119.9	16.8	77.4	34.46	72.5	2.06	93,
Average for year	100.0	21.7	100.0	47.56	100.0	2,20	100.

Average and classified hourly earnings.—Table 28 gives average and classified earnings per hour of the employees in each of the occupations on the pineapple plantations for which data are shown in Table 26.

Average earnings per hour were computed for each employee by dividing his total earnings including his bonus, if any, in a pay period by the actual number of hours worked by him in the pay period. The average for all employees in an occupation was computed by dividing the total earnings of all employees in the occupation, including the bonus earned by them in the pay period, by the actual hours worked by them in the period.

The table shows the number of employees in each occupation, average earnings per hour of such employees, and the per cent of employees whose earnings per hour were in each classified group. In explanation of the table, it is seen from the figures for the 2,018 plantation "laborers, field, adult male" on the island of Oahu that they earned an average of 19.7 cents per hour; that less than 1 per cent of them earned 10 and under 12 cents per hour; 1 per cent earned 12 and under 14 cents per hour; 13 per cent earned 14 and under 16 cents per hour; 10 per cent earned 16 and under 18 cents per hour; 5 per cent earned 18 and under 20 cents per hour; 67 per cent earned 20 and 22 cents per hour; 2 per cent earned 22 and under 24 cents per hour; and that less than 1 per cent earned 45 and under 50 cents per hour.

	Num-	A ver-						Per	cent o	of empl	loyees	whose	earning	gs (in	cents)	per ho	ur were	<u>ب</u>		-		-	
Occupation and sex	ber of em- ployees	earn- ings per hour	Un- der 6	6 and under 7	7 and under 8	8 and under 9	9 and under 10	10 and under 12	12 and under 14	14 and under 16	16 and under 18	18 and under 20	20 and under 22	22 and under 24	24 and under 26	26 and under 28	28 and under 30	30 and under 35	35 and under 40	40 and under 45	45 and under 50	50 and under 60	60 and under 70
Blacksmiths, male: Maui. Oahu	26	\$0. 407 . 399																33	50 33	50	17	17	
Total	8	. 401																25	38	13	13	13	
Blacksmiths' helpers, male: Maui Oahu	24	. 213 . 341											100					50	50				
Total	6	. 301											33					33	33				
Carpenters, male: Maui Oahu	13 9	. 383 . 410											15				8	22	22	38 11	23 33	8 11	8
Total	22	. 395											9				5	9	9	27	27	9	5
Carpenters' helpers, male: Maui Oahu	2 6	(¹) . 313											33	(1)			(¹) 17		50				
Total	8	. 295											25	13			25		38				
Laborers, field, adult, male: ² Maui. Oahu.	271 2, 018	. 192 . 197						(1)	3 1	11 13	9 10	26 5	46 67	32		(¹)	(*) (*)	(3)			(1)		
Total	2, 289	. 196						(1)	1	13	10	8	65	2	(4)	(1)	(1)	(4)			(1)		
Laborers, field, minors, male ^{,3} <u>Mami</u>	12	.085	2	17	29	13	12	19	6	2													
# 100,000		83 1			(-)	(1)		(1)														******	
Tutul		.652	2	35	2	15	11	20	5	2													
Laborers, field, adult,	35		2	35	5	13	11	37	5		5	5		5			11		5	5			
		.111 .141	2	35	5	25	16	37 16	5 47	26	4	2		4			 11 1		5	5			
female:3 Maui	19	. 111		38		25		37	5		5 4 4	5 2 2											
female: ³ Maui Oahu	19 116	.111 .141			5	83	16	37 16	5 47	26	4	2		4									
female ³ Maui Oahu Total Laborers, field, minors, female ³ Maui	19 116 135	.111 .141 .136	(1)		5		16	377 16 19	5 47	26	4	2		4									
female ³ Maul Oahu Total Laborers, field, minors, female: ³ Maul Oahu Total Lunas or foromen, or field lunas or overseers, male: Maul	19 116 135 17 9 26 20	.111 .141 .136 (!) .077	(1)		5	8	16 2 (1)	37 16 19 (1)	5 47	26	4	2		4		10 15	1	 5 24	1 20 12	1 20 10			
female ³ Maul Oahu Total Laborers, field, minors, female: ³ Maul Oahu Total Lunas or foremen, or field lunas or overseers, male: Maul Oahu	19 116 1355 177 9 26 20 165	:111 :141 :136 (!) :077	(1)		5	8	16 2 (1)	37 16 19 (1)	5 47	26	4	2	1	4		15	1		1	1			
female ³ Maul Oahu Total Laborers, field, minors, female: ³ Maul Oahu Total Lunas or foromen, or field lunas or overseers, male: Maul	19 116 135 17 9 26 20	.111 .141 .136 (!) .077 .332 .331	(1)		5	8	16 2 (1)	37 16 19 (1)	5 47	26	4			4 4 	7	15	1 5 17 16	24 22 (1) (1)	1 20 12 13	1 20 10 11 (')	4	2	
female: ³ Maui	19 116 135 17 9 26 20 165 185 3	. 111 . 141 . 136 (1) . 077 . 332 . 331 . 331	(1)		5	8	16 2 (1)	37 16 19 (1)	5 47	26	4			4 4 	7	15	1 5 17	24	1 20 12 13	1 20 10	4	2	
female: ³ Maui Oahu Total Laborers, field, minors, female: ³ Maui Oahu Total Total Maui Oahu Total Painters, male: Maui Oahu Painters, male: Maui Oahu	19 116 135 17 9 26 165 185 185 185 185 185 185	.111 .141 .136 (!) .077 .332 .331 .331 (!) .362 (!)	(1)		5	8	16 2 (1)	37 16 19 (1)	5 47	26	4			4 4 	7	15	1 5 17 16	24 22 (1) (1)	1 20 12 13	1 20 10 11 (')	4	2	
female: ³ Maui	19 116 1355 17 9 26 165 185 185 185 185 185 185 185 185	.111 .141 .136 (!) () .077 .332 .331 .331 (!) (!) (!) .362 (!) .532	(1)		5	8	16 2 (1)	37 16 19 (1)	547 41	26				4 4 	7	15	1 5 17 16	24 22 (1) (1)	1 20 12 13	20 10 11 (1) 500 (1)	4	2	
female: ³ Maul. Oahu Total Laborers, field, minors, female: ³ Maui. Oahu Total Lunas or foromen, or field lunas or overseers, male: Maui. Oahu Total Painters, male: Maui. Oahu Total Plumbers, male: Maui. Oahu Oahu	19 116 1355 17 9 26 165 185 185 185 185 185 185 185 185 185 18	.111 .141 .136 (!) .077 .332 .331 .331 .331 (!) .362 (!) .532 .490 .316	(1)		5	8	16 2 (1)	37 16 19 (1)	547 41	26					7	15 14 		24 (1) (1) 50 	20 12 13	20 10 11 (1) 50 (1) (1) 17 31	4		
female ³ Maui	19 116 135 17 9 26 20 165 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185	.111 .141 .126 (!) (!) .077 .332 .331 .331 (!) .532 .490 .316 .435	(1)		5		16 2 (1)	37 16 19 (1)	547 41				4 3		7			24 22 (1) (1) .50	20 12 13	20 10 11 (1) 50 (1) (1) 17 31	4		
female: ³ Maui	19 116 135 17 9 26 20 165 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185 - 185	.111 .141 .136 (!) (!) .077 .332 .331 .331 (!) (!) .362 (!) .532 .490 .316 .415 .399 .254					16 2 (1)	37 16 19 (1)								15 14 		24 22 (1) (1) 50 		20 10 11 (1) 50 (1) (1) 17 31	4		

TABLE 28.—Average and classified earnings per hour on pineapple plantations, 1929, by occupation and sex

Included in occupation total.
 Includes planters, cultivators, fertilizers, fruit pickers, plant gatherers, cultivator contractors, cleaners-up, etc.
 Includes plant and slip gatherers, hoers, and weeders.
 Less than 1 per cent,

. 247

262

Total_____

61

		Aver-						Pe	r cent	of emp	loyees	whose	earnin	gs (in	cents)	per ho	ur wer	e—					
Occupation and sex	Num- ber of em- ployees	age earn- ings per hour	Un- der 6	6 and under 7	7 and under 8	8 and under 9	9 and under 10	10 and under 12	12 and under 14	14 and under 16	16 and under 18	18 and under 20	20 and under 22	22 and under 24	24 and under 26	26 and under 28	28 and under 30	30 and under 35	35 and under 40	40 and under 45	45 and under 50	50 and under 60	60 and under 70
Fractor drivers, male: Maui Oahu	11 38	\$0. 298 . 315												8	9 13	36 8	18 5	18 39	18 21	3			
Total	49	. 310											2	6	12	14	8	35	20	2			
Tractor drivers' helpers, male: Maui Oahu	9 39	. 222 . 245									3		67 23	22 28	11 18	13							
Total	48	. 241									2		31	27	17	10	10	2					
Fruck drivers, male: Maui Oahu	17 66	.317										2		12	12 9	12 9	20	59 39	18 9				
Total	83	. 305										1		10	10	10	16	43	11				
Truck drivers' helpers, male: Maui Oahu	44 97	. 209 . 228								i	11 5	7 10	52 31	16 21	7 21	26	24				2		
Total	141	. 221								1	7	9	38	19	16	5	4	1			1		
Other employees, male: Maui Oshu	28 106	. 269 . 244					4				6	11 13	21 17	4 24	4 11	11 9	11 10	18 8	7 1	7		4	
Total	134	. 250					1				4	13	18	19	10	10	10	10	2	2	1	1	
LI employees, male: Mani Oshu	500 2, 516	. 221 . 228	(1)	2	(4) ³	(⁴)	1	(⁴) ²	21	6 9	6 8	16 5	34 51	56	35	34	33	4	3 2	31	1	(1)	(3)
Tural	1.336	.25	(9)	(9)	1	(9	(9)	1	1	9	7	7	49	6	5	4	3	4	2	1	1	(1)	(1)

TABLE 28.—Average and classified earnings per hour on pineapple plantations, 1929, by occupation and sex—Continue,

All employees, female: Maui. Oahu.	36 125	.086 .133		3 2	19 2	11 3	17	25 14	6 44	24	34	3 2	<u>1</u>	84			6		3	3			
Total	161	. 116		2	6	б	4	17	35	19	4	2	1	4			1		1	1			
All employees, male and female: Maui. Oahu	536 2, 941	. 216 . 226	(4)	(⁴)	(⁴)	(⁴) ²	2	4 1	23	6 10	6 8	15 4	31 49	5 6	3 5	34	33	4	32	3 1	1	(1)	8
Total	3, 477	. 225	(1)	(*)	1	1	(*)	1	3	9	7	7	47	6	4	4	3	4	2	1	1	(9)	(1)

• Less than 1 per cent.

Length of Service of Employees

Table 29 shows the number and per cent of employees of two representative plantations by periods of service.

On plantation A 26.1 per cent of its employees had a period of service of less than 6 months; 30.8 per cent, 1 and under 2 years; while one employee, or one-tenth of 1 per cent, had a service of 26 years.

TABLE 29.—Number	and per	cent of employees of two	pineapple plantations, 1929,
		by period of service	

	Employe		each classif vice—	fied period
Period of service	Planta	tion A	Planta	tion B
	Number	Per cent	Number	Per cent
ess than 6 months months and under 1 year	458	26. 1	505 198	44. 0 17. 2
and under 2 years and under 3 years and under 4 years and under 5 years	540 187 153 73	30.8 10.7 8.7 4.2	$ \begin{array}{r} 167 \\ 115 \\ 52 \\ 59 \end{array} $	14. 5 10. 0 4. 5
and under 6 years and under 7 years and under 8 years	90 62 43	5.1 3.5 2.5	27 12 2	2.4
and under 9 years and under 10 years and under 11 years	37 36 20	2.1 2.1 1.1	24	.2
and under 12 years	10 7 4 5	.6 .4 .2 .3	12	
and under 16 years. and under 16 years. and under 17 years.	4	.2	1	
and under 19 years. and under 20 years. and under 21 years.	2335	2		
and under 22 years. and under 23 years. and under 24 years.	1 3 3	$^{-1}_{-2}_{-2}$		
and under 25 years. and under 26 years. years	2 2 1	.1 .1 .1		
Total	1, 755	100.0	1, 148	100.0

Productivity of Labor on a Plantation, 1929

Planting pineapple slips.—Planting slips (crowns, slips, and suckers) is one of the important divisions of the work on pineapple plantations and paid for at a specified rate per thousand. The work is usually done during the last half of the year, beginning as early as July in some fields and ending in December in other fields. Employees who do this work are generally called field or plantation laborers as they are shifted from one kind of field work to another as needed. Field No. 1 was planted in August and September, 1929. The employees (males) who did the planting in this field worked a total of 4,991 hours, set out an average of 296 slips per hour, and earned an average of 32.6 cents per hour. The average for all work of planting slips in the 10 fields in 1929 was 31.7 cents per hour. Employees who did this work also did other field work on the plantation in 1929. Figures for a representative pineapple plantation are given in Table 30.
 TABLE 30.—Average number of pineapple slips planted per hour and average earnings per hour on one representative plantation, 1929

in the			Average	per hour
Field	Period	Number of hours worked	Number of slips planted	Earnings
No. 1 No. 2 No. 3 No. 4 No. 6 No. 6 No. 7 No. 8 No. 9 No. 9 No. 10	August and September	4, 991 2, 490 2, 090 3, 650 1, 860 8, 068 2, 255 8, 035 3, 259 920	296 255 320 224 272 280 325 329 252 310	\$0. 326 286 352 244 302 302 355 365 277 34
	Total	37, 618	288	. 31

Trimming pineapple slips.—In 1929 the work of trimming pineapple slips on a representative pineapple plantation was done by men and women. Data for each sex were not available. They worked a total of 23,488 hours as trimmers of slips, trimmed an average of 259 slips per hour, and earned an average of 21.8 cents per hour. Employees, especially the men, also did other field work on the plantation in 1929.

Fertilizing pineapple plantation fields.—In 1929 a part of the regular or permanent male employees of a representative pineapple plantation did 10 different jobs of fertilizing and temporary employees did 26 jobs. The regular employees also did other field work on the plantation. The regular employees worked a total of 5,858 hours as fertilizers and earned an average of 20.8 cents per hour, while the temporary employees—men, women, and boys—worked a total of 25,628 hours and earned an average of 17.9 cents per hour.

Pineapple picking.—In the months of June to October, 1929, the work of picking pineapples on a representative pineapple plantation was done by adult male employees. The rates paid for this work ranged from \$1.10 per ton for fields with the lowest rate to \$2.65 per ton for fields with the highest rate. These employees worked a total of 37,136 hours, picked an average of 0.187 tons per hour, and earned an average of 23 cents per hour. They also did other field work on the plantation during the year.

Pineapple Canneries

Description of Work and Definition of Occupations

The fruit is delivered to the canneries on railroad cars or auto trucks (fig. 29) and unloaded from these to hand trucks on the loading platform, five boxes of fruit to each truck load.

Loading platform and Ginaca machines.—"Truckers" push the trucks loaded with fruit from the railroad cars or auto trucks to bins conveniently located at certain (Ginaca) machines, lower the filled boxes onto the floor of the platform, fill the trucks with empty boxes and return the empties to the railroad cars or auto trucks for return to the pineapple plantations. Truckers are classified in this report as "laborers," because the work done by them is unskilled and they are so classified by practically all of the canneries included in the study of the industry.

In distributing the boxes of fruit to the machines, those with fruit of grade 1 are delivered by the truckers to machines of a given size that cut from each pineapple a cylinder of a specified diameter, of grade 2 to machines of another size, and of grade 3 to still another. These machines cut pineapples to different diameters, those of small diameter being for small cans, of medium diameter for medium-sized cans, and of large diameter for large cans.

"Dumpers," classified in this report as "laborers," empty the fruit from the boxes into bins and stack the empties—one on another, nine to a stack—for return to the railroad cars or auto trucks and ultimately to the plantations.

"Feeders" (fig. 30) to the Ginaca machines take pineapples from the bins and place them one at a time on a belt-conveyor of the machine at the rate of 42 per minute. Some machines have a speed of 84 pineapples per minute. Those with the higher rate of speed require more truckers, dumpers, and feeders before and more trimmers, canners, laborers, and other employees after them than those of the lower rate of speed.

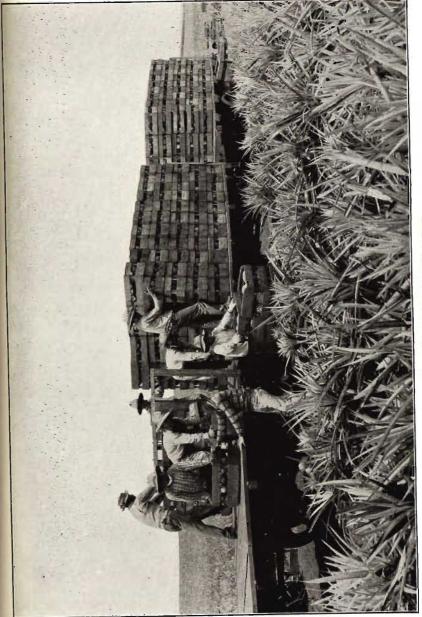
The machines, as stated above, cut from the fruit a cylinder of one of the three given diameters—small, medium, or large. They also extract the core, cut off the ends, and in addition, scrape or cut from the skin or hull of the pineapple the fruit left thereon after the cylinder is cut. The cored and peeled cylinders of pineapples pass from the machines by gravity to conveyors on trimming tables, and the fruit from the skin or hull is carried by belt conveyors from the machine to the "eradicator" tables and the skin or peeling to the juice recovery plant.

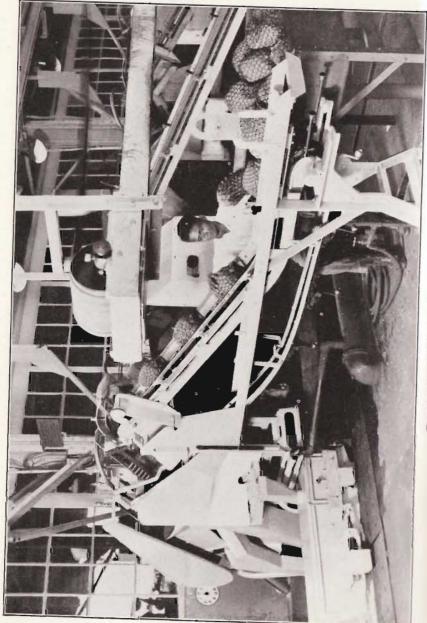
"Machine operators," one at each machine, look after the machines while in operation. These machines, like all others in pineapple canneries, are operated by electric power.

"Inspectors, male," called in some canneries "eradicators," inspect the fruit from the skin or hull of the pineapple as it passes from the machines to belt conveyors, and take from the fruit particles of the skin or other foreign matter. Data for these employees are included in the group designated as "other employees" in this report. *Trimming and slicing.*—"Trimmers" (fig. 31) take the cored

Trimming and slicing.—"Trimmers" (fig. 31) take the cored cylinders of the pineapples from the belt conveyors as they pass along the trimming tables, inspect them, complete the trimming with knives by cutting off any part of the skin left on the cylinder when they were cut, and return the fruit to the conveyors. There is a relief trimmer for every two trimming tables to fill in whenever for any cause it is necessary for an employee to drop out of line.

"Foreladies" are in charge of trimming, canning, and eradicating tables. They, as well as the trimmers and all others who handle any of the fruit from the time it passes through the Ginaca machines up to the filling of the cans with fruit, wear rubber gloves for sanitary purposes and to protect their hand from the effects of the acid of the fruit. They also, for sanitary purposes, wear caps to hold the hair in place and aprons to protect the clothing, altogether presenting a neat and clean appearance.





FIQURE 30. - FEEDING TO GINACA MACHINE

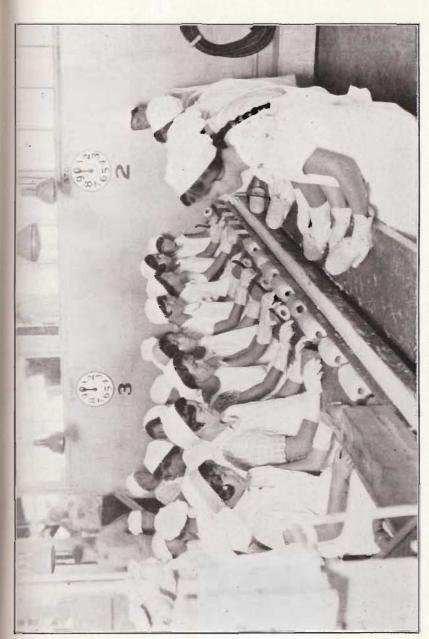


FIGURE 31.-TRIMMING

The fruit passes automatically from the trimming tables to and through automatic slicing machines, is washed, cut into slices of uniform thickness, and delivered to the belt conveyors of the canning tables.

Packing in cans.—"Canners" (fig. 32) take slices of pineapples from the belt conveyors, make selection as to grade, and fill cans. Small pieces and slices which fail to pass inspection are carried from the packing tables by conveyors to the crushed pineapple department.

"Tray boys," classified in this report as "laborers," truck empty cans on trays 15 by 19 inches in size—one tray on top of another from the elevators to the canners' tables, place the trays of empties one tray at a time—at the tables convenient to the canners for filling, take the trays of cans filled with slices from the packing tables and stack them to a height sufficient to make a truck load of about 15 trays.

Èmployees classified in this report as "laborers" receive the cans as they come into the canneries from a can factory, stamp them by machine to indicate the grade or size of fruit with which they are to be filled, and place them on trays, which they truck to storage or canning room or to an elevator which carries them to such room or department.

Truckers (laborers), using hand trucks, take the stacks of trays from the packing tables to the vacuumizing, siruping, and other machines in the processing department.

Processing and sealing.—"Feeders," classified as "laborers" in this report, take cans filled with slices of pineapple from the trays and feed them at the rate of 110 cans per minute to automatic vacuum machines for treatment.

The cans pass automatically from the vacuumizing machine to and through the siruping machines, where each can is given its quota of clarified pineapple juice. This is a product of the juice recovery plant of the cannery, which is built up to a sirup of the required density by the addition of refined cane sugar. The cans pass automatically from the siruping machine to the exhaust box, where they are warmed and expanded by live steam, the air expelled, can covers automatically placed thereon and sealed. The sealed cans first pass through steampressure cookers with temperature slightly over boiling and then through a lacquer bath, going in white and coming out with a coat of lacquer which improves the appearance of the cans and protects them from rust in moist or humid climates. "Lacquer men" (laborers) keep a supply of lacquer in the vats. The cans pass from the lacquer bath to the drying machine, to and through and out of the cooler where "tray stackers" (laborers) pick up the trays and stack them, the number of trays in the stacks varying with the size of cans.

"Electric truck operators" ("other employees") take the stacks to the cooling room, where they are kept 24 hours for inspection for leaks and bulges after which they are loaded on gasoline tractors and moved to the warehouse.

Warehouse.—On receipt of the canned fruit in the warehouse, stackers take the cans from the trays and stack them. In filling orders for shipment from the canneries the cans are taken from the stacks, inspected, placed on trays, moved by hand trucks to labeling machines, fed into the machines, labeled, and the labeling inspected, after which the cans are taken from the belt of the machine and packed in wooden

FIGURE 32 .- FILLING THE CANS



LABOR CONDITIONS IN HAWAII, 1929-1930

or fiber cases. Covers or tops are attached to the wooden cases by nailing machines and then wired by machinery, the tops and bottoms of fiber cases are glued and sealed by automatic sealing machines, and both kinds of cases are dropped by gravity to the shipping floor ready for loading (by laborers) and shipment from the canneries. In nearly all of the canneries included in the study the employees whose work is here described are called laborers and are therefore so classified in this report.

The wooden cases used in packing the fruit for shipment are made or assembled by "box makers" from "shucks" bought by the canneries already cut to size. The assembling of the boxes consists of the branding by machine of the shuck for certain parts of the box, the making of the cases by assembling and nailing sides, ends, bottoms, and tops, and the inspection of the work.

Crushed pineapple.—The fruit from the skin or hull of the pineapple, after inspection at the Ginaca machines is transferred from the machines by belt conveyors to the eradicating tables where "eradicators, females," carefully reinspect the fruit as it passes on conveyors and pick from the fruit any and all specks or particles of the skin or hull remaining in it. This fruit is then conveyed to nickel steam-heated kettles for cooking and sterilization along with small pieces of pineapple and slices which, not passing inspection by canners at the packing tables, have been transferred to and through crushing machines to the nickel kettles. After being cooked and sterilized the fruit is conveyed to automatic filling machines where cans are filled and sealed; then washed by a spray of hot water, lacquered and cooled; inspected and transferred to the warehouse; and handled in the same manner as sliced canned goods.

Juice recovery plant.—The skins or peelings of the pineapples, delivered by belt conveyors from the Ginaca machine to the juice recovery department, are carried by machinery to a separator for extraction of metal, stone, or any other solid and, after passing to a 3-roller cane mill where they are crushed and a very large per cent of the juice pressed from them, are passed automatically to and through a shredding machine to screw presses where all possible juice is pressed from them.

This juice is then carried automatically through the machinery of the recovery department, neutralized, filtered, concentrated, and pumped to the syrup mixing department where refined cane sugar is added to make a syrup of certain standard for use in filling cans of sliced pineapple.

The skins after all the obtainable juice has been pressed from them still retain some moisture which is approximately a 12 per cent sugar solution. The skins are automatically passed from the presses into a steel cylinder, dried by furnace heat forced through the cylinder, and made into dairy stock feed. The feed thus obtained is dropped from the cylinder through a chute to an automatic weighing machine where laborers attach empty bags to the machine, take the filled 100-pound bags from it and sew the open end of the bag at the rate of 75 bags per hour when working at capacity. The bags are then loaded on hand trucks and pushed by truckers to the warehouse for storage or filling orders. From each ton of fruit canned 60 pounds of dairy feed is obtained.

PINEAPPLE INDUSTRY

Each cannery has a well-equipped machine and repair shop with a force of machinists, carpenters, painters, plumbers, and other mechanics for construction and repair of machinery and the repair of other necessary equipment. The employees in this shop are classified by occupations according to the kind of work done.

Race and Sex of Employees in Cannery, 1929

Table 31 shows the number and per cent of males, females, and all employees of each race on the pay rolls of a representative pineapple cannery in the Hawaiian Islands in a representative pay period in 1929.

Japanese formed 43.9 per cent of all males of all races on the pay rolls, and 39.9 per cent of all females, while the total number of Japanese was 42.1 per cent of all employees of the cannery.

TABLE 31.—Number and p		a representative pineapple cannery.
	1929, by race and	sex

	M	iles	Fen	nales	To	otal
Race	Number	Per cent	Number	Per cent	Number	Per cent
Japanese Hawailan Filipino	525 107 220	43.9 9.0 18.4	386 248 32	39.9 25.6 3.3	911 355 252	42.1 16.4 11.7
Portuguese. Part Hawaiian	111 75 62 43	9.3 6.3 5.2 3.6	99 89 85 13	10.2 9.2 8.8 1.3	210 164 147 56	9.7 7.6 6.8
American Korean Porto Rican Spanish	43 39 7 2	3.3 .6 .2	13 8 4 1	.8 .4 .1	47 11 3	2.6 2.2 .5
Russian Negro Italian British	1 1 1 1	.1 .1 .1	1	.1 .1	2 2 1	.1
Norwegian			1	.1	î	.0
Total	1, 195	100.0	968	100.0	2, 163	100. (

Hours and Earnings, 1929

The three most important occupations in canneries in number of employees are canners, female, with a total of 1,510; laborers, male, with 3,205; and trimmers, female, with 1,408. The total of the employees in these occupations is 81 per cent of the 7,516 employees in all occupations in the five canneries included in this report.

Table 32 shows average days, hours, and earnings by occupations for the employees of two of the largest canneries on the island of Maui for a pay period of one month and for the employees of three of the most important canneries on the island of Oahu for a pay period of one week.

Canners in the two canneries on the island of Maui worked an average of 21 days and 191 hours in one month and earned an average of \$23.24 in the month and an average of 12.2 cents per hour, while those on the island of Oahu worked an average of 5.7 days and 48.1 hours in one week and earned an average of \$8.49 in the week and an average of 17.7 cents per hour. Laborers, male, on Maui earned an average of 20 cents, and those on Oahu an average of 24.3 cents per hour. Trimmers, female, on Maui earned an average of 12.3 cents and on Oahu an average of 17.7 cents per hour. Males in all occupations in the two canneries on the island of Maui earned an average of 22.9 cents and the 3,095 males in all occupations on the island of Oahu earned 28.2 cents per hour, or 23 per cent more than was earned by the employees in the canneries on Maui. Females in all occupations on Maui earned an average of 12.4 cents and those on Oahu an average of 18.2 cents per hour, or 47 per cent more than those on Maui. All male and female employees in the canneries on Maui earned an average of 17.9 cents while in the canneries on Oahu the average was 23.7 cents per hour, or 32 per cent more than was earned by the employees on the island of Maui. All employees, male and female, on the 4 plantations earned an average of 22.5 cents per hour, while those in the five canneries earned an average of 22.4 cents per hour.

In three canneries the rate for overtime and for work on Sunday and holidays was one and one-half times the regular rate and applied to hourly rate employees; in one cannery this rate applied to all except monthly rate employees; and in one cannery the rate was the same as for regular working time.

TABLE 32.—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour in pineappla canneries, 1929, by occupation and sex

ONE-MONTH PAY PERIOD

	Num-	Num-	Aver- age num- ber of	time	nge full- hours er—	Aver- age	Per	Aver-		ge full- arnings	A ver-
Island, 'occupation, and sex	ber of estab- lish- ments	ploy-	days on which em- ployees worked in pay period	Week	Month	hours actually worked in pay period		age earn- ings per hour	Per week	Per pay period	actual earn- ings in pay period
MAUI											
Box makers, male Canners, female Electricians, male Eradicators, female Foreladies Laborers, male Laborers, female Machina shop helpers, male Trimmers, female Truck or tractor driv- ers, male Other skilled employ-	1 2 1 2 2 2 1 2 2 1	21 335 6 2 71 25 705 22 16 37 416 2	(1) 21.0 (1) 20.7 24.6 20.5 22.5 (1) 25.6 19.9 (1)	(1) 60.0 (1) (1) 60.0 60.0 60.0 (1) 60.0 (1) 60.0 (1)	(1) 270.0 (1) 270.0 270.0 270.0 270.0 (1) 270.0 270.0 (1)	(1) 191.0 (1) 206.8 243.0 210.6 224.5 (1) 282.2 174.4 (1)	(1) 70.7 (1) (1) 76.6 90.0 78.0 83.1 (1) 104.5 64.6 (1)	(1) \$0.122 (1) .112 .187 .200 .133 (1) .271 .123 (1)	(1) \$7.32 (1) (1) 6.72 11.22 12.00 7.93 (1) 16.26 7.38 (1)	(1) \$32, 94 (1) 30, 24 50, 49 54, 00 35, 91 (1) 73, 17 33, 21 (1)	(1) #23.0 (23.0 #46.66 45.18 20,0 74.48 (1) 74.48 (1)
ees, male Other employees, male_	$\frac{1}{2}$	1 52	(1) 24. 9	(1) 60. 0	(1) 270.0	(1) 269. 0	(¹) 99. 6	(¹) . 427	(¹) 25. 62	(1) 115, 29	112.96
All employees: Male Female	2 2	842 869	21. 1 20. 6	60. 0 60. 0	270. 0 270. 0	219. 5 187. 8	81. 3 69. 6	. 229 . 124	13. 74 7. 44	61, 83 33, 48	60. 120 28. 20
All employees, male and female	2	1, 711	20. 8	60. 0	270. 0	203.4	75.3	. 179	10, 74	48, 33	36, 49

¹ Included in total.

 TABLE 32.—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour in pineapple canneries, 1929, by occupation and sex—Continued

ONE-WEEK PAY PERIOD

Occupation and sex	Num- ber of estab- lish- ments	Num- ber of em- ploy- ees	A verege number of days on which employ- ees worked in pay period	A verage full-time hours in pay period	Average hours actually worked in pay period	Per cent of full time worked		A verage full-time earnings in pay period	A verage actual earnings in pay period
OAHU								400 70	\$29.87
Blacksmiths, male	2	2	6.5	60.0	58.3	97.2 (¹)	\$0. 513 (¹)	\$30.78 (1)	\$29.01 (1)
Box makers, male	1	10	(1)	(¹) 60.0	(¹) 48.1	80.2	.177	10.62	8.49
Canners, female	3 2 2 2	1,175	6.1	60.0	56.4	94.0	. 536	32.16	30. 21
Carpenters, male	2	10	6.3	60.0	73.3	122.2	. 546	32.76	38.43
Eradicators, male	2	98	5.8	60.0	52.6	87.7	. 200	12.00	10. 52
Eradicators, female	3	177	5.8	60.0	48.9	81.5	.172	10.32	8.40 16.50
Foreladies	3	81	6.3	60.0	60.4	100.7	. 273	16.38 14.58	10.50
Laborers, male	33	2, 500	5.6	60.0	51.8 51.0	86.3 85.0	. 243	14.08	9.48
Laborers, female	3	272	6.0	60.0 60.0	73.6	122.7	. 556	33. 36	40.94
Machinists, male	3	84	6.7	00.0	10.0	100.1		00.00	
Machine shop helpers,	3	45	6.0	60.0	60.9	101.5	. 390	23.40	23.79
male Machine tender opera-	0	40	0.0	00.0	2.1				
tors, male	2	34	6.0	60.0	62.5	104.2	. 397	23.82	24.82 21.98
Testers, can, male	223	26	6.2	60.0	64.4	107.3	. 341	20.46 10.62	8.41
Trimmers, female	3	992	5.6	60.0	47.5	79.2	. 177	10. 62	8.41
Truck or tractor driv-				0.00	61.9	103.2	. 333	19.98	20.63
ers, male	2	8	6.1	60.0	01.9	100.2		10.00	20100
Other skilled employ-	0	52	5.9	60.0	59.1	98.5	. 523	31.38	30.93
ees, male Other employees, male.	23	218				106.2		25.68	27.25
Other employees, male.		210	0.0		1	and the second	1	1	1
male	2	13	6.8	64.6	68.8	106.5	. 260	16.80	17.89
All employees:		3, 095	5.7	60.0	53.8	89.7	. 232	16.92	15.15
Male Female		2,710							8.84
All employees, male and female		5, 805	5 5.7	60.0	51.4	85.7	. 237	14. 22	12. 20

I Included in total.

Earnings per hour and per week.—Table 33 shows, by occupations, average full-time hours per week, earnings per hour, and full-time earnings per week for the employees of the five canneries covered in this study.

LABOR CONDITIONS IN HAWAII, 1929-1930

 TABLE
 33.—Average full-time hours and earnings per week, and average earnings per hour in pineapple canneries, 1929, by occupation and sex

Occupation and sex	Num- ber of estab- lish- ments	Number of em- ployees	A verage full-time hours per week	A verage carnings per hour	A verago full-time earnings per week
Blacksmiths, male Box makers, male					
Box makers, male	2	2	60.0	\$0. 513	\$30, 7
Canners, female Carpenters, male	2	31	60.0	. 220	13. 20
Carpenters, male	5	1, 510	60.0	. 165	9, 00
Carpenters, male Electricians, male	3	14	60.0	. 428	
Eradicators:	3	12	60.0	. 502	25. 6
Male			00.0	. 302	30, 1;
Female	2	98	60.0	000	
Foreladies	5	248	60.0	. 200	12.00
Laborers:	51	106		. 155	9, 34
Male	-	100	60.0	. 253	15, 18
Male	5	3, 205	60.0		
Machiniste male	5	294	60.0	. 234	14, 04
Machine short believe	4	100		. 182	10, 02
Machine tender operators, male	5	82	60.0	. 541	32 46
Postan Postan Postan Postan Postan Postan Postan	2	34	60.0	. 336	20, 16
Pesters, can, male	2		60.0	. 397	23, 82
Trimmers, female	5	26	60.0	. 341	20, 40
Truck or tractor drivers, male		1,408	60.0	. 161	9.66
	3	10	60.0	. 326	19, 50
	3	53	60.0	. 542	32, 59
Male					0.0.04
Female	5	270	60.0	. 428	25, 68
	2	13	64.6	. 260	16.80
All employees, male				. 200	10, 100
All employees, female	5	3, 937	60.0	. 271	111.000
projoco, ionalio-	5	3, 579	60.0	. 168	18, 20
All employees male and too			00.0	. 108	10, 08
All employees, male and female	5	7, 516	60.0	. 224	13. 44

Average and classified hourly earnings.—Table 34 gives, by occupa-tion and sex, the average and classified earnings per hour in 1929 for the canneries on the islands of Maui and Oahu.

120 and over and der 120 90 der 100 90 Hard 10

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	_																					
	N				1				Per c	ent ol	Per cent of employees whose earnings (in cents) per hour were-	oyees	whos	se eari	ings	in ce	nts) p	er hot	II Wer	L	1	
Occupation, sex, and island	ploy- ees	age earn- ings per hour	7 and un- der 8	and un- der 9	9 un- der 10	10 and un- der 12	12 and un- der 14	14 and un- der 16	16 un- der 18	18 and un- der 20	20 and der 22	22 24 der 24	24 and der 26	28 der un-	30 der 38	35 der 30 35 der	35 35 der 40	40 der 45	45 and a der der der	50 and a der der	60 and der 70	1 and er der 80
Blacksmiths, male: Oahu	2	\$0. 513													T			50			50	
Box makers, male: Maui Oahu	10	33						Ξ	ε	Ξ	33	33	ΞΞ	33			Ξ				1 1	
Potal	- 31	. 220						10	10	26	13	9	19	13			3					
Camers, female: Maui Oahu	- 335 1,175	.122 .177	5	3	4	12	52	16	43 cr	35 .	2	1	33		1	()	(2)					
Total	- 1,510	. 165	1	-	-	3	12	18	35	27	-	-	(3)	(2)	(3)	(2)					1 1	
Carpenters, male: Maui Oahu	98	(I) . 536										Ξ	Ξ	Ξ		Ξ	Ξ			188	i H	13
Total	14	.428		TI	Π		Π		Π		Π	1	1	1	Π	1-	2			20	1	-
Electricians, male: Maui Oahu	10	(I) . 546										Ξ				E	10	20	10	IO	40	
Total.	- 12	. 502										8	11			00	00	17	8	00	33	
Eradicators, male: Oahu	- 98	.200							13	41	32	2	3	2		2						
Eradicators, female: Maui	171	.112 .172	80	80	3	30	48		81	12			I									
Total.	- 248	.155	2	57	-	8	14	5	58	8			-									
		1 Inch	¹ Included in occupation total	n occi	ipatio	n teta	-		Ī	Ī		Ē.	1	-	² Less	than	¹ Less than I per cent	cent.	Ì	Ĩ	1	L.

Average and classified earnings per hour in pineapple canneries, 1929, by occupation and sex

TABLE 34.-

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		A ver-							Per	cent o	of emp	oloyee	s who	se ea	rnings	(in c	ents)	per h	our w	ere-						
Occupation, sex, and island	Num- ber of em- ploy- ees	age earn- ings per hour	7 and un- der 8	8 and un- der 9	9 and un- der 10	10 and un- der 12	12 and un- der 14	14 and un- der 16	16 and un- der 18	18 and un- der 20	20 and un- der 22	22 and un- der 24	24 and un- der 26	26 and un- der 28	28 and un- der 30	30 and un- der 35	35 and un- der 40	40 and un- der 45	45 and un- der 50	50 and un- der 60	60 and un- der 70	70 and un- der 80	80 and un- der 90	90 and un- der 100	100 and un- der 120	120 and ove
Foreladies:		\$0, 187						8	32	40																
Maui Oahu	25 81	. 273						•		40	8 17	17	12	8 12	5	14	19	1	1	1						
Total	106	. 253						2	8	9	15	13	10	11	4	10	14	1	1	1						
aborers, male: Maul Oahu	705 2, 500	. 200 . 243			(2)	(2)	1	3 (²)	48 1	23 8	12 16	3 21	2 31	2 11	1 3	27	21	1 (²)	(2)							
Total	3,205	. 234			(2)	(2)	(2)	1	12	11	15	17	24	9	3	6	2	(2)	(2)							
aborers, female: Maui Oahu	22 272	.133				5	68	18	5 37	5 46		3	2	(2)												
Total	294	. 182				(2)	5	4	35	43	8	3	2	(2)												
lachinists, male: Maui Oahu	16 84	(1) . 556											2	2	6	4	6	(¹) 8	(1) 12	(1) 23	(¹) 10	7	6	10	5	
Total	100	. 541											2	2	5	3	õ	12	13	26	9	6	5	8	4	
fachine shop helpers, male: Maui. Oahu	37 45	.271 .390						3	8	82	16 2	16 7	5	5 4	8	5 13	14 27	11 7		27						
Total	82	. 336						1	4	5	9	11	2	5	4	10	21	9	6	15						
achine tender operators, male: Oahu. esters, can, male: Oahu	34 26	. 397											3		6	18 85	21 4	26	9	18						

TABLE 34 .- Average and classified earnings per hour in pineapple canneries, 1929, by occupation and sex-Continued

																	-	-		1		- 1	-	- 1	-1		
	-				1	1	1	I	1	.1	1	1	-	1													
Trimmers, female: Maui	416 992	.123	3	3	1	13	68	77	49	42	1	1	_		(2)												
Oahu	1,408	. 161	1	1	(2)	4	20	7	36	30	1	(2)		(2)	(2)			=	-		=		-				
Track or tractor drivers, male:		(1)												00	(1)		13	13									
Maui. Oahu	2 8	. 333												30	20	30	10	10_									
Total	10	. 326					_									101							2	2	2	(1)	
Other skilled employees, male: Maui	1 52	(1) . 523														2	8	17	21	33 32	8	6	2	2	2	2	
Oahu	53	. 542														2	8	17	21	32		-	-	-	-		
Total Other employees, male:					2		2	8	4		2	4	8.		8	4	4	10 20	12 10	21 18	4	42	6	(2)	(2)		i
Maui.	52 218	.427 .428							1	(2)	3	3	2	3	2	14	10	18	10	19	5	3	1	(2)	(2)		
Total	270	. 428			(1)		(2)	2	2	(2)	15	23	8	30	23												
Other employees, female: Oahu_	13	. 260											_			2	3	2	1	2	(2)	(2) (2)	(2) (2)		(2)	(2) (2)	
All employees, male: Maui	842	. 229			(2)	(2)	1	3	41	21 8	11 15	4 18	3 25	2 10	3	8	3	3	2	23		(2)	(2)	(2)	_	(2)	
Oahu	3,095	. 282	-	-	(2)	(2)	(2)	1	10	10	14	15	21	8	3	7	3	3	2	3	1	(1)		-		-	
Total	- 0, 937		=	=		13	58	10	5	2	(2) 3		(2)	(?)				(2)	(2)	0	-	-		· t	- [- [
All employees, female: Maui Oahu	2,710		2	3				- 11	46	36		2	1	1	(?)	(2)	(2)	(2)	(2)	-	-	-					
Total	3, 579	. 16	8			1 3	3 14	11	36	28	2	1	-	-			2		-	T	-	(2)	(2)			(2)	
All employees, male and female Maui		1 .17		2	2	1	7 30		2	3 11 3 22	6 9		1 14		12			1	1	-	2 1	(2)	-	-	(9)		
Oahu	7 61	_		1 (2) (2)	2	7 (5 2	2 19	8	8	11	4	2	4	2	1			2 (2)	(?)	(2)	(2)			
Total			1_	1	1	-	1		-	-	-				2 I	less th	han 1	per ce	ent.								

1 Included in occupation total.

² Less than 1 per cer

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LABOR CONDITIONS IN HAWAII, 1929-1930

Bonuses

Figures in the tables giving average earnings for employees on pineapple plantations and in canneries include earnings at basic time and piece rates and bonuses paid to employees for attendance, service, specified per cent of earnings at time and piece rates, etc., but do not include rental value of houses, nor the value of fuel, water, and medical and hospital service furnished by plantations to employees.

One plantation and one cannery paid a bonus of 10 cents per day to each employee with an attendance of 21 or more days per month. Attendance of 21 days earned a bonus of \$2.10 in the month in addition to earnings at basic rates; of 22 days a bonus of \$2.20; of 23 days a bonus of \$2.30, etc. Example: An employee whose rate per hour was 20 cents and who worked 24 days or 240 hours in a month earned at his basic rate \$48.00 and a bonus of \$2.40 for attendance, or a total of \$50.40 in the month.

One plantation and one cannery paid a "busy-season attendance" bonus of 10 per cent of earnings at basic rates, during the busy season in the summer, to males who did not lose as much as 50 hours of the regular working time and to females who did not lose as much as 70 hours. Employees were also paid a "service" bonus of 1 per cent of earnings at basic rates if in service one-half year and also onetenth of 1 per cent of earnings for each year of service after one-half year.

One plantation and one cannery paid to all employees except those who were paid monthly rates an "attendance" bonus of 25 cents per day for attendance of 23 or more days per month, a special bonus of 10 per cent of earnings at basic rates, and also a "quarterly" bonus based on earnings. Employees at monthly rates were paid the special bonus of 10 per cent of earnings at basic rates.

One of the 4 plantations and 2 of the 5 canneries had no bonus systems in operation in 1929.

Length of Service of Employees

Table 35 shows the number and per cent of employees of a representative cannery by periods of service.

In the cannery 43.4 per cent of the employees had service of less than 6 months; 15.8 per cent, 6 months and under 1 year; 12.2 per cent, 1 and under 2 years; and 4.6 per cent, 10 and under 24 years. Only one employee, or one-tenth of 1 per cent of all the employees, had service of 23 and under 24 years.

TABLE 35.—Number and per cent of employees of one pineapple cannery, 1929, by period of service

PINEAPPLE INDUSTRY

Period of service	each cl	es having assified of service	Period of service	Employee each cla period o	assified
	Number	Per cent		Number	Per cent
Less than 6 months	828	43.4	14 and under 15 years	6	0. 3
months and under 1 year		15.8	15 and under 16 years	7	
and under 2 years		12.2	16 and under 17 years	7	•
and under 3 years	112	5.9	17 and under 18 years	22	
and under 4 years		3.8	18 and under 19 years		•
and under 5 years	62	3.3	19 and under 20 years	3	
and under 6 years	62	3.3	20 and under 21 years		
and under 7 years		2.7	21 and under 22 years	1 1	•
7 and under 8 years	28	1.5	22 and under 23 years	1	•
8 and under 9 years	25	1.3	23 and under 24 years		71
and under 10 years	43	2.3	24 and under 25 years		
10 and under 11 years	21	1.1	25 and under 26 years		
11 and under 12 years	1 17	. 9	26 years		
12 and under 13 years	6	.3	10 Total	1 000	100.
13 and under 14 years	14	.7	Total	1, 906	100.

Employment in Peak and Slack Seasons

The pineapple industry is a seasonal one. Nearly the entire crop matures and is gathered and canned in the busy season or peak period in June, July, August, and September. During these months the canneries operate at capacity six days each week and usually two shifts per day. Pineapples, however, ripen and are gathered and canned throughout the year. In the slack period, which extends over the other months in the year, canneries operate at less than capacity and frequently on only one day or part of a day in a week.

On the plantations the busy season covers the same period, June to September. The general work on the plantations, however, furnishes employment six days each week to employees who do the various kinds of work necessary in preparing the soil, planting slips, cultivating the plants, etc.

The figures in Table 36 show for a representative cannery and for two representative plantations, the number and per cent of employees of each race and sex in the slack period and in the peak period in 1929. The average number and per cent of employees by race and sex for the year, the per cent that the slack period was of the peak period and of the average for the year, the per cent that the peak period was of the average for the year, and the per cent that the average was of the peak period are also shown.

Reading some of the figures for males in the cannery it is seen that the 231 Japanese were 35.8 per cent of the 645 of all races on the pay rolls in the slack period; that the 797 Japanese were 33.8 per cent of 2,355 of all races in the peak period; that the average number of Japanese—353—on the rolls in 1929 were 33.5 per cent of the average number of all races—1,053—on the rolls in 1929. The 231 Japanese in the slack period were 29 per cent of the 797 Japanese on the rolls in the peak period and 65.4 per cent of the 1929 average of 353. The number in the peak period was 225.8 per cent of the average number for the year, while the average for the year was 44.3 per cent of the number on the pay roll in the peak period.

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LABOR CONDITIONS IN HAWAII, 1929-1930

TABLE 36.—Number and per cent of employees in the pineapple industry in slack period and peak period, and yearly average, 1929, by race and sex

CANNERY

Sex and race	Slack	period	Peak	period		y aver- ge	Per cer period of	d was	Per cent peak period	Per cent aver- age
	Number	Per cent	Number	Per cent	Num- ber	Per cent	Peak period	A ver- age	was of aver- age	was of peak period
Males: Japanese Filipino. Korean Chinese. Hawaiian Others.	231 224 10 62 46 72	35.8 34.7 1.6 9.6 7.1 11.2	797 579 86 392 196 305	33.8 24.6 3.7 16.6 8.3 13.0	353 313 29 145 83 130	33.5 29.7 2.8 13.8 7.9 12.3	$29.0 \\ 38.7 \\ 11.6 \\ 15.8 \\ 23.5 \\ 23.6$	65. 4 71. 6 34. 5 42. 8 55. 4 55. 4	225. 8 185. 0 296. 6 270. 3 236. 1 234. 6	44. 3 54. 1 33. 7 37. 0 42. 3 42. 0
Total	645	100.0	2, 355	100.0	1, 053	100.0	27.4	61.3	223.6	44.7
Females: Japanese Filipino Korean Chinese Hawailan Others	111 44 20 127 130 30	24.0 9.5 4.3 27.5 28.2 6.5	515 87 104 530 549 238	25.5 4.3 5.1 26.2 27.1 11.8	212 55 41 228 235 82	24. 9 6. 4 4. 8 26. 7 27. 6 9. 6	21. 6 50. 6 19. 2 24. 0 23. 7 12. 6	52. 4 80. 0 48. 8 55. 7 55. 3 36. 6	242. 9 158. 2 253. 7 282. 5 233. 6 290. 2	41, 9 63, 9 39, 4 43, 0 42, 6 34, 6
Total	462	100. 0	2, 023	100.0	853	100.0	22.8	54.2	237.2	42. 9
Males and females: Japanese Filipino. Korean. Chinese Hawaiian. Others.	342 268 30 189 176 102	30. 9 24. 2 2. 7 17. 1 15. 9 9. 2	1, 312 666 190 922 745 543	30.0 15.2 4.3 21.1 17.0 12.4	565 368 70 373 318 212	29.6 19.3 3.7 19.6 16.7 11.1	26. 1 40. 2 15. 8 20. 5 23. 6 18. 8	60. 5 72. 8 42. 9 50. 7 55. 3 48. 1	232. 2 181. 0 271. 4 247. 2 234. 3 256. 1	43, 1 55, 3 30, 6 40, 8 42, 7 39, 0
Total	1, 107	100.0	4, 378	100.0	1, 906	100.0	25.3	58.1	229.7	43. 5

PLANTATION NO. 1

Females: 31 90.0 191 76.1 125 83.3 42.4 64.8 152.8 64.8 Filipino 6 6.7 32 12.7 14 9.3 18.8 42.9 322.6 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.8 64.6 64.8 152.9 70.4 142.1 70.8 <td< th=""><th>Males: Japanese Filipino Korean Chinese Hawaiian Others</th><th>685 74 92</th><th>31. 5 53. 9 5. 8 7. 2 . 1 1. 5</th><th>670 1, 158 151 130 5 39</th><th>31. 1 53. 8 7. 0 6. 1 . 2 1. 8</th><th>481 882 99 114 2 27</th><th>30.0 54.9 6.2 7.1 .1 1.7</th><th>59. 7 59. 2 49. 0 70. 8 20. 0 48. 7</th><th>83. 2 77. 7 74. 7 80. 7 50. 0 70. 4</th><th>139, 3 131, 3 152, 5 114, 0 250, 0 144, 4</th><th>71, 8 76, 9 00, 9 87, 7 40, 0 50, 9</th></td<>	Males: Japanese Filipino Korean Chinese Hawaiian Others	685 74 92	31. 5 53. 9 5. 8 7. 2 . 1 1. 5	670 1, 158 151 130 5 39	31. 1 53. 8 7. 0 6. 1 . 2 1. 8	481 882 99 114 2 27	30.0 54.9 6.2 7.1 .1 1.7	59. 7 59. 2 49. 0 70. 8 20. 0 48. 7	83. 2 77. 7 74. 7 80. 7 50. 0 70. 4	139, 3 131, 3 152, 5 114, 0 250, 0 144, 4	71, 8 76, 9 00, 9 87, 7 40, 0 50, 9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Total	1, 271	100.0	2, 153	100.0	1,605	100.0	59.0	79.2	134.1	74.0
Males and females: 481 35, 3 961 35, 8 606 34, 5 55, 9 79, 4 142, 1 70 Filipino 691 50, 8 1, 100 49, 5 896 51, 0 58, 1 77, 1 132, 8 70 Korean 74 5, 4 164 6, 8 103 5, 9 79, 4 142, 1 70 Chinese 92 6, 8 132 5, 5 115 6, 6 69, 7 70, 4 142, 1 70 Hawaiian 1 .1 5 .2 2 .1 20, 0 50, 0 250, 0 40 Others .22 1, 6 52 2, 2 33 1, 9 42, 3 66, 7 157, 6 68	Japanese Filipino Korean Chinese Hawaiian Others	6	6. 7 	32 13 2 13	12.7 5.2 .8 5.2	14 4 1 6	9.3 2.7 .7 4.0	18.8 23.1	42.9	228, 6 325, 0 200, 0 216, 7	43. 6 30. 6 76, 9
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Total	90	100.0	251	100.0	150	100.0	35.9	60, 0	167. 3	<u>89.</u> H
TotalI, 361 100.0 2,404 100.0 1,755 100.0 56.6 77.6 137.0 71.1	Japanese Filipino Korean Chinese Hawaiian	691 74 92 1	50.8 5.4 6.8 .1 1.6	1, 190 164 132 5 52	49.5 6.8 5.5 .2 2.2	896 103 115 2 33	51.0 5.9 6.6 .1 1.9	58. 1 45. 1 69. 7 20. 0 42. 3	77. 1 71. 8 80. 0 50. 0 66. 7	132.8 159.2 114.8 250.0 157.6	26.8 69.6 87.6

PINEAPPLE INDUSTRY

 TABLE 36.—Number and per cent of employees in the pineapple industry in slack

 period and peak period, and yearly average, 1929, by race and sex—Continued

PLANTATION NO. 2

Sex and race	Slack	period	Peak	period		y aver- ge		d was	Per cent peak period	Per cent aver- age
	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent	Peak period	Aver- age	was of aver- age	was of peak period
fales:			-				1.20		12.9	-
Japanese	208	33.9	342	19.9	245	22.7	60.8	84.9	139.6	71.6
Filipino	325	52.9	1, 129	65.6	673	62.4	28.8	48.3	167.8	59. (
Korean	29	4.7	63	3.7	48	4.5	46.0	60.4	131.3	76. 1
Chinese	14	2.3	66	3.8	38	3.5	21.2	36.8	173.7	57.
Hawaiian	16	2.6	25	1.5	18	1.7	64.0	88.9	138.9	72.
Others	22	3.6	95	5.5	56	5.2	23. 2	39.3	169.6	58.
Total	614	100. 0	1, 720	100.0	1,078	100. 0	35.7	57.0	159.6	62.
emales:						-			-	
Japanese	32	76.2	90	72.6	52	74.3	35.6	61.5	173.1	57.
Filipino	10	23.8	19	15.4	12	17.1	52.6	83.3	158.3	63.
Korean			4	3.2	2	2.9			200.0	50.
Chinese			1	.8						
Hawaiian			5	4.0	1	1.4			500.0	20.
Others			5	4.0	3	4.3			166.7	60.
Total	42	100.0	124	100.0	70	100.0	33.9	60.0	177.1	56.
fales and females:									17.000	1000
Japanese	240	36.6	432	23.4	297	25.9	55.6	80.8	145.5	68.
Filipino	335	51.1	1, 148	62.3	685	59.7	29.2	48.9	167.6	59.
Korean	29	4.4	67	3.6	50	4.4	43.3	58.0	134.0	74.
Chinese	14	2.1	67	3.6	38	3.3	20.9	36.8	176.3	56.
Hawaiian	16	2.4	30	1.7	19	1.6	53.3	84.2	157.9	63.
Others	22	3.4	100	5.4	59	5.1	22.0	37.3	169.5	59.
Total	656	100. 0	1,844	100.0	1, 148	100.0	35.6	57.1	160.6	62.

PLANTATIONS NOS. 1 AND 2

	_	_				-			-	-
Males: Japanese. Filipino. Korean. Chinese. Hawaiian Others.	103 106	32. 2 53. 6 5. 5 5. 6 . 9 2. 2	1, 012 2, 287 214 196 30 134	26. 1 59. 0 5. 5 5. 1 . 8 3. 5	726 1, 555 147 152 20 83	27.0 58.0 5.5 5.7 .7 3.1	60. 1 44. 2 48. 1 54. 1 56. 7 30. 6	83.7 65.0 70.1 69.7 85.0 49.4	139. 4 147. 1 145. 6 128. 9 150. 0 161. 4	71.7 68.0 68.7 77.6 66.7 61.9
Total	1, 885	100. 0	3, 873	100.0	2, 683	100.0	48.7	70.3	144. 4	69.3
Females: Japanese Filipino Korean	16			75.0 13.6 4.5	177 26 6	80. 5 11. 8 2. 6	40. 2 31. 4	63. 8 61. 5	158. 8 196. 2 283. 3	63. 0 51. 0 35. 3
Chinese Hawaiian Others		L	3 5 18	.8 1.3 4.8	1 1 9	.5 .5 4.1	16.7	33. 3	300, 0 500, 0 200, 0	33. 3 20. 0 50. 0
Total	132	100.0	375	100.0	220	100.0	35. 2	60.0	170.5	58.7
Males and females: Japanese Filipino Korean Chinese Hawaijan Others	1,026 103 106	35.7 50.9 5.1 5.3 .8 2.2	1, 293 2, 338 231 199 35 152	30. 5 55. 0 5. 4 4. 7 . 8 3. 6	903 1, 581 153 153 21 92	31. 1 54. 5 5. 3 5. 3 . 7 3. 1	55. 8 43. 9 44. 6 53. 3 48. 6 28. 9	79.8 64.9 67.3 69.3 81.0 47.8	143. 2 147. 9 151. 0 130. 1 166. 7 165. 2	69.8 67.6 66.2 76.9 60.0 60.5
Total	2,017	100. 0	4, 248	100. 0	2, 903	100.0	47.5	69.5	146.3	68. 3

Building Construction

Average full-time hours and earnings per week, and average earnings per hour in building construction in Hawaii in 1929, by occupations, for the employees of three representative Japanese contractors whose employees were of that race and of six contractors whose comployees were almost entirely of the Caucasian race, are shown in Table 37.

The average full-time hours of the 68 Japanese carpenters were 52.2 per week, and they earned an average of 46.5 cents per hour. Had they worked full time in the week at 46.5 cents per hour they would have earned an average of \$24.27. The average full-time hours of the 121 Caucasian carpenters were 48.4 or 3.8 hours per week lease than the average for the Japanese carpenters, and they earned an average of 69.2 cents per hour or 22.7 cents per hour more than was earned by the Japanese carpenters, and their average full-time carpings per week were \$33.49 or an average of \$9.22 more than the average for Japanese.

The rate for overtime and for work on Sunday and holidays was the same as for regular working time in eight establishments and one and one-half times the regular rate in one establishment.

TABLE 37.—Average	full-time	hours and	earnings	per week	and average carni	nan
per hour in	building	construction	n, 1929, by	occupati	on and race	

Occupation and race	Num- ber of estab- lish- ments	Num- ber of em- ployees	A verage full-time hours per week	Average earnings per hour	A vernin full-tim earning per wee
Carpenters: Japanese Caucasian	36	68 121	52.2 48.4	\$0,465 .692	\$24. 38.
Total	9	189	49.8	. 607	30.
Carpenters' helpers: Japanese Caucasian	1 3	9 18	(1) 48.0	(¹) . 460	(1) 22.
Total	4	27	48.7	. 414	20,
Cement finishers: Caucasian	4	12	48.0	. 734	35.
Concrete mixer operators: Caucasian	4	6	48.7	. 639	80.
Laborers: Japanese Caucasian	36	70 341	52.6 48.4	. 295 . 464	10 99.
Total	9	411	49.1	. 437	.91
Masons, brick: Japanese Caucasian	1	42	(1) (1)	(!) (!)	8
Total	2	6	49, 3	. 610	30
Painters: Japanese Caucasian	13	12 7	⁽¹⁾ 48.6	(¹) . 737	na.
Total	4	19	51.7	. 468	WA.
Plumbers: Japanese Caucasian	1	10 5	(¹) (¹)	(1) (2)	8
Total	2	15	51.7	DMG .	80.

¹ Included in total.

 TABLE 37.—Average full-time hours and earnings per week and average earnings

 per hour in building constituction, 1929, by occupation and race—Continued

Occupation and race	Num- ber of estab- lish- ments	Num- ber of em- ployees	A verage full-time hours per week	A verage earnings per hour	A verage full-time earnings per week
Plumbers' helpers: Japanese	1	27	(1) (1)	(1) (1)	(1) (1)
Total	2	9	49.2	\$0.475	\$23.37
Truck drivers: Japanese Caucasian	15	14 25	(¹) 48.6	(¹) . 494	(¹) 24.01
Total	6	39	50.4	. 452	22.78
Other skilled employees: Japanese Caucasian	36		53.3 48.1	. 466 . 867	24. 84 41. 70
Total	9	86	50.4	. 686	34. 57
Other employees: Japanese	36	35 52	52.5 48.2		
Total	9	87	49.9	, 430	21.46
All employees: Japanese Caucasian	3	262 644		. 384 . 559	
Total		906	49,6	. 506	25. 10

1 Included in total.

Table 38 shows for each occupation the average number of days on which employees worked in a pay period of one week or of two weeks; average full-time hours in the pay period; average hours actually worked in the pay period; the per cent that the hours actually worked are of the average full-time hours in the pay period; average earnings per hour; average full-time and actual earnings in the pay period.

TABLE 38.—Average days worked and average full-time and actual hours and earnings in a pay period, per cent of full time actually worked, and average earnings per hour, 1929, by occupation and race

Occupation and race	Num- ber of estab- lish- ments	Num- ber of em ploy- ees	A verage number of days on which em- ployees worked in pay period	Aver- age full- time hours per pay period	Aver- age hours actu- ally worked in pay . period	Per cent of full time worked in pay period	Aver- age earn- ings per hour	Aver- age full- time earn- ings in pay period	Aver- age actual earn- ings in pay period
				One-w	eek pay	period			
Carpenters: Japaneso	25	18	5.2 5.2	48.5 48.8	41.9	86.4 84.4	\$0. 538 . 638	\$26.09 31.13	\$22.52 26.26
Total.	7	88	5.2	48.7	41.3	84.8	. 617	30.05	25. 50
Carpenters' helpers: Japanese Caucasian	12	9		(1) 48.0	(¹) 31. 9	(¹) 66.5	(1) . 468	(1) 22.46	(¹) 14. 94
Total	3	21	4.9	48.9	3.8.7	75.1	, 405	19.80	14.86
Coment Brishers: Cattenslan.	3		4.0	48.0	33.7	70, 2	. 707	33. 94	23.8

1 Included in occupation total.

LABOR CONDITIONS IN HAWAII, 1929-1930

 TABLE 38.—Average days worked and average full-time and actual hours and earnings in a pay period, per cent of full time actually worked, and average earnings per hour, 1929, by occupation and race—Continued

Occupation and race	Num- ber of estab- lish- ments	Num- ber of em- ploy- ees	A verage number of days or which em ployees worked in pay period	time	Aver- age hours actu- ally worked in pay period	Per cent of full time worked in pay period	A ver- age earn- ings per hour	A ver- age full- time earn- ings in pay period	A ver age actua earn- ings h pay perioe
Concrete-mixer operators:			One	week p	ay perio	d-Con	tinued		-
Concrete-mixer operators: Caucasian	3	5	5.8	48.8	50.0	102.5	\$0. 629	\$30.70	\$31.4
Laborers: Japanese Caucasian	2 5	12 263	3.3 5.0	48.1 48.5	25. 6 40. 6	53. 2 83. 7	. 354	17.03 22.36	9.0 18,7
Total	7	275	4.9	48.5	39.9	82.3	. 458	22, 21	18, 2
Masons, brick: Japanese Caucasian	1	42	(1) (1)	(1) (1)					
Total	2	6	3.8	49.3	33.7	68.4	. 610	30.07	20, 5
Painters: Caucasian	2	4	4.5	49.0	39.3	80.2	. 648	31.75	-
Truck drivers: Caucasian	4	24	5.3	48.7	45.7	93.8	. 494		25, 44
Other skilled employees: Japanese Caucasian	2 5	240	4.5	48.8	36.5	74.8	. 816	24.06 39.82	22, 60 20, 80
Total.	7	42	8.0	48.2		83.8	. 849	40.92	34, 20
Other employees: Japanese					40. 2	83.4	. 847	40. 83	34, 07
Caucasian	2 5	7 40	5.9 5.7	48.6 48.2	48.5 43.9	99.8 91.1	. 271	13.17 25.45	13, 10 23, 18
Total	7	47	5.7	48.3	44.6	92.3	. 486	23.47	21. (0
All employees: Japanese Caucasian	25	52 465	4.6	48.8 48.5	37. 8 41. 0	77.5	. 432	21.08	10, 39
Total	7	517	5.3	48.5	40.7	83.9	. 526	26.00 25.51	22.00
				rwo-we	ek pay p	eriod			-
Carpenters	2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	101 6 7 1 136 15 15 15 9 15 44 40	8.3 (²) (²) 8.2 9.4 11.1 10.0 10.6 10.4 10.1	101. 4 (?) (?) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	71.8 (²) (²) (²) 71.1 82.0 96.8 78.8 95.1 91.1 87.5	\$70. 8 (2) (2) (2) (2) 70. 7 78. 2 93. 6 80. 1 89. 5 86. 8 84. 3	\$0. 599 (2) (2) (2) 396 . 452 . 586 . 475 . 385 . 532 . 365	\$60. 74 (2) (2) (2) 39. 84 47. 37 60. 59 46. 74 40. 89 55. 86 37. 89	\$43.00 \$00 200 200 200 200 200 200 200 200 2
All employees	2	389	9.0	102.0	78.1	76.6	. 480	48, 96	37, 69

Table 39 shows average and classified earnings per hour for the employees in each of 10 of the most important occupations in building construction in 1929.

BUILDING CONSTRUCTION

 TABLE 39.—Average and classified earnings per hour in 10 occupations in building construction, 1929, by race

	-	Num-	Aver-	Pe	r cen	t of	empl	oyee	s wh	ose e	arni	ngs (in ce	ents)	per	hour	wer	e—
0	cupation and race	ber of em- ploy- ees	age earn- ings per hour	16, un- der 18		24, un- der 26	26, un- der 28	28, un- der 30	30, un- der 35	35, un- der 40		45, un- der 50	50, un- der 60	60, un- der 70	70, un- der 80	80, un- der 90		
ar	penters: Japanese Caucasian	68 121	\$0.465 .692						3	24	22	16 2	28 17	7 44	14	21		2
	Total	189	. 607						1	8	8	7	21	31	9	13		2
lar	penters' helpers: Japanese Caucasian	9 18	(1) . 460				(1)		(1) 6	(1) 28	(1) 11		56					
	Total	27	. 414				11		7	30	15		37					
Ca lor	ient finishers: Cau- sian crete-mixer opera- rs: Caucasian	12 7 6	. 734											17 100	67	8	8	
	orers: Japansee Caucasian	70 341	. 295 . 464	1	1	6	13	53 (²)	13 4	11 11	1 21	25	37	2				
	Total	411	. 437	(2)	(2)	1	2	9	6	11	18	21	31	2				
	ons, brick: Japanese Caucasian	4 2	(1) (1)	*							(1)	(1)	(1)		(1)			
	Total	6	6.10								17	17	33		33			
	iters: Japanese Caucasian	12 7	(1) 7.37							(1)	(1)	(1)	14	29	43	****		14
	Ťotal	19	. 493							5	42	16	5	11	16			5
	mbers: Japanese Caucasian	10 5								(1)	(1)	(1)	(1)	(1)			(1)	(1)
	Total	15	. 586							7	20	20	20	7			7	20
Plu	mbers' helpers: Japanese Caucasian	27	(1)				1.4		(1)			(1)	` (1)	(1)				
	Total	9	. 475						22			11	56	11				
	ck drivers: Japanese Caucasian	14 25	(1) . 494						(1)	(1) 4	(1) 20		68	8				
	Total	39	. 452	-				-	13	18	21	-	44	5		-		

Table 40 shows for each of the carpenters, electricians, building laborers, masons, painters, and plumbers that were in the service of a representative building construction company in Honolulu any time in 1929, the number of weeks in which he did any work, and the amount earned in such weeks. A full week was 6 days or 53½ hours, but any week of less than 6 days or 53½ hours was counted a week.

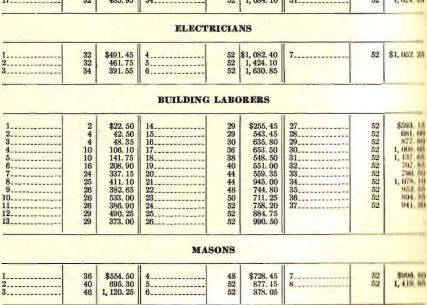
In 1929 the company had in its service a total of 51 carpenters. One of them was on the pay rolls only 4 weeks and earned only \$20.60. He was a part-time worker. The weeks of the others ranged from 6 to 52 in the year. Eighteen were on the rolls 52 weeks, and their earnings ranged from \$940.60 to \$1,769.30. It must be borne in mind that very few workers in any industry, especially in building construction, are on duty full time each and every week in a year. The 51 carpenters earned an average of \$22.68 per week and \$876.89 in the year.

Electricians earned an average of \$21.35 a week and \$933.48 in the year; building laborers, \$16.28 per week and \$592.65 in the year; masons, \$19.23 per week and \$908.56 in the year; painters, \$21.16 per week and \$749.50 in the year; and plumbers earned an average of \$25.07 per week and \$1,168.33 in the year.

TABLE 40.—Number	oj	weeks worked	and	amount	earned by	individual	employees
	of	one contractor	in 1	929, by	occupation		-

CARPENTERS

Employee No.	Num- ber of weeks worked	Amount earned	Employee No.	Num- ber of weeks worked	A mount earned	Employee No.	Num- ber of weeks worked	A mount earned
1	4	\$20.60	18	36	\$582.45	35	52	\$1, 104. 70
2	6	108.80	19	38	873.70	36	52	1, 339, 60
3	6 8	90.00	20		740.25 758.50	37 38		1,362.00 1,309.10
4		279.35	22	42	820.05	39		1, 302, 10
6		218.35	23	46	817.35	40		1, 190, 20
7		231. 25	24	46	742.25	41		1, 310, 3/
8	18	296.85	25		708.65	42	52	1, 145, 8/
9	22	471.55	26		1, 083. 75	43	52	1, 026. 3
0		665.85	27		1, 241. 80	44		1, 079, 9
1	24	670.90	28		1,069.10			940.0
2		515.00	29		802.05	46	52	1, 769, 30
3	28	432.60	30		746.65	47	52	1, 368, 3/
4		945.60	31		1, 347. 40	48	52 52	1, 197, 60
56		576.05 723.05	32	50 50	1, 337.75	49	52 52	1, 523, 60
7	32	485.95	34	52	1, 084. 10	51	52	1, 624, 4



STEAM RAILWAYS

 TABLE 40.—Number of weeks worked and amount earned by individual employees

 of one contractor in 1929, by occupation—Continued

PAINTERS

Employee No.	Num- ber of weeks worked	Amount earned	Employee No.	Num- ber of weeks worked	Amount earned	Employee No.	Num- ber of weeks worked	Amount earned
	1 6 6 10 38 38 38	\$4.75 60.25 96.45 22.50 100.15 770.00 776.60	8 9 10 11 12 13 14	42 42 42 46 46 46 48 48 48	\$919, 30 894, 65 876, 35 1, 042, 55 883, 55 995, 55 947, 75	15 16 17 18 19	48 50 52 52 52 52	\$1, 010. 48 952. 08 1, 476. 98 1, 299. 58 1, 111. 18

PLUMBERS

State of the second second					1		111111	
	22 40 40 52	\$506.00 909.20 992.25 1,010.25	6	52	\$1, 208. 55 1, 291. 85 1, 386. 65 1, 378. 51	9 10	52 52	\$1,359.45 1,640.60

Steam Railways

Average hours and earnings in 1929, by occupations, for the employees of the two steam railroads in the Hawaiian Islands are given in Table 41. Males only were employed.

In the pay period of one month for which averages are shown in the table the average days on which employees worked ranged, by occupation, from 14.7 for stevedores to 30.5 for station agents. Average full-time hours ranged from 198.1 for painters to 293.1 per month for station agents. Average hours actually worked in the month ranged from 127.5 for stevedores to 293.1 for station agents. Stevedores worked only 53.1 per cent of full time and locomotive engineers, due to extra work, worked 101.5 per cent of full time. Average earnings per hour by occupations ranged from 32.3 cents for section hands to 85.2 cents for machinists.

Checkers of one company were paid one and one-fifth and stevedores one and one-fourth times the regular rate for any time after 5 p. m., and employees in all other occupations were paid the same rate for overtime and for work on Sunday and holidays as for regular working time. Wharf, car-shop, machine-shop, and boiler-shop employees, and section hands of the other company were paid one and one-half times the regular rate for overtime. All others in this company were paid the same rate for overtime as for regular working time. There was no work on Sunday and holidays by this company.

One company paid a service bonus to all employees as follows: For a period of service of 5 and under 10 years, 5 per cent of earnings; for 10 and under 15 years, 10 per cent; for 15 and under 20 years, 15 per cent; for 20 and under 25 years, 20 per cent; and for 25 years and over, 25 per cent of earnings. In the pay period covered 12 per cent of the employees were paid a bonus of 25 per cent of earnings.

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TABLE 41.—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour, on steam railways, 1929, by occupation

-	Num- ber of	Num- ber of	full-	time urs	A ver- age number of days	A ver- age hours actu-	Per cent of full	A ver- age earn-	full	erage -time nings	A ver- age actual
Occupation	estab- lish- ments	em- ploy- ees	Per week	Per month	em- ployees worked in 1 month	ally worked in 1 month	time worked in 1 month	inge	Per week	Per month	earn- ings in 1 month
Brakemen	2	31	52.1	234.3	26.3	212.9	90.9	\$0. 454	\$23.65	\$106.37	\$96.7
Carpenters	2 2	42	45.6	202.3	24.0	181.4	89.7	. 518	23.62	104.79	94.00
Conductors Engineers, locomo-	2	19	52.1	229.7	25.7	221.8	96.6	. 720	37.51	165.38	159.73
tive Firemen, locomo-	2	19	51.4	226.4	26.7	229.7	101.5	. 800	41. 20	181 12.	183, 7/
tive	2	14	51.4	231.4	27.1	229.7	99.3	. 465	23.90	107.60	106. 6
Laborers	222222	22	46.5	210.3	25.9	202.7	96.4	. 395	18.37	83.07	80. 0
Machinists	2	10	45.0	201.6	25.5	188.0	93. 3	.852	38.34	171.76	160.1
Machinists' helpers_	2	8	45.0	200.0	26.3	196.9	98.5	. 553	24.89	110, 60	108, 90
Painters	2	19	45.0	198.1	23.9	172.1	86.9	. 459	20. 66	90. 93	78.18
Section hands	2	159	50. 2	226.7	24.6	205. 5	90.6	. 323	16. 21	73. 22	66.4
Station agents	22	21	67.5	293.1	30.5	293.1	100.0	. 340	22. 95	99.69	90. 64
Stevedores	2	145	53.0	240.1	14.7	127.5	53.1	. 387	20. 51	92.92	40, 31
Other skilled em-		140	00.0	210.1	19.7	121.0	00.1	. 001	20.01	52. 82	40. 0
plovees	22	37	47.4	210.3	25.2	198.3	94.3	. 707	33. 51	148.68	140.1
Other employees	2	114	52.3	232.7	25.5	212.5	91.3	. 435	22.75	101. 22	92, M
All employees_	2	660	51.1	228.8	23.1	191.0	83.5	. 446	22.79	102.04	85. 2

Average and classified earnings per hour in 12 occupations on steam railways in 1929 are shown in Table 42:

TABLE 42.—Average	and classified	earnings per	hour i	n 12	occupations	on	steam
	T	ailways, 1929					

	Num- ber	A ver-	J	Per c	ent o	of em	ploy	ees v	whose wei		ning	s (in	cent	s) p	y ho	лır
Occupation	of em- ploy- ees	earn- ings per hour	22, un- der 24				30, un- der 35	35, un- der 40	40, un- der 45	45, un- der 50						nn de
Brakemen Carpenters Conductors	31 42 19	\$0.454 .518 .720					3	26 10	23 14	16 14	26 43 16	3 12 26	3 5 32	2 21		
Engineers, locomotive Firemen, locomotive Laborers Machinists	19 14 22 10	.800 .465 .395 .852					9	29 55	29 32	14 5	14	26 14	32 	21 40	16	***
Machinists' helpers Painters Section hands	10 8 19 159	. 553 . 459 . 323					90	5 10	53	13 26	63 5	10 25 11				- 4.5
Station agents	21 145	.340 .387	5	5	10	5	29 14	24 10	14 75	5	5					

LABOR CONDITIONS IN HAWAII, 1929-1930

Road Building

Average days, hours, and earnings in 1929, by occupations, for the employees of one of the very few road-construction contractors on the islands are shown in Table 43. The figures were compiled from data for a pay period of one week and are for males only. The rate for overtime and for work on Sunday and holidays was the

same as for regular working time.

TABLE 43.—Average days worked, average full-time and actual hours and earnings per week, per cent of full time actually worked, and average earnings per hour in road building, 1929, by occupation

Occupation	Num- ber of em- ploy- ees	A ver- age num- ber of days on which em- ploy- ees worked in 1 week	Aver- age full- time hours per week	Aver- age hours actu- ally worked in 1 week	Per cent of full time worked	Aver- age earn- ings per hour	A ver- age full- time earn- ings per week	Aver- age actual earn- ings in 1 week
Carpenters Comercte-mixer operators Laborers Pipe calkers Pump operators Stone masons Truck drivers Other skilled employees Other second se	13	5.3 6.5 3.8 5.5 5.9	48.0 48.0 48.0 48.0 48.0 84.0 48.0 48.0	52. 5 43. 7 31. 8 45. 1 43. 4 69. 3 31. 5 48. 4 50. 4 49. 5	100.8	\$0. 681 . 575 . 600 . 469 . 721 . 504 . 673 . 478 . 759 . 521	\$32, 69 27, 60 28, 80 22, 51 34, 61 42, 34 32, 30 22, 94 37, 04 25, 01	\$35.70 25.09 19.05 21.16 31.33 34.91 21.19 23.14 38.25 25.75
All employees	383	5.4	49.3	46.8	94.9	. 506	24.95	23.6

Table 44 shows average and classified earnings per hour in 8 occupations in road building in 1929:

TABLE 44.—Average and classified earnings per hour in eight occupations in road building, 1929

	Num- ber of	Aver-	Per ce	nt of e	mploy	es wh	ose ear were—	nings (in cen	ls) per
Occupation	em-	earn- ings per hour	30, under 35	35, under 40	40, under 45	45, under 50	50, under 60	60, under 70	70, under 80	80, under 90
Carpenters	13	\$0.681					8 83	69 17 100	15	8
Coment finishers Concrete-mixer operators	6 2 262	. 600	1	(1)	5	53	41	100		83
Pipe calkers	6 13 4	.721 .504 .673					100	75		25
Pruck drivers	16			6	6	25	63			

1 Less than 1 per cent.

Longshore Labor

Hours and earnings in 1929 for two of the largest employers of labor used in loading and unloading steamships are shown in Table 45. The figures in the table are for a pay period of one week and for males only.

Stevedores covered by the study earned an average of \$14.96 in the week and an average of 43.1 cents per hour. They worked an average of 34.7 hours only in the week or 64.3 per cent of their nominal full time of 54 hours per week. While their nominal full-time hours are assumed to be 54 per week, they really work only when there in work to be done, and the amount of work varies from day to day.

The rate for overtime and for work on Sunday and holidays was the same as for regular working time.

TABLE 45.—Average days worked, average full-time and actual earnings per work, per cent of full time actually worked, and average earnings per hour for longshore labor, 1929, by occupation

Occupation	Num- ber of estab- lish- ments		A ver- age number of days on which em- ploy- ees worked in I week	Aver- age full- time hours per week	A ver- age hours ac- tually worked in 1 week	Percent offull time worked	A ver- age earn- ings per hour	A ver- age full- time earn- ings per week	A ver- age ac- tual earn- inga in 1 week
Stevedores Winchmen Other employees	$\begin{array}{c}2\\1\\2\end{array}$	251 66 64	¹ 3. 2 (²) ³ 5. 8	54.0 54.0 53.7	34.7 20.4 25.0	64.3 37.8 46.6	\$0. 431 . 650 . 516	\$23. 27 35, 10 27. 71	\$14,06 13, 29 12, 91
All employees	2	381	4 3. 8	54.0	30.6	56.7	. 468	25. 27	14, 89

¹ Not including data for 159 employees

² Data not reported.

³ Not including data for 38 employees. ⁴ Not including data for 263 employees.

Table 46 shows average and classified earnings per hour in longshore labor in 1929:

TABLE 46.—Average and classified earnings per hour in two occupations in longahore labor, 1929

	Number	Average	1015		employ nts) per			inge
Occupation	of em- ployees	earnings per hour		26, under 28	40, under 45	45, under 50	50, under 60	00, under 70
Stevedores	251 66	\$0. 431 . 650	(1)	(1)	73	3	23	100

¹ Less than 1 per cent.

Steam Laundries

Data on average hours and earnings in 1930 are here shown, by occupations, for 102 males and 178 females in two of the largest steam laundries in Honolulu. The length of the pay period was one week for one and a half month for the other laundry.

The full-time hours per week were 54 for the employees in each occupation in each laundry.

The average earnings per hour for males, by occupations, ranged from 15.8 cents for shakers, mangle-machine feeders, and folders of flat work to 65.7 cents for drivers, and for females ranged from 14.9 cents for shakers, mangle-machine feeders, and folders of flat work to 20.8 cents per hour for checkers and markers. Males in all occupations earned an average of 41.6 cents per hour, and females in all occupations earned an average of 19 cents per hour. The average for both sexes, or the industry, was 27.2 cents per hour.

The average full-time earnings per week for males by occupations ranged from \$8.53 for shakers, mangle-machine feeders, and folders of flat work to \$35.48 for drivers, and for females ranged from \$8.05 for shakers, mangle-machine feeders, and folders of flat work to \$11.23 for checkers and markers.

The rate for overtime and for work on Sunday and holidays was the same as for regular working time.

TABLE 47. — Average full-time hours and earnings per week, and average earnings per hour for employees in steam laundries, 1930, by occupation and sex

Occupation and sex	Num- ber of estab- lish- ments	Num- ber of employ- ees	A verage full-time hours per week	A verage earnings per hour	A verage full-time earnings per week
Checkers and markers, male Theckers and markers, female Drivers, male Trassing-machine operators, female Dakers, mangle-machine feeders, and folders (flat work), male The set in the set of the se	2 2 2 2 1 1 2 2 2 2 2 2 2	3 14 26 10 26 18 31 63 9 33 347	54.0 54.0 54.0 54.0 54.0 54.0 54.0 54.0	\$0. 501 208 657 198 161 .167 .158 .149 .297 .493 .261	\$27.05 11.23 35.48 10.69 9.02 8.53 8.05 16.04 26.62 14.09
All employees, male All employees, female		102 178	54.0 54.0	. 416 . 190	22.46 10.26
All employees, male and female		280	54.0	. 272	14. 69

Table 48 shows the average number of days worked and average full-time and actual hours and earnings of employees in steam laundries in 1930.

90 LABOR CONDITIONS IN HAWAII, 1929–1930

 TABLE 48.—Average days worked, average full-time and actual hours and earnings, per cent of full time worked, and average earnings per hour in steam laundries, 1930, by occupation and sex

Occupation and sex	Num- ber of em- ploy- ees	A ver- age num- ber of days on which em- ployees worked in pay period	Aver- age full- time hours per pay period	Aver- age hours actu- ally worked in pay period	Per- cent of full time worked	A ver- age earn- ings per hour	A ver- age full- time earn- ings per pay period	A ver- age actual earn- ings in pay period
			One	e-week p	ay peri	od	2	
Checkers and markers, male Checkers and markers, female Prinshers, shirt, female Finishers, shirt, female Pressing-machine operators, female Shakers, mangle-machine feeders, and folders (flat work), male Shakers, mangle-machine feeders, and folders (flat work), female Washing-machine hands and helpers, male. Other employees, female	2 5 11 5 14 11 31 34 6 9 20	6.0 6.0 6.1 5.8 5.6 6.1 6.5 5.8 6.3 5.8 6.8 5.8	54.0 54.0 54.0 54.0 54.0 54.0 54.0 54.0	50. 5 49. 8 55. 1 43. 9 41. 5 46. 5 48. 7 44. 0 53. 6 52. 7 51. 3	93. 5 92. 2 102. 0 81. 3 76. 9 86. 1 90. 2 81. 5 99. 3 97. 6 95. 0	\$0. 602 266 .704 .218 .166 .171 .158 .160 .318 .564 .318	\$32.51 14.36 38.02 11.77 8.96 9.23 8.53 8.64 17.17 30.46 17.17	\$30, 40 13, 23 38, 79 9, 55 6, 80 7, 94 7, 70 7, 04 17, 05 20, 72 16, 31
All employees, female	59 89	6.4	54.0 54.0	51. 1 45. 9	94. 6 85. 0	. 364	19.66 11.39	18. 57
All employees, male and female	148	6.1	54.0	47.9	88.7	. 276	14.90	13. 24
			Half	-month	pay pe	riod		
Checkers and markers, male Checkers and markers, female Drivers, male Finishers, shirt, female Pressing-machine operators, female Shakers, mangle-machine feeders, and folders (flat work), female Washing-machine hands and helpers, male. Other employees, female	1 9 15 5 12 7 29 3 24 27	13.0 13.0 13.0 13.0 11.9 12.4 12.3 13.0 13.0 12.8	117.0 117.0 117.0 117.0 117.0 117.0 117.0 117.0 117.0 117.0 117.0	117. 0 117. 0 117. 0 129. 2 119. 4 125. 4 114. 4 117. 0 117. 0 115. 3	100.0 100.0 100.0 110.4 102.1 107.2 97.8 100.0 100.0 98.5	\$0.299 .176 .622 .178 .156 .161 .137 .256 .466 .218	\$35.00 20.56 72.75 20.83 18.25 18.84 16.03 30.00 54.54 25.51	\$35.00 20.56 72.75 23.00 18.00 20.39 15.71 30.54 54.54 25.17
All employees, male All employees, female	43 89	13.0 12.5	117.0 117.0	117.0 117.3	100.0	. 502	58, 73 20, 12	58.71 20.91
All employees, male and female		12.7	117.0	117. 2	110. 2	. 280	32.76	39.77

Table 49 shows the average and classified hourly earnings in 7 occupations in steam laundries in 1930.

120 and over and under 120 100 90 and under 100 4 15 and 80 33 60 and 70 were-50 and 00 60 33 earnings (in cents) per hour 40 and 45 22 35 and 40 44 15 53 30 and 35 33 28 and 30 26 and 28 28 OT 22 cent of employees whose 10 24 and under 26 3 3 3 1 22 and 24 24 20 and 22 22 14 20 Ц Per 0 0130 1 and 20 11 13 28 28 16 and inder 18 22 11 50 50 14 and inder 16 12 and under 14 25 10 and 12 10 \$0.501 .208 .657 .198 .161 .167 A ver-age earn-ings per hour . 149 297 9 53 31 18 266 14 3 31 331 99 99 Num-ber of em-ploy-ees markers, male... markers, female. Occupation and sex female female ers and 1 ers and 1 ers, male shers, shi ers, hand sing-mach asl

Shal

per hour in seven occupations in steam laundries, 1930, by sex

Average and classified earnings

49.--

TABLE

STEAM LAUNDRIES

Tin-Can Manufacturing

Hours and earnings, by occupations and sex, for 220 males and 48 females of a plant engaged in the manufacture of tin cans are shown in Table 50. The figures in the table are for a representative weekly pay period in 1929.

The full-time hours of the establishment and for the employees in each occupation were 60 per week.

Average earnings per hour for males by occupations ranged from 31.2 cents for slitting-machine operators to 88 cents for machinists, and for females ranged from 21.9 cents for laborers to 24.3 cents for can inspectors.

The rate for overtime and for work on Sunday and holidays was one and one-half times the rate for regular working time and applied to all employees.

TABLE 50.—Average days worked, average full-time and actual hours and earning per week, per cent of full time actually worked, and average earnings per hour, in tin-can manufacturing, 1929, by occupation and sex

Occupation and sex	Num- ber of em- ploy- ees	Aver- age num- ber of days on which em- ployees worked in one week	Aver- age full- time hours per week	A ver- age hours actu- ally worked in one week	Per cent of full time worked	A ver- age earn- ings per hour	A ver- age full- time earn- ings per weck	A ver- ago actual corn- inga ia one week
Double-seam machine operators, male Inspectors, can, male Laborers, male Laborers, male Machinists, male Machinists' helpers, male Maintenance machine men Openers, tin plate, male Shear operators, male Shear operators, male Stilting-machine operators, male Texters, can, male Truckers, male Other skilled employees, male Other employees, female	5 28 88 14 6 3 15 9 8 14 8 14 15 9 8 14	5.0501 5.0501 5.00 5.501 5.509 5.509 5.509 5.509 5.50 5.509 5.50 5.50	$\begin{array}{c} 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 60.\ 0\\ 0\\ 0\\ 60.\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ $	$\begin{array}{c} 53, 6\\ 58, 3\\ 51, 6\\ 43, 4\\ 47, 5\\ 61, 3\\ 60, 0\\ 54, 5\\ 56, 3\\ 57, 6\\ 56, 3\\ 57, 6\\ 56, 3\\ 58, 6\\ 54, 3\\ 58, 6\\ 56, 7\\ 55, 1\end{array}$	89.3 97.2 86.0 72.3 79.2 102.2 100.0 90.8 93.8 96.0 93.3 89.3 90.5 97.7 94.5 91.8	\$0. 340 466 243 319 219 880 517 498 350 358 312 370 372 582 414 289	\$20, 40 27, 96 14, 58 19, 14 13, 14 52, 80 31, 00 29, 88 21, 00 21, 48 18, 72 22, 20 22, 32 34, 92 24, 84 17, 34	\$18, 20 27, 17 32, 57 33, 85 10, 41 55, 00 27, 15 19, 70 20, 01 34, 10 27, 15 19, 70 20, 20 34, 11 22, 61 15, 46 10, 84 23, 61 15, 00
All employees, male All employees, female	220 48	5.5 5.4	60. 0 60. 0	51.2 50.9	85.3 84.8	. 401 . 243	24.06 14.58	20, 50 12, 86
All employees, male and female	268	5.5	. 60. 0	51.1	85. 2	.373	22.38	10, 04

Table 51 shows average and classified hourly earnings in 11 occupations in tin-can manufacturing in 1929;

ELECTRICITY-MANUFACTURE AND DISTRIBUTION

TABLE 51.—Average and classified earnings per hour in 11 occupations in tin-can manufacturing, 1929, by sex

	Num-	Aver-	Pę	r cen	UOIN	- mp	loyee	e	and R		_	-	-		-		1
Occupation and sex ber of er en pioy- in pioy- in h	age earn- ings per hour	14, un- der 16		22, un- der 24	24, un- der 26	26, un- der 28	30, un- der 35	35, un- der 40	40, un- der 45	45, un- de, 50	50, un- der 60	60, un- der 70	70, un- der 80	80, un- der 90	90, un- der 100	100 and un- der 120	
Double-seam machine operators, male nspectors, can, male	85	\$0.340				25	13	13 20	38	20	13	60				****	
Laborers, female	28 88 14	. 243 . 319 . 219	7	11 64	14	75 25 14	3	51 7	14	7			17		17	50	
Machinists, male Machinists' helpers, male	6	. 880								33		33					
Maintenance machine	. 15	. 498						7	13	7	27	27	13	7	400	a 934	
Openers, tin plate maleshear operators, male	8							67 38	33 38	25					4		
Slitting-machine oper- ators, male Testers, can, male Truckers, male	14	. 370						14 38 13	50 13 31	25	13				e e	24	

Electricity-Manufacture and Distribution

Hours and earnings of employees are presented in Table 52 by occupations for the 256 employees of a plant engaged in the manufacture and distribution of electric power. Males only were employed at this work. The figures in the table were compiled from data for a half-monthly pay period in 1930.

A nan-monthly pay period in 1950. Average earnings per hour by occupations ranged from 42.5 cents for wiremen's helpers to 85.8 cents for trouble men. The employees in the group of "other skilled employees" earned an average of 90 cents per hour. All employees combined earned an average of 70.7 cents per hour.

The rate for overtime and for work on Sunday and holidays was two times the rate for regular working time and applied to all except monthly rate employees.

All employees in service of company four months or more were paid a percentage bonus based on quarterly profits of plant. In 1929 the bonus was approximately 12 per cent of earnings at basic rates.

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LABOR CONDITIONS IN HAWAII, 1929-1930

 TABLE 52.—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour, in the manufacture and distribution of electricity, 1930, by occupation

10 L. 1	Num-	A ver- age number of days	A ver time	age full- hours	Aver-			A ver time	age full- earnings	Aver
Occupation	ber of em- ploy- ees	which employ- ees worked in one- half month	Per week	In one- half month	hours actu- ally worked in one-	Per cent of full time worked	Aver- age earn- ings per hour	Per week	In one- half month	age actum earn- ings in one- half mont
Electricians. Groundmen. Laborers. Linemen Linemen Trouble men. Wiremen's helpers. Other skilled employees. Other employees.	8 7 11 33 13 6 30 20 54 74	12.6 13.0 12.5 12.8 12.7 13.0 12.2 12.3 13.0 13.0 13.0	44. 5 44. 0 44. 4 44. 0 44. 0 44. 0 44. 0 44. 0 44. 0 44. 0 46. 7 45. 9	93. 5 92. 0 93. 1 92. 0 92. 0 95. 3 92. 0 92. 0 92. 0 100. 9 98. 5	94. 8 94. 3 92. 7 92. 8 91. 3 95. 3 89. 3 89. 7 101. 0 100. 2	101. 4 102. 5 99. 5 100. 9 99. 2 100. 0 97. 1 97. 5 100. 1 101. 7	\$0. 809 . 503 . 490 . 664 . 487 . 858 . 686 . 425 . 900 . 721	\$36.00 22.13 21.76 29.22 21.43 37.75 30.18 18.70 42.03 33.09	\$75. 64 46. 28 45. 62 61. 09 44. 80 81. 82 63. 11 39. 10 90. 81 71, 02	\$76. 7 47. 38 45. 40 61. 63 44. 40 81. 83 61. 23 38, 14 90, 90 72, 24
All employees	256	12.8	45.1	96.0	96.1	100.1	. 707	31.89	67.87	67. 07

Table 53 shows average and classified hourly earnings in eight occupations in the manufacture and distribution of electricity in 1930:

TABLE 53.-Average and classified earnings per hour in eight occupations in the manufacture and distribution of electricity, 1930

	Num- ber	age		Per o	cent (in	of er cent.	nplo s) pe	yees r ho	who ur w	se ea ere	rnin	gs
Occupation	of em- ploy- ees	earn- ings per hour	30, un- der 35		40, un- der 45	45, un- der 50	50, un- der 60	60, un- der 70				
Electricians Groundmen Laborers Linemen	7	\$0.809 .503 .490			14	43	43 36	13	63			2/
Trouble men. Wiremen 's helpers	11 33 13 6 30 30	. 664 . 487 . 858 . 686 . 425	5	20	8	69 10 15	36 39 23 17 27 10	12	42 17 20	6 33 20	 17 7	17

Street Railways

Data of hours and earnings, by occupations, for 236 employees of the only electric street railway on the islands are presented in Table 54. The data were compiled from figures for a representative halfmonthly pay period in 1930 and are for males only.

The average earnings per hour, by occupations, ranged from 38.7 cents for laborers to 62.2 cents for operators of 1-man busses and 74.1 cents for "other skilled employees."

STREET RAILWAYS

 TABLE 54.—Average number of days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per
 hour on street railways, 1930, by occupation

		Aver- age num- ber of		bours	Aver- age				ge full- arnings	Aver-
Occupation	Num- ber of em- ploy- ees	days on which em- ployees worked in one-half month	Per week	In one- half month	hours actu- ally worked in one- half month	Per cent of full time worked	earn- ings	Per week	In one- half month	age actual earn- ings in one- half month
Carpenters	5	13.0	50.0	105.0	105.0			\$30. 50	\$64.05	\$64.05
Conductors, regular	48	12.9			114.7		. 560			64.18
Conductors, extra-	13	11.0	(1)		94.2		.470	(1)	(1)	44.30
Laborers Mechanics	23 9	12.0 12.8	50.7 58.7	107.0	97.8 123.1	91.4 97.6	.387	19.62	41.41 67.84	37.80 66.24
Motormen, regular	47	12.0			111.1		. 568			63.04
Motormen, extra	15	11.2			91.7		.470			43.12
Operators of 1-man busses, regular. Operators of 1-man busses,	10	11.8	(1)	(1)	113.4	(1)	. 622	(1)	(1)	70.50
operators of 1-man cars,	2	13.5	(1)	(1)	124.5	(1)	. 535	(1)	(1)	66.63
regular Operators of 1-man cars,	28	13.5	(1)	(1)	124.8	(1)	. 598	(1)	(1)	74.64
extra	3	14.0	(1)	(1)	134.8	(1)	. 549	(1)	(1)	74.08
Painters	5	13.0	50.0	105.0	105.0	100.0	.446	22.30	46.83	46.83
Other skilled employees	5	13.0	52.0	110.0	109.2	99.3	. 741	38.53	81.51	80.96
Other employees	23	13.3	53.0	112.0	120.7	107.8	. 537	28.46	60.14	64.82
All employees	236	12.6	2 52.5	² 111.0	111.6	2 100.5	. 544	\$ 22.62	2 60. 38	60.73

¹ Not reported. ² Not including data for 166 employees; regular full-time hours per week not reported.

Table 55 shows average and classified earnings per hour in eight occupations on street railways, 1930:

TABLE 55.—Average and classified earnings per hour in eight occupations on street railways, 1930

	Num-	Aver-	Per ing	cent o s (in c	f emplo cents)	oyees v per ho	vhose e our we	ere-
Occupation	ber of em- ploy- ces	age earn- ings perhour	35 and under 40	40 and under 45	45 and under 50	50 and under 60	60 and under 70	70 and under 80
Carpenters. Conductors, regular	48	\$0.610 .560 .470			10 100	· 40 64	40 25	20
Laborers Mechanics Motormen, regular	9 47	.387 .538 .568 .470	61	35	4 11 11 100	78 64	11 26	
Operators of 1-man busses, regular Operators of 1-man busses, extra Operators of 1-man cars, regular		.622 .535 .598				30 100 46	70 54	
Operators of 1-man cars, extra	35	. 549 . 446	40	20	20	100	20	

Table 56 shows the number of runs with specified hours on duty of motormen and conductors, operators of 1-man cars, and operators of 1-man busses, on Monday to Friday, Saturday, and Sunday, and the number of hours within which each run was completed.

Reading the table, it is seen that on Monday to Friday the hours of the motorman and conductor on one run were 5% and under 6, and that the run was completed within 8½ and under 9 hours. This means that the motorman and the conductor on this run were off duty 3 hours between the time of beginning and quitting work each day, Monday to Friday. It is also seen that the hours of duty of another run were 8½ and under 9 and that it was completed within the same number of hours. This means that it was a straight run—one that is continuous from time of beginning until time of quitting work for the day, with no time off duty. Two runs Monday to Friday were each 10 and under 10½ hours per day, one completed within 12 and under 12½ hours and the other within 12½ and under 13 hours.

Car and bus operators with runs of 9 hours or less per day were paid one and one-half times their regular rate for any time worked in excess of 9 hours. Those with runs of more than 9 hours per day were paid one and one-half times their regular rate for any time worked in excess of their regular working time.

TABLE 56.—Number of regular runs (days' work) on street railways, by hours on duty and hours within which runs were completed

MOTORMEN AND CONDUCTORS

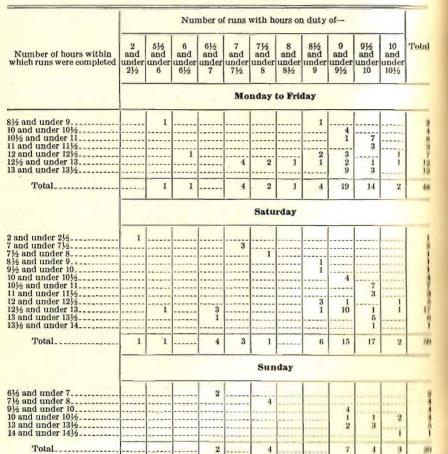
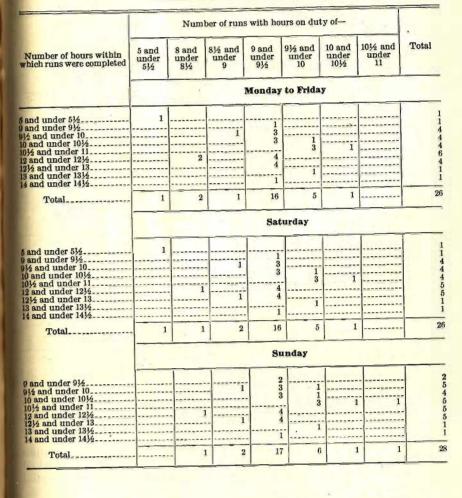


 TABLE 56.—Number of regular runs (days' work) on street railways, by hours on duty and hours within which runs were completed—Continued

OPERATORS OF 1-MAN CARS



STREET RAILWAYS

 TABLE
 56.—Number of regular runs (days' work) on street railways, by hours on duty and hours within which runs were completed—Continued

OPERATORS OF 1-MAN BUSSES

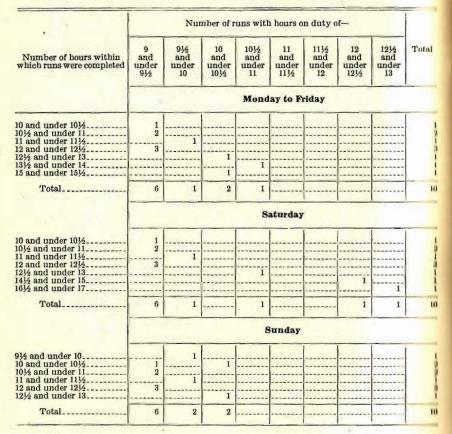


Table 57 shows for each motorman, conductor, operator of 1-man cars, and operator of 1-man busses the classified hours actually worked and the classified earnings in a representative half-monthly pay period in 1930.

In the half month the hours actually worked by one motorman were "10 and under 20 hours," and his earnings were "\$10 and under \$12.50." Another motorman whose hours were "20 and under 30" earned "\$10 and under \$12.50." It is further seen that the hours of three motormen were "135 and under 140" in the half month and that their earnings were "\$82.50 and under \$85."

	Total	84444988888888888	000000	15
	145 and 150			
	140 and 145			
were	135 and 140	4.00 1-		
Number of employees in each earnings group whose hours of actual work in one-half month were	130 and 135			
r llad-9	125 and 130			
t in one	and sudder u			10
al work	115 and under 120			
of actus	110 and under 115	0 0 0 1 1 5		
nours	105 and under 110	0		
v hose 1	100 and under 105		1 69	2
a dnor	95 and 100			3 2
nings g	90 and 95		-01	- 8
ich ear	80 and 90			
es in es	70 and under 80			2
ployee	and under 70			1-
r of en	50 and under 60			
Jumbe	30 and 50			
4	20 and 30 30			
	10 and 20 20			
	Un- der 10			
	Occupation and classified earnings in one-half month	MOTORMEN, REGULAR S10.00 and under \$17.50. \$15.00 and under \$17.50. \$51.00 and under \$17.50. \$51.00 and under \$57.50. \$57.50 and under \$55.00. \$50.00 and under \$55.00. \$55.00 and under \$55.00. \$55.00 and under \$55.00. \$55.00 and under \$57.50. \$55.00 and under \$57.60. \$55.00 and under \$57.60. Total.	\$50.00 and under \$32.50 \$57.50 and under \$40.00 \$90.00 and under \$42.50 \$45.00 and under \$45.00 \$45.00 and under \$47.80 \$46.00 and under \$52.50	52.50 and under \$57.50

in spe

11

one-half

Classified actual hours and earnings in

67.-

TABLE

			1	Numb	er of er	nploye	es in e	ach ea	rnings	group	whose	hours	of actu	al worl	k in or	ne-half	month	were-			
ccupation and classified earnings in one-half month	Un- der 10	10 and under 20	20 and under 30	30 and under 50	50 and under 60	60 and under 70	70 and under 80	80 and under 90	90 and under 95	95 and under 100	100 and under 105	105 and under 110	110 and under 115	115 and under 120	120 and under 125	125 and under 130	130 and under 135	135 and under 140	140 and under 145	145 and under 150	Total
CONDUCTORS, REGULAR	-																				
and under \$35.00				l	1																1
and under \$37.50 and under \$42.50							1	i													1
and under \$45.00 and under \$47.50								1													1
and under \$50.00									1												1
and under \$52.50 and under \$55.00						*****			2	1		2	1								3
and under \$57.50 and under \$60.00									1		1										2
and under \$62.50													21	î							2
and under \$65.00 and under \$67.50													3	1	1						15
and under \$70.00 and under \$72.50											1		1	1	2	2					7
and under \$77.50															1	3					4
and under \$80.00																	1	2			1
and under \$85.00																		3			3
Total					1		1	2	4	2	2	2	9	4	4	6	6	5			48
CONDUCTORS, EXTRA											-										
								_	1.00	-		1									
and under \$20.00 and under \$30.00 and under \$35.00 and under \$42.50						1															1
and under \$35.00						1	1														1
and under \$42.50									- 1	1											2
) and under \$47.50.) and under \$50.00.) and under \$52.50.												1									1
and under \$52.50												1	1								2
and under \$57.50.															2						2
Total				1		1	1	1		2		2	2		2						13
Total				1			1	1		2		2	2		2	. 1		•			13
FEATORS OF I-MAN CARS, REGULAR										1					2						13
TEATORS OF 1-MAN CARS, REGULAR and under \$55.00.										1			- 2		2						13 1 1 1 2 3
FRATORS OF 1-MAN CARS, REGULAR and under \$55.00										1					2	2	 				13 1 1 1 2 3 3 1
EEATORS OF 1-MAN CARS, BEGULAR and under \$55.00										1				1	2	2	i				13 1 1 1 2 3 3 1 1
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1		 		1	2	2	 1 				13 1 1 1 2 3 3 1 1 1 4 3
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1		1 1 1 1		1		2 2 1	 1 1 1				13 1 1 1 2 3 3 1 1 1 4 3 2 4
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1				1		2 2 2 1 2 1 2			1	1	13 1 1 1 2 3 3 1 1 4 3 2 4 1
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1		1 1 1		1							13 1 1 2 3 3 1 1 4 3 2 4 4 1 1
EEATOBS OF 1-MAN CABS, BEGULAB and under \$55.00										1				1	1 1 1 1 1	2					1123331144332441111
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1				1							13 1 1 2 3 3 1 1 4 3 2 4 1 1 1 1 2 8
and under \$55.00										1				1	1 1 1 1 1	2					1123331144332441111
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1				1	1 1 1 1 1	2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				1 1 2 3 3 3 1 1 1 4 4 3 2 4 1 1 1 1 2 8
ELATORS OF 1-MAN CARS, REGULAR and under \$55.00										1				1	1 1 1 1 1	2					1 1 2 3 3 3 1 1 1 2 3 3 1 1 1 4 4 3 2 4 4 1 1 1 1 2 8 8 8 1 1 1 1 2 2 3 3 3 1 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 1 2 2 3 1 1 1 2 2 3 1 1 1 2 2 3 1 1 1 1
And under \$55.00										1				1		2		1			1 1 2 3 3 3 1 1 1 4 4 3 2 4 1 1 1 1 2 8
and under \$55.00										1						2		1		1	1 1 2 3 3 3 1 1 1 2 3 3 1 1 1 4 4 3 2 4 4 1 1 1 1 2 8 8 8 1 1 1 1 2 2 3 3 3 1 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 1 2 2 3 1 1 1 2 2 3 3 3 3
and under \$55.00										1						2		1		1	1 1 2 3 3 1 1 1 4 4 3 2 8 8 7 1 1 1 1 1 1 1 3 3
EEATORS OF 1-MAN CARS, REGULAR and under \$55.00										1						7		1		1	1 1 2 3 3 1 1 1 4 4 3 2 8 8 7 1 1 1 1 1 1 1 3 3
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1						7		1		1	1 1 2 3 3 3 1 1 1 2 3 3 1 1 1 4 4 3 2 4 4 1 1 1 1 2 8 8 8 1 1 1 1 2 2 3 3 3 1 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 2 2 3 1 1 1 2 2 3 3 3 3
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1						7		1		1	1 1 2 3 3 1 1 1 4 4 3 2 8 8 7 1 1 1 1 1 1 1 3 3
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1						7		1		1	
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1						7					
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1						7				1	
ERATORS OF 1-MAN CARS, REGULAR and under \$55.00										1						7					
ELATORS OF 1-MAN CARS, REGULAR and under \$55.00										1											
PERATORS OF 1-MAN CARS, REGULAR 0 and under \$55.00. 0 and under \$60.00. 0 and under \$70.00. 0 and under \$77.50. 0 and under \$77.50. 0 and under \$82.50. 0 and under \$80.00. 0 and under \$80.00. 0 and under \$80.00. 0 and under \$80.00. 0 and under \$7.50. 50 and under \$80.00. Total. Total. Total. 50 and under \$80.00. 2.00 and under \$80.00										1											

Table 58 shows for each motorman, conductor, operator of 1-man cars, and operator of 1-man busses the actual number of days on which he worked in a representative half-monthly pay period in 1930 and the classified amount earned in such period.

classified amount earned in such period. In the one-half month one motorman worked on 2 days and his earnings were "\$10 and under \$12.50." Another motorman worked on 3 days and his earnings were the same. Two worked on 15 days and the earnings of one were \$52.50 and under \$55 and those of the other were "\$55 and under \$57.50." Of three who worked on 14 days the earnings of each were "\$82.50 and under \$85."

TABLE 58.—Days worked by	employees and	classified	earnings in	one-half	month
in specified	occupations on	street rails	ways, 1930		

Occupation, and classified earnings in one-half month	Nu	mbe	er of	emp	loye	es ea ked i	rnin in on	g eac e-hal	h ela	assifi onth	ed a were	mou	nt w	hose	dayø
in one-nan month	1	2	3	5	6	7	8	9	10	11	12	13	14	15	Toto
MOTORMEN, REGULAR	•	-													
\$10.00 and under \$12.50		1	1												
@15 00 and under \$17 50			1												
\$35.00 and under \$37.50								1							
52.00 and under \$17.50 \$42.50 and under \$45.00 \$47.50 and under \$45.00 \$50.00 and under \$50.00 \$52.50 and under \$55.00 \$52.50 and under \$55.00								i î					2		
\$50.00 and under \$52.50											1				1
\$52.50 and under \$55.00										1				1	
\$55.00 and under \$57.50 \$57.50 and under \$60.00 \$60.00 and under \$62.50												-	1	1	
\$60.00 and under \$60.00											2		1	****	
\$62.50 and under \$65.00										1		1	-	100	
\$65.00 and under \$67.50											2		1		
\$62.50 and under \$65.00 \$65.00 and under \$67.50 \$70.00 and under \$72.50 \$72.50 and under \$75.00													2		
\$75.00 and under \$75.00													1	****	
\$77.50 and under \$80.00												4	3		
\$80.00 and under \$82.50													6		1
\$80.00 and under \$82.50 \$82.50 and under \$85.00													3		
Total										3	6	5			-
10tal		1	2					3	1	3	6	5	24	2	
MOTORMEN, EXTRA									1						
\$25.00 and under \$27.50 \$27.50 and under \$30.00 \$30.00 and under \$32.50 \$37.50 and under \$40.00 \$40.00 and under \$42.50 \$42.50 and under \$42.50						1	-				-				
\$27.50 and under \$30.00							1								1
\$30.00 and under \$32.50						1									
\$37.50 and under \$40.00											1		++++		
														1111	
\$45.00 and under \$47.50											2				
\$50.00 and under \$52.50													1		
\$45.00 and under \$47.50 \$50.00 and under \$62.50 \$52.50 and under \$55.00 \$55.00 and under \$57.50											1				5
\$55.00 and under \$57.50												1	1	1100	-
Total						2	1		1	1	7	1	2		
CONDUCTORS, REGULAR															
\$32.50 and under \$35.00					1								100		
\$35.00 and under \$37.50								1					1.4		
\$40.00 and under \$42.50											1				
\$42.50 and under \$45.00									1						
47.50 and under \$47.50												1000			
50.00 and under \$52.50							1		1		1	2			
52.50 and under \$55.00										1		1		8	
\$55.00 and under \$57.50										1	1				
bo/.ou and under \$60.00												3	1.4.8.1	1.044	
\$60 00 and under \$69 50											0.4.4.1	1	****		
\$60.00 and under \$62.50 \$62.50 and under \$65.00															
\$2.50 and under \$35.00 \$35.00 and under \$37.50 \$40.00 and under \$42.50 \$42.50 and under \$45.00 \$47.50 and under \$45.00 \$50.00 and under \$52.50 \$50.00 and under \$52.00 \$55.00 and under \$57.50 \$57.50 and under \$57.50 \$57.50 and under \$57.60 \$57.50 and under \$50.00 \$60.00 and under \$62.50 \$62.50 and under \$65.00 \$65.00 and \$65.00 and \$65.00 \$65.00 and \$65											12	2	1		
\$60.00 and under \$62.50 \$62.50 and under \$65.00 \$65.00 and under \$67.50 \$67.50 and under \$70.00											1	8	1		
\$60.00 and under \$62.50 \$62.50 and under \$65.00 \$65.00 and under \$67.50 \$67.50 and under \$70.00 \$70.00 and under \$72.50 \$75.00 and under \$77.50 \$75.00 and under \$75.50 \$77.50 and under \$80.00															

 TABLE 58.—Days worked by employees and classified earnings in one-half month in specified occupations on street railways, 1930—Continued

cupation, and classified earnings				UII	W	ork	ed in		-hall	mo	ath v	vere	_			days
in one-half month	1	2	3	:	5	6	7	8	9	10	11	12	13	14	15	Total
NDUCTORS, REGULAR-Continued							-							4		4
0.00 and under \$82.50 2.50 and under \$85.00														3		3
Total						1			1	2	2	6	17	16	3	48
CONDUCTORS, EXTRA																1
7.50 and under \$20.00 7.50 and under \$30.00 2.50 and under \$35.00					1			1								
				-							1			.		
2.50 and under \$42.50										1	1					. i
5.00 and under \$47.50 7.50 and under \$50.00				-								1				
0 00 and under \$52 bl													1.1	1		1 1
2.50 and under \$55.00												1		- 1		
					1			1	1	1	3	2	2	2		- 18
Total			-		-			-	-	-		-	-	-	-	
PERATORS OF 1-MAN CARS, REGULAR		1	1	1								ľ.,		1		
2.50 and under \$55.00											1	1				-
7 50 and under \$60.00													. 1	1		
2.50 and under \$65.00			-											- 3	_ 1	-
5.00 and under \$67.50											1	1			-	-
7.50 and under \$70.00 0.00 and under \$72.50 2.50 and under \$75.00 				~									1			-
			1.												5	-
77 50 and under \$80.00														2		
				[- 1	2	1 1	
															1	-
85.00 and under \$87.50															i	
90.00 and under \$92.50												_		7 1		3 5
Total											- 2	2		7 1	+	5 4
DPERATORS OF 1-MAN CARS, EXTRA	-	T														
		1											-	1	1 2	
87.50 and under \$70.00 75.00 and under \$77.50 77.50 and under \$80.00							-									1
577.50 and under \$80.00	-													1	1	1
Total											-					
OPERATORS OF 1-MAN BUSSES, REGULAR											1					
\$2.50 and under \$5.00																
										L		i		1		
															1	
72.50 and under \$73.00															0	22
82.50 and under \$85.00																
\$86.00 and under \$87.50 \$95.00 and under \$97.50															1	
				-	1-					1		1		1	6	
Total		1		-			=	===	= -	==	==	==	===	===	-	
2 00011111111		1	1		1	1				1						
OPERATORS OF 1-MAN BUSSES, EXTR					-									1		
														1	1-	

Printing and Publishing

Hours of labor and earnings in 1930 are presented in Table 59, by occupations, for 194 males and 24 females in the two most important newspaper and book and job printing and publishing companies in the Hawaiian Islands. Employees in each occupation were on a 6-day week of 44 hours basis.

In the weekly pay period covered the average hours actually worked by employees in each occupation, except male proof readers, were in excess of the average full-time hours per week.

Average earnings per hour by occupations were 35.2 cents for bindery women; 88.3 cents for bookbinders, male; \$1.04 for compositors, hand, male; \$1.196 for linotype operators, male; 45.1 cents for press feeders, male; 93.6 cents for pressmen; \$1.083 for proof readers. male; and 95.3 cents for stereotypers, male, etc. Males in all occupations earned an average of 91.5 cents per hour and females, 37.8 cents. The average for both sexes combined, or the industry, was 85.7 cents per hour.

The rate for overtime and for work on Sunday and holidays was one and one-half times the rate for regular working time and applied to all employees.

TABLE 59.—Average days worked, average full-time and actual hours and earning per week, per cent of full time actually worked, and average earnings per hour in printing and publishing, 1930, by occupation and sex

Occupation and sex	Num- ber of estab- lish- ments	Num- ber of em- ploy- ees	A ver- age num- ber of days on which em- ployees worked in one week	A ver- age full- time hours per week	A ver- age hours actu- ally worked in one week	Per cent of full time worked	A ver- age earn- ings per hour	A ver- age full- time earn- ings per week	A ver- age actual earn- inga in one week
Bindery women Bookbinders, male Compositors, hand, male Press feeders, male Press feeders, male Proof readers, male Stereotypers, male Other skilled employees, male Other employees, male Other employees, female	2 2 2 2 2 2 2 2	19 6 22 33 8 14 6 4 36 65 5 5	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	44.0 44.0 44.0 44.0 44.0 44.0 44.0 44.0	44. 5 44. 6 44. 4 44. 1 47. 9 44. 1 44. 9 44. 1 44. 0 44. 8 45. 2 46. 8 45. 7	101. 1 101. 3 101. 0 100. 3 108. 9 100. 2 100. 0 101. 7 102. 8 106. 5 103. 9	\$0. 352 . 883 1. 040 1. 196 . 451 . 936 1. 083 . 953 1. 358 . 545 . 472	\$15, 49 38, 85 45, 76 52, 62 19, 84 41, 18 47, 67 41, 03 59, 75 23, 98 20, 77	\$10.07 30.50 40.20 52.70 21.04 41.29 47.07 42.00 61.13 20.51 21.59
All employees, male All employees, fcmale	2 2	194 24	6.0 6.0	44. 0 44. 0	45.5 44.7	103. 4 101. 7	. 915 . 378	40, 26 16, 63	41.84
All employees, male and female	2	218	6.0	44.0	45. 4	103, 1	. 857	37. 71	89, 80

Table 60 shows the per cent of employees receiving each classified amount per hour in 1930 by occupations, in printing and publishing (newspaper, and book and job):

TABLE 60.—Average and classified earnings in printing and publishing in eight occupations, 1930, by sex

	1100	Aver-	10					-				-	-		hour		
Occupation and sex	Num- ber of em- ploy- ees	age earn- ings per hour	16 and un- der 18			un-	un-	un-	un-	un-	un-	un-	un-	un-	and un-	un-	and
Bindery women		\$0.352	5	11	5	5	32	16	5	11	11		- 33	17	17	- 33	
Bookbinders, male Compositors, hand, male	6 22	. 883											9	9	14	55	1 14
Linotype operators, male	33	1, 196												9	6	15	2 70
Pressfeeders, male	8	.451					13	13	25	25	25 14	7	14	21		29	31.
Pressmen Proof readers, male Stereotypers, male	6	1.083		+									25	25		50	

1 9 per cent earred \$1.30 and under \$1.40 and 5 per cent \$1.20 and under \$1.30.
2 12 per cent earned \$1.30 and under \$1.40 and 58 per cent \$1.20 and under \$1.30.
3 7 per cent earned \$1.40 and over and 7 per cent \$1.20 and under \$1.30.
4 These employees earned \$1.40 and over.

Stock Raising

Average hours and earnings are presented in Table 61 by occupations, for 191 employees of a very large stock farm engaged in the raising of cattle, sheep, horses, and hogs, and the production and marketing of dairy products. The data were collected by agents of the bureau for a monthly pay period in 1929 and are for males only.

The farm or ranch, including land owned and leased, covered more than 450,000 acres. The stock on the ranch included 27,000 cattle, 12,000 sheep, 3,000 horses, and several hundred swine.

The regular working time was 53 hours per week. Average earnings per hour were 30.6 cents for cowboys; 26.4 cents for dairymen; 19.9 cents for laborers; and 36 cents for all "other employees." The average earnings for all employees on the ranch were 27.5 cents per hour.

The rate for overtime and for work on Sunday and holidays was the same as for regular working time.

TABLE 61.—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour in stock raising, 1929, by occupation

		Aver- age num-	Averag time	ge full- hours	Aver- age	Per	Aver-	A verag time in	earn-	Aver- age
Occupation and sex	Num- ber of em- ployees	ber of days on which em- ployees worked in 1 month		Per month	hours actually worked in 1	cent of full	age earn- ings per hour	Per week	Per month	actual earn- ings in 1 month
Cowboys Dairymen Laborers Other employees	24 11 89 67	26.5 28.8 24.8 26.1	53.0 53.0 53.0 53.1	229. 0 229. 0 229. 0 229. 5	233. 8 254. 0 218. 7 230. 4	102. 1 110. 9 95. 5 100. 6	\$0. 306 . 264 . 199 . 360	\$16. 22 13. 99 10. 55 19. 12	\$70.07 60.46 45.57 82.62	\$71.49 66.99 43.55 83.02
All employees	191	25.7	53.0	229.0	226.7	99.0	. 275	14.58	62.98	62.2

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For the occupations of cowboys, dairymen, and laborers, average earnings per hour in 1929 and the per cent of employees earning each classified amount are shown in Table 62:

 TABLE
 62.—Average and classified earnings per hour in three occupations in stock raising, 1929

		Aver-	Per	cent c	of emp	loyee	s who	se ear	nings	(in c	ents)	per h	our w	ere
Occupation	Num- ber of em- ployees	age earn- ings	14 and un- der 16	16 and un- der 18	18 and un- der 20	20 and un- der 22	22 and un- der 24	24 and un- der 26	26 and un- der 28	28 and un- der 30	30 and un- der 35	35 and un- der 40	40 and un- der 45	45 and un- der 50
Cowboys Dairymen Laborers	24 11 89	\$0. 306 . 264 . 199	7	4	13 40	17 9 21	8 45 7	9 6	4 9	8 18 1	8	8 9	21	

Machine Shops

Average full-time hours and earnings in 1929 are shown in Table 63, by occupations, for the employees of the two important machine shops on the islands. The hours of the employees in each shop were 44 per week, and average earnings by occupations, except "helpers" and "other employees," ranged from 49.8 cents for crane operators to \$1.051 for pattern makers.

The rate for overtime and for work on Sunday and holidays was two times the rate for regular working time and applied to all employees.

TABLE 63.	-Average	full-time				in	machine	shops,	1929,	by
			oc	cupat	tion					

Occupation	Number of estab- ments	Number of em- ployees	A verage full-time hours per week	Average earnings per hour	A verage full-time earnings per week
Blacksmiths Blacksmiths' helpers Crane operators Helpers, not otherwise specified Machinists	2 2 1 2 2	2 7 3 20 47 29	44.0 44.0 44.0 44.0 44.0 44.0	\$0. 991 . 535 . 498 . 484 . 868	\$43, 60 23, 54 21, 91 21, 30 38, 11
Machinists' and toolmakers' helpers Pattern makers Other skilled employees Other employees	2 1 2 2	29 7 10 16	44. 0 44. 0 44. 0 44. 0	. 510 1. 051 . 894 . 484	22.4 46.2 39.3 21.3
All employees	2	141	44.0	. 685	30, 1

In one machine shop the pay period was one week and in the other two weeks. Table 64 shows by pay period the average full-time hours and earnings, the per cent of full time worked, and the hours actually worked and actual earnings in 1929. **TABLE 64.**—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour in machine shops, 1929, by occupation

		Averaga number of days on which employ- ees worked in pay period	A ver- age full- time hours per pay period	A verage hours actually worked in pay period	Per cent of full time worked	Aver- age earn- ings per hour	earn-	Aver- age actual earn- ings in pay period
		-	One	-week p	ay perio	d		
Blacksmiths	7779	5.9 6.0 5.3 6.0	44.0 44.0	44.0 44.1 44.0 39.9 44.2	100. 0 100. 0 98. 4 96. 8 100. 0 100. 2 100. 0 90. 7 100. 5 99. 1	\$0. 942 . 565 . 498 . 531 . 853 . 510 1. 051 . 879 . 504 . 699	\$41. 45 24. 86 21. 91 23. 36 37. 49 22. 44 46. 23 38. 68 22. 18 30. 76	\$41. 45 24. 86 21. 57 22. 62 37. 49 46. 23 35. 08 22. 30 30. 45
A CONTRACTOR OF A CONTRACT			T	wo-week	c pay pe	riođ		
Blacksmiths. Blacksmiths' helpers. Helpers, not otherwise specified Machinists. Other skilled employees. Other employees.	-	1 12.0 12.0 12.0 7 11.6 8 12.0 4 12.0 3 12.0 7 12.0	88.0 88.0 88.0 88.0 88.0 88.0 88.0 88.0 88.0	0 88.0 0 86.1 0 89.9 0 87.9 0 91.6	100.0 97.8 97.8 102.2 99.9 99.9 104.1 103.4	. 460 . 398 . 939 . 510 . 930 4 . 458	40. 48 35. 02 82. 63 44. 88 81. 84 3 40. 30	40.43 34.2- 84.31 44.8 85.2 41.7
All employees	1 0	2 11.	9 88.	0 89.	0 101.5	2 . 63	7 56.00	

Table 65 gives average hourly earnings in 1929 for seven of the occupations in machine shops, and shows the number of employees earning each classified amount:

 TABLE 65.—Average and classified earnings per hour in seven occupations in machine shops, 1929

	Num-	Aver-													
Occupation	ber of em- ploy- ees	age earn- ings per hour	30 and un- der 35	40 and un- der 45	45 and un- der 50	50 and un- der 60	60 and un- der 70	70 and un- der 80	80 and un- der 90	90 and un- der 100	100 and un- der 120				
										50	50				
Blacksmiths Blacksmiths' helpers Crane operators	2 7 3	\$0. 991 . 535 . 498		14	29 67	29 33	14	14							
Helpers, not otherwise speci- fied	20 47	.484 .868	5	30	10	50	5 15	13	19	49	4				
Machinists and toolmakers' helpers Pattern makers	29	. 510		3	45	48	3		14	14	7				

Gas—Manufacture and Distribution

Data for the 102 employees engaged in the manufacture and distribution of gas are for males only in one establishment. In Table 66 average full-time hours, hourly earnings, and full-time weekly earnings in 1930, by occupations, are given.

The 48-hour week was in operation in all occupations and average earnings per hour ranged from 38 cents for laborers to 65 cents for gas-pipe fitters. The average for the industry was 47.8 cents per hour.

The rate for overtime and for Sunday and holidays was the same as for regular working time.

TABLE	66	-Average	hours	and	earnings	of	employees	in	the	manufacture	and
			distrib	ution	of gas, 15	930,	by occupat	ion			

Occupation	Number of employees	A verage full-time hours per week	A verage earnings per hour	A verago full-time earnings per week
Boiler firemen	7	48.0	\$0.481	\$23. 0
Gas makers	6	48.0	. 621	29, 84
Gas-pipe fitters	4	48.0	, 650	31, 20
Laborers	52	48.0	. 380	18, 24
Meter repair men	4	48.0	.475	22. 84
Trouble men	3	48.0	. 625	30. 0
Other skilled employees	5	48.0	. 596	28, 61
Other employees	21	48.0	. 562	26, 0
All employees	102	48.0	. 478	22, 0

For certain occupations in the manufacture and distribution of gas the length of the pay period was one week and for others one-half month. Table 67 shows by occupation and pay period average fulltime and actual hours and earnings, and also hourly earnings in 1930;

TABLE 67.—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour in the manufacture and distribution of gas, 1930, by pay period and occupation

Occupation	Num- ber of em- ploy- ees	A ver- age num- ber of days on which em- ployees worked in pay period	A ver- age full- time hours in pay period	A ver- age hours actually worked in pay period	Per cent of full time worked	A ver- age earnings per hour	A ver- age full- time earnings in pay period	Aver- age actual caratuas in pay period
			01	ne-week	pay pe	riod		
Gas-pipe fitters Laborers Meter repair men Other skilled employees Other employees	4 50 4 4 15	6.0 4.2 6.0 6.0 6.0	48. 0 48. 0 48. 0 48. 0 48. 0	48. 0 33. 3 48. 0 48. 0 48. 0	100. 0 69. 3 100. 0 100. 0 100. 0	\$0. 650 . 379 . 475 . 535 . 458	\$31, 20 18, 19 22, 80 25, 68 21, 98	\$31, 20 12, 60 22, 80 25, 68 21, 98
All employees	77	4.8	48.0	38.4	80.0	. 432	20, 74	16, 60
			One-l	half mo	nth pay	period		
Boiler firemen Gas makers Laborers Trouble men. Other skilled employees Other employees	7 6 2 3 1 6	13.0 13.0 13.0 13.0 13.0 13.0 13.0	104. 0 104. 0 104. 0 104. 0 104. 0 104. 0	104. 0 104. 0 104. 0 104. 0 104. 0 104. 0 104. 0	100, 0 100, 0 100, 0 100, 0 100, 0 100, 0	\$0, 481 . 621 . 307 . 625 . 841 . 821	\$50, 00 64, 58 41, 25 65, 00 87, 50 85, 42	\$50,00 64, 59 41, 25 65,00 87, 50 85, 42
All employees	25	13.0	104. 0	104.0	100, 0	, 621	64, 60	64, 60

Table 68 gives the average hourly earnings in 1930, by occupation, and the per cent of employees who earned each classified amount per hour in gas manufacture and distribution.

 TABLE 68.—Average and classified earnings per hour of employees in six occupations

 in the manufacture and distribution of gas, 1930

13H	Num-	Aver-	Per	cent of	emplo	yees w	vhose e r were-	arning	s (in ce	ents)
Occupation	ber of	earnings per	and	35 and under 40	40 and under 45	45 and under 50	50 and under 60	60 and under 70	70 and under 80	80 and under 90
Boiler firemen Gas makers	7 6 4	\$0. 481 . 621 . 650				100	67 50	17 25	17	2
Aborers. Meter repair men Trouble men	52 4 3	. 380 . 475 . 625	2	79	19 50		50 33	33		3

Dry Dock

Average full-time and actual hours and earnings, by occupations, are presented in Table 69 for the 94 employees of the most important dry dock on the islands. The data are for a pay period of one week in 1929 and for males only. The regular hours of operation of employees in each occupation were 45 per week and average earnings per hour ranged from 44.1 cents for laborers to 91.4 cents for machinists.

The rate for overtime and for work on Sunday and holidays was one and one-half times the rate for regular working time and applied to all employees.

TABLE 69.—Average days worked, average full-time and actual hours and earnings per week, per cent of full time actually worked, and average earnings per hour for dry-dock workers, 1929, by occupation

Occupation	Num- ber of em- ploy- ees	A ver- age number of days on which em- ployees worked in one week	A ver- age full- time hours per week	Aver- age hours actually worked in one week	Per cent of full time worked	A ver- age earn- ings per hour	A ver- age full- time earn- ings per week	A ver- age actual earn- ings made in one week
Carpenters. Carpenters' helpers. Indorors. Machinists Machinists' helpers. Welders. Other skilled employees. Other employees.	42	5.8 6.0 4.4 5.8 6.0 5.5 6.1 5.1	45. 0 45. 0 45. 0 45. 0 45. 0 45. 0 45. 0	45. 8 47. 0 33. 7 44. 3 45. 8 44. 7 48. 0 39. 8	101. 8 104. 4 74. 9 98. 4 101. 8 99. 3 106. 7 88. 4	\$0. 724 .477 .441 .914 .457 .912 .851 .457	\$32, 58 21, 47 19, 85 41, 13 20, 57 41, 04 38, 30 20, 57	\$33. 18 22. 43 14. 84 40. 45 20. 89 40. 73 40. 87 18. 19
All employees	94	5.1	45.0	39.6	88.0	. 578	26.01	22.8

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In Table 70 average hourly earnings and the per cent of employees who earned each classified amount per hour in 1929 are shown for six occupations in dry-dock work.

TABLE 70.- Average and classified earnings per hour in six occupations in a dry dock. 1929

Occupation	Num- ber of	A verage earn-	Per	cent c	of empl I	oyees v ber hou	whose ir were	earning	gs (in c	ents)
	em- ploy- ees	ings per hour	30 and under 35	40 and under 45	45 and under 50	50 and under 60	60 and under 70	70 and under 80	80 and under 90	90 and under 100
Carpenters. Carpenters' helpers Laborers Machinists	13 3 41	\$0. 724 . 477 . 441	2	67 88	5	33	23	77		******
Machinists' helpers Welders	4 4 2	.914 .457 .912		50	25	25			50 50	50 50

Dairies

Average number of days on which employees worked, average fulltime and actual hours and earnings in 1930, by occupations, are given in Table 71 for the employees of the most important establishment on the islands that is engaged in the production and distribution of dairy products. The figures were compiled from data collected for a representative pay period of one month in 1930 and are for males only.

Average earnings per hour ranged from 20.9 cents for laborers to 53.3 cents for truck drivers who deliver milk and other products to customers. The average for the industry was 29.9 cents per hour.

The rate for overtime and for work on Sunday and holidays was the same as for regular working time.

TABLE 71 .- Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour of dairy employees, 1930, by occupation

Occupation	Num- ber of	Average number of days on which	vers	age full- hours-	A verage hours	Per	Aver-	time	age full-) earn-)gs—	Aver
Occupation	em- ploy- ees	employ- ecs worked in one month	Per week	In one month	of 6-17	earn- ings per hour	Per week	In one month	netual earn: logs in one month	
Cow washers Laborers Milkers, machine Peamsters Fruck drivers (delivering	9 34 7 5	28. 1 22. 7 26. 3 24. 8	69.0 69.0 60.0 69.0	302.0 305.5 261.0 303.6	271. 7 223. 7 256. 0 242. 2	90. 0 73. 2 98. 1 79. 8	\$0. 215 . 209 . 294 . 263	\$14. 84 14. 42 17. 64 18. 15	\$64, 93 63, 85 76, 73 79, 85	\$08. 3. 40. 0 70. 1 63. 7
ther employees	9 20	31.0 28.6	56.0 67.3	243.0 291.9	243.0 271.6	100. 0 93. 0	. 533	29.85 25.37	129, 60	120. 60
All employees	84	26.0	66.4	291.3	246.1	84.5	. 209	19.85	87. 10	73.4

COFFEE MILLS

Table 72 gives the per cent of employees earning each classified amount per hour for five occupations in dairies, and average earnings per hour in 1930. Truck drivers were the only employees who earned as much as 35 cents per hour.

TABLE 72.—Average and classified earnings per hour in five occupations in dairies, 1930

	Num-	A ver-	Aver-											
Occupation	ber of em- ploy- ees	age earn- ings per hour	14 and un- der 16	16 and un- der 18	20 and un- der 22	22 and un- der 24	24 and un- der 26	26 and un- der 28	28 and un- der 30	30 and un- der 35	35 and un- der 40	50 and un- der 60	70 and un- der 80	
ow washers	9 34 7 5	\$0. 215 . 209 . 294 . 263	3	11 3	56 76	22 12	3 60	14 20	11 43 20	3 43				
ruck drivers (delivering milk)	9	. 533									22	67	1	

Coffee Mills

Separate studies were made of the two divisions of the coffee industry, but the report includes figures only as to the mill processes of hauling, sorting, and polishing the bean. Agricultural data could not be included because such operations were not going on at the time the agents of the bureau visited the islands and it was impracticable to locate coffee producers who employ any considerable number of workers and retain copies of pay rolls beyond the season's crop. A succinct idea of the industry is given in the report of the governor of the Territory for the fiscal year ending June 30, 1929, as follows:

The present acreage devoted to coffee production on the island of Hawaii, the

5,500 acres; Hamakua district, 400 acres; other districts, 100 acres. In Kona district there are about 1,200 coffee farms, and at the height of the picking season, during the past year, about 1,200 men and 850 women were employed in the industry. The value of the coffee exported during the calendar year 1928 was \$1,368,826, the crop amounting to 5,151,266 pounds.

The figures in Table 73 are for average full-time hours and earnings and average hourly earnings, by occupations, for employees of the two establishments on the islands that clean, dry, grade, and otherwise prepare the coffee bean for the trade.

Males in all occupations combined earned an average of 30.7 cents per hour and females 14.1 cents per hour, while the average for the industry was 21.3 cents per hour.

The rate for overtime and for work on Sunday and holidays was one and one-half times the rate for regular working time. This rate applied to laborers with rate of \$12 per week and males in other occupations. The rate for females was the same as for regular working time.

One mill has a profit-sharing bonus that applies only to males in service of plant at end of year. In 1929 the bonus was approximately 12 per cent of earnings.

TABLE 73.—Average hours and earnings in coffee mills, 1929-30, by occupation and sex

Occupation and sex	Number of estab- lish- ments	Number of em- ployees	A verage full-time hours per week	A verage earnings per hour	A verage full-time carning per week
Carpenters, male Coffee pickers, female. Grading machine operators, male Laborers, male. Other employees, male Other employees, female	2 2 2 2 2 2 1	3 41 3 19 7 (1)	54. 5 55. 1 54. 5 55. 2 56. 3 (¹)	\$0. 433 . 139 . 361 . 252 . 379 (!)	\$23, 00 7, 00 19, 05 13, 91 21, 34 (¹)
All employees, male	2 2	32 42	55. 3 55. 0	. 307	10, C) 7, 70
All employees, male and female	2	74	55. 1	. 213	11.7

¹ Included in total.

In one coffee mill the pay period was a month and in the other a week for males and a month for females. The average full-time and actual hours and earnings for employees in these coffee mills in 1929-30 are given in Table 74, by pay periods.

TABLE 74.—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour in coffee mills, 1929-30, by occupation and sex

Occupation and sex	Num- ber of em- ploy- ees	A ver- age number of days on which employ- ees worked in pay period	A ver- age full- time hours per pay period	A ver- age hours actu- ally worked in pay period	Per cent of full- time worked	A ver- age earn- ings per hour	A ver- age full- time earn- ings per pay period	A ver- age actual earn- ings in pay period
			One-	week pa	y period	1		
Carpenters, male Grading machine operators, male Laborers, male Other employees, male Other employees, female	2 2 11 3 1	6. 0 6. 0 5. 7 6. 0 6. 0	52. 0 52. 0 52. 0 52. 0 52. 0 52. 0	54. 0 54. 0 53. 5 54. 0 52. 0	103. 8 103. 8 102. 9 103. 8 100. 0	\$0. 498 . 381 . 265 . 432 . 231	\$25, 90 19, 81 13, 78 22, 46 12, 00	\$20, 60 20, 50 14, 10 21, 87 12, 00
All employees, male	18 1	5.8 6.0	52. 0 52. 0	53.7 52.0	103.3 100.0	- 332 - 234	17.26	17. 80
All employees, male and female	19	5.8	52.0	53. 7	103. 3	. 320	16, 95	12, 68
			One-n	aonth p	ay perio	d		
Coffee pickers, female Carpenters, male Grading-machine operators, male Laborers, male. Coffee pickers, female Other employees, male All employees, male	24 1 1 8 17 4 14	20. 9 30. 0 30. 0 22. 0 23. 4 27. 0 24. 6	208. 0 257. 5 257. 5 257. 5 257. 5 257. 5 257. 5 257. 5	181. 7 297. 5 293. 3 240. 1 231. 7 257. 9 253. 1	115.5 113.9 93.2 90.0 100.2 98.3	\$0. 133 303 321 235 145 339 , 272	\$27, 00 78, 02 49, 00 60, 51 37, 54 37, 54 37, 29	821, 16 96, 00 96, 15 50, 49 33, 64 87, 85 70, 84
All employees, female	17	23.4	257.5	231.7	90.0 93.7	. 145	37.84	10. 04 //1. 11

FOUNDRIES

In Table 75, which shows the number of employees earning each classified amount per hour, it will be seen that of the female coffee pickers all but 7 per cent earned less than 18 cents an hour, while 67 per cent of the male carpenters earned 45 and under 50 cents.

TABLE 75.—Average and classified earnings per hour in four occupations, 1929-30, by occupation and sex

		Aver-	_	er e	енсс	n en	pioy	669	- 103	0.000							ere	_
	Num- ber of em- ploy- ees	age earn- ings per hour		un-	9 and un- der 10	un-	un-			18 and un- der 20		un-	un-	un-	un-	un-		un
Carpenters, male Coffee pickers,	3	\$0. 433													33			6
female Grading machine operators,male Laborers, male	41 3 19	. 139	2	5	5	17	24	20	20	7	42	32	11	11	33 5	33	33	

Foundries

Average full-time hours and earnings in 1929 are presented by occupations in Table 76 for the 66 employees of the two important foundries on the islands. Only males were employed. The regular hours of operation were 44 per week for each occupation. The range in average earnings per hour was from 51.3 cents for molders' helpers, floor, to \$1.086 for core makers. For the industry the average was 64.9 cents per hour.

The rate for overtime and for work on Sunday and holidays was two times the rate for regular working time and applied to all employees.

TABLE 76.—Average hours and earnings in foundries, 1929, by occupation

			-		
Occupation	Num- ber of estab- lisb- ments	Num- ber of employ- 368	A verage full-time hours per week	A veragə earnings per hour	A verage full-time earnings per week
Chippers and rough grinders	1 1 1 2 2 1 2	$ \begin{array}{c} 4 \\ 3 \\ 2 \\ 16 \\ 32 \\ 1 \\ 5 \end{array} $	44. 0 44. 0 44. 0 44. 0 44. 0 44. 0 44. 0 44. 0	$\begin{array}{c} \$0.\ 539\\ 1.\ 086\\ 563\\ .\ 562\\ 1.\ 034\\ .\ 513\\ .\ 688\\ .\ 246\end{array}$	\$23. 71 47. 78 24. 77 24. 73 45. 50 22. 57 30. 27 10. 82
All employees.	2	66	44.0	. 649	28.56

Pay periods in the two foundries were for one week in one and for two weeks in the other. Table 77 shows the per cent of full time worked by foundry employees and their average full-time and actual hours and carnings in 1929.

 TABLE 77.—Average days worked, average full-time and actual hours and earnings, per cent of full time actually worked, and average earnings per hour in foundries, 1929, by occupation

		-						
Occupation	Num- ber of em- ploy- ees	A ver- age num- ber of days on which em- ployees worked in pay period	hours	Aver- age hours actually worked in pay period	Per cent of full- time worked	earn- ings	full-	Aver- age actua earn- ings in pay period
			On	e-week j	pay per	iod		
Chippers and rough grinders Core makers	4 3 2 12 22 1 3	6.0 5.0 5.3 6.0 5.5 5.9 5.0 6.0	44.0 44.0 44.0 44.0 44.0 44.0 44.0 44.0	44. 0 37. 0 38. 7 40. 5 42. 2 43. 3 40. 0 44. 0	100. 0 84. 1 88. 0 92. 0 95. 9 98. 4 90 9 100. 0	\$0. 539 1. 086 . 563 . 562 1. 101 . 513 . 688 . 250	\$23. 71 47. 78 24. 77 24. 73 48. 44 22. 57 30. 27 11. 00	\$23, 71 40, 20 21, 75 22, 78 46, 50 22, 19 27, 59 11, 00
All employees	50	5.7	44.0	42.3	96.1	. 678	29.83	28.60
			Two-	week pa	y perio	đ		
Molders, hand, floor Molders' helpers, floor Other employees	4 10 2	12.0 11.8 12.0	88. 0 88. 0 88. 0	88.3 86.2 88.5	100.3 98.0 100.6	0. 833 . 512 . 241	73. 30 45. 06 21. 21	\$73, 55 44, 11 21, 35
All employees	16	11.9	88.0	87.0	98.9	. 559	49. 19	48, 63

Table 78 gives for seven occupations in foundries the per cent of employees earning each classified amount per hour and the average earnings per hour in 1929.

TABLE 78.—Average and classified earnings per hour in seven occupations in foundries, 1929

Occupation	Num- ber of	A ver-	Per	Per cent of employees whose earnings (in cents) per hour were-								
Occupation	em- ploy- ees	earn- ings per hour	40 and under 45	45 and under 50	50 and under 60	60 and under 70	80 and under 90	90 and under 100	100 nnd Unde 120			
Chippers and rough grinders Core makers Crane operators	4	\$0. 539 1. 086			100							
Cupola tenders	32	- 563 - 562			100 100							
Molders' helpers, floor Rough carpenters	16 32	1.034 .513	3	3	94	6	6	13	70			
	1	. 688				100			*****			

Slaughtering and Meat Packing

Figures in Table 79 are for average number of days on which employees worked, and for average full-time and actual hours and earnings in one week in 1930 in a slaughtering and meat-packing establishment, the employees of which were all males. The regular hours of the establishment were 9 per day Monday to Friday and 6 on Saturday, or 51 per week. Earnings per hour by occupations ranged from an average of 27.8 cents for hide workers to 46.6 cents for butchers and 47.1 cents for mechanics.

The rate for overtime and for work on Sunday and holidays was the same rate as for regular working time.

 TABLE 79.—Average days worked, average full-time and actual hours and earnings per week, per cent of full time actually worked, and average earnings per hour in slaughtering and meat packing, 1930, by occupation

Occupation	Num- ber of em- ploy- ees	A verage number of days on which em- ployees worked in 1 week	A ver- age full- time hours per week	A ver- age hours actu- ally worked in 1 week	Per cent of full time worked	A ver- age earn- ings per hour	A ver- age full- time earn- ings per week	A ver- age actual earn- ings in 1 week
Butchers	4	5.5	51.0	47.3			\$23.77	\$22.00
Ice-house workers	433	6.0	51.0	51.0	100.0	. 343	17.49	17, 49
Hide workers, general	3	6.0	51.0	51.0	100.0	. 278	14.18	14.18
Laborers	7	5.7	51.0	49.3	96.7	. 317	16.17	15.64
Offal workers, general	8	6.0	51.0	51.1	100.2	. 328	16.73	16.75
Mechanics	1	6.0	51.0	51.0	100.0	. 471	24.00	24.00
All employees	26	5.8	51.0	50.0	98.0	. 347	17.70	17.33

Table 80 gives for six occupations in slaughtering and meat packing the per cent of employees whose earnings per hour were each classified amount, and shows average hourly earnings in 1930.

 TABLE 80.—Average and classified earnings per hour in six occupations in slaughtering and meat packing, 1930

	Num-	Aver-	Per o	cent of		oyees er hou		earnin	gs (in	cents)
Occupation	ber of em- ploy- ees	earn- ings per hour	24 and under 26	26 and under 28	28 and under 30	30 and under 35	35 and under 40	40 and under 45	45 and under 50	50 and under 60
Butchers Ice-house workers Hide workers, general	433	\$0. 466 . 343 . 378	33			33 67	67	25	75	
Offal workers, general Mechanics	5 7 8 1	.317 .328 .471		14	29	29 88	29		100	13

Overalls and Shirt Making

In Table 81 are given average number of days on which employees worked and the average full-time and actual hours and earnings of employees of one manufacturer of overalls and shirts for a representative weekly pay period in 1930.

Female sewing-machine operators, representing 76 per cent of the total number of employees in the establishment, worked an average of 5.2 days or 40.4 hours in one week and earned an average of \$13.25 in one week and an average of 32.8 cents per hour. They worked 89.4 per cent of full time in the week, the full-time hours being 45.2. Had they worked full time at the same average of 32.8 cents per hour their earnings would have averaged \$14.83. Earnings per hour

ranged from an average of 19 cents for one employee to 40 cents for two employees.

The rate for overtime and for work on Sunday and holidays was the same as for regular working time.

TABLE 81.—Average days worked, average full-time and actual hours and earni	ngs
per week, per cent of full time actually worked, and average earnings per hour	· in
overalls and shirt making, 1930, by occupation and sex	

Occupation and sex	Num- ber of em- ploy- ees	A verage number of days on which employ- ees worked in 1 week	hours per week	actually	Per cent of full time worked	A verage earnings per hour	A vei age full-time earnings per week	earning
Machine operators, female	13	5. 2	45. 2	40. 4	89. 4	\$0. 328	\$14. 83	\$13. 2/
Pressers, male	1	6. 0	45. 2	46. 0	101. 8	. 174	7. 86	8. 0(
Other employees, ¹ female	3	5. 3	45. 2	41. 3	91. 4	. 219	9. 90	9. 0/
All employees, male	1	6. 0	45. 2	46. 0	101. 8	. 174	7.86	8. 00
All employees, female	16	5. 3	45. 2	40. 6	89. 8	. 307	13.88	12. 40
All employees, male and female	17	5.3	45. 2	40. 9	90. 5	. 298	13. 47	12. 20

¹ Include 1 folder, 1 machine operator learner, and 1 general utility worker.

Salaries of Policemen and Firemen and Wages of Street Labor in Honolulu, 1930

The number of persons in each official position or occupation in the Honolulu police and fire departments in 1930 at each specified monthly salary and the rate of wages per hour of unskilled street laborers are shown in Table 82.

Monthly salaries in the police department ranged from \$155 for traffic policemen to \$550 for the sheriff, and in the fire department ranged from \$140 for hose men and watchmen to \$400 for the chief. Unskilled street laborers were paid a wage rate of 53 cents per hour, and their regular hours were 8 per day on Monday to Friday and 4 on Saturday, or 44 per week.

TABLE 82.—Salaries	s of Honolulu	police and	fire departments, a	and wages of street
labor,	1930, by depa:	rtment and	position or occupat	lion

Department and official posi- tion or occupation	Number of persons	Salary per month	Department and official posi- tion or occupation	Number of persons	Salary per month
POLICE DEPARTMENT			FIRE DEPARTMENT		
Sheriff	1	\$550.00	Chief	1	\$400.00
Sheriff Deputy sheriff	î	350.00	Chief First assistant	î	325, 00
Do	Î	275.00	Second assistant	1	250.00
Do	ī	200.00	Drillmaster		225.480
Do	1	175.00	Mechanic	1	225. 183
Do	4	160.00	Assistant mechanic		200.00
Chief clerk		250.00	Captains Lieutenants	10	200, 00
Clerk	1	225.00	Lieutenants	10	175.00
Senior captain	1	250.00	Engineers	16	165.00
Captains	3	200.00	Drivers	26	150, 00
Lieutenants	3	175.00	Hose men	7.1	140, 00
sergeants	0	170.00	Watchmen	2	140, 00
Motor-cycle policemen	58	165.00	and all and a star and		
Patrolmen	36	150.00	STREET LABOR		
Fraffic policemen	11	155.00	Unskilled laborers	(1)	9, 20

Union Labor

Labor organizations in the Hawaiian Islands are few in number, small in membership, and, with the exception of the barbers' union, have no agreements with the employers.

The trades or occupations that have organizations are machinists, molders, molders' helpers, and boilermakers in foundries and machine shops; hand compositors and linotype operators in book and job and newspaper printing and publishing; marine engineers in steam navigation; carpenters and joiners, plasterers and plumbers in building construction and repair; and barbers in shops in which Japanese and Filipinos are not employed. Table 83 shows the number of days per week on which work was available to the employees in each of these trades (except boilermakers and plasterers), in the companies in which they were employed, the regular hours of operation, Monday to Friday, Saturday, and per week; wage rates per hour, day, week, or month; and the number of times the regular rate that was paid for overtime and for any work on Sunday and holidays. Boiler makers and plasterers are entirely too few in number to warrant showing any figures for them.

The members of the machinists' union were employed in shops in which work was available 6 days per week. The regular hours of operation in the shops were 8 each day, Monday to Friday, and 4 on Saturday, or 44 per week. The wage rates ranged from \$7 to \$7.84 for a day of 8 hours. For overtime or any time worked in excess of 8 hours, Monday to Friday, and 4 on Saturday, or any work on Sundays and holidays, a rate of two times the regular rate was paid.

TABLE 83.—Days of operation per weck, hours of operation per day and week, and rates of pay for regular time, overtime, and work on Sunday and holidays, 1930, by occupations

	Dava		Hours		- 1 A	Times regu- lar rate for
Trade or occupation	Days per week	Monday to Friday	Saturday	Per week	Wage rates per day	overtime and work on Sunday and holidays
Machinists Molders, floor, hand Molders' helpers	6 6 6	8 8 8	4 4 4	44 44 44	\$7.00-\$7.84 8.50 4.00-5.25	2 2 2 2
Compositors, hand, and linotype operators Marine engineers Carpenters and joiners Plumbers Barbers	6 6 6 6	8 8 8 8 1 9 1 9	4 8 5 4½ 11½	44 48 48 47 58½	${}^{1} \begin{array}{c} 35. \ 00-85. \ 00\\ {}^{2} \ 150. \ 00-306. \ 00\\ \begin{array}{c} 4. \ 50-6. \ 50\\ {}^{1} \ 6. \ 00-7. \ 00\\ \end{array}$	

1 Per week.

² Per month. ³ Per week plus 60 cents for each \$1 over \$35 gross, for chair. Example: A barber in one week did work amounting to \$40. He was paid \$25 plus 60 cents for each \$1 over \$35, or a total of \$28.

At the time of the study of conditions in the Hawaiian Islands by the bureau, the barbers' union, which does not include any Japanese or Filipinos, had agreements with six shops only.

The Honolulu Japanese Barbers' Association, an employers' organization, consisted at that time of 191 members and employed approximately 200 male and 100 female Japanese barbers. The hours in these shops were from 7 a. m. to 8.30 p. m., Monday to Saturday, with one hour off duty at or near noon for lunch, except on busy days, usually Saturday, when only such time as could be had without interfering with the trade was taken. The hours were therefore 12½ per day, Monday to Friday, and 13½ on Saturday, or 76 per week, for which they were paid rates ranging from \$15 to \$25 per week and given two meals per day. The barbers in these shops are not members of any union.

In 1929 there were approximately 150 plumbers in Honolulu. About 30 per cent of them were members of the plumbers' union and 70 per cent were Japanese and other nonunion workers. Members of the union were paid from \$6 to \$7 per day. The Japanese plumbers worked for contractors of their race and were paid from \$3 to \$5 per day. In the year 2,402 plumbing permits, at an estimated cost of \$704,695.50, were issued in Honolulu. A total of 2,169 permits, at an estimated cost of \$567,196.50, were issued to Japanese contractors, and only 233 permits, at an estimated cost of \$137,499, were issued to contractors who employed members of the union.

The carpenters' union in Honolulu does not include any Japanese and in 1929 and early in 1930 its membership was less than 33% per cent of the total membership of the union in 1917–18. The union rate was \$6.50 per day of 8 hours, but many members were paid less and some as low as \$4.50 per day. It was estimated by officials of the carpenters' union that in 1929 and 1930 there were approximately 1,000 Japanese carpenters in the Hawaiian Islands, that they or the contractors who employed them do practically all of the building of cottages, repair and jobbing, much of the large contract work, and as much as 90 per cent of all the carpentry work in Honolulu. The rates paid Japanese carpenters range from \$3.50 to \$5 per day, the atter rate being paid to working foremen.

Workmen's Compensation

The Hawaiian workmen's compensation law has been in effect since 1915, but no report of its operation has so far been published. The administration of the workmen's compensation law is in the hands of a commission and a secretary for each of the principal islands. Except for the island of Oahu (city and county of Honolulu) no reports covering a period of years could be secured.

Tables 84 to 88 were compiled for the Bureau of Labor Statistics from the records of the Industrial Accident Board of the city and county of Honolulu by the secretary of that board, and contain data for each year from 1918 to 1928.

Table 84 applies to accidents causing temporary total disability; accidents causing permanent partial disability; fatal accidents; and all accidents combined.

The number of accidents of all classes on the island of Oahu ranged, by years, from 2,298 in 1918 to 5,958 in 1927. The number of temporary total disability accidents in 1918 was 2,241, or 97.5 per cent of the total; of permanent partial disability accidents was 36, or 1.5 per cent of the total; and of fatal accidents was 21, or 0.9 per cent of the total. In no year were accidents causing temporary total disability less than 97.1 per cent of the total, accidents causing permanent partial disability more than 2.1 per cent of the total, and fatal accidents more than 0.9 per cent of the total.

In 1918 only 992, or 44.3 per cent, of the 2,241 temporary total dianbility accidents exceeded the waiting period, or the number of days or weeks from the date of the accident to the date when compensation begins. No compensation is paid in case of recovery before the expiration of the waiting period. Compensation for the 992 accidents was \$19,416, or 49.9 per cent of the total of compensation and medical and hospital expense combined. Medical and hospital expense was \$19,462, or 50.1 per cent of the total expense of the 992 accidents. In 1928 compensation for the 956 compensable cases was 35.2 per cent and medical and hospital expense 64.8 per cent of the total expense. Compensation per temporary accident was \$19.57 in 1918 and \$46.60 in 1928.

TABLE 84.—Number,	compensation,	and medic	al, hospital,	burial, a	and administra-
tion costs of a	ccidents in the	island of C	ahu, 1918 to	1928, b	y years

					Te	mporary	total disa	bility			
						ensable ses ²	Compe	nsation	Medica hospita		
1918 2, 298	Num- ber of cases	Per cent of total acci- dents	Num- ber of non- com- pen- sable cases ¹	Num- ber of cases	Per cent of tempo- rary total disa- bility cases	Amount	Per cent of total cost	Amount	Per cent of total cost	Total cost ³	
1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928	2, 298 2, 992 3, 406 2, 719 2, 752 3, 614 4, 311 4, 511 5, 348 5, 958 5, 866	$\begin{array}{c} 2,241\\ 2,927\\ 3,316\\ 2,642\\ 2,673\\ 3,524\\ 4,227\\ 4,403\\ 5,223\\ 5,815\\ 5,754\end{array}$	97.5 97.8 97.4 97.2 97.1 97.5 98.1 97.6 97.7 97.6 98.1	1, 249 1, 556 2, 199 1, 714 1, 569 2, 198 2, 792 3, 041 4, 149 4, 798 4, 798	992 1, 371 1, 117 928 1, 104 1, 326 1, 435 1, 362 1, 074 1, 017 956	44. 3 46. 8 33. 7 35. 1 41. 3 37. 6 33. 9 30. 9 20. 6 17. 5 16. 6	\$19, 416 35, 595 44, 783 41, 487 35, 552 55, 521 50, 436 47, 385 38, 655 56, 605 44, 545	49, 9 57, 5 51, 2 54, 5 47, 9 50, 0 42, 7 44, 4 35, 1 38, 6 35, 2	\$19, 462 26, 331 42, 674 34, 570 38, 724 55, 455 67, 716 59, 266 71, 558 89, 978 81, 864	50. 1 42. 5 48. 8 45. 5 52. 1 50. 0 57. 3 55. 6 64. 9 61. 4 64. 8	\$38, 877 61, 922 87, 45 76, 05 74, 27 110, 97 118, 15 106, 65 110, 21 146, 58 126, 40

Medical and hospital cost Compensation Total Per During tempo-rary total disa-bility Following tem-Year accicent of porary total dis-ability Total dents Numtotal Per cost i ber of accicent of dents Amount cases total Per Per cost cent of cent of Amount Amount total total cost cost \$20, 020 22, 377 27, 847 30, 416 29, 776 42, 266 35, 190 43, 023 53, 168 55, 204 55, 204 53, 009 \$23, 590 28, 969 35, 431 38, 783 38, 659 58, 096 47, 381 63, 217 80, 592 83, 563 78, 538 1918. 1919. 1920. 1921. 1.51.61.82.02.11.7\$2, 251 3, 416 3, 279 4, 006 4, 522 9, 846 6, 485 9, 771 15, 641 13, 496 13, 804 $\begin{array}{c} 9.5\\ 11.8\\ 9.3\\ 10.3\\ 11.7\\ 16.9\\ 13.7\\ 15.5\\ 19.4\\ 16.2\\ 17.6\end{array}$ 2,298 2,992 3,406 2,719 2,752 3,614 4,311 4,511 5,348 5,958 5,866 36 49 61 55 59 61 59 85 103 117 \$1, 319 3, 176 4, 305 4, 361 4, 360 5, 984 5, 706 10, 422 11, 783 14, 862 11, 724 84. 9 77. 2 78. 6 78. 4 77. 0 72. 8 74. 3 68. 1 66. 0 $\begin{array}{c} 11.0\\ 12.2\\ 11.2\\ 11.3\\ 10.3\\ 12.0\\ 16.5\\ 14.6\\ 17.8\\ 14.9\end{array}$ 1922____ 1923 1924_____ 1.4 1925_____ 1926_____ 1927_____ 2.0 66.1 67.5 1928.....

Permanent partial disability

¹ Causing disability not extending beyond waiting period.

² Causing disability extending beyond waiting period.
 ³ Compensation plus medical and hospital cost.

					Fa	tal acciden	ts		_	
Year	Total acci-	Num-	Per cent of	Compe	nsation	Medic		Buria		
	dents	ber of cases	total acci- dents	Amount	Per cent of total cost	Amount	Per cent of total cost	Amount	Per cent of total cost	Total cost
1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928	2, 298 2, 992 3, 406 2, 719 2, 752 3, 614 4, 311 4, 511 5, 348 5, 958 5, 866	21 16 29 22 20 29 25 23 22 25 23 22 26 22	0.9 .5 .9 .8 .7 .8 .6 .5 .4 .4	\$34, 953 21, 202 54, 261 32, 817 34, 183 62, 077 42, 240 11, 864 36, 265 39, 557 48, 064	95. 7 94. 4 96. 1 95. 3 94. 5 92. 8 85. 6 95. 2 92. 7 95. 0	\$193 392 436 414 269 1,722 922 1,022 366 1,415 1,143	0.5 1.7 .8 2.6 2.0 7.4 1.0 3.3 2.3	\$1, 369 872 1, 757 1, 172 1, 434 1, 918 2, 345 978 1, 480 1, 697 1, 408	3.7 3.9 3.1 4.0 5.2 7.1 3.90 2.8	\$36, 51 22, 46 56, 45 34, 40 35, 50 13, 86 38, 11 45, 50 13, 86 38, 11 45, 50 13, 86 38, 11 45, 50 13, 86 38, 11 45, 50 10, 61

 TABLE 84.—Number, conpensation, and medical, hospital, burial, and administration

 costs of accidents in the island of Oahu, 1918 to 1928, by years—Continued

		_	-				All A	ccident	s					
		C	omper	nsation			age	A ver-		Ađi	ministr	ation e	expense	NS
'Year	Num- ber	Amount	Per cent of to- tal cost	A ver- age per acci- dent	A ver- age per com- pen- sable acci- dent	Med- ical and hos- pital cost	Bur- ial cost	med- ical, hos- pital, and bur- ial cost per acci- dent	Total cost 4	Amount	Per com- pen- sable acci- dent	Per acci- dent	Per dol- lar of acci- dent cost	Per dot- lar of pen sa- lton
1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928	$\begin{array}{c} 2,298\\ 2,992\\ 3,406\\ 2,719\\ 2,752\\ 3,614\\ 4,311\\ 4,511\\ 5,348\\ 5,958\\ 5,866\end{array}$	\$75, 707 82, 350 131, 196 109, 082 103, 871 165, 847 133, 572 112, 695 139, 872 166, 228 157, 342	76. 5 72. 6 73. 2 73. 1 69. 8 70. 6 63. 3 61. 3 61. 1 60. 9 61. 6	27. 32 38. 52 40. 12 37. 74 45. 89 30. 98 24. 98 26. 15 27. 90	57. 34 108. 69 108. 54 87. 80 117. 12 87. 93 76. 66 116. 66 143. 30	46, 388 38, 990 43, 516 67, 023 75, 123	872 1, 757 1, 172 1, 434 1, 918 2, 345 978 1, 480	10. 36 14. 14 14. 77 16. 33 19. 08 17. 99 15. 75 16. 65 17. 89	\$98, 982 113, 360 179, 341 149, 243 148, 821 234, 788 211, 039 183, 732 228, 916 272, 814 255, 560	6, 708 12, 496 12, 949 12, 860 12, 740 15, 277 14, 996 16, 527 16, 452	4.67 10.35 12.88 10.87 9.00 10.06 10.20 13.78 14.18	2.24 3.67 4.76 4.68 3.53 3.54	Cts. 8 9 0 7 8 8 9 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	であ。 私 10 21 21 21 21 21 21 21 21 21 21 21 21 21

4 Compensation plus medical, hospital, and burial cost.

Table 85 shows the number of accidents each year from 1918 to 1928. among the workers of the different races:

TABLE 85.-Number of accidents each year, 1918 to 1928, by race

Year	Ameri- can	Chi- nese	Fili- pino	Hawai- ian	Part Hawai- ian	Japa- nese	Korean	Porta- guese	Porto Rican	À.Îl others	Total
1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928	198 316 322 264 255 362 448 406 407 444 397	$\begin{array}{c} 131\\ 166\\ 203\\ 146\\ 105\\ 156\\ 204\\ 220\\ 212\\ 256\\ 248\\ \end{array}$	235 345 421 387 434 584 672 844 1,094 1,156 1,247	258 378 463 323 299 428 440 402 446 550 538	66 111 108 69 81 37 71 116 134 204 144	790 867 948 803 1,045 1,156 1,327 1,590 4,788 1,705	84 159 136 97 106 135 258 215 210 217 186	313 397 559 411 435 534 643 864 862 853 964	75 97 103 80 127 215 250 250 250 250 250 250 250 250 250	148, 156 143, 143, 143, 143, 143, 143, 143, 143,	2,200 21,000 21,700 22,700 31,011 0,011 0,011 0,010 0,010 0,010

1 No explanation of difference of 7 between this total and total given in Table 84.

The marital status and the sex of the workers injured by accidents n each year from 1918 to 1928 are set forth in Table 86:

TABLE 86.—Total accidents each year, 1918 to 1928, by marital status and sex.

	-	Marital	status	Sex		
Year	Total acei- dents	Married	Single	Male	Female	
918	2, 298	1, 227	1, 071	2, 222	7(8)	
/19 /20	2, 992 3, 406	1,524	1,468 1,687	2,910 3,287	8	
021	2,719	1, 500	1,219	2,660		
/22	2,752 3,614	1,394	1,358	2,702 3,575	5	
124	4, 311	2, 323	1,988	4, 256	5 3 5 6 6	
1215	4, 511 5, 348	2, 382 2, 871	2, 129 2, 477	4,448 5,279	6	
27	5,958	3, 103	2,855	5,839	119	
9223	1 5, 866	2,869	3,004	5,742	13	

¹ Figures given for marital status and for sex total 5,873, but this total agrees with total in Table 85. No explanation is given for difference.

The number of compensation awards and of claims denied and dismissed in fatal accident cases and the number of such cases with and without dependents are presented in Table 87:

TABLE 87 .- Number of fatal accidents and disposition of claims therefor, and number of cases with and without dependents, 1918 to 1928, by years

	Num-		Claims	Com-	Cases	Numbe	er of cases	with dep	endents
Year	ber of fatal acci- dents	Claims denied	dismiss- ed	pensa- tion awards	with no depend- ents	Widow only	Widow and children	Children only	All other depend- ents
1918	21	5	1	15		5	9		
919	16		2	11 18	3	3.	4	1	
P21	29 22 20 29 25 23 22 22 26 1 22	4	2	10	2	2	9	0	
9:32	20	1		14 11 19	28		7	2	1
9:23	29			19	10		16 13	1	2
9:24	25	2	Transferry	18	11	9	13	2	
9:26	20	3	2	98	9	1	3	5	
9:27	26	3	2	14	7	3	4	4	
9/28	1 22	5	3	14	8	1	9	3	1

1 No explanation as to total of items not agreeing with this total, which is same as in Table 84.

Table 88 shows the number and kind of accidents, the compensation awarded and the medical, hospital, and burial cost, each year from 1918 to 1928, for sugar plantations and mills, pineapple plantations and canneries, public utilities, construction work and building trades, and all other industries.

			А	cciden	its		1			Comper	asation a	warded ar	nd paid		1	Medica hospita	al and al cost 1	Buria	l cost	
Year	Temp total bili	disa-	Perm par disal	tial	Fa	tal	Total	Tempora disab	ility	Permane tial dis	ent par- ability	Fatal ac	cidents	To	tal		Per		Per	Total cost— amount
	Num- ber	Per cent of total	Num- ber	Per cent of total	Num- ber	Per cent of total	num- ber	Amount	Per cent of total cost	Amount	Per cent of total cost	Amount	Per cent of total cost	Amount	Per cent of total cost	Amount	cent of total cost	Amount	cent of total cost	
918	551 555 535 436 485 541 667 857 1,004 805 881	97.9 96.8 94.7 95.4 94.5 95.8 95.8 95.8 96.4 97.2 96.1 97.2	8 16 19 17 23 18 24 29 27 28 21	1.4 2.8 3.7 4.5 2.5 3.6 3.3 2.3 2.3 2.3 2.3	421145653254	0.7 .4 1.9 1.0 1.0 1.0 7.3 2.6 .5	563 569 565 457 513 565 696 889 1,033 838 906	\$4,017 5,928 13,366 6,600 4,332 6,362 6,362 6,236 8,311 7,881 6,208	28. 2 27. 5 28. 9 25. 1 17. 4 27. 0 21. 0 27. 1 29. 6 25. 6 25. 5	\$4, 793 9, 874 9, 874 10, 103 8, 087 7, 298 9, 218 11, 992 12, 783 9, 590 5, 034	33.6 45.9 20.5 38.5 32.6 31.0 32.3 52.0 45.5 31.1 20.6	\$2,805 1,223 18,001 6,246 10,000 7,966 10,261 1,617 4,428 11,529 10,519	19.7 5.7 38.9 23.8 40.2 33.8 35.9 7.0 15.7 37.4 43.1	\$11, 615 17, 026 40, 851 22, 949 21, 626 25, 484 19, 845 25, 522 29, 000 21, 761	81.5 79.1 88.3 87.4 90.2 91.8 89.2 86.1 90.8 94.1 89.2	\$2, 324 4, 384 5, 029 3, 225 2, 288 1, 779 2, 413 2, 989 2, 425 1, 299 2, 329	$16.3 \\ 20.4 \\ 10.9 \\ 12.3 \\ 9.2 \\ 7.6 \\ 8.4 \\ 13.0 \\ 8.6 \\ 4.2 \\ 9.6 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.1 \\$	\$310 110 380 80 140 150 680 210 150 522 300	2.2 .5 .8 .6 2.4 .9 .6 1.7 1.2	\$14, 250 21, 520 46, 260 26, 254 24, 847 23, 555 26, 576 23, 044 28, 096 30, 820 24, 389
Total	7, 313	96.3	230	3.0	51	.7	7, 594	75, 246	25.8	98, 257	33.7	84, 595	29.0	258, 097	88.5	30, 484	10.5	3,032	1.0	291, 613
							1	PINEAPH	PLE PL	ANTATI	IONS A	ND CAN	NERIE	S					_	
915. 919. 920. 921. 922. 925. 924. 925. 925. 926. 925. 926.	302 406 494 292 188 253 332 407 515 55	98.1 97.6 97.0 95.7 96.4 95.5 96.5 96.9 97.7 97.9 97.9	6 10 12 11 7 10 9 11 11 11 13	1.9 2.4 2.6 3.6 3.6 3.6 2.2 1 2.1 1.6	3 2 3 2 1	0.6 .7 .7 .9 .5 .2	308 416 509 305 195 265 344 420 529 608 609	\$2, 152 4, 564 5, 574 5, 173 2, 667 5, 846 4, 586 5, 665 6, 252 4, 816 5, 155	28.1 27.3 26.6 21.3 31.2 24.2 18.8 24.2 27.8 19.9 19.8	\$1,797 6,369 3,441 3,873 1,155 3,771 6,094 5,407 3,697 4,504 6,775	23.4 38.1 16.4 16.0 13.5 15.7 25.1 23.1 16.5 18.7 26.0	\$2,016 7,233 5,000 4,223 1,834 3,420	9.6 29.8 20.7 17.4 7.8 13.2	\$3, 949 10, 934 11, 031 16, 279 3, 823 14, 617 14, 903 12, 906 9, 948 9, 320 15, 350	51.5 65.4 52.6 67.1 44.7 60.6 61.3 55.1 44.3 38.6 59.0	\$3,716 5,769 9,622 7,598 4,725 9,386 9,081 10,459 12,401 14,845 10,571	48.5 34.6 45.9 31.3 55.3 38.9 37.4 44.7 55.2 61.4 40.6	\$320 390 127 324 41 108 100	1.5 1.6 .5 1.3 .2 .5	\$7,665 16,702 20,973 24,267 8,548 24,130 24,309 23,406 22,457 24,165 26,021
Total	4,384	87.3	130	2.4	14	-1	4, 508	32, 449	22.6	46, 885	21.0	23, 726	10.7	122,060	55.3	98, 172	44. I	1, 410	.6	222, 643
					-	-	-	-	-	-	-		-		-	-	_	_	-	-
-									PI	BLIC U	PERSONNEL	IES				100				
9918	179 279 215 214 360 445 530 462 433 392	99, 4 99, 2 98, 6 98, 6 97, 8 98, 9 98, 9 90, 6 98, 9 90, 6 98, 9	1 2 3 6 1 2 1 4 6 2	0.4 .9 1.4 1.6 .2 .4 .2 .9 1.5 .5	1 1 1 2 4 4 1 1 3	0.6 .4 .5 .9 .7 .2 .7	180 281 218 217 368 450 536 464 438 401 374	\$5, 643 4, 514 3, 172 4, 290 5, 121 14, 636 5, 369 3, 563 3, 376 5, 145 3, 879	$\begin{array}{r} 43.1\\ 36.3\\ 32.0\\ 50.3\\ 29.5\\ 40.5\\ 19.4\\ 32.5\\ 16.6\\ 32.6\\ 32.6\end{array}$	\$114 148 1, 523 2, 206 1, 254 1, 311 332 3, 700 5, 805 451	0.9 1.5 17.8 12.7 3.5 4.7 3.0 18.2 26.8 3.8	\$5,000 5,000 2,533 4,526 12,896 12,142 4,951 1,544	38.2 40.1 25.5 26.0 35.6 43.9 24.4 7.1	\$10, 643 9, 627 5, 853 5, 812 11, 853 28, 786 18, 822 3, 895 12, 028 12, 465 4, 330	81.3 77.3 59.0 68.1 68.2 79.6 68.0 35.5 59.2 57.5 36.4	\$2, 348 2, 731 3, 962 2, 725 5, 334 7, 065 8, 395 6, 983 8, 181 9, 078 7, 568	17.9 21.9 40.0 31.9 30.7 19.6 30.3 63.6 40.3 41.8 63.6	\$100 100 100 200 300 472 100 100 154 1,626	0.8 .8 1.0 1.1 .8 1.7 .9 .5 .7	\$13,091 12,458 9,915 8,537 17,387 36,151 27,689 10,978 20,309 21,697 11,898 190,111
Total	372	99.5 98.8	28	.7	18	.5	3, 927	58, 678	30.9	16, 844	8.8	48, 593	25.6	124,116	65.3	64, 369	33.9	1,020	1	
		_		1	2	0.9		\$1,786	20.7	WORK	AND E	\$3,939	45.6	\$6.425	74.4	\$2,011	23.3	\$200 300	2.3	\$8,636
1918 1919 1920 1921 1922 1922 1923 1924 1925 1926 1927 1928	421 631 - 462 - 547 - 630 - 884 - 920 - 1, 323 - 1, 605	98.0 98.0 98.8 98.6 98.4 97.7	2 3 6 8 11 8 12 17 32	1.4 1.7 .9 1.3 1.3 1.9	351323146	.7 .8 .2 .6 .3 .3 .1 .3 .4	426 639 469 558 643 895 933 1,344 1,643	5,844 6,017 16,277 12,209 18,321 18,131 13,095 16,522 22,508	40.5 18.7 54.0 32.3 40.7 34.7 31.1 21.9 26.5	874 1, 958 6, 209 5, 306 11, 729 5, 685 6, 555 16, 638 20, 569 13, 110	$\begin{array}{c} 6.1\\ 6.1\\ 20.6\\ 14.0\\ 26.0\\ 10.8\\ 15.5\\ 22.1\\ 24.2\\ 18.2\\ \end{array}$	1, 938 16, 624 10, 000 	10.4 22.2	22,486 27,515 30,050 31,860 24,650 48,199 51,917 44,484	61.7	17, 423 26, 823 32, 444 27, 246	31.9 22.2 25.4 26.4 33.1 38.6 41.3 35.6 38.2 37.8 34.6	496 10 300 100 237 100 400 608 400	1.5 (²) .8 .2 .5 .2 .5 .2 .5	$\begin{array}{c} 32,243\\ 30,141\\ 37,812\\ 45,062\\ 52,284\\ 42,174\\ 75,422\\ 84,968\\ 72,129\\ \end{array}$
Total	1		120	1.3	35	.4	9, 271	146,084	29.5	89, 333 OTHEB	1	1	17.3	320, 840	1 0	1	-	-		
1918	- 1,270	97.7	20 25 18 3 15 21	1.7	10 9 15 10 10 15		1,300 1,473 1,273 1,118 1,69	14, 745 16, 654 9, 148 11, 222 10, 356	10.5 30.6 23.8 15.2 18.6 9.8	\$14,047 8,322 17,121 13,069 17,382 24,197	25.4 17.2 24.5 21.8 2 28.9 7 22.8	\$23, 209 13, 041 15, 086 19, 338 9, 657 36, 215	27.0 21.5 32.2 16.0 34.2	36, 108 48, 861 41, 555 38, 261 2 70, 768	74.8 69.8 69.2 63.5 66.8	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	29.6 29.6 35.2 32.0 44.8	362 461 692 794 1,241 3 632		48, 247 69, 949 60, 044 60, 227 105, 890 8 78, 181

TABLE 88 .- Number and kind of accidents, compensation, and medical, hospital, and burial cost, 1918 to 1928, by years SUGAR PLANTATIONS AND MILLS

¹ All sugar plantations and mills maintain hospitals and medical staffs, and the figures here given for such plantations and mills represent only the actual medical and hospital cost outside of the service maintained by the plantations and mills. ² Less than one-tenth of 1 per cent.

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Data for the operations of the Industrial Accident Board of the County of Hawaii and of the Industrial Accident Board of the County of Kauai for the year ending January 30, 1930, follow:

County of Hawaii

Total paid recovered employees: By self-insuring concerns By insurance companies	\$11, 321. 22 4, 982. 79	@16_004_01
Medical and hospital expense reported		\$16, 304. 01 24, 140. 54
By self-insuring concerns, monthly to dependents. By insurance companies, monthly to dependents.	134. 33 0. 00	
Periodical payments:		134. 33
Self-insuring concerns, monthly Insurance companies, monthly	99. 84 64. 27	
- County of Kauai		164. 11
Total paid recovered employees: By self-insuring concerns By insurance companies	\$2, 014. 97 719. 08	
Medical and hospital expense reported		\$2, 734. 05 2, 440, 50
Compensation being paid as death benefits: By self-insuring concerns, monthly to dependents_ By insurance companies, monthly to dependents_	63. 00 83. 00	
Periodical payments:		146.00
Self-insuring concerns, monthly Insurance companies, monthly	53. 40 39. 44	92, 84

Employment Agency Statistics, 1929

The following tables were compiled from information furnished to agents of the Bureau of Labor Statistics by the Pan Service Bureau of Honolulu.

Table 89 shows for each month of and for the year 1929 the number ber of applicants to the Pan Service Bureau for positions in commercial service, in industrial service, and in domestic service; the number of persons called for by employers in each service; and the number of positions filled in each service.

In the year 1929, 1,031 persons applied to the Pan Service Bureau for positions in commercial service, 421 in industrial service, and 778 applied for work in domestic service, a total of 2,230 applicants. Employers called on the Pan Service Bureau for 695 persons in commercial service, 198 in industrial service, and 1,261 in domestic service, or a total of 2,154. The Pan Service Bureau obtained positions for 682 persons in commercial service, 183 in industrial service, and for 858 persons in domestic service, or a total of 1,723.
 TABLE 89.—Number of applicants for work, of persons called for by employers, of applicants sent out by service bureau, and of positions filled each month and in the year 1929

in .	Nun	nber of	applic	cants	Number of persons called for by employers				Number of appli-	Number of positions filled			
Month	th Com- mer- cial	In- dus- trial	Do- mes- tic	Total	Com- mer- cial	In- dus- trial	Do- mes- tic	Total	cants sent to em- ployers	Com- mer- cial	In- dus- trial	Do- mes- tic	Total
anuary	121	48	74	243 149	50 75	14	104	168 160	230 216	72 62	10 17	88 111	170
March	86	16	49	151	62	18	93 97	173	212 187	86 27	17 13	55 62	158
pril	50 71	51 54	78	179	48 46	14 27	100	159 173	204	52	16	47	11
une	148	25	69	1 242	72	14	97	183	2 227	49	15	52	110
uly	131	29	92	252	60	14	130	204	224	58	11	81	150
ugust	73	31	78	182	59 52	13	152	224 170	237 216	59 43	14	85 68	150
eptember	76 86	41 27	69 88	186 201	75	22 15	114	204	292	79	24 13	.79	17
ovember	52	38	41	131	47	17	104	168	217	45	11	67	12
ecember	61	40	43	144	49	21	98	168	207	50	22	63	13
Total	1, 031	421	778	2, 230	695	198	1, 261	2, 154	2, 669	682	183	858	1,72

1 159 males consisting of 23 students, 26 already employed, and 110 not employed; 83 females, consisting of 19 students, 10 already employed, and 54 not employed.
 2 22 males and 105 females.

Table 90 shows for the 242 applicants in June, 1929, the number of each race, the occupation, and the extent of education of such applicants:

TABLE 90.—Race, occupation, and education of applicants for employment, June, 1929

Race of applicants	Num- ber	Occupation of applicants sent out by bureau	Num- ber	Extent of education of applicants	Num- ber
Anglo-Saxon: American	27 8 35 40 22 52 6 25 1 1 3 1 1 3 2 2 2 1	Stenographer-typists Salesmen and saleswomen Waiters and waitresses Yardmen Cooks Housemaids Mechanics Truck drivers Laborers Carpenters and painters Telephone operators Others	41 12 23 80 2 5 23 6	Coflege High school Commercial Grade school None–Illiterate	13 100 26 20
Total	1 242	Total	1 227	Total	1 24

Table 91 shows the wage rate per day, week, or month, in February, 1930, of Caucasians and of other races, by occupations.

TABLE 91.—Wage rates of Caucasians and of other races, February, 1930, by occupation

	Wage rates									
Occupation		Caucasia	as		Other rac	es				
5	Per day	Per week	Per month	Per day	Per week	Per mont				
Accountants		La hand	\$225.00			A100				
Bookkeepers			125.00			\$175,0				
Bell boys Butchers						30.				
Carpenters	\$5.00		150.00			160. (
Carpenters' helpers	2 90			\$5.00 2.50						
chaulleurs	1000 2028		80.00	2.50		60. (
JIERKS			75.00			50.4				
Collectors			1 75.00			(2)				
Cooks, house, male Cooks, house, female		\$15.00			\$15.00					
JOOKS, restaurant	21-11	12.00	100 00		12.00					
JIESSIIIAKEIS			100.00			100.0				
Ivers		35,00	100.00		15.00	60, 0				
LIECTRICIANS	3 00			3, 60	10.00					
Clectricians' helpers	3. 40			3. 35						
arm hands			100.00			60. (
ountain girls			60.00			60. 0				
targeners	10		50.00			50. (
10USE DOVS	121 110 110 110		60.00			50.0				
TOUSEKEEDETS			60.00			40.0				
rouer. Jaundry		10.00	00.00		10.00	40.0				
anitors			75.00		10.00	60.0				
aborers	3.20			1 2.50-	}	our o				
Aachinist		35, 00		3. 20	5					
fachinists' helpers	3.20	35.00		4.20 2.40						
faids (general)	00	8.00		2. 90	8.00					
latrons		25.00			20.00					
lechanics	31.00			3, 50	20.00					
Aechanics' helpers			60.00			40.0				
Aotion-picture operators			100.00			75.0				
ainters' helpers	5.00			5.00						
antrymen		*********		2.50						
lasterers	10.00			6.00		46.0				
lumbers	3.2 00			5,00						
ales clerks, male	1	20.00		0.00	15.00					
ales clerks, female		15.00								
chool girls					3.00					
ervice-station boys					3.00					
denographers.			75.00			40.0				
allors			150.00			06, 0				
elephone operators	and the second second second	20.00	100.00		15.00	100.00				
ile setters ray girls	10.00			6.00	10.00	*********				
ray girls			50.00			35.0				
ruck drivers			100.00			75.0				
vpists	5.00			5.00						
aiters			75.00			40.0				
altresses	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		60.00			50.0				
ashers, laundry		30.00	10.00		20. (8)	35.00				
ardmen	-				PUV (M)	45.00				

1 And commission.

² Commission only.

Per hour.

LABOR CONDITIONS IN HAWAII, 1929-1930

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Wholesale and Retail Prices in Honolulu, 1930

Wholesale prices of staple food articles, February and August, 1930.— The figures given in Table 92 were furnished by a leading wholesale firm and represent net cash prices f. o. b. Honolulu. Prices for the two months named are based on identical descriptions of articles.

TABLE 92.—Wholesale prices (net cash f. o. b. Honolulu) of staple food articles, February and August, 1930

Article	February, 1930	August, 1930
Beans, dried, per 100 pounds:		
Bayos, speckled	\$7.85	\$6.75
Garavanzos	7.70	7.70
Lima, California	13.10	12.75
Mexican, red	5.90	5.45
White, small	8.90	8.00
Cereals, breakfast, per case: Bran, 24 10-ounce packages	2.65	2.65
Corn flakes, 36 packages		3. 36
Cream of wheat, 18 28-ounce packages	3, 86	3, 86
Oatmeal, 12 20-ounce packages		1.40
Rice flakes, 24 6-ounce packages		2.75
Coffee, Kona, roasted, per pound:	2.10	20.10
Bulk, ground	. 35	. 29
Packaged, 48 1-pound packages	. 36	. 30
Corn meal, white, 12 20-ounce packages, per case	1.18	1, 17
Crackers, soda, 24 21/2-pound tins, per case	16.00	16.00
Fish, canned, per case:		
Cod, 48 1-pound cans Salmon, Alaska red, 48 No. 1s, tall	13.80	13.80
Salmon, Alaska red, 48 No. 1s, tall	11.76	11.30
Tuna, 48 No. 1s	16.00	10.45
Flour, wheat, per 49-pound bag	1.90	1.70
Fruit, canned, per case:		
Apricots, 48 No. 1s	6.85	6.45
Peaches, 48 No. 1s	6.82	5.90
Pears, 48 No. 18	7.95	6.05
Pineapples, 48 No. 1s	5. 60	4.70
Fruit, dried:	1 00	0.00
Apples, extra choice, 25 pounds, per case	4.00	2.80
Apricots, extra choice, 10 pounds, per case	2.50	1.75
Currants, 25 pounds, per case	4.25	4.20
Figs, black, 25 pounds, per box	3.70	1. 75
Prunes, 40–50s, 25 pounds, per case Raisins, seedless, 45 15-ounce packages, per case	3.85	2. 58
Milk, evaporated, 48 talls, per case	4.30	4.00
Rice, extra fancy, California, per 100 pounds	4.70	4.60
Salt, 100 1½-pound bags, per bale	3.73	3.73
Boda, baking, 60 1-pound packages, per case		4.23
Sugar, Honolulu refined, per 100-pound bag	5. 30	4.70
Tea, 100 ½-pound packages, per pound	.72	. 67
Vegetables, canned, per case:		
Asparagus, medium white, 24 No. 1s	7.25	6,90
Beans, lima, 24 No. 28	2.47	2.30
Beans, lima, 24 No. 2s Beans, stringless, 24 No. 2s	3.00	2.72
Corn, 24 No. 28	3, 85	3. 52
Peas, 24 No. 25	4.70	4.40
Pork and beans, 36 medium	3. 20	3.00
Tomatoes, 24 No. 2s		2.40
Vinegar, cider, per gallon	. 20	. 20

Retail food prices, February to October, 1930.—Table 93 is compiled from monthly reports made to the Bureau of Labor Statistics by representative retail dealers in Honolulu and in other localities of Hawaii. The stores were selected by personal visits of an agent of the bureau. The reporting firms operate stores patronized largely by wage earners.

TABLE 93.—Retail food prices, February to October, 1930

HONOLULU

and the second s		1111			_		LNI		
Article	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct,
Sirloin steakpound Round steakdo Rib roastdo Chuck roastdo	Cents 38.1 32.7 33.2 25.1	Cents 37.8 32.5 32.9 25.0	Cents 38.4 32.7 32.8 25.0	Cents 38.4 33.2 32.8 25.0	Cents 38.4 32.7 32.8 25.0	Cents 38.0 32.7 32.3 25.0	Cents 37.8 32.4 31.7 25.6	Cents 37.3 32.4 32.0 25.6	Centa 37. 1 31. 8 31. 4 25. 5
Plate beefdo	23.8	23.7	23.8	23.8	23.5	23. 5	22.7	23. 0	22, 0
Pork chopsdo	43.2	43.4	43.4	43.4	43.2	43. 4	41.3	40. 7	40, 8
Bacon, sliceddo	54.1	54.1	54.4	54.4	55.2	55. 2	55.1	55. 8	54, 2
Ham, sliceddo	64.5	64.2	64.6	64.6	64.6	64. 2	64.0	63. 6	61, 8
Lamb, leg ofdo	40.8	40.7	40. 4	39.8	40. 3	40. 2	39. 2	39. 4	38, 9
Hensdo	53.0	52.4	51. 9	50.4	45. 0	51. 0	50. 0	48. 6	49, 1
Salmon, red, canneddo	30.1	30.0	29. 7	30.0	30. 0	30. 1	30. 0	32. 6	32, 4
Milk, freshquart	20.3	20.3	20. 3	20.3	20. 3	20. 3	20. 3	20. 3	20, 3
Milk, evaporated16-ounce can	10. 2	10. 1	10. 1	10. 2	10. 2	10. 1	10. 2	10. 2	1), 0
Butterpound	49. 1	53. 6	53. 4	53. 9	53. 5	52. 8	52. 7	52. 4	52, 6
Cheesedo	37. 1	37. 3	37. 3	37. 9	37. 7	36. 8	37. 0	37. 1	36, 4
Larddb	24.4	24.4	24.4	24.4	27.5	25.0	25.0	27.5	$ \begin{array}{c} 30, 0 \\ 26, 2 \\ 78, 1 \\ 10, 0 \end{array} $
Vegetable lard substitutedo	27.1	27.2	26.8	26.8	27.1	27.3	27.1	27.1	
Eggs, strictly freshdozen	50.6	49.2	49.3	49.4	48.7	52.4	66.0	76.3	
Breadpound	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	
Flourdo	5.8	5.8	5.7	5.8	5.8	5.6	5.8	5.5	5.4
Corn mealdodo	11.0	10.8	10.9	10.6	10.8	10.8	10.9	10.8	10.9
Rolled oatsdo	12.7	12.7	12.8	12.7	12.6	12.6	12.7	12.5	12.3
Corn flakes8-ounce package	12.9	12.9	12.8	12.9	13.0	12.8	12.8	12.9	12.7
Wheat cereal23-ounce package	27.3	27.3	27.3	$27.1 \\ 19.1 \\ 6.1 \\ 14.3$	27.3	27.1	27.1	27.3	27. 3
Macaronipound	19.2	19.1	19.1		19.3	19.2	18.8	19.0	18. 0
Ricedo	6.1	6.1	6.1		6.1	5.9	5.9	5.9	5. 0
Beans, navydo	14.6	14.4	14.1		14.4	13.9	14.0	13.9	13. 7
Potatoes	4.5	4.5	4.5	4.9	4.8	4.8	4.5	4.1	3.9
	4.1	4.1	4.0	4.1	4.3	4.1	4.0	3.9	3.6
	5.9	5.7	6.3	7.0	6.3	5.2	4.9	5.0	6.6
	11.0	11.0	11.1	11.3	11.2	11.1	10.8	11.0.	10.5
Corn, canned	19.3	19.0	19.0	18.7	18.8	18. 2	17.8	18. 2	18. 0
	19.1	18.8	18.8	18.6	18.4	18. 7	18.2	18. 7	18. 0
	14.8	14.7	14.7	14.7	15.0	15. 3	15.1	15. 4	14. 8
	6.3	6.2	6.2	6.2	6.2	5. 9	5.9	5. 5	5. 5
Teado	86.2	86.1	86. 1	85.1	85.6	85. 9	85.4	87.3	86.4
Coffeedo	41.8	41.6	40. 9	40.7	40.8	40. 7	40.2	38.9	38.1
Prunesdo	17.8	17.9	18. 1	17.2	16.6	15. 9	15.3	14.4	15.0
Raisinsdo	13.1	12.9	12.7	12.4	12.2	12. 2	11. 8	11. 9	11.4
Bananasdo	4.4	4.4	4.4	4.7	4.7	4. 6	4. 4	4. 3	4.8
Orangesdozen	55.3	58.2	58.5	59.4	62.7	64. 8	63. 4	65. 7	(05.5

HAWAII, OUTSIDE HONOLULU

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32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	31. 6
30.8	30.8	30.8	30.8	30.8	30.0	30.0	30.0	29, 0
30.0	30.0							27. 5
26.5	26.5	26.4	26.5	26.5	26.0	26.0	26.0	24. 5
23.3	23.3	23.3	23.3	23.3	23.3	23, 3	23.3	25.0
36.8	36.61	36.6	36.6	36.8	36.8	36.2	36. 2	35. 4
55.7	55.7	53.0	52.5	52.1	52.1	52.1	52.1	52. 6
55.0	55.0	58.3	58.3	58.3	56.7	58.3	58.3	55. 0
48.3	48.3	48.3	48.3	46.7	46.7	46.7	46.7	42.0
								46.0
								36, 8
15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
11.1	10.9	11.0	11.0	10.8	10.6	10.0	14.7	16,11
57.6								55. 4
37.4	37.2	37.7	37.7	36.7	36.4	36, 3	15. 4	35.0
25.4	25 4	23 9	27 5	26 7	28.7	28.1	25. 1	27. 5
								27. 5
								641.1
10.0							1.1.1	16. 6
	30.8 30.0 26.5 23.3 36.8 55.7 55.0 48.3 53.3 30.8 15.0 11.1 57.6	30.8 30.8 30.0 30.0 30.0 26.5 23.3 23.3 36.8 36.8 36.6 55.7 55.7 55.7 55.7 56.3 30.9 15.0 15.0 15.0 15.0 11.1 10.9 57.6 56.3 57.4 25.4 25.4 25.4 25.4 25.4 25.4 25.4 25.4 25.8 50.0 10.1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

WHOLESALE AND RETAIL PRICES-HONOLULU

TABLE 93.-Retail food prices, February to October, 1930-Continued

HAWAII, OUTSIDE HONOLULU-Continued

And it to be a second and a second as							_		
Article	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Flour	Cents 5.3 11.9 14.2	Cents 5.3 11.9 14.2	Cents 5.1 12.2 13.9	Cents 5.1 12.2 13.9	Cents 5.0 12.2 13.7 13.6	Cents 5.0 12.2 13.7 13.8	Cents 4.8 12.0 14.0 13.9	Cents 4.7 13.0 14.3 13.9	Cents 4.4 13.8 13.2 12.7
Corn meal	13.5 28.6 20.2 5.6 13.5	13.7 28.6 19.4 5.5 13.5	13.8 29.1 20.6 5.4 13.4	13.8 29.1 20.6 5.5 13.4	28.6 20.4 5.4 13.2	28.1 20.4 5.4 12.8	28.1 20.2 5.5 12.5	$28.1 \\ 20.1 \\ 5.5 \\ 12.2$	29.0 19.6 5.2 11.9
Alce Beans, navy Potatoes Onions Cabbage Pork and beans No. 2 can	4.2 4.1 4.3	4.3 4.1 4.3 10.9	4.3 4.5 4.5 11.1	4.5 4.5 4.5 11.1	4.9 4.6 4.5 10.8	4.8 4.3 4.5 10.8	4.4 3.9 4.0 10.8	1	3.6 3.7 10.8
Corn, canned do Peas, canned do Tomatoes, canned do Sugar, granulated pound.	19.7 19.3	19.7 19.5 18.1 6.6		18.1	17.9 6.3	17.9 6.2	19.6 19.0 16.9 6.1	19.9 18.3 16.4 5.9 85.3	18. 1 17. 0 5. 8
Teadodododododododo	18.1	45.8 18.1	.45.3 18.1	44.4 18.1	45.3 17.6	44.8 17.4 13.8	43.9 17.1 13.4	43.0 16.6 13.1	42.8 16.0
Raisinsdo Bananasdo Orangesdozen.		5.0	5.0	5.0	5.0	5.0			