
FOOD AND KINDRED PRODUCTS

	Page
BUTTER, CHEESE, AND CONDENSED MILK.....	25
SLAUGHTERING AND MEAT PACKING.....	44
CANNING AND PRESERVING.....	62
CHOCOLATE AND COCOA PRODUCTS.....	86
CONFECTIONERY AND ICE CREAM.....	98
FLOUR-MILL AND GRISTMILL PRODUCTS.....	102
GLUCOSE AND STARCH.....	121
RICE, CLEANING AND POLISHING.....	127
THE SUGAR INDUSTRY.....	133

BUTTER, CHEESE, AND CONDENSED MILK.

GENERAL STATISTICS.

Scope of the industry.—The manufacture of butter, cheese, and condensed milk is treated in this report as a single industry, although in some tables the more important data are given for the three branches separately. The general statistics reported for each branch represent the complete returns of those establishments reporting the designated commodity as their product of chief value. The value of products shown for the butter-making branch of the industry, for example, includes the value of cheese or condensed milk manufactured as a subsidiary product in factories engaged primarily in the manufacture of butter. Tables 14, 15, and 16, however, show the total production of butter, cheese, and condensed milk of all establishments in the industry.

Factories of considerable size are sometimes operated on farms, but such factories are considered a part of the farm equipment and are covered by the census of agriculture rather than by that of manufactures. The present report is, therefore, confined to establishments operated independently of farming activities. In Table 17, however, the combined production of butter and cheese on farms and in the factories covered by the census of manufactures is shown. This represents approximately the total output of butter and cheese for the United States.

Skimming or separating stations operated in connection with a butter factory are counted as a part of the factory. Independent separating stations, however, have not been included, nor have establishments engaged primarily in the buying and selling of milk and cream, but incidentally manufacturing small quantities of butter or cheese from surplus stock.

Importance and growth of the industry.—Table 1 summarizes the statistics of each census since 1879, with percentages of increase for each period. With few exceptions increases are noticeable at each succeeding census. The large increases, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products, are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 accounts for the large increase in "Rent and taxes."

Comparative summary for the three branches of the industry.—Table 2 presents a summary for the butter, cheese, and condensed-milk industry as a whole, and for the three branches separately, for 1919 and 1914.

Principal states, ranked by value of products.—Table 3 summarizes the more important statistics of the industry, by states, arranged according to the value of products for 1919.

Wisconsin, New York, and Minnesota, in the order named, continue to be the three leading states in the industry in 1919 as in 1914, the combined value of their products in 1919 representing 41.6 per cent of the total value of products for the industry for the United States. There were a number of changes in the relative rank of the states from 1914 to 1919, as measured by value of products. Thus Michigan, which ranked sixth in 1914, advanced to fourth place in 1919, displacing Iowa; and Ohio, which ranked eighth in 1914, advanced to fifth place in 1919. Iowa dropped from fourth to seventh place and Illinois from fifth to sixth place during the five-year period.

Persons engaged in the industry.—The classification by age of the average number of wage earners is an estimate obtained by the method described in the "Explanation of terms." The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the classification by age. Table 4 shows for the industry as a whole, and for each of its three branches, the classification of the persons employed, by sex and age, for 1919, 1914, and 1909. Figures for individual states will be found in Table 19.

Wage earners, by months.—As shown by Table 5, the number of wage earners employed in the industry ranged from a maximum of 40,989 in June to a minimum of 29,022 in January, the minimum number being equivalent to 70.8 per cent of the maximum. Figures are given for the states separately, while for 1919 the number of males and females is also shown. The number of females employed in the industry is also shown for 1919 in eight of the states reporting a large proportion of female wage earners.

Prevailing hours of labor.—Table 6 shows a shortening of the working day for the industry since 1914. In that year 8.4 per cent of the wage earners were reported as employed fewer than 54 hours per week, as against 15 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 73.6 per cent of the total number of wage earners, as compared with 59.3 per cent in 1919.

Size of establishments, by average number of wage earners.—As shown by Table 7, there were 867 establishments in 1919, or 11.3 per cent of the total number for the industry, which employed no wage earners. These were comparatively small establishments in

which the work was done by the proprietors and firm members. In some cases they employed a few wage earners for short periods, but the number was so small and the period of employment so short that in computing the average number, as described in the "Explanation of terms," no wage earners could be shown. Of the total number of establishments, 76.5 per cent employed 1 to 5 wage earners, and 7.4 per cent from 6 to 20. There were only 159 establishments that employed an average of more than 50 wage earners, and of these only 40 employed over 100.

Size of establishments, by value of products.—At the censuses of 1909 and 1914, establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. Table 8, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919 the three groups having products of \$100,000 and over included 1,714 establishments, or 22.4 per cent of the total number for the

industry; employed 28,218 wage earners, or 79.9 per cent of the total average number; and reported products to the value of \$830,507,804, or 77.9 per cent of the total value of products.

Character of ownership.—Table 9 shows that in 1919, of the total number of establishments reported for the industry, 25.4 per cent were under corporate ownership. While corporations thus controlled only one-fourth of the total number of establishments, they employed 73.2 per cent of the total average number of wage earners and reported 65.8 per cent of the total value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 10, there was an increase in the total horsepower reported for the industry of 38,009 horsepower, or 29.1 per cent. This increase, however, was due almost entirely to the gain of 36,169 horsepower, or 205.2 per cent, in rented power, the increase in power owned being only 1,840 horsepower, or 1.6 per cent of the total.

Fuel consumed.—Table 11 shows, by states, the principal kinds of fuel used in the industry in 1919 and 1914. Of the total quantity of bituminous coal used in the industry in 1919, New York and Wisconsin reported 40.9 per cent, while California reported 74.6 per cent of the fuel oils, and Kansas and Ohio together 68.8 per cent of the gas.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. ¹					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	7,669	7,628	8,479	8,926	9,242	4,552	3,932	0.5	-10.0	-5.0	-3.4	103.0	15.8
Persons engaged.....	49,865	34,795	31,506	25,865	22,604	(²)	(²)	43.3	10.4	21.8	14.4	.....	.....
Proprietors and firm members.....	4,452	5,009	8,019	6,801	6,987	(²)	(²)	-11.1	-37.5	17.9	-2.7	.....	.....
Salaried employees.....	10,100	6,727	5,056	3,507	2,818	(²)	(²)	51.1	33.0	44.2	24.4	.....	.....
Wage earners (average number)...	35,313	23,059	18,481	15,557	12,799	12,219	7,903	53.1	25.1	18.5	21.5	(²)	(²)
Primary horsepower.....	168,871	130,862	101,349	93,845	88,062	25,526	(²)	29.0	29.1	8.0	6.6	245.0	.....
Capital.....	\$315,277,362	\$105,812,304	\$71,283,615	\$47,255,556	\$36,303,164	\$16,016,573	\$9,604,803	198.0	48.4	50.8	30.2	126.7	66.5
Salaries and wages.....	54,157,374	21,977,895	14,671,932	9,789,034	7,057,273	5,116,005	1,546,495	146.4	49.8	49.9	38.7	37.9	230.8
Salaries.....	16,217,698	6,130,814	3,590,624	1,376,097	911,712	(²)	(²)	164.5	70.7	160.9	50.9	.....	.....
Wages.....	37,939,676	15,847,081	11,081,308	8,412,937	6,145,561	(²)	(²)	139.4	43.0	31.7	36.9	.....	.....
Paid for contract work.....	711,975	712,651	301,658	39,024	28,604	(²)	(²)	-0.1	136.2	673.0	36.4	.....	.....
Rent and taxes.....	8,843,710	1,262,749	684,622	446,323	436,271	(²)	(²)	600.4	84.4	47.7	30.1	.....	.....
Cost of materials.....	926,366,296	315,025,635	235,546,064	142,920,277	108,841,200	49,819,301	18,363,579	194.1	33.7	64.8	31.3	118.5	171.3
Value of products.....	1,066,125,489	364,286,150	274,557,718	168,182,789	130,783,349	60,635,705	25,742,510	192.7	32.7	63.2	28.6	115.7	135.5
Value added by manufacture.....	139,759,193	40,259,515	30,011,654	25,202,512	21,042,149	10,816,404	7,378,931	183.7	26.3	54.4	15.1	102.9	46.6

¹ A minus sign (—) denotes decrease.
² Figures not available.

³ Figures not strictly comparable.
⁴ Exclusive of internal revenue.

⁵ Value of products less cost of materials.

BUTTER, CHEESE, AND CONDENSED MILK.

27

TABLE 2.—COMPARATIVE SUMMARY FOR THE THREE BRANCHES OF THE INDUSTRY: 1919 AND 1914.

	TOTAL FOR INDUSTRY.			ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—								
				Butter.			Cheese.			Condensed milk.		
	1919	1914	Per cent of increase, 1914-1919.	1919	1914	Per cent of increase, 1914-1919.	1919	1914	Per cent of increase, 1914-1919.	1919	1914	Per cent of increase, 1914-1919.
Number of establishments.....	7,660	7,628	0.5	3,738	4,356	-14.2	3,530	3,082	14.5	401	190	111.1
Persons engaged.....	49,805	34,705	43.3	25,330	21,516	22.4	6,993	5,654	23.7	16,533	7,625	116.8
Proprietors and firm members....	4,452	5,000	-11.1	2,006	2,543	-21.1	2,400	2,420	-0.8	46	40	15.0
Salaried employees.....	10,100	6,727	50.1	6,692	4,824	38.7	596	326	82.8	2,812	1,577	78.3
Wage earners (average number)...	35,313	23,059	53.1	17,641	14,149	24.7	3,997	2,908	37.4	13,675	6,002	127.8
Primary horsepower.....	168,871	130,862	29.0	95,190	91,628	3.9	24,500	19,219	27.5	49,181	20,015	145.7
Capital.....	\$315,277,362	\$105,812,304	198.0	\$162,302,108	\$50,625,448	172.2	\$26,022,734	\$11,139,094	133.6	\$126,962,520	\$35,047,852	262.2
Salaries and wages.....	54,157,374	21,977,895	146.4	28,374,818	14,090,240	101.4	5,859,034	2,274,213	157.6	19,923,522	5,013,442	254.9
Salaries.....	16,217,698	6,130,814	164.5	9,522,089	3,970,762	139.8	1,050,043	208,529	403.5	5,645,566	1,051,523	189.3
Wages.....	37,939,676	15,847,081	139.4	18,852,729	10,119,478	86.3	4,808,991	2,065,684	132.8	14,277,956	3,961,919	289.0
Paid for contract work.....	711,075	712,651	-0.1	428,799	652,076	-34.2	42,567	26,917	58.1	240,609	33,658	614.0
Rent and taxes (including internal revenue).....	8,843,710	1,262,740	600.4	3,414,781	880,609	296.8	407,874	121,969	234.4	5,021,055	280,171	1,692.1
Cost of materials.....	926,366,296	316,025,035	194.1	514,345,739	212,546,847	142.0	129,425,265	46,758,685	175.8	282,595,292	55,720,103	407.2
Value of products.....	1,066,125,489	364,285,150	192.7	583,163,011	243,379,371	139.6	143,455,704	51,744,779	177.2	339,506,774	66,161,000	390.0
Value added by manufacture.....	139,759,193	40,259,515	183.7	68,817,272	30,832,524	123.2	14,030,439	4,986,094	181.4	56,911,432	18,440,897	323.4

¹ A minus sign (—) denotes decrease.

TABLE 3.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.....	7,009	35,313	100.0	....	\$1,066,125	100.0	....	\$139,759	100.0	....	Oklahoma.....	20	301	0.9	18	\$7,718	0.7	20	\$994	0.7	21
											Texas.....	31	200	0.6	23	7,161	0.7	21	1,195	0.9	19
Wisconsin.....	2,872	5,973	16.9	1	221,447	20.8	1	23,463	16.8	1	Montana.....	53	195	0.6	24	4,320	0.4	24	768	0.5	23
New York.....	821	5,032	14.4	2	120,008	12.1	2	18,292	13.1	2	Kentucky.....	16	140	0.4	26	3,655	0.3	25	382	0.3	29
Minnesota.....	903	2,135	6.0	4	93,586	8.8	3	7,596	5.4	7											
Michigan.....	318	2,104	6.2	3	64,787	6.1	4	8,880	6.4	4	Arizona.....	9	155	0.4	25	3,159	0.3	26	732	0.5	25
											New Jersey.....	19	90	0.3	30	2,475	0.2	27	429	0.3	28
Ohio.....	267	2,132	6.0	5	60,013	5.6	5	9,597	6.9	3	Maine.....	11	117	0.3	28	2,260	0.2	28	521	0.4	27
Illinois.....	223	1,991	5.6	7	58,298	5.5	6	8,679	6.2	5	Mississippi.....	19	106	0.3	29	2,248	0.2	29	353	0.3	32
Iowa.....	434	1,663	4.7	9	57,800	5.4	7	7,319	5.2	8											
California.....	180	2,022	5.7	6	56,420	5.3	8	6,740	4.8	9	Massachusetts.....	23	65	0.2	33	2,214	0.2	30	367	0.3	31
											Virginia.....	23	125	0.4	27	1,784	0.2	33	534	0.4	26
Pennsylvania.....	273	1,900	5.4	8	44,564	4.2	9	8,215	5.9	6	Alabama.....	4	65	0.2	32	983	0.1	35	120	0.1	35
Nebraska.....	57	1,111	3.1	12	38,245	3.6	10	5,014	4.2	11	Connecticut.....	22	44	0.1	36	901	0.1	36	171	0.1	34
Washington.....	130	1,228	3.5	11	33,128	3.1	11	6,280	4.5	10											
Missouri.....	71	691	2.0	14	22,295	2.1	14	2,137	1.5	15	North Carolina.....	22	38	0.1	37	683	0.1	37	115	0.1	37
											Nevada.....	5	17	0.1	40	662	0.1	38	62	(1)	39
Vermont.....	137	608	1.7	15	18,539	1.7	15	1,883	1.3	17	West Virginia.....	6	20	0.1	39	200	(1)	41	56	(1)	41
Oregon.....	136	595	1.7	16	15,762	1.5	16	2,526	1.8	14	All other states.....	426	3,600	(1)	....	88,629	(1)	....	12,353	(1)	....
Colorado.....	78	495	1.4	17	11,908	1.1	17	1,959	1.4	16											
North Dakota.....	60	215	0.6	22	11,170	1.0	18	1,139	0.8	20											

¹ Less than one-tenth of 1 per cent.

MANUFACTURES.

TABLE 4.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.			Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	
					Male.	Fe- male.						Male.	Fe- male.
BUTTER, CHEESE, AND CON- DENSED MILK.	1919	49,865	41,918	7,047	84.1	15.9	CHEESE.....	1919	6,993	6,709	284	95.9	4.1
	1914	34,795	31,493	3,302	90.5	9.5		1914	5,654	5,510	144	97.5	2.5
	1909	31,506	29,095	2,411	92.3	7.6		1909	7,164	7,018	146	98.0	2.0
Proprietors and officials.....	1919	8,253	8,071	182	97.8	2.2	Proprietors and officials.....	1919	2,745	2,707	38	98.6	1.4
	1914	7,420	7,293	127	98.3	1.7		1914	2,607	2,560	47	98.2	1.8
	1909	10,480	10,336	144	98.6	1.4		1909	4,299	4,238	61	98.6	1.4
Proprietors and firm members....	1919	4,452	4,340	106	97.6	2.4	Proprietors and firm members....	1919	2,400	2,367	33	98.6	1.4
	1914	5,009	4,906	103	97.9	2.1		1914	2,420	2,375	45	98.1	1.9
	1909	8,019	7,901	118	98.5	1.5		1909	4,148	4,089	59	98.6	1.4
Salaried officers of corporations...	1919	1,112	1,078	34	96.9	3.1	Salaried officers of corporations...	1919	157	153	4	97.5	2.5
	1914	635	614	21	96.7	3.3		1914	37	35	2	94.6	5.4
	1909	1,032	1,014	18	98.3	1.7		1909	64	62	2	96.9	3.1
Superintendents and managers....	1919	2,669	2,647	22	98.4	1.6	Superintendents and managers....	1919	188	187	1	99.5	0.5
	1914	1,776	1,773	3	99.8	0.2		1914	150	150	0	100.0	0.0
	1909	1,429	1,421	8	99.4	0.6		1909	87	87	0	100.0	0.0
Clerks and other subordinate salaried employees.	1919	6,299	3,089	3,210	49.0	51.0	Clerks and other subordinate salaried employees.	1919	251	159	92	63.3	36.7
	1914	4,316	3,006	1,310	69.6	30.4		1914	139	111	28	79.9	20.1
	1909	2,595	1,748	847	67.4	32.6		1909	161	135	26	83.8	16.1
Wage earners (average number).....	1919	35,313	30,758	4,555	87.1	12.9	Wage earners (average number).....	1919	3,997	3,843	154	96.1	3.9
	1914	23,059	21,194	1,865	91.9	8.1		1914	2,908	2,839	69	97.6	2.4
	1909	18,431	17,011	1,420	92.3	7.7		1909	2,704	2,645	59	97.8	2.2
16 years of age and over.....	1919	35,210	30,672	4,538	87.1	12.9	16 years of age and over.....	1919	3,675	3,521	154	96.1	3.9
	1914	22,972	21,122	1,850	91.9	8.1		1914	2,894	2,825	69	97.6	2.4
	1909	18,324	16,924	1,400	92.4	7.6		1909	2,686	2,627	59	97.8	2.2
Under 16 years of age.....	1919	97	86	11	88.7	11.3	Under 16 years of age.....	1919	22	22	0	100.0	0.0
	1914	87	72	15	82.8	17.2		1914	14	14	0	100.0	0.0
	1909	107	87	20	81.3	18.7		1909	18	18	0	100.0	0.0
BUTTER.....	1919	26,339	21,467	4,872	81.5	18.5	CONDENSED MILK.....	1919	16,533	13,742	2,791	83.1	16.9
	1914	21,516	19,359	2,157	90.0	10.0		1914	7,625	6,624	1,001	88.9	11.1
	1909	19,380	18,244	1,136	94.2	5.8		1909	4,962	3,833	1,129	77.3	22.7
Proprietors and officials.....	1919	4,475	4,342	133	97.0	3.0	Proprietors and officials.....	1919	1,033	1,022	11	98.9	1.1
	1914	4,415	4,337	78	98.2	1.8		1914	398	396	2	99.5	0.5
	1909	5,966	5,883	83	98.6	1.4		1909	215	215	0	100.0	0.0
Proprietors and firm members....	1919	2,006	1,934	72	96.4	3.6	Proprietors and firm members....	1919	46	45	1	97.8	2.2
	1914	2,543	2,486	57	97.8	2.2		1914	46	45	1	97.8	2.2
	1909	3,855	3,796	59	98.5	1.5		1909	16	16	0	100.0	0.0
Salaried officers of corporations...	1919	746	721	25	96.6	3.4	Salaried officers of corporations...	1919	209	204	5	97.6	2.4
	1914	496	473	23	96.4	3.6		1914	102	101	1	99.0	1.0
	1909	905	889	16	98.2	1.8		1909	63	63	0	100.0	0.0
Superintendents and managers....	1919	1,723	1,687	36	97.9	2.1	Superintendents and managers....	1919	778	773	5	99.4	0.6
	1914	1,376	1,373	3	99.8	0.2		1914	250	250	0	100.0	0.0
	1909	1,206	1,198	8	99.3	0.7		1909	136	136	0	100.0	0.0
Clerks and other subordinate salaried employees.	1919	4,223	2,000	2,223	47.4	52.6	Clerks and other subordinate salaried employees.	1919	1,825	930	895	51.0	49.0
	1914	2,952	1,836	1,116	62.2	37.8		1914	1,225	1,059	166	86.4	13.6
	1909	1,851	1,172	679	63.3	36.7		1909	583	441	142	75.6	24.4
Wage earners (average number).....	1919	17,641	15,125	2,516	85.7	14.3	Wage earners (average number).....	1919	13,675	11,790	1,885	86.2	13.8
	1914	14,149	13,188	961	93.2	6.8		1914	6,002	5,159	843	86.1	13.9
	1909	11,563	11,180	374	96.8	3.2		1909	4,164	3,177	987	76.3	23.7
16 years of age and over.....	1919	17,594	15,084	2,510	85.7	14.3	16 years of age and over.....	1919	13,647	11,767	1,880	86.2	13.8
	1914	14,113	13,153	960	93.2	6.8		1914	5,965	5,144	821	86.2	13.8
	1909	11,523	11,154	369	96.8	3.2		1909	4,115	3,143	972	76.4	23.6
Under 16 years of age.....	1919	47	41	6	87.2	12.8	Under 16 years of age.....	1919	28	23	5	82.1	17.9
	1914	36	33	3	91.7	8.3		1914	37	25	12	67.6	32.4
	1909	40	35	5	87.5	12.5		1909	49	34	15	69.4	30.6

BUTTER, CHEESE, AND CONDENSED MILK.

29

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919	35,313	<i>29,022</i>	30,050	31,375	34,871	38,069	40,989	40,584	39,017	37,182	35,016	34,122	32,850	70.8
Males	30,758	<i>26,502</i>	26,391	27,571	30,440	33,143	35,614	35,274	33,824	32,212	30,832	29,640	28,635	71.6
Females	4,555	<i>2,520</i>	3,659	3,804	4,432	4,926	5,375	5,310	5,193	4,970	4,184	4,482	4,215	81.8
1914	23,059	<i>19,707</i>	19,882	20,401	22,816	25,129	26,548	26,299	25,242	24,344	23,241	22,047	21,052	74.2
1909	18,431	<i>16,121</i>	15,239	15,978	18,059	20,262	21,313	21,392	20,834	20,065	18,902	17,571	16,343	70.7
California	2,022	<i>1,098</i>	1,726	1,834	2,001	2,048	2,095	2,211	2,251	2,188	2,128	2,099	1,990	75.2
Illinois	1,981	<i>1,761</i>	1,778	1,841	1,952	2,041	2,228	2,174	2,117	2,046	2,003	1,982	1,981	78.6
Indiana	1,080	<i>1,378</i>	1,384	1,390	1,538	1,694	1,886	1,882	1,860	1,817	1,731	1,704	1,656	73.1
Iowa	1,063	<i>1,393</i>	1,328	1,315	1,533	1,751	1,952	1,857	1,787	1,843	1,811	1,761	1,625	67.4
Kansas	927	<i>754</i>	754	793	942	1,080	1,101	1,022	1,031	967	897	920	863	68.5
Michigan	2,104	<i>1,941</i>	2,009	2,080	2,122	2,287	2,447	2,454	2,291	2,230	2,165	2,195	2,107	79.1
Minnesota	2,135	<i>1,826</i>	1,842	1,890	2,070	2,330	2,501	2,446	2,428	2,204	2,071	2,043	1,970	73.0
Missouri	691	<i>511</i>	521	547	633	760	814	867	829	801	693	668	648	68.9
Nebraska	1,111	<i>901</i>	926	878	1,135	1,276	1,508	1,448	1,312	1,161	986	889	912	50.7
New York	5,082	<i>3,011</i>	4,073	4,048	5,451	5,948	6,232	6,021	5,555	5,218	5,128	4,602	4,447	57.5
Ohio	2,132	<i>1,816</i>	1,871	1,913	2,028	2,205	2,401	2,388	2,332	2,288	2,178	2,114	2,050	75.6
Oregon	595	<i>485</i>	498	528	569	615	660	706	669	641	610	591	568	68.7
Pennsylvania	1,900	<i>1,568</i>	1,595	1,712	1,840	2,007	2,150	2,188	2,131	2,037	1,951	1,853	1,774	71.4
Vermont	608	<i>480</i>	550	567	636	711	748	718	670	606	583	521	506	64.2
Washington	1,228	<i>1,055</i>	1,084	1,096	1,140	1,329	1,458	1,429	1,388	1,207	1,216	1,156	1,112	72.4
Wisconsin	5,973	<i>5,033</i>	5,201	5,397	5,996	6,420	6,920	6,702	6,455	6,178	6,022	5,738	5,554	72.7
States showing large proportion of females.														Per ct. av. of state.
Illinois	319	<i>242</i>	262	259	322	312	368	341	345	328	340	344	305	16.0
Indiana	327	<i>249</i>	253	250	280	329	390	374	388	368	359	332	352	19.7
Kansas	218	<i>164</i>	160	168	224	268	266	254	259	240	217	213	193	23.5
Missouri	177	<i>124</i>	129	125	159	186	196	218	225	238	189	174	161	25.6
Nebraska	220	<i>147</i>	141	140	244	272	337	307	276	236	208	161	171	19.8
Ohio	283	<i>246</i>	244	248	267	297	310	314	312	335	319	277	264	13.3
Oregon	89	<i>68</i>	85	88	82	85	100	103	98	85	87	92	85	15.0
Washington	214	<i>178</i>	176	185	188	238	264	275	240	227	216	203	179	17.4

TABLE 6.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Cen- sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—								STATE.	Cen- sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Be- tween 44and 48.	48.1	Be- tween 48and 54.	54.	Be- tween 54and 60.	60.	Over 60.				44 and under.	Be- tween 44and 48.	48.1	Be- tween 48and 54.	54.	Be- tween 54and 60.	60.	Over 60.
United States.	1919	35,313	452	76	3,844	919	5,053	4,037	11,872	9,060	Minnesota.....	1919	2,135	72	10	515	15	371	103	862	187
	1914	23,059	(2)	(2)	1,600	338	2,527	1,615	9,934	7,045		1914	1,458	(2)	(2)	235	20	309	10	809	75
	1909	18,431	(2)	(2)	1,793	228	1,020	1,254	6,379	7,757											
California.....	1919	2,022	91	3	177	70	501	424	85	671	Nebraska.....	1919	1,111	.....	.....	17	4	97	276	122	595
	1914	1,044	(2)	(2)	101	15	239	76	99	514		1914	696	(2)	(2)	1	.....	80	11	426	178
Illinois.....	1919	1,991	12	.....	61	116	349	70	713	670	New York.....	1919	5,082	40	.....	308	142	688	378	2,745	781
	1914	1,755	(2)	(2)	64	2	79	87	1,196	327		1914	3,235	(2)	(2)	190	60	202	376	1,433	914
Indiana.....	1919	1,060	1	.....	128	108	90	372	619	342	Ohio.....	1919	2,132	16	16	173	38	244	277	846	522
	1914	719	(2)	(2)	29	.....	50	60	386	194		1914	1,480	(2)	(2)	65	13	183	233	586	400
Iowa.....	1919	1,663	44	5	455	14	236	134	715	60	Pennsylvania....	1919	1,900	28	1	128	26	238	114	823	542
	1914	1,333	(2)	(2)	160	38	132	16	782	205		1914	1,309	(2)	(2)	153	38	123	132	472	391
Kansas.....	1919	927	.....	.....	116	5	116	35	323	332	Washington.....	1919	1,228	5	.....	278	15	610	164	60	96
	1914	761	(2)	(2)	25	.....	176	22	150	388		1914	860	(2)	(2)	31	.....	55	23	271	480
Michigan.....	1919	2,194	20	16	202	81	237	121	1,127	390	Wisconsin.....	1919	5,973	55	11	489	60	366	887	1,459	2,637
	1914	1,367	(2)	(2)	145	24	81	43	833	241		1914	3,717	(2)	(2)	208	73	243	251	1,350	1,592

¹ Includes 48 and under for 1914 and 1909.

² Corresponding figures not available.

MANUFACTURES.

TABLE 7.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—													
	Estab- lish- ments.	Wage earners (average number).	No wage earn- ers.	1 to 5 wage earn- ers, inclusive.	6 to 20 wage earn- ers, inclusive.	21 to 50 wage earn- ers, inclusive.	50 to 100 wage earn- ers, inclusive.	101 to 250 wage earn- ers, inclusive.	251 to 500 wage earn- ers, inclusive.							
			Estab- lish- ments.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.			
United States.....	1919.....	7,669	35,313	887	5,868	8,943	566	6,196	209	6,961	119	8,244	40	4,969	.....	.....
	1914.....	7,628	23,059	839	6,148	8,899	461	4,740	117	3,718	49	3,362	12	1,691	2	649
California.....		180	2,022	7	108	257	42	509	14	414	5	302	4	540	.....	.....
Illinois.....		223	1,991	21	145	262	29	311	19	671	8	617	1	130	.....	.....
Indiana.....		101	1,660	6	52	135	23	268	9	270	7	486	4	501	.....	.....
Iowa.....		434	1,663	29	360	650	36	413	5	164	1	78	3	353	.....	.....
Kansas.....		67	927	2	36	76	13	124	10	273	5	353	1	101	.....	.....
Michigan.....		318	2,194	13	246	599	35	427	18	714	5	365	1	119	.....	.....
Minnesota.....		903	2,135	40	819	1,265	32	327	10	341	1	76	1	126	.....	.....
Missouri.....		71	691	11	43	108	6	86	7	223	4	274	.....	.....	.....	.....
Nebraska.....		57	1,111	2	30	62	15	177	2	64	5	401	3	407	.....	.....
New York.....		821	5,082	103	589	749	65	670	34	1,220	23	1,597	7	846	.....	.....
Ohio.....		267	2,132	45	139	250	58	665	13	333	10	664	2	220	.....	.....
Oregon.....		136	595	12	105	202	16	185	1	32	1	62	1	114	.....	.....
Pennsylvania.....		273	1,900	25	195	337	31	343	11	378	9	616	2	226	.....	.....
Vermont.....		137	608	8	112	193	11	112	3	72	2	118	1	113	.....	.....
Washington.....		130	1,228	10	91	214	16	172	6	237	5	335	2	270	.....	.....
Wisconsin.....		2,872	5,073	463	2,810	2,073	55	488	15	566	24	1,579	5	667	.....	.....
All other states.....		679	3,401	70	488	941	83	919	32	989	4	321	2	231	.....	.....

TABLE 8.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes.....	7,669	7,628	8,479	35,313	23,059	18,431	\$1,066,125,489	\$364,285,150	\$274,557,718	\$139,759,193	\$49,259,515	\$39,011,654
Less than \$5,000.....	225	547	833	76	261	365	620,244	1,725,785	2,610,549	126,579	268,768	455,171
\$5,000 to \$20,000.....	1,159	3,206	4,262	801	2,735	3,482	15,607,652	39,618,343	49,657,002	1,894,877	4,517,688	6,395,108
\$20,000 to \$100,000.....	4,571	3,242	3,004	6,218	6,950	6,633	219,389,889	130,094,135	110,551,144	21,432,453	14,710,825	13,159,610
\$100,000 to \$500,000.....	1,271	537	371	7,609	10,208	7,464	240,320,614	106,139,682	93,905,110	29,298,673	22,679,804	17,084,727
\$500,000 to \$1,000,000.....	208	72	9	5,366	2,905	487	149,856,053	47,334,087	11,933,853	21,124,049	7,082,430	1,917,129
\$1,000,000 and over.....	235	24	9	15,243	2,905	487	431,331,137	39,473,118	11,933,853	65,882,562	7,082,430	1,917,129
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	2.9	7.2	9.8	0.2	1.1	2.0	0.1	0.5	1.0	0.1	0.5	1.2
\$5,000 to \$20,000.....	15.1	42.0	50.3	2.3	11.9	18.9	1.5	10.8	18.0	1.4	9.2	16.4
\$20,000 to \$100,000.....	59.6	42.5	35.4	17.6	30.1	36.0	20.6	35.7	42.5	15.3	29.9	33.7
\$100,000 to \$500,000.....	16.6	7.0	4.4	21.5	44.3	40.5	23.1	29.1	34.2	21.0	46.1	43.8
\$500,000 to \$1,000,000.....	2.7	0.9	0.1	15.2	21.6	4.0	14.1	13.0	34.2	15.1	46.1	43.8
\$1,000,000 and over.....	3.1	0.3	0.1	43.2	12.6	2.6	40.7	10.8	4.3	47.1	14.4	4.9

BUTTER, CHEESE, AND CONDENSED MILK.

31

TABLE 9.—CHARACTER OF OWNERSHIP, BY SELECTED STATES: 1919 AND 1914.

STATE.	Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
						Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.				
United States	1919	2,544	1,948	3,177	35,313	3,216	25,838	6,259	9.1	73.2	17.7	\$1,006,125,489	\$124,157,044	\$701,459,061	\$240,509,384	11.6	65.9	22.6				
	1914	2,819	1,675	3,134	23,059	3,340	14,369	5,350	14.5	62.3	23.2	364,285,150	62,025,960	199,846,135	102,413,055	17.0	54.9	28.1				
	1909	3,370	1,313	3,796	18,431	3,418	9,299	5,714	18.6	50.7	30.6	274,557,718	61,432,341	113,493,555	99,631,822	22.4	41.3	36.3				
California.....	1919	49	74	57	2,022	122	1,429	471	6.0	70.7	23.3	56,420,383	2,568,230	38,683,863	15,168,290	4.6	68.6	26.9				
	1914	68	69	64	1,044	103	665	216	15.6	63.7	20.7	20,406,428	2,453,843	12,675,034	5,337,551	12.0	61.9	26.1				
Illinois.....	1919	54	106	63	1,991	85	1,724	182	4.3	86.6	9.1	58,298,271	2,337,787	50,041,558	5,918,026	4.0	85.8	10.2				
	1914	75	131	61	1,755	123	1,511	121	7.0	86.1	6.9	21,792,220	1,951,763	18,065,494	1,774,963	9.0	82.9	8.1				
Iowa.....	1919	84	83	267	1,063	162	942	559	8.9	60.3	30.8	57,800,148	4,887,637	29,075,593	23,830,868	8.9	53.2	38.9				
	1914	90	107	293	1,333	222	637	474	16.7	47.8	35.6	27,605,968	2,949,066	12,375,882	12,280,120	10.7	44.8	44.5				
Michigan.....	1919	93	113	112	2,194	208	1,683	303	9.5	76.7	13.8	64,786,598	7,454,409	46,930,345	10,401,844	11.5	72.4	16.1				
	1914	115	135	114	1,367	187	939	241	13.7	68.7	17.6	21,549,597	3,193,218	14,348,845	4,007,534	14.8	60.6	18.6				
Minnesota.....	1919	117	87	690	2,135	149	823	1,163	7.0	38.5	54.5	93,585,605	6,827,645	30,198,879	56,550,081	7.3	32.3	60.4				
	1914	126	48	633	1,458	157	356	945	10.8	24.4	64.8	33,746,396	3,269,926	8,453,102	22,023,308	9.7	25.0	65.3				
Nebraska.....	1919	11	34	12	1,111	36	1,043	32	3.2	93.9	2.9	38,244,936	1,126,345	35,594,724	1,523,867	2.9	93.1	4.0				
	1914	12	28	8	696	45	643	8	6.5	92.4	1.1	11,082,123	735,316	10,159,134	187,073	6.6	91.7	1.7				
New York.....	1919	294	342	185	5,082	369	4,365	348	7.3	85.9	6.8	129,008,365	12,628,261	107,141,693	9,238,411	9.8	83.0	7.2				
	1914	008	237	299	3,235	557	2,228	448	17.3	68.9	13.8	43,262,309	11,485,975	24,256,476	7,519,858	26.5	50.1	17.4				
Ohio.....	1919	64	116	87	2,132	170	1,818	138	8.3	85.3	6.5	60,012,831	2,921,133	53,781,357	3,310,341	4.9	89.0	5.5				
	1914	70	102	114	1,480	125	1,183	172	8.4	79.9	11.6	19,325,977	1,352,416	16,076,924	1,806,637	7.0	83.2	9.8				
Pennsylvania.....	1919	102	93	78	1,900	203	1,457	240	10.7	76.7	12.6	44,564,261	5,879,804	31,815,914	6,808,543	13.2	71.4	15.4				
	1914	191	85	111	1,309	254	789	266	19.4	60.3	20.3	15,687,299	3,341,218	8,905,766	3,440,325	21.3	50.8	21.9				
Washington.....	1919	30	70	30	1,228	66	1,094	68	5.4	89.1	5.5	33,127,837	1,365,283	28,864,135	2,898,409	4.1	87.1	8.7				
	1914	26	50	25	800	63	723	74	7.3	84.1	8.6	11,807,897	1,041,410	9,119,409	1,647,078	8.8	77.2	13.9				
Wisconsin.....	1919	1,336	271	1,265	5,973	1,077	3,044	1,852	18.0	51.0	31.0	221,447,273	61,082,747	84,505,220	75,859,306	27.6	38.2	34.3				
	1914	1,129	253	1,049	3,717	874	1,355	1,488	23.5	36.5	40.0	72,858,592	22,849,450	20,068,099	29,941,034	31.4	27.5	41.1				

TABLE 10.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	13,811	9,604	7,775	168,871	130,862	101,349	100.0	100.0	100.0
Owned.....	6,391	7,252	7,133	115,072	113,232	95,771	68.1	86.5	94.5
Steam.....	5,094	6,235	6,555	104,223	104,729	90,933	61.7	80.0	89.8
Engines.....	4,793	(2)	(2)	99,315	(2)	(2)	58.8	(1)	(2)
Turbines.....	301	(2)	(2)	4,908	(2)	(2)	2.9	(1)	(2)
Internal-combustion engines.....	1,234	949	509	9,294	7,229	3,373	5.5	5.5	3.3
Water wheels, turbines, and motors.....	63	68	69	1,555	1,274	1,465	0.9	1.0	1.4
Rented.....	7,420	2,352	642	53,799	17,630	5,578	31.0	13.5	5.5
Electric.....	7,420	2,352	642	53,479	17,027	5,366	31.7	13.0	5.3
Other.....				320	603	212	0.2	0.5	0.2
Electric.....	10,647	3,558	1,246	70,562	23,061	8,276	100.0	100.0	100.0
Rented.....	7,420	2,352	642	53,479	17,027	5,366	75.8	73.8	64.8
Generated by establishments reporting.....	3,227	1,206	604	17,083	6,034	2,910	24.2	26.2	35.2

¹ Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.

² Not reported separately.

MANUFACTURES.

TABLE 11.—FUEL CONSUMED, BY STATES: 1919.

STATE.	Census year.	COAL.		Coke (tons, 2,000 lbs.)	Fuel oils (barrels)	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet.)
		Anthracite (tons, 2,240 lbs.)	Bituminous (tons, 2,000 lbs.)				
United States.....	1919	73,812	1,379,270	6,407	320,185	24,490	233,553
	1914	36,069	831,549	7,146	213,369	(1)	213,373
California.....	1919	30	353	18	239,004	2,614	17,886
	1914	27	622	25	108,780	(1)	810
Illinois.....	1919	893	105,108	56	387	387	1,542
	1914	301	114,255	185	486	(1)	1,501
Indiana.....	1919	26	48,749	20	35	1,915	57
	1914	22,802	144	207	(1)	57	
Iowa.....	1919	1,767	83,387	505	1,270	907	
	1914	264	65,752	322	2,181	(1)	
Kansas.....	1919	35	25,569	3,053	194	96,994	
	1914	17,942	47	4,715	(1)	79,702	
Michigan.....	1919	2,281	122,759	285	349	997	1,532
	1914	3,344	71,742	179	189	(1)	20
Minnesota.....	1919	3,607	56,334	955	403	646	60
	1914	1,277	40,905	497	1,326	(1)	
Nebraska.....	1919	38,882	3	39,420	85		
	1914	28,223	1,800	21,266	(1)		
New York.....	1919	43,344	274,911	104	87	7,192	4,388
	1914	17,229	145,424	108	614	(1)	8,150
Ohio.....	1919	101	86,524	72	29	342	63,791
	1914	58,470	159	(1)	159		87,634
Pennsylvania.....	1919	13,227	99,816	3,150	15	286	10,934
	1914	9,058	54,016	100	189	(1)	17,010
Washington.....	1919	2	10,239	315	3,318	653	252
	1914	8,013	50,599	(1)	50,599		
Wisconsin.....	1919	5,487	288,632	756	1,911	6,836	94
	1914	801	124,989	182	2,335	(1)	33
All other states.....	1919	3,006	137,947	224	31,235	1,376	36,392
	1914	3,748	78,394	3,557	20,313	(1)	18,078

1 Included in figures for fuel oils.

SPECIAL STATISTICS.

The special schedule used in collecting the statistics for the butter, cheese, and condensed-milk industry required details as to the quantity and cost of the milk and cream used during the year and the quantity and value of the various products.

Quantity and cost of principal materials used, by states.—Table 12 shows, by states, the quantity and

cost of milk, cream, skimmed milk, and sugar used in the manufacture of butter, cheese, and condensed milk in 1919.

The figures given in the table for cream and skimmed milk represent the quantities of these materials delivered as such at the factories rather than the quantities actually used in the manufacture of butter, cheese,

TABLE 12.—QUANTITY AND COST OF PRINCIPAL MATERIALS USED, BY STATES: 1919.

STATE.	MILK.		CREAM.		SKIMMED MILK.		SUGAR.	
	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
United States.....	10,244,874,702	\$333,356,687	2,551,748,117	\$437,267,198	1,361,188,373	\$8,740,665	636,568,407	\$30,108,824
Alabama.....	6,295,376	304,606	605,315	131,945	.....	.....	135,000	27,000
Arizona.....	63,362,671	1,538,370	1,295,198	227,728	.....	.....	.....	.....
California.....	486,610,222	13,725,961	157,016,439	29,474,514	245,938,943	1,366,471	4,255,087	415,615
Colorado.....	53,458,757	1,594,245	45,719,824	6,569,127	10,051,629	31,969	241,496	24,522
Connecticut.....	4,633,105	158,108	3,639,923	500,317	255,000	1,420	.....	.....
Delaware.....	11,000,284	332,648	731,745	98,374	.....	.....	.....	.....
Idaho.....	56,843,953	1,659,803	17,011,329	2,698,887	40,028	1,168	94,736	11,011
Illinois.....	498,635,310	16,148,188	139,404,230	21,215,139	67,382,103	409,533	31,686,813	4,440,581
Indiana.....	124,967,079	4,142,831	123,576,483	18,994,039	436,748	3,494	5,692,831	288,108
Iowa.....	170,492,203	4,105,942	285,842,271	41,367,343	13,350,426	47,618	881,971	40,217
Kansas.....	64,104,488	2,161,438	122,799,903	17,326,273	17,085,660	11,136	1,328,779	133,009
Kentucky.....	1,021,013	65,253	19,948,948	2,875,936	.....	.....	19,840	1,936
Maine.....	17,471,361	554,263	4,457,462	626,582	605,785	4,554	3,111,607	279,541
Maryland.....	35,161,638	1,062,524	1,065,166	130,440	.....	.....	562,655	56,141
Massachusetts.....	7,702,912	278,822	9,728,918	1,380,197	6,360,972	15,110	73,600	6,554
Michigan.....	637,685,167	19,627,021	153,836,380	23,889,161	77,503,179	850,796	27,404,338	2,626,872
Minnesota.....	265,573,334	7,104,669	455,196,226	78,373,862	8,921,214	83,488	870,656	95,923
Mississippi.....	6,378,679	160,784	11,264,752	1,621,623	.....	.....	10,950	1,205
Missouri.....	9,081,734	304,969	15,449,963	17,550,276	12,269,373	58,388	243,407	26,813
Montana.....	7,917,033	248,454	20,229,380	2,998,573	107,000	1,525	173,637	20,140
Nebraska.....	30,797,431	933,593	60,517,171	27,430,952	26,240,196	46,186	579,926	61,976
Nevada.....	.....	.....	3,922,484	574,580	.....	.....	.....	.....
New Hampshire.....	7,932,524	188,306	1,825,250	277,913	.....	.....	293,098	28,576
New Jersey.....	36,222,278	1,160,996	232,000	32,480	13,823,119	121,709	2,932,786	287,746
New York.....	2,187,467,476	69,177,406	40,245,416	6,759,102	366,666,558	2,069,522	477,265,374	13,499,268
North Carolina.....	2,245,411	60,367	3,040,154	414,537	.....	.....	.....	.....
North Dakota.....	13,108,615	400,194	51,737,633	8,637,790	8,634,208	12,729	141,205	15,621
Ohio.....	455,792,602	13,772,147	202,179,020	30,544,827	137,709,546	453,183	7,004,204	699,848
Oklahoma.....	434,979	13,524	32,732,345	4,913,764	.....	.....	175,647	18,151
Oregon.....	163,821,524	5,122,022	33,459,682	6,669,546	157,816	1,384	395,067	32,901
Pennsylvania.....	773,831,196	23,981,827	19,563,418	3,081,985	90,175,243	771,587	32,503,307	2,964,551
Rhode Island.....	2,259,060	73,789	271,143	44,346	.....	.....	.....	.....
South Dakota.....	3,654,547	116,484	49,246,774	8,305,754	4,322,612	8,202	141,205	15,621
Tennessee.....	343,037	10,266	11,651,444	1,637,737	.....	.....	18,538	1,956
Texas.....	11,226,947	348,191	38,647,107	5,042,504	.....	.....	206,779	19,076
Utah.....	58,350,631	1,692,977	14,173,075	2,134,140	.....	.....	578,143	57,371
Vermont.....	214,103,872	6,046,827	44,116,449	6,551,767	19,148,878	165,356	12,830,478	1,183,955
Virginia.....	12,121,114	358,047	5,799,107	748,910	.....	.....	337,878	35,785
Washington.....	388,438,995	12,019,179	55,723,590	9,126,423	400,771	24,051	885,639	88,316
West Virginia.....	508,011	15,136	1,270,619	185,622	.....	.....	.....	.....
Wisconsin.....	3,340,251,639	121,640,164	300,770,999	44,918,645	232,631,673	2,179,443	23,739,558	2,704,653
Wyoming.....	14,634,392	319,916	4,496,042	632,135	1,700	44	73,930	7,796
All other states.....	842,192	26,430	308,280	41,393	.....	.....	40,142	4,014

and other products. Large additional quantities of cream are separated from whole milk at the butter factories, and while much of the skimmed milk resulting from this separation is sold or returned to patrons, the quantities used in the manufacture of cheese and casein doubtless far exceed the quantities reported as purchased. In some instances considerable quantities of whole milk and cream are sold by the factories instead of being used for manufacturing purposes. It is evident, therefore, that the figures in the table do not represent the actual

quantities used in the manufacture of the various products.

Wisconsin and New York, the leading states in the quantity of milk used, reported 32.6 per cent and 21.4 per cent, respectively, of the total quantity of milk used as material in the manufacture of butter, cheese, and condensed milk in the United States.

Milk and cream used in leading states.—Table 13 shows, for 1919, 1914, 1909, and 1904, the quantities of milk and cream reported for the 14 states which led in 1919 with respect to value of products.

MANUFACTURES.

TABLE 13.—QUANTITY OF MILK AND CREAM USED, BY STATES: 1919, 1914, 1909, AND 1904.

STATE.	Census year.	Milk (pounds).	Cream (pounds).
United States.....	1919	10,244,874,792	2,551,748,117
	1914	8,431,426,426	2,384,182,766
	1909	9,888,727,303	1,406,143,908
	1904	12,147,304,550	588,186,471
Wisconsin.....	1919	3,340,251,639	300,770,999
	1914	2,691,720,696	346,307,960
	1909	2,306,154,761	246,838,822
	1904	2,665,903,141	80,032,094
New York.....	1919	2,187,487,476	46,245,416
	1914	2,049,532,238	53,454,943
	1909	2,422,727,788	17,842,320
	1904	2,716,366,410	6,176,069
Minnesota.....	1919	260,573,334	455,190,226
	1914	320,032,086	353,710,188
	1909	645,597,385	236,801,608
	1904	1,072,606,743	57,562,246
Michigan.....	1919	637,685,167	153,836,380
	1914	535,038,623	123,539,936
	1909	478,008,911	83,241,827
	1904	670,230,324	7,714,987
Ohio.....	1919	455,792,602	202,179,020
	1914	292,419,114	135,461,829
	1909	344,686,001	41,291,271
	1904	405,702,734	6,582,108
Illinois.....	1919	498,635,310	139,404,230
	1914	560,685,863	93,323,222
	1909	707,013,502	44,565,553
	1904	809,720,061	11,062,470
Iowa.....	1919	170,492,203	265,842,271
	1914	241,933,578	206,522,854
	1909	474,821,988	243,619,568
	1904	1,994,925,394	110,850,366
California.....	1919	486,610,222	157,016,439
	1914	220,399,948	274,301,008
	1909	206,222,329	101,128,644
	1904	481,091,233	29,504,300
Pennsylvania.....	1919	773,831,196	19,563,418
	1914	607,678,749	35,080,004
	1909	787,448,479	16,061,716
	1904	946,150,704	4,167,213
Nebraska.....	1919	30,797,431	60,517,171
	1914	9,473,066	112,155,355
	1909	167,801,401	58,010,365
	1904	167,978,290	32,312,868
Washington.....	1919	386,433,995	55,723,590
	1914	206,922,411	61,235,364
	1909	156,544,631	29,415,008
	1904	66,762,847	23,595,768
Indiana.....	1919	124,967,079	123,575,483
	1914	72,960,150	87,603,732
	1909	119,475,669	27,098,202
	1904	110,349,625	1,225,907
Kansas.....	1919	64,104,488	122,799,903
	1914	40,214,302	77,284,342
	1909	119,462,779	47,340,211
	1904	97,909,446	36,833,076
Missouri.....	1919	9,081,734	15,449,963
	1914	10,858,160	52,997,592
	1909	35,606,793	29,484,057
	1904	27,183,088	16,292,834

¹ Exclusive of 1 establishment engaged in the manufacture of condensed milk.

The total quantity of milk used in the industry in 1919 represented an increase of 21.5 per cent over the quantity reported for 1914, while for the earlier five-year period 1909 to 1914 there was a decrease of 14.7 per cent. From 1914 to 1919 the total quantity of cream used showed an increase of 7 per cent.

Minnesota, Illinois, Iowa, and Missouri show decreases in the quantity of milk used from 1914 to 1919, while for Wisconsin, New York, Iowa, Pennsylvania, Nebraska, Washington, and Missouri there were decreases shown in the quantity of cream used.

Quantities, by states.—Table 14 gives, by states, the quantities of butter, cheese, and condensed milk,

as reported at the censuses of 1919, 1914, 1909, and 1904.

TABLE 14.—QUANTITY OF BUTTER, CHEESE, AND CONDENSED AND EVAPORATED MILK, BY STATES: 1919, 1914, 1909, AND 1904.

STATE.	Census year.	Butter (pounds).	Cheese (pounds).	Condensed and evaporated milk (pounds).
United States ¹	1919	920,550,066	473,569,199	2,150,182,245
	1914	799,809,781	370,278,599	873,410,504
	1909	624,764,653	311,126,317	494,796,544
	1904	531,478,141	317,144,872	308,485,182
Arizona.....	1919	1,040,437	547,645	(²)
	1914	1,851,981	(²)	(²)
	1909	1,053,899	421,043	(²)
	1904	799,433	161,796	162,000
California.....	1919	61,140,390	9,708,885	* 46,600,095
	1914	58,259,665	3,745,979	(²)
	1909	37,283,450	1,567,640	(²)
	1904	26,837,386	3,601,051	7,723,021
Colorado.....	1919	13,982,711	1,163,140	* 14,365,276
	1914	8,862,705	(²)	(²)
	1909	6,351,691	550,622	(²)
	1904	5,054,006	871,673	(²)
Connecticut.....	1919	1,018,699	188,922	.....
	1914	1,486,290	(²)	.....
	1909	1,960,935	.....	(²)
	1904	2,903,277	(²)	.....
Delaware.....	1919	294,713	(²)	.....
	1914	465,698	(²)	.....
	1909	627,300	(²)	.....
	1904	644,823	(²)	.....
Idaho.....	1919	5,272,857	2,623,440	(²)
	1914	2,813,761	(²)	(²)
	1909	2,367,386	(²)	.....
	1904	671,783	132,420	.....
Illinois.....	1919	44,527,933	4,851,054	177,702,214
	1914	27,332,293	6,377,947	167,425,094
	1909	24,570,976	4,799,235	114,500,748
	1904	27,339,925	5,361,211	93,425,052
Indiana.....	1919	42,186,894	269,094	32,470,141
	1914	25,637,452	354,792	14,107,675
	1909	11,712,450	424,597	6,674,660
	1904	4,742,632	978,903	* 317,721
Iowa.....	1919	90,079,758	1,015,790	* 8,039,785
	1914	92,405,806	855,198	6,574,527
	1909	88,582,187	999,559	4,984,333
	1904	71,181,766	2,828,745	(²)
Kansas.....	1919	36,597,263	35,436	21,831,821
	1914	29,278,717	(²)	(²)
	1909	18,712,568	(²)	(²)
	1904	16,488,131	1,120,863	.....
Kentucky.....	1919	5,949,761	(²)	.....
	1914	606,404	.....	(²)
	1909	549,929	.....	.....
	1904	239,061	.....	.....
Maine.....	1919	1,271,819	(²)	(²)
	1914	2,713,496	(²)	(²)
	1909	2,105,622	55,591	(²)
	1904	5,005,907	361,850	(²)
Maryland.....	1919	301,895	(²)	* 3,875,951
	1914	677,802	.....	3,901,004
	1909	1,118,530	.....	(²)
	1904	1,816,433	.....	.....
Massachusetts.....	1919	2,659,264	(²)	.....
	1914	2,172,813	(²)	(²)
	1909	1,888,307	.....	.....
	1904	3,470,323	(²)	.....
Michigan.....	1919	55,842,680	12,857,230	181,700,256
	1914	43,220,077	13,267,145	76,514,655
	1909	35,511,760	13,382,160	32,404,944
	1904	21,013,000	16,814,856	27,681,608
Minnesota.....	1919	146,295,141	10,116,048	(²)
	1914	111,165,208	4,016,570	(²)
	1909	88,842,846	2,735,883	.....
	1904	62,122,654	3,090,055	79,120
Missouri.....	1919	35,988,733	188,920	(²)
	1914	16,241,687	165,829	(²)
	1909	10,261,876	219,112	(²)
	1904	5,806,724	743,447	.....
Montana.....	1919	6,094,496	390,527	.....
	1914	3,450,315	(²)	.....
	1909	1,307,777	.....	.....
	1904	(²)	.....	.....

(See footnotes at end of table.)

BUTTER, CHEESE, AND CONDENSED MILK.

35

TABLE 14.—QUANTITY OF BUTTER, CHEESE, AND CONDENSED AND EVAPORATED MILK, BY STATES: 1919, 1914, 1909, AND 1904—Continued.

STATE.	Census year.	Butter (pounds).	Cheese (pounds).	Condensed and evaporated milk (pounds).
Nebraska.....	1919	58,570,937	(2)	7,041,504
	1914	36,343,424	21,997	(2)
	1909	23,973,162	77,122	
	1904	10,035,468	158,470	
Nevada.....	1919	1,087,795		
	1914	1,281,888		
	1909	1,039,784		
	1904	758,184	33,000	
New Hampshire.....	1919	517,498	(2)	(2)
	1914	1,320,103	144,137	
	1909	1,740,235	184,497	
	1904	3,098,889	207,149	(2)
New Jersey.....	1919	189,796	722,379	* 11,961,184
	1914	569,521	(2)	7,980,751
	1909	785,857		7,688,412
	1904	1,178,846	6,700	(2)
New York.....	1919	15,727,774	88,957,860	479,735,984
	1914	35,385,557	97,014,024	131,574,633
	1909	45,897,216	105,194,898	120,601,999
	1904	58,256,504	132,830,482	102,480,355
North Carolina.....	1919	884,914	192,539	
	1914	187,986		
	1909			
	1904			
North Dakota.....	1919	19,536,985	(2)	1,606,725
	1914	5,814,240	(2)	
	1909	3,683,679	(2)	
	1904	3,013,151	51,894	
Ohio.....	1919	63,882,101	5,220,545	119,183,708
	1914	43,064,632	8,717,996	50,509,848
	1909	17,491,251	11,880,601	37,655,347
	1904	11,591,981	17,351,778	1,947,218
Oklahoma.....	1919	10,896,549		
	1914	2,851,538		
	1909	4,110,978		
	1904	416,100		
Oregon.....	1919	13,984,185	9,424,399	* 34,084,196
	1914	11,182,937	0,314,757	23,157,414
	1909	8,472,660	4,218,953	21,788,937
	1904	5,080,590	2,255,592	(2)
Pennsylvania.....	1919	14,589,001	15,438,708	184,951,084
	1914	23,985,125	14,808,573	69,708,917
	1909	30,484,217	11,234,037	26,461,384
	1904	35,754,841	11,453,424	20,364,700
Rhode Island.....	1919	197,170	(2)	
	1914	54,000	102,517	
	1909			
	1904			
South Dakota.....	1919	17,612,674		(2)
	1914	10,538,747		
	1909	0,495,608		
	1904	11,058,460	(2)	
Texas.....	1919	10,911,466	(2)	
	1914	7,247,074		
	1909	2,133,590	(2)	(2)
	1904	266,806		
Utah.....	1919	4,410,678	1,070,933	* 18,575,13
	1914	3,539,357	1,094,448	(2)
	1909	3,722,784	1,060,122	(2)
	1904	3,586,547	1,629,730	* 127,800
Vermont.....	1919	12,883,193	4,907,759	* 31,504,375
	1914	21,076,047	2,522,937	16,887,549
	1909	20,227,495	2,762,556	13,342,666
	1904	27,250,874	4,343,160	(2)
Virginia.....	1919	1,732,223	(2)	(2)
	1914	712,444	(2)	(2)
	1909	158,863	(2)	
	1904	81,803	(2)	
Washington.....	1919	20,237,682	2,291,428	165,398,981
	1914	16,813,044	1,355,423	85,167,152
	1909	11,302,591	422,290	53,614,242
	1904	7,722,911	921,383	13,841,906
West Virginia.....	1919	356,498		(2)
	1914	153,338		
	1909	(2)	(2)	
	1904			
Wisconsin.....	1919	93,081,754	298,705,911	513,226,536
	1914	116,149,284	205,920,915	149,682,530
	1909	103,884,684	148,065,648	30,573,886
	1904	89,155,975	109,423,856	11,614,222

TABLE 14.—QUANTITY OF BUTTER, CHEESE, AND CONDENSED AND EVAPORATED MILK, BY STATES: 1919, 1914, 1909, AND 1904—Continued.

STATE.	Census year.	Butter (pounds).	Cheese (pounds).	Condensed and evaporated milk (pounds).
Wyoming.....	1919	1,324,004	1,502,022	
	1914	1,536,299	(2)	
	1909	783,585	(2)	
	1904	500,515	84,600	
All other states.....	1919	7,508,275	1,108,585	96,238,699
	1914	1,755,520	2,979,932	70,218,755
	1909	693,955	890,051	24,504,986
	1904	520,523	379,780	28,520,459

* In addition, in 1919, 17,955,316 pounds of butter, valued at \$11,055,867; 1,761,621 pounds of cheese, valued at \$340,133; 3,326,847 pounds of condensed and evaporated milk, valued at \$391,490; 108,739 pounds of casein, valued at \$11,575; 1,770,000 pounds of powdered milk, valued at \$264,218; in 1914, 10,533,084 pounds of butter, valued at \$3,318,342; 933,445 pounds of cheese, valued at \$156,357; 2,096,934 pounds of condensed milk, valued at \$123,357; 227,356 pounds of casein, valued at \$13,353; in 1909, 2,381,212 pounds of butter, 49,413 pounds of part-cream cheese, and 401,300 pounds of condensed milk; and in 1904, 1,971,120 pounds of butter, were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

* Included with the quantity shown for "All other states" to avoid disclosure of individual operations.

* Exclusive of condensed milk.

* The products of 2 establishments in Indiana and 1 in Utah engaged in the manufacture of condensed milk in 1904 were included with that for "All other states" to avoid disclosure of individual operations.

* Exclusive of evaporated milk.

Attention is again called to the fact that in the tables showing separately the quantities of butter, cheese, and condensed milk manufactured, the figures represent the total quantity of each of the given products reported for the industry as a whole, whether made in establishments engaged primarily in the manufacture of that product or in establishments belonging to one of the other branches of the industry. The products made in establishments in other industries are not included in the totals, but the quantities, so far as available, are shown in a footnote.

The total quantity of butter manufactured in the factories of the industry increased 295,785,413 pounds, or 47.3 per cent, for the decade 1909 to 1919. For the five-year period 1914 to 1919 the increase was 150,740,285 pounds, or 19.6 per cent. The combined production of butter in 1919 for Minnesota, Wisconsin, and Iowa, the three leading states in this respect, amounted to 35.8 per cent of the total for the industry, although the quantities reported for Iowa and Wisconsin were decreases from those reported for 1914 of 2.5 per cent and 19.9 per cent, respectively.

The production of cheese shows an increase of 52.2 per cent from 1909 to 1919, and an increase for the five-year period 1914 to 1919 of 27.9 per cent. Wisconsin continues to be the leading state, the quantity reported for 1919 being an increase of 45.1 per cent over that reported for 1914, and representing 63.1 per cent of its total production for the United States. Of the states for which figures are given separately in the table, decreases were also shown for Illinois, Indiana, Michigan, New York, and Ohio.

The increase in the production of condensed and evaporated milk between 1909 and 1919 amounted to 1,655,385,701 pounds, or 334.6 per cent, while for the

five-year period 1914 to 1919 the increase was 1,276,771,741 pounds, or 146.2 per cent. Wisconsin was the most important state in this branch of the industry, the quantity reported for 1919 being an increase of 363,544,006 pounds, or 242.9 per cent, over that reported for 1914 and representing 23.9 per cent of the

total quantity of condensed and evaporated milk reported for the United States.

Quantity and value of products, by states.—Table 15 shows in detail, by states, the quantities and values of the principal products for 1919.

TABLE 15.—DETAILED STATISTICS OF KIND, QUANTITY, AND VALUE OF PRINCIPAL PRODUCTS, BY STATES: 1919.

STATE.	BUTTER.						CHEESE.							
	Total.		Packed solid.		Prints or rolls.		Total.		Full-cream.		Part-cream.		Skimmed and all other kinds.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
United States ¹	920,550,066	Dollars. 522,274,315	551,121,133	Dollars. 309,229,371	369,428,933	Dollars. 213,044,944	473,569,199	Dollars. 130,940,464	411,778,381	Dollars. 123,731,763	9,157,736	Dollars. 2,216,545	52,633,082	Dollars. 10,992,166
Alabama.....	445,907	275,685	(²)	(²)	(²)	(²)	547,045	145,831	379,581	115,163	(²)	(²)	(²)	(²)
Arizona.....	1,040,437	652,737	(²)	(²)	(²)	(²)	9,708,885	2,675,028	6,430,680	1,944,362	1,050,415	302,121	2,217,784	428,545
California.....	61,140,390	36,195,810	18,551,691	10,761,455	42,588,699	25,444,356	1,163,140	653,869	58,768	17,003	532,812	144,255	671,560	492,611
Colorado.....	13,982,711	7,979,413	4,581,219	2,497,395	9,301,492	5,482,018	188,922	49,062	61,450	28,872	(²)	(²)	(²)	(²)
Connecticut.....	1,018,699	650,866	407,197	262,272	611,502	388,594	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Delaware.....	294,713	177,570	28,289	15,194	266,424	162,376	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Idaho.....	5,272,857	3,070,808	1,057,899	562,575	4,214,958	2,508,231	2,623,440	792,872	(²)	(²)	(²)	(²)	(²)	(²)
Illinois.....	44,527,933	24,928,641	19,906,494	10,937,917	24,621,439	13,600,724	4,851,054	1,344,910	2,464,849	939,091	(²)	(²)	1,032,679	236,443
Indiana.....	42,186,894	23,675,474	24,567,204	13,584,345	17,619,690	10,091,129	289,094	63,108	(²)	(²)	(²)	(²)	90,727	16,170
Iowa.....	90,079,758	50,438,628	62,856,122	34,729,324	27,223,636	15,709,304	1,015,790	293,685	947,415	283,881	(²)	(²)	68,375	9,804
Kansas.....	36,567,263	20,369,842	21,051,042	11,483,817	15,516,221	8,886,025	35,436	7,911	(²)	(²)	(²)	(²)	(²)	(²)
Kentucky.....	5,949,761	3,471,872	3,352,138	1,855,820	2,597,623	1,616,552	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Maine.....	1,271,819	753,157	70,540	43,867	1,201,279	709,290	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Maryland.....	301,805	180,312	140,625	82,745	161,270	97,567	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Massachusetts.....	2,659,264	1,552,777	803,905	399,844	1,855,359	1,152,933	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Michigan.....	55,842,680	29,041,057	29,358,134	16,650,919	26,484,546	12,390,788	12,857,230	3,454,423	9,201,576	2,928,357	(²)	(²)	3,292,305	442,481
Minnesota.....	146,296,141	81,365,245	116,662,006	64,656,612	29,633,135	16,708,633	10,116,048	2,757,387	9,271,766	2,628,913	(²)	(²)	504,627	31,188
Mississippi.....	3,473,709	2,026,544	1,468,293	797,844	2,005,416	1,228,700	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Missouri.....	35,988,733	20,138,209	18,950,331	10,241,087	17,038,402	9,897,122	188,920	39,612	(²)	(²)	(²)	(²)	(²)	(²)
Montana.....	6,094,466	3,392,806	2,047,687	1,084,812	4,046,879	2,308,084	390,527	113,036	(²)	(²)	(²)	(²)	(²)	(²)
Nebraska.....	58,570,937	33,933,148	41,522,517	23,545,435	17,048,420	10,387,713	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Nevada.....	1,087,795	653,990	(²)	(²)	1,087,795	653,990	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
New Hampshire.....	517,498	313,255	101,180	62,868	416,318	250,397	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
New Jersey.....	189,796	119,350	(²)	(²)	(²)	(²)	792,379	152,721	131,704	52,412	(²)	(²)	(²)	(²)
New York.....	15,727,774	9,949,106	10,752,801	5,619,683	4,974,973	3,329,423	88,957,860	24,822,085	59,873,219	18,217,182	4,406,916	967,087	24,678,725	5,637,816
North Carolina.....	884,914	559,228	684,341	434,634	200,573	124,594	192,539	60,725	192,539	60,725	(²)	(²)	(²)	(²)
North Dakota.....	19,636,985	10,206,398	17,069,098	8,807,596	2,487,887	1,398,802	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Ohio.....	63,882,101	36,394,179	30,464,645	17,275,751	33,417,456	19,618,428	5,220,545	1,634,118	2,672,289	962,974	(²)	(²)	2,170,743	635,470
Oklahoma.....	10,806,549	5,841,607	7,071,750	3,769,752	3,734,793	2,081,855	9,424,399	2,956,032	9,411,668	2,953,242	(²)	(²)	(²)	(²)
Oregon.....	13,984,185	8,061,141	6,594,846	3,647,179	7,389,339	4,413,962	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Pennsylvania.....	14,589,601	9,546,875	4,225,249	2,588,716	10,364,352	6,958,159	15,438,708	3,727,997	5,618,896	1,771,166	375,988	61,128	9,445,824	1,895,703
Rhode Island.....	197,170	125,384	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
South Dakota.....	17,612,674	9,568,962	14,680,702	8,019,332	2,931,972	1,549,630	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Tennessee.....	3,479,817	1,931,999	2,159,448	1,161,293	1,320,369	770,706	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Texas.....	10,911,466	6,499,280	399,327	222,222	10,512,139	6,277,058	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Utah.....	4,410,678	2,610,102	413,641	235,389	3,997,037	2,374,713	1,070,933	304,054	1,011,417	293,436	(²)	(²)	(²)	(²)
Vermont.....	12,883,193	7,703,565	7,752,857	4,020,236	5,130,336	3,074,329	4,907,759	1,369,933	3,584,615	1,166,763	481,857	105,200	861,287	97,970
Virginia.....	1,732,223	1,027,423	1,024,071	618,326	708,152	409,097	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Washington.....	20,237,682	11,895,587	6,537,278	3,788,104	13,700,404	8,108,483	2,291,428	697,819	1,996,833	634,376	(²)	(²)	172,277	34,223
West Virginia.....	356,498	217,989	291,582	174,207	64,916	43,692	298,705,911	88,084,130	293,508,902	87,234,046	1,472,400	397,673	3,724,609	452,411
Wisconsin.....	93,081,754	53,380,697	72,673,292	42,540,113	20,408,462	10,840,584	1,502,022	448,865	1,502,022	448,865	(²)	(²)	(²)	(²)
Wyoming.....	1,324,904	826,099	(²)	(²)	(²)	(²)	1,108,585	291,251	3,460,186	1,050,934	848,348	239,081	3,801,560	581,331
All other states.....	108,842	69,830	741,786	462,111	2,565,270	1,606,974	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)

¹ In addition, 17,955,316 pounds of butter, valued at \$11,055,887; 1,761,621 pounds of cheese, valued at \$340,133; 3,328,847 pounds of condensed and evaporated milk, valued at \$391,490; 108,739 pounds of caseln, valued at \$11,575; 1,770,000 pounds of powdered milk, valued at \$264,218 were produced by establishments engaged in the manufacture of products other than those covered by the industry designation.

² Figures included with those for "All other states," to avoid disclosure of individual operations.

³ Exclusive of "skimmed milk," to avoid disclosure of individual operations.

BUTTER, CHEESE, AND CONDENSED MILK.

37

TABLE 15.—DETAILED STATISTICS OF KIND, QUANTITY, AND VALUE OF PRINCIPAL PRODUCTS, BY STATES: 1919—Continued.

STATE.	CONDENSED AND EVAPORATED MILK.								POWDERED MILK.		SUGAR OF MILK.		CASEIN SOLD.	
	Total.		Condensed.				Evaporated.							
			Sweetened.		Unsweetened.									
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
		Dollars.		Dollars.		Dollars.		Dollars.		Dollars.		Dollars.		Dollars.
United States..	2,150,182,245	298,267,547	760,582,490	126,055,505	174,004,366	17,783,261	1,215,595,389	154,428,781	48,385,548	11,918,105	10,401,416	2,632,776	16,615,076	2,188,787
Alabama.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Arizona.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California.....	* 46,600,095	* 7,819,767	(1)	(1)	(1)	(1)	* 46,600,095	* 7,819,767	4,490,334	789,581	4,120,743	988,608	6,462,203	940,882
Colorado.....	* 14,365,276	* 2,058,644	(1)	(1)	(1)	(1)	* 14,365,276	* 2,058,644	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Delaware.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Idaho.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	134,241	17,966
Illinois.....	177,792,214	27,667,488	70,370,033	13,562,542	7,615,164	1,093,047	99,807,017	13,011,899	(1)	(1)	(1)	(1)	1,733,370	219,074
Indiana.....	32,470,141	3,608,035	3,312,154	422,416	7,917,430	930,021	21,240,557	2,255,598	(1)	(1)	(1)	(1)	(1)	(1)
Iowa.....	* 8,039,785	* 923,110	(1)	(1)	8,039,785	923,110	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kansas.....	21,831,821	2,750,970	2,388,071	425,174	2,745,306	186,507	16,698,444	2,139,289	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	1,221,622	134,169
Maryland.....	* 3,875,951	* 282,789	1,146,877	122,667	2,729,074	160,132	(1)	(1)	(1)	(1)	(1)	(1)	374,926	43,239
Massachusetts.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	181,700,256	24,422,946	63,915,861	10,442,798	11,001,503	952,350	106,782,892	13,027,798	7,252,892	1,851,764	75,190	37,594	452,637	67,298
Minnesota.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Mississippi.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Missouri.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Montana.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Nebraska.....	7,041,504	524,703	(1)	(1)	4,140,580	173,283	2,891,924	351,420	2,350,102	264,890	(1)	(1)	(1)	(1)
Nevada.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Hampshire.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	* 11,961,184	* 1,611,412	7,987,775	1,177,033	4,003,409	433,779	(1)	(1)	(1)	(1)	(1)	(1)	71,780	8,675
New York.....	479,735,984	77,094,614	363,422,890	61,867,503	35,365,071	3,769,912	80,948,023	11,480,199	21,529,412	6,129,070	5,373,168	1,390,678	3,001,220	350,076
North Carolina.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
North Dakota.....	1,605,725	48,152	(1)	(1)	1,605,725	48,152	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Ohio.....	119,183,708	15,137,312	18,729,845	2,060,599	14,656,334	1,027,155	85,797,526	11,153,618	(1)	(1)	(1)	(1)	(1)	(1)
Oklahoma.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Oregon.....	* 34,084,196	* 4,038,583	(1)	(1)	(1)	(1)	34,084,196	4,038,583	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	184,951,684	25,171,430	75,037,173	11,592,482	24,031,976	2,953,942	85,882,535	10,625,000	6,495,504	1,467,683	(1)	(1)	(1)	(1)
Rhode Island.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
South Dakota.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tennessee.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Texas.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Utah.....	* 18,575,130	* 2,250,739	(1)	(1)	(1)	(1)	18,575,130	2,250,739	(1)	(1)	(1)	(1)	(1)	(1)
Vermont.....	* 31,504,375	* 4,769,619	30,269,093	4,659,951	1,245,282	109,668	(1)	(1)	(1)	(1)	(1)	(1)	378,605	50,588
Virginia.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Washington.....	165,308,981	18,418,644	821,074	93,466	407,444	84,270	164,170,463	18,290,908	(1)	(1)	(1)	(1)	(1)	(1)
West Virginia.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	613,228,536	68,509,973	99,555,049	15,083,176	14,840,160	1,824,137	398,831,327	51,599,660	3,728,516	756,810	(1)	(1)	263,052	33,029
Wyoming.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
All other states.....	96,236,699	11,168,617	23,066,592	3,666,168	33,650,123	3,176,796	38,919,984	4,325,653	2,538,788	658,307	832,375	215,901	2,521,420	323,791

* Figures included with those for "All other states," to avoid disclosure of individual operations.
 † Exclusive of "condensed milk," to avoid disclosure of individual operations.
 ‡ Exclusive of "evaporated milk," to avoid disclosure of individual operations.

In 1919, in addition to the products shown in the table, 19,763,067 gallons of ice cream were reported, valued at \$21,619,167. Whey to the value of \$3,423,906 was also reported, and of this amount, \$2,846,067, or 83.1 per cent, was reported for Wisconsin.

Quantity and value of products, United States as a whole.—Table 16 shows in detail, for the United States as a whole, the products of the industry for 1919, 1914, 1909, and 1904.

Of the total value of products for the United States in 1919, butter represented 49 per cent, cheese 12.8 per cent, and condensed and evaporated milk 28.0 per cent.

In 1919, of the total production of butter reported for the industry, 40.1 per cent was put up in prints or rolls, as compared with 38.1 per cent in 1914 and 34.3 per cent in 1909, the remainder in each case being

packed solid. The increase from 1914 to 1919 in the quantity of butter put up in prints or rolls amounted to 76,514,944 pounds, or 26.1 per cent, and the increase in butter packed solid to 74,225,341 pounds, or 15.6 per cent.

Of the total quantity of cheese manufactured in 1919, 87 per cent represented full-cream, 1.9 per cent part-cream, 3.4 per cent skimmed, and 7.7 per cent "Other kinds." From 1914 to 1919 the production of full-cream cheese increased 79,087,490 pounds, or 23.8 per cent, that of skimmed-milk cheese, 2,203,363 pounds, or 15.9 per cent, while the production of "Other kinds" of cheese was nearly seven times greater, or 579.7 per cent. The only decrease is shown for part-cream cheese, for which there was a falling off in production for the five years of 9,160,701 pounds, or 50.1 per cent.

TABLE 16.—DETAILED STATISTICS OF KIND, QUANTITY, AND VALUE OF PRODUCTS: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904
Products, total value.....	\$1,066,125,489	\$304,285,150	\$274,557,718	\$108,182,789
Butter:				
Pounds.....	920,550,066	799,809,781	624,764,653	531,478,141
Value.....	\$522,274,315	\$218,021,690	\$179,510,619	\$113,189,453
Packed solid—				
Pounds.....	551,121,133	476,895,792	410,692,616	361,432,996
Value.....	\$309,229,371	\$132,259,915	\$115,098,056	\$74,483,306
Prints or rolls—				
Pounds.....	369,428,933	292,913,989	214,072,037	167,045,145
Value.....	\$213,044,944	\$95,761,772	\$64,412,563	\$38,706,147
Cheese:				
Pounds.....	473,569,199	370,278,599	311,126,317	317,144,872
Value.....	\$136,940,464	\$50,377,018	\$43,239,924	\$28,011,700
Full-cream—				
Pounds.....	411,778,381	332,690,891	287,110,383	230,652,634
Value.....	\$123,781,763	\$47,432,597	\$40,817,073	\$22,024,833
Part-cream—				
Pounds.....	9,157,736	18,318,437	10,803,392	10,803,392
Value.....	\$2,216,545	\$1,542,230	\$1,188,000	\$1,188,000
Skimmed—				
Pounds.....	16,097,055	13,593,692	7,770,812	3,459,582
Value.....	\$2,185,539	\$748,596	\$429,519	\$148,508
Other kinds—				
Pounds.....	36,536,027	5,375,870	5,441,730	74,032,656
Value.....	\$8,806,617	\$953,535	\$805,332	\$0,438,339
Condensed and evaporated milk:				
Pounds.....	2,150,182,245	873,410,594	494,786,544	308,485,182
Value.....	\$298,267,547	\$93,747,252	\$33,563,129	\$20,149,282
Condensed milk—				
Pounds.....	934,589,856	599,762,869	599,762,869	599,762,869
Value.....	\$143,838,766	\$11,513,153	.....	.....
Sweetened—				
Pounds.....	760,582,490	267,869,055	214,518,310	198,355,189
Value.....	\$126,055,505	\$21,686,139	\$17,345,278	\$13,478,376
Unsweetened—				
Pounds.....	174,094,366	331,892,014	280,278,234	110,129,993
Value.....	\$17,793,261	\$19,928,014	\$16,217,851	\$6,670,906
Evaporated milk—				
Pounds.....	1,215,595,389	273,647,635	.....	.....
Value.....	\$154,428,781	\$17,234,099	.....	.....
In sealed cans—				
Pounds.....	1,790,910,965	.....	.....	.....
Not in sealed cans—				
Pounds.....	302,735,440	.....	.....	.....
Cream sold:				
Pounds.....	120,304,183	123,511,348	81,211,374	28,181,914
Value.....	\$26,173,920	\$13,802,083	\$9,828,072	\$2,364,407
Skimmed milk sold:				
Value.....	\$2,453,657	\$786,050	\$620,135	\$1,308,738
Buttermilk sold:				
Value.....	\$4,027,144	\$1,278,700	.....	.....
Casein:				
Pounds.....	16,615,076	18,570,220	13,018,298	11,581,874
Value.....	\$2,188,787	\$977,770	\$795,544	\$554,099
Whey sold:				
Value.....	\$3,423,906	\$72,979	(*)	(*)
Powdered milk:				
Pounds.....	48,385,548	20,454,051	(*)	(*)
Value.....	\$11,918,105	\$1,968,259	(*)	(*)
Sugar of milk:				
Pounds.....	10,401,416	4,051,320	(*)	(*)
Value.....	\$2,632,770	\$400,613	(*)	(*)
All other products, value.	\$55,824,868	\$17,852,756	\$6,900,395	\$1,945,050

* In addition, 17,955,316 pounds of butter valued at \$11,055,867; 1,761,621 pounds of cheese, valued at \$340,133; 3,326,847 pounds of condensed and evaporated milk, valued at \$391,490; 108,739 pounds of casein, valued at \$11,575; 1,770,000 pounds of powdered milk, valued at \$264,218 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

* In addition, 10,533,068 pounds of butter, valued at \$3,316,342; 933,445 pounds of cheese, valued at \$156,357; 2,096,934 pounds of condensed milk, valued at \$123,357; and 227,366 pounds of casein, valued at \$13,353, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

* In addition, 2,381,212 pounds of butter, valued at \$664,171; 49,143 pounds of part-cream cheese, valued at \$24,078; and other dairy products to the value of \$25,388 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

* In addition, 1,971,120 pounds of butter, valued at \$448,729 and other dairy products to the value of \$71,588 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

* Not reported separately.

In 1919 the quantities reported for sweetened and unsweetened condensed milk represented 35.4 per cent and 8.1 per cent, respectively, of the total production of condensed and evaporated milk, while the proportion for evaporated milk was 56.5 per cent. For the five-year period 1914 to 1919 there was an increase of 492,712,535 pounds, or 183.9 per cent, in

the quantity of sweetened condensed milk, and an increase of 941,947,754 pounds, or 344.2 per cent, in the production of evaporated milk, but there were decreases in both quantity and value of unsweetened condensed milk of 47.6 per cent and 10.8 per cent, respectively.

The production of powdered milk, which was first included with the butter, cheese, and condensed-milk industry at the census of 1914, showed an increase for the five-year period of 27,931,497 pounds, or 136.6 per cent.

Production of butter and cheese in factories and on farms.—Table 17 shows the total quantity of butter and cheese produced in the factories of the butter, cheese, and condensed-milk industry and on farms in 1919 and 1909.

TABLE 17.—BUTTER AND CHEESE PRODUCED IN FACTORIES AND ON FARMS: 1919 AND 1909.

PRODUCT.	PRODUCTION (POUNDS).			
	1919	1909	Per cent of total.	
			1919	1909
Butter.....	1,628,216,558	1,619,415,263	100.0	100.0
Factory product.....	920,550,066	624,764,653	56.5	38.6
Farm product.....	707,666,492	994,650,610	43.5	61.4
Cheese.....	479,940,595	320,532,181	100.0	100.0
Factory product.....	473,569,199	311,126,317	98.7	97.1
Farm product.....	6,371,396	9,405,864	1.3	2.9

* In addition, there were 17,955,316 pounds of butter in 1919, and 2,381,212 pounds in 1909, produced in establishments engaged primarily in the manufacture of products other than butter, cheese, or condensed milk.

* In addition, there were 1,761,621 pounds of cheese in 1919, and 49,143 pounds in 1909, produced in establishments engaged primarily in the manufacture of products other than butter, cheese, or condensed milk.

In 1919 the combined production of butter in the factories of the butter, cheese, and condensed-milk industry and on farms in the United States was an increase of only 8,801,295 pounds, or five-tenths of 1 per cent, over the production in 1909. During the decade the output of the factories increased 295,785,413 pounds, or 47.3 per cent, while the production on farms decreased 286,984,118 pounds, or 28.9 per cent. In 1909 the production of butter on farms exceeded the factory output, but the proportion which it formed of the combined total at that census decreased from 61.4 per cent to 43.5 per cent in 1919.

The quantity of cheese produced in the United States in the factories of the industry and on farms during 1919 was an increase of 159,408,414 pounds, or 49.7 per cent, over the production in 1909. The production in the factories engaged in the industry increased 162,442,882 pounds, or 52.2 per cent, between 1909 and 1919, and the production on farms decreased 3,034,468 pounds, or 32.3 per cent. At both censuses the quantity made in factories was many times greater than the quantity made on farms, and the proportion which it formed of the combined total increased from 97.1 per cent in 1909 to 98.7 per cent in 1919.

BUTTER, CHEESE, AND CONDENSED MILK.

39

GENERAL TABLES.

Comparative summary, by states, 1919, 1914, and 1909.—Table 18 gives, for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the industry.

Detailed statement of the combined industry, by states, 1919.—Table 19 presents, for 1919, statistics in detail for the butter, cheese, and condensed-milk industry for the three branches separately, for the states which can be shown separately.

TABLE 18.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
United States...	1919	7,669	35,313	168,871	\$37,940	\$926,366	\$1,066,125	Nebraska.....	1919	57	1,111	7,772	\$1,250	\$32,331	\$38,245
	1914	7,628	23,059	130,862	15,847	315,026	364,285		1914	48	696	11,787	436	9,791	11,082
	1909	8,479	18,431	101,349	11,081	235,546	274,558		1909	37	383	1,082	256	6,435	7,681
Arizona.....	1919	9	155	1,111	253	2,427	3,159	Nevada.....	1919	5	17	168	22	600	662
	1914	7	86	315	88	776	1,072		1914	11	21	173	21	373	447
	1909	11	58	350	51	388	538		1909	9	16	94	15	289	326
California.....	1919	180	2,022	7,186	2,382	49,671	56,420	New Hampshire.....	1919	116	16	254	19	522	643
	1914	201	1,044	4,694	896	17,974	20,466		1914	23	44	310	27	547	657
	1909	161	597	2,496	466	11,140	12,761		1909	29	50	492	31	709	807
Colorado.....	1919	78	495	2,565	454	9,947	11,906	New Jersey.....	1919	19	90	580	110	2,046	2,474
	1914	61	291	1,388	223	2,912	3,597		1914	14	67	492	44	730	854
	1909	39	210	667	130	1,924	2,430		1909	20	73	771	42	670	793
Connecticut.....	1919	22	44	408	43	730	901	New York.....	1919	821	5,082	17,030	5,069	110,716	129,008
	1914	24	63	197	43	527	624		1914	1,144	3,235	15,389	2,029	36,079	43,262
	1909	30	105	231	52	623	745		1909	1,562	2,866	16,629	1,607	36,161	42,468
Delaware.....	1919	16	32	186	29	516	570	North Dakota.....	1919	60	215	1,894	247	10,031	11,170
	1914	10	45	257	28	183	242		1914	58	115	699	93	1,464	1,740
	1909	10	32	204	14	211	264		1909	68	62	854	46	891	1,029
Idaho.....	1919	48	225	1,341	285	4,800	5,669	Ohio.....	1919	267	2,132	10,401	2,290	50,415	60,013
	1914	28	88	857	76	1,165	1,396		1914	286	1,480	6,677	1,049	15,068	19,326
	1909	18	118	260	77	681	884		1909	325	1,067	3,356	557	7,686	9,690
Illinois.....	1919	223	1,991	8,467	2,104	49,619	58,298	Oklahoma.....	1919	20	301	835	291	6,725	7,718
	1914	267	1,755	6,184	1,079	18,236	21,792		1914	14	46	282	28	673	809
	1909	295	1,732	6,753	942	14,267	17,798		1909	19	62	427	36	928	1,150
Indiana.....	1919	101	1,660	3,914	1,466	27,993	32,541	Oregon.....	1919	136	595	3,333	707	13,237	15,762
	1914	120	719	3,007	452	7,431	8,824		1914	118	434	1,827	325	5,502	6,568
	1909	132	468	1,858	262	3,196	3,959		1909	95	420	1,935	290	3,962	4,920
Iowa.....	1919	434	1,663	10,135	1,756	50,481	57,800	Pennsylvania.....	1919	273	1,900	9,729	1,883	36,349	44,564
	1914	490	1,333	9,048	1,013	24,075	27,606		1914	387	1,309	7,808	745	13,017	15,687
	1909	612	1,231	8,911	855	22,842	25,850		1909	536	1,177	7,613	556	11,074	13,544
Kansas.....	1919	67	927	3,475	911	23,406	27,258	South Dakota.....	1919	187	225	1,802	299	9,455	10,830
	1914	61	761	2,752	407	8,710	10,220		1914	62	134	988	105	2,577	2,920
	1909	60	348	2,544	211	4,951	6,071		1909	95	139	1,456	112	2,308	2,686
Kentucky.....	1919	16	140	1,082	120	3,273	3,655	Texas.....	1919	31	200	953	202	5,966	7,161
	1914	10	122	115	77	116	287		1914	51	174	1,360	115	1,752	2,281
	1909	13	56	164	30	195	275		1909	36	84	477	40	530	660
Maine.....	1919	10	75	254	74	697	1,060	Utah.....	1919	137	298	1,418	302	4,740	5,502
	1914	17	90	450	55	1,239	1,426		1914	37	264	1,312	144	1,891	2,298
	1909	29	96	623	48	1,098	1,301		1909	37	214	635	116	1,613	1,971
Maryland.....	1919	17	90	435	85	1,515	1,893	Vermont.....	1919	137	608	2,814	600	16,656	18,539
	1914	32	61	452	34	463	583		1914	173	471	2,701	314	7,976	8,696
	1909	44	69	522	39	524	654		1909	186	519	2,044	292	7,056	8,112
Massachusetts.....	1919	23	65	313	69	1,847	2,214	Virginia.....	1919	23	125	565	109	1,249	1,784
	1914	17	33	158	21	697	814		1914	13	90	245	48	476	608
	1909	24	56	318	29	548	664		1909	11	16	141	6	54	67
Michigan.....	1919	318	2,194	9,136	2,483	55,906	64,787	Washington.....	1919	130	1,228	5,095	1,582	26,848	33,128
	1914	364	1,367	6,659	863	18,463	21,550		1914	101	860	3,212	657	9,512	11,808
	1909	435	1,073	4,776	554	12,377	14,287		1909	97	735	2,203	457	5,676	7,271
Minnesota.....	1919	903	2,135	15,873	2,398	86,020	93,586	Wisconsin.....	1919	2,872	5,973	32,244	6,739	197,984	221,447
	1914	1,807	1,458	12,865	1,167	30,770	33,746		1914	2,431	3,717	23,365	2,712	65,326	72,859
	1909	784	1,184	11,874	829	22,707	25,287		1909	2,630	2,863	16,467	1,877	48,006	53,843
Missouri.....	1919	71	691	2,871	647	20,159	22,295	All other states.....	1919	97	355	1,918	351	6,887	7,930
	1914	54	361	1,556	202	4,367	5,167		1914	55	154	802	112	1,387	1,753
	1909	56	189	788	100	2,499	2,959		1909	24	44	329	32	384	494
Montana.....	1919	53	195	1,227	261	3,559	4,326								
	1914	32	71	509	69	1,011	1,218								
	1909	20	29	235	24	354	419								

¹ Excludes statistics for 1 establishment to avoid disclosure of individual operations.

² Excludes statistics for 2 establishments to avoid disclosure of individual operations.

MANUFACTURES.

TABLE 19.—DETAILED STATEMENT,

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						Capital.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.				Total.	16 and over.		Under 16.				
					Male.	Female.	Average number.	Number, 15th day of—		Male.		Female.	Male.	Female.				
								Maximum month.	Minimum month.									
BUTTER.																		
1	United States.....	3,738	26,339	2,006	2,469	2,000	2,223	17,641	Ja	20,370	Ja	14,796	17,304	14,816	2,442	40	6	\$162,302,108
2	Alabama.....	4	87	.....	14	7	1	65	Jy ^a	69	Ja ^a	59	68	63	5	.....	.....	449,570
3	California.....	121	1,798	155	100	131	144	1,268	Se	1,399	Ja	1,060	1,292	1,158	128	4	2	8,826,808
4	Colorado.....	65	505	30	62	31	44	338	Jy	417	Fe	283	342	233	106	2	1	2,769,760
5	Connecticut.....	17	47	5	5	1	1	35	Mh	38	Ja ^a	33	34	32	2	.....	.....	219,736
6	Delaware.....	6	45	.....	8	1	4	82	Au ^a	37	Ja	27	30	20	1	.....	.....	190,112
7	Idaho.....	32	217	8	24	12	28	145	Jy	174	Ja	119	145	133	13	.....	.....	958,650
8	Illinois.....	129	1,288	103	131	93	143	813	Je	940	Mh	683	789	629	158	2	.....	10,521,565
9	Indiana.....	92	2,001	60	160	129	199	1,453	Au	1,645	Ja	1,198	1,434	1,142	292	.....	.....	5,061,815
10	Iowa.....	411	2,386	234	273	162	122	1,595	Je	1,881	Mh	1,243	1,637	1,378	250	9	.....	9,292,240
11	Kansas.....	59	1,049	46	77	101	85	740	Je	885	Fe	575	666	482	184	.....	.....	4,099,106
12	Kentucky.....	16	208	7	16	23	17	140	Oc	195	Fe	94	192	124	68	.....	.....	1,251,297
13	Maine.....	10	97	7	5	3	7	75	Jy	79	Ja ^a	72	73	72	1	.....	.....	407,468
14	Maryland.....	10	18	7	2	.....	.....	9	Je ^a	11	Mh	8	10	9	1	.....	.....	72,490
15	Massachusetts.....	20	81	7	14	2	7	51	Au	60	Fe	44	52	50	2	.....	.....	275,316
16	Michigan.....	231	1,509	135	144	114	132	984	Jy	1,161	Fe	826	954	815	138	1	.....	9,147,141
17	Minnesota.....	832	2,734	217	234	142	179	1,962	Je	2,278	Ja	1,702	1,905	1,750	149	6	.....	42,854,461
18	Mississippi.....	19	152	13	16	9	8	106	Au	139	Ja	68	113	103	9	.....	1	365,860
19	Missouri.....	66	974	57	103	24	104	686	Jy	862	Ja	506	666	495	189	1	1	3,392,826
20	Montana.....	47	301	24	28	36	23	190	Jy	238	Ja	134	187	165	22	.....	.....	1,900,458
21	Nebraska.....	51	1,778	16	140	371	198	1,053	Je	1,439	Mh	817	912	743	168	1	.....	11,012,072
22	Nevada.....	5	25	2	2	4	.....	17	Je	21	Ja	15	15	13	2	.....	.....	186,742
23	New Hampshire.....	14	28	15	1	.....	.....	12	My ^a	13	Mh ^a	11	12	12	.....	.....	.....	70,867
24	New Jersey.....	5	10	4	1	.....	.....	5	(^a)	5	(^a)	5	6	6	.....	.....	.....	53,282
25	New York.....	123	569	73	79	20	38	350	Ja	423	De	271	374	353	20	1	.....	2,420,164
26	North Carolina.....	7	52	2	9	4	6	31	Jy	45	Ja	22	30	29	1	.....	.....	186,907
27	North Dakota.....	57	346	31	31	37	35	212	Jy	320	Ja	131	184	166	17	1	.....	1,621,167
28	Ohio.....	141	2,029	77	167	134	289	1,362	Jy	1,531	Ja	1,148	1,361	1,160	196	5	.....	8,018,205
29	Oklahoma.....	20	408	12	29	43	23	301	Au	357	Mh	257	258	195	63	.....	.....	1,097,181
30	Oregon.....	76	570	44	61	58	58	349	Je	414	De	284	328	280	47	1	.....	2,686,548
31	Pennsylvania.....	160	589	107	33	9	23	357	Jy	397	Ja	316	349	337	11	1	.....	2,593,626
32	Rhode Island.....	7	11	4	1	.....	1	5	My ^a	6	Ap	3	5	4	1	.....	.....	124,247
33	South Dakota.....	86	376	50	34	24	45	223	Jy	309	Ja	158	207	185	21	1	.....	1,366,363
34	Tennessee.....	10	78	.....	18	5	5	50	Se	63	Mh	25	61	41	20	.....	.....	207,637
35	Texas.....	31	326	26	25	46	29	200	Au	229	Ja	104	210	178	31	1	.....	1,815,106
36	Utah.....	17	189	13	19	25	16	116	Jy	124	Oc	109	112	87	25	.....	.....	852,360
37	Vermont.....	92	449	49	61	18	28	293	Jy	343	Fe	252	282	271	11	.....	.....	1,698,158
38	Virginia.....	20	130	6	17	7	6	94	Au	101	Fe ^a	87	92	91	1	.....	.....	408,063
39	Washington.....	101	798	40	146	67	70	475	Jy	559	Fe	410	482	431	50	.....	1	3,952,981
40	West Virginia.....	6	27	2	3	1	1	20	Se ^a	22	De ^a	18	20	19	1	.....	.....	122,924
41	Wisconsin.....	498	1,836	185	158	83	93	1,317	Jy	1,433	Fe	1,216	1,305	1,251	51	3	.....	10,011,209
42	Wyoming.....	13	66	7	9	6	6	35	Jy	40	Fe ^a	31	38	31	7	.....	.....	287,925
43	All other states ^b	11	157	51	9	5	5	77	.....	.....	.....	.....	71	71	.....	.....	.....	451,745

CHEESE.

1	United States.....	3,530	6,993	2,400	345	159	92	3,907	Je	5,026	Ja	2,843	4,723	4,523	174	26	.....	\$26,022,734
2	California.....	48	307	60	14	13	10	210	Oc ^a	231	Fe	167	235	225	8	2	.....	2,063,335
3	Colorado.....	8	76	4	6	12	5	49	Je ^a	52	Ja	43	49	31	18	.....	.....	596,164
4	Connecticut.....	5	16	4	2	.....	1	9	Ja	29	Jy ^a	3	25	25	.....	.....	.....	48,915
5	Idaho.....	14	35	3	7	1	.....	24	Je ^a	28	Ja	18	29	28	1	.....	.....	147,650
6	Illinois.....	56	99	16	10	3	3	67	Je ^a	80	Ja	50	76	73	3	.....	.....	320,678
7	Iowa.....	20	37	19	.....	1	.....	17	Mh ^a	19	De	12	20	19	1	.....	.....	96,375
8	Michigan.....	55	212	31	13	12	10	146	No	158	Ja	125	161	146	15	.....	.....	760,562
9	Minnesota.....	66	123	25	6	1	2	89	Je	121	De	59	95	95	.....	.....	.....	255,982
10	Montana.....	6	10	5	.....	.....	.....	5	Fe	8	Ja ^a	3	6	5	1	.....	.....	42,550
11	New Jersey.....	8	15	7	.....	.....	.....	8	Au	11	Ja ^a	7	6	6	.....	.....	.....	162,832
12	New York.....	598	1,676	459	124	61	30	1,002	Je	1,424	Ja	659	1,313	1,245	65	3	.....	6,258,937
13	North Carolina.....	15	26	17	2	.....	.....	7	Je	12	Fe ^a	3	10	9	.....	.....	.....	20,028
14	Ohio.....	90	112	52	1	.....	.....	59	My	93	Ja ^a	21	86	80	.....	.....	.....	270,850
15	Oregon.....	52	96	25	2	2	1	66	Jy	91	Ja	34	87	85	1	.....	.....	409,728
16	Pennsylvania.....	64	297	52	27	21	9	188	Jy	232	Fe	153	196	188	7	1	.....	1,243,006
17	Utah.....	17	37	6	2	1	.....	28	Ja ^a	31	De ^a	24	30	30	.....	.....	.....	93,399
18	Vermont.....	38	99	32	10	2	7	48	Je	70	Ja	31	62	58	4	.....	.....	240,033
19	Washington.....	15	36	9	6	1	1	19	Jy	27	Ja ^a	12	24	21	3	.....	.....	135,149
20	Wisconsin.....	2,323	3,608	1,555	107	25	8	1,912	Je	2,328	Ja	1,333	2,184	2,099	47	18	.....	12,566,530
21	All other states ^b	26	76	19	6	2	5	44	.....	.....	.....	.....	49	49	.....	.....	.....	320,085

^a Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

^b Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

^c Same number reported for one or more other months.

^d Same number reported throughout the year.

BUTTER, CHEESE, AND CONDENSED MILK.

41

BY STATES: 1919.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.						
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.	
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.					Rented. ¹
											Steam engines (not turbines).	Steam turbines.	Internal combustion engines.	Water power. ¹		

BUTTER.

\$5,247,000	\$4,274,900	\$18,852,720	\$428,790	\$628,124	\$2,789,657	\$509,028,330	\$4,417,409	\$583,163,011	\$88,817,272	95,190	46,340	1,165	5,522	748	41,415	5,347	1
27,905	9,304	42,358	.....	920	4,963	818,431	35,637	982,943	128,875	637	400	.....	50	.....	187	.....	2
201,158	352,072	1,542,380	26,617	56,723	222,408	35,969,721	378,300	40,680,853	4,313,832	4,630	818	42	232	59	3,479	.....	3
203,710	87,904	281,539	9,445	34,960	65,981	7,293,808	69,694	8,768,894	1,404,892	1,728	1,030	1	8	.....	489	249	4
4,146	1,085	31,970	51	420	1,849	618,370	12,232	783,664	153,062	345	125	.....	.....	.....	221	.....	5
8,180	4,321	29,490	.....	400	1,406	503,768	12,285	570,402	54,349	186	185	.....	.....	.....	1	.....	6
52,368	41,508	187,048	600	7,585	10,603	3,094,590	35,623	3,664,496	534,283	764	165	12	18	.....	569	5	7
345,489	221,359	790,255	3,745	26,801	111,854	23,588,871	149,635	26,376,027	2,637,521	4,015	1,088	41	303	.....	2,585	1	8
309,701	285,357	1,260,268	19,304	15,887	159,787	23,833,038	214,789	27,900,732	3,852,905	3,112	953	140	32	.....	1,987	86	9
450,718	310,443	1,678,637	61,371	35,728	276,080	48,946,955	492,528	50,422,287	6,982,806	9,681	5,422	117	781	47	3,314	568	10
201,501	211,266	728,280	14,307	14,307	209,150	21,007,748	148,204	24,443,667	3,287,715	2,955	1,475	.....	.....	.....	1,205	267	11
31,099	32,438	120,428	9,050	8,034	10,204	3,235,391	37,556	3,665,208	382,261	1,082	486	.....	82	.....	514	.....	12
7,191	9,480	74,222	.....	733	3,889	682,365	14,931	1,059,652	362,356	254	49	46	7	.....	152	.....	13
2,040	.....	10,548	55	321	1,355	166,556	4,377	205,745	34,513	122	115	.....	6	.....	1	.....	14
16,343	8,983	61,613	.....	8,798	4,088	1,786,161	22,393	2,148,354	339,800	304	80	.....	.....	.....	224	.....	15
287,018	270,978	1,173,610	19,667	31,978	148,126	29,346,329	234,563	32,885,420	3,804,528	4,943	1,833	192	167	.....	2,701	60	16
376,192	312,057	2,237,868	45,738	46,769	248,379	81,380,204	570,887	88,882,271	6,951,120	14,644	9,716	179	778	71	3,902	965	17
27,820	16,012	99,825	.....	5,524	4,158	1,865,970	28,645	2,248,099	353,484	501	187	1	12	.....	301	.....	18
234,201	253,997	940,842	.....	45,388	131,888	19,913,885	121,830	22,147,691	2,111,906	2,751	691	22	99	5	1,934	35	19
60,900	70,495	254,197	8,647	10,094	19,641	3,416,583	46,808	4,219,316	755,865	1,200	290	1	14	.....	925	42	20
563,915	443,514	1,183,230	.....	10,157	341,005	81,332,785	363,723	37,240,778	5,554,270	6,832	4,188	1	99	.....	2,544	985	21
5,597	7,330	22,409	.....	988	592,138	7,510	662,023	62,375	158	40	.....	18	.....	.....	100	.....	22
2,931	169	12,040	108	350	912	317,403	3,317	391,297	70,577	91	62	.....	10	1	18	.....	23
900	.....	5,620	.....	488	276	115,028	3,687	150,395	31,680	103	88	.....	.....	.....	15	.....	24
72,814	50,294	405,251	4,487	8,515	67,909	8,811,528	91,568	10,558,321	1,055,225	2,010	1,166	10	139	222	473	1	25
14,905	11,610	22,347	1,374	556	1,004	613,618	6,482	622,288	102,188	86	9	.....	.....	.....	77	.....	26
02,020	87,643	241,340	15,189	7,507	59,691	9,030,669	90,001	11,121,687	1,125,017	1,264	847	30	95	.....	792	5	27
451,478	387,817	1,450,105	4,984	81,048	255,889	34,455,248	271,955	41,061,993	6,334,790	7,405	3,486	3	1,124	.....	2,792	748	28
111,379	74,471	290,626	.....	17,767	20,908	6,670,716	53,789	7,718,428	993,926	835	180	.....	78	.....	569	5	29
116,231	111,387	395,827	801	31,270	21,155	7,869,497	69,161	8,727,869	1,289,211	1,714	289	.....	25	.....	1,400	39	30
48,527	24,218	334,422	4,548	4,726	20,658	8,212,697	120,403	9,718,065	1,385,065	3,314	2,037	73	106	10	1,088	10	31
1,500	600	5,036	.....	1,580	404	115,320	811	130,223	14,092	40	23	.....	.....	.....	17	.....	32
67,027	72,349	205,608	1,280	10,793	84,661	9,364,078	74,379	10,805,783	1,367,326	1,502	632	.....	100	.....	770	.....	33
27,201	8,988	49,269	1,080	1,459	5,092	1,885,777	5,806	1,971,600	80,116	165	56	10	.....	.....	98	300	34
55,008	99,732	201,822	.....	7,349	64,309	5,004,093	61,955	7,161,208	1,195,160	953	275	.....	00	.....	618	.....	35
46,622	63,278	120,025	67	9,479	7,029	2,335,030	21,759	2,698,795	342,006	397	139	50	9	.....	199	100	36
56,526	24,144	276,856	7,730	1,040	16,397	8,821,345	69,500	10,194,160	1,303,315	1,729	800	22	71	263	573	102	37
24,609	11,329	78,916	50	4,570	5,333	1,082,030	23,268	1,535,290	429,094	440	85	.....	.....	.....	355	10	38
180,859	138,376	588,555	3,321	35,498	60,432	10,611,350	119,131	12,990,885	2,260,404	2,877	1,127	.....	18	70	1,662	57	39
2,675	955	15,441	2,737	.....	750	241,446	2,225	299,234	55,563	171	104	.....	54	.....	13	.....	40
237,237	121,660	1,448,374	124,537	26,934	95,526	52,009,980	386,649	56,642,327	4,295,698	8,675	5,748	172	582	.....	2,173	712	41
20,017	15,522	53,823	.....	2,340	9,749	777,446	11,990	949,249	169,813	234	110	.....	.....	.....	124	.....	42
28,506	13,458	96,683	.....	3,070	7,161	1,004,125	19,370	1,286,793	263,318	340	213	.....	74	.....	63	4	43

CHEESE.

\$389,924	\$600,119	\$1,808,991	\$12,567	\$129,213	\$278,061	\$127,988,010	\$1,437,255	\$143,455,704	\$14,030,439	24,500	17,760	1,749	3,000	112	1,879	142	1
34,740	25,307	269,183		11,428	15,459	3,180,203	67,758	3,792,388	538,427	772	155	10	36	2	569	93	2
23,158	26,977	46,413	5,497	2,626	10,146	526,270	5,837	732,260	200,153	110	34		6		70		3
2,110	264	11,387		1,886	126	97,465	1,500	116,884	17,919	62	50	12					4
7,558	600	30,627		733	1,028	656,210	9,902	727,759	61,647	117	14				103		5
14,725	8,426	109,395		3,326	1,824	1,185,183	18,515	1,484,899	280,701	432	343	24	52		13		6
	200	17,342		825	145	243,972	4,794	284,145	35,379	100	93		2		5		7
21,946	32,643	171,563	200	3,227	6,256	3,161,993	56,288	3,663,131	444,850	668	530	21	35		82	5	8
3,029	403,426	89,729		4,706	1,826	2,481,755	24,125	2,838,135	332,255	505	429	9	14		53		9
					6,617	227	1,655	107,110	12,000	27	12		12		3		10
					6,172	715	154	105,280	517	54	54						11
159,687	87,349	997,633	5,828	17,713	96,934	23,096,161	262,968	26,539,612	3,180,480	5,236	4,516	97	207	60	356	11	12
270		3,778	413		430	47,643	407	60,725	12,676	1					1		13
1,097		125,422	2,698	3,679	3,991	1,614,248	11,064	1,763,274	227,962	510	435	72	3				14
2,800	997	89,087	3,714	1,578	35,953	2,524,379	20,394	2,854,282	309,509	498	397		12	10	79		15
46,678	45,430	216,481	1,382	2,791	18,400	2,992,964	42,769	3,817,471	781,748	1,625	1,367	16	77	12	153		16
2,100	440	29,028	335	570	651	190,419	5,285	235,184	39,480	65	56				9		17
13,907	7,695	50,407		2,466	2,776	1,828,804	10,645	1,482,936	143,487	262	175	13	6		68	10	18
5,300	630	26,379	905	1,350	1,007	463,552	6,581	550,266	80,153	146	89		17	16	25		19
38,957	14,240	2,445,639	20,290	67,780	85,195	83,480,320	869,478	91,462,678	7,112,880	13,180	8,882	1,475	2,521	13	289	23	20
11,802	5,495	65,039	1,245	1,684	1,133	611,731	16,803	825,097	196,593	130	129				1		21

MANUFACTURES.

TABLE 19.—DETAILED STATEMENT,

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.			
					Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.	Female.		
								Maximum month.							Minimum month.

CONDENSED MILK.

1	United States.....	401	16,533	46	987	930	895	13,675	Je	15,593	Ja	11,383	13,183	11,420	1,736	22	5	\$126,952,520
2	California.....	11	648	.....	25	40	39	544	Jy ¹	638	Ja	451	471	395	76	.....	.....	5,744,367
3	Colorado.....	5	124	.....	7	4	5	108	Ap	114	Oc	98	109	94	15	.....	.....	894,387
4	Illinois.....	38	1,377	6	88	90	82	1,111	Je	1,208	Ja	1,016	1,060	921	125	10	4	14,636,102
5	Indiana.....	7	254	.....	20	7	22	205	Je	246	Mh	159	193	163	30	.....	.....	1,363,855
6	Iowa.....	3	58	.....	3	2	2	51	Ja	57	Ap ²	45	45	38	7	.....	.....	541,469
7	Kansas.....	6	217	6	11	7	6	187	My	220	Ja	159	180	160	20	.....	.....	1,289,233
8	Maryland.....	5	93	.....	6	2	6	79	Jy	89	Mh	55	82	81	1	.....	.....	502,779
9	Michigan.....	32	1,270	3	81	56	66	1,064	Je	1,143	Ja	972	1,035	914	119	2	.....	11,224,584
10	Minnesota.....	5	117	2	11	9	11	84	Je	102	Ja	63	91	66	25	.....	.....	1,223,556
11	Nebraska.....	6	87	.....	11	3	15	58	My	72	De	36	36	36	.....	.....	.....	964,710
12	New Jersey.....	6	95	2	7	4	5	77	Jy ¹	84	Ja ¹	70	78	77	1	.....	.....	684,669
13	New York.....	100	4,421	2	240	213	236	3,730	Je	4,435	Ja	2,635	3,618	3,152	465	1	.....	29,998,636
14	North Dakota.....	3	8	.....	2	1	2	8	Se ¹	6	Ja ¹	1	6	6	.....	.....	.....	96,071
15	Ohio.....	30	806	3	41	24	27	711	Je	783	Ja	647	703	639	64	.....	.....	4,493,877
16	Oregon.....	8	247	.....	21	29	17	180	De	241	Ap	138	249	207	42	.....	.....	2,494,314
17	Pennsylvania.....	49	1,602	9	89	75	74	1,355	Jy	1,559	Ja	1,086	1,317	1,155	157	5	.....	9,600,179
18	Vermont.....	7	317	4	12	17	17	267	My ¹	344	De	190	200	190	10	.....	.....	2,532,466
19	Washington.....	14	964	.....	41	125	64	734	Je	887	Ja	631	674	545	129	.....	.....	8,778,228
20	Wisconsin.....	51	3,331	5	237	182	163	2,744	Je	3,181	Ja	2,477	2,706	2,305	397	3	1	25,787,449
21	All other states ¹	15	497	4	34	40	36	383	.....	.....	.....	.....	330	276	53	1	.....	4,101,589

¹ Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).² Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

BUTTER, CHEESE, AND CONDENSED MILK.

43

BY STATES: 1919—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.				
											Steam engines (not turbines).	Steam turbines.	Internal combustion engines.	Water power. ¹		Rent.^{2}

CONDENSED MILK.

\$3, 223, 142	\$2, 422, 424	\$14, 277, 056	\$240, 809	\$150, 842	\$4, 861, 213	\$277, 324, 307	\$5, 270, 985	\$339, 506, 774	\$58, 911, 482	49, 181	35, 206	2, 003	772	695	10, 505	11, 594	1
108, 662	121, 743	570, 327	5, 000	1, 375	189, 215	9, 815, 093	254, 071	11, 068, 142	1, 897, 178	1, 784	753	.....	200	.....	831	345	2
31, 693	28, 080	126, 248	30, 806	6, 337	27, 203	1, 995, 188	56, 402	2, 405, 286	353, 696	727	352	80	3	.....	292	16	3
255, 254	220, 860	1, 204, 682	24, 437	14, 350	501, 919	24, 272, 797	404, 022	30, 437, 845	5, 761, 026	4, 020	2, 434	219	10	.....	357	1, 345	4
72, 250	35, 400	204, 137	.....	.....	46, 540	3, 833, 437	92, 351	4, 617, 448	691, 660	792	455	.....	.....	.....	337	213	5
35, 999	6, 953	60, 237	.....	5, 644	4, 140	755, 035	37, 559	1, 093, 716	301, 122	354	340	.....	.....	.....	14	.....	6
53, 028	18, 776	183, 330	.....	835	60, 269	2, 185, 018	62, 254	2, 810, 144	562, 872	508	327	156	.....	.....	25	213	7
13, 965	14, 352	71, 977	.....	.....	13, 336	1, 246, 251	35, 313	1, 584, 148	302, 584	272	270	.....	.....	.....	2	72	8
250, 256	167, 739	1, 138, 158	148	4, 472	394, 068	22, 673, 469	433, 699	27, 738, 047	4, 630, 879	3, 525	2, 987	.....	20	.....	518	968	9
23, 378	19, 781	70, 539	500	7, 950	7, 878	1, 541, 176	41, 812	1, 805, 199	282, 211	724	352	.....	.....	.....	372	.....	10
49, 182	11, 500	67, 327	.....	10, 853	16, 137	593, 540	50, 747	1, 004, 158	359, 871	940	921	2	.....	.....	17	.....	11
15, 137	10, 448	98, 525	.....	50	10, 337	1, 793, 091	28, 420	2, 196, 550	375, 030	423	224	.....	.....	.....	199	5	12
003, 153	576, 138	3, 086, 567	19, 835	84, 860	1, 089, 497	77, 092, 915	1, 361, 109	91, 010, 432	13, 450, 348	9, 784	7, 001	225	231	510	1, 817	2, 173	13
2, 240	2, 206	5, 398	.....	2, 112	273	33, 206	1, 126	48, 152	13, 820	630	.....	.....	.....	.....	630	.....	14
127, 316	58, 740	708, 177	12, 577	5, 293	119, 206	13, 925, 447	237, 503	17, 197, 894	3, 034, 614	2, 486	1, 826	3	202	.....	305	891	15
49, 805	57, 099	221, 490	2, 040	250	169, 367	3, 182, 839	70, 413	4, 180, 091	926, 809	1, 121	618	.....	.....	.....	503	16	16
255, 712	185, 322	1, 331, 790	27, 005	4, 805	348, 246	24, 532, 318	448, 183	31, 028, 725	6, 048, 224	4, 790	4, 153	.....	16	5	616	1, 297	17
28, 976	40, 485	273, 036	7, 717	.....	42, 467	6, 300, 880	124, 849	6, 881, 550	435, 827	823	587	.....	.....	.....	236	96	18
199, 096	291, 813	966, 545	.....	2, 440	756, 038	15, 395, 573	251, 418	19, 586, 736	3, 939, 745	2, 972	1, 124	255	.....	.....	693	476	19
666, 283	442, 983	2, 844, 596	110, 454	0, 971	957, 874	60, 162, 599	1, 125, 296	73, 342, 268	12, 054, 373	10, 389	7, 277	863	.....	180	2, 069	2, 953	20
72, 857	95, 026	464, 891	.....	1, 185	107, 203	5, 993, 535	153, 409	7, 630, 597	483, 563	3, 017	2, 205	200	.....	.....	612	505	21

* Same number reported for one or more other months.

* All other states embrace: Arizona, 1 establishment; Idaho, 2; Maine, 1; Massachusetts, 2; Missouri, 3; New Hampshire, 1; South Dakota, 1; Utah, 3; and Virginia, 1.

SLAUGHTERING AND MEAT PACKING.¹

GENERAL STATISTICS.

General character of the industry.—This report presents statistics for establishments engaged in slaughtering and meat packing, wholesale. It does not include retail establishments, nor those engaged exclusively in the manufacture of sausage, lard, and the killing and dressing of poultry. Plants that slaughtered for the retail trade, but disposed of large quantities of meats at wholesale, were included, and the reports for these establishments generally covered both branches of the trade. Establishments included in the industry at one census may, on account of changes in the character of their business, be omitted at another. The statistics, however, represent practically all important establishments engaged wholly or chiefly in slaughtering and meat packing for the wholesale trade. Of the 1,304 establishments in this industry in 1919, only 460 reported Federal inspection.

Statistics were collected for two classes of establishments: (1) Those whose principal products were fresh and cured meats, and (2) those whose principal products were fresh meats. The first group also includes establishments that cure meat only and do not slaughter, and the second group includes abattoirs that slaughter for custom only.

So many establishments engaged in both branches of the industry that the overlapping of classification makes it advisable to present the combined figures in all tables, except Tables 2 and 3.

Comparative summary.—Table 1 summarizes the statistics of each census since 1899 and gives percentages of increase for each period. Except in a few instances, increases are shown for each successive census. The large increases, however, from 1914 to 1919, for salaries and wages, cost of materials, and value of products are due largely to general price increases following the World War, and do not, therefore, fairly measure the growth of the industry for that period. The increases in average number of wage earners and primary horsepower are a truer index of conditions. The addition of the Federal income tax since 1914 will account for the large increase in "Rent and taxes."

There is some duplication in the figures for cost of materials and value of products. Those establishments which cure meat only, use as material the fresh meat produced by establishments which slaughter.

Establishments engaged in curing only.—Table 2 presents data for establishments engaged in curing

meat but which did no slaughtering, for 1919, 1914, and 1909. Data for this class of plants were first collected in 1909.

There were 142 establishments in 1919 engaged primarily in curing meat, which also rendered lard, manufactured lard compounds and numerous other products, including canned meat and meat products. These plants were in operation in 24 states and the District of Columbia. The most important among these states were Illinois with 13 establishments and a product of \$40,272,330, and New York with 49 establishments and a product of \$23,644,595. Other states in which the value of products was over a million dollars were Massachusetts, Wisconsin, Pennsylvania, New Jersey, Texas, Rhode Island, Maryland, Missouri, and Ohio, enumerated in the order of the value of their products.

Establishments engaged in custom slaughtering only.—Table 3 shows for custom abattoirs for 1919, 1914, and 1909 the same class of statistics as those presented for curing establishments in the preceding table. The 1909 census was the first at which these data were secured. The establishments included in Table 3 are those whose chief business is slaughtering animals for food. The animals which they slaughter are owned by other establishments.

In addition to custom slaughtering, however, some establishments do a certain amount of rendering and further processing of products. The materials used are those received for the service rendered or purchased from establishments for which the slaughtering is done. The large increase in cost of materials in the last two census periods was due largely to this growing characteristic of this class of plants. It is possible that the statistics do not include all establishments of this class in operation in 1919, as the special agents in different parts of the country may have treated plants of this character differently.

Thirty-three establishments engaged in custom slaughtering were distributed through the following states and the District of Columbia in 1919: Alabama, 3; Colorado, 1; District of Columbia, 1; Georgia, 2; Illinois, 1; Iowa, 1; Louisiana, 2; Maine, 1; Maryland, 1; Massachusetts, 1; Michigan, 1; Minnesota, 1; Missouri, 1; New Jersey, 2; Ohio, 1; Rhode Island, 2; South Carolina, 3; Tennessee, 3; Texas, 2; Utah, 1; Virginia, 1; and West Virginia, 1.

These custom abattoirs are largely under corporate ownership, but operate along cooperative lines. There were 23 operating under corporate ownership, 1 municipal, 1 partnership, and 8 individual in 1919.

¹ The figures presented in this report are for continental United States. In addition to these, there are two establishments in Hawaii, the data for which can not be published without disclosing individual operations.

Principal states, ranked by value of products.—Table 4 shows the number of wage earners, value of products, and value added by manufacture, by states for 1919, ranked according to value of products. The industry is well distributed throughout the United States, as there were one or more establishments in all states except New Hampshire and New Mexico. In value of products, however, the industry is largely centered in a few states. Illinois is the most important of these, and reported in 1919, 30.2 per cent of the total value of products for the United States. The first five states, Illinois, Kansas, Nebraska, New York, and Missouri, reported products valued at \$2,518,263,652, or 59.3 per cent of the total for the country in 1919, and represented about the same proportion in 1914.

There was an increase in value of products in each state in the industry except Vermont, and a great many changes in per cent distribution. Most noticeable was Nebraska, whose production was third in 1919, taking the place occupied by New York in 1914, and Ohio, which advanced to seventh place, the one held by Pennsylvania in 1914. The greatest relative growth, however, was in Minnesota, which occupied eighth place in 1919 and thirteenth in 1914. In fact the only states retaining the same per cent distribution at each of these census periods were Illinois, Kansas, Missouri, Iowa, South Dakota, Montana, and Vermont. The states of North Dakota, Oklahoma, and South Dakota, had larger value of products than some of those shown in the table, but the figures can not be published separately without disclosing the operations of individual establishments.

Value of products, for six leading cities.—Table 5 shows the value of products of the industry for Chicago, Kansas City, Omaha, New York, Indianapolis, and St. Louis in 1919 and 1914.

Persons engaged in the industry.—The age classification of the average number of wage earners in Table 6 is an estimate obtained by the method described in the "Explanation of terms." The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. Figures for states will be found in Table 25.

Wage earners, by months, for selected states.—In Table 7 the number of wage earners employed in the industry, month by month, is shown. Figures are given separately for all states reporting more than 1,000 wage earners, while for the United States the number of males and females is shown. The table also gives several states which employed a large proportion of females.

Average number of wage earners, by prevailing hours of labor per week, for selected states.—Table 8 indicates a marked shortening of the working day for the industry since 1914. In that year only 8.1 per

cent were reported as employed fewer than 54 hours per week, as compared with 37.8 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 69.7 per cent of the total number of wage earners, while in 1919 the proportion was only 6.6 per cent.

Size of establishments, by average number of wage earners, for selected states.—Table 9 establishes the fact that most of the wage earners employed in the industry were reported by the large establishments. In 1919, 64 establishments having more than 500 wage earners each, employed 121,788 wage earners, or 75.6 per cent of the total average number. In 1914 this class of establishments employed 65.5 per cent of the total average number of wage earners.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000," and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns of 1914. The table, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in Table 10 show the degree of concentration of production in large establishments. In 1919, 431 establishments, or 33.1 per cent of the total number for the industry, employed 155,502 wage earners, or 96.6 per cent of the total average number, and reported products to the value of \$4,122,077,719, or 97.1 per cent of the total value of products.

Character of ownership, by states.—Table 11 shows the predominance of the corporate form of ownership. Though corporations owned less than half of the total number of slaughtering and meat-packing establishments in 1919, they reported more than nine-tenths of the total average number of wage earners and total value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919 there was an increase in the total horsepower for the industry of 106,146 horsepower, or 41.9 per cent. This was due principally to the increase of 78,797 horsepower, or 201.4 per cent, in rented electric power as indicated by Table 12.

Fuel consumed, by states.—Table 13 shows the principal kinds of fuel used for the industry in 1919 and 1914. In 1914 gasoline and other volatile oils were included in the total for fuel oils.

Bituminous coal was the principal fuel used in 1919, and there was an increase of over 1,000,000 tons over that used in 1914. There was also a very large increase in the use of fuel oils in this period, but a decrease in gas. This decrease was largely in states where natural gas was used.

MANUFACTURES.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	1919	1914	1909	1904	1899	PER CENT OF INCREASE. ¹			
						1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments.....	1,304	1,279	1,221	929	882	2.0	4.8	31.4	5.3
Persons engaged.....	197,392	121,729	105,971	87,077	(²)	62.2	14.9	21.7	.....
Proprietors and firm members.....	1,071	1,157	1,170	969	(²)	-7.4	-1.1	20.7	.....
Salaried employees.....	35,825	21,740	16,988	11,974	10,199	62.5	28.0	41.9	17.4
Wage earners (average number).....	160,996	98,832	87,813	74,134	68,386	62.9	12.5	18.5	8.4
Primary horsepower.....	369,212	253,066	202,432	115,956	85,008	41.9	25.0	74.6	36.4
Capital.....	\$1,176,483,643	\$534,273,563	\$378,319,045	\$237,714,690	\$188,800,181	120.2	41.2	59.1	25.9
Salaries and wages.....	269,174,628	89,696,745	70,122,766	53,670,874	43,493,900	200.1	27.9	30.7	23.4
Salaries.....	59,685,365	27,561,023	19,718,312	13,343,902	10,101,647	116.6	39.8	47.8	32.1
Wages.....	209,489,263	62,135,722	50,404,454	40,326,972	33,392,253	237.1	23.3	25.0	20.8
Paid for contract work.....	1,978,648	273,421	414,520	101,343	(²)	610.7	-32.8	309.0	.....
Rent and taxes.....	19,654,846	4,411,135	3,121,767	* 1,586,808	(²)	345.6	41.3	.....	.....
Cost of materials.....	3,782,929,533	1,441,662,658	1,191,438,076	805,856,969	682,096,839	162.4	21.0	47.8	18.1
Value of products.....	4,246,290,614	1,651,965,424	1,355,544,431	913,914,624	783,779,191	167.0	21.9	48.3	16.6
Value added by manufacture.....	463,361,081	210,302,766	164,106,355	108,057,655	101,682,352	120.3	28.2	51.9	6.3

¹ A minus sign (—) denotes decrease.² Figures not available.³ Exclusive of internal revenue.⁴ Value of products less cost of materials.

TABLE 2.—ESTABLISHMENTS ENGAGED IN CURING ONLY: 1919, 1914, AND 1909.

	1919	1914	1909 ¹	Percent of increase, ² 1909-1919.		1919	1914	1909 ¹	Percent of increase, ² 1909-1919.
Number of establishments.....	142	181	159	-10.7	Salaries and wages.....	\$9,833,728	\$4,944,178	\$4,123,834	138.5
Persons engaged.....	7,676	6,659	6,081	20.2	Salaries.....	2,253,004	1,705,691	1,299,610	73.4
Proprietors and firm members.....	127	167	159	-20.1	Wages.....	7,580,724	3,238,487	2,824,224	168.4
Salaried employees.....	1,183	1,337	1,164	1.6	Cost of materials.....	74,493,632	53,098,330	45,094,837	65.2
Wage earners (average number).....	6,366	5,105	4,768	33.8	Value of products.....	92,840,368	65,164,466	56,212,973	65.2
Capital.....	\$32,111,789	\$23,210,909	\$18,236,050	78.1	Value added by manufacture.....	18,346,786	12,086,136	11,118,136	65.0

¹ Includes 1 establishment engaged in custom curing.² A minus sign (—) denotes decrease.

TABLE 3.—ESTABLISHMENTS ENGAGED IN CUSTOM SLAUGHTERING ONLY: 1919, 1914, AND 1909.

	1919	1914	1909	Percent of increase, 1909-1919.		1919	1914	1909	Percent of increase, 1909-1919.
Number of establishments.....	33	33	31	6.5	Salaries and wages.....	\$991,225	\$387,368	\$275,887	259.3
Persons engaged.....	917	623	488	87.9	Salaries.....	117,250	61,487	53,477	119.3
Proprietors and firm members.....	10	15	.....	.....	Wages.....	873,975	325,881	222,410	293.0
Salaried employees.....	82	55	55	49.1	Cost of materials.....	868,999	452,326	136,538	536.5
Wage earners (average number).....	825	553	433	90.5	Value of products.....	2,375,034	1,157,698	653,042	263.7
Capital.....	\$2,471,339	\$1,540,013	\$1,196,346	106.6	Value added by manufacture.....	1,508,035	705,372	516,504	191.6

SLAUGHTERING AND MEAT PACKING.

47

TABLE 4.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.				STATE.	Number of establishments.	WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Average number.	Per cent distribution.	Rank.			Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.						
United States.....	1,304	160,996	100.0	....	\$4,246,291	100.0	....	\$463,361	100.0	...	Oregon.....	21	772	0.5	22	\$15,868	0.4	23	\$2,119	0.5	22				
Illinois.....	72	54,179	33.7	1	1,284,103	30.2	1	141,153	30.5	1	Kentucky.....	26	450	0.3	27	12,954	0.3	24	2,295	0.5	24						
Kansas.....	28	17,805	11.1	2	427,693	10.1	2	39,804	8.6	2	Utah.....	11	446	0.3	28	11,124	0.3	25	1,092	0.2	29						
Nebraska.....	16	10,122	6.3	3	303,849	7.2	3	32,387	7.0	3	Georgia.....	7	869	0.5	21	8,142	0.2	27	1,378	0.3	26						
New York.....	130	6,646	4.1	6	256,038	6.0	4	25,690	5.6	4	Virginia.....	25	502	0.3	26	7,689	0.2	28	1,362	0.3	27						
Missouri.....	49	8,290	5.1	4	246,610	5.8	5	18,601	4.0	7	Montana.....	12	210	0.1	34	6,859	0.2	29	1,035	0.2	30						
Iowa.....	21	7,134	4.4	5	226,362	5.3	6	21,941	4.7	5	Rhode Island.....	22	264	0.2	32	0,807	0.2	30	839	0.2	31						
Ohio.....	141	5,336	3.3	8	170,538	4.0	7	19,739	4.3	6	Alabama.....	9	549	0.3	25	6,125	0.1	31	1,237	0.3	28						
Minnesota.....	13	5,231	3.2	9	146,361	3.4	8	17,855	3.9	9	Tennessee.....	16	331	0.2	31	5,706	0.1	32	740	0.2	33						
Indiana.....	57	5,691	3.5	7	134,029	3.2	9	12,339	2.7	12	Florida.....	8	348	0.2	30	5,816	0.1	33	500	0.1	34						
Texas.....	19	5,072	3.2	10	125,192	2.9	10	18,440	4.0	8	Dist. of Columbia..	6	203	0.1	35	5,012	0.1	34	784	0.2	32						
Pennsylvania.....	176	4,438	2.8	11	122,862	2.9	11	15,581	3.4	10	Delaware.....	15	117	0.1	39	3,285	0.1	35	426	0.1	35						
Massachusetts.....	40	4,307	2.7	12	110,238	2.6	12	9,003	1.9	16	Nevada.....	4	118	0.1	38	2,939	0.1	36	215	(1)	41						
New Jersey.....	40	3,566	2.2	13	110,221	2.6	13	9,817	2.1	14	Maine.....	17	123	0.1	37	2,043	(1)	37	395	0.1	37						
Wisconsin.....	21	3,218	2.0	15	102,182	2.4	14	12,278	2.6	13	Idaho.....	12	89	0.1	40	1,791	(1)	39	350	0.1	38						
California.....	91	3,405	2.1	14	92,554	2.2	15	15,138	3.3	11	Arizona.....	4	57	(1)	42	1,406	(1)	40	226	(1)	40						
Michigan.....	24	1,712	1.1	18	59,585	1.4	16	9,810	2.1	15	Arkansas.....	7	59	(1)	41	1,218	(1)	41	243	0.1	39						
Maryland.....	47	1,563	1.0	19	41,439	1.0	18	7,919	1.7	17	Louisiana.....	3	248	0.2	33	849	(1)	42	403	0.1	36						
Colorado.....	21	1,848	1.1	17	41,008	1.0	19	5,222	1.1	19	North Carolina....	4	45	(1)	43	457	(1)	43	134	(1)	43						
Washington.....	29	1,222	0.8	20	34,389	0.8	20	5,204	1.1	18	All other states....	24	3,772	2.3	....	86,734	2.0	....	7,062	1.5	....					
West Virginia.....	10	639	0.4	24	19,044	0.4	21	2,245	0.5	23																	

¹ Less than one-tenth of 1 per cent.

TABLE 5.—VALUE OF PRODUCTS, FOR SIX LEADING CITIES: 1919 AND 1914.

CITY.	VALUE OF PRODUCTS.		PER CENT OF TOTAL FOR THE UNITED STATES.		CITY.	VALUE OF PRODUCTS.		PER CENT OF TOTAL FOR THE UNITED STATES.	
	1919	1914	1919	1914		1919	1914	1919	1914
United States.....	\$4,246,290,614	\$1,651,965,424	100.0	100.0	Omaha.....	\$283,092,054	(¹)	6.8	....
Total for six leading cities.....	2,138,971,585	710,820,350	50.4	43.0	New York.....	185,244,898	\$107,659,229	4.4	6.5
Chicago.....	1,083,090,049	394,748,592	25.5	23.9	Indianapolis.....	104,805,746	37,780,039	2.5	2.3
Kansas City.....	381,604,618	133,826,338	9.0	8.1	St. Louis.....	96,044,220	36,506,152	2.3	2.2
					All other.....	2,107,319,029	941,145,074	49.6	57.0

¹ Not available.

MANUFACTURES.

TABLE 6.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	
					Male.	Fe- male.						Male.	Fe- male.
All classes.....	1919	197,392	174,196	23,196	88.2	11.8	Clerks and other subordinate salaried employees.	1919	29,657	23,390	6,267	78.9	21.1
	1914	121,729	112,717	9,012	92.6	7.4		1914	19,689	17,182	2,507	87.3	12.7
	1909	106,971	98,723	7,248	93.2	6.8		1909	15,213	13,614	1,599	89.5	10.5
Proprietors and officials.....	1919	6,739	6,665	74	98.9	1.1	Wage earners (average number)...	1919	160,996	144,141	16,855	89.5	10.5
	1914	3,208	3,157	51	98.4	1.6		1914	98,832	92,378	6,454	93.5	6.5
	1909	2,946	2,907	38	98.7	1.3		1909	87,813	82,202	5,611	93.6	6.4
Proprietors and firm members....	1919	1,071	1,055	16	98.5	1.5	16 years of age and over	1919	160,789	143,961	16,828	89.5	10.5
	1914	1,157	1,129	28	97.6	2.4		1914	98,589	92,187	6,402	93.5	6.5
	1909	1,170	1,151	19	98.4	1.6		1909	87,817	81,747	5,570	93.6	6.4
Salaried officers of corporations...	1919	1,048	1,019	29	97.2	2.8	Under 16 years of age.....	1919	207	180	27	87.0	13.0
	1914	736	715	21	97.1	2.9		1914	243	191	52	78.6	21.4
	1909	696	677	19	97.3	2.7		1909	496	455	41	91.7	8.3
Superintendents and managers...	1919	4,620	4,591	29	99.4	0.6							
	1914	1,315	1,313	2	99.9	0.2							
	1909	1,079	1,079	.....	100.0	.....						

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATE.	Aver- age num- ber em- ployed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent mini- mum is of maxi- mum.
		Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Sep- tember.	Octo- ber.	Novem- ber.	Decem- ber.	
United States:														
1919.....	160,996	187,609	171,452	163,025	<i>150,806</i>	151,252	157,358	157,938	156,304	154,147	155,398	158,859	167,804	80.4
Male.....	144,141	165,028	151,902	145,954	<i>135,909</i>	136,820	142,224	142,895	140,957	138,076	139,110	140,480	150,237	82.4
Female.....	16,855	22,581	19,550	17,071	<i>14,897</i>	14,432	15,134	15,043	15,347	15,471	16,288	18,379	17,567	66.0
1914.....	98,832	106,613	103,062	99,638	<i>94,090</i>	91,973	95,108	94,848	<i>91,292</i>	95,128	101,938	103,859	108,440	84.2
1909.....	87,813	92,804	90,332	86,032	<i>82,708</i>	82,862	84,989	84,800	84,502	87,525	90,517	92,447	94,162	87.8
California.....	3,405	3,526	3,433	3,545	3,341	3,312	3,326	3,271	3,353	3,324	3,441	3,470	3,518	92.3
Colorado.....	1,848	1,981	1,979	1,823	1,823	1,826	1,812	1,762	1,798	1,850	1,878	1,779	1,859	88.0
Illinois.....	54,179	65,114	59,864	55,397	<i>50,048</i>	51,711	52,297	52,435	52,671	52,946	53,729	53,509	53,509	76.9
Indiana.....	5,691	6,064	6,072	5,738	5,359	5,634	5,664	5,599	5,291	5,396	5,500	5,489	5,916	79.4
Iowa.....	7,134	8,170	7,737	7,499	6,706	6,715	7,104	7,151	6,487	6,032	6,041	7,292	8,054	73.8
Kansas.....	17,805	21,817	18,156	17,249	<i>15,656</i>	16,056	17,075	16,988	17,081	16,801	17,007	20,000	19,974	72.4
Maryland.....	1,563	1,497	1,462	1,475	1,485	1,507	1,518	1,545	1,575	1,584	1,670	1,703	1,735	84.3
Massachusetts.....	4,307	5,354	5,319	5,165	4,608	4,453	4,624	4,741	4,523	4,232	3,655	1,601	3,509	28.0
Michigan.....	1,712	1,942	1,774	1,706	1,480	1,466	1,681	1,594	1,619	1,643	1,644	1,923	2,073	70.7
Minnesota.....	5,231	5,843	5,379	5,389	4,989	4,365	4,870	5,091	5,022	4,858	4,953	5,505	6,018	80.7
Missouri.....	8,290	9,805	9,012	8,415	7,802	7,909	8,170	8,063	8,205	7,981	<i>7,654</i>	7,875	8,589	78.1
Nebraska.....	10,122	11,158	10,675	10,635	9,988	9,553	10,252	10,134	10,024	9,806	<i>9,643</i>	9,590	10,200	85.5
New Jersey.....	3,566	3,914	3,825	3,687	3,594	3,601	3,556	3,577	3,580	3,546	3,514	3,689	3,609	69.4
New York.....	6,648	6,306	6,735	6,901	6,505	6,464	6,798	6,701	6,747	6,714	6,716	6,734	6,823	83.3
Ohio.....	5,338	5,844	5,348	5,148	4,999	<i>4,096</i>	5,366	5,316	5,033	5,063	5,198	5,738	5,984	83.5
Pennsylvania.....	4,438	4,583	4,385	4,318	4,237	4,248	4,312	4,339	4,254	4,400	4,671	4,610	4,890	88.6
Texas.....	5,072	6,845	4,825	4,460	4,531	4,944	4,867	5,331	5,424	4,964	4,789	4,918	5,183	67.1
Washington.....	1,222	1,357	1,175	1,105	1,109	1,117	1,200	1,189	1,204	1,207	1,334	1,303	1,371	80.4
Wisconsin.....	3,218	4,197	3,639	3,220	2,762	3,001	3,473	3,329	2,543	<i>2,095</i>	2,566	3,683	4,120	49.9
States showing large proportion of females.														Per ct. av. is of state.
Illinois.....	7,048	9,022	8,611	7,394	6,233	6,172	6,105	6,117	6,565	6,739	7,005	7,394	6,619	13.0
Kansas.....	2,238	3,337	2,819	2,235	1,831	1,831	1,871	1,830	1,727	<i>1,672</i>	1,828	3,106	2,769	12.6
Nebraska.....	1,047	1,303	1,243	1,061	942	897	955	1,014	1,038	1,053	923	1,077	1,027	10.3

SLAUGHTERING AND MEAT PACKING.

49

TABLE 8.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Cen- sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—								STATE.	Cen- sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and un- der.	Be- tween 44and 48.	48. ¹	Be- tween 48and 54.	54.	Be- tween 54and 60.	60.	Over 60.				44 and un- der.	Be- tween 44and 48.	48. ¹	Be- tween 48and 54.	54.	Be- tween 54and 60.	60.	Over 60.
United States..	1919	160,996	4,791	1,859	128,795	5,850	5,017	4,041	10,364	273	Minnesota.....	1919	5,231	.....	.....	5,059	.....	103	45	3	21
	1914	98,832	(²)	(²)	4,728	3,263	13,188	8,734	68,019	600		1914	2,565	.....	.....	15	.....	4	8	2,638	.....
	1900	87,813	(²)	(²)	4,787	4,068	10,267	4,113	63,572	1,006	Missouri.....	1919	8,290	142	.....	8,000	28	18	10	32	.....
California.....	1919	3,405	211	71	2,789	35	224	16	31	28		1914	5,152	(²)	(²)	625	84	785	1,827	1,729	102
	1914	2,172	(²)	(²)	200	32	425	220	1,243	43	Nebraska.....	1919	10,122	20	.....	7,530	2	17	43	2,504	.....
Colorado.....	1919	1,848	2	.....	1,804	8	14	.....	20	.....		1914	5,713	(²)	(²)	6	.....	3	.....	6,702	2
	1914	777	(²)	(²)	1	281	13	.....	470	3	New Jersey.....	1919	3,566	180	8	3,233	40	42	23	40	.....
Illinois.....	1919	54,179	1,222	76	49,017	3,504	245	22	93	.....		1914	2,033	(²)	(²)	450	15	23	240	1,225	71
	1914	31,315	(²)	(²)	1,007	442	1,006	2,700	26,027	43	New York.....	1919	6,646	321	.....	3,815	667	331	134	1,377	1
Indiana.....	1919	5,691	5	671	4,062	44	311	133	382	83		1914	6,245	(²)	(²)	1,332	952	588	2,791	41	.....
	1914	4,481	(²)	(²)	37	14	137	373	3,577	43	Ohio.....	1919	5,336	915	137	1,460	547	1,174	385	693	16
Iowa.....	1919	7,134	136	.....	5,190	.....	26	41	1,741	.....		1914	3,480	(²)	(²)	110	6	635	459	2,260	1
	1914	4,413	(²)	(²)	7	.....	207	.....	4,194	5	Pennsylvania....	1919	4,438	634	453	781	141	618	1,062	735	14
Kansas.....	1919	17,805	.....	.....	17,366	343	22	.....	74	.....		1914	3,015	(²)	(²)	47	.....	507	2,386	437	.....
	1914	9,884	(²)	(²)	739	.....	3,284	2	5,759	.....	Texas.....	1919	5,072	247	.....	4,422	287	45	42	29	.....
Maryland.....	1919	1,563	203	.....	559	7	101	266	417	10		1914	3,480	(²)	(²)	21	57	2,066	.....	712	.....
	1914	1,221	(²)	(²)	11	6	98	224	879	3	Washington.....	1919	1,222	4	.....	785	5	422	.....	0	.....
Massachusetts..	1919	4,307	409	.....	3,832	36	27	.....	3	.....		1914	864	.....	.....	.....	.....	100	704	.....	.....
	1914	3,233	(²)	(²)	42	28	995	967	1,201	.....	Wisconsin.....	1919	3,218	9	74	2,561	.....	69	440	56	.....
Michigan.....	1919	1,712	13	.....	55	2	365	608	669	.....		1914	2,011	(²)	(²)	5	.....	866	102	1,038	.....
	1914	1,112	(²)	(²)	9	.....	30	3	1,070	.....										

¹ Includes 48 and under for 1914 and 1900.

² Corresponding figures not available.

TABLE 9.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																	
	Establishments.	Wage earners (average number).	No wage earners.		1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States..1919..	1,304	100,996	92	515	1,235	303	3,512	136	4,476	92	6,648	63	10,095	39	13,272	26	18,379	38	103,409	
1914..	1,279	98,832	65	555	1,317	307	3,503	145	4,789	82	5,868	51	8,174	30	10,423	22	16,428	22	48,327	
California.....	91	3,405	5	40	81	27	318	10	289	2	155	3	534	2	654	2	1,374	.....	.....
Colorado.....	21	1,848	2	11	41	2	21	2	63	.....	.....	2	253	.....	.....	2	1,470	.....	.....
Illinois.....	72	54,179	1	7	18	12	171	11	384	15	1,043	6	1,081	9	3,255	2	1,076	9	46,551	
Indiana.....	57	5,691	1	21	65	16	179	8	267	3	225	6	946	.....	.....	1	600	1	3,349
Iowa.....	21	7,134	.....	3	7	6	64	2	92	1	59	2	311	2	730	1	585	4	5,286
Kansas.....	28	17,805	1	5	18	6	56	5	171	1	76	1	164	2	716	2	1,702	5	14,902	
Maryland.....	47	1,563	2	25	60	7	81	4	139	2	138	6	855	1	290	.....	.....	.....	.....
Massachusetts..	40	4,307	3	19	37	8	88	3	108	1	74	1	153	3	1,008	.....	2	2,839	.....
Michigan.....	24	1,712	2	9	25	8	103	1	31	1	83	.....	.....	1	271	2	1,198	.....	.....
Minnesota.....	13	5,231	.....	3	8	2	23	3	90	1	92	1	144	1	362	.....	2	4,512	.....
Missouri.....	49	8,290	6	19	33	7	72	7	258	3	222	1	114	1	407	2	1,807	3	5,217	
Nebraska.....	16	10,122	.....	8	23	4	38	1	40	.....	.....	.....	.....	.....	1	501	4	9,520	.....
New Jersey.....	45	3,566	1	15	36	18	206	3	125	2	157	2	325	3	979	1	615	1	1,122	
New York.....	130	6,646	17	44	98	34	384	9	280	16	1,158	4	725	1	319	4	2,463	1	1,219	
Ohio.....	141	5,336	14	54	147	31	368	21	635	12	853	6	758	.....	.....	3	2,545	.....	.....
Pennsylvania....	176	4,438	18	91	185	33	302	13	386	9	575	7	1,111	4	1,281	1	508	.....	.....
Texas.....	19	5,072	.....	3	13	6	76	4	140	2	181	2	493	1	287	.....	2	3,882	.....
Washington.....	29	1,222	3	13	39	5	42	1	23	3	198	2	307	2	608	.....	2	2,455	.....
Wisconsin.....	21	3,218	2	6	14	5	42	2	61	3	212	.....	.....	1	434	.....	.....	.....	.....

MANUFACTURES.

TABLE 10.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
United States.....	1,304	1,279	1,221	160,996	98,832	87,813	\$4,246,290,614	\$1,651,965,424	\$1,355,544,431	\$463,361,081	\$210,302,766	\$164,106,355
Less than \$5,000.....	21	25	16	7	25	26	62,774	82,330	45,909	22,692	30,378	25,529
\$5,000 to \$20,000.....	120	182	134	149	322	268	1,579,512	2,170,193	1,787,909	421,011	584,890	459,298
\$20,000 to \$100,000.....	338	427	438	978	1,815	1,000	18,426,088	21,631,136	22,239,416	3,412,419	3,988,776	4,095,709
\$100,000 to \$500,000.....	385	357	407	4,350	8,379	9,207	104,143,021	91,527,810	155,039,724	15,518,572	19,337,068	21,848,085
\$500,000 to \$1,000,000.....	121	82	166	2,942	88,291	76,412	84,007,399	58,345,904	1,170,461,413	11,355,429	432,630,958	186,361,664
\$1,000,000 and over.....	310	206	166	152,560	88,291	76,412	4,087,470,323	1,478,208,045	1,170,461,413	432,630,958	186,361,664	138,177,674
PER CENT DISTRIBUTION.												
United States.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	1.6	2.0	1.3	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
\$5,000 to \$20,000.....	9.9	14.2	11.0	0.1	0.3	0.3	(1)	0.1	0.1	0.1	0.3	0.3
\$20,000 to \$100,000.....	25.9	33.4	35.9	0.6	1.8	2.2	0.4	1.3	1.6	0.7	1.9	2.5
\$100,000 to \$500,000.....	29.5	27.9	38.2	2.7	8.5	10.5	2.5	5.5	11.4	3.3	9.2	13.0
\$500,000 to \$1,000,000.....	9.3	6.4	13.6	1.8	8.5	10.5	2.0	3.5	80.8	2.5	88.6	84.2
\$1,000,000 and over.....	23.8	16.1	13.6	94.8	89.3	87.0	95.1	89.5	80.8	93.4	88.6	84.2

1 Less than one-tenth of 1 per cent.

TABLE 11.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	NUMBER OF ESTABLISH- MENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.							VALUE OF PRODUCTS.						
		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.		
						Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Individ- uals.	Corpora- tions.	All others.	Indi- vid- uals.	Corpora- tions.	All oth- ers.
United States.....	1910 1914 1909	451 604 494	582 494 450	241 281 277	160,996 98,832 87,813	3,267 3,769 3,925	155,379 91,056 79,831	2,350 4,007 4,057	2.0 3.8 4.5	96.5 92.1 90.9	1.5 4.1 4.6	\$4,246,290,614 1,651,965,424 1,355,544,431	\$110,822,752 69,133,795 68,626,256	\$4,049,077,511 1,505,177,105 1,211,015,811	\$36,390,351 77,654,464 75,903,364	2.6 4.2 5.1	95.4 91.1 89.3	2.0 4.7 5.6
California.....	1919 1914	34 35	43 38	14 15	3,405 2,220	298 222	2,988 1,811	119 187	8.8 10.0	87.8 81.6	3.5 8.4	92,554,164 50,011,820	9,179,749 6,318,512	75,384,796 37,791,080	7,989,619 5,902,228	9.9 12.6	81.4 75.6	8.0 11.8
Illinois.....	1919 1914	7 28	57 55	8 16	54,179 31,627	454 671	53,530 30,709	195 247	0.8 2.1	98.8 97.1	0.4 0.8	1,284,103,016 489,230,324	20,949,930 11,846,275	1,256,948,300 474,026,283	6,204,720 3,367,763	1.6 2.4	97.9 96.9	0.5 0.7
Indiana.....	1919 1914	14 21	26 23	17 24	5,691 4,484	72 111	5,463 4,228	156 145	1.3 2.5	96.0 94.3	2.7 3.2	134,028,726 51,065,774	1,835,643 1,321,420	127,988,923 47,375,495	4,204,160 2,368,869	1.4 2.6	95.5 92.8	3.1 4.6
Iowa.....	1919 1914	2 11	15 15	4 7	7,134 4,430	176	6,958 3,246	118 1,184	2.5 73.3	97.5 26.7	.....	226,361,698 74,289,887	1,427,569 56,374,518	222,134,129 217,914,869	.....	1.9 75.9	98.1 24.1	.....
Kansas.....	1919 1914	5 6	17 15	6 5	17,805 9,884	39 28	17,729 9,808	87 48	0.2 0.3	99.6 99.2	0.2 0.5	427,663,145 151,647,123	688,604 331,031	425,683,369 150,606,933	1,291,112 709,159	0.2 0.2	99.5 99.3	0.3 0.5
Maryland.....	1919 1914	24 36	13 12	10 12	1,563 1,292	241 444	1,237 753	85 90	15.4 34.4	79.1 58.7	5.4 7.0	41,439,448 17,099,968	6,394,153 6,290,152	32,295,912 9,034,854	2,749,383 1,774,962	15.4 36.8	77.9 52.8	6.6 10.4
Massachusetts.....	1919 1914	22 65	13 26	5 10	4,807 3,582	83 242	4,178 3,224	46 116	1.9 6.8	97.0 90.0	1.1 3.2	110,238,038 54,446,687	3,030,961 2,292,794	106,246,640 50,597,928	960,428 1,555,965	2.7 4.2	96.4 92.9	0.9 2.9
Michigan.....	1919 1914	11 20	10 8	3 8	1,712 1,181	159 43	1,563 1,092	..... 46	3.4 3.6	96.6 92.5	..... 3.9	59,584,740 21,206,915	2,157,617 650,577	57,427,123 20,116,733	499,605	3.0 3.1	96.4 94.6	..... 2.3
Minnesota.....	1919 1914	3 11	7 9	3 9	5,231 2,687	189 47	5,142 2,469	..... 81	1.7 1.8	98.3 95.1	..... 3.1	146,361,046 47,710,059	3,844,326 614,397	142,516,720 45,042,451	..... 1,453,181	2.6 1.3	97.4 95.7	..... 3.0
Missouri.....	1919 1914	21 10	25 24	3 6	8,290 5,200	149 28	8,241 5,139	..... 33	0.6 0.5	99.4 98.8	..... 0.6	246,610,195 92,060,499	1,719,239 392,938	244,890,955 91,192,177	..... 475,384	0.7 0.4	99.3 99.1	..... 0.5
Nebraska.....	1919 1914	3 3	8 6	5 1	10,122 5,713	135 117	10,087 5,696	.....	0.3 0.3	99.7 99.7	.....	303,848,903 104,508,333	1,229,528 511,591	302,619,375 103,991,742	.....	0.4 0.5	99.6 99.5	.....
New Jersey.....	1919 1914	17 52	22 22	7 16	3,566 2,197	104 171	3,292 1,799	170 227	2.9 7.8	92.3 81.9	4.8 10.3	110,221,328 40,108,471	5,247,614 3,080,998	95,315,116 30,506,824	9,658,598 6,620,649	4.8 7.7	86.5 76.1	8.8 16.3
New York.....	1919 1914	58 214	46 55	26 68	6,646 6,641	272 983	6,047 5,023	327 635	4.1 14.8	91.0 75.6	4.9 9.6	256,038,393 148,105,659	12,830,841 18,241,291	228,233,892 113,630,919	15,267,660 16,333,449	4.9 12.3	89.1 76.7	6.0 11.0
Ohio.....	1919 1914	54 84	54 51	33 34	5,836 3,619	319 350	4,835 3,108	182 161	6.0 9.7	90.6 85.9	3.4 4.4	170,337,892 60,074,379	12,481,613 6,758,736	147,893,255 54,682,018	9,993,024 5,283,625	7.3 10.1	86.8 81.9	5.9 7.9
Pennsylvania.....	1919 1914	98 84	47 43	31 39	4,438 3,687	723 747	3,534 2,668	181 272	16.3 20.3	79.6 72.4	4.1 7.4	122,802,240 65,981,384	19,624,444 11,000,267	96,076,071 50,737,815	7,160,825 4,243,302	16.0 16.7	78.2 76.9	5.8 6.4
Wisconsin.....	1919 1914	6 21	8 13	7 12	3,218 2,236	11 149	3,101 2,019	106 68	0.3 6.7	96.4 90.3	3.3 3.0	102,182,171 34,697,955	458,297 1,875,208	99,199,208 32,005,258	2,524,666 817,489	0.4 5.4	97.1 92.2	2.5 2.4

1 Includes the group "All others."

2 Includes the group "Individuals."

SLAUGHTERING AND MEAT PACKING.

51

TABLE 12.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	10,766	5,095	2,766	359,212	253,066	202,432	100.0	100.0	100.0
Owned.....	1,812	1,055	1,067	240,609	212,963	189,100	67.0	84.2	93.4
Steam.....	1,711	1,556	1,566	288,017	210,536	187,324	66.3	83.2	92.5
Engines.....	1,563	(2)	(2)	210,348	(2)	(2)	58.6	.....	.....
Turbines.....	148	(2)	(2)	27,689	(2)	(2)	7.7	.....	.....
Internal-combustion engines.....	92	96	67	2,018	2,412	1,744	0.6	1.0	0.9
Water wheels, turbines, and motors.....	9	3	4	574	15	41	0.2	(*)	(*)
Rented.....	8,954	3,440	1,090	118,603	40,103	13,323	33.0	15.8	6.6
Electric.....	8,954	3,440	1,090	117,913	39,116	12,588	32.8	15.5	6.2
Other.....	.....	.....	.....	690	987	735	0.2	0.4	0.4
Electric.....	16,491	9,843	5,498	213,548	117,810	76,124	100.0	100.0	100.0
Rented.....	8,954	3,440	1,090	117,913	39,116	12,588	55.2	33.2	16.5
Generated by establishments reporting.....	7,537	6,403	4,399	95,635	78,694	63,536	44.8	66.8	83.5

1 Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power. 2 Not reported separately. 3 Less than one-tenth of 1 per cent.

TABLE 13.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States.....	1919	222,891	3,802,849	32,170	1,890,794	21,725	1,291,318
	1914	222,975	2,786,196	13,859	1,201,456	(1)	2,014,965
California.....	1919	42	92	.....	214,197	1,595	55,788
	1914	30	135	10	204,169	(1)	4,513
Colorado.....	1919	.....	68,433	4,427	20	1	470
	1914	.....	43,542	.....	.....	.....	161
Illinois.....	1919	.....	1,550,216	935	48,440	1,035	136,099
	1914	5,161	1,024,711	9,410	1,267	(1)	197,411
Indiana.....	1919	.....	178,222	.....	.....	128	21,542
	1914	.....	149,793	.....	148	(1)	632
Iowa.....	1919	500	219,072	100	.....	317	28,666
	1914	.....	222,726	60	80	(1)	1,621
Kansas.....	1919	.....	325,831	.....	502,089	1,432	33,266
	1914	289	235,496	932	484,806	(1)	17,995
Maryland.....	1919	3,772	48,461	.....	12	21	299
	1914	.....	45,858	1,446	172	(1)	270
Massachusetts.....	1919	66,313	12,597	120	.....	110	2,024
	1914	52,300	4,525	.....	17	(1)	180
Michigan.....	1919	39	32,576	.....	101	.....	3,772
	1914	28	27,887	.....	4	(1)	.....
Minnesota.....	1919	221	163,863	12	.....	220	9,818
	1914	.....	70,070	.....	62	(1)	3,306
Missouri.....	1919	.....	266,986	530	170,100	2	24,512
	1914	.....	223,102	.....	73,416	(1)	195,771
Nebraska.....	1919	.....	277,825	5	48,410	1,403	9,143
	1914	.....	245,354	.....	.....	.....	.....
New Jersey.....	1919	52,474	41,685	3,087	200	300	2,448
	1914	62,001	11,439	.....	79	(1)	3,351
New York.....	1919	64,632	115,434	4,327	49	1,066	36,938
	1914	68,689	84,833	1,042	632	(1)	24,389
Ohio.....	1919	.....	148,512	204	1,054	2,397	71,483
	1914	5	91,169	200	75	(1)	368,369
Pennsylvania.....	1919	31,314	108,778	106	235	9,318	31,356
	1914	33,751	80,085	140	182	(1)	19,180
Texas.....	1919	.....	23,257	8,018	545,885	742	268,952
	1914	.....	62,715	.....	400,703	(1)	77,115
Washington.....	1919	.....	12,863	2,100	1	50	100
	1914	.....	10,489	.....	.....	.....	.....
Wisconsin.....	1919	162	88,605	.....	6	(1)	.....
	1914	137	51,842	.....	.....	.....	.....
All other states.....	1919	3,422	179,541	8,199	300,001	348	552,229
	1914	694	99,119	19	35,638	(1)	1,091,278

1 Included in figures for fuel oils.

SPECIAL STATISTICS.

Certain additional detailed information concerning the number, weight, and cost of animals slaughtered and the quantity and value of fresh and cured meats and other products of the industry was collected by means of supplemental schedules, data for which are presented in the following tables.

Materials—Quantity and cost.—The number and cost of animals slaughtered in 1919, 1914, 1909, and 1904 are presented, by classes, in Table 14.

The total number of animals slaughtered in 1919 was 73,256,127, and in 1914, 59,561,819, an increase of 13,694,308, or 23 per cent, in the five-year period. The largest increase, 10,078,813, was that for hogs and there was an actual decrease of 2,446,443 in the number of sheep and lambs.

TABLE 14.—MATERIALS—QUANTITY AND COST: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904
Materials, total cost.....	\$3,782,929,533	\$1,441,662,658	\$1,191,438,076	\$805,856,069
Animals slaughtered, cost.....	\$3,056,387,778	\$1,199,642,235	\$960,587,033	\$675,831,771
Bees—				
Number.....	1 10,818,511	1 7,149,042	8,114,860	7,147,835
Cost.....	\$1,055,739,469	\$490,108,203	\$392,127,010	\$289,040,930
Calves—				
Number.....	1 4,395,675	1 2,019,004	2,504,728	1,568,130
Cost.....	\$96,449,234	\$27,623,448	\$25,030,014	\$12,665,557
Sheep and lambs—				
Number.....	1 13,497,300	1 15,943,743	12,255,501	10,875,339
Cost.....	\$146,775,993	\$84,783,721	\$69,924,931	\$44,359,804
Hogs—				
Number.....	1 44,520,726	1 34,441,913	33,870,616	30,977,639
Cost.....	\$1,757,279,014	\$597,097,518	\$483,383,848	\$329,765,480
Goats and kids—				
Number.....	1 23,915	1 8,117	33,224	(3)
Cost.....	\$144,068	\$29,345	\$121,230	(3)
Poultry, cost.....	\$1,787,936	\$2,178,144	\$138,548	\$61,905
Dressed meat purchased, cost.....	\$299,089,389	\$124,334,708	\$93,409,286	\$53,114,957
All other materials, cost.....	\$425,664,480	\$115,507,481	\$137,303,209	\$76,818,336

¹ In addition, 553,839 bees, 387,692 calves, 289,128 sheep and lambs and goats and kids, and 2,290,539 hogs were slaughtered for others in 1919, and 377,937 bees, 243,360 calves, 795,519 sheep and lambs and goats and kids, and 2,898,994 hogs in 1914.

² Not reported separately.

³ Includes cost of animals other than those shown in detail.

The dressed meat purchased for curing was procured largely from slaughtering establishments which are included in this report, and therefore is duplicated in the total value of products. This item includes meat purchased for curing and canning, animal fats for the manufacture of lard, lard compounds and substitutes, oleo oil and stearin. This item increased \$174,754,591, or 140.6 per cent in the last census period. The cost of "All other materials" includes containers, materials for the manufacture of containers, ice, materials for the manufacture of ice, curing materials, cottonseed oil, butter, whole milk, fuel, rent of power, mill supplies, and freight.

As indicated by the table, from 1914 to 1919 the number of bees slaughtered increased 3,669,469, or 51.3 per cent, and their cost \$565,631,266, or 115.4 per cent; the number of calves, 2,376,671, or 117.7

per cent, and their cost \$68,825,786, or 249.2 per cent; hogs 10,078,813, or 29.3 per cent, and their cost \$1,160,181,496, or 194.3 per cent.

In addition to the animals enumerated in Table 14, there were 3,501,198 slaughtered in 1919 on a custom basis, in establishments included in this report. Of this number 1,305,885 were slaughtered in abattoirs doing custom killing exclusively, both for the wholesale and retail trade. This is a decrease of 902,192 from the number reported in 1914, and leads to the inference that the number of this class of establishments is declining.

The following statement gives the average cost on the hoof per animal and per pound of four classes for the last five censuses:

CLASS.	1919	1914	1909	1904	1899
AVERAGE LIVE COST PER HEAD.					
Bees.....	\$97.59	\$68.56	\$48.32	\$40.44	\$44.73
Calves.....	21.94	13.08	9.99	8.08	8.21
Sheep and lambs.....	10.87	5.32	4.89	4.05	4.05
Hogs.....	39.47	17.34	14.27	10.04	9.10
AVERAGE LIVE COST PER POUND.					
Bees.....	\$0.107	\$0.069	\$0.047	\$0.039	\$0.042
Calves.....	0.128	0.082	0.059	0.048	0.058
Sheep and lambs.....	0.139	0.067	0.061	0.047	0.048
Hogs.....	0.180	0.082	0.071	0.050	0.042

Gross and net weights of animals slaughtered.—The gross and net weights, in pounds, on the hoof and dressed, with average weights per head, of four classes of animals slaughtered in 1919, 1914, 1909, and 1904, are shown in Table 15.

TABLE 15.—GROSS AND NET WEIGHTS OF ANIMALS SLAUGHTERED: 1919, 1914, 1909, AND 1904.

CLASS.	1919	1914	1909	1904
BEEVES.				
Number.....	10,818,511	7,149,042	8,114,860	7,147,835
Weight on hoof, pounds.....	9,883,011,033	7,076,145,687	8,265,991,836	7,485,407,944
Average weight on hoof, pounds.....	912	990	1,019	1,047
Weight, dressed, pounds.....	5,118,728,572	3,786,382,187	4,400,718,922	4,066,264,877
Average weight, dressed, pounds.....	473	530	543	569
CALVES.				
Number.....	4,395,675	2,019,004	2,504,728	1,568,130
Weight on hoof, pounds.....	752,372,181	337,665,316	419,604,080	261,683,672
Average weight on hoof, pounds.....	171	167	168	167
Weight, dressed, pounds.....	457,469,662	206,311,127	262,315,076	161,049,581
Average weight, dressed, pounds.....	104	102	105	103
SHEEP AND LAMBS AND GOATS AND KIDS.				
Number.....	13,521,215	15,951,860	12,288,725	10,875,339
Weight on hoof, pounds.....	1,056,530,820	1,259,595,728	987,569,521	930,168,367
Average weight on hoof, pounds.....	78	79	80	86
Weight, dressed, pounds.....	500,610,006	629,723,014	496,640,869	484,872,621
Average weight, dressed, pounds.....	37	39	40	43
HOGS.				
Number.....	44,520,726	34,441,913	33,870,616	30,977,639
Weight on hoof, pounds.....	9,745,921,840	7,277,070,937	6,856,832,417	6,586,349,782
Average weight on hoof, pounds.....	219	211	202	213
Weight, dressed, pounds.....	7,358,910,897	5,476,236,776	5,201,902,778	5,048,832,850
Average weight, dressed, pounds.....	165	159	154	163

¹ Figures for goats and kids not available, probably included here.

SLAUGHTERING AND MEAT PACKING.

53

The net or dressed weight does not include edible offal. The net weight of calves and sheep and lambs includes in some cases the weight of skins and pelts, as they are sold on the carcass whenever they are intended for interstate shipment.

The average gross weight of beeves per animal has been decreasing since 1904. This is probably due to

the slaughter of baby beeves. The gross or market weight of this class has been estimated by the Department of Agriculture, for the United States, as 834 pounds.

Gross and net weights, by states.—In Table 16 are presented the gross and net weights, in pounds, of four classes, by states, for 1919, 1914, and 1909.

TABLE 16.—GROSS AND NET WEIGHTS OF ANIMALS SLAUGHTERED, BY STATES: 1919, 1914, AND 1909.

CLASS AND STATE.	1919		1914		1909	
	Gross.	Net.	Gross.	Net.	Gross.	Net.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Beeves, total.....	9,803,011,033	5,118,728,572	7,076,145,687	3,786,382,167	8,285,091,886	4,409,718,922
California.....	387,369,497	208,040,260	323,203,850	178,023,882	356,435,388	188,099,815
Colorado.....	135,446,610	69,857,508	62,578,982	33,853,114	64,095,177	34,382,622
Illinois.....	2,659,097,072	1,375,500,300	1,894,347,628	1,008,454,049	2,235,784,978	1,212,582,804
Indiana.....	220,032,101	114,763,421	184,243,730	96,571,044	230,630,010	121,258,601
Iowa.....	397,886,543	225,575,083	223,207,766	122,793,052	250,830,891	130,931,601
Kansas.....	1,308,139,052	674,440,623	946,715,069	505,538,585	1,367,045,707	729,200,917
Michigan.....	92,061,097	45,044,003	56,521,917	28,462,575	47,011,306	24,099,494
Minnesota.....	271,807,849	132,045,112	168,451,248	83,735,477	124,408,131	60,982,227
Missouri.....	593,081,874	306,088,837	342,001,498	187,655,121	525,710,468	278,418,625
Nebraska.....	930,241,870	494,180,420	520,098,198	287,010,102	687,973,475	368,610,331
New Jersey.....	127,522,502	60,833,293	43,868,265	24,140,172	63,914,730	35,050,003
New York.....	710,251,032	382,448,568	743,272,050	409,190,580	800,725,800	442,372,061
Ohio.....	341,344,727	171,806,469	252,380,479	130,020,938	248,940,915	123,282,567
Pennsylvania.....	259,505,948	132,199,421	256,499,534	135,082,921	270,612,910	145,127,584
Texas.....	445,018,500	224,330,620	432,897,416	221,521,566	452,881,856	225,871,758
Washington.....	129,087,817	67,497,004	91,201,768	49,507,085	128,278,131	71,147,120
Wisconsin.....	116,171,897	58,200,095	68,429,493	35,279,680	70,200,875	37,773,924
All other states.....	723,847,477	304,204,639	475,236,211	248,624,134	832,932,908	478,007,059
Calves, total.....	752,372,181	457,469,662	337,565,316	206,311,127	419,004,080	262,315,076
California.....	19,407,884	12,118,152	6,752,944	4,008,111	18,380,094	11,702,419
Colorado.....	6,091,156	3,189,183	836,334	2,272,580	2,272,580	1,383,005
Illinois.....	136,186,990	86,496,568	74,390,172	45,777,646	82,948,030	53,987,041
Indiana.....	10,180,441	5,977,507	8,916,009	5,325,010	9,060,243	5,505,485
Kansas.....	88,715,777	51,292,596	26,890,412	10,064,742	45,227,093	27,703,210
Maryland.....	8,154,052	4,529,054	3,173,175	1,615,635	2,657,387	1,521,061
Massachusetts.....	24,547,495	13,705,694	14,295,842	7,696,636	14,533,142	8,318,302
Michigan.....	11,520,056	7,238,061	4,107,437	2,800,785	3,831,261	2,004,124
Minnesota.....	43,017,042	27,823,427	11,894,252	7,775,268	9,095,834	5,739,653
Missouri.....	33,531,285	20,236,681	7,802,437	4,830,719	14,660,376	9,302,603
Nebraska.....	33,030,120	19,345,610	6,045,910	3,618,952	12,020,856	7,993,153
New Jersey.....	14,598,043	9,266,133	10,227,128	13,606,009	13,606,009	8,702,824
New York.....	89,437,057	56,267,955	59,004,341	37,471,922	57,359,815	36,791,701
Ohio.....	35,079,046	20,335,308	20,383,316	12,101,500	21,424,320	12,968,426
Pennsylvania.....	23,622,001	13,860,275	17,553,952	10,191,849	23,219,799	13,424,881
Texas.....	89,108,798	52,564,617	37,176,094	21,827,297	54,389,404	32,598,321
Wisconsin.....	31,973,599	21,931,530	11,762,528	8,106,515	14,780,228	10,225,760
All other states.....	54,743,534	32,291,227	15,721,773	9,573,606	19,218,549	11,782,476
Sheep and lambs, total.....	1,054,851,683	499,727,042	1,259,595,728	620,723,014	987,596,521	496,640,869
California.....	92,332,195	45,179,846	113,296,370	57,499,522	89,943,570	44,502,009
Colorado.....	17,522,758	8,274,902	7,144,811	3,290,103	4,997,460	2,407,445
Illinois.....	344,552,918	161,779,994	396,079,329	199,144,851	310,824,806	158,420,118
Iowa.....	21,986,780	10,638,388	26,111,904	12,482,980	4,381,486	1,857,387
Kansas.....	93,046,082	43,448,346	119,650,226	59,516,071	87,549,179	43,816,825
Massachusetts.....	16,497,305	8,091,291	32,304,584	14,715,201	25,953,907	13,345,490
Michigan.....	11,834,602	5,351,292	10,130,365	4,782,158	6,969,398	3,598,844
Minnesota.....	16,967,170	7,762,878	17,873,462	8,511,323	11,667,016	5,655,958
Missouri.....	57,443,062	27,662,250	59,453,486	30,410,705	42,905,028	21,820,210
Nebraska.....	125,810,414	59,354,852	145,095,274	72,486,249	94,297,114	45,386,112
New Jersey.....	31,153,792	14,313,472	29,029,086	15,429,086	32,209,592	16,234,014
New York.....	113,229,112	53,680,880	140,521,113	72,958,706	155,884,208	80,668,901
Ohio.....	19,417,513	9,747,925	21,962,827	10,446,357	15,806,887	7,693,744
Pennsylvania.....	21,776,751	10,587,249	33,005,842	16,102,556	35,193,551	17,361,840
Texas.....	13,621,490	6,601,429	22,635,046	11,420,844	6,487,560	2,968,809
Washington.....	20,751,906	9,723,654	33,593,116	16,806,582	25,849,187	13,297,291
All other states.....	36,907,833	17,448,393	50,707,288	24,653,920	35,998,012	17,675,321

MANUFACTURES.

TABLE 16.—GROSS AND NET WEIGHTS OF ANIMALS SLAUGHTERED, BY STATES: 1919, AND 1909—Continued.

CLASS AND STATE.	1919		1914		1909	
	Gross.	Net.	Gross.	Net.	Gross.	Net.
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
Hogs, total.....	9,745,921,840	7,358,910,897	7,277,670,937	5,476,236,776	6,856,832,417	5,201,902,778
California.....	89,634,801	64,850,875	70,174,380	52,830,882	62,527,587	46,631,388
Colorado.....	86,400,977	66,169,280	58,081,786	43,716,326	58,950,395	43,953,370
Illinois.....	2,442,004,157	1,849,006,662	1,653,498,581	1,241,381,168	1,535,959,595	1,149,193,004
Indiana.....	436,426,011	351,897,789	370,586,260	286,807,844	364,178,272	287,559,440
Iowa.....	789,960,312	579,452,827	569,387,634	421,324,109	555,200,081	419,735,891
Kansas.....	975,469,217	705,721,410	567,953,750	405,928,861	836,207,888	615,127,325
Maryland.....	86,223,380	62,602,379	85,163,744	63,141,979	73,635,684	54,792,707
Massachusetts.....	341,784,003	257,851,385	314,327,969	246,411,940	348,330,075	271,634,381
Michigan.....	189,958,806	144,555,063	148,686,550	109,897,029	85,852,343	64,959,972
Minnesota.....	505,259,121	390,818,720	353,862,859	273,102,774	210,518,286	159,800,532
Missouri.....	756,619,010	582,117,096	582,366,300	446,152,081	511,926,108	398,239,522
Nebraska.....	720,638,077	532,143,359	605,997,761	399,276,188	483,734,281	355,008,890
New Jersey.....	188,010,605	136,368,736	187,027,738	139,587,289	166,930,287	125,999,812
New York.....	300,811,743	232,113,979	308,593,639	238,806,367	318,476,443	235,064,832
Ohio.....	523,802,338	411,887,018	393,274,969	295,612,065	333,545,643	261,173,211
Pennsylvania.....	290,241,330	218,002,287	283,203,738	217,544,102	214,940,092	167,762,367
Texas.....	128,456,461	95,061,469	108,159,489	78,447,373	178,034,691	139,981,230
Washington.....	61,182,579	42,380,020	75,863,170	51,031,927	50,496,743	39,289,779
West Virginia.....	71,289,801	53,105,517	41,969,080	32,477,023	30,220,850	24,150,880
Wisconsin.....	317,394,471	245,408,588	251,371,421	196,356,730	231,152,827	182,767,219
All other states.....	444,294,640	336,376,432	350,112,008	260,505,086	206,013,716	157,786,937

Animals slaughtered, by states.—Table 17 presents, by states, the number and cost of the principal kinds of animals slaughtered in 1919, and the number in 1914 and 1909. The states selected are those in which the minimum of 100,000 beeves, 50,000 calves, 100,000 sheep and lambs, and 200,000 hogs were slaughtered in 1919.

TABLE 17.—ANIMALS SLAUGHTERED, BY STATES: 1919, 1914, AND 1909.

CLASS AND STATE.	1919		1914	1909
	Cost.	Number.	Number.	Number.
Beeves, total.....	\$1,055,739,469	10,818,511	7,149,042	8,114,860
California.....	39,576,429	395,524	315,762	341,617
Colorado.....	12,986,062	145,694	62,735	64,308
Illinois.....	292,428,922	2,887,414	1,894,982	2,181,199
Indiana.....	22,844,736	271,004	200,180	252,697
Iowa.....	41,943,020	437,055	219,359	252,821
Kansas.....	135,490,811	1,479,805	990,188	1,362,572
Michigan.....	8,632,036	108,975	62,035	50,187
Minnesota.....	23,500,100	299,462	106,908	125,852
Missouri.....	61,904,149	674,287	359,010	530,356
Nebraska.....	102,233,077	1,006,654	491,032	651,258
New Jersey.....	18,413,023	110,066	37,903	53,234
New York.....	99,271,131	661,518	636,389	668,447
Ohio.....	35,531,201	410,680	299,719	205,191
Pennsylvania.....	31,077,651	257,008	236,940	252,897
Texas.....	39,926,332	550,550	554,479	527,469
Washington.....	12,672,900	132,213	85,774	117,522
Wisconsin.....	10,601,787	123,316	70,900	73,049
All other states.....	60,626,102	898,686	523,243	344,214
Calves, total.....	96,449,234	4,395,675	2,019,004	2,504,728
California.....	2,110,967	89,080	81,834	81,344
Illinois.....	17,310,534	839,604	439,616	513,639
Indiana.....	1,427,568	55,537	61,500	60,578
Kansas.....	9,444,961	386,971	130,102	209,357
Maryland.....	1,365,074	60,530	26,278	23,137
Massachusetts.....	3,060,196	244,394	115,724	129,102
Michigan.....	1,876,206	74,242	24,605	27,284
Minnesota.....	5,655,226	187,753	79,599	55,091
Missouri.....	3,827,762	177,753	45,213	81,551
Nebraska.....	3,386,478	131,666	23,914	53,158
New Jersey.....	2,622,156	101,975	68,402	95,604
New York.....	14,248,013	572,955	378,197	377,121
Ohio.....	6,579,638	240,487	141,368	150,223
Pennsylvania.....	4,196,823	164,415	115,446	152,851
Texas.....	8,816,216	353,417	145,361	234,172
Wisconsin.....	4,994,617	293,248	101,036	129,207
All other states.....	6,497,899	313,628	89,909	125,340

TABLE 17.—ANIMALS SLAUGHTERED, BY STATES, 1919, 1914, AND 1909—Continued.

CLASS AND STATE.	1919		1914	1909
	Cost.	Number.	Number.	Number.
Sheep and lambs, total.....	146,775,993	13,497,300	15,943,743	12,255,501
California.....	12,178,278	1,188,079	1,427,250	1,071,908
Colorado.....	2,346,812	212,702	81,141	55,006
Illinois.....	49,135,520	4,368,664	4,882,940	3,892,142
Iowa.....	2,782,728	264,432	307,419	49,577
Kansas.....	12,583,635	1,200,680	1,559,119	1,136,021
Massachusetts.....	2,509,439	217,146	370,835	342,461
Michigan.....	2,010,375	193,345	125,637	88,285
Minnesota.....	1,970,333	208,046	198,695	133,244
Missouri.....	8,337,496	742,156	776,751	540,649
Nebraska.....	17,430,378	1,575,954	1,797,072	1,127,962
New Jersey.....	4,958,662	425,050	426,093	423,724
New York.....	18,881,438	1,480,640	1,989,134	1,918,721
Ohio.....	2,103,814	268,291	300,397	229,985
Pennsylvania.....	3,186,744	284,397	436,881	445,471
Texas.....	1,524,325	161,285	284,050	77,805
Washington.....	2,488,560	237,440	362,854	280,383
All other states.....	4,338,168	478,875	607,700	426,431
Hogs, total.....	1,757,279,014	44,520,726	34,441,913	33,870,616
California.....	15,089,841	500,123	400,306	344,319
Colorado.....	15,227,544	396,878	259,821	276,618
Illinois.....	437,857,730	9,976,191	7,205,510	7,203,544
Indiana.....	80,656,295	2,104,263	1,840,811	1,751,454
Iowa.....	141,345,852	3,302,333	2,394,061	2,487,251
Kansas.....	177,542,104	4,538,052	2,825,764	4,191,927
Maryland.....	15,089,808	654,438	622,628	554,761
Massachusetts.....	65,510,104	1,422,449	1,263,238	1,501,455
Michigan.....	33,244,535	881,030	761,380	444,766
Minnesota.....	90,902,161	2,197,152	1,559,491	1,063,655
Missouri.....	139,204,440	3,506,211	2,793,439	2,471,658
Nebraska.....	131,744,544	2,905,220	2,105,510	2,103,692
New Jersey.....	34,347,204	1,242,798	1,297,313	1,210,849
New York.....	54,884,890	1,614,479	1,725,688	1,802,669
Ohio.....	92,951,818	2,542,304	1,911,608	1,725,285
Pennsylvania.....	50,692,444	1,063,910	1,573,974	1,222,880
Texas.....	21,918,507	696,255	570,182	939,674
Washington.....	11,133,490	301,429	373,321	239,352
West Virginia.....	13,540,075	316,827	171,897	124,914
Wisconsin.....	57,842,080	1,444,115	1,110,440	1,078,361
All other states.....	76,654,544	2,224,266	1,675,524	1,041,631

There was an increase in the number of beeves slaughtered, from 1914 to 1919, in all states except Texas, and the decrease in beeves slaughtered in this state was only 3,929, while the number of calves slaughtered more than doubled. In the number of calves slaughtered, all states increased; in hogs, all

states except New Jersey, New York, and Washington. All states, except Colorado, Michigan, and Minnesota, showed a decrease in the number of sheep and lambs slaughtered.

Animals slaughtered in wholesale slaughtering establishments and on farms and ranges.—Table 18 presents statistics, by states, showing the number of animals killed in wholesale slaughtering and meat-packing es-

tablishments and on farms and ranges. These figures do not include the animals slaughtered in retail establishments and therefore do not represent the total number slaughtered for food in the United States.

This is the first census in which the slaughter of horses was specifically reported. The number was small—only 748. Of this number, 306 were killed under Federal inspection.

TABLE 18.—NUMBER OF ANIMALS SLAUGHTERED IN WHOLESALE SLAUGHTERING AND MEAT-PACKING ESTABLISHMENTS AND ON FARMS AND RANGES, BY STATES: 1919 AND 1909.

STATE.	TOTAL.		IN WHOLESALE SLAUGHTERING AND MEAT-PACKING ESTABLISHMENTS.		ON FARMS AND RANGES.	
	1919	1909	1919	1909	1919	1909
United States.....	92,395,540	75,340,201	73,250,127	56,778,929	19,139,419	18,567,272
Cattle.....	12,723,092	10,655,100	10,818,511	8,114,860	1,904,581	2,540,240
Calves.....	4,395,675	2,504,728	4,305,675	2,504,728	—	—
Sheep and lambs and goats and kids.....	13,955,823	12,818,251	13,521,215	12,288,725	434,608	529,520
Hogs.....	61,320,950	49,249,133	44,520,726	33,870,616	16,800,230	15,378,517
All other.....	(¹)	118,980	(¹)	(¹)	(¹)	118,980
Alabama.....	884,354	659,054	148,716	12,955	735,638	646,080
Arizona.....	50,317	29,975	23,573	—	26,744	29,975
Arkansas.....	653,123	674,021	9,320	—	673,803	674,021
California.....	2,357,791	2,053,551	2,181,180	1,844,508	176,602	209,043
Colorado.....	927,913	520,803	775,933	406,662	151,980	114,141
Connecticut.....	214,588	198,814	171,264	155,394	43,324	43,420
Delaware.....	79,947	75,859	51,201	47,217	28,746	28,642
District of Columbia.....	97,967	75,303	97,407	75,384	580	419
Florida.....	470,220	365,910	136,073	43,840	334,147	322,076
Georgia.....	1,376,874	965,051	191,864	37,108	1,185,010	927,943
Idaho.....	161,656	98,437	34,434	25,413	127,222	73,024
Illinois.....	18,866,304	14,778,035	18,086,358	13,886,402	709,946	880,573
Indiana.....	3,089,864	2,822,605	2,465,474	2,123,270	624,190	699,335
Iowa.....	4,662,185	3,415,347	4,040,005	2,810,098	613,070	605,240
Kansas.....	8,007,352	7,339,537	7,605,978	6,917,150	401,374	422,378
Kentucky.....	1,045,044	1,077,587	295,194	307,844	750,750	780,743
Louisiana.....	361,278	323,012	9,741	—	351,537	323,012
Maine.....	138,337	171,300	35,822	54,573	102,515	110,787
Maryland.....	1,045,524	824,673	847,703	633,322	197,821	191,351
Massachusetts.....	1,980,585	2,004,788	1,943,308	2,036,895	46,277	57,893
Michigan.....	1,731,841	1,115,179	1,255,592	610,482	476,249	504,697
Minnesota.....	3,407,402	1,869,450	2,904,183	1,378,742	503,219	490,708
Mississippi.....	689,744	547,454	3,893	—	685,851	547,454
Missouri.....	5,940,944	4,630,076	5,002,746	3,630,901	848,198	999,175
Montana.....	298,705	170,684	124,769	104,201	173,936	76,483
Nebraska.....	6,022,250	4,251,848	5,709,724	3,940,990	312,635	310,868
Nevada.....	79,049	63,131	64,938	37,572	24,111	25,559
New Hampshire.....	35,165	51,667	—	3,345	35,165	48,322
New Jersey.....	1,951,540	1,875,980	1,879,902	1,783,823	71,644	92,157
New Mexico.....	94,816	126,779	—	—	94,816	126,779
New York.....	4,881,290	5,486,366	4,338,001	4,766,959	552,695	719,407
North Carolina.....	981,810	850,785	6,706	4,840	975,104	845,945
North Dakota.....	309,209	186,579	40,813	—	268,486	186,579
Ohio.....	4,282,390	3,240,957	3,460,902	2,370,699	821,488	870,258
Oklahoma.....	1,305,452	494,082	826,387	30,444	479,065	455,538
Oregon.....	479,881	413,911	297,641	225,464	182,240	188,447
Pennsylvania.....	3,232,931	2,935,841	2,370,330	2,074,099	862,601	861,742
Rhode Island.....	87,749	69,408	82,688	57,106	5,161	12,297
South Carolina.....	461,856	340,121	11,435	3,100	450,421	337,021
South Dakota.....	511,576	183,358	311,638	22,754	199,638	160,604
Tennessee.....	921,922	886,317	102,746	83,110	819,176	803,207
Texas.....	2,752,690	2,788,675	1,763,751	1,779,120	988,948	1,000,555
Utah.....	346,198	151,188	243,459	87,081	102,739	64,107
Vermont.....	64,640	117,813	750	125	63,890	117,688
Virginia.....	853,389	785,233	168,648	212,939	684,741	572,294
Washington.....	897,300	833,306	688,537	663,405	208,823	169,891
West Virginia.....	626,958	335,444	366,020	146,539	270,938	238,905
Wisconsin.....	2,471,925	1,874,848	1,921,093	1,529,135	550,832	545,713
Wyoming.....	63,841	50,508	8,383	4,830	55,453	45,678

¹ Not reported.

Products—Quantity and value.—Table 19 shows the quantity and value of the principal products of the industry as reported at the censuses of 1919, 1914, 1909, and 1904.

All classes of products increased in quantity from 1914 to 1919 except mutton and lamb, poultry, oleo oil, soap stock, glue, and sheep and lamb pelts. The value of each class of products, however, except

dressed poultry and soap stock, increased. This increase was not at all comparable with that in quantity, and was largely attributable to inflated prices caused by the World War. See statement on page 10, showing live costs per pound for 1914 and 1919.

The production of fresh meat in 1919 was 8,364,975,602 pounds, and in 1914 was 6,656,031,002, an increase of 1,708,944,600 pounds. Cured meat in

1919 amounted to 4,276,077,115 pounds, an increase of 1,255,195,621 pounds as compared with 1914. This is exclusive of sausage and canned meat. The canned meat specifically reported as such in 1919 amounted to 228,115,608 pounds. There was a very large quantity, however, included under "other canned goods." The canned sausage reported was 160,908,986 pounds, and all other sausage 643,905,181 pounds, making a total meat production for 1919 of 13,673,982,492 pounds.

The lard reported includes pure, leaf, neutral, kettle rendered, prime steam, and refined. There was an increase in the total production of 253,680,981 pounds of this important product in the last census period, and the value increased \$295,403,205. Lard compounds and substitutes increased 124,723,964 pounds in quantity, and \$90,686,631 in value. The total production of all classes of establishments, of lard, lard compounds and substitutes, glue, oleomargarine, sausage, sausage casings, fertilizers, and soap, is shown in Table 22. In addition to the figures presented in Table 19, edible meat products valued at \$37,125,907 were produced in establishments assigned to other classifications.

TABLE 19.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, 1909, AND 1904.

PRODUCT.	1919	1914	1909	1904
Total value.....	\$1,246,200,614	\$1,051,965,424	\$1,355,544,431	\$913,914,624
Fresh meat, value.....	\$1,042,461,577	\$769,383,846	\$578,485,088	\$398,162,589
Beef—				
Pounds.....	4,832,061,881	3,058,333,660	4,200,196,668	3,748,055,377
Value.....	\$846,794,386	\$421,296,794	\$327,653,456	\$247,096,724
Veal—				
Pounds.....	422,978,820	194,698,880	252,097,078	154,212,652
Value.....	\$83,012,942	\$26,299,446	\$25,058,886	\$12,856,369
Mutton and lamb—				
Pounds.....	500,360,124	629,232,090	495,457,894	460,754,244
Value.....	\$120,338,355	\$74,675,627	\$50,735,110	\$36,880,455
Pork—				
Pounds.....	2,095,884,557	1,877,099,071	1,547,494,184	1,224,032,010
Value.....	\$532,669,835	\$226,535,734	\$158,714,862	\$91,749,323
Edible offal and other fresh meat—				
Pounds.....	509,667,525	280,090,794		
Value.....	\$59,129,725	\$17,647,510		
Poultry dressed—				
Pounds.....	7,022,695	16,575,907	257,800,083	124,307,681
Value.....	\$2,616,334	\$2,923,735	\$16,392,768	\$9,579,718
Cured meat, value.....	\$1,245,949,819	\$408,000,916	\$340,289,451	\$256,945,273
Beef, pickled and other cured—				
Pounds.....	129,990,004	91,571,753	120,477,662	136,890,697
Value.....	\$28,359,892	\$14,395,316	\$12,169,152	\$5,107,952
Pork, pickled and other cured—				
Pounds.....	4,143,117,111	2,929,309,741	2,829,633,003	2,922,001,962
Value.....	\$1,217,589,927	\$393,605,600	\$328,130,299	\$248,837,321
Canned goods:				
Pounds.....	305,955,403	160,798,955	121,376,837	(¹)
Value.....	\$98,904,341	\$20,417,624	\$15,345,543	\$16,114,665
Sausage:				
Canned—				
Pounds.....	160,908,986	74,004,380	(²)	(²)
Value.....	\$27,065,155	\$9,845,669	(²)	(²)
All other—				
Pounds.....	643,905,181	435,146,931	462,867,157	324,416,039
Value.....	\$145,622,246	\$58,349,853	\$44,540,912	\$25,056,331

¹ Comparable figures not available.
² Not reported separately.

TABLE 19.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1909, 1914, 1909, AND 1904—Continued.

PRODUCT.	1919	1914	1909	1904
Meat puddings, scrapple, head cheese, etc.: Pounds.....	43,182,235	42,339,926	(²)	(²)
Value.....	\$10,050,494	\$4,488,461	(²)	(²)
Lard:				
Pounds.....	1,372,869,656	1,119,188,675	1,243,567,604	1,109,086,400
Value.....	\$415,817,212	\$120,414,007	\$134,396,587	\$82,540,964
Lard compounds and substitutes:				
Pounds.....	521,121,914	396,397,950	(²)	(²)
Value.....	\$123,724,098	\$33,037,467	(²)	(²)
Oleo oil:				
Gallons.....	14,919,876	16,501,585	19,692,172	19,454,790
Value.....	\$31,212,708	\$11,925,832	\$16,475,726	\$10,201,911
Other oils:				
Gallons.....	6,720,822	6,715,497	11,343,189	4,893,133
Value.....	\$9,153,123	\$4,009,602	\$6,350,745	\$2,595,051
Tallow:				
Pounds.....	211,188,146	193,615,601		
Value.....	\$28,591,346	\$12,371,206		
Oleo stock:				
Pounds.....	29,823,070	15,998,534	202,844,139	(²)
Value.....	\$7,684,719	\$1,361,550	\$13,499,659	(²)
Grease:				
Pounds.....	107,276,780	(²)	(²)	(²)
Value.....	\$13,710,215	(²)	(²)	(²)
Soap stock:				
Pounds.....	39,066,722	76,003,670	(²)	(²)
Value.....	\$2,989,878	\$3,742,747	(²)	(²)
Stearin (lard, oleo, and cottonseed oil):				
Pounds.....	44,267,107	\$30,091,991	51,957,097	(²)
Value.....	\$8,990,349	\$2,752,421	\$6,871,935	(²)
Oleomargarine:				
Pounds.....	123,538,860	60,387,881	42,912,466	(²)
Value.....	\$36,777,815	\$8,818,557	\$5,983,981	(²)
Casings:				
Pounds.....	102,281,168	99,453,298	(²)	(²)
Value.....	\$16,779,655	\$9,077,593	(²)	(²)
Hoofs, horns, and horn tips, strips, etc.:				
Pounds.....	84,640,302	73,125,830	(²)	(²)
Value.....	\$2,180,600	\$944,034	(²)	(²)
Fertilizers and fertilizer materials:				
Tons (2,000 pounds).....	382,132	294,388	362,136	389,074
Value.....	\$18,314,754	\$8,737,009	\$3,726,818	\$7,204,061
Glue:				
Pounds.....	36,630,195	\$40,844,650	27,036,035	17,526,456
Value.....	\$4,439,774	\$3,088,764	\$1,944,338	\$1,087,719
Hides and pelts:				
Cattle—				
Number.....	10,813,511	7,158,862		
Pounds.....	583,972,224	415,890,714		
Value.....	\$185,020,306	\$69,958,593	9,560,138	8,039,204
Calf—				
Number.....	3,322,729	1,464,430	504,503,930	456,443,857
Pounds.....	43,549,073	18,647,761	\$65,401,515	\$44,206,107
Value.....	\$24,613,930	\$3,512,610		
Sheep and lambs, and goats and kids—				
Number.....	12,188,071	15,916,618	11,724,667	\$11,344,544
Value.....	\$33,686,165	\$13,624,046	\$11,425,235	\$8,964,043
All other skins—				
Pounds.....	2,214,258	(²)	(²)	(²)
Value.....	\$240,844	\$389,068	(²)	(²)
Hair, hog and cattle:				
Pounds.....	60,343,741	(²)	(²)	(²)
Value.....	\$4,059,096	(²)	(²)	(²)
Wool:				
Pounds.....	29,901,176	26,432,398	21,858,926	16,877,333
Value.....	\$20,071,303	\$7,938,212	\$5,327,095	\$5,229,621
All other products, including custom work, value.	\$89,220,092	\$59,775,137	\$94,499,803	\$55,604,880

¹ No cottonseed oil stearin reported in 1914.

² Includes a very small amount of gelatine.

³ Goat and kid skins not included—figures not available. Includes some pelts purchased for wool pulling.

Production of meat in wholesale slaughtering and meat-packing establishments and on farms and ranges.—Table 20 shows the meat production in slaughtering and meat-packing establishments and on farms and ranges, for 1919, by classes and by states.

SLAUGHTERING AND MEAT PACKING.

57

TABLE 20.—PRODUCTION OF MEAT IN WHOLESALE SLAUGHTERING AND MEAT-PACKING ESTABLISHMENTS AND ON FARMS AND RANGES, BY CLASSES AND STATES: 1919.

CLASS AND STATE.	Total.	Meat produced in wholesale slaughtering and meat-packing establishments.	Meat and meat products sold on farms and ranges.
	Pounds.	Net pounds.	Pounds.
United States.....	14, 110, 772, 100	13, 435, 710, 137	675, 063, 032
Beef.....	5, 343, 508, 701	5, 118, 728, 572	224, 780, 189
Venison.....	457, 460, 662	457, 460, 662	
Mutton and lamb and goat and kid meat.....	507, 344, 778	500, 610, 006	6, 734, 772
Pork.....	7, 802, 448, 968	7, 358, 910, 897	443, 538, 071
Alabama.....	45, 274, 902	24, 911, 702	20, 303, 260
Arizona.....	7, 422, 319	6, 087, 908	1, 324, 411
Arkansas.....	24, 016, 557	2, 275, 150	21, 741, 407
California.....	341, 537, 968	330, 226, 932	11, 311, 036
Colorado.....	154, 849, 130	147, 491, 445	7, 357, 685
Connecticut.....	35, 259, 714	30, 874, 785	4, 384, 929
Delaware.....	9, 940, 098	8, 257, 232	1, 682, 866
District of Columbia.....	80, 086	(1)	80, 086
Florida.....	35, 118, 714	19, 499, 264	15, 619, 450
Georgia.....	51, 454, 828	27, 201, 121	24, 253, 707
Idaho.....	13, 234, 530	7, 709, 164	5, 525, 375
Illinois.....	3, 493, 058, 465	3, 471, 965, 149	21, 093, 316
Indiana.....	486, 237, 590	473, 601, 503	12, 036, 087
Iowa.....	827, 707, 409	821, 956, 987	5, 841, 422
Kansas.....	1, 483, 856, 935	1, 474, 920, 241	8, 936, 694
Kentucky.....	55, 593, 018	47, 003, 435	8, 589, 583
Louisiana.....	8, 626, 209	(1)	8, 626, 209
Maine.....	18, 259, 097	7, 212, 258	11, 044, 739
Maryland.....	113, 224, 326	106, 175, 839	7, 048, 487
Massachusetts.....	314, 155, 074	309, 646, 572	4, 508, 502
Michigan.....	241, 394, 106	203, 080, 819	38, 304, 787
Minnesota.....	575, 955, 907	558, 480, 137	17, 475, 770
Mississippi.....	18, 970, 313	(1)	18, 970, 313
Missouri.....	954, 633, 881	936, 830, 019	18, 102, 962
Montana.....	37, 659, 260	27, 402, 291	10, 556, 969
Nebraska.....	1, 108, 788, 272	1, 105, 030, 250	3, 753, 022
Nevada.....	10, 804, 149	9, 567, 324	826, 825
New Hampshire.....	3, 988, 656	.....	3, 988, 656
New Jersey.....	235, 212, 892	220, 781, 654	5, 431, 238
New Mexico.....	2, 518, 945	.....	2, 518, 945
New York.....	774, 264, 466	724, 511, 392	49, 753, 074
North Carolina.....	29, 636, 167	2, 050, 732	27, 585, 435
North Dakota.....	6, 522, 184	(1)	6, 522, 184
Ohio.....	642, 751, 190	613, 830, 471	28, 920, 719
Oklahoma.....	9, 214, 018	(1)	9, 214, 018
Oregon.....	60, 857, 107	52, 337, 351	14, 519, 755
Pennsylvania.....	441, 233, 901	375, 609, 282	65, 624, 609
Rhode Island.....	17, 364, 965	16, 878, 527	486, 438
South Carolina.....	5, 947, 690	(1)	5, 947, 690
South Dakota.....	3, 066, 014	(1)	3, 066, 014
Tennessee.....	42, 719, 364	19, 933, 804	22, 785, 560
Texas.....	406, 276, 816	378, 995, 281	27, 281, 585
Utah.....	45, 500, 424	41, 256, 624	4, 243, 800
Vermont.....	7, 949, 740	(1)	7, 949, 740
Virginia.....	45, 455, 294	24, 362, 303	21, 092, 991
Washington.....	141, 515, 645	121, 762, 315	19, 752, 330
West Virginia.....	72, 384, 950	61, 886, 639	10, 498, 311
Wisconsin.....	353, 663, 929	327, 827, 747	25, 836, 182
Wyoming.....	2, 123, 798	(1)	2, 123, 798
All other states.....	287, 268, 188	287, 268, 188	.....

¹ Included in "All other states" to avoid disclosing individual operations

Meat production, by classes.—Table 21 shows the production of fresh meat in the slaughtering and meat-packing industry, by classes.

TABLE 21.—MEAT PRODUCTION, BY CLASSES: 1919 AND 1914.

KIND.	QUANTITY. (POUNDS).		PER CENT OF TOTAL.	
	1919	1914	1919	1914
Total ¹	12, 641, 052, 717	9, 676, 912, 496	100.0	100.0
Pork, fresh and cured.....	6, 242, 001, 668	4, 806, 408, 812	49.4	49.7
Beef, fresh and cured.....	4, 062, 021, 885	3, 749, 905, 413	39.3	38.8
Mutton and lamb, fresh.....	500, 360, 124	629, 232, 600	4.0	6.5
Veal, fresh.....	422, 978, 820	104, 698, 880	3.3	2.0
Edible offal and all other, fresh.....	513, 690, 220	296, 666, 701	4.1	3.1

¹ Sausage and canned meat not included.

Subsidiary products.—Many establishments in the slaughtering and meat-packing industry make large quantities of auxiliary products, some of which form the chief product, and others minor products, of other industries within the scope of the census, and the value for eight selected classes is presented in Table 22.

TABLE 22.—SUBSIDIARY PRODUCTS: 1919.

PRODUCT.	Total value of products.	VALUE OF PRODUCTS IN ESTABLISHMENTS—		
		Engaged primarily in manufac- turing the product specified. ¹	In the slaughtering and meat- packing industry.	Assigned to other classifi- cations.
Fertilizers.....	\$306, 523, 899	\$281, 143, 587	\$18, 314, 754	\$7, 065, 558
Glue.....	37, 603, 685	32, 131, 067	4, 469, 774	1, 002, 791
Lard.....	420, 077, 408	219, 660	415, 817, 212	4, 040, 536
Lard compounds and substitutes.....	320, 838, 994	121, 249, 287	123, 721, 008	75, 915, 629
Oleomargarine.....	121, 784, 125	79, 815, 590	36, 777, 815	5, 190, 730
Sausage ²	221, 208, 076	47, 500, 086	173, 587, 401	119, 089
Sausage casings.....	20, 355, 218	9, 109, 406	10, 779, 655	406, 167
Soap.....	337, 879, 613	310, 740, 115	(4)	* 21, 139, 798

¹ Includes in some cases products other than those specified.

² Includes a large amount of fertilizer materials.

³ Includes canned sausage.

⁴ Figures can not be shown without disclosing individual operations.

* Includes that manufactured in slaughtering and meat-packing establishments.

Products, by states.—The quantity and value, by states, of certain leading products of the industry in 1919, and the quantity in 1914 and 1909 are presented in Table 23.

MANUFACTURES.

TABLE 23.—PRODUCTS, BY STATES: 1919, 1914, AND 1909.

PRODUCT AND STATE.	1919		1914	1909	PRODUCT AND STATE.	1919		1914	1909
	Value.	Quantity.	Quantity.	Quantity.		Value.	Quantity.	Quantity.	Quantity.
Beef, fresh, total.....	\$846,794,386	Pounds. 4,832,061,881	Pounds. 3,658,333,660	Pounds. 4,209,196,688	Pork, pickled and other cured—Con.				
California.....	32,873,279	192,753,812	178,314,652	188,315,779	Ohio.....	\$52,918,383	Pounds. 178,055,163	Pounds. 121,188,242	Pounds. 121,068,353
Illinois.....	247,315,429	1,364,421,895	1,000,942,830	1,142,920,916	Pennsylvania.....	22,259,787	66,309,393	83,007,657	78,559,883
Indiana.....	18,514,791	101,505,575	91,435,251	119,685,578	Texas.....	17,478,772	57,457,320	39,477,022	71,219,057
Iowa.....	38,190,688	189,851,603	118,567,051	123,780,302	Washington.....	6,544,903	21,311,428	22,352,555	17,110,659
Kansas.....	102,543,726	596,203,753	474,292,677	686,015,803	Wisconsin.....	47,961,162	161,041,949	98,775,805	106,390,708
Minnesota.....	15,831,153	109,239,489	76,992,124	59,270,609	All other states.....	58,237,302	203,204,182	153,557,002	80,966,743
Missouri.....	44,197,907	282,295,654	183,947,055	273,808,501					
Nebraska.....	79,947,351	402,931,812	272,491,272	354,353,419	Sausage, total.....	145,622,246	643,905,181	435,146,931	452,867,187
New Jersey.....	15,520,362	69,290,250	24,107,901	35,415,243	California.....	1,519,019	7,678,049	8,604,082	6,195,723
New York.....	74,497,463	368,849,102	402,728,421	429,981,714	Illinois.....	42,431,818	180,615,145	112,630,102	113,631,970
Ohio.....	27,876,643	164,018,954	118,627,111	119,597,663	Indiana.....	3,655,176	17,662,551	15,895,177	15,794,886
Pennsylvania.....	27,083,661	127,315,710	130,759,894	138,838,202	Iowa.....	4,347,109	21,252,903	17,820,025	16,541,624
Texas.....	32,768,834	223,075,778	208,057,923	208,086,588	Kansas.....	7,720,842	39,325,972	17,706,704	31,200,707
All other states.....	94,623,039	579,008,489	378,469,498	332,515,348	Maryland.....	1,944,920	8,095,159	10,060,851	11,713,517
					Massachusetts.....	6,212,114	24,481,233	27,854,557	23,074,968
Veal, fresh, total.....	83,012,942	422,978,820	194,098,880	252,997,078	Michigan.....	2,582,906	10,758,438	8,400,965	8,174,244
California.....	2,230,552	11,741,785	4,063,441	12,077,330	Minnesota.....	5,241,525	24,657,904	8,845,380	7,632,668
Illinois.....	15,327,876	77,851,254	41,388,464	51,859,192	Missouri.....	6,630,208	35,010,739	16,183,074	18,022,911
Indiana.....	1,299,709	6,004,165	5,345,353	5,505,181	Nebraska.....	6,406,611	28,457,996	12,267,326	27,535,144
Kansas.....	7,264,133	45,030,726	14,797,191	26,731,826	New Jersey.....	5,386,351	20,068,764	13,525,180	15,444,144
Massachusetts.....	1,930,759	13,677,154	7,966,636	8,317,482	New York.....	9,953,425	38,836,830	41,572,857	39,582,116
Michigan.....	1,808,948	7,215,770	2,800,755	2,603,074	Ohio.....	7,424,455	34,395,032	31,047,288	42,569,651
Minnesota.....	4,620,716	25,542,939	6,987,380	5,785,636	Pennsylvania.....	12,763,130	61,474,642	40,069,573	42,010,426
Missouri.....	2,980,652	16,810,269	4,409,375	8,831,469	Texas.....	5,110,596	25,279,950	8,847,610	12,916,426
Nebraska.....	2,526,172	17,364,838	3,419,343	7,609,474	Wisconsin.....	3,970,070	16,178,905	11,958,878	10,737,835
New Jersey.....	2,641,722	9,293,800	6,645,803	8,702,274	All other states.....	12,316,707	59,074,959	30,632,702	28,908,144
New York.....	14,497,259	55,477,838	37,462,344	36,610,306					
Ohio.....	4,768,452	20,548,843	11,157,758	12,921,898	Lard, total.....	415,817,212	1,372,869,656	1,119,188,675	1,243,567,604
Pennsylvania.....	3,588,885	13,641,334	9,967,655	13,405,455	Illinois.....	146,123,019	497,185,468	335,695,330	403,177,806
Texas.....	6,595,106	43,729,133	19,089,610	29,308,686	Indiana.....	15,241,920	51,452,324	46,374,420	46,901,294
Wisconsin.....	4,693,413	21,101,904	8,010,982	9,615,384	Iowa.....	31,003,935	103,502,429	59,038,160	71,084,771
All other states.....	7,178,609	37,940,998	11,193,254	14,632,512	Kansas.....	33,190,657	108,754,239	83,753,215	148,408,252
					Massachusetts.....	23,374,020	72,101,184	66,849,028	60,840,711
Mutton, fresh, total.....	120,338,355	500,360,124	629,232,690	495,457,894	Michigan.....	7,078,212	26,271,409	13,351,255	13,351,255
California.....	10,319,275	45,057,992	59,522,015	44,220,813	Minnesota.....	13,649,819	49,699,701	40,311,585	21,429,617
Illinois.....	41,073,611	182,303,710	197,047,411	157,615,125	Missouri.....	27,744,195	92,084,888	72,410,790	48,836,133
Iowa.....	2,141,308	9,820,929	12,539,457	1,848,011	Nebraska.....	26,059,520	84,363,218	66,505,695	89,851,080
Kansas.....	9,424,313	43,384,553	58,514,735	43,584,755	New Jersey.....	8,925,431	28,190,529	15,222,492	49,017,290
Massachusetts.....	1,888,818	8,091,291	14,715,201	13,346,470	New York.....	13,156,805	44,018,005	40,496,413	47,042,820
Michigan.....	1,767,650	8,757,427	4,782,158	5,699,894	Ohio.....	18,053,472	64,613,868	57,135,365	58,518,032
Minnesota.....	1,494,971	8,518,836	8,511,931	5,655,124	Pennsylvania.....	10,693,649	40,055,529	47,191,604	36,121,032
Missouri.....	6,090,270	27,183,158	30,382,856	21,896,982	Texas.....	4,440,358	16,350,937	16,157,440	60,722,123
Nebraska.....	12,941,190	59,504,426	72,208,015	45,101,837	Washington.....	2,198,685	7,579,698	32,914,041	9,050,739
New Jersey.....	3,873,149	14,294,769	15,500,648	16,228,087	Wisconsin.....	9,680,127	31,101,615	27,014,963	19,173,185
New York.....	14,711,621	54,534,743	73,819,403	80,774,979	All other states.....	25,223,390	86,574,917	74,775,200	60,041,065
Ohio.....	1,877,852	8,583,818	9,245,870	7,738,777					
Pennsylvania.....	3,007,865	10,346,033	16,142,452	17,316,377	Hides, cattle and calf, total.....	209,634,236	627,521,297	434,538,475	504,503,930
Texas.....	1,327,333	6,020,395	11,179,234	2,846,112	California.....	6,701,204	24,118,281	19,754,487	21,134,504
Washington.....	1,828,684	9,427,826	15,187,952	13,393,776	Illinois.....	55,539,618	161,677,467	111,520,999	135,817,679
All other states.....	6,570,690	25,426,118	29,033,352	20,080,775	Indiana.....	4,765,845	13,688,524	11,006,066	14,209,481
					Iowa.....	7,391,336	24,067,425	12,390,379	14,727,015
Pork, fresh, total.....	532,669,835	2,065,884,557	1,877,090,071	1,547,494,184	Kansas.....	27,559,708	83,507,564	65,854,920	79,719,102
California.....	8,452,760	33,610,279	40,125,668	32,204,886	Massachusetts.....	2,477,175	5,170,291	5,458,472	4,072,435
Illinois.....	112,403,650	462,665,805	374,315,938	303,896,802	Minnesota.....	7,085,990	18,473,528	10,027,859	7,240,972
Indiana.....	26,257,682	98,772,828	93,434,549	79,377,563	Missouri.....	12,325,707	37,617,531	22,446,957	32,408,006
Iowa.....	29,812,210	116,334,618	103,461,543	100,113,209	Nebraska.....	18,817,641	59,613,792	29,510,483	39,975,521
Kansas.....	33,291,363	137,022,770	116,002,875	150,199,802	New York.....	14,703,826	41,448,510	45,355,486	49,577,570
Massachusetts.....	17,091,609	63,194,630	80,977,605	66,468,331	Ohio.....	8,195,154	24,739,352	17,826,624	18,900,033
Michigan.....	19,111,083	74,392,478	30,382,616	16,479,567	Pennsylvania.....	6,058,734	17,752,416	10,922,093	19,170,899
Minnesota.....	27,826,610	120,359,452	110,312,690	45,709,115	Texas.....	11,781,382	32,977,200	29,457,278	27,478,301
Missouri.....	39,001,850	156,569,049	164,944,862	138,974,435	Washington.....	2,445,880	8,169,292	5,436,323	7,325,034
Nebraska.....	27,475,271	113,202,033	97,872,530	98,834,601	Wisconsin.....	2,276,271	7,331,086	4,039,085	4,613,282
New Jersey.....	24,246,219	90,263,835	106,261,343	96,506,328	All other states.....	21,713,635	66,569,032	36,625,964	29,795,645
New York.....	30,757,518	111,497,816	124,190,102	123,540,054					
Ohio.....	30,853,273	157,378,994	101,775,391	60,320,259	Sheep pelts, total.....	33,639,606	Number. 12,164,620	Number. 15,907,899	Number. 11,691,308
Pennsylvania.....	24,441,891	81,045,097	91,731,688	50,210,292	California.....	3,008,331	1,083,297	1,406,831	1,070,801
Texas.....	13,776,121	52,263,286	41,073,293	48,264,738	Illinois.....	9,885,299	3,366,234	4,880,057	3,619,577
Washington.....	58,870,716	227,311,481	200,286,372	136,394,202	Iowa.....	786,073	263,719	307,648	49,534
					Kansas.....	3,328,567	1,199,374	1,559,141	1,117,653
Pork, pickled and other cured, total.....	1,217,589,927	4,146,117,111	2,929,309,741	2,829,633,003	Massachusetts.....	650,633	217,146	370,835	341,956
California.....	7,857,223	21,276,818	24,825,588	13,964,304	Michigan.....	619,420	192,998	125,534	88,235
Colorado.....	11,378,623	30,837,592	23,106,330	20,530,615	Minnesota.....	492,692	208,382	196,086	132,574
Illinois.....	346,808,843	1,181,812,053	854,815,194	720,216,994	Missouri.....	2,108,383	742,144	776,765	281,627
Indiana.....	49,810,459	163,511,706	124,924,967	148,474,672	Nebraska.....	4,816,204	1,575,964	1,799,985	1,127,937
Iowa.....	96,821,231	335,237,881	233,138,198	219,106,133	New Jersey.....	1,015,352	416,847	426,063	423,624
Kansas.....	132,318,305	442,962,131	269,884,018	364,998,559	New York.....	3,017,980	1,377,590	1,913,895	1,913,895
Maryland.....	11,340,198	33,222,353	30,156,127	28,231,007	Ohio.....	573,812	256,740	300,259	232,775
Massachusetts.....	41,084,061	137,117,491	119,834,341	122,689,181	Oregon.....	191,073	97,697	141,892	141,892
Michigan.....	13,762,791	53,300,220	43,017,100	36,145,040	Pennsylvania.....	610,414	228,020	436,880	442,480
Minnesota.....	58,548,266	236,784,979	115,033,007	82,480,987	Texas.....	248,076	160,768	283,471	77,861
Missouri.....	90,646,801	313,862,906	209,922,094	222,224,021	Utah.....	76,789	76,789	115,601	47,763
Nebraska.....	90,917,158	314,440,569	202,562,434	184,213,423	Washington.....	573,270	234,564	362,854	290,298
New Jersey.....	18,454,674	58,214,045	53,894,116	49,690,559	All other states.....	1,346,952	475,544	423,577	338,630
New York.....	42,418,455	140,097,462	118,537,294	134,425,208					

GENERAL TABLES.

Comparative summary, by states.—Table 24 presents, for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products, for the industry.

Detailed statement, by states.—Table 25 presents, for 1919, statistics in detail for the industry as a whole and for each state for which figures can be shown without disclosing the operations of individual establishments.

TABLE 24.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
United States.....	1919	1,304	160,996	350,212	\$209,489	\$3,782,930	\$4,246,201	Missouri.....	1919	40	8,290	19,966	\$10,378	\$228,009	\$246,610
	1914	1,270	98,832	253,066	62,136	1,441,603	1,651,965		1914	31	5,152	15,373	3,423	84,335	91,608
	1909	1,221	87,813	202,432	50,404	1,191,438	1,355,544		1909	37	4,649	11,620	2,649	72,005	79,326
Alabama.....	1919	9	549	1,548	482	4,889	6,125	Montana.....	1919	12	210	1,714	274	5,824	6,859
	1914	7	122	897	48	592	703		1914	8	96	299	101	1,717	2,120
	1909	4	47	705	25	198	320		1909	9	105	316	92	1,781	2,054
Arkansas.....	1919	7	59	337	47	975	1,218	Nebraska.....	1919	16	10,122	20,367	13,914	271,462	303,849
	1914	3	0	.....	3	111	123		1914	10	5,713	15,486	3,697	94,173	104,503
California.....	1919	91	3,405	13,325	4,153	77,416	92,554		1909	15	6,009	11,863	3,369	78,346	92,283
	1914	81	2,172	7,018	1,770	40,931	49,500	Nevada.....	1919	4	118	702	123	2,723	2,939
	1909	74	1,601	3,762	1,276	28,224	33,953		1914	4	91	407	98	1,604	1,853
Colorado.....	1919	21	1,848	4,036	2,149	35,785	41,008	New Jersey.....	1919	46	3,566	9,560	4,647	100,404	110,221
	1914	16	777	2,467	480	10,687	12,726		1914	56	2,033	6,597	1,472	35,310	38,809
	1909	13	659	2,450	389	8,295	9,657		1909	61	1,707	3,134	1,213	32,824	36,446
Delaware.....	1919	15	117	385	128	2,850	3,285	New York.....	1919	130	6,646	13,799	8,998	230,049	250,038
	1914	19	125	504	82	1,499	1,711		1914	184	6,245	10,189	4,610	127,282	144,236
	1909	9	82	212	53	1,231	1,372		1909	150	5,847	12,897	4,192	108,669	125,073
Florida.....	1919	8	348	918	278	4,816	5,316	Ohio.....	1919	141	5,336	19,626	6,089	150,598	170,338
	1914	11	54	144	32	789	925		1914	152	3,480	12,356	1,381	58,297	64,960
	1909	11	32	.....	20	392	467		1909	137	2,974	9,431	1,780	43,640	49,795
Idaho.....	1919	12	89	474	117	1,441	1,791	Oregon.....	1919	21	772	3,048	958	13,749	15,868
	1914	9	81	227	79	714	981		1914	14	442	1,344	309	6,202	7,487
	1909	4	39	115	33	451	532		1909	14	366	752	280	5,015	5,880
Illinois.....	1919	72	54,179	86,636	79,983	1,142,950	1,284,103	Pennsylvania.....	1919	176	4,438	15,325	5,346	107,281	122,862
	1914	70	31,315	66,698	19,236	408,895	485,362		1914	146	3,616	11,883	2,492	57,605	65,191
	1909	75	26,344	55,661	14,350	341,348	386,366		1909	155	2,940	11,741	1,940	44,247	51,107
Indiana.....	1919	57	5,691	11,395	5,470	121,600	134,029	Rhode Island.....	1919	22	264	555	257	5,038	6,807
	1914	65	4,481	9,844	2,497	46,262	51,022		1914	10	190	336	105	4,158	4,497
	1909	58	4,416	5,952	2,156	41,939	47,230		1909	10	180	303	97	2,644	2,877
Iowa.....	1919	21	7,131	15,527	8,738	204,421	226,362	Tennessee.....	1919	16	331	837	279	4,965	5,706
	1914	28	4,413	10,183	2,729	67,774	74,172		1914	18	199	1,213	87	1,561	1,889
	1909	27	4,125	8,255	2,178	53,034	58,013		1909	22	272	1,186	134	1,579	2,011
Kansas.....	1919	28	17,805	34,663	20,863	387,859	427,663	Texas.....	1919	19	5,072	14,055	5,757	106,752	125,192
	1914	26	9,884	24,376	5,908	135,952	151,647		1914	18	3,486	12,276	2,069	44,424	52,945
	1909	35	10,591	24,500	5,862	147,646	165,361		1909	14	3,639	11,330	1,902	37,410	42,530
Kentucky.....	1919	26	450	1,441	437	10,659	12,054	Utah.....	1919	11	446	1,104	479	10,032	11,124
	1914	28	223	834	164	3,671	4,109		1914	14	138	349	115	2,672	3,011
	1909	37	354	853	251	5,746	6,568		1909	12	99	572	77	1,327	1,690
Louisiana.....	1919	3	248	1,391	223	446	849	Virginia.....	1919	25	592	3,073	456	6,228	7,589
	1914	4	219	1,057	95	57	180		1914	21	396	3,084	212	3,725	4,382
Maine.....	1919	17	123	325	133	1,647	2,043		1909	24	342	1,491	118	4,057	4,601
	1914	21	115	139	72	1,037	1,247	Washington.....	1919	29	1,222	3,821	1,526	29,124	34,389
	1909	14	90	167	48	675	815		1914	11	864	2,149	691	15,901	18,444
Maryland.....	1919	47	1,563	5,070	1,973	33,520	41,439		1909	14	828	1,883	575	13,760	16,654
	1914	40	1,221	3,878	749	13,767	16,607	West Virginia.....	1919	10	639	3,076	716	16,798	19,044
	1909	43	990	2,877	584	11,283	13,394		1914	7	214	1,557	140	4,447	4,788
Massachusetts.....	1919	40	4,307	8,050	5,301	101,235	110,238		1909	6	167	1,321	123	3,335	3,764
	1914	46	3,233	5,772	1,804	45,428	51,725	Wisconsin.....	1919	21	3,213	7,712	3,706	89,904	102,182
	1909	45	3,056	4,200	1,666	37,484	42,531		1914	22	2,011	3,759	1,227	25,538	32,181
Michigan.....	1919	24	1,712	4,746	2,277	49,774	59,585		1909	24	1,681	2,713	919	22,249	26,702
	1914	17	1,112	3,056	770	18,814	20,666	All other states.....	1919	45	4,946	14,070	5,729	92,172	101,751
	1909	19	795	3,080	423	11,253	12,842		1914	37	2,348	6,221	1,460	31,141	35,130
Minnesota.....	1919	13	5,231	11,223	0,440	128,596	140,361		1909	27	877	2,412	510	7,258	8,821
	1914	19	2,565	5,189	1,799	41,501	47,536								
	1909	22	1,902	4,528	1,114	22,043	25,609								

MANUFACTURES.

TABLE 25.—DETAILED STATEMENT,

PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital. <i>Dollars</i>
STATE.	Number of estab- lish- ments.	Total.	Pro- pri- etors and firm- mem- bers.	Sala- ried offi- cers, super- inten- dents, and man- agers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Fe- male.	Aver- age num- ber.	Number, 15th day of--			Male.	Fe- male.	Male.	Fe- male.	
								Maximum month.	Minimum month.						
1 United States.....	1,304	197,392	1,071	5,668	23,390	6,267	160,996	Ja 187,609	Ap 150,806	163,582	147,127	16,244	184	27	1,176,483,643
2 Alabama.....	9	661	1	49	48	14	549	Ja 625	Se 487	553	485	68	.....	.....	1,876,429
3 Arizona.....	4	70	3	6	3	1	57	De 62	Fe 52	62	62	.....	.....	.....	326,382
4 Arkansas.....	7	83	5	8	10	1	69	Se 63	Oc 55	62	59	.....	.....	.....	291,901
5 California.....	91	4,618	75	181	754	153	3,405	Mh 3,645	Jy 3,271	3,547	3,334	209	4	.....	30,743,107
6 Colorado.....	21	2,300	17	45	359	91	1,848	Ja 1,691	Jy 1,752	1,950	1,837	111	2	.....	8,984,079
7 Delaware.....	15	169	15	15	12	10	117	De 139	My 99	140	137	3	.....	.....	784,900
8 District of Columbia.....	6	272	4	12	42	11	203	De 226	Jy 187	226	216	10	.....	.....	1,847,080
9 Florida.....	8	425	8	13	44	12	348	Ja 489	Je 257	381	318	63	.....	.....	1,675,565
10 Georgia.....	7	1,030	2	32	118	29	869	De 1,001	Je 715	932	859	123	.....	.....	4,046,236
11 Idaho.....	12	128	8	15	10	4	89	Oc 106	Mh 75	108	105	.....	1	.....	1,150,418
12 Illinois.....	72	62,090	31	1,614	5,541	1,625	54,179	Ja 65,114	My 50,048	53,973	47,248	6,703	17	5	430,375,561
13 Indiana.....	57	6,617	59	132	617	118	5,691	Ja 6,064	Au 5,291	5,550	5,045	446	47	12	28,564,709
14 Iowa.....	21	8,985	11	145	1,355	320	7,134	Ja 8,170	Se 6,032	8,051	7,240	793	15	3	59,813,152
15 Kansas.....	28	22,621	19	684	3,394	719	17,805	Ja 21,617	Ap 15,650	17,323	15,634	1,688	1	.....	96,067,119
16 Kentucky.....	26	567	29	33	53	2	450	De 462	Se 439	455	447	8	.....	.....	1,980,987
17 Louisiana.....	3	276	.....	13	12	3	248	Ja 299	Ap 228	258	256	2	.....	.....	1,034,864
18 Maine.....	17	156	17	8	7	1	123	De 134	Mh 116	133	128	5	.....	.....	603,214
19 Maryland.....	47	2,000	43	86	246	57	1,563	De 1,735	Fe 1,402	1,740	1,528	204	8	.....	12,759,470
20 Massachusetts.....	40	4,626	33	87	301	108	4,307	Ja 5,354	No 1,501	3,981	3,868	105	8	.....	42,216,147
21 Michigan.....	24	2,083	18	73	193	87	1,712	De 2,073	My 1,465	2,078	1,773	297	2	1	16,431,187
22 Minnesota.....	13	6,636	11	249	855	290	5,231	De 6,013	My 4,855	5,599	5,147	452	.....	.....	24,731,277
23 Missouri.....	49	10,281	23	386	1,240	323	8,290	Ja 9,805	Oc 7,654	8,126	7,500	620	6	.....	98,958,695
24 Montana.....	12	305	3	26	47	19	210	Jy 222	De 193	212	196	14	2	.....	3,371,027
25 Nebraska.....	16	12,993	14	125	2,197	535	10,122	Ja 11,158	Oc 9,543	10,179	9,190	979	9	1	57,763,347
26 Nevada.....	4	141	.....	5	12	6	118	Oc 130	De 106	105	103	.....	.....	.....	1,471,293
27 New Jersey.....	46	4,509	32	114	594	203	3,566	Ja 3,914	No 2,599	3,663	3,367	295	1	.....	20,674,400
28 New York.....	130	8,795	120	266	1,393	370	6,640	Mh 6,901	No 5,784	6,951	6,700	251	.....	.....	69,314,547
29 North Carolina.....	4	64	4	9	3	3	45	Fe 61	Ja 39	43	41	2	.....	.....	296,812
30 Ohio.....	141	6,607	136	244	694	197	5,336	De 5,984	My 4,995	5,820	5,350	469	1	.....	32,340,461
31 Oregon.....	21	1,035	10	29	174	50	772	Ja 927	Jy 698	721	629	90	2	.....	5,255,407
32 Pennsylvania.....	176	5,752	168	239	710	197	4,438	De 4,890	Ap 4,237	4,851	4,406	434	8	3	27,832,571
33 Rhode Island.....	22	331	26	13	19	9	264	Oc 375	My 165	268	222	46	.....	.....	2,158,979
34 Tennessee.....	16	430	17	33	37	12	331	De 430	Ap 279	430	328	64	38	.....	1,600,148
35 Texas.....	19	6,558	2	236	1,012	236	5,072	Ja 6,645	Mh 4,460	5,204	4,594	610	.....	.....	21,325,101
36 Utah.....	11	603	11	9	110	27	446	Ja 554	Se 390	431	392	39	.....	.....	3,976,407
37 Virginia.....	25	629	24	43	45	15	502	Oc 538	No 440	599	549	50	.....	.....	3,156,150
38 Washington.....	29	1,480	17	47	132	71	1,222	De 1,371	Ap 1,102	1,355	1,244	111	.....	.....	12,759,109
39 West Virginia.....	10	808	4	48	88	29	639	De 785	Se 582	785	715	70	.....	.....	4,295,862
40 Wisconsin.....	21	4,046	23	266	401	133	3,218	Ja 4,197	Se 2,093	2,801	2,203	494	12	2	21,646,835
41 All other states.....	21	4,445	18	80	409	166	3,772	.....	.....	3,893	3,582	311	.....	.....	21,982,108

¹ Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).² Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

SLAUGHTERING AND MEAT PACKING.

61

BY STATES: 1919.

EXPENSES.											POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.			Value of products.	Value added by manufacture.	Primary horsepower.					Electric horse-power generated in establishments reporting.		
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Total.			Owned.							
Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.		Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. ¹	Rent- ²			
19,081,909	40,603,456	209,439,293	1,978,648	2,054,729	17,600,117	3,758,839,744	24,089,789	4,246,290,614	493,361,031	359,212	210,348	27,669	2,018	574	118,603	95,635		
102,414	73,652	481,839	1,036	4,882	17,840	4,801,490	87,067	0,125,251	1,236,704	1,548	1,035				513	273		
27,400	7,200	72,484		2,220	13,510	1,100,184	10,323	1,405,808	226,295	88			1		87			
19,050	26,735	47,298	18,000	7,159	5,098	966,579	8,840	1,218,191	242,772	337			25		312			
514,953	1,405,095	4,158,193	515,394	104,603	325,957	76,877,625	588,696	92,554,154	15,137,942	13,325	2,031		104		11,190	523		
163,780	604,570	2,148,745	158,414	8,465	103,286	35,501,638	283,726	41,007,531	5,222,167	4,036	3,147	304	12		573	2,349		
43,152	20,564	127,997	9,817	8,850	44,708	2,845,929	13,326	3,285,336	420,081	385	288				97			
50,980	69,996	245,725		8,432	10,188	4,165,209	62,630	5,012,294	784,455	917	270	145			502			
32,831	77,244	278,499		20,541	13,441	4,740,323	69,907	5,310,186	499,950	918	292				620			
103,786	180,835	607,369	15,450	19,492	11,059	6,635,328	128,547	8,142,161	1,378,286	3,291	2,835				456			
26,360	17,387	117,321		4,810	7,143	1,417,038	24,157	1,791,175	349,980	474	20		11		443			
5,302,197	9,852,654	79,082,535	17,275	201,266	4,094,287	1,130,106,748	6,843,744	1,284,103,016	141,152,524	86,636	51,459	10,103			24,984	33,242		
590,882	923,400	5,470,261	8,077	25,208	647,598	121,003,378	686,316	134,028,726	12,339,032	11,895	0,676	2,038			2,668	3,780		
628,962	2,305,072	8,738,195	211,904	212,158	1,380,394	203,215,931	1,204,755	228,361,698	21,941,012	15,527	10,545	840	13		4,142	3,284		
1,726,093	5,519,005	20,862,627	74,008	7,158	1,223,645	385,173,208	2,685,503	427,668,145	39,804,434	34,863	19,061	2,955	5		12,042	10,955		
93,094	86,133	437,072	4,628	3,859	58,405	10,680,189	78,715	12,953,986	2,295,082	1,441	1,217				224	524		
25,739	10,636	223,095		360	20,675	375,968	60,916	849,326	403,442	1,391	1,070	190	16		115			
32,525	11,226	132,943	1,494	8,540	6,927	1,634,788	12,380	2,042,660	395,492	325	45		4		276			
378,163	456,332	1,972,514	2,376	21,339	287,579	33,171,745	348,483	41,439,448	7,910,215	5,076	3,140	450			1,486	1,169		
350,184	688,928	5,391,004	109,110	55,756	542,061	100,653,710	581,630	110,238,038	9,002,698	8,050	3,345	410	14		4,281	268		
313,008	348,823	2,277,400	15	4,803	176,749	49,581,119	193,229	59,584,740	9,810,392	4,746	2,735	500			1,511	1,274		
624,578	1,502,088	6,448,530	44,768	11,821	470,029	127,850,193	640,784	146,361,046	17,855,069	11,223	5,187	826		535	4,675	819		
1,030,071	2,257,049	10,377,515	45,533	24,785	251,955	226,464,734	1,544,042	246,610,195	18,600,819	19,956	15,109	2,069	92		2,669	5,668		
71,234	121,885	273,955		7,470	30,784	5,774,500	49,554	6,858,703	1,034,559	1,714	330		15		1,369			
634,019	3,878,525	13,914,188	148,081	4,725	1,546,581	269,894,945	1,636,899	303,848,903	32,387,059	20,367	11,707	1,000	10		7,500	4,523		
22,815	31,717	122,837		1,177	6,344	2,684,881	38,277	2,938,628	215,470	702	140				562			
425,336	1,040,515	4,647,499	250,962	115,952	301,670	99,802,593	601,695	110,221,328	9,817,037	9,560	6,721	1,347	4		1,488	2,552		
1,371,839	2,459,887	8,968,272	47,629	438,922	618,703	228,842,265	1,206,249	256,038,393	25,989,879	18,799	10,870	783	235		6,911	3,891		
28,570	10,174	84,667			2,270	300,150	13,482	450,974	134,342	524	425			15	84	140		
977,698	1,284,264	6,089,371	42,347	70,861	926,334	149,656,070	941,769	170,337,892	19,739,453	19,926	10,760	356	591		3,219	3,220		
112,047	314,206	957,674	16,180	24,461	40,760	13,025,004	124,329	15,868,169	2,118,836	3,048	100				2,513			
1,103,247	1,384,973	5,346,125	186,478	192,291	695,452	106,508,357	772,659	122,802,240	15,581,224	15,325	11,863	245	480	5	2,732	4,882		
36,372	32,674	250,896	500	3,260	38,536	5,948,934	19,023	6,807,195	836,238	555	119				434			
80,237	62,133	279,000	44	6,634	29,243	4,896,085	68,710	5,705,845	740,444	837	645				292			
808,105	1,682,504	5,757,314	41,581	236,076	522,969	105,874,192	877,425	125,191,873	18,440,256	14,055	9,657				4,398	2,886		
36,846	195,021	470,341		1,440	108,485	9,981,802	50,261	11,124,341	1,092,278	1,104	25				1,079			
86,175	67,338	455,791		23,697	38,794	6,130,374	88,193	7,589,320	1,361,753	3,073	2,102			1	903	424		
195,436	229,988	1,525,782	2,397	7,806	113,354	29,972,511	151,941	34,388,584	5,204,132	3,821	813			7	2,991			
141,494	136,806	710,435	5,200	13,366	157,530	16,721,412	77,079	10,043,629	2,245,138	3,076	930	1,766	225	18	137	2,461		
681,313	557,091	3,705,908		32,273	2,107,297	89,401,380	502,559	102,182,171	12,278,232	7,712	5,324	1,015			1,373	1,180		
218,938	709,032	4,708,157		101,411	497,534	78,890,972	789,362	86,732,305	7,067,971	9,250	7,325	80	135		1,746	4,873		

¹ Same number reported for one or more other months.

² All other states embrace: Connecticut, 5 establishments; Mississippi, 1; North Dakota, 1; Oklahoma, 5; South Carolina, 4; South Dakota, 4; Vermont, 2; and Wyoming, 2.

CANNING AND PRESERVING.

GENERAL STATISTICS.

General character of the industry.—The canning and preserving industry includes four classes of establishments: (1) Establishments whose chief products are canned and preserved fruits and vegetables, including dried and packed fruits, put up by packing houses; (2) establishments whose products are canned and cured fish, including pickled, smoked, and dried fish; (3) establishments whose chief products are canned oysters and clams; and (4) establishments whose chief products are pickles, preserves, jellies, sauces, etc.

A subclassification has been made for the canned fruit and vegetable branch of the industry for 1919 in which the establishments have been grouped according to the products of chief value under "canned vegetables," "canned fruits," "dried fruits," and "dried vegetables"; while the "pickles, preserves, and sauces" branch of the industry has been subdivided into two groups, including under "preserves" those establishments manufacturing as their products of chief value, jam, jellies, preserved fruits, fruit butters, etc., and under "pickles and sauces" those establishments whose products of chief value were pickles, olives, sauces, salad dressings, catsup, etc.

The general statistics for the industry do not cover the canning of meats, soup, or other products by meat-packing establishments, statistics for which are included in the slaughtering and meat-packing industry. The industry being seasonal in character the report relates to the season of 1919—that is, to the canning and preserving from the crop of that year. Some of the establishments are engaged in the canning of fruits and vegetables in the summer and fall months, and in the canning and curing of fish and oysters at other times.

There is considerable overlapping in the canning and preserving of fruits and vegetables and pickles, preserves, and sauces. Establishments engaged primarily in canning vegetables and fruits report also preserves, jellies, jams, sauces, and pickles. This is also the case with the fish and oyster industry. Large establishments engaged in the canning and curing of fish also can oysters and clams. The shucking and wholesale shipment of fresh oysters in unsealed containers is not included.

The process of manufacture is comparatively simple and inexpensive and the industry is well distributed throughout the United States, Nevada and Wyoming being the only states not represented by one or more establishments.

Importance and growth of the industry.—Table 1 summarizes the statistics of each census since 1889, with percentages of increase for each period. Increases are noticeable at each succeeding census. The large increases, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 accounts for the large increase in "Rent and taxes."

Summary for the four branches, 1919.—Table 2 presents for 1919 a summary of the statistics for the canning and preserving industry as a whole and for its four leading branches separately.

The overlapping among the four branches of the industry to which reference has been made comprises products valued at \$22,224,258, distributed as follows: Canned and preserved fruits and vegetables to the value of \$1,385,623, reported by establishments engaged in the canning and preserving of fish and oysters; canned fruits, vegetables, fish, and oysters to the value of \$8,451,522, put up by establishments whose principal products were pickles, preserves, and sauces; canned and preserved fish and oysters to the value of \$1,495,258, reported by establishments engaged primarily in the canning and preserving of fruits and vegetables, and pickles, preserves, and sauces to the value of \$10,891,855 were reported by establishments engaged primarily in the canning and preserving of fruits and vegetables.

In addition, canned and preserved products to the value of \$11,483,158 were reported by establishments engaged primarily in industries other than canning and preserving. The total value of canned and preserved goods reported as by-products by establishments classified either in other branches of the industry than the one to which the products belonged, or in entirely separate industries, was thus \$33,707,416.

Comparative summary for the four branches.—Table 3 shows, for the four branches of the industry separately, the most important items for 1919 and 1914, and the per cent of increase. With few exceptions, there were substantial increases for all four branches of the industry.

Principal states, ranked by value of products.—Table 4 shows that California was the leading state in

the industry in 1919 as it has been since the census of 1899. New York ranked second in importance in value of products, and third in average number of wage earners, while Maryland ranked second in average number of wage earners; and third in value of products. In 1914 Pennsylvania ranked fourth in importance in value of products but dropped to fifth place in 1919, being displaced by New Jersey. The ranking of the industry by value of products is not always satisfactory as indicating its importance from a manufacturing standpoint. In many instances this ranking would change materially if based upon the average number of wage earners or value added by manufacture.

Persons engaged in the industry.—The classification by age of the average number of wage earners in Table 5 is an estimate obtained by the method described in the "Explanation of terms." The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the classification by age. Figures are shown for the industry as a whole and for the four branches separately. Figures for the individual states will be found in Table 23.

Wage earners, by months.—Because of the seasonal character of the industry, the fluctuation of employment is very great. As shown by Table 6, the number of wages earners employed in the industry ranged from a maximum of 198,047 in September to a minimum of 35,692 in March, the minimum number being equivalent to 18 per cent of the maximum. Figures are given separately for all states showing over 550 wage earners, and for a number of states showing a large proportion of females, while for the United States for 1919 the number of males and females is also shown.

Prevailing hours of labor.—Table 7 shows a marked shortening of the working day for the industry since 1914. In that year only 14.4 per cent of the wage earners were reported as being employed fewer than 54 hours per week, as against 39.5 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 51.2 per cent of the total number of wage earners, as compared with 35.7 per cent in 1919.

Size of establishments, by average number of wage earners.—It should be borne in mind in considering Table 8 that because of the seasonal character of the industry, the average number of wage earners for the entire year for any given establishment is usually much smaller than the maximum or even the average for the active period. (See "Explanation of terms.") Moreover, the fact that some establishments operate during a much longer period than others affects the significance of the distribution according to the average number employed for the year. Of the 4,280 establishments reported for 1919, there were 314, or 7.3 per cent, which employed no wage earners. These were small establishments in which the work was done by the proprietors or firm members, sometimes assisted by members of their families or by

persons classed as salaried employees. In some cases they employed a few wage earners for short periods, but the numbers were so small and the periods so short that the averages for the year computed in the manner described in the "Explanation of terms" were nearer zero than 1, and therefore no wage earners could be shown. Of the total number of establishments, 39.8 per cent employed 1 to 5 wage earners, and 29.3 per cent from 6 to 20. There were only 393 establishments that employed an average of more than 50 wage earners, and of these only 165 employed over 100. For the United States as a whole the average number of wage earners per establishment for 1919 was 21, as compared with 18 for 1914.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. Table 9, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919 the three groups having products of \$100,000 and over included 1,058 establishments, or 24.7 per cent of the total number for the industry, but employed 68,243 wage earners, or 75.9 per cent of the total average number, and reported products to the value of \$190,686,510, or 88.5 per cent of the total value of products.

Character of ownership.—Table 10 shows that in 1919, of the total number of establishments for the industry, 37.6 per cent were under corporate ownership. While corporations thus controlled slightly more than one-third of the total number of establishments, they employed 72.9 per cent of the total average number of wage earners and reported 79.4 per cent of the total value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 11, there was an increase in the total horsepower for the industry of 60,808 horsepower, or 50.7 per cent. This increase, however, is largely due to the gain of 37,494 horsepower, or 200.2 per cent, in rented electric power, although there was an increase in owned power of 23,619 horsepower, or 23.5 per cent.

Fuel consumed.—Table 12 shows, by states, the principal kinds of fuel used in the industry in 1919 and 1914. Of the total quantity of bituminous coal used in the industry in 1919, Illinois, Indiana, New York, and Pennsylvania together reported 41.9 per cent, while California reported 89.9 per cent of the fuel oils consumed and 55.1 per cent of the gas.

MANUFACTURES.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, AND 1889.

	1919	1914	1909	1904	1899	1889	PER CENT OF INCREASE. ¹				
							1914-1919	1909-1914	1904-1909	1899-1904	1889-1899
Number of establishments.....	4,280	4,220	3,767	3,168	2,570	1,328	1.4	12.0	18.9	23.3	93.5
Persons engaged.....	108,261	88,069	71,972	66,022	(2)	(2)	22.9	22.4	9.0	.....	.....
Proprietors and firm members.....	4,159	4,409	4,244	3,450	(2)	(2)	-5.7	3.9	23.0	.....	.....
Salaried employees.....	14,179	9,559	7,760	5,628	4,160	2,037	47.9	23.6	37.9	34.0	106.1
Wage earners (average number).....	89,923	74,071	50,968	58,944	57,012	61,812	21.4	23.5	5.3	-0.1	-7.8
Primary horsepower.....	180,812	120,004	81,179	60,831	38,624	7,000	50.7	47.8	33.4	57.5	451.8
Capital.....	\$378,416,813	\$172,474,945	\$119,207,127	\$79,245,880	\$55,480,983	\$21,288,160	119.4	44.7	50.4	42.8	160.6
Salaries and wages.....	91,212,687	38,668,278	26,945,466	21,567,056	17,183,832	8,971,923	135.9	43.5	24.9	25.5	91.5
Salaries.....	24,768,664	11,471,254	7,863,623	5,230,704	3,478,727	1,390,961	115.9	45.9	50.3	50.4	150.1
Wages.....	66,444,023	27,197,024	19,081,843	16,336,352	13,705,105	7,580,962	144.3	42.5	16.8	19.2	80.8
Paid for contract work.....	877,683	840,419	501,173	359,079	(2)	(2)	4.4	67.7	39.6	.....	.....
Rent and taxes.....	17,377,705	1,899,046	1,074,279	775,703	(2)	(2)	815.1	76.8	.....	.....	.....
Cost of materials.....	412,659,747	150,657,909	101,823,059	83,147,336	63,667,568	30,793,280	158.5	56.8	22.5	30.6	106.8
Value of products.....	628,287,925	243,439,859	157,101,201	130,465,976	99,335,464	49,886,305	158.1	55.0	20.4	31.3	99.1
Value added by manufacture.....	215,628,178	83,781,950	55,278,142	47,318,040	35,667,896	19,093,025	157.4	51.6	16.8	32.7	86.8

¹ A minus sign (-) denotes decrease.² Figures not available.³ Exclusive of internal revenue.⁴ Value of products less cost of materials.

TABLE 2.—SUMMARY FOR THE INDUSTRY AND EACH OF THE FOUR BRANCHES: 1919.

	Total for the industry.	ESTABLISHMENTS ENGAGED PRIMARILY IN CANNING AND PRESERVING—							Pickles, preserves, and sauces.	
		Canned vegetables.	Canned fruits.	Dried fruits.	Dried vegetables.	Fish.	Oysters.		Preserves.	Pickles and sauces.
Number of establishments.....	4,280	1,969	446	629	18	410	65		195	528
Persons engaged.....	108,261	39,854	24,418	7,844	628	12,797	1,339		8,546	12,835
Proprietors and firm members.....	4,159	2,178	374	729	3	275	51		112	437
Salaried employees.....	14,179	5,118	2,309	1,062	100	1,274	99		1,395	2,816
Wage earners (average number).....	89,923	32,558	21,785	6,053	519	11,248	1,189		7,030	9,552
Primary horsepower.....	180,812	95,352	20,214	9,447	1,409	24,865	1,025		7,715	14,785
Capital.....	\$378,416,813	\$134,442,080	\$68,006,910	\$19,300,168	\$1,943,076	\$63,049,038	\$2,971,876		\$35,951,096	\$52,752,569
Salaries and wages.....	91,212,687	27,240,226	23,200,989	5,902,973	599,449	11,038,634	618,013		8,763,431	12,948,972
Salaries.....	24,768,664	7,471,942	4,637,978	1,103,204	131,976	2,602,545	149,083		3,196,541	5,169,395
Wages.....	66,444,023	19,768,284	18,563,011	4,793,769	467,473	8,436,089	468,930		5,566,890	7,779,577
Paid for contract work.....	877,683	198,508	89,091	39,991	.....	445,746	56,053		18,483	28,821
Rent and taxes (including internal revenue).....	17,377,705	4,889,217	5,443,829	1,486,060	63,061	1,578,900	43,354		1,940,483	1,042,693
Cost of materials.....	412,659,747	101,836,478	89,299,075	72,952,712	1,539,360	52,410,951	1,582,838		45,537,295	47,600,138
Value of products.....	628,287,925	162,097,699	150,474,213	87,252,343	2,418,717	77,284,412	2,976,011		65,122,667	80,661,803
Value added by manufacture.....	215,628,178	60,261,221	61,174,238	14,289,631	879,357	24,873,461	1,393,173		19,585,372	33,161,725

¹ Value of products less cost of materials.

CANNING AND PRESERVING.

65

TABLE 3.—COMPARATIVE SUMMARY FOR THE INDUSTRY AND EACH OF THE FOUR BRANCHES: 1919 AND 1914.

	ESTABLISHMENTS ENGAGED PRIMARILY IN CANNING AND PRESERVING—											
	Fruits and vegetables.			Fish.			Oysters.			Pickles, preserves, and sauces.		
	1919	1914	Per cent of increase. ¹	1919	1914	Per cent of increase.	1919	1914	Per cent of increase. ¹	1919	1914	Per cent of increase. ¹
Number of establishments.....	3,082	3,153	—2.3	410	330	24.2	65	65	.....	723	672	7.6
Persons engaged.....	72,744	58,320	24.7	12,797	10,306	24.2	1,339	2,296	—41.7	21,381	17,138	24.8
Proprietors and firm members..	3,284	3,520	—6.7	275	283	4.6	51	60	—15.0	549	566	—3.0
Salaried employees.....	8,595	4,484	91.7	1,274	974	30.8	99	149	—33.6	4,211	3,982	5.8
Wage earners (average number)..	60,865	50,326	20.9	11,248	9,069	24.0	1,189	2,087	—43.0	16,621	12,590	32.0
Primary horsepower.....	132,422	88,303	50.0	24,865	10,900	126.7	1,025	1,895	—45.9	22,500	18,840	19.4
Capital.....	\$223,692,234	\$98,738,219	126.6	\$63,049,038	\$28,463,738	121.5	\$2,971,876	\$2,076,607	43.1	\$88,703,665	\$43,190,381	105.5
Salaries and wages.....	50,943,637	22,412,200	154.1	11,938,634	4,048,991	141.2	618,013	552,063	11.9	21,712,403	10,754,934	101.9
Salaries.....	13,351,100	5,106,787	161.4	2,902,545	1,269,992	128.5	149,083	128,366	16.1	8,365,936	4,968,109	68.5
Wages.....	43,592,537	17,305,503	151.0	9,036,089	3,678,999	145.6	468,930	423,697	10.7	13,346,467	5,786,825	130.6
Paid for contract work.....	328,580	422,514	—22.2	445,746	322,347	38.3	50,053	8,009	546.6	47,304	80,889	—45.6
Rent and taxes (including internal revenue).....	11,872,170	5,878,158	35.2	1,578,099	375,904	320.0	43,354	18,726	131.5	3,883,176	626,198	520.1
Cost of materials.....	265,628,525	103,293,044	157.2	62,410,951	19,407,153	109.2	1,582,838	1,225,206	29.2	93,037,433	35,672,506	160.8
Value of products.....	402,242,972	140,175,866	169.6	77,284,412	31,111,409	148.4	2,976,011	2,238,053	33.0	145,784,530	60,914,532	139.3
Value added by manufacture.....	136,614,447	46,882,821	197.7	24,873,461	11,644,256	113.6	1,393,173	1,012,847	37.0	52,747,097	25,242,020	109.0

¹ A minus sign (—) denotes decrease.

² Value of products less cost of materials.

TABLE 4.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States..	4,280	89,923	100.0	....	\$628,288	100.0	....	\$215,628	100.0	....	Michigan.....	98	2,592	2.9	12	\$16,009	2.5	14	\$5,028	2.3	14
California.....	444	24,283	27.0	1	219,279	34.9	1	72,910	33.8	1	Iowa.....	76	1,582	1.8	16	10,223	1.6	15	3,488	1.6	15
New York.....	637	7,656	8.5	3	54,558	8.7	2	19,429	9.0	2	Kentucky.....	28	1,147	1.3	19	8,496	1.4	16	2,774	1.3	16
Maryland.....	460	8,023	8.9	2	30,566	4.9	3	8,570	4.0	8	Missouri.....	158	1,266	1.4	18	6,877	1.0	17	1,446	0.7	20
New Jersey.....	97	3,232	3.6	8	29,822	4.7	4	11,614	5.4	4	Delaware.....	78	1,469	1.6	17	5,584	0.9	18	1,962	0.9	17
Pennsylvania.....	94	3,010	3.3	9	20,489	4.7	5	12,142	5.6	3	Virginia.....	498	2,123	2.4	14	5,505	0.9	19	1,662	0.8	11
Illinois.....	132	3,680	4.1	6	28,341	4.5	6	10,508	4.9	5	Utah.....	37	1,099	1.2	20	4,658	0.7	20	1,823	0.8	18
Indiana.....	166	4,170	4.6	4	27,823	4.4	7	10,295	4.8	6	Minnesota.....	38	683	0.8	24	3,800	0.6	21	1,171	0.5	22
Washington.....	127	3,394	3.8	7	27,516	4.4	8	9,903	4.6	7	Colorado.....	24	689	0.8	23	3,190	0.5	22	1,860	0.6	21
Maine.....	217	3,846	4.3	5	24,551	3.9	9	7,571	3.5	9	Arkansas.....	107	804	0.9	22	2,421	0.4	23	930	0.4	23
Oregon.....	103	2,344	2.6	13	20,501	3.3	10	6,225	2.9	11	Mississippi.....	28	1,094	1.2	21	2,303	0.4	24	786	0.4	25
Massachusetts.....	55	1,944	2.2	15	19,017	3.0	11	5,584	2.6	13	Louisiana.....	38	653	0.7	25	2,146	0.3	25	798	0.4	24
Wisconsin.....	129	2,909	3.2	11	18,067	2.9	12	7,410	3.4	10	Texas.....	27	354	0.4	27	1,913	0.3	26	784	0.4	26
Ohio.....	124	2,951	3.3	10	17,289	2.8	13	5,775	2.7	12	Tennessee.....	62	593	0.6	26	1,513	0.2	27	601	0.3	27
											All other states...	200	2,353	2.6	....	7,641	1.2	....	3,025	1.4	..

MANUFACTURES.

TABLE 5.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

INDUSTRY AND CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		INDUSTRY AND CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	
					Male.	Fe- male.						Male.	Fe- male.
CANNING AND PRESERVING.....	1919	108,261	61,219	47,042	56.5	43.5	Clerks and other subordinate sala- ried employees.	1919	30	19	11	63.3	36.7
	1914	88,069	48,180	39,889	54.7	45.3		1914	87	66	21	75.9	24.1
	1909	71,972	38,437	33,535	53.4	46.6		1909	77	69	8	89.6	10.4
Proprietors and officials.....	1919	11,002	10,631	371	96.6	3.4	Wage earners (average number).....	1919	1,189	446	743	37.5	62.5
	1914	7,510	7,388	172	97.7	2.3		1914	2,087	1,115	972	53.4	46.6
	1909	6,920	6,759	161	97.7	2.3		1909	2,668	1,251	1,415	46.9	53.1
Proprietors and firm members....	1919	4,159	4,029	130	96.9	3.1	16 years of age and over.....	1919	1,185	445	740	37.6	62.4
	1914	4,409	4,285	124	97.2	2.8		1914	2,008	1,085	923	54.0	46.0
	1909	4,244	4,116	128	97.0	3.0		1909	2,325	1,108	1,217	47.7	52.3
Salaried officers of corporations....	1919	2,110	2,026	84	96.0	4.0	Under 16 years of age.....	1919	4	1	3	25.0	75.0
	1914	1,207	1,182	25	97.9	2.1		1914	79	30	49	38.0	62.0
	1909	968	951	17	98.2	1.8		1909	341	143	198	41.9	58.1
Superintendents and managers....	1919	4,733	4,576	157	96.7	3.3	FRUITS AND VEGETABLES.....	1919	72,744	40,641	32,103	55.9	44.1
	1914	1,924	1,901	23	98.8	1.2		1914	58,329	29,836	28,493	51.2	48.8
	1909	1,708	1,692	16	99.1	0.9		1909	47,448	23,496	23,952	49.5	50.5
Clerks and other subordinate sala- ried employees.	1919	7,336	4,488	2,850	61.2	38.8	Proprietors and officials.....	1919	8,176	7,944	232	97.2	2.8
	1914	6,458	5,096	1,362	78.9	21.1		1914	5,627	5,450	77	98.6	1.4
	1909	5,084	4,028	1,056	79.2	20.8	Proprietors and firm members....	1919	5,110	5,014	96	98.1	1.9
Wage earners (average number).....	1919	89,923	46,102	43,821	51.3	48.7		1914	3,284	3,206	78	97.6	2.4
	1914	74,071	35,716	38,355	48.2	51.8		1914	3,620	3,468	52	98.5	1.5
	1909	59,968	27,650	32,318	46.1	53.9		1909	3,816	3,239	77	97.7	2.3
16 years of age and over.....	1919	87,881	46,321	42,560	51.6	48.4	Salaried officers of corporations....	1919	1,354	1,304	50	96.3	3.7
	1914	71,128	34,577	36,551	48.6	51.4		1914	700	688	12	98.3	1.7
	1909	55,722	25,865	29,857	46.4	53.6		1909	607	599	8	98.7	1.3
Under 16 years of age.....	1919	2,042	781	1,261	38.2	61.8	Superintendents and managers....	1919	3,538	3,434	104	97.1	2.9
	1914	2,943	1,139	1,804	38.7	61.3		1914	1,307	1,294	13	99.0	1.0
	1909	4,246	1,785	2,461	42.0	58.0		1909	1,187	1,176	11	99.1	0.9
Fish.....	1919	12,797	8,106	4,691	63.3	36.7	Clerks and other subordinate sala- ried employees.	1919	3,703	2,124	1,579	57.4	42.6
	1914	10,308	6,763	3,545	65.5	34.5		1914	2,477	1,903	574	76.8	23.2
	1909	8,341	5,314	3,027	63.7	36.3		1909	1,846	1,434	412	77.7	22.3
Proprietors and officials.....	1919	932	909	23	97.5	2.5	Wage earners (average number).....	1919	60,865	30,673	30,292	50.2	49.8
	1914	651	644	7	98.9	1.1		1914	50,325	22,483	27,842	44.7	55.3
	1909	651	642	9	98.6	1.4		1909	40,492	17,048	23,444	42.1	57.9
Proprietors and firm members....	1919	275	267	8	97.1	2.9	16 years of age and over.....	1919	59,399	29,989	29,410	50.5	49.5
	1914	263	258	5	98.1	1.9		1914	47,839	21,633	26,206	45.0	55.0
	1909	338	331	7	97.9	2.1		1909	36,908	15,565	21,343	42.2	57.8
Salaried officers of corporations....	1919	283	275	8	97.2	2.8	Under 16 years of age.....	1919	1,466	584	882	39.8	60.2
	1914	163	162	1	99.4	0.6		1914	2,486	950	1,536	38.2	61.8
	1909	127	125	2	98.4	1.6		1909	3,584	1,483	2,101	41.4	58.6
Superintendents and managers....	1919	374	367	7	98.1	1.9	PICKLES, PRESERVES, AND SAUCES.	1919	21,381	11,890	9,491	55.6	44.4
	1914	225	224	1	99.6	0.4		1914	17,138	10,292	6,846	60.1	39.9
	1909	186	186	.....	100.0	.....		1909	13,310	8,178	5,132	61.4	38.6
Clerks and other subordinate sala- ried employees.	1919	617	353	264	57.2	42.8	Proprietors and officials.....	1919	1,774	1,661	113	93.6	6.4
	1914	586	434	152	74.1	25.9		1914	1,240	1,156	84	93.2	6.8
	1909	430	299	131	69.6	30.5	Proprietors and firm members....	1919	1,029	974	55	94.7	5.3
Wage earners (average number).....	1919	11,248	6,844	4,404	60.8	39.2		1914	549	505	44	92.0	8.0
	1914	9,069	5,675	3,394	62.6	37.4		1914	568	501	67	98.5	11.5
	1909	7,260	4,373	2,887	60.2	39.8		1909	541	498	43	92.1	7.9
16 years of age and over.....	1919	11,145	6,795	4,350	61.0	39.0	Salaried officers of corporations....	1919	449	424	25	94.4	5.6
	1914	8,902	5,574	3,328	62.6	37.4		1914	321	310	11	96.6	3.4
	1909	7,085	4,277	2,808	60.4	39.6		1909	200	193	7	96.5	3.5
Under 16 years of age.....	1919	103	49	54	47.6	52.4	Superintendents and managers....	1919	776	732	44	94.3	5.7
	1914	167	101	66	60.5	39.5		1914	353	345	8	97.7	2.3
	1909	175	96	79	54.9	45.1		1909	288	283	5	98.3	1.7
OYSTERS.....	1919	1,339	582	757	43.5	56.5	Clerks and other subordinate sala- ried employees.	1919	2,986	1,990	996	66.6	33.4
	1914	2,296	1,290	997	56.6	43.4		1914	3,308	2,693	615	81.4	18.6
	1909	2,873	1,449	1,424	50.4	49.6		1909	2,731	2,226	505	81.5	18.5
Proprietors and officials.....	1919	120	117	3	97.5	2.5	Wage earners (average number).....	1919	16,621	8,239	8,382	49.6	50.4
	1914	122	118	4	96.7	3.3		1914	12,690	6,443	6,147	51.2	48.8
	1909	130	129	1	99.2	0.8		1909	9,550	4,978	4,572	52.1	47.9
Proprietors and firm members....	1919	51	51	.....	100.0	.....	16 years of age and over.....	1919	16,152	8,092	8,060	50.1	49.9
	1914	60	58	2	96.7	3.3		1914	12,379	6,385	5,994	51.6	48.4
	1909	49	48	1	98.0	2.0		1909	9,404	4,915	4,489	52.3	47.7
Salaried officers of corporations....	1919	24	23	1	95.8	4.2	Under 16 years of age.....	1919	469	147	322	31.3	68.7
	1914	23	22	1	95.7	4.3		1914	211	58	153	27.5	72.5
	1909	34	34	.....	100.0	.....		1909	146	63	83	43.2	56.8
Superintendents and managers....	1919	45	43	2	95.6	4.4							
	1914	39	38	1	97.4	2.6							
	1909	47	47	.....	100.0	.....						

CANNING AND PRESERVING.

67

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	89,923	44,407	37,044	35,698	41,508	40,581	77,462	122,414	169,455	198,047	161,452	87,333	57,681	18.0
Males.....	46,102	26,640	22,731	21,890	25,353	28,599	43,058	58,073	80,709	91,745	72,354	47,298	33,873	23.9
Females.....	43,821	17,767	14,313	13,808	16,155	17,982	34,404	63,441	88,746	106,301	89,098	40,035	23,808	13.0
1914.....	74,071	<i>27,917</i>	28,944	20,926	34,047	38,458	58,899	80,183	143,042	185,724	141,670	69,026	41,446	15.0
1909.....	59,908	<i>19,998</i>	21,268	23,015	28,390	31,139	45,270	68,616	127,741	154,800	105,257	59,727	34,536	12.9
Arkansas.....	804	5	<i>2</i>	11	20	49	26	492	2,526	2,855	2,522	874	256	0.1
California.....	24,233	13,618	9,222	7,747	10,320	10,779	19,719	44,967	51,317	45,039	37,335	24,667	10,666	15.1
Colorado.....	689	203	<i>166</i>	166	282	309	527	1,233	1,222	2,079	1,237	514	330	8.0
Delaware.....	1,459	455	340	<i>278</i>	327	494	2,074	579	4,065	4,740	3,110	695	351	5.9
Illinois.....	3,680	2,552	<i>2,367</i>	2,427	2,671	2,993	3,724	3,483	4,927	7,688	4,787	3,507	3,044	30.7
Indiana.....	4,170	2,263	1,695	<i>1,569</i>	1,578	1,740	3,219	3,273	7,920	11,828	9,037	3,621	2,297	13.3
Iowa.....	1,582	616	<i>554</i>	637	595	767	769	812	4,794	5,777	1,903	1,083	677	9.6
Kentucky.....	1,147	965	943	894	875	783	1,020	1,102	1,630	1,771	1,636	1,175	970	44.2
Louisiana.....	653	<i>241</i>	350	342	937	886	767	634	850	802	918	672	877	26.3
Maine.....	3,846	1,086	<i>931</i>	1,068	1,308	2,117	3,494	4,345	7,409	10,799	7,697	3,859	2,029	9.1
Maryland.....	8,023	<i>1,698</i>	1,074	1,881	2,566	3,333	6,126	5,637	13,715	27,225	25,966	4,202	2,313	6.0
Massachusetts.....	1,944	2,005	1,959	1,858	1,764	1,874	1,973	1,957	1,740	1,921	1,959	2,082	2,171	80.1
Michigan.....	2,502	1,188	763	<i>768</i>	885	1,189	3,968	5,641	4,860	4,912	3,752	2,097	1,087	13.6
Minnesota.....	683	109	<i>184</i>	206	255	208	480	837	2,244	1,994	712	469	318	8.2
Mississippi.....	1,094	1,380	1,192	1,143	1,101	590	179	202	1,059	1,190	1,714	1,723	1,645	10.4
Missouri.....	1,256	310	<i>305</i>	311	327	449	439	449	3,855	4,144	3,438	631	364	7.4
New Jersey.....	3,232	2,328	2,312	2,017	1,608	1,802	2,784	3,293	4,999	5,710	5,890	3,671	2,870	28.2
New York.....	7,656	3,664	3,382	<i>5,537</i>	8,542	4,018	6,121	11,230	11,227	14,264	14,260	10,805	6,022	23.4
Ohio.....	2,951	1,474	<i>1,468</i>	1,497	1,630	2,054	4,426	3,056	4,882	6,773	4,033	2,422	1,707	21.5
Oregon.....	2,344	1,029	631	<i>671</i>	691	1,180	2,576	3,848	4,116	4,676	3,798	3,097	1,915	12.2
Pennsylvania.....	3,010	2,303	2,345	2,282	2,362	<i>2,167</i>	2,627	3,148	4,265	4,851	4,302	2,994	2,424	44.5
Tennessee.....	593	<i>23</i>	30	40	40	332	314	1,206	1,965	1,626	881	457	112	1.3
Utah.....	1,089	276	235	<i>225</i>	275	348	863	2,400	2,256	2,994	2,214	742	360	7.5
Virginia.....	2,124	<i>145</i>	148	147	532	459	407	846	7,307	7,594	6,341	1,283	279	1.9
Washington.....	3,394	1,367	<i>1,259</i>	1,555	1,971	2,676	2,998	4,397	5,525	6,161	5,647	4,624	2,753	20.1
Wisconsin.....	2,909	999	901	<i>861</i>	1,051	1,386	3,780	11,153	5,468	3,999	2,440	1,844	1,046	7.7
States showing large proportion of females.														Per ct. av. is of state.
California.....	12,331	5,166	3,229	<i>2,837</i>	4,228	4,103	10,069	28,254	31,621	25,132	17,719	9,854	5,760	50.8
Illinois.....	1,550	1,142	<i>1,045</i>	1,089	1,136	1,334	1,408	1,245	1,976	3,235	2,170	1,483	1,337	42.1
Indiana.....	1,782	837	<i>587</i>	674	<i>466</i>	632	1,045	1,050	3,684	6,105	4,417	1,865	732	42.7
Maine.....	1,812	497	<i>353</i>	396	471	879	1,675	2,123	3,688	4,987	3,778	1,972	945	47.1
Maryland.....	4,710	<i>659</i>	755	855	1,137	1,808	3,196	3,431	4,499	16,536	20,036	2,484	1,124	58.7
Massachusetts.....	423	399	382	<i>374</i>	407	461	453	445	428	427	437	433	430	21.7
Michigan.....	1,283	485	244	<i>219</i>	252	354	2,173	3,024	2,652	2,651	2,114	908	320	49.3
New Jersey.....	1,283	897	887	715	503	585	1,095	1,193	2,066	2,556	2,521	1,470	908	39.7
New York.....	3,736	1,630	1,346	1,250	1,350	1,463	2,754	5,308	5,667	7,631	7,880	5,330	2,943	48.8
Ohio.....	1,377	<i>690</i>	700	714	739	992	1,592	1,522	2,238	3,109	2,060	1,266	902	46.7
Oregon.....	1,147	422	141	<i>94</i>	119	246	1,380	2,180	2,350	2,599	1,951	1,443	839	48.9
Pennsylvania.....	1,438	1,098	1,101	1,043	1,105	<i>996</i>	1,224	1,630	2,198	2,350	2,038	1,391	1,082	47.8
Virginia.....	1,270	76	<i>75</i>	71	225	185	115	401	4,503	4,743	3,994	728	119	59.8
Washington.....	1,869	425	<i>291</i>	357	413	655	1,026	1,891	2,478	2,901	2,533	2,093	1,365	40.3
Wisconsin.....	851	212	173	129	<i>125</i>	159	931	2,707	1,999	1,357	777	475	168	29.3

MANUFACTURES.

TABLE 7.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Cen- sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Cen- sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Be- tween 44 and 48.	48. ¹	Be- tween 48 and 54.	54.	Be- tween 54 and 60.	60.				Over 60.	44 and under.	Be- tween 44 and 48.	48. ¹	Be- tween 48 and 54.	54.	Be- tween 54 and 60.	60.	Over 60.
United States.	1919	89,923	5,367	1,278	19,635	9,205	11,168	11,115	28,508	3,587	1919	683	15	20	46	146	22	.....	420	14
	1914	74,071	(2)	(2)	7,854	2,844	14,984	10,467	35,141	2,781	1914	436	(2)	(2)	115	13	30	99	133	40
	1909	59,068	(2)	(2)	2,632	1,311	8,077	4,641	42,908	5,399										
Arkansas.....	1919	804	37	32	232	23	123	.....	348	9	1919	1,094	18	.....	485	18	221	91	261	.....
	1914	454	(2)	(2)	44	18	....	44	298	.....	1914	1,052	(2)	(2)	496	.....	88	45	423	.....
California.....	1919	24,233	2,643	209	10,310	190	2,358	289	6,042	1,642	1919	1,256	189	25	264	83	258	17	420	.....
	1914	12,756	(2)	(2)	1,336	807	3,094	206	7,144	669	1914	850	(2)	(2)	396	22	78	12	337	5
Colorado.....	1919	689	16	2	159	6	259	70	176	1	1919	3,232	93	19	37	444	220	1,936	462	15
	1914	684	(2)	(2)	84	79	389	9	79	44	1914	3,154	(2)	(2)	221	177	203	1,485	1,064	4
Delaware.....	1919	1,459	114	12	55	26	24	428	800	.....	1919	7,656	100	385	339	1,371	1,802	404	3,243	12
	1914	1,303	(2)	(2)	166	91	256	268	993	29	1914	8,757	(2)	(2)	249	261	3,069	931	3,611	36
Illinois.....	1919	8,680	65	123	374	1,524	162	355	1,072	5	1919	2,051	38	24	379	518	211	690	1,027	64
	1914	2,560	(2)	(2)	21	111	205	980	1,238	5	1914	2,509	(2)	(2)	92	86	870	345	1,094	22
Indiana.....	1919	4,170	80	11	327	917	439	682	1,643	71	1919	2,344	14	3	1,069	21	458	30	735	14
	1914	4,422	(2)	(2)	262	188	302	1,085	1,576	409	1914	799	(2)	(2)	59	32	477	23	141	67
Iowa.....	1919	1,582	15	.....	32	85	154	202	888	236	1919	3,010	67	81	94	583	75	1,781	281	48
	1914	1,209	(2)	(2)	79	88	18	22	858	194	1914	3,096	(2)	(2)	114	86	613	1,841	351	91
Kentucky.....	1919	1,147	31	.....	8	2	521	456	129	.....	1919	593	26	.....	54	9	30	239	232	3
	1914	594	(2)	(2)	74	7	175	185	148	6	1914	390	(2)	(2)	58	95	30	9	197	1
Louisiana.....	1919	653	9	21	230	58	79	.....	202	54	1919	1,099	8	.....	578	182	148	35	15	133
	1914	991	(2)	(2)	795	.....	3	.....	186	7	1914	677	(2)	(2)	72	21	156	35	303	.....
Maine.....	1919	3,846	49	.....	216	161	1,565	139	1,618	98	1919	2,123	206	194	175	101	187	279	981	.....
	1914	3,913	(2)	(2)	150	65	499	56	3,142	1	1914	2,076	(2)	(2)	445	126	55	418	989	33
Maryland.....	1919	8,023	1,089	115	789	743	446	1,605	3,090	166	1919	3,394	28	1,916	248	235	.....	906	81	.....
	1914	8,040	(2)	(2)	1,385	272	142	568	5,668	605	1914	2,352	(2)	(2)	150	21	630	.....	1,811	240
Massachusetts..	1919	1,044	5	10	313	1,563	17	.....	36	.....	1919	2,909	27	6	189	124	422	648	1,094	309
	1914	1,903	(2)	(2)	56	200	1,513	115	19	.....	1914	2,687	(2)	(2)	109	207	421	442	1,811	107
Michigan.....	1919	2,592	128	.....	210	29	255	492	970	498	1919	2,592	128	.....	210	29	255	492	970	498
	1914	2,507	(2)	(2)	395	11	607	384	1,081	29	1914	2,507	(2)	(2)	395	11	607	384	1,081	29

¹ Includes 48 and under for 1914 and 1909.² Corresponding figures not available.

TABLE 8.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earn- ers.	1 to 5 wage earn- ers, inclusive.		6 to 20 wage earn- ers, inclusive.		21 to 50 wage earn- ers, inclusive.		51 to 100 wage earn- ers, inclusive.		101 to 250 wage earn- ers, inclusive.		251 to 500 wage earn- ers, inclusive.		501 to 1,000 wage earn- ers, inclusive.		Over 1,000 wage earn- ers.	
				Establish- ments.	Wage earn- ers.	Establish- ments.	Wage earn- ers.	Establish- ments.	Wage earn- ers.	Establish- ments.	Wage earn- ers.	Establish- ments.	Wage earn- ers.	Establish- ments.	Wage earn- ers.	Establish- ments.	Wage earn- ers.	Establish- ments.	Wage earn- ers.
United States...1919..	4,280	89,923	314	1,702	4,418	1,253	14,748	618	19,861	228	16,263	133	19,882	25	8,017	3	1,845	4	4,889
1914..	4,220	74,071	118	2,135	5,119	1,160	13,163	504	15,969	183	12,827	95	14,966	18	5,787	5	3,510	2	2,730
Arkansas.....	107	804	3	73	204	22	261	7	214	2	125	.....	.....	.....	.....	.....	.....	.....	.....
California.....	444	24,283	18	101	270	101	1,274	83	2,809	68	4,991	57	8,742	13	3,899	2	1,283	1	1,035
Colorado.....	24	689	1	5	13	8	80	5	200	4	275	1	121	.....	.....	.....	.....	.....	.....
Delaware.....	1	459	1	22	77	42	546	7	187	3	217	3	432	.....	.....	.....	.....	.....	.....
Illinois.....	182	3,680	8	49	128	35	442	20	693	11	839	7	907	2	671	.....	.....	.....	.....
Indiana.....	166	4,170	5	39	128	78	967	27	832	9	640	6	857	2	746	.....	.....	.....	.....
Iowa.....	76	1,582	4	13	39	30	369	26	776	1	56	2	342	.....	.....	.....	.....	.....	.....
Kentucky.....	28	1,147	5	9	31	5	58	4	159	1	60	2	254	2	585	.....	.....	.....	.....
Louisiana.....	38	653	.....	14	34	13	144	7	203	2	125	2	147	.....	.....	.....	.....	.....	.....
Maine.....	217	3,846	6	77	236	73	785	48	1,549	10	733	3	543	.....	.....	.....	.....	.....	.....
Maryland.....	460	8,023	11	152	519	199	2,226	66	2,090	22	1,474	9	1,427	1	287	.....	.....	.....	.....
Massachusetts.....	55	1,044	3	22	63	17	214	6	172	5	346	1	148	.....	.....	.....	.....	.....	.....
Michigan.....	90	2,592	7	33	67	22	274	20	658	7	559	7	1,034	.....	.....	.....	.....	.....	.....
Minnesota.....	38	683	1	10	14	18	241	7	203	1	82	1	143	.....	.....	.....	.....	.....	.....
Mississippi.....	28	1,094	.....	1	4	11	164	10	317	3	219	3	390	.....	.....	.....	.....	.....	.....
Missouri.....	158	1,256	8	94	308	48	523	7	186	.....	.....	1	239	.....	.....	.....	.....	.....	.....
New Jersey.....	97	3,232	9	31	92	36	447	11	404	6	407	3	438	.....	.....	.....	.....	.....	.....
New York.....	637	7,656	116	332	612	91	1,049	63	2,074	23	1,524	10	1,365	1	450	1	582	1	1,444
Ohio.....	124	2,951	4	41	127	50	587	18	593	4	292	5	770	2	582	.....	.....	.....	.....
Oregon.....	103	2,344	2	36	89	33	412	22	729	6	519	4	595	.....	.....	.....	.....	.....	.....
Pennsylvania.....	94	3,010	5	33	83	37	444	11	364	4	283	3	422	.....	.....	.....	.....	.....	.....
Tennessee.....	62	593	10	25	78	22	280	3	92	2	148	.....	.....	.....	.....	.....	.....	.....	.....
Utah.....	37	1,099	2	5	14	11	136	10	322	9	627	.....	.....	.....	.....	.....	.....	.....	.....
Virginia.....	498	2,123	57	349	894	79	759	11	330	2	150	.....	.....	.....	.....	.....	.....	.....	.....
Washington.....	127	3,394	8	35	77	46	570	30	1,007	9	599	2	344	2	797	.....	.....	.....	.....
Wisconsin.....	129	2,909	4	18	34	45	569	53	1,591	7	493	2	222	.....	.....	.....	.....	.....	.....

CANNING AND PRESERVING.

69

TABLE 9.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes.....	4,280	4,220	3,767	89,923	74,071	59,968	\$628,287,925	\$243,439,859	\$157,101,201	\$215,628,178	\$83,781,950	\$55,278,142
Less than \$5,000.....	933	1,028	1,394	1,233	3,255	3,185	2,217,181	3,195,667	3,105,208	900,115	1,435,493	1,232,832
\$5,000 to \$20,000.....	1,080	1,142	1,176	5,092	8,090	8,088	11,871,579	12,301,999	12,221,783	4,228,851	4,661,692	4,438,480
\$20,000 to \$100,000.....	1,209	937	840	15,355	18,345	17,700	58,224,225	42,783,417	36,853,716	10,812,702	14,843,174	13,364,334
\$100,000 to \$500,000.....	803	435	344	20,213	33,272	24,575	173,751,360	92,018,266	81,447,022	61,547,170	41,795,058	26,910,548
\$500,000 to \$1,000,000.....	138	51	13	12,656	33,272	24,575	95,675,802	35,186,652	23,468,494	34,815,741	21,046,533	9,281,446
\$1,000,000 and over.....	117	29	13	20,374	11,109	5,522	286,547,678	57,883,858	23,468,494	94,323,509	21,046,533	9,281,446
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	21.8	24.1	37.0	1.4	4.4	5.3	0.4	1.3	2.0	0.4	1.7	2.2
\$5,000 to \$20,000.....	25.2	27.1	31.2	5.7	10.9	15.0	1.9	5.1	7.8	2.0	5.6	8.1
\$20,000 to \$100,000.....	28.2	22.2	22.8	17.1	24.8	29.5	9.3	17.6	23.5	9.2	17.7	24.2
\$100,000 to \$500,000.....	18.8	10.3	0.1	22.5	44.9	41.0	27.7	37.8	51.8	23.5	49.9	48.7
\$500,000 to \$1,000,000.....	3.2	1.2	0.3	14.1	15.0	9.2	15.2	14.4	14.9	16.1	25.1	16.9
\$1,000,000 and over.....	2.7	0.7	0.3	29.3	15.0	9.2	45.6	23.8	14.9	43.7	25.1	16.9

TABLE 10.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
						Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.				
United States.	1919	1,034	1,611	1,035	89,923	10,919	65,556	13,448	12.1	72.9	15.0	\$628,287,925	\$50,391,371	\$499,137,982	\$78,758,572	8.0	79.4	12.5				
	1914	1,905	1,322	993	74,071	11,549	53,473	9,049	15.6	72.2	12.2	243,439,859	26,390,525	195,088,337	21,900,997	10.9	80.1	9.0				
	1909	1,636	1,167	964	59,968	10,571	39,847	9,550	17.6	66.4	15.9	157,101,201	21,321,533	116,496,603	19,283,065	13.6	74.2	12.2				
Arkansas.....	1919	39	6	62	804	156	152	496	19.4	18.9	61.7	2,420,922	502,531	439,163	1,479,228	20.8	18.1	61.1				
	1914	23	10	30	454	97	159	198	21.4	35.0	43.6	579,209	93,021	273,154	213,034	16.1	47.2	36.8				
California.....	1919	117	229	98	24,283	1,968	17,711	4,614	8.1	72.9	19.0	219,278,576	12,811,710	161,581,385	44,885,481	5.8	73.7	20.5				
	1914	66	165	58	12,756	712	11,211	833	5.6	87.9	6.5	61,162,849	2,591,241	54,168,399	4,400,209	4.2	88.6	7.2				
Colorado.....	1919	3	18	3	689	25	659	5	3.6	95.6	0.7	3,190,048	68,987	3,045,944	75,117	2.2	95.5	2.4				
	1914	5	18	3	684	125	552	7	18.3	80.7	1.0	1,798,120	256,057	1,522,872	19,200	14.2	84.7	1.1				
Delaware.....	1919	30	24	24	1,459	399	756	304	27.4	51.7	20.8	5,584,357	1,268,245	3,422,210	892,902	22.9	61.1	16.9				
	1914	37	27	33	1,803	380	1,010	413	21.1	56.0	22.0	3,174,821	643,434	1,825,402	705,985	20.3	57.5	22.2				
Illinois.....	1919	38	68	26	3,680	271	3,240	169	7.4	88.0	4.6	28,340,663	1,598,576	25,698,569	1,043,518	5.6	90.7	3.7				
	1914	39	61	17	2,560	366	2,146	58	13.9	83.8	2.3	10,121,497	893,810	9,035,273	192,405	8.8	80.3	1.9				
Indiana.....	1919	40	100	26	4,170	545	3,155	470	13.1	75.7	11.3	27,823,348	3,043,913	22,762,823	2,016,612	10.9	81.8	7.2				
	1914	34	85	22	4,422	531	3,540	351	12.0	80.1	7.9	13,896,383	2,232,592	10,854,527	779,264	16.1	78.3	5.6				
Iowa.....	1919	9	58	9	1,582	34	1,487	61	2.1	94.0	3.9	10,223,227	93,195	9,752,014	378,018	0.9	95.4	3.7				
	1914	10	43	11	1,209	10	1,090	109	0.8	90.2	9.0	3,919,955	21,650	3,683,137	215,168	0.5	94.0	5.5				
Kentucky.....	1919	11	16	1	1,147	141	1,106	.....	3.6	96.4	.....	8,496,486	188,246	8,408,240	.....	1.0	99.0	.....			
	1914	11	16	6	594	63	502	29	10.6	84.5	4.9	2,265,958	50,395	2,195,539	20,024	2.2	96.9	0.9				
Louisiana.....	1919	12	18	8	653	86	506	61	13.2	77.5	9.3	2,146,385	409,176	1,525,865	211,344	10.1	71.1	9.8				
	1914	8	14	6	991	50	834	107	5.0	84.2	10.8	1,365,287	79,807	1,206,376	79,024	5.8	88.4	5.8				
Maine.....	1919	54	118	45	3,846	370	3,076	400	9.6	80.0	10.4	24,550,574	2,501,450	19,753,482	2,295,642	10.2	80.5	9.4				
	1914	68	70	58	3,913	468	2,989	459	12.0	76.3	11.7	10,742,738	1,098,537	8,505,480	1,138,721	10.2	79.2	10.6				
Maryland.....	1919	217	66	177	8,023	2,140	2,953	2,890	26.7	36.8	36.5	30,566,097	6,276,454	15,188,224	9,101,419	20.5	49.7	20.8				
	1914	259	61	145	8,640	2,400	3,852	2,388	27.8	44.6	27.6	13,028,779	4,299,967	9,299,890	4,458,922	23.9	51.4	24.7				
Massachusetts.....	1919	24	30	1	1,944	127	1,817	.....	6.6	93.4	.....	19,017,084	1,351,303	17,665,781	.....	7.1	92.9	.....			
	1914	27	27	11	1,903	211	1,537	155	11.1	80.8	8.1	8,109,014	803,401	6,702,116	693,497	9.8	82.1	8.1				
Michigan.....	1919	24	58	14	2,592	274	2,092	226	10.5	80.8	8.7	16,008,622	1,427,228	13,205,350	1,375,044	8.8	82.5	8.6				
	1914	33	43	15	2,507	312	2,070	125	12.4	82.6	5.0	8,194,225	814,978	7,074,230	305,017	10.0	86.3	3.7				
Mississippi.....	1919	5	18	5	1,094	106	895	93	9.8	81.7	8.5	2,303,364	191,083	1,941,690	170,501	8.7	83.9	7.4				
	1914	1	15	2	1,052	.....	1,052	.....	.....	100.0	.....	1,654,772	.....	1,654,772	.....	.....	100.0	.....			
Missouri.....	1919	86	20	52	1,256	531	440	285	42.3	35.0	22.7	6,378,889	1,134,345	4,811,515	431,029	17.8	75.5	6.8				
	1914	76	27	50	850	391	251	208	46.0	29.5	24.5	1,081,580	406,614	530,568	144,408	37.6	49.0	13.4				
New Jersey.....	1919	37	45	15	3,232	302	2,788	142	9.3	80.3	4.4	29,821,737	2,408,796	26,967,955	444,986	8.1	90.4	1.5				
	1914	42	39	15	3,154	492	2,482	180	15.0	78.7	5.7	13,764,955	1,449,832	11,919,676	365,447	10.5	86.8	2.7				
New York.....	1919	385	164	88	7,650	921	6,237	498	12.0	81.5	6.5	54,557,674	5,115,633	46,283,885	3,158,166	9.4	84.8	5.8				
	1914	677	129	181	8,757	1,796	5,992	969	20.5	68.4	11.1	25,944,634	4,284,482	19,120,521	2,539,631	16.5	73.7	9.8				
Ohio.....	1919	35	73	16	2,951	203	2,556	192	6.9	86.6	6.5	17,289,782	1,137,306	15,289,491	862,085	6.6	88.4	5.0				
	1914	37	71	28	2,609	537	1,587	385	21.4	63.3	15.3	8,957,833	1,081,966	5,924,414	1,051,503	22.1	66.1	11.7				

¹ Includes the group "All others."

² Includes the groups "Individuals" and "All others."

MANUFACTURES.

TABLE 10.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914—Continued.

STATE.	Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
						Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Indi- vid- uals.	Corpora- tions.	All others.	Indi- vid- uals.	Corpora- tions.	All oth- ers.				
		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Corpora- tions.	All others.	Indi- vid- uals.	Corpora- tions.	All oth- ers.						
Oregon.....	1919	14	70	19	2,344	84	2,147	113	3.6	91.6	4.8	20,591,135	613,021	18,184,178	1,793,936	3.0	88.3	8.7				
	1914	18	42	11	799	70	652	77	8.8	81.6	9.6	4,738,067	168,466	4,083,334	486,267	3.5	86.2	10.3				
Pennsylvania.....	1919	40	27	27	3,010	426	2,329	255	14.2	77.4	8.5	29,489,000	2,146,452	25,871,944	1,470,604	7.3	87.7	5.0				
	1914	41	20	23	3,096	381	2,409	306	12.3	77.8	9.9	14,949,551	1,089,427	12,607,172	1,255,952	7.3	84.3	8.4				
Tennessee.....	1919	26	9	27	593	143	213	237	24.1	35.9	40.0	1,513,347	418,399	544,444	550,504	27.6	36.0	36.4				
	1914	36	8	19	390	124	97	169	31.8	24.9	43.3	540,225	143,850	131,970	264,405	26.6	24.4	48.9				
Utah.....	1919	4	31	2	1,099	26	1,073	.....	2.4	97.6	.....	4,567,638	100,257	4,457,381	.....	2.2	97.8	.....			
	1914	4	22	1	677	15	672	.....	0.7	99.3	.....	2,429,804	18,108	2,421,696	.....	0.3	99.7	.....			
Virginia.....	1919	254	44	200	2,123	855	488	780	40.3	23.0	36.7	5,506,351	2,111,861	1,494,772	1,898,718	38.4	27.1	34.5				
	1914	222	40	179	2,074	835	494	745	40.3	23.8	35.9	2,234,408	806,957	630,208	797,243	36.1	28.2	35.7				
Washington.....	1919	27	81	19	3,394	110	3,049	235	3.2	89.8	6.9	27,515,650	1,115,900	24,530,593	1,869,157	4.1	89.2	6.8				
	1914	16	60	10	2,352	89	1,923	340	3.8	81.8	14.4	9,449,549	471,829	8,021,768	955,952	5.0	84.9	10.1				
Wisconsin.....	1919	10	109	10	2,909	150	2,712	47	5.2	93.2	1.6	18,066,890	794,144	16,956,394	316,352	4.4	93.9	1.8				
	1914	10	89	13	2,687	77	2,586	24	2.9	96.2	0.9	7,835,338	359,236	6,830,781	145,321	4.9	93.1	2.0				

¹ Includes the group "All others."

TABLE 11.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
	1919	1914	1909						
Primary power, total.....	13,538	7,175	4,087	180,812	120,004	81,179	100.0	100.0	100.0
Owned.....	4,464	4,379	3,203	124,241	100,622	75,309	68.7	83.8	92.8
Steam.....	3,406	3,201	2,587	114,140	90,778	70,392	63.1	75.6	86.7
Engines.....	3,318	(¹)	(²)	111,395	(²)	(³)	61.6	.....	.....
Turbines.....	88	(²)	(²)	2,745	(²)	(³)	1.5	.....	.....
Internal-combustion engines.....	1,050	1,137	595	9,961	8,967	4,519	5.6	7.5	5.6
Water wheels, turbines, and motors.....	8	41	21	140	877	398	0.1	0.7	0.5
Rented.....	9,074	2,796	884	56,571	19,382	5,870	31.3	16.2	7.2
Electric.....	9,074	2,796	884	56,220	18,726	5,469	31.1	15.6	6.7
Other.....	.....	.....	.....	351	656	401	0.2	0.5	0.5
Electric.....	12,000	4,349	1,410	72,674	28,438	8,728	100.0	100.0	100.0
Rented.....	9,074	2,796	884	56,220	18,726	5,469	77.4	65.8	62.7
Generated by establishments reporting.....	2,926	1,553	526	16,454	9,712	3,259	22.6	34.2	37.3

¹ Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.² Not reported separately.

CANNING AND PRESERVING.

71

TABLE 12.—FUEL CONSUMED, BY STATES: 1919.

STATE.	Census year.	COAL.		Coke (tons, 2,000 lbs.).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).				
United States.....	1919	33,431	538,898	6,207	716,246	23,676	287,538
	1914	48,705	415,732	2,992	344,764	(1)	224,643
Arkansas ¹	1919		2,726		47	106	6,136
California.....	1919		565	1,431	644,061	4,450	158,418
	1914	140	389		284,988	(1)	10,005
Colorado.....	1919		8,604	1,350	1	111	
	1914		6,926		56	(1)	382
Delaware.....	1919	1,366	8,219			77	
	1914	517	7,382	150	83	(1)	150
Illinois.....	1919	1,021	47,206	93	111	1,148	8,074
	1914	156	20,854	66	315	(1)	1,848
Indiana.....	1919	102	64,744	40	8	49	433
	1914	3	56,844	10	185		323
Iowa.....	1919	219	19,394		3	31	3,600
	1914	215	11,625		110	(1)	1,370
Kentucky.....	1919		15,312	69	3	166	160
	1914		9,382		15	(1)	2,292
Louisiana.....	1919	31	8,627	38	3,146	125	32,662
	1914		4,196		1,582	(1)	457
Maine.....	1919	1,326	25,691	5	2,910	3,650	8
	1914	1,080	19,611	165	817	(1)	354
Maryland.....	1919	1,311	38,967		297	2,313	338
	1914	1,157	36,932	20	324	(1)	9,525
Massachusetts.....	1919	4,127	4,820	105	7,355	16	1,894
	1914	1,268	6,018	30	28	(1)	1,501
Michigan.....	1919	89	26,110		5	69	34
	1914	416	22,697	238	432	(1)	229
Minnesota ¹	1919	104	3,132		59	20	25
Mississippi.....	1919	85	6,557	13		4	
	1914		6,558	2	4	(1)	416
Missouri.....	1919	4	4,352		6	69	
	1914	3	1,486	49	66	(1)	11
New Jersey.....	1919	1,158	31,698	1,433	1,979	44	2,797
	1914	2,528	24,332		337	(1)	2,111
New York.....	1919	17,563	66,763	280	271	2,562	18,556
	1914	37,267	48,367	1,091	2,190	(1)	34,374
Ohio.....	1919		35,776	8	63	330	27,783
	1914	548	26,747		98	(1)	88,399
Oregon.....	1919		7,198	30	26,526	1,061	1,859
	1914	312	60		16,208	(1)	327
Pennsylvania.....	1919	2,267	46,812	60	56	144	21,820
	1914	1,940	40,902		62	(1)	54,455
Tennessee ¹	1919	55	2,413		1	13	
Utah.....	1919	1	8,105	776		104	
	1914		6,667		21	(1)	
Virginia.....	1919	868	10,095		11	210	
	1914	365	5,966	67	137	(1)	
Washington.....	1919	38	9,913		27,778	5,252	1,804
	1914	541	9,712		54,975	(1)	2,013
Wisconsin.....	1919	215	23,328	32	54	1,217	
	1914	113	18,073	628	1,032	(1)	151
All other states.....	1919	1,149	10,832	444	1,495	297	11,717
	1914	448	19,596	486	699	(1)	13,840

¹ Included in figures for fuel oils.² Not reported separately in 1914.

SPECIAL STATISTICS.

The special schedules used in collecting statistics for the canning and preserving industries called for a detailed report of the quantity and value of the various products, with the exception of pickles, preserves, and sauces. Since, as already stated, there is a considerable overlapping among the four branches of the industry, it has been deemed best in presenting data as to specific products not to segregate the branches, but to show the total quantity and value of each product made by all establishments which produce that product, to whatever industries they may be assigned.

Sizes of cans and cases.—Table 13 shows the dimension and approximate capacity of the principal sizes of cans in use. These dimensions and capacities were obtained from the National Canners' Association and are those agreed upon by the conference committee of that association and the National Wholesale Grocers' Association as complying with the state and national pure-food laws. The volume and weight of contents given allow for "reasonable tolerances"—that is to say, they represent not the maximum capacity of the cans, but what they actually contain when filled in the usual manner. The figures relate to the "sanitary" (open-top) cans, which in some cases differ slightly in size from the "hole-and-cap" variety.

In Tables 14, 15, 16, 17, 19, and 20, the quantities of the several classes of canned products are given in standard cases of the capacities indicated in footnote 1, Table 13.

TABLE 13.—SIZE, NUMBER, DIMENSION, AND APPROXIMATE CAPACITY OF CANS.

SIZE, NO. 1	Outside diameter or length and breadth.	Out-side height.	CONTENTS.		
			Kind.	Approximate volume.	Approximate weight.
	Inches.	Inches.		Cu. in.	Lbs. Oz.
1	3½ by 4½	2½	Sardines	7	.. 3½
2	3½ by 4½	2	Tuna fish	14½	.. 7
3	3½ by 4½	1½	Sardines	21	.. 11
4	3½ by 4½	1	Oysters and clams	19	.. 5
5	3½ by 4½	¾	Shrimp	19	.. 4½
6	3½ by 4½	¾	Tuna fish	25	.. 13
7	3½ by 4½	¾	Salmon	27	.. 15½
8	3½ by 4½	¾	Soups	19	.. 10½
9	3½ by 4½	¾	Fruits and vegetables	19	.. 10
10	3½ by 4½	¾	Fruits and vegetables	37	1 4
11	3½ by 4½	¾	Fruits and vegetables	52	1 14
12	3½ by 4½	¾	Fruits and vegetables	61	2 1
13	3½ by 4½	¾	Fruits and vegetables	63	2 6
14	3½ by 4½	¾	Fruits and vegetables	69	2 6
15	3½ by 4½	¾	Fruits and vegetables	189	6 10

¹ In the compilation of Tables 14 to 20, inclusive, the quantities of the several classes of products have been reduced to standard cases of the following capacities: Sardines, No. 1 cans, 100 to the case; tuna fish, No. 1 cans, 48 to the case; salmon, shrimp, and oysters and clams, No. 1 cans, 48 to the case; soups, No. 1 cans, 48 to the case; clam chowder, No. 3 cans, 24 to the case; tomato pulp, No. 10 cans, 12 to the case; and all other fruits and vegetables, No. 2 or 3 cans, 24 to the case, as indicated in Table 16.

² Not including weight of liquid.

³ The fruits usually packed in the No. 2½ cans and the tomato and other pulps usually packed in the No. 10 cans are slightly heavier in proportion to their volume than the average of the contents of the other sizes of cans.

Quantity and value of products: 1919 and 1914.—

Table 14 presents a summary, by broad classes, of the quantity and value of products for the canning and preserving industry as reported at the censuses of 1919 and 1914.

TABLE 14.—QUANTITY AND VALUE OF PRODUCTS: 1919 AND 1914.

CLASS OF PRODUCT.	QUANTITY.		VALUE.				PER CENT OF INCREASE, ¹ 1914-1919.	
	1919	1914	1919	1914	Per cent of total.		Quantity.	Value.
					1919	1914		
Total value.....			\$630,771,083	\$249,791,120	100.0	100.0		156.0
Canned vegetables (cases) ²	* 63,316,116	55,144,772	176,431,307	92,290,724	27.6	36.9	14.8	91.2
Canned fruits (cases) ²	21,432,393	9,449,182	127,949,357	24,897,174	20.0	10.0	293.3	413.0
Dried fruits (pounds)	615,408,528	563,587,364	85,401,265	34,771,912	13.3	13.9	8.2	145.6
Canned fish and oysters (cases) ²	10,345,206	8,788,104	53,186,286	22,401,004	8.3	9.0	17.7	137.4
Smoked fish (pounds)	32,243,591	28,713,806	5,371,833	2,759,341	0.8	1.1	12.3	94.7
Salted fish (pounds)	111,655,326	131,149,037	18,203,800	8,172,477	2.9	3.3	—14.9	122.7
All other products, including pickles, preserves, and sauces.....			178,227,235	64,498,497	27.1	25.8		

¹ A minus sign (—) denotes decrease.

² See Tables 13 and 18.

³ Includes canned soup.

Increases in value appear for all classes of products covered by the table; and, with the exception of salted fish, all products for which comparative figures are given also show increases in quantity. The greatest percentage of increase shown in both quantity and value is that for canned fruits—126.8 per cent and 413.9 per cent, respectively.

Detailed statistics of kind, quantity, and value.—

Table 15 shows the kind, quantity, and value of each specified product of the canning and preserving industry as returned at the censuses of 1919, 1914, and 1909.

CANNING AND PRESERVING.

73

TABLE 15.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, AND 1909.

KIND.	1919	1914	1909	KIND.	1919	1914	1909
Total value.....	\$639,771,083	\$249,791,129	\$165,272,412	FRUITS AND VEGETABLES—contd.			
The canning and preserving industry.	\$628,287,925	\$243,439,859	\$157,101,201	Canned fruits—Continued.			
Subsidiary products, other industries.	\$11,483,158	\$6,351,270	\$8,171,211	Apples—			
FRUITS AND VEGETABLES.				Cases ¹	2,447,027	1,514,939	1,205,742
Total.....	\$392,424,581	\$151,959,810	\$92,041,367	Value.....	\$9,081,598	\$2,392,289	\$1,898,720
The canning and preserving industry.	\$389,153,687	\$149,633,706	\$90,790,335	Cherries—			
Other industries.....	\$3,270,897	\$2,326,104	\$1,845,032	Cases ²	1,362,832	543,213	390,351
Canned vegetables:				Value.....	\$8,451,029	\$1,628,975	\$1,019,013
Cases ¹	57,471,285	50,258,674	34,656,179	Blackberries—			
Value.....	\$164,573,590	\$84,413,667	\$55,068,941	Cases.....	910,657	(³)	(³)
The canning and preserving industry—				Value.....	\$5,080,397	(³)	(³)
Cases.....	57,036,272	49,339,094	33,887,162	Raspberries—			
Value.....	\$163,268,521	\$82,397,458	\$53,354,032	Cases.....	551,419	(³)	(³)
Other industries—				Value.....	\$4,278,939	(³)	(³)
Cases.....	435,023	918,980	709,017	Strawberries—			
Value.....	\$1,305,039	\$2,016,209	\$1,714,909	Cases.....	374,097	(³)	(³)
Beans—				Value.....	\$3,693,648	(³)	(³)
Cases ⁴	14,824,232	8,994,302	4,415,303	Plums—			
Value.....	\$39,408,603	\$16,565,021	\$7,031,737	Cases ⁵	571,521	288,326	220,057
Tomatoes—				Value.....	\$2,228,183	\$438,238	\$346,953
Cases ⁴	11,836,476	16,200,302	12,909,986	Loganberries—			
Value.....	\$38,067,999	\$25,532,217	\$18,747,941	Cases.....	273,664	(³)	(³)
Corn—				Value.....	\$2,138,817	(³)	(³)
Cases ³	14,402,725	9,919,050	7,451,265	Pineapple—			
Value.....	\$35,632,007	\$13,923,057	\$10,332,136	Cases ⁶	156,755	94,140	78,557
Peas—				Value.....	\$1,305,484	\$364,260	\$313,647
Cases ²	9,325,727	8,826,284	5,901,703	Prunes—			
Value.....	\$25,073,220	\$15,089,047	\$10,247,363	Cases.....	273,710	(³)	(³)
Asparagus—				Value.....	\$1,271,410	(³)	(³)
Cases ²	1,006,604	637,001	342,838	Blueberries—			
Value.....	\$6,571,629	\$2,790,817	\$1,975,775	Cases.....	150,350	(³)	(³)
Tomato pulp—				Value.....	\$913,821	(³)	(³)
Cases ⁷	759,055	752,151	(³)	Grapes—			
Value.....	\$3,819,101	\$1,454,051	(³)	Cases.....	87,644	(³)	(³)
Kraut—				Value.....	\$514,219	(³)	(³)
Cases ⁴	1,041,932	1,184,219	(³)	Gooseberries—			
Value.....	\$2,845,340	\$1,667,717	(³)	Cases.....	87,026	(³)	(³)
Sweet potatoes—				Value.....	\$343,504	(³)	(³)
Cases.....	745,861	454,415	347,286	Other canned fruits—			
Value.....	\$2,477,719	\$730,759	\$531,651	Cases.....	516,558	1,486,077	898,901
Spinach—				Value.....	\$2,701,318	\$3,573,323	\$2,024,882
Cases ⁴	676,388	391,700	149,255	Dried fruits:			
Value.....	\$2,338,497	\$730,686	\$294,414	Pounds.....	615,408,528	568,587,304	455,335,800
Beets—				Value.....	\$35,401,265	\$34,771,912	\$21,968,154
Cases ⁴	584,309	251,632	126,422	The canning and preserving industry—			
Value.....	\$1,951,344	\$511,900	\$261,398	Pounds.....	612,823,741	566,769,879	484,328,767
Hominy—				Value.....	\$35,135,256	\$34,008,282	\$21,914,995
Cases ⁴	587,298	686,100	(³)	Other industries—			
Value.....	\$1,346,044	\$712,991	(³)	Pounds.....	2,584,787	1,817,485	1,007,033
Tomato paste—				Value.....	\$200,000	\$103,630	\$53,169
Cases.....	234,691	(³)	(³)	Raisins—			
Value.....	\$1,300,680	(³)	(³)	Pounds.....	293,800,581	226,043,959	195,774,767
Succotash—				Value.....	\$35,544,232	\$13,938,045	\$9,912,533
Cases ³	373,977	270,077	254,365	Prunes—			
Value.....	\$1,142,236	\$455,056	\$320,141	Pounds.....	139,377,066	139,091,887	138,498,490
Pumpkin—				Value.....	\$18,253,691	\$9,004,348	\$5,130,412
Cases ⁴	383,211	789,368	440,303	Peaches—			
Value.....	\$801,436	\$1,023,008	\$576,043	Pounds.....	73,370,193	61,907,251	46,843,391
Squash—				Value.....	\$12,109,624	\$2,016,695	\$2,423,083
Cases.....	54,589	(³)	(³)	Apples—			
Value.....	\$165,217	(³)	(³)	Pounds.....	46,623,499	54,057,003	44,508,244
All other canned vegetables—				Value.....	\$9,772,080	\$2,889,406	\$3,098,095
Cases ⁴	634,220	900,483	2,317,453	Apricots—			
Value.....	\$1,072,518	\$3,314,440	\$3,850,342	Pounds.....	24,102,628	30,397,294	28,205,569
Canned soups:				Value.....	\$9,034,697	\$3,615,857	\$2,277,177
Cases ⁸	5,844,821	4,886,098	853,840	Apple chops—			
Value.....	\$11,857,717	\$7,877,057	\$2,588,834	Pounds.....	3,686,103	(³)	(³)
The canning and preserving industry—				Value.....	\$308,977	(³)	(³)
Cases.....	5,844,821	4,876,451	853,840	All other dried fruits—			
Value.....	\$11,857,717	\$7,862,436	\$2,588,834	Pounds.....	37,849,458	47,189,970	30,445,339
Other industries—				Value.....	\$9,377,934	\$2,408,061	\$2,126,854
Cases.....	9,647	9,647	(³)	Dried vegetables:			
Value.....	\$14,621	\$14,621	(³)	Pounds.....	10,345,821	(³)	(³)
Canned fruits:				Value.....	\$2,642,655	(³)	(³)
Cases ¹	21,432,393	9,449,182	5,528,878	The canning and preserving industry—			
Value.....	\$127,940,357	\$24,897,174	\$13,015,438	Pounds.....	7,344,021	(³)	(³)
The canning and preserving industry—				Value.....	\$1,892,205	(³)	(³)
Cases.....	21,207,071	9,363,636	5,501,404	Other industries—			
Value.....	\$120,999,938	\$24,765,530	\$12,938,474	Pounds.....	3,001,800	(³)	(³)
Other industries—				Value.....	\$750,450	(³)	(³)
Cases.....	225,322	85,546	27,474	Potatoes—			
Value.....	\$649,309	\$131,644	\$76,964	Pounds.....	7,253,230	(³)	(³)
Peaches—				Value.....	\$1,840,399	(³)	(³)
Cases ⁶	7,706,855	3,407,906	1,467,213	Carrots—			
Value.....	\$46,516,225	\$9,585,773	\$3,753,698	Pounds.....	432,959	(³)	(³)
Apricots—				Value.....	\$117,487	(³)	(³)
Cases ⁵	3,939,768	1,051,816	630,185	Beans—			
Value.....	\$25,167,772	\$3,060,626	\$1,825,311	Pounds.....	917,134	(³)	(³)
Pears—				Value.....	\$116,091	(³)	(³)
Cases ⁵	2,021,610	1,062,672	637,782	Spinach—			
Value.....	\$14,202,963	\$3,853,700	\$1,833,214	Pounds.....	40,989	(³)	(³)
				Value.....	\$41,352	(³)	(³)
				Cabbage—			
				Pounds.....	10,901	(³)	(³)
				Value.....	\$13,684	(³)	(³)

¹ See Tables 13 and 16.

² Includes meat products, in 1914, valued at \$731,201.

³ Standard case contains 24 No. 2 cans. See Table 16.

⁴ Standard case contains 24 No. 3 cans. Table 16.

⁵ Standard case contains 24 No. 2½ cans. See Table 16.

⁶ Not reported separately.

⁷ Standard case contains 12 No. 10 cans. See Table 16.

⁸ Standard case contains 48 No. 1 cans. See Table 16.

⁹ Included in apples.

MANUFACTURES.

TABLE 15.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, AND 1909—Continued.

KIND.	1919	1914	1909	KIND.	1919	1914	1909
FRUITS AND VEGETABLES—contd.				FISH AND OYSTERS—continued.			
Dried vegetables—Continued.				Smoked fish—Continued.			
Celery—				Herring—			
Pounds.....	17,587	(¹)	(¹)	Pounds.....	14,639,391	11,504,126	21,369,856
Value.....	\$11,100	(¹)	(¹)	Value.....	\$1,360,745	\$719,640	\$931,611
Turnips—				Salmon—			
Pounds.....	19,396	(¹)	(¹)	Pounds.....	5,574,273	4,248,896	6,836,099
Value.....	\$8,264	(¹)	(¹)	Value.....	\$1,681,982	\$638,975	\$950,540
Soup mixture—				Finnan haddock—			
Pounds.....	655,228	(¹)	(¹)	Pounds.....	5,696,883	4,095,693	4,513,222
Value.....	\$222,361	(¹)	(¹)	Value.....	\$495,404	\$327,877	\$304,620
All other dried vegetables—				Sturgeon—			
Pounds.....	989,897	(¹)	(¹)	Pounds.....	570,031	511,196	620,437
Value.....	\$271,917	(¹)	(¹)	Value.....	\$435,959	\$150,614	\$182,788
FISH AND OYSTERS.				All other smoked fish—			
Value.....	\$76,761,919	\$33,332,822	\$27,850,319	Pounds.....	5,763,013	8,353,895	7,400,160
The fish and oyster industry.....	\$76,285,796	\$32,806,841	\$27,648,289	Value.....	\$1,407,743	\$922,235	\$569,701
Other industries.....	\$476,123	\$525,981	\$202,030	Salted and pickled fish:			
Canned fish and oysters:				Pounds.....	111,655,326	131,149,037	133,169,621
Cases.....	10,345,206	8,788,104	(¹)	Value.....	\$18,203,800	\$8,172,477	\$7,318,101
Value.....	\$53,186,286	\$22,401,004	\$17,592,960	The fish and oyster industry—			
The fish and oyster industry—				Pounds.....	110,359,666	128,333,485	128,539,299
Cases.....	10,279,785	8,771,860	(¹)	Value.....	\$18,139,017	\$7,860,856	\$7,174,561
Value.....	\$62,859,180	\$22,303,854	\$17,573,311	Other industries—			
Other industries—				Pounds.....	1,295,660	2,815,552	4,630,322
Cases.....	65,421	16,244	(¹)	Value.....	\$64,783	\$311,621	\$143,540
Value.....	\$327,106	\$97,150	\$19,649	Cod—			
Salmon—				Pounds.....	62,902,037	68,456,917	54,302,338
Cases.....	2,188,004	1,613,300	(¹)	Value.....	\$12,643,357	\$5,123,562	\$3,248,669
Value.....	\$19,113,204	\$8,712,695	\$8,723,565	Herring—			
Sardines—				Pounds.....	14,135,579	21,133,974	21,718,467
Cases.....	5,777,959	5,012,199	(¹)	Value.....	\$845,629	\$641,603	\$461,287
Value.....	\$20,258,565	\$6,238,938	\$4,631,831	Mackerel—			
Oysters—				Pounds.....	5,098,700	6,224,313	9,046,460
Cases.....	717,686	944,629	(¹)	Value.....	\$1,000,593	\$519,727	\$740,513
Value.....	\$3,510,119	\$2,070,951	\$2,443,101	Haddock—			
Shrimp—				Pounds.....	7,691,146	4,947,286	3,065,156
Cases.....	322,076	459,877	(¹)	Value.....	\$815,180	\$218,359	\$148,191
Value.....	\$1,864,793	\$1,725,621	\$600,021	All other salted fish—			
Tuna—				Pounds.....	21,827,864	30,386,547	45,038,191
Cases.....	874,380	437,090	(¹)	Value.....	\$2,899,041	\$1,669,226	\$2,719,441
Value.....	\$5,710,188	\$1,638,675	(¹)	PICKLES, PRESERVES, AND SAUCES.			
Clams—				Preserves.....	\$74,851,134	\$14,833,288	\$44,780,826
Cases.....	157,843	185,186	(¹)	Pickles and sauces.....	\$31,109,887	\$45,303,671	
Value.....	\$772,870	\$670,363	\$402,466	The canning and preserving industry:			
All other canned fish—				Preserves.....	\$69,655,403	\$13,261,576	\$41,404,689
Cases.....	309,308	235,813	(¹)	Pickles and sauces.....	\$78,569,430	\$43,376,198	
Value.....	\$1,956,547	\$737,766	\$401,976	Other industries:			
Smoked fish:				Preserves.....	\$5,195,731	\$1,571,712	\$3,376,137
Pounds.....	32,243,591	28,713,808	40,739,774	Pickles and sauces.....	\$2,540,407	\$1,927,473	
Value.....	\$5,871,633	\$2,769,341	\$2,939,258	All other products of the canning and preserving industry.....	\$14,623,609	\$4,361,538	(¹)
The fish and oyster industry—							
Pounds.....	31,397,919	27,426,726	39,814,989				
Value.....	\$5,287,599	\$2,642,131	\$2,900,417				
Other industries—							
Pounds.....	545,672	1,287,080	924,785				
Value.....	\$84,234	\$117,210	\$38,841				

¹ Not reported separately.² See Table 13.³ Reported in pounds in 1909.⁴ Standard case contains 48 No. 1 cans. See Table 13.⁵ Standard case contains 100 No. 3 cans. See Table 13.⁶ Standard case contains 48 No. 3 cans. See Table 13.⁷ Pickles, preserves, and sauces include "All other products."

Canned vegetables.—From 1914 to 1919 the total output of canned vegetables increased by 7,212,621 cases, or 14.3 per cent, in quantity and \$80,159,923, or 95 per cent, in value. General increases are shown for the five-year period in both quantity and value for each variety of canned vegetables for which comparative figures are given with the exception of tomatoes and kraut, for which there were decreases in the number of cases reported of 26.9 per cent and 12 per cent, respectively, and for canned pumpkin, which shows a decrease of 51.5 per cent in quantity and 15.8 per cent in value.

Canned fruits.—The output of canned fruits increased from 1914 to 1919 by 11,983,211 cases, or 126.8 per cent, in quantity and by \$103,052,183, or 413.9 per cent, in value. Every kind of canned fruit for which comparative figures are given in the table

shows increases in both quantity and value for the five-year period 1914 to 1919. For canned peaches, the leading product in all three years, the increase from 1914 to 1919 amounted to 4,298,949 cases, or 126.1 per cent, in quantity and \$36,930,452, or 385.2 per cent, in value.

Dried fruits.—The increase in the output of dried fruits during the five-year period 1914 to 1919 amounted to 46,821,164 pounds, or 8.2 per cent, in quantity and \$50,629,353, or 145.6 per cent, in value. Every class of dried fruit shown separately in the table showed increases in value, but there were decreases in the quantity reported for prunes, apples, and apricots. For raisins, the leading product, the increase between 1914 and 1919 was 67,256,622 pounds, or 29.8 per cent, in quantity and \$21,605,617, or 155 per cent, in value.

Dried vegetables.—The drying of vegetables was first reported at the census of 1919. The most important product shown is dried potatoes, the quantity and value reported representing over 70 per cent of both the total quantity and value shown for all dried vegetables.

Canned fish and oysters.—For the five-year period 1914 to 1919 the increase in the total output of canned fish and oysters amounted to 1,557,102 cases, or 17.7 per cent, in quantity and \$30,785,282, or 137.4 per cent, in value. For canned sardines, the most important product of the group in 1919, there was an increase of 765,760 cases, or 15.3 per cent, in quantity and \$14,019,632, or 224.7 per cent, in value. For canned salmon, the next most important product, the quantity increased 44.5 per cent and the value 119.4 per cent. Canned oysters, shrimp, and clams show decreases in the number of cases reported but increases in value, while for canned tuna there was an increase in the quantity of 437,290 cases, or 100 per cent, and of \$4,071,513 in value, or 248.5 per cent.

Smoked fish.—The output of smoked fish increased by 3,529,785 pounds, or 12.3 per cent, in quantity and \$2,612,492, or 94.7 per cent, in value from 1914 to 1919. At each of the three censuses smoked herring and salmon were the leading products of the group, the quantity reported for the former increasing 27.3 per cent and the value 87.7 per cent during the five-year period, while the increases for the latter were 31.2 per cent and 163.2 per cent, respectively.

Salted and pickled fish.—For the five-year period 1914 to 1919 the total quantity of salted and pickled fish decreased 14.8 per cent, while the value increased 122.7 per cent. With the exception of haddock, for which there was an increase in quantity of 55.5 per cent, there were decreases in quantities shown for each of the different kinds of salted fish, although the values show substantial increases.

Number of cases packed.—Table 16 shows, for 1919, for each class of vegetables and fruits, the number of cases of each size of cans as reported, together with the corresponding equivalent in standard cases.

TABLE 16.—NUMBER OF CASES PACKED, STANDARD SIZE, 24 CANS TO CASE: 1919.

PRODUCT.	Stand- ard size of cans.	Total number of cases reduced to standard size, 24 cans to the case.	NUMBER OF CASES OF—					
			No. 1 cans.	No. 2 cans.	No. 2½ cans.	No. 3 cans.	No. 10 cans.	Special size.
Canned vegetables.....		57,471,205	3,802,597	38,987,667	5,748,387	6,682,855	2,630,525	2,271,794
Asparagus.....	2½	1,006,004	322,178	45,733	419,097	128,185	20,630	223,111
Beans—								
Baked.....	2	11,142,381	1,332,580	6,787,276	251,492	1,022,969	79,205	983,193
String.....	2	2,199,825	109,073	1,822,605	5,842	27,947	161,387	19,677
Lima.....	2	468,680	29,683	411,608	7,928	21	12,874	.....
All other beans.....	2	1,013,507	170,582	921,534	124,136	35,393	24,945	2,890
Beets.....	3	584,309	1,980	222,528	43,660	296,919	69,504	11,692
Corn.....	2	14,402,725	122,760	14,066,160	28,036	30,831	78,726	10,744
Hominy.....	3	587,298	5,361	118,685	125,315	385,270	6,007	4,097
Kraut.....	3	1,041,932	.....	172,309	180,011	686,610	66,834	10,908
Succotash.....	2	378,977	1,500	368,887	.....	.....	2,105	959
Peas.....	2	9,325,727	264,545	8,853,843	668	16,740	128,584	72,369
Pumpkin.....	3	388,211	8,867	33,761	47,130	250,592	73,140	1,503
Sweet potatoes.....	3	746,861	14,336	36,685	371,147	363,018	18,952	.....
Spinach.....	3	676,383	20,160	108,098	190,232	196,211	163,542	16,431
Squash.....	3	54,689	.....	1,940	1,687	22,707	22,217	234
Tomatoes.....	3	11,836,476	1,247,374	4,711,358	3,908,786	3,171,486	1,022,374	276,485
Tomato pulp.....	10	759,053	108,651	12,083	11,606	27,787	470,122	269,147
All other canned vegetables.....	3	888,911	47,977	291,676	37,180	17,230	220,594	368,403
Canned soups.....	1	* 5,844,821	4,981,041	167,751	127,383	35,687	7,963	130,886
Canned fruits.....		21,432,393	1,540,584	2,966,400	9,592,215	674,968	5,501,250	338,348
Apples.....	3	2,447,927	6,926	27,701	25,260	155,661	1,751,798	6,022
Apricot.....	2½	3,939,768	377,645	187,120	2,660,476	15,394	885,098	44,145
Berries—								
Blackberries.....	2	910,657	18,193	378,581	11,023	22,547	365,257	4,212
Blueberries.....	2	160,350	247	50,360	319	461	78,916	.....
Gooseberries.....	2	87,026	306	32,888	140	.....	42,306	285
Raspberries.....	2	551,419	17,752	366,652	796	2,000	121,084	13,201
Strawberries.....	2	374,097	33,966	176,975	2,802	73	60,996	25,460
Loganberries.....	2	273,664	1,335	162,284	10,136	.....	105,653	16,024
Cherries.....	2	1,362,832	87,758	240,224	517,767	10,371	231,542	11,169
Currents.....	2	2,562	211	1,842	.....	.....	381	59
Figs.....	3	11,918	1,154	160	91	2,555	924	712
Grapes.....	3	87,644	8,025	7,849	69,136	285	14,594	12
Peaches.....	2½	7,706,855	689,937	553,107	4,822,648	214,995	1,368,909	54,553
Pears.....	2½	2,021,610	151,398	479,877	1,074,450	227,857	177,764	6,404
Pineapples.....	2½	156,755	64,944	111,207	.....	10,794	19,750	662
Plums.....	2	571,521	16,945	93,195	245,470	7,135	88,645	1,989
Quinces.....	2	4,789	1	230	.....	3	3,635	6
All other canned fruit.....	2	770,999	63,821	106,149	151,701	4,837	203,108	153,474

* 12 cans to the case.

* 48 cans to the case.

Number of cases, by size of cans.—Table 17 gives, for 1919, the total number of cases of each class of

canned vegetables and fruits, as reported, distributed according to size of cans.

MANUFACTURES.

TABLE 17.—NUMBER OF CASES PACKED, BY SIZE OF CANS: 1919.

PRODUCT.	NUMBER OF CASES PACKED IN 1919.							
	Total.	No. 1 size cans.	No. 2 size cans.	No. 2½ size cans.	No. 3 size 4½-inch cans.	No. 3 size, 5-inch cans.	No. 3 size, 5½-inch cans.	No 10 size cans. ¹
Aggregate number of cans.....	86,188,286	10,324,202	42,121,818	15,467,990	6,674,181	573,102	146,227	10,880,766
Canned vegetables.....	60,123,825	3,802,597	38,987,667	5,748,387	6,076,447	478,870	128,538	4,902,319
Asparagus.....	1,156,834	322,178	45,733	419,007	51,976	34,567	39,642	243,741
Beans—								
Baked.....	10,456,715	1,332,580	6,787,276	251,492	929,489	93,308	172	1,062,898
String.....	2,146,071	109,073	1,822,665	5,342	18,217	190	9,540	181,044
Lima.....	462,114	29,683	411,608	7,928	21			12,874
All other.....	1,279,453	170,582	921,534	124,136	28,651	6,495	217	27,838
Beets.....	646,183	1,980	222,528	43,560	284,392	12,527		81,196
Corn.....	14,337,316	122,760	14,066,160	28,095	2,093	8,863	18,975	89,470
Hominy.....	643,734	5,351	118,685	125,815	383,902	1,377		9,104
Kraut.....	1,105,673		172,309	180,011	688,362	16,978	270	67,743
Succotash.....	373,451	1,500	368,887					3,064
Peas.....	9,336,544	264,545	8,858,843	663	8,133	2,340	6,267	200,753
Pumpkin.....	415,993	8,867	33,761	47,130	252,904	3,688		74,643
Sweet potatoes.....	804,138	14,336	36,685	371,147	351,684	4,823	6,511	18,952
Spinach.....	695,564	20,160	108,988	190,232	191,050	5,161		179,973
Squash.....	48,765		1,940	1,667	17,281	3,264	2,162	22,451
Tomatoes.....	14,332,801	1,247,374	4,711,336	3,903,786	2,870,625	258,311	42,560	1,298,809
Tomato pulp.....	396,316	108,651	12,053	11,606	1,650	24,515	1,572	739,269
All other canned vegetables.....	983,090	47,977	291,676	37,180	14,117	2,463	650	588,997
Canned soup.....	5,450,716	4,981,041	167,751	127,388	35,087			138,849
Canned fruits.....	20,613,745	1,540,564	2,906,400	9,592,215	563,047	94,232	17,689	5,839,508
Apples.....	1,973,368	6,926	27,701	25,260	144,013	3,794	7,854	1,757,820
Apricots.....	4,149,878	377,045	187,120	2,060,476	7,617	7,841	436	909,243
Berries—								
Blackberries.....	799,813	18,193	378,581	11,023	20,792	1,755		369,469
Blueberries.....	129,842	247	50,360	319				78,916
Gooseberries.....	76,336	306	32,883	140	461			42,541
Raspberries.....	522,385	17,752	306,652	796	2,000			135,185
Strawberries.....	300,281	33,966	176,975	2,802	27	46		86,465
Loganberries.....	285,432	1,335	152,284	10,136				121,677
Cherries.....	1,038,831	87,758	240,224	517,767	6,186	4,185		242,711
Currents.....	2,493	211	1,342					440
Figs.....	5,695	1,154	159	91	102	923	1,530	1,636
Grapes.....	99,901	8,025	7,849	69,136	239	46		14,006
Peaches.....	7,704,149	689,937	553,107	4,822,048	174,713	36,937	3,345	1,423,462
Pears.....	2,117,740	151,398	479,877	1,074,450	191,386	34,628	1,843	184,158
Pineapples.....	207,357	64,944	111,207	9,935	859			20,412
Plums.....	453,379	16,945	93,195	243,470	4,172	2,804	159	90,634
Quinces.....	8,875	1	230		3			3,641
All other canned fruits.....	683,090	63,821	109,149	151,701	1,401	914	2,522	356,582

¹ Includes special size cans as shown in Table 16.

Products, by states.—Table 18 shows the values of the principal products for the leading states producing each, as reported at the censuses of 1919, 1914, 1909, and 1904.

TABLE 18.—VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919, 1914, 1909, AND 1904.

PRODUCT AND STATE.	VALUE.			
	1919	1914	1909	1904
CANNED VEGETABLES.				
Beans.....	\$39,408,603	\$16,565,021	\$7,931,737	\$4,133,810
California.....	1,490,602	275,807	87,059	133,494
Illinois.....	1,015,945	1,062,842	562,249	321,458
Indiana.....	7,277,045	2,306,309	2,116,648	491,233
Maine.....	1,131,073	443,652	151,476	92,231
Maryland.....	1,953,714	947,047	778,732	1,031,025
Michigan.....	1,821,703	1,261,899	154,697	(1)
New Jersey.....	13,011,072	2,764,520	537,458	272,755
New York.....	3,279,534	1,819,186	1,024,065	1,055,253
Ohio.....	575,361	1,051,187	264,005	241,125
Pennsylvania.....	4,517,008	3,583,881	1,730,212	91,416
Utah.....	285,365	144,791	33,084	8,220
Wisconsin.....	975,343	294,070	101,763	55,968
All other states.....	2,074,838	609,821	390,289	339,632
Corn.....	35,632,007	13,923,057	10,332,136	15,952,386
Illinois.....	5,843,773	2,173,480	2,170,082	2,403,720
Indiana.....	1,526,103	943,641	679,446	958,455
Iowa.....	5,763,458	1,868,993	1,241,460	2,616,178
Maine.....	4,723,397	2,038,716	1,320,223	1,625,089
Maryland.....	5,448,073	1,939,295	1,039,095	2,021,027
New York.....	2,906,900	1,262,038	1,197,999	2,272,682
Ohio.....	3,327,725	1,441,272	1,156,609	1,736,503
All other states.....	5,992,488	2,265,652	1,626,612	2,418,132
Peas.....	25,073,220	15,089,047	10,247,363	7,928,791
Illinois.....	1,221,443	696,975	227,068	35,309
Indiana.....	994,536	620,357	753,527	644,439
Maryland.....	1,713,500	894,929	619,981	1,019,131
Michigan.....	1,267,356	976,005	796,840	471,613
New York.....	3,440,696	3,899,570	2,681,866	2,598,291
Wisconsin.....	12,132,849	5,549,499	3,410,628	2,011,226
All other states.....	4,297,841	2,451,712	1,757,953	1,148,782

¹ Comparable figures can not be given.

TABLE 18.—VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919, 1914, 1909, AND 1904—Continued.

PRODUCT AND STATE.	VALUE.			
	1919	1914	1909	1904
CANNED VEGETABLES—CON.				
Tomatoes.....	\$38,067,909	\$25,532,217	\$18,747,941	\$14,020,846
California.....	10,452,851	3,122,532	1,120,632	845,806
Delaware.....	1,011,064	1,965,968	1,605,069	1,007,595
Indiana.....	2,482,729	1,809,912	1,469,219	1,820,870
Maryland.....	10,295,386	9,851,727	7,674,960	4,976,098
New Jersey.....	284,432	1,249,875	1,502,398	1,273,420
New York.....	1,748,626	1,055,920	657,375	389,036
Ohio.....	588,366	822,862	707,682	635,751
Utah.....	1,992,088	1,250,280	603,898	566,578
Virginia.....	3,396,908	1,401,303	1,269,209	747,838
All other states.....	5,815,549	3,001,848	2,137,499	1,857,843
CANNED FRUITS.				
Apples.....	9,081,598	2,392,289	1,808,720	738,013
California.....	502,906	214,021	136,855	67,591
Maine.....	921,577	77,603	122,791	6,794
Maryland.....	358,620	131,417	168,458	70,980
Michigan.....	674,020	227,710	275,437	103,419
New York.....	2,048,171	1,269,372	753,231	634,817
Pennsylvania.....	875,519	144,958	100,759	23,463
All other.....	3,800,785	327,208	341,189	110,949
Apricots.....	25,167,767	3,060,626	1,825,311	1,641,919
California.....	25,033,625	2,963,672	1,819,558	1,619,757
All other states.....	134,142	96,954	5,753	22,162
Cherries.....	8,451,029	1,628,075	1,019,013	825,522
California.....	3,753,993	459,005	491,575	457,169
Michigan.....	1,422,863	142,951	72,710	44,801
New York.....	248,617	629,345	323,803	133,814
Oregon.....	925,007	125,925	49,203	72,465
All other states.....	2,100,649	271,749	81,722	117,273
Peaches.....	46,516,225	9,585,773	3,753,698	3,902,441
California.....	42,847,718	8,685,831	3,013,203	2,640,524
Georgia.....	446,507	124,971	156,282	
Maryland.....	1,425,079	334,070	158,839	753,003
Michigan.....	881,443	233,051	175,386	179,838
New York.....	286,134	40,338	141,142	39,399
All other states.....	1,130,344	167,512	108,846	289,677

TABLE 18.—VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919, 1914, 1909, AND 1904—Continued.

PRODUCT AND STATE.	VALUE.			
	1919	1914	1909	1904
CANNED FRUITS—contd.				
Pears	\$14,202,963	\$3,853,700	\$1,833,214	\$2,192,910
California.....	8,240,308	2,796,356	1,316,022	1,677,823
Maryland.....	915,547	301,398	111,949	199,802
New Jersey.....	547,893	153,900	82,082	97,202
New York.....	1,363,984	375,300	216,858	172,944
Oregon.....	1,161,462	78,404	42,842	43,464
Washington.....	1,069,390	71,960	—	—
All other states.....	895,409	76,283	63,461	101,675
Berries	16,449,126	3,102,245	1,754,927	1,058,659
California.....	1,077,626	345,322	171,995	168,640
Maine.....	667,240	246,504	105,434	(1)
Maryland.....	1,271,897	319,587	375,319	(1)
Michigan.....	2,392,724	320,375	150,082	(1)
New York.....	2,070,007	716,577	596,130	372,171
Oregon.....	3,253,930	286,424	46,273	39,343
Washington.....	3,421,800	542,866	72,832	—
All other states.....	2,293,317	324,590	236,802	478,505
DRIED FRUITS.				
Apples	9,772,100	2,880,406	3,098,095	1,758,610
Arkansas.....	805,157	194,727	112,091	129,094
California.....	2,030,300	603,673	481,173	40,659
Michigan.....	39,633	22,669	141,665	177,343
New York.....	2,234,128	1,893,015	2,333,137	1,831,895
All other states.....	1,062,882	116,322	30,038	79,619
Apricots	6,034,697	3,615,857	2,277,177	1,410,838
California.....	5,994,309	3,602,090	2,277,177	1,410,838
All other states.....	40,388	13,167	—	—
Peaches	12,109,624	2,915,595	2,423,083	1,702,205
California.....	12,074,246	2,888,962	2,422,043	1,701,105
All other states.....	35,378	26,633	1,040	1,100
Prunes	18,253,091	9,004,348	5,130,412	3,299,628
California.....	15,211,293	7,956,549	4,304,922	3,169,878
Oregon.....	2,785,373	822,837	470,911	28,000
Washington.....	16,997	112,932	258,909	—
All other states.....	240,028	112,030	5,670	101,750
Raisins	35,544,262	13,938,045	6,912,533	6,349,331
California.....	35,544,262	13,681,048	6,912,533	6,349,331
All other states.....	—	257,597	—	—
CANNED FISH AND OYSTERS.				
Salmon	19,113,204	8,712,095	8,723,565	4,251,337
California.....	159,564	241,335	27,515	125,020
Oregon.....	5,447,491	2,314,771	1,341,481	1,694,762
Washington.....	13,509,149	6,156,558	7,354,559	2,431,605
All other states.....	—	31	—	—
Sardines	20,258,565	6,238,933	4,931,831	4,380,498
California.....	7,604,328	308,420	238,607	78,000
Maine.....	12,027,822	5,780,867	4,609,224	4,291,324
All other states.....	26,375	89,656	84,000	11,174
Oysters	3,510,119	2,676,951	2,443,101	3,812,312
Georgia.....	55,389	79,193	105,740	256,750
Louisiana.....	170,274	237,425	383,436	507,373
Maryland.....	1,854,880	1,177,091	761,198	548,646
Mississippi.....	747,369	526,106	311,181	1,340,942
South Carolina.....	416,509	324,405	268,438	526,511
All other states.....	295,008	332,731	613,128	629,090
Shrimp	1,864,793	1,725,621	690,021	(1)
Georgia.....	191,768	109,494	—	(1)
Louisiana.....	533,594	644,132	253,184	(1)
Mississippi.....	844,605	954,535	433,693	(1)
All other states.....	294,765	17,460	3,144	(1)
Tuna—California	5,710,188	(1)	(1)	(1)
SMOKED FISH.				
Herring	1,350,745	719,640	931,611	631,352
Maine.....	455,489	237,703	255,498	206,879
Massachusetts.....	354,859	210,404	457,485	155,814
All other states.....	540,397	271,533	218,628	268,659
Salmon	1,081,082	638,975	950,540	831,184
New York.....	1,173,400	442,243	480,910	319,620
Washington.....	282,112	123,217	389,620	405,026
All other states.....	225,470	73,515	74,010	106,538
SALTED FISH.				
Cod	12,643,357	5,123,532	3,248,669	3,013,320
Maine.....	1,334,989	348,741	333,621	141,345
Massachusetts.....	9,450,480	3,870,529	2,542,873	2,511,159
Washington.....	500,802	247,230	201,118	49,366
All other states.....	1,357,046	687,062	171,057	311,450
Mackerel	1,000,593	519,727	740,513	678,326
Massachusetts.....	899,950	499,454	729,828	668,326
All other states.....	100,637	20,243	10,685	10,000

¹ Comparable figures can not be given.

² Includes loganberries to the value of \$127,888, tabulated as "All other canned fruits."

³ Includes loganberries to the value of \$27,633, tabulated as "All other canned fruits."

Canned vegetables.—Canned beans, which include canned baked beans, string beans, lima beans, etc., were the most important of the canned vegetables in 1919. New Jersey was the leading state, the value reported for 1919 being an increase over that for 1914 of 370.6 per cent, and representing about one-third (33 per cent) of the total value of canned beans for the United States.

In the production of canned tomatoes, California and Maryland led all other states, the value of the output for each state being more than \$10,000,000, their combined output for 1919 constituting 54.5 per cent of the total value of this product. Maryland was the leading state in the canning of tomatoes at the censuses of 1914, 1909, and 1904, but the large increase from 1914 to 1919 in the value of products reported for California, 234.8 per cent, puts that state in the lead in 1919.

In the production of canned corn, four states, Illinois, Iowa, Maryland, and Maine, ranking in importance in the order named, reported 61.3 per cent of the total value for 1919, while in the production of canned peas, Wisconsin led all other states at each of the four censuses, and in 1919 reported nearly one-half (48.4 per cent) of the total value of canned peas for the United States.

Canned fruits.—Of the total value of canned peaches, the most important of this class of products, California contributed 91 per cent in 1919. Nearly all of the canned apricots (99.6 per cent) and 58.1 per cent of the canned pears were reported from California.

Dried fruits.—California was the leading state in the production of each of the dried fruits specified. In 1919 the state produced 38.8 per cent of the dried apples, 99.3 per cent of the apricots, 99.7 per cent of the peaches, 83.3 per cent of the prunes, and all of the raisins.

Canned fish and oysters.—Of the total value of canned salmon, the state of Washington reported 70.7 per cent in 1919, Maine reported nearly two-thirds (62.3 per cent) of the total value of sardines, while Maryland reported 52.8 per cent of the total value of canned oysters.

Smoked fish.—Of the total value of smoked herring, Maine and Massachusetts reported 60 per cent in 1919, while of the total value of smoked salmon, New York reported 69.8 per cent.

Salted fish.—Massachusetts reported 74.7 per cent of the total value of salted cod for 1919. The state also produced nearly the entire output of salt mackerel—89.9 per cent.

Detailed statistics of products, by states.—Table 19 gives detailed statistics of quantities and values of the various classes of products of the canning and preserving industry, by states, for 1919.

MANUFACTURES.

TABLE 19.—QUANTITY AND VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919.

PRODUCT AND STATE.	Quantity.	Value.	PRODUCT AND STATE.	Quantity.	Value.	PRODUCT AND STATE.	Quantity.	Value.
CANNED VEGETABLES.			CANNED VEGETABLES—CON.			CANNED VEGETABLES—CON.		
Asparagus.....	<i>Cases.</i> 1,008,604	\$8,571,629	Kraut—Continued.	<i>Cases.</i>		Tomato paste.....	<i>Cases.</i> 234,691	\$1,300,680
California.....	994,669	8,482,299	Michigan.....	158,289	\$363,508	California.....	122,804	689,085
New York.....	4,109	39,651	New York.....	270,657	929,817	Indiana.....	50,284	358,592
All other states.....	7,826	49,679	Ohio.....	178,276	439,254	Maryland.....	33,928	123,394
Beans, baked.....	11,142,331	28,551,342	Tennessee.....	7,152	23,796	New Jersey.....	6,417	33,222
California.....	503,806	929,742	Wisconsin.....	159,893	406,277	New York.....	3,508	25,442
Illinois.....	162,632	345,390	All other states.....	155,052	414,904	All other states.....	17,750	70,946
Indiana.....	2,500,975	6,720,466	Peas.....	9,325,727	25,073,220	Tomato pulp.....	759,055	3,819,101
Iowa.....	128,384	209,274	California.....	213,857	564,904	California.....	158,072	654,949
Maryland.....	304,043	729,346	Colorado.....	85,714	254,694	Colorado.....	4,128	20,165
Michigan.....	592,874	1,041,692	Delaware.....	222,832	564,208	Delaware.....	31,933	99,830
New York.....	153,324	462,770	Illinois.....	446,908	1,221,443	Indiana.....	258,940	1,076,050
Ohio.....	187,306	356,272	Indiana.....	387,387	904,535	Iowa.....	3,677	26,804
All other states.....	6,603,987	17,756,381	Maryland.....	623,627	1,718,500	Kentucky.....	30,674	125,544
Beans, string.....	2,199,825	8,607,080	Michigan.....	406,980	1,207,356	Maryland.....	40,310	214,417
California.....	173,490	518,782	Minnesota.....	68,513	176,911	Michigan.....	31,283	158,267
Colorado.....	100,309	252,661	New Jersey.....	57,960	179,638	New Jersey.....	62,296	232,419
Indiana.....	11,088	27,830	New York.....	919,612	3,440,696	New York.....	44,859	190,311
Louisiana.....	10,821	32,219	Ohio.....	337,887	962,463	Ohio.....	30,995	124,173
Maine.....	89,241	232,217	Pennsylvania.....	71,161	182,045	Tennessee.....	7,943	42,184
Maryland.....	395,649	929,602	Utah.....	409,834	1,262,193	Utah.....	48,959	215,020
Michigan.....	38,445	306,115	Wisconsin.....	5,022,630	12,132,849	All other states.....	9,077	38,969
New York.....	722,535	2,600,177	All other states.....	50,925	150,780	All other vegetables.....	634,220	1,672,518
North Carolina.....	4,630	9,518	Pumpkin.....	383,211	861,436	California.....	389,780	770,060
Ohio.....	20,314	65,808	California.....	38,493	119,018	Illinois.....	1,666	8,342
Oregon.....	27,902	84,019	Illinois.....	42,093	91,613	Indiana.....	31,391	105,201
Pennsylvania.....	80,900	216,717	Indiana.....	116,310	247,755	Louisiana.....	36,197	100,168
Tennessee.....	17,079	34,020	Iowa.....	64,501	122,068	Maine.....	8,104	33,351
Utah.....	51,028	123,250	Michigan.....	5,282	11,667	Maryland.....	69,455	247,172
Virginia.....	14,285	28,689	New York.....	30,412	87,812	New Jersey.....	16,056	74,042
Washington.....	25,975	82,687	Ohio.....	49,547	92,800	New York.....	13,198	57,269
Wisconsin.....	305,142	899,998	All other states.....	38,573	88,703	Ohio.....	21,787	91,421
All other states.....	54,991	102,791	Sweet potatoes.....	745,891	2,477,719	Oregon.....	10,400	42,597
Beans, kidney.....	429,104	1,429,680	Arkansas.....	15,649	55,069	Washington.....	7,916	21,872
Indiana.....	60,641	171,215	California.....	52,077	249,180	All other states.....	28,390	120,143
Michigan.....	62,354	216,192	Delaware.....	74,954	258,790	Canned soup.....	5,844,821	11,857,717
New York.....	16,704	69,434	Georgia.....	25,503	72,724	CANNED FRUITS.		
Ohio.....	17,324	73,998	Louisiana.....	29,915	82,023	Apples.....	2,447,927	9,081,598
All other states.....	272,081	898,841	Maryland.....	167,274	544,394	Arkansas.....	213,230	755,506
Beans, lima.....	468,569	1,457,719	Mississippi.....	158,642	544,606	California.....	140,458	602,906
Maine.....	36,648	78,210	New Jersey.....	6,115	20,842	Colorado.....	38,377	138,022
Maryland.....	91,778	208,394	Tennessee.....	14,487	46,517	Connecticut.....	2,676	10,942
Michigan.....	43,690	157,533	Texas.....	14,371	50,635	Delaware.....	53,263	203,178
New Jersey.....	169,168	623,312	Virginia.....	165,038	463,979	Maine.....	253,993	921,577
New York.....	24,056	97,184	All other states.....	84,836	98,960	Maryland.....	109,504	358,620
Ohio.....	21,616	79,283	Spinach.....	676,388	2,338,497	Michigan.....	191,755	574,020
All other states.....	81,613	215,803	California.....	370,075	1,308,724	Missouri.....	1,054	15,596
Beans, all other.....	584,403	1,362,782	Maryland.....	256,827	834,032	New Jersey.....	5,384	17,169
Indiana.....	180,826	867,634	New York.....	20,961	88,599	New York.....	482,140	2,048,171
Maine.....	9,378	29,518	Ohio.....	13,010	45,300	North Carolina.....	5,943	16,676
Maryland.....	28,210	84,382	All other states.....	15,715	61,842	Oregon.....	230,555	863,595
Michigan.....	38,265	100,171	Squash.....	54,580	165,217	Pennsylvania.....	183,827	875,619
New York.....	10,850	49,960	Connecticut.....	1,391	3,899	Utah.....	48,252	133,295
Oregon.....	3,335	10,783	Maine.....	13,242	42,128	Virginia.....	94,075	300,364
All other states.....	313,539	730,434	Michigan.....	9,296	27,313	Washington.....	313,034	1,089,356
Beets.....	584,309	1,951,344	New Jersey.....	9,619	22,612	All other states.....	76,407	277,086
California.....	80,533	344,352	New York.....	6,500	24,978	Apricots.....	3,939,768	25,167,772
Maryland.....	12,220	40,635	All other states.....	14,541	44,287	California.....	3,912,404	25,033,625
Michigan.....	7,575	26,008	Succotash.....	373,977	1,142,236	Utah.....	23,320	116,717
New Jersey.....	59,204	189,035	Maine.....	53,458	179,958	All other states.....	4,044	17,430
New York.....	151,717	472,103	Maryland.....	47,260	109,635	Blackberries.....	910,657	5,080,397
Ohio.....	20,458	67,916	Michigan.....	63,117	201,201	California.....	118,832	743,891
Oregon.....	5,740	19,664	New York.....	149,082	478,368	Indiana.....	16,687	43,482
Wisconsin.....	196,587	619,868	Ohio.....	19,494	55,409	Maryland.....	48,589	250,017
All other states.....	50,275	171,763	Vermont.....	5,166	17,712	Michigan.....	81,022	479,330
Corn.....	14,402,725	35,532,007	All other states.....	36,400	99,943	New Jersey.....	15,963	109,432
Delaware.....	198,728	479,594	Tomatoes.....	11,836,476	38,067,999	New York.....	9,309	78,073
Illinois.....	2,291,943	5,843,773	Arkansas.....	140,054	443,186	North Carolina.....	32,645	101,257
Indiana.....	608,515	1,526,103	California.....	3,627,473	10,452,851	Ohio.....	7,958	40,351
Iowa.....	2,888,706	5,763,458	Colorado.....	292,140	994,087	Oregon.....	230,205	1,242,572
Maine.....	1,548,120	4,723,397	Connecticut.....	20,066	90,186	Tennessee.....	26,449	82,269
Maryland.....	2,342,359	5,448,073	Delaware.....	285,127	1,011,064	Texas.....	52,490	245,749
Michigan.....	139,520	421,384	Illinois.....	67,668	227,704	Virginia.....	2,961	9,218
Minnesota.....	516,347	1,402,307	Indiana.....	917,235	2,482,729	Washington.....	255,620	1,615,323
Nebraska.....	177,915	409,587	Iowa.....	83,434	222,126	All other states.....	11,927	44,433
New Hampshire.....	42,671	140,601	Kentucky.....	81,623	102,658	Blueberries.....	180,350	913,821
New York.....	901,368	2,908,990	Maryland.....	3,655,516	10,295,388	Maine.....	100,409	667,246
Ohio.....	1,400,793	3,327,725	Michigan.....	120,781	444,844	Michigan.....	25,738	111,144
Pennsylvania.....	387,664	788,658	Missouri.....	459,620	1,383,667	Washington.....	15,199	71,117
Vermont.....	146,372	437,683	New Jersey.....	79,413	284,432	All other states.....	9,004	64,314
Virginia.....	970	2,284	New Mexico.....	53,483	1,745,626	Cherries.....	1,362,832	8,451,029
Washington.....	1,779	5,727	New York.....	437,841	1,745,626	California.....	618,210	3,753,993
Wisconsin.....	745,296	1,743,435	North Carolina.....	8,083	26,291	Colorado.....	51,929	305,552
All other states.....	63,664	161,228	Ohio.....	189,403	588,366	Maryland.....	6,757	51,389
Hominy.....	587,298	1,346,044	Oregon.....	10,736	29,871	Michigan.....	184,472	1,422,863
Illinois.....	93,173	177,836	Pennsylvania.....	170,492	532,789	New York.....	30,636	248,517
Indiana.....	379,929	828,073	Tennessee.....	239,005	805,720	Ohio.....	10,676	73,839
All other states.....	114,196	340,135	Utah.....	878,323	1,992,088	Oregon.....	149,203	925,007
Kraut.....	1,041,932	2,845,340	Virginia.....	860,800	3,396,908	Utah.....	33,079	160,870
Illinois.....	18,894	65,423	West Virginia.....	82,321	238,963	Virginia.....	1,812	7,768
Indiana.....	87,719	202,361	Wisconsin.....	23,083	72,660	Washington.....	146,782	828,030
			All other states.....	48,050	147,664	All other states.....	129,276	673,901

1 Standard case contains 24 No. 2 cans. See Table 16.

2 Standard case contains 24 No. 2 cans. See Table 16.

3 Standard case contains 24 No. 3 cans. See Table 16.

4 Standard case contains 48 No. 1 cans. See Table 16.

5 Standard case contains 12 No. 10 cans. See Table 16.

CANNING AND PRESERVING.

79

TABLE 19.—QUANTITY AND VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919—Continued.

PRODUCT AND STATE.	Quantity.	Value.	PRODUCT AND STATE.	Quantity.	Value.	PRODUCT AND STATE.	Quantity.	Value.
CANNED FRUITS—contd.			DRIED FRUITS.			CANNED FISH AND OYSTERS—continued.		
Gooseberries.....	<i>Cases.</i> 187,026	\$343,504	Apples.....	<i>Pounds.</i> 46,623,599	\$8,772,100	Shad.....	<i>Cases.</i> 11,877	\$88,428
Colorado.....	25,118	80,103	Arkansas.....	6,720,070	895,157	Oregon.....	5,942	30,414
Maryland.....	9,175	36,402	California.....	15,477,039	2,630,300	Washington.....	1,900	14,844
Michigan.....	33,730	149,115	Illinois.....	274,354	33,051	All other states.....	3,945	23,170
New York.....	1,991	7,423	New York.....	13,524,019	2,234,128	Shrimp.....	*322,073	1,864,793
Oregon.....	12,324	50,658	Oregon.....	1,577,441	191,490	Florida.....	36,246	207,365
Washington.....	4,479	14,988	Virginia.....	1,274,125	122,425	Georgia.....	37,212	191,788
All other states.....	809	4,810	Washington.....	4,044,090	466,214	Louisiana.....	91,818	533,694
Grapes.....	*87,644	514,219	West Virginia.....	203,000	34,821	Mississippi.....	144,800	844,666
California.....	86,851	509,234	All other states.....	3,529,461	254,514	All other states.....	12,000	87,400
All other states.....	793	4,985	Apple chops.....	3,686,103	308,977	Tuna—California.....	*874,380	5,710,188
Loganberries.....	*273,617	2,138,817	New York.....	3,010,278	266,070	All other canned fish.....	272,378	1,744,192
Oregon.....	195,535	1,458,019	All other states.....	675,825	52,907	SMOKED AND DRIED FISH.		
Washington.....	64,857	578,735	Apricots.....	24,192,628	6,034,097	Finnan haddock.....	<i>Pounds.</i> 5,606,883	495,404
All other states.....	13,272	102,063	California.....	23,944,612	5,994,309	Maine.....	1,063,492	136,440
Peaches.....	*7,706,855	46,516,225	All other states.....	248,016	40,388	Massachusetts.....	3,910,134	278,213
Arkansas.....	46,402	179,433	Peaches.....	73,379,193	12,109,624	All other states.....	723,287	80,761
California.....	6,869,152	42,347,718	California.....	73,268,010	12,074,246	Herring.....	14,639,391	1,350,745
Delaware.....	88,411	320,469	All other states.....	111,183	35,378	Maine.....	5,278,985	455,489
Georgia.....	144,609	440,507	Prunes.....	136,377,066	13,253,691	Maryland.....	75,800	17,234
Maryland.....	239,790	1,425,079	California.....	114,324,446	15,211,293	Massachusetts.....	3,284,016	354,859
Michigan.....	170,758	881,443	Oregon.....	19,930,935	2,785,373	New Jersey.....	25,191	4,022
New Jersey.....	20,700	136,202	All other states.....	2,121,685	257,025	New York.....	500,725	83,829
New York.....	48,053	285,134	Raisins—California.....	293,300,581	35,544,262	Washington.....	111,698	9,711
Oregon.....	22,303	119,868	All other dried fruits.....	37,852,258	6,384,934	Wisconsin.....	3,264,036	197,334
Utah.....	16,633	83,325	California.....	33,235,543	5,659,138	All other states.....	2,098,900	227,667
Virginia.....	12,121	56,930	Oregon.....	3,177,585	430,935	Salmon.....	5,574,273	1,031,932
Washington.....	26,352	127,337	All other states.....	1,439,130	288,861	New York.....	3,840,000	1,173,400
All other states.....	21,571	106,780	DRIED VEGETABLES.			Washington.....	1,471,093	282,112
Pears.....	*2,021,610	14,202,963	Potatoes.....	7,253,230	1,840,399	All other states.....	767,180	228,470
California.....	1,049,922	8,249,308	California.....	3,189,328	838,521	Sturgeon.....	570,031	435,959
Delaware.....	95,275	506,875	Oregon.....	774,087	176,806	New York.....	556,171	424,378
Maryland.....	185,610	915,547	All other states.....	3,289,815	825,072	All other states.....	13,800	11,581
Michigan.....	39,774	248,963	Beans.....	917,134	116,091	All other smoked and dried	5,803,013	1,411,453
New Jersey.....	105,090	547,863	California.....	134,689	8,097	fish.....	5,689,264	397,316
New York.....	171,187	1,363,984	All other states.....	782,445	107,994	Illinois.....	413,935	112,193
Oregon.....	164,733	1,161,462	Carrots.....	432,959	117,437	Louisiana.....	54,200	14,190
Virginia.....	12,077	43,991	California.....	312,207	85,568	Maryland.....	173,297	42,818
Washington.....	179,873	1,069,390	All other states.....	120,752	28,919	Massachusetts.....	610,410	200,267
All other states.....	18,064	95,580	Turnips—All states.....	19,396	8,264	New Jersey.....	2,394,036	580,184
Pineapples.....	*156,755	1,365,484	Spinach—All states.....	40,989	41,352	New York.....	567,271	75,485
Maryland.....	155,400	1,347,972	Cabbage—All states.....	19,601	13,684	SALTED AND PICKLED FISH.		
All other states.....	1,355	17,512	Celery—All states.....	17,587	11,100	Cod.....	62,902,087	12,643,357
Plums.....	*571,521	2,228,183	Soup mixture—All states.....	655,228	222,361	Maine.....	9,964,117	1,334,989
California.....	363,024	1,551,251	Other dried vegetables—All	989,397	271,917	Massachusetts.....	39,847,584	9,450,480
Michigan.....	75,980	224,714	states.....			Washington.....	5,297,113	500,862
New York.....	88,320	307,670	CANNED FISH AND OYSTERS.			All other states.....	7,793,223	1,357,046
Oregon.....	16,666	57,867	Clams.....	<i>Cases.</i> *157,843	772,870	Haddock.....	7,691,146	815,540
Washington.....	10,830	30,638	Maine.....	74,397	356,878	Massachusetts.....	5,957,012	623,583
All other states.....	16,701	56,043	Washington.....	70,964	359,192	All other states.....	1,734,134	161,957
Prunes.....	*273,710	1,271,410	All other states.....	12,482	56,800	Herring.....	14,135,579	845,629
California.....	87,653	558,757	Oysters.....	*717,636	3,510,119	Maine.....	768,425	47,333
New York.....	11,954	11,803	Florida.....	6,972	35,663	Maryland.....	1,875,193	95,135
Oregon.....	114,683	387,985	Georgia.....	9,452	55,389	Massachusetts.....	2,910,953	204,247
Washington.....	52,623	227,224	Louisiana.....	28,508	170,274	New York.....	775,500	144,507
All other states.....	16,797	85,641	Maryland.....	410,294	1,854,880	Virginia.....	3,623,103	117,724
Raspberries.....	*551,419	4,278,939	Mississippi.....	133,446	747,369	Wisconsin.....	1,493,300	37,233
Maryland.....	27,355	218,602	North Carolina.....	31,219	116,117	All other states.....	2,689,135	199,445
Michigan.....	131,223	959,621	South Carolina.....	83,920	416,509	Mackerel.....	5,093,700	1,000,593
New Jersey.....	19,478	118,127	All other states.....	13,825	114,918	Maine.....	49,153	7,071
New York.....	213,096	1,663,789	Roe.....	26,768	174,268	Massachusetts.....	4,728,643	899,956
Oregon.....	37,416	285,028	Virginia.....	14,080	73,519	New York.....	282,641	87,486
Washington.....	103,986	918,812	Maryland.....	2,518	15,166	All other states.....	38,263	6,080
All other states.....	18,835	114,960	All other states.....	10,170	85,583	All other salted and pickled	21,883,864	2,904,641
Strawberries.....	*374,097	3,693,648	Salmon.....	*2,186,004	19,113,204	fish.....	6,640,836	1,274,264
California.....	21,414	231,693	Oregon.....	511,325	5,447,491	Florida.....	442,820	41,690
Louisiana.....	43,063	500,296	Washington.....	1,661,490	13,506,149	Maine.....	5,734,735	303,603
Maryland.....	75,215	760,936	All other states.....	13,189	159,564	Maryland.....	1,204,820	191,106
Michigan.....	87,892	693,514	Sardines.....	*5,777,959	20,258,565	Massachusetts.....	2,404,822	247,409
New Jersey.....	19,717	187,575	California.....	2,110,604	7,604,328	Oregon.....	2,086,628	591,082
New York.....	32,089	324,209	Maine.....	3,680,935	12,627,862	Washington.....	584,050	72,225
Oregon.....	21,107	217,253	All other states.....	6,420	26,375	All other states.....	2,785,353	183,453
Washington.....	25,426	222,834						
All other states.....	48,174	555,338						
Other canned fruits.....	*516,558	2,701,348						
California.....	360,722	1,928,526						
New York.....	83,053	496,552						
All other states.....	72,783	276,270						
Other canned foods, not including fish and oysters.....	*1,285,611	2,923,184						

* Standard case contains 24 No. 2 cans. See Table 16.
* Standard case contains 24 No. 3 cans. See Table 16.

* Standard case contains 24 No. 2½ cans. See Table 16.
* Standard case contains 100 No. ½ cans. See Table 13.

* Standard case contains 48 No. ½ cans. See Table 13.
* Standard case contains 48 No. 1 cans. See Table 13.

Products, by geographic divisions.—Table 20 shows, for 1919, the value of the several major groups of products and the quantity of most of them, by geo-

graphic divisions and states, with the per cent distribution of the total value.

MANUFACTURES.

TABLE 20.—KIND, QUANTITY, AND VALUE OF PRODUCTS, BY GEOGRAPHIC DIVISIONS AND STATES: 1919.

DIVISION AND STATE.	Total value.	Per cent distribution.	CANNED VEGETABLES AND SOUPS.		CANNED FRUITS.		DRIED FRUITS.		CANNED FISH AND OYSTERS.		CURED FISH.		PICKLES, PRESERVES, AND SAUCES.	ALL OTHER PRODUCTS.
			Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Value.	Value.
UNITED STATES.....	Dollars. 639,771,083	100.0	Cases. 63,316,116	Dollars. 176,431,307	Cases. 21,432,393	Dollars. 127,949,357	Pounds. 615,405,528	Dollars. 85,401,265	Cases. 10,345,203	Dollars. 53,186,286	Pounds. 143,898,917	Dollars. 23,575,633	Dollars. 155,060,971	Dollars. 17,266,264
NEW ENGLAND.....	45,899,817	7.2	2,827,808	6,931,254	433,016	1,839,900	21,360	12,816	3,894,579	13,881,574	87,536,552	14,567,987	7,004,567	1,661,719
Maine.....	25,323,674	4.0	2,074,553	6,125,876	408,357	1,737,893			3,865,289	13,636,760	24,301,591	2,437,032	120,301	1,215,812
New Hampshire.....	247,485		51,056	168,846	18,087	70,739							7,200	700
Vermont.....	537,661	0.1	175,030	521,879									15,782	
Massachusetts.....	19,164,406	3.0	730	2,840	2,842	17,581	21,300	12,816	23,290	194,814	63,234,961	12,130,955	6,367,903	437,497
Connecticut and Rhode Island.....	626,591	0.1	26,139	111,813	3,130	13,687							493,381	7,710
MIDDLE ATLANTIC.....	116,540,464	18.1	16,130,739	43,915,450	1,561,084	9,042,400	17,393,195	2,602,163			12,008,362	3,140,500	54,172,368	3,667,523
New York.....	56,510,333	8.8	3,893,079	13,773,670	1,162,834	6,849,959	16,896,724	2,557,160			8,508,783	2,580,008	27,058,229	3,091,297
New Jersey.....	30,229,315	4.7	9,080,036	23,105,108	190,960	1,157,499					1,825,128	375,143	5,250,212	341,383
Pennsylvania.....	29,800,816	4.7	3,157,624	7,030,672	207,284	1,035,022	496,471	45,003			1,074,446	185,349	21,263,927	234,843
EAST NORTH CENTRAL.....	111,120,210	17.4	20,417,015	52,975,416	1,205,877	6,593,058	2,064,777	360,696			8,486,460	846,944	47,567,158	2,776,938
Ohio.....	18,174,597	2.8	2,513,679	6,388,369	31,707	176,543	890,572	211,792					11,132,302	255,591
Indiana.....	28,462,473	4.4	6,284,691	17,080,368	34,544	126,588							9,613,093	1,636,484
Illinois.....	30,002,101	4.7	3,845,317	8,744,470	9,825	55,204	475,264	67,073			1,845,264	448,316	20,628,975	68,063
Michigan.....	16,238,728	2.5	1,769,448	4,750,531	1,025,707	5,793,049	600,000	39,633			1,671,860	128,976	5,070,400	480,079
Wisconsin.....	18,242,311	2.9	6,503,880	16,005,738	104,094	471,674	95,951	42,196			4,909,336	269,652	1,110,328	330,721
WEST NORTH CENTRAL.....	22,765,695	3.6	4,977,462	11,184,121	22,104	81,400					1,049,275	41,971	10,825,843	632,351
Minnesota.....	4,151,545	0.6	664,577	1,750,857	1,022	5,559					1,049,275	41,971	2,322,794	30,364
Iowa.....	10,242,721	1.6	3,610,971	7,200,975	8,615	28,794							2,439,172	573,780
Missouri.....	7,017,934	1.1	494,069	1,522,470	5,111	20,182							5,458,075	17,207
North Dakota, South Dakota, and Kansas.....	435,747	0.1	26,054	76,769	638	2,200							356,778	
Nebraska.....	917,748	0.1	281,791	633,050	6,718	24,674							249,024	11,000
SOUTH ATLANTIC.....	46,688,584	7.3	9,675,966	28,720,813	1,412,201	7,605,149	3,135,284	199,077	680,624	3,303,042	8,730,256	603,594	4,822,492	4,341,387
Delaware.....	5,598,315	0.9	972,245	2,753,772	233,008	1,224,610					107,500	13,958	1,054,165	551,804
Maryland and District of Columbia.....	32,103,143	5.0	7,401,326	21,574,503	860,292	5,374,572	1,535,209	35,000	415,610	1,884,493	3,786,833	388,813	2,489,536	356,166
Virginia.....	5,046,255	0.9	1,059,958	3,959,344	123,301	419,901	1,336,575	126,839	25,163	184,203	3,023,103	117,724	474,301	363,883
West Virginia.....	461,923	0.1	83,068	239,613	10,907	17,351	263,500	37,238					158,250	9,471
North Carolina.....	359,708	0.1	16,025	46,429	39,469	119,892					38,819	157,817	10,600	13,468
South Carolina.....	429,308	0.1	777	3,010							83,920	416,509	5,759	4,030
Georgia.....	872,270	0.1	28,186	80,694	145,284	448,767					46,666	247,157	65,112	30,650
Florida.....	1,187,634	0.2	24,381	68,388							70,448	412,803	442,820	504,769
EAST SOUTH CENTRAL.....	12,870,419	2.0	695,432	2,252,452	62,670	473,440			283,246	1,639,035			8,447,882	58,104
Kentucky.....	8,044,190	1.4	96,984	312,002	10,999	120,124							8,212,014	50
Tennessee.....	1,572,021	0.2	893,048	1,233,786	42,808	284,205							29,848	24,182
Alabama and Mississippi.....	2,654,208	0.4	205,400	706,664	9,072	69,117			283,246	1,639,035			205,520	33,872
WEST SOUTH CENTRAL.....	6,764,795	1.0	309,342	971,559	372,395	1,748,001	6,990,070	823,757	120,320	703,868	413,935	112,193	2,142,164	263,263
Arkansas.....	2,420,922	0.4	162,693	515,652	253,358	949,508	6,990,070	823,757						181,945
Louisiana.....	2,166,571	0.3	76,024	228,692	45,645	511,754			120,320	703,868	413,935	112,193	522,176	87,018
Oklahoma and Texas.....	2,177,302	0.3	70,725	227,245	63,892	296,679							1,019,978	45,400
MOUNTAIN.....	8,734,368	1.4	1,728,763	5,577,420	313,199	1,472,405	2,888,740	325,282					1,193,092	166,169
Idaho, New Mexico, Arizona, and Montana.....	956,698	0.1	45,567	154,449	70,946	393,414	2,888,740	325,282					78,480	7,073
Colorado.....	3,190,048	0.5	521,169	1,624,007	122,731	569,547							842,126	163,768
Utah.....	4,587,622	0.7	1,162,027	3,798,394	119,622	509,444							274,480	6,328
PACIFIC.....	268,388,761	42.0	7,053,889	23,902,822	16,049,838	99,063,529	582,015,102	81,077,474	5,366,431	33,658,767	25,674,077	4,262,444	10,785,915	6,605,810
Washington.....	27,717,930	4.3	69,279	230,259	1,201,810	6,784,839	4,824,485	520,856	1,736,205	13,891,805	8,890,332	973,889	8,481,927	1,834,289
Oregon.....	29,600,721	3.2	86,968	262,181	1,196,014	6,776,604	24,743,383	3,443,070	622,299	5,505,849	2,213,187	626,811	2,874,514	1,112,692
California.....	220,068,030	34.4	6,897,612	23,410,383	13,652,014	85,533,026	563,550,231	77,113,548	3,107,927	14,261,053	14,670,558	2,661,747	18,429,474	3,658,529

Among the geographic divisions, the Pacific states led, in 1919, with 42 per cent of the total value of products; the Middle Atlantic group ranked second, with 18.1 per cent; and the East North Central occupied third place, with 17.4 per cent. These three geographic divisions together thus reported 77.5 per cent of the total value of products for the United States as a whole.

Canned goods—quantity and value.—Table 21 shows the quantity and value of all classes of canned goods, including dried fruits and vegetables, produced in the canning and preserving industry, the slaughtering and meat-packing industry, and other industries.

TABLE 21.—CANNED GOODS—QUANTITY AND VALUE: 1919 AND 1914.

INDUSTRY.	1919		1914	
	Quantity.	Value.	Quantity.	Value.
Total, value.....		\$1,099,475,305		\$353,773,234
	Cases.		Cases.	
Canning and preserving.....		825,147,474		245,429,591
Canned vegetables.....	57,471,295	164,573,590	50,253,674	84,413,607
Canned soups.....	5,844,821	11,857,717	4,886,098	7,877,057
Canned fruits.....	21,432,393	127,949,357	9,449,182	24,897,174
Canned fish.....	9,627,570	49,676,167	7,843,465	19,724,053
Canned oysters.....	717,636	3,510,119	944,639	2,676,951
Pickles, preserves, and sauces.....		155,960,971		60,136,959
	Pounds.		Pounds.	
Dried fruits.....	615,408,528	85,401,265	568,587,364	34,771,912
Dried vegetables.....	10,345,821	2,642,655	(1)	(1)
Cured fish.....	143,898,917	23,575,633	159,862,843	10,931,818
Slaughtering and meat packing.....		124,860,496		36,263,293
Canned sausage.....	160,908,988	27,965,155	74,004,380	9,845,669
All other canned goods.....	305,955,406	96,904,341	160,798,955	26,417,624
Other industries.....		349,458,425		72,080,350
Condensed and evaporated milk.....	2,093,646,405	293,177,134	873,410,504	58,747,252
Sweetening sirups, other than cane.....		50,430,585		13,333,098
Peanut butter.....		5,850,706	(1)	(1)

¹ Figures not available.

GENERAL TABLES.

Comparative summary, by states.—Table 22 shows for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and

value of products as reported for the industry.

Detailed statement, by states.—Table 23 presents for 1919, by states, the more detailed statistics for each of the four branches separately.

TABLE 22.—COMPARATIVE SUMMARY FOR 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Expressed in thousands.			STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Expressed in thousands.		
					Wages.	Cost of mate- rials.	Value of prod- ucts.						Wages.	Cost of mate- rials.	Value of prod- ucts.
United States.....	1919	4,280	89,923	180,812	\$66,444	\$412,060	\$628,287	Missouri.....	1919	158	1,256	2,805	\$511	\$4,931	\$6,377
	1914	4,220	74,071	120,004	27,197	150,058	243,440		1914	153	1,250	1,912	142	740	1,082
	1909	3,767	59,908	81,179	19,082	101,823	157,101		1909	222	952	974	186	1,005	1,574
Arkansas.....	1919	107	804	676	390	1,400	2,431	Nebraska.....	1919	20	147	902	93	519	669
	1914	63	454	587	118	347	570		1914	17	244	1,329	73	392	590
	1909	44	292	428	54	181	279		1909	12	215	569	63	269	481
California.....	1919	1,444	24,283	23,930	22,060	146,360	219,279	New Jersey.....	1919	97	3,232	5,136	2,654	18,208	29,822
	1914	289	12,750	10,502	5,489	45,695	61,183		1914	96	3,154	3,783	1,252	8,035	13,765
	1909	196	7,757	7,453	3,454	24,009	32,915		1909	84	1,818	2,093	646	2,208	3,664
Colorado.....	1919	24	689	1,890	480	1,831	3,190	New York.....	1919	637	7,650	19,768	5,846	35,128	54,558
	1914	26	684	1,453	287	1,080	1,798		1914	987	8,757	16,630	3,801	15,957	25,945
	1909	30	518	1,340	250	672	1,528		1909	790	7,075	12,409	2,663	11,669	19,040
Connecticut.....	1919	12	95	142	57	206	471	North Carolina.....	1919	22	152	75	58	211	390
	1914	15	147	360	53	203	359		1914	27	351	292	65	175	347
	1909	12	128	199	45	175	346		1909	21	188	230	25	75	144
Delaware.....	1919	178	1,459	2,967	823	3,622	5,584	Ohio.....	1919	124	2,951	7,105	2,065	11,515	17,289
	1914	297	1,803	2,993	400	2,252	3,175		1914	136	2,509	7,079	1,947	5,902	8,958
	1909	77	1,369	1,725	273	1,553	2,100		1909	107	2,009	4,244	532	3,102	4,660
Florida.....	1919	28	424	391	152	625	1,041	Oregon.....	1919	103	2,344	4,397	2,018	14,366	20,591
	1914	21	194	208	58	239	418		1914	71	799	1,655	339	3,090	4,738
	1909	18	188	70	51	80	213		1909	71	661	1,318	315	2,187	3,207
Georgia.....	1919	10	248	528	126	473	795	Pennsylvania.....	1919	94	3,010	6,555	2,261	17,347	29,489
	1914	17	447	576	69	231	446		1914	84	3,096	4,476	1,204	7,539	14,950
	1909	20	428	318	50	108	321		1909	83	2,753	3,474	947	4,665	9,434
Illinois.....	1919	132	3,680	8,299	3,178	17,833	28,341	South Carolina.....	1919	12	377	297	119	206	429
	1914	117	2,500	7,078	1,108	6,680	10,121		1914	18	485	407	78	209	364
	1909	118	2,383	4,305	904	4,813	7,620		1909	15	467	95	64	159	318
Indiana.....	1919	166	4,170	9,080	2,795	17,528	27,823	Tennessee.....	1919	62	593	1,438	178	912	1,513
	1914	141	4,422	7,208	1,574	8,818	13,869		1914	62	381	738	62	301	496
	1909	134	3,406	6,398	870	5,945	8,758		1909	37	303	460	39	181	206
Iowa.....	1919	76	1,582	6,949	1,099	6,735	10,223	Texas.....	1919	27	354	550	185	1,129	1,913
	1914	64	1,209	4,400	438	2,122	3,920		1914	22	213	423	79	630	1,211
	1909	71	1,247	2,989	299	1,568	2,549		1909	19	168	243	45	201	498
Kentucky.....	1919	28	1,147	1,075	656	5,723	8,496	Utah.....	1919	37	1,099	3,151	657	2,735	4,558
	1914	33	594	843	190	1,367	2,263		1914	37	677	1,930	287	1,069	2,430
	1909	36	653	907	177	1,093	1,857		1909	24	396	847	123	716	1,059
Louisiana.....	1919	38	653	750	297	1,348	2,146	Vermont.....	1919	19	173	665	64	360	522
	1914	28	991	710	177	663	1,365		1914	16	95	296	33	228	402
	1909	20	974	659	183	573	978		1909	8	118	240	40	214	330
Maine.....	1919	217	3,846	10,619	2,875	16,980	24,551	Virginia.....	1919	1498	2,128	7,853	836	3,813	5,505
	1914	194	3,913	6,257	1,293	7,404	10,743		1914	1441	2,074	8,861	330	1,573	2,234
	1909	245	3,850	4,355	1,138	5,125	7,689		1909	325	1,800	1,382	277	1,208	1,854
Maryland.....	1919	400	8,023	16,093	3,932	21,988	30,566	Washington.....	1919	127	3,394	8,244	3,154	17,613	27,516
	1914	465	8,640	10,698	2,402	12,958	18,029		1914	86	2,352	4,565	1,322	5,279	9,450
	1909	468	8,613	7,007	1,926	10,090	13,709		1909	80	2,029	2,493	1,272	5,046	9,595
Massachusetts.....	1919	55	1,944	1,677	1,838	13,433	19,017	West Virginia.....	1919	25	134	815	47	189	308
	1914	65	1,903	996	866	5,606	8,169		1914	29	216	552	44	264	351
	1909	71	1,449	1,043	642	4,583	6,840		1909	30	271	484	58	430	605
Michigan.....	1919	90	2,592	4,846	1,530	10,980	16,009	Wisconsin.....	1919	129	2,909	11,930	2,220	10,650	18,067
	1914	91	2,607	4,701	944	4,593	8,194		1914	112	2,687	8,730	1,064	4,570	7,335
	1909	104	2,073	3,374	665	3,074	4,971		1909	83	1,776	4,915	639	2,967	4,807
Minnesota.....	1919	38	683	1,635	431	2,329	3,500	All other states.....	1919	64	603	1,147	399	1,827	3,015
	1914	35	436	1,055	140	806	1,284		1914	57	419	781	145	764	1,242
	1909	32	415	692	135	895	1,343		1909	37	329	465	114	436	729
Mississippi.....	1919	28	1,094	846	375	1,517	2,303								
	1914	18	1,052	600	229	877	1,655								
	1909	11	847	378	97	508	824								

1 Excludes statistics for 1 establishment to avoid disclosure of individual operations.
 2 Excludes statistics for 2 establishments to avoid disclosure of individual operations.
 3 Excludes statistics for 3 establishments to avoid disclosure of individual operations.

MANUFACTURES.

TABLE 23.—DETAILED STATEMENT FOR CAN-

STATE.	Num-ber of estab-lish-ments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Pro- pri- etors and firm mem- bers.	Sala- ried offi- cers, super- in- tend- ents, and man- agers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Fe- male.	Aver- age num- ber.	Number, 15th day of—			Male.	Fe- male.	Male.		Fe- male.
								Maximum month.	Minimum month.						

CANNING AND PRESERVING, FRUITS AND VEGETABLES.

1	United States.....	3,082	72,744	3,284	4,892	2,124	1,579	60,865	Se 157,032	Mh 14,005	163,346	69,847	89,306	1,534	2,659	\$223,692,234
2	Arkansas.....	107	1,044	201	30	6	3	804	Se 2,865	Fe 2	2,918	943	1,938	10	27	842,279
3	California.....	303	22,406	203	939	1,048	641	19,576	Au 44,571	Mh 4,862	49,228	20,555	27,037	463	1,173	63,649,112
4	Colorado.....	18	752	4	52	21	12	663	Se 2,043	Fe 145	908	304	602			3,068,331
5	Connecticut.....	5	63	5	6	1	2	49	Se 215	Mh 1	144	57	87			105,452
6	Delaware.....	70	1,487	83	68	15	11	1,310	Se 4,324	Ap 262	5,244	2,137	3,100	5	2	4,692,668
7	Florida.....	5	43	2	4		1	36	De 94	Ap 0	164	51	111	2		76,085
8	Georgia.....	12	149	18	14		2	115	Je 493	Mh 0	485	143	342			214,000
9	Idaho.....	8	184	3	16	6	4	155	Se 342	Fe 8	295	195	100			385,422
10	Illinois.....	59	1,652	40	163	27	27	1,405	Se 4,708	Fe 480	1,689	1,055	605	10	10	7,562,036
11	Indiana.....	136	3,610	118	246	98	99	2,949	Se 9,239	Mh 801	7,564	3,714	3,715	49	80	11,527,447
12	Iowa.....	62	1,540	32	157	48	32	1,271	Se 5,365	Fe 326	3,514	1,862	1,637	11	4	7,826,193
13	Kentucky.....	10	115	7	4	5	1	101	Se 377	Fe 8	301	85	216			223,614
14	Louisiana.....	11	197	12	23	11	2	149	My 299	Fe 31	471	191	251	13	16	465,770
15	Maine.....	97	1,352	85	150	24	45	1,048	Se 5,146	Mh 80	4,371	2,708	1,592	47	26	4,202,579
16	Maryland.....	406	8,785	597	310	147	86	7,645	Se 26,827	Ja 1,360	25,002	9,261	15,310	227	204	20,760,946
17	Michigan.....	52	2,366	32	149	34	42	2,109	Jy 5,019	Mh 410	3,462	1,392	1,879	62	129	6,010,871
18	Minnesota.....	25	558	3	51	8	10	456	Au 1,630	Fe 66	1,240	673	673			1,741,480
19	Mississippi.....	10	276	2	17	4	4	249	No 624	My 65	835	249	381	5		417,136
20	Missouri.....	147	1,178	196	58	9	5	910	Se 3,765	Ja 10	3,761	1,111	2,409	79	152	1,001,979
21	Nebraska.....	9	182	9	21	3	2	147	Se 754	Fe 12	681	334	344	3		775,587
22	New Hampshire.....	4	75		8	3	4	60	Se 179	Fe 2	169	107	62			85,183
23	New Jersey.....	53	3,307	42	168	243	169	2,685	Se 4,858	Ap 1,240	4,751	2,504	2,246		1	21,088,371
24	New Mexico.....	3	19		4			15	Se 83	Ja 0	85	35	50			30,716
25	New York.....	515	5,955	490	355	114	152	4,835	Se 10,668	Fe 958	11,015	4,900	5,974	65	76	23,707,470
26	North Carolina.....	13	54	19	6			28	Jy 108	Ja 0	105	51	44	4	6	73,172
27	Ohio.....	87	1,868	52	157	38	45	1,576	Se 4,699	De 359	3,911	2,211	1,651	18	31	6,744,352
28	Oregon.....	59	1,937	37	92	39	49	1,720	Se 3,676	Mh 266	3,759	1,384	2,300	15	60	5,027,763
29	Pennsylvania.....	42	820	57	40	14	7	711	Se 2,353	Mh 64	2,098	971	1,032	47	48	2,100,567
30	Tennessee.....	62	745	101	34	12	6	593	Au 1,965	Ja 23	1,615	529	1,069	4	13	764,005
31	Texas.....	9	164	8	16	16	4	120	Jo 238	Fe 53	198	75	123			530,767
32	Utah.....	31	1,172	4	81	16	20	1,051	Se 2,883	Mh 203	2,761	1,079	1,601	22	50	4,448,953
33	Vermont.....	9	206	12	15	3	3	173	Se 684	Ja 4	640	450	110	57	23	334,250
34	Virginia.....	473	3,491	716	919	13	7	1,836	Se 7,188	Ja 2	9,026	3,003	5,506	177	250	2,319,063
35	Washington.....	30	1,518	20	69	47	25	1,348	Se 2,718	Mh 1,287	2,871	782	1,970	30	80	4,326,371
36	West Virginia.....	25	182	44	4			134	Se 594	Ja 0	658	153	382	31	92	134,937
37	Wisconsin.....	103	3,258	5	417	46	53	2,737	Jy 10,976	Mh 736	7,140	4,616	2,489	58	77	15,739,718
38	All other states.....	12	122	7	9	4	5	97			373	79	269	11	14	684,259

CANNING AND PRESERVING, FISH.

1	United States.....	410	12,797	275	657	353	204	11,248	Au 17,329	Mh 6,749	18,252	10,541	7,578	68	65	63,049,038
2	California.....	57	3,312	14	168	78	63	2,689	Jy 4,718	My 976	3,643	1,703	1,937	2	1	10,517,677
3	Florida.....	10	300	18	14	6	4	264	Oc 504	Jy 78	502	250	252			284,884
4	Georgia.....	4	84	4	7	1	1	71	De 223	Ja 11	223	91	132			215,627
5	Illinois.....	5	32	8	2	1	1	20	Fe 22	Je 17	23	20	3			123,377
6	Louisiana.....	16	457	17	27	6	4	383	Se 615	Ja 68	742	184	558			797,786
7	Maine.....	102	3,066	65	165	50	65	2,721	Se 5,592	Fe 859	4,973	2,178	2,740	25	30	17,199,422
8	Maryland.....	23	251	42		1		203	Ap 406	Jy 102	554	448	96	4	6	136,325
9	Massachusetts.....	22	1,623	8	39	53	59	1,494	De 1,651	Au 1,249	1,093	1,488	183	10	12	7,104,155
10	Mississippi.....	11	516	13	13	7	2	481	Oc 671	Je 74	673	176	484	10	3	710,787
11	New Jersey.....	3	19	3	1	1	1	13	No 17	Je 9	15	15				267,093
12	New York.....	15	178	11	17	36	7	107	Ja 122	Au 92	116	84	12	11	9	930,238
13	Oregon.....	36	578	8	51	28	15	476	Au 940	Ja 115	1,034	849	185			7,302,838
14	Pennsylvania.....	4	36	3	6	13	3	11	De 16	Ap 4	16	14	2			84,141
15	Virginia.....	18	238	25	8	3	1	201	Ap 370	Mh 48	624	472	152			430,574
16	Washington.....	66	1,930	15	133	65	34	1,683	Au 3,041	Mh 610	3,122	2,434	679	5	4	16,603,445
17	Wisconsin.....	9	45	8	5	3	3	26	Ja 35	Oc 16	39	36	2	1		150,936
18	All other states.....	9	146	13	1	1	1	130			260	99	161			188,830

¹ Includes water wheels and turbines (irrespective of ownership of water supply) and water motors (operated by water from city mains.)

² Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

³ None reported for one or more other months.

⁴ Same number reported for one or more other months.

CANNING AND PRESERVING.

83

NING AND PRESERVING, BY STATES: 1919.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.			Rent. ²	
										Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. ¹		

CANNING AND PRESERVING, FRUITS AND VEGETABLES.

\$9,312,121	\$4,038,979	\$43,592,537	\$328,580	\$1,445,342	\$10,426,834	\$261,910,079	\$3,718,440	\$402,242,972	\$136,614,447	132,422	84,321	2,263	6,182	81	39,595	6,663	1
37,070	10,640	889,042	20,534	10,590	4,187	1,438,903	51,486	2,420,922	980,533	676	511	.....	80	.....	75	.....	2
2,393,127	1,952,143	18,470,086	51,687	920,390	5,379,586	127,314,326	1,325,513	189,955,031	61,315,792	21,992	4,102	.....	739	.....	17,151	249	3
146,765	32,393	462,226	300	19,144	80,637	1,037,940	33,556	2,970,113	1,243,617	1,845	1,828	50	.....	.....	450	15	4
13,350	1,500	22,298	287	1,100	1,275	62,372	1,699	124,012	59,941	107	95	.....	12	.....	.....	.....	5
474,340	25,977	722,054	60	3,278	87,046	3,182,883	54,316	4,705,378	1,468,170	2,723	2,610	25	70	.....	18	.....	6
2,827	150	12,310	.....	200	249	42,295	2,250	68,382	23,837	95	93	.....	2	.....	.....	.....	7
5,055	350	60,623	.....	2,075	870	327,617	3,393	514,093	183,028	330	330	.....	.....	.....	.....	.....	8
10,180	5,108	120,547	840	350	22,659	353,573	21,832	781,258	405,853	181	25	.....	.....	.....	156	.....	9
446,277	62,496	1,237,489	1,951	121,795	456,377	5,333,348	97,026	8,340,119	3,415,745	5,137	3,136	100	233	.....	1,603	707	10
474,340	107,065	1,902,309	6,611	22,655	231,905	11,507,574	216,853	18,898,767	7,174,340	8,058	5,761	220	80	.....	1,991	873	11
305,228	103,942	875,294	100,000	10,364	252,839	5,147,037	119,315	8,014,770	2,748,418	6,611	4,280	185	40	.....	2,126	495	12
10,280	3,095	34,715	.....	1,150	327	199,897	2,495	273,055	70,603	105	143	.....	3	.....	44	10	13
27,258	12,238	91,229	.....	928	4,262	540,010	7,529	818,309	201,770	196	143	.....	33	.....	20	.....	14
245,565	48,360	741,792	1,250	5,316	143,543	4,696,138	64,873	7,301,237	2,540,221	3,696	3,103	135	30	.....	373	25	15
718,857	212,300	3,744,919	5,044	103,350	350,882	20,365,307	294,822	28,421,544	7,761,415	16,551	13,122	412	506	.....	1,451	643	16
302,658	95,678	1,135,224	2,576	8,575	97,460	7,849,401	121,541	11,172,169	3,201,227	4,195	3,451	.....	38	.....	696	183	17
120,006	8,192	251,511	3,714	84,647	34,647	1,037,349	27,271	1,792,185	1,399,045	1,399	647	.....	72	.....	690	30	18
30,512	8,093	93,800	.....	270	1,490	451,997	8,461	624,312	163,914	219	203	.....	.....	.....	18	.....	19
59,871	6,496	254,610	800	4,084	5,474	837,499	23,599	1,559,034	647,990	2,335	2,138	.....	109	8	40	.....	20
29,528	2,748	92,558	150	3,750	2,972	506,040	12,155	693,724	149,929	902	600	.....	.....	.....	302	122	21
12,780	5,120	28,444	.....	795	1,690	167,902	2,801	240,285	60,582	146	118	.....	5	.....	23	.....	22
805,932	579,921	2,193,020	106	21,852	649,303	14,630,501	134,972	24,618,704	9,803,231	3,586	2,827	32	29	.....	698	1,567	23
3,443	.....	14,272	.....	213	255	20,507	1,042	53,481	32,432	72	72	.....	.....	.....	.....	.....	24
979,998	183,066	3,403,806	58,020	30,226	705,717	15,872,738	434,174	20,584,556	10,227,594	10,876	10,275	471	2,274	13	3,843	680	25
8,100	1,700	12,703	22,418	550	1,467	79,189	594	146,421	66,633	62	52	.....	.....	.....	.....	.....	26
285,099	67,253	775,723	508	3,785	174,408	4,347,443	64,869	6,838,327	2,426,015	5,103	3,844	123	400	.....	736	282	27
234,506	100,505	1,225,144	361	12,590	322,956	8,108,554	109,934	12,265,651	4,050,163	2,574	1,204	30	120	60	1,160	.....	28
91,726	17,859	387,929	862	1,190	22,251	2,205,114	33,207	3,190,331	803,010	1,791	1,588	20	71	.....	112	96	29
65,523	10,263	177,568	1,145	991	14,112	804,129	18,121	1,513,347	601,097	1,438	1,044	.....	69	.....	325	191	30
37,491	22,870	44,984	.....	205	3,621	385,204	5,632	618,076	225,934	284	77	80	4	.....	123	.....	31
175,933	20,848	628,304	1,905	2,570	164,101	2,602,330	51,992	4,339,529	1,735,207	3,122	745	35	.....	.....	2,342	5	32
24,077	4,031	64,160	.....	1,255	4,186	353,813	5,871	1,021,879	192,165	665	434	.....	19	.....	212	.....	33
55,930	7,937	647,609	13,032	11,374	13,904	3,077,633	60,253	4,427,441	1,280,555	6,879	6,141	40	119	.....	70	2	34
138,636	125,037	1,035,044	1,000	13,726	103,482	5,705,272	84,474	9,295,891	3,416,145	1,032	409	.....	4	.....	619	.....	35
1,170	.....	47,168	1,069	300	649	183,588	5,540	307,098	118,560	815	799	.....	14	.....	2	.....	36
827,641	119,948	2,121,209	33,121	95,138	1,083,115	9,925,137	191,035	17,036,033	6,910,860	11,758	8,737	275	743	.....	1,998	395	37
14,530	4,482	62,332	.....	1,971	2,961	170,480	8,045	310,294	122,760	276	124	.....	35	.....	117	.....	38

CANNING AND PRESERVING, FISH.

2,140,883	761,682	9,036,080	445,746	168,200	1,410,799	51,539,475	871,476	77,284,412	24,873,461	24,865	13,067	452	2,484	4	8,258	1,472	1
637,647	184,591	2,210,048	171	66,910	394,568	10,197,310	213,202	17,482,795	7,069,277	4,790	485	.....	90	.....	4,215	4	2
20,600	9,950	86,508	150	1,499	2,229	189,111	3,957	382,009	188,941	161	126	20	10	.....	5	.....	3
13,325	1,650	44,832	.....	100	1,895	112,183	2,633	207,830	92,904	102	160	.....	12	.....	.....	.....	4
6,240	1,624	27,023	.....	3,100	920	357,160	5,399	448,316	85,787	13	.....	.....	.....	.....	13	.....	5
43,561	8,486	137,749	200	2,040	13,145	433,840	17,491	795,223	343,892	441	301	.....	140	.....	80	.....	6
517,878	143,765	2,095,029	.....	22,325	243,545	11,780,126	246,073	16,980,400	4,954,201	6,658	4,073	335	1,118	.....	1,132	967	7
.....	939	73,623	2,000	1,701	1,534	253,143	3,927	411,489	154,419	213	107	.....	108	.....	.....	.....	8
212,251	103,215	1,418,205	200	16,700	110,285	9,337,013	87,471	12,763,266	3,338,782	847	82	.....	56	.....	709	.....	9
26,900	10,688	169,661	2,513	1,370	5,195	608,791	19,617	882,132	255,724	418	408	.....	.....	.....	10	.....	10
1,600	2,652	10,561	.....	1,200	838	284,544	1,041	323,873	43,288	19	.....	.....	.....	.....	19	.....	11
72,440	57,740	130,670	.....	18,119	7,431	2,453,336	9,841	2,926,481	453,304	105	.....	.....	5	.....	100	.....	12
125,723	58,419	609,090	211,107	8,617	104,905	4,605,178	59,310	6,531,462	1,866,974	1,890	999	25	59	.....	307	15	13
2,058	9,132	12,718	120	420	1,050	66,935	2,432	103,535	34,163	1,484	1,400	.....	.....	.....	84	.....	14
12,396	3,780	145,271	2,326	335	9,437	346,955	25,504	609,995	237,535	1,337	1,294	.....	42	.....	1	340	15
437,783	159,006	1,781,027	226,383	22,655	449,883	10,137,263	163,470	15,860,141	5,559,403	6,775	4,224	72	844	4	1,631	61	16
6,961	4,673	28,226	.....	168	3,265	180,850	2,807	271,893	88,730	25	.....	.....	.....	.....	25	.....	17
3,500	1,025	52,918	576	881	674	193,230	4,281	293,572	101,061	27	18	.....	2	.....	7	.....	18

¹ All other states embrace: Alabama, 2 establishments; Kansas, 2; Massachusetts, 2; Montana, 1; Oklahoma, 1; Rhode Island, 1; South Carolina, 2; and South Dakota, 1.

² All other states embrace: Alabama, 1 establishment; Delaware, 1; District of Columbia, 2; Michigan, 2; North Carolina, 2; and Ohio, 1.

MANUFACTURES.

TABLE 23.—DETAILED STATEMENT FOR CAN-

		PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.							
STATE.	Number of estab- lish- ments.	Total.	Pro- pri- etors and firm mem- bers.	Sala- ried offi- cers, super- in- tend- ents, and man- agers.	Clerks, etc.		Wage earners.				Total.	16 and over.		Under 16.		Capital.			
					Male.	Fe- male.	Aver- age num- ber.	Number, 15th day of—		Male.		Fe- male.	Male.	Fe- male.					
								Maximum month.	Minimum month.										
1	United States.....	65	1,339	51	69	19	11	1,189	De	1,836	Jy	214	2,256	842	1,409	1	4	\$2,971,876	
2	Georgia.....	3	68	2	2	1	1	62	Ja ³	117	Je ³	3	117	42	75	.....	.....	52,016
3	Louisiana.....	3	47	3	2	.....	.....	42	Oc	70	My ⁴	0	77	42	35	.....	.....	97,008
4	Maine.....	13	91	14	7	1	.....	69	My	159	Ja ⁴	0	184	65	119	.....	.....	102,507
5	Maryland.....	5	61	1	5	2	0	47	De	117	Mh ⁵	10	110	78	32	.....	.....	72,417
6	Mississippi.....	7	388	1	17	4	2	364	Mh	514	Jy	6	502	122	377	1	2	465,710	
7	North Carolina.....	6	82	5	6	3	1	67	De	144	My	8	144	61	83	.....	.....	55,703
8	South Carolina.....	9	397	9	12	.....	.....	376	De	695	Jy ³	85	705	220	483	.....	2	262,285
9	Washington.....	14	137	15	12	2	1	107	Mh	237	Jy	6	345	169	170	.....	.....	335,751
10	All other states ⁶	5	68	1	6	.....	.....	55	.....	.....	.....	.....	72	43	29	.....	.....	1,467,570

CANNING AND PRESERVING, OYSTERS.																			
1	United States.....	723	21,381	549	1,225	1,990	990	16,621	Se	23,032	Mh	13,134	19,284	9,300	9,514	159	311	88,703,665	
2	Arizona.....	3	22	7	2	.....	.....	13	De	52	Mh	2	52	17	35	.....	.....	51,408
3	California.....	84	2,133	80	110	155	69	1,719	Se	2,413	Ap	934	2,639	1,012	1,619	4	4	7,630,805	
4	Colorado.....	6	44	5	6	6	1	28	Se	36	Ja ³	21	23	13	10	.....	.....	133,462
5	Connecticut.....	7	68	8	3	8	3	46	Jy	54	Fe	31	50	26	24	.....	.....	180,501
6	Delaware.....	8	191	6	8	19	9	149	Se	416	Fe	37	185	132	53	.....	.....	1,565,724
7	District of Columbia.....	3	9	4	.....	.....	.....	5	(*)	5	(*)	5	5	.....	5	.....	.....	2,990
8	Florida.....	13	225	16	51	29	5	124	Ap	310	Jy	46	127	94	27	2	4	488,832	
9	Illinois.....	68	2,731	44	151	183	98	2,255	Oc	3,083	Fe	1,855	2,718	1,345	1,347	10	16	11,008,502	
10	Indiana.....	30	1,410	20	52	78	39	1,221	Se	2,589	My	694	1,395	760	632	3	.....	4,151,228
11	Iowa.....	14	435	9	27	55	33	311	Au	492	Fe	228	329	176	128	3	22	1,985,004	
12	Kentucky.....	18	1,280	6	60	128	40	1,046	Oc	1,415	My	750	1,227	620	587	4	16	3,887,998	
13	Louisiana.....	8	112	7	13	12	1	79	Au	93	De	52	86	33	44	5	4	205,218	
14	Maine.....	5	16	3	4	.....	.....	8	Ja ³	9	No ⁵	6	8	5	3	.....	.....	29,924
15	Maryland.....	26	176	25	10	14	4	123	Jy	284	Mh ³	80	322	111	211	.....	.....	724,105
16	Massachusetts.....	33	645	18	43	63	41	480	De	520	Mh	440	524	268	243	9	4	3,100,895	
17	Michigan.....	44	653	27	51	56	36	483	Se	726	Ja	328	551	411	137	3	.....	3,180,811
18	Minnesota.....	13	299	0	25	31	10	227	Au	614	Fe	118	267	138	129	.....	.....	930,605
19	Missouri.....	11	459	4	18	59	32	346	Je	424	Fe	292	366	154	210	.....	2	2,465,944
20	New Jersey.....	41	660	30	46	28	22	534	Se	841	Ap	356	557	306	232	5	14	3,210,526	
21	New York.....	107	3,374	75	160	300	125	2,714	Se	3,490	Ap	2,173	3,007	1,383	1,598	5	21	13,221,246	
22	Ohio.....	37	1,565	25	59	67	39	1,375	Se	2,074	Ja	1,019	1,416	567	852	.....	7	6,599,462
23	Oregon.....	8	214	5	20	26	15	148	Jy	177	De	125	131	79	62	.....	.....	1,847,257
24	Pennsylvania.....	48	3,466	47	221	579	331	2,288	Au	2,639	My	2,053	2,187	1,112	801	91	183	17,818,921	
25	Rhode Island.....	4	8	5	.....	.....	.....	3	Se ³	4	Ja ³	2	4	4	.....	.....	.....	9,390
26	Texas.....	18	318	12	18	39	15	234	Au	354	Ja	160	266	146	150	.....	.....	865,523
27	Utah.....	6	61	5	4	3	1	48	Se	106	Ja ³	22	46	14	32	.....	.....	187,233
28	Virginia.....	7	114	5	12	6	5	86	Se	120	Mh	58	112	56	39	7	10	257,016	
29	Washington.....	17	324	10	21	26	11	256	Se	477	My	152	268	133	128	3	4	1,403,105	
30	Wisconsin.....	17	189	19	17	2	5	140	Se	260	Fe	75	148	95	53	.....	.....	452,379
31	All other states ⁷	19	180	16	13	18	5	128	.....	.....	.....	.....	238	100	133	5	.....	1,035,286

¹ Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

² Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

³ Same number reported for one or more other months.

⁴ None reported for one or more other months.

CANNING AND PRESERVING.

85

CANNING AND PRESERVING, BY STATES: 1919—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.				
											Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. ¹		Rent.^{2}

CANNING AND PRESERVING, OYSTERS.

\$100,700	\$30,383	\$463,030	\$56,053	\$12,093	\$30,361	\$1,528,173	\$56,065	\$2,976,011	\$1,393,173	1,025	\$58	123	5	37	.....	1
2,731	2,750	20,390	.....	852	200	26,327	900	72,991	45,764	36	33	.....	.....	.....	.....	2
4,250	261	22,631	.....	120	1,718	67,064	5,801	110,742	37,787	40	40	.....	.....	.....	.....	3
5,901	1,379	31,940	198	290	4,210	96,423	3,742	161,640	61,375	180	110	60	.....	10	.....	4
15,405	13,023	28,034	7,597	4,575	1,085	300,448	1,015	640,206	338,743	27	25	.....	.....	2	.....	5
34,142	6,983	111,178	46,358	900	10,679	409,547	21,381	790,920	395,902	209	207	.....	.....	2	.....	6
8,600	1,800	35,391	1,900	350	262	102,092	3,064	192,167	86,111	15	15	.....	.....	.....	.....	7
14,710	.....	118,672	.....	600	2,726	189,493	12,745	420,639	219,301	271	241	30	.....	.....	.....	8
12,400	4,393	60,624	.....	420	2,752	172,807	4,663	318,240	141,270	175	134	23	5	13	.....	9
16,561	8,794	31,061	.....	4,916	6,720	162,572	3,264	262,666	99,830	72	50	12	.....	10	.....	10

PICKLES, PRESERVES, AND SAUCES.

3,866,049	4,499,887	13,346,467	47,304	567,836	3,315,340	91,851,287	1,186,146	145,784,530	52,747,097	22,500	12,549	30	1,190	50	8,681	8,319	1
3,000	8,848	720	415	15,296	306	33,807	18,205	40	3	37	2
308,223	386,163	1,379,604	210	45,029	261,702	7,208,289	100,199	11,840,150	4,533,632	2,148	478	16	.....	1,654	.....	3
10,840	8,935	23,725	640	937	2,184	100,402	3,618	219,935	115,915	51	30	12	.....	9	.....	4
11,795	19,357	34,253	.....	4,193	6,263	139,762	2,324	316,710	204,624	35	.....	2	.....	33	.....	5
13,514	34,470	99,856	952	.....	2,153	377,244	7,953	878,979	493,782	244	207	.....	.....	87	80	6
.....	.....	2,080	106	540	22	6,705	181	14,533	7,647	1	.....	.....	.....	1	.....	7
16,150	14,111	55,418	.....	2,062	3,981	374,712	12,943	590,336	202,676	135	70	4	.....	61	.....	8
470,417	395,408	1,613,875	3,054	86,580	408,811	11,859,455	180,570	19,046,228	7,006,203	3,149	1,878	117	.....	1,154	708	9
172,342	174,097	862,690	498	19,177	128,030	5,730,475	73,045	8,924,581	3,121,061	1,602	1,222	11	50	319	1,776	10	
63,868	111,437	224,058	314	3,480	40,996	1,445,730	22,825	739,872	739,872	338	202	2	.....	134	221	11
232,019	285,278	621,043	.....	6,135	158,586	5,460,083	50,977	8,223,431	2,703,371	880	489	2	.....	380	114	12
16,751	11,514	45,513	.....	1,550	3,944	265,261	2,060	422,111	154,791	73	30	.....	.....	43	.....	13
2,133	600	6,197	.....	917	674	90,032	2,455	107,307	14,910	85	50	6	.....	80	.....	14
49,244	16,003	85,592	307	3,905	100,256	759,722	9,063	1,092,858	324,073	302	239	10	.....	53	25	15
169,931	163,070	420,234	.....	50,026	124,404	3,973,037	35,850	6,253,818	2,244,925	830	604	30	.....	196	219	16
141,295	139,150	404,588	.....	6,991	127,233	2,971,623	37,825	4,830,452	1,827,004	661	244	30	55	362	.....	17
59,658	60,250	179,081	.....	1,759	50,906	1,252,650	11,397	1,707,094	443,647	236	35	51	.....	150	.....	18
63,120	116,221	256,209	.....	8,546	30,152	4,001,712	18,411	4,817,855	797,732	450	91	.....	.....	369	.....	19
144,906	66,269	444,917	123	23,012	83,558	3,041,646	65,314	4,874,160	1,767,200	1,531	1,013	27	.....	491	776	20
749,131	681,855	2,311,010	19,451	170,733	785,309	16,178,438	176,636	25,006,037	8,743,563	2,787	1,300	232	.....	1,255	353	21
201,898	192,814	1,288,981	712	31,854	159,507	6,900,845	102,556	10,451,455	3,340,054	2,002	1,547	71	.....	384	1,377	22
48,915	70,517	156,697	.....	8,097	17,680	1,455,161	30,712	1,794,022	303,149	433	92	5	.....	336	1	23
714,440	1,307,537	1,850,045	.....	45,109	697,855	14,749,895	194,154	26,189,134	11,245,085	3,280	2,137	466	.....	677	2,669	24
.....	.....	2,930	160	893	.....	20,473	154	28,823	8,198	11	.....	.....	.....	11	.....	25
67,713	68,626	110,536	279	5,465	30,826	730,394	8,035	1,206,544	558,115	266	54	53	.....	184	.....	26
3,100	4,800	28,884	.....	9	3,880	76,930	3,646	108,109	87,533	29	10	.....	.....	19	.....	27
18,654	14,939	44,134	3,127	4,818	8,331	287,923	6,141	407,915	173,851	137	125	.....	.....	12	.....	28
50,489	59,435	267,659	.....	8,747	50,105	1,240,958	14,659	2,041,378	785,761	262	8	2	.....	257	.....	29
21,153	4,453	70,903	4,911	240	10,716	345,677	5,414	758,959	407,868	147	66	37	.....	44	.....	30
40,741	22,119	89,284	12,460	7,409	8,246	689,727	6,713	1,052,062	358,622	355	333	2	.....	20	.....	31

¹ All other states embrace: California, 1 establishment; Florida, 3; and Virginia, 1.

² Same number reported throughout the year.

³ All other states embrace: Alabama, 2 establishments; Georgia, 1; Kansas, 2; Mississippi, 1; Montana, 1; Nebraska, 3; New Hampshire, 1; North Carolina, 1; North Dakota, 2; South Carolina, 1; Vermont, 1; and West Virginia, 3.

CHOCOLATE AND COCOA PRODUCTS.

GENERAL STATISTICS.

General character of the industry.—This report presents separately statistics for two industries: (1) Chocolate and cocoa products and (2) confectionery and ice cream. The first part of the report covers data collected from establishments engaged primarily in the manufacture of chocolate and cocoa products. This industry is confined to ten states; three of which—Pennsylvania, New York, and Massachusetts—reported 82.3 per cent of the total value of products.

Importance and growth of the industry.—Table 1 summarizes the statistics for chocolate and cocoa products for the censuses of 1914 and 1919 with percentages of increase. With one exception, increases are noticeable. The large increases, however, in salaries and wages, cost of materials, and value of products are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of Federal income tax since 1919 will account for the increase in "Rent and taxes." Contract work, or work performed by employees other than those in the plants reporting, has little significance, since it represents merely the methods of manufacture used by establishments, which vary from year to year.

States, ranked by value of products.—Pennsylvania, as shown by Table 2, leads in the manufacture of chocolate and cocoa products. This state reported 35.6 per cent of the total number of wage earners and 34.9 per cent of the total value of products.

Persons engaged in the industry.—The classification, by sex, for 1919 was reported separately, but for 1914 was obtained in the same manner as the distribution by age. The age classification of average number of wage earners in Table 3 is an estimate obtained by the method described in the "Explanation of terms." Figures by states will be found in Table 14.

Wage earners, by months.—As shown by Table 4 the number of wage earners employed in the industry month by month ranged from a maximum of 10,034 in October to a minimum of 8,200 in May, the minimum number being equivalent to 81.7 per cent of the maximum. Figures are given for the states separately.

Prevailing hours of labor.—Table 5 shows 46.4 per cent of the wage earners as employed less than 54 hours per week; while the groups "60" and "Over 60" constituted only 4.8 per cent of the total number.

Size of establishments, by average number of wage earners.—Analysis of Table 6 discloses the fact that 7 establishments, or 14.6 per cent of the total number for the industry, employed fewer than 6 wage earners each, while only 19 wage earners, or 0.2 per cent of the total number, were employed therein. On the other hand, the classes "501 to 1,000" and "Over 1,000" wage earners, comprising 5 establishments, employed 4,890 wage earners, or 53.8 per cent of the total average number, illustrating the extent of manufacturing operations in a few large establishments.

Size of establishments, by value of products.—At the census of 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. Table 7, therefore, gives combined figures for these two groups in case of average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919 the groups "\$500,000 to \$1,000,000" and "\$1,000,000 and over" included 34 establishments, or 70.8 per cent of the total number for the industry, employed 8,922 wage earners, or 98.3 per cent of the total average number, and reported products to the value of \$137,103,365, or 98.5 per cent of the total value of products.

Character of ownership.—Table 8 emphasizes the predominance of the corporate form of ownership in the chocolate and cocoa products industry. Corporations owned 83.3 per cent of the total number of establishments in 1919, employed 96.6 per cent of the total average number of wage earners, and reported 94.2 per cent of the value of products. During the five-year period, 1914–1919, the average number of wage earners in corporations increased 4,857, or 124.1 per cent, and the value of products \$98,196,031, or 297.8 per cent.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 9, there was an increase in the total horsepower for the industry of 13,704 horsepower, or 69.4 per cent, due principally to an increase of 13,188 horsepower, or 455.4 per cent, in rented power during this five-year period.

Fuel consumed.—Table 10 shows the principal kinds of fuel used for the industry in 1919 and 1914.

CHOCOLATE AND COCOA PRODUCTS

87

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904 AND 1899.

	1919	1914	1909	1904	1899	PER CENT OF INCREASE. ¹			
						1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments.....	48	35	27	25	24				
Persons engaged.....	10,287	5,059	3,404	2,396	1,623	108.3	48.6	42.1	47.6
Proprietors and firm members.....	21	20	10	15	20				
Salaried employees.....	1,183	879	568	291	289	34.6	54.8	95.2	0.7
Wage earners (average number).....	9,083	4,160	2,826	2,090	1,314	118.3	47.2	35.2	59.1
Primary horsepower.....	33,440	19,736	10,593	7,204	2,756	66.4	86.3	47.0	101.4
Capital.....	\$60,074,737	\$23,684,036	\$13,685,446	\$8,378,980	\$6,890,722	156.2	73.1	63.3	21.6
Salaries and wages.....	13,308,533	3,489,070	2,238,795	1,285,082	893,938	281.4	55.8	74.2	48.3
Salaries.....	4,038,456	1,453,472	970,182	463,231	371,003	177.8	49.8	100.4	24.8
Wages.....	9,270,077	2,035,598	1,268,613	821,851	522,935	355.4	60.5	54.4	56.3
Paid for contract work.....	1,463	71,955	3,361			-98.0	2,010.9		
Rent and taxes.....	6,037,510	287,398	170,346	138,425	107,498	2,000.7	68.7	23.1	28.8
Cost of materials.....	101,754,466	24,483,308	15,523,000	9,722,555	6,876,682	315.6	57.7	50.7	41.4
Value of products.....	139,258,296	35,712,810	22,390,222	14,389,699	9,666,102	289.9	59.5	55.6	48.9
Value added by manufacture.....	37,503,830	11,220,507	6,867,162	4,667,144	2,789,510	234.0	63.5	47.1	67.3

¹ A minus sign (-) denotes decrease.

² Exclusive of internal revenue.

³ Value of products less cost of materials.

TABLE 2.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.....	48	9,083	100.0	.....	\$139,258	100.0	.....	\$37,504	100.0	.....
Pennsylvania.....	10	3,231	35.6	1	48,660	34.9	1	16,398	43.7	1
New York.....	14	2,311	25.4	2	30,803	22.2	2	8,123	21.7	2
Massachusetts.....	6	2,007	22.1	3	30,327	21.8	3	6,338	16.9	3
New Jersey.....	8	489	5.4	4	10,813	7.8	4	1,536	4.1	6
California.....	4	252	2.8	7	5,603	4.1	5	1,858	5.0	4
All other states.....	6	793	8.7	.....	12,932	9.3	.....	3,251	8.7	.....

TABLE 3.—PERSONS ENGAGED IN THE INDUSTRY: 1919 AND 1914.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1919	10,287	7,449	2,838	72.4	27.6	Clerks and other subordinate salaried employees.....	1919	904	611	293	67.6	32.4
	1914	5,059	3,518	1,541	69.5	30.5		1914	783	546	237	82.5	17.5
Proprietors and officials.....	1919	300	283	17	94.3	5.7	Wage earners (average number).....	1919	9,083	6,555	2,528	72.2	27.8
	1914	116	114	2	98.3	1.7		1914	4,160	2,758	1,402	66.3	33.7
Proprietors and firm members.....	1919	21	21				16 years of age and over.....	1919	8,900	6,520	2,470	72.5	27.5
	1914	20	19	1	95.0	5.0		1914	4,098	2,730	1,368	66.6	33.4
Salaried officers of corporations.....	1919	112	110	2	98.2	1.8	Under 16 years of age.....	1919	93	35	58	37.6	62.4
	1914	49	49					1914	62	28	34	45.2	54.8
Superintendents and managers.....	1919	167	152	15	91.0	9.0							
	1914	47	46	1	97.9	2.1							

MANUFACTURES.

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON THE 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	9,083	8,723	9,103	9,064	8,713	<i>8,200</i>	8,403	8,898	9,137	9,593	10,034	9,826	9,302	81.7
Males.....	6,555	6,101	6,597	6,442	6,276	<i>5,976</i>	6,191	6,431	6,668	6,962	7,213	7,120	6,880	82.9
Females.....	2,528	2,622	2,706	2,622	2,437	<i>2,224</i>	2,209	2,467	2,469	2,631	2,821	2,706	2,422	78.3
1914.....	4,160	4,180	4,242	4,298	4,280	4,109	3,978	3,619	3,777	4,355	4,512	4,589	4,201	80.2
California.....	252	258	262	270	282	270	263	<i>221</i>	231	240	239	243	245	78.4
Massachusetts.....	2,007	1,989	2,020	2,080	2,030	<i>1,844</i>	1,870	2,127	2,053	2,144	2,111	1,949	1,887	86.0
New Jersey.....	489	461	483	469	467	<i>435</i>	476	499	481	505	535	531	526	81.8
New York.....	2,311	2,071	2,286	2,218	2,192	<i>2,027</i>	2,121	2,280	2,376	2,525	2,735	2,684	2,247	74.1
Pennsylvania.....	3,231	3,228	3,295	3,207	2,959	<i>2,851</i>	2,895	3,010	3,211	3,412	3,572	3,576	3,556	79.7

TABLE 5.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48. ¹	Between 48 and 54.	54.	Between 54 and 60.	Over 60.
United States.....	1919.. 9,083	8	11	3,338	859	673	3,753	248
	1914.. 4,160	(²)	(²)	21	514	644	2,102	879
California.....	252			60	20	166		
Massachusetts.....	2,007			1,900		107		
New Jersey.....	489				204		285	
New York.....	2,311	7		1,110	107		953	139
Pennsylvania.....	3,231	1	4	268	480		2,166	110

¹ Includes 48 and under for 1914.² Corresponding figures not available.

TABLE 6.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earn- ers.	1 to 5 wage earn- ers, inclusive.	6 to 20 wage earn- ers, inclusive.	21 to 50 wage earn- ers, inclusive.	51 to 100 wage earn- ers, inclusive.	101 to 150 wage earn- ers, inclusive.	251 to 500 wage earn- ers, inclusive.	501 to 1,000 wage earn- ers, inclusive.	Over 1,000 wage earn- ers.								
			Estab- lish- ments.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.		
United States...1919..	48	9,083	.....	7	19	4	47	10	355	8	543	8	1,143	6	2,086	4	2,958	1	1,932
1914..	36	4,160	2	4	8	6	95	8	292	3	206	11	1,807	.....	.....	1	592	1	1,160
California.....	4	252	.....	1	.....	1	14	2	72	.....	.....	1	166	.....	.....	.....	.....	.....	.....
Massachusetts.....	6	2,007	.....	1	.....	.....	.....	.....	.....	.....	.....	2	287	1	255	2	1,404	.....	.....
New Jersey.....	8	489	.....	2	7	.....	.....	2	67	2	152	2	263	.....	.....	.....	.....	.....	.....
New York.....	14	2,311	.....	2	6	1	20	4	130	4	261	.....	.....	1	400	2	1,404	.....	.....
Pennsylvania.....	10	3,231	.....	2	5	.....	.....	1	50	1	69	3	427	2	748	.....	.....	1	1,932

CHOCOLATE AND COCOA PRODUCTS.

89

TABLE 7.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919 AND 1914.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
All classes.....	48	36	9,083	4,160	\$139,258,296	\$35,712,810	\$37,503,830	\$11,229,507
Less than \$5,000.....	3	2	5	1	10,541	11,127	41,420	136,770
\$5,000 to \$20,000.....	4	2	17	122	149,478	102,000	432,049	1,950,061
\$20,000 to \$100,000.....	7	14	139	1,070	1,085,012	3,331,493	1,843,101	9,242,676
\$100,000 to \$500,000.....	10	6	452	3,068	8,899,681	4,082,623	35,176,133	
\$500,000 to \$1,000,000.....	24	10	8,470		130,203,684	28,106,715		
\$1,000,000 and over.....								
PER CENT DISTRIBUTION.								
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	6.2	5.6	0.1	0.5	(*)	0.1	(*)	0.3
\$5,000 to \$20,000.....	8.3	5.6	0.2	0.5	0.1	0.3	0.1	0.3
\$20,000 to \$100,000.....	14.0	38.9	1.5	25.7	1.4	9.3	1.2	17.4
\$100,000 to \$500,000.....	20.8	16.6	5.0	73.8	5.0	11.4	4.9	82.3
\$500,000 to \$1,000,000.....	50.0	27.8	93.3		93.5	79.0	93.8	
\$1,000,000 and over.....								

* Includes the groups "Less than \$5,000" and "\$5,000 to \$20,000."

* Less than one-tenth of 1 per cent.

TABLE 8.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Cen- sus year.	Num- ber of estab- lish- ments.	Average number of wage earners.	Value of products.	CHARACTER OF OWNERSHIP.	Cen- sus year.	Num- ber of estab- lish- ments.	Average number of wage earners.	Value of products.
All classes.....	1919 1914	48 36	9,083 4,160	\$139,258,296 35,712,810	Per cent distribution: Individual.....	1919 1914	8.2 11.1	1.5	4.2
Individual.....	1919 1914	3 4	61	1,497,514	Corporation.....	1919 1914	83.3 76.0	96.6 94.1	94.2 92.3
Corporation.....	1919 1914	40 27	8,770 3,913	131,150,108 32,963,077	All other.....	1919 1914	10.4 13.9	3.4 4.5	5.8 3.5
All other.....	1919 1914	5 5	1313 188	18,099,188 1,252,219					

* Includes the group "Individual."

TABLE 9.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919 AND 1914.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.				POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
			Amount.		Per cent distribution.					Amount.		Per cent distribution.	
	1919	1914	1919	1914	1919	1914		1919	1914	1919	1914	1919	1914
Primary power, total.....	1,245	335	33,440	19,736	100.0	100.0	Rented.....	1,171	253	16,084	2,896	48.1	11.7
Owned.....	74	82	17,356	16,840	51.9	85.3	Electric.....	1,171	253	16,058	2,836	48.0	14.4
Steam engines.....	52	59	15,273	14,410	45.7	73.0	Other.....			26	60	0.1	0.3
Internal-combustion engines.....	8	9	1,783	2,150	5.3	10.9	Electric.....	2,230	877	24,552	12,875	100.0	100.0
Water wheels, turbines, and motors.....	14	14	300	280	0.9	1.4	Rented.....	1,171	253	16,058	2,836	65.4	22.0
							Generated by establishments reporting.....	1,059	624	8,494	10,039	34.6	78.0

MANUFACTURES.

TABLE 10.—FUEL CONSUMED, BY STATES: 1919.

STATE.		COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas. (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States.....	1919..	38,562	100,744	1,966	33,137	1,244	40,021
	1914..	25,486	57,644	300	8,008	(1)	6,519
California.....				1,203	9,279	860	1,538
Massachusetts.....		9,359	18,861				24,978
New Jersey.....		2,639	1,189	18	3	144	6,124
New York.....		18,313	12,723	277			615
Pennsylvania.....		8,981	67,040	420	23,855	240	3,626

¹ Included in figures for fuel oils.

SPECIAL STATISTICS.

Detailed statistics of materials.—Table 11 gives in detail the cost and quantity of the principal materials used in the manufacture of chocolate and cocoa.

Detailed statistics of products.—Table 12 gives in detail the kind and value of chocolate and cocoa products manufactured.

TABLE 11.—DETAILED STATISTICS OF QUANTITY AND COST OF MATERIALS: 1919.

STATE.		All materials, including mill supplies con- tainers, etc. (other than fuel and rent of power).	COMPONENT MATERIALS REPORTED.							
			Total.	Cocoa—			Sugar.	Nuts.	Flavors.	Other.
				Beans.	Butter.	Powder.				
United States.....	Pounds..			323,765,152	6,132,671	967,599	132,054,335	7,914,928		
	Value..	\$100,347,208	\$88,896,692	\$65,153,297	\$2,208,925	\$206,789	\$12,372,836	\$2,497,407	\$604,344	\$5,853,094
California.....	Pounds..			10,226,724	430,955	213,391	8,045,590	14,884		
	Value..	\$3,754,700	\$3,328,167	\$2,143,802	\$175,798	\$38,410	\$797,070	\$6,932	\$11,607	\$154,548
Massachusetts.....	Pounds..			102,502,847	73,851	3,500	27,387,664	1,207,710		
	Value..	\$23,697,564	\$21,035,323	\$17,764,553	\$29,421	\$900	\$2,601,826	\$201,271	\$137,401	\$299,801
New Jersey.....	Pounds..			39,755,647	522,858	517,511	4,273,735	296,033		
	Value..	\$9,178,619	\$8,256,370	\$7,114,478	\$217,579	\$113,323	\$428,884	\$69,164	\$58,673	\$254,269
New York.....	Pounds..			77,254,798	2,121,096	220,878	35,923,199	845,305		
	Value..	\$22,352,647	\$19,427,815	\$13,862,498	\$799,762	\$46,740	\$3,338,551	\$261,370	\$133,383	\$985,511
Pennsylvania.....	Pounds..			56,905,750	2,623,152	12,000	38,087,801	4,604,809		
	Value..	\$31,799,653	\$27,585,169	\$17,536,652	\$865,378	\$1,680	\$3,426,680	\$1,828,371	\$177,832	\$3,749,570
All other states.....	Pounds..			37,119,386	360,759	319	18,336,346	946,187		
	Value..	\$9,564,025	\$9,263,848	\$6,731,314	\$120,987	\$5,738	\$1,780,325	\$130,299	\$85,358	\$409,329

CHOCOLATE AND COCOA PRODUCTS.

91

TABLE 12.—PRODUCTS, BY PRINCIPAL STATES: 1919.

	United States.	California.	Massachusetts.	New Jersey.	New York.	Pennsylvania.	All other states.
Total value ¹	\$139,258,206	\$5,662,682	\$30,327,397	\$10,813,228	\$30,863,238	\$48,660,497	\$12,931,254
Chocolate:							
In cakes—							
Sweetened.....	24,451,403	239,220	5,144,035	1,624,717	2,904,488	9,769,070	4,768,967
Unsweetened.....	8,135,032	196,199	3,576,884	161,914	3,586,666	539,419	73,950
With nuts.....	18,600,334	272,570	2,710,613	349,117	1,797,407	13,405,787	64,840
Coatings—							
Sweetened.....	23,671,321	2,603,978	6,844,797	522,246	1,358,849	7,888,139	4,453,312
Unsweetened.....	9,380,148	74,440	2,523,936	.....	6,602,230	156,803	22,739
Milk chocolate.....	9,057,568	3,640	204,513	590,750	2,816,982	4,765,800	685,883
Liquor.....	2,790,182	.....	283,380	216,530	281,868	1,479,865	528,539
Other.....	2,758,565	1,475,578	.....	.....	1,256,218	26,769	.....
Cocoa:							
Powdered, in cans.....	9,423,285	329,000	1,201,060	803,046	2,704,855	3,186,008	1,048,416
In other forms.....	14,180,705	166,464	5,221,812	2,268,427	2,726,492	3,126,552	670,958
Cocoa butter.....	13,897,384	108,105	1,917,799	3,698,562	4,618,769	3,329,039	225,110
Other chocolate and cocoa products, except confectionery.....	356,325	78,418	5,441	81,606	128,586	47,977	14,207
Candy and confectionery.....	697,331	1,128	354,961	53,901	.....	.....	287,341
All other.....	1,858,713	113,912	247,266	442,412	19,828	948,363	86,902

¹ In addition, chocolate and cocoa products to the value of \$1,308,243 were reported by establishments engaged primarily in other industries.

GENERAL TABLES.

Comparative summary, by states.—Table 13 gives for 1919 and 1914, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the chocolate and cocoa industry.

Detailed statistics, by states.—Table 14 presents for 1919, statistics in detail for the industry as a whole, and for each state that can be shown separately without the possibility of disclosing the operations of individual establishments.

TABLE 13.—COMPARATIVE SUMMARY, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
Expressed in thousands.								Expressed in thousands.							
United States.	1919	48	9,083	33,440	\$9,270	\$101,754	\$139,258	New York.....	1919	14	2,311	10,335	\$2,064	\$22,740	\$30,863
	1914	30	4,100	19,736	2,030	24,483	35,713		1914	13	810	4,482	380	5,307	7,412
Massachusetts.....	1919	6	2,007	5,711	1,945	23,089	30,327	Pennsylvania.....	1919	10	3,231	11,025	3,531	32,262	48,660
	1914	5	943	4,403	592	7,303	10,210		1914	7	1,750	7,607	739	7,546	12,342
New Jersey.....	1919	8	489	1,946	502	9,277	10,813	All other states.....	1919	10	1,045	4,423	1,228	13,486	18,595
	1914	6	322	1,342	148	1,679	2,102		1914	5	320	1,902	177	2,688	3,587

MANUFACTURES.

TABLE 14.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15 OR NEAREST REPRESENTATIVE DAY.						EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		Capital.	Salaries and wages.		
					Male.	Female.	Average number.	Number, 16th day of—			Male.	Female.	Male.	Female.		Officials.	Clerks, etc.	
								Maximum month.	Minimum month.									
United States..	48	10,287	21	279	611	293	9,083	Oct 10,034	My 8,200	9,313	6,838	2,383	36	56	\$60,674,737	\$1,928,732	\$2,109,724	
California.....	4	295	.....	18	16	9	252	Apr 282	July 221	245	185	60	.....	.....	2,711,270	82,577	55,584
Massachusetts.....	6	2,223	.....	45	117	54	2,007	Sept 2,144	My 1,844	1,887	1,358	502	12	15	14,871,209	346,233	413,705
New Jersey.....	8	569	8	25	18	29	489	Oct 535	My 435	532	379	138	11	4	2,612,298	188,020	114,599	
New York.....	14	2,644	5	101	172	55	2,311	Oct 2,735	My 2,027	2,247	1,694	548	2	3	11,116,115	445,851	608,514	
Pennsylvania.....	10	3,648	7	69	224	117	3,231	Nov 3,576	My 2,851	3,561	2,586	956	4	15	23,604,607	594,422	611,040	
All other states ¹	6	908	1	21	64	29	793	.....	.....	841	636	179	7	19	5,759,238	271,629	306,322

STATE.	EXPENSES—continued.						Value of products.	Value added by manufacture.	POWER.						
	Salaries and wages—Continued.	For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.	
			Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.					Rented. ³
										Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. ²		
United States..	\$9,270,077	\$1,463	\$271,035	\$5,765,825	\$100,347,208	\$1,407,258	\$139,253,296	\$37,503,830	33,440	15,273	.....	1,783	300	16,084	8,494
California.....	251,171	.....	8,575	285,453	3,754,700	50,615	5,662,682	1,857,367	1,353	40	.....	.....	.....	1,313	.....
Massachusetts.....	1,944,753	1,463	37,461	827,625	23,697,594	291,586	30,327,397	6,338,247	5,711	2,062	.....	150	300	2,599	331
New Jersey.....	501,630	.....	50,993	140,582	9,178,619	98,602	10,813,228	1,536,107	1,946	400	.....	133	.....	1,413	186
New York.....	2,083,937	.....	150,802	606,093	22,352,647	387,639	30,833,238	8,123,052	10,335	3,996	.....	.....	.....	6,339	400
Pennsylvania.....	3,531,375	.....	1,080	3,652,873	31,799,653	462,611	48,660,497	16,898,233	11,025	7,075	.....	1,500	.....	1,850	7,477
All other states ¹	977,211	.....	17,274	253,289	9,594,025	116,405	12,931,254	3,250,824	3,070	500	.....	.....	.....	2,570	100

¹ All other states embrace: Connecticut, 1 establishment; Illinois, 1; Ohio, 2; Vermont, 1; Wisconsin, 1.² Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).³ Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

CONFECTIONERY AND ICE CREAM.

GENERAL STATISTICS.

General character of the industry.—Statistics are here presented for the manufacture of confectionery and ice cream. Every state is represented, evidencing the universal character of the industry, although approximately half the manufacturing is carried on in New York, Illinois, Pennsylvania, and Massachusetts.

Importance and growth of the industry.—Table 15 summarizes the statistics for the censuses of 1919 and 1914 with percentages of increase. The large increases in the salaries and wages, cost of materials, and value of products are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of Federal income tax since 1919 will account for the increase in "Rent and taxes." Contract work, or work performed by employees other than those in the plants reporting, has little significance, since it represents merely the methods of manufacture used by establishments, which vary from year to year.

Principal states, ranked by value of products.—New York, Illinois, Pennsylvania, and Massachusetts, as shown by Table 16, lead in the manufacture of confectionery and ice cream, reporting 49.1 per cent of the total number of wage earners and 50.8 per cent of the total value of products.

Persons engaged in the industry.—The classification, by sex, for 1919 was reported separately, but for 1914 was obtained in the same manner as distribution by age. The age classification of average number of wage earners in Table 17 is an estimate obtained by the method described in the "Explanation of terms." Figures by states will be found in Table 28.

Wage earners, by months.—As shown by Table 18, the number of wage earners employed in the industry month by month ranged from a maximum of 107,004 in October to a minimum of 86,491 in January, the minimum being equivalent to 80.8 per cent of the maximum. States employing over 850 wage earners are shown separately, as are also those showing a large number of females employed.

Prevailing hours of labor.—Table 19 shows 61.2 per cent of the wage earners as employed less than 54 hours per week, while the groups "60" and "Over 60" constituted 11.9 per cent of the total number.

Size of establishments, by average number of wage earners.—Analysis of Table 20 discloses the significant

fact that 4,787 establishments, or 72.3 per cent of the total number for the industry employed fewer than six wage earners each, while only 7,881, or 8.2 per cent of the total number of wage earners, were employed therein. On the other hand, the classes "501 to 1,000" and "Over 1,000" wage earners, comprising 20 establishments, employed 15,456 wage earners, or 16.2 per cent of the total average number, illustrating the extent of manufacturing operations in a few large establishments.

Size of establishments, by value of products.—At the census of 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments, and value of products have been compiled, however, from the returns for 1914. Table 21, therefore, gives combined figures for these two groups in case of average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919 the groups "\$500,000 to \$1,000,000" and "\$1,000,000 and over" included 260 establishments, or 3.9 per cent of the total number for the industry, employed 53,078 wage earners, or 55.4 per cent of the total average number, and reported products to the value of \$357,432,334, or 56.0 per cent of the total value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 22, there was an increase in the total horsepower for the industry of 81,598 horsepower, or 82.9 per cent, due primarily to an increase of 72,836 horsepower, or 171.6 per cent in rented power, during this five-year period.

Character of ownership.—Table 23 shows that in 1919 corporations owned only 23.5 per cent of the establishments engaged in the confectionery and ice cream industry while employing 76.2 per cent of the total average number of wage earners and reporting 75.6 per cent of the total value of products. During the five-year period 1914-1919 the average number of wage earners in corporations increased 29,153, or 66.7 per cent, and the value of products \$336,643,674, or 231.8 per cent.

Fuel consumed.—Table 24 shows the kinds of fuel used for the industry. Gas was the principal fuel used in 1919 as well as in 1914. Large quantities of bituminous coal were also consumed.

MANUFACTURES.

TABLE 15.—COMPARATIVE SUMMARY: 1919 AND 1914.

	1919	1914	Per cent of increase, 1914-1919.		1919	1914	Per cent of increase, 1914-1919.
Number of establishments.....	6,624	4,754	39.3	Salaries and wages.....	\$115,955,895	\$41,600,871	178.7
Persons engaged.....	122,028	78,676	55.1	Salaries.....	39,795,029	14,112,623	182.0
Proprietors and firm members.....	7,051	4,933	42.9	Wages.....	76,159,866	27,488,248	177.1
Salaried employees.....	19,329	11,757	64.4	Paid for contract work.....	1,191,588	124,225	859.2
Wage earners (average number).....	95,648	61,986	54.3	Rent and taxes.....	33,750,537	4,712,786	616.1
Primary horsepower.....	179,991	98,393	82.9	Cost of materials.....	368,809,170	126,464,242	191.6
Capital.....	\$317,043,923	\$120,544,963	163.0	Value of products.....	637,209,168	209,668,656	203.9
				Value added by manufacture ¹	283,399,998	83,204,414	222.6

¹ Value of products less cost of materials.

TABLE 16.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.....	6,624	95,648	100.0	....	\$637,209	100.0	....	\$268,400	100.0	....	Virginia.....	76	855	0.9	20	\$6,692	1.1	19	\$2,681	1.0	21
New York.....	930	15,615	16.3	1	110,069	17.3	1	47,644	17.8	1	Utah.....	49	1,123	1.2	19	6,238	1.0	20	2,939	1.1	20
Illinois.....	462	8,779	9.2	4	73,097	11.5	2	32,001	11.9	2	Connecticut.....	121	849	0.9	21	5,260	0.8	21	2,203	0.8	24
Pennsylvania.....	839	11,010	11.5	3	71,120	11.2	3	28,590	10.7	3	Kentucky.....	87	797	0.8	23	5,255	0.8	22	2,340	0.9	22
Massachusetts.....	278	11,585	12.1	2	68,897	10.8	4	28,543	10.6	4	Louisiana.....	41	818	0.9	22	5,096	0.8	23	2,020	0.8	25
Ohio.....	380	5,451	5.7	5	39,185	6.1	5	17,363	6.5	5	Colorado.....	91	783	0.8	24	5,004	0.8	24	2,307	0.9	23
Wisconsin.....	150	4,123	4.3	6	24,389	3.8	6	9,969	3.7	7	Dist. of Columbia.....	23	617	0.7	25	4,859	0.8	25	3,002	1.1	19
Missouri.....	220	3,669	3.8	8	23,497	3.7	7	10,570	3.9	6	Kansas.....	115	564	0.6	27	3,836	0.6	26	1,493	0.6	26
California.....	298	4,083	4.3	7	23,226	3.6	8	9,732	3.6	8	Nebraska.....	53	607	0.6	26	3,666	0.6	27	1,415	0.5	28
Maryland.....	170	3,008	3.1	9	17,995	2.8	9	6,659	2.5	10	Oklahoma.....	73	381	0.4	31	3,591	0.6	28	1,299	0.5	30
New Jersey.....	245	2,955	3.1	10	16,899	2.7	10	6,722	2.5	9	Oregon.....	37	450	0.5	29	3,466	0.5	29	1,246	0.5	31
Texas.....	193	1,950	2.0	12	13,309	2.1	11	5,081	1.9	12	Alabama.....	39	486	0.5	28	3,249	0.5	30	1,439	0.6	27
Michigan.....	184	1,746	1.8	13	12,626	2.0	12	5,458	2.0	11	West Virginia.....	75	342	0.4	32	3,178	0.5	31	1,318	0.5	29
Iowa.....	182	1,739	1.8	14	11,535	1.8	13	4,664	1.7	13	Arkansas.....	64	391	0.4	30	2,563	0.4	32	1,028	0.4	32
Indiana.....	235	1,713	1.8	15	11,195	1.8	14	3,982	1.5	18	Rhode Island.....	87	292	0.3	35	2,368	0.4	33	908	0.3	33
Washington.....	119	1,596	1.7	16	10,302	1.6	15	4,618	1.7	14	North Carolina.....	66	316	0.3	33	2,035	0.3	34	889	0.3	34
Minnesota.....	117	1,959	2.0	11	10,056	1.6	16	4,368	1.6	16	Maine.....	87	313	0.3	34	2,032	0.3	35	767	0.3	35
Tennessee.....	68	1,397	1.5	18	10,017	1.6	17	4,036	1.5	17	All other states.....	310	1,713	1.8	....	11,647	1.8	....	4,629	1.7	...
Georgia.....	60	1,553	1.6	17	9,680	1.5	18	4,427	1.6	15											

TABLE 17.—PERSONS ENGAGED IN THE INDUSTRY: 1919 AND 1914.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1919 1914	122,028 78,676	64,299 41,877	57,729 36,799	52.7 53.2	47.3 46.8	Clerks and other subordinates salaried employees.....	1919 1914	13,914 9,019	7,906 6,313	6,008 2,706	56.8 70.0	43.2 30.0
Proprietors and officials.....	1919 1914	12,466 7,671	11,661 7,268	805 403	93.5 94.7	6.5 5.3	Wage earners (average number).....	1919 1914	95,648 61,986	44,732 28,296	50,916 33,690	46.8 45.6	53.2 54.4
Proprietors and firm members ..	1919 1914	7,051 4,933	6,695 4,682	356 251	95.0 94.9	5.0 5.1	16 years of age and over	1919 1914	92,318 59,725	43,763 27,840	48,555 31,885	47.4 46.6	52.6 53.4
Salaried officers of corporations..	1919 1914	2,250 1,242	2,127 1,176	123 66	94.5 94.7	5.5 5.3	Under 16 years of age.....	1919 1914	3,330 2,261	969 456	2,361 1,805	29.1 20.2	70.9 79.3
Superintendents and managers..	1919 1914	3,165 1,496	2,839 1,410	326 86	89.7 94.3	10.3 5.7							

CONFECTIONERY AND ICE CREAM.

95

TABLE 18.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATES.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		Janu-ary.	Febru-ary.	March.	April.	May.	June.	July.	August.	Septem-ber.	October.	Novem-ber.	Decem-ber.	
United States:														
1919.....	95,648	<i>88,491</i>	89,978	91,061	90,859	89,453	90,449	91,900	99,382	104,608	107,004	105,212	101,379	80.8
Males.....	44,732	<i>38,604</i>	40,015	40,610	42,041	43,324	46,041	47,275	49,471	50,172	48,350	46,416	44,493	78.9
Females.....	50,916	<i>47,027</i>	49,963	50,442	48,818	46,129	44,408	44,625	49,911	54,436	58,654	58,796	56,883	75.5
1914.....	61,986	<i>57,004</i>	57,203	59,309	58,714	58,950	59,305	59,200	63,011	68,004	69,495	69,962	66,483	82.2
California.....	4,083	<i>3,497</i>	3,561	3,709	3,810	3,744	3,881	3,903	4,210	4,469	4,671	4,820	4,722	72.4
Georgia.....	1,553	<i>1,381</i>	1,378	1,365	1,379	1,555	1,403	1,539	1,558	1,782	1,850	1,847	1,799	73.2
Illinois.....	8,779	<i>7,738</i>	8,333	8,253	1,951	7,705	7,321	7,407	9,387	10,214	10,690	10,470	9,305	69.3
Indiana.....	1,713	<i>1,608</i>	1,639	1,583	1,587	1,593	1,711	1,760	1,892	1,898	1,871	1,803	1,686	80.2
Iowa.....	1,789	<i>1,557</i>	1,594	1,559	1,620	1,606	1,753	1,690	1,818	1,935	1,879	1,936	1,821	77.1
Maryland.....	3,008	<i>2,650</i>	2,748	2,877	2,888	2,890	2,505	2,558	2,608	3,339	3,404	3,770	3,727	67.9
Massachusetts.....	11,585	<i>10,708</i>	11,506	11,783	11,456	11,132	10,826	10,733	11,982	12,103	12,593	12,428	11,770	85.0
Michigan.....	1,746	<i>1,617</i>	1,620	1,539	1,526	1,519	1,609	1,708	1,706	1,872	2,052	2,096	2,020	72.5
Minnesota.....	1,950	<i>1,722</i>	1,865	1,809	1,660	1,690	1,694	1,696	2,083	2,126	2,357	2,420	2,507	63.6
Missouri.....	3,669	<i>3,368</i>	3,428	3,432	3,402	3,414	3,412	3,471	3,711	3,996	4,138	4,215	4,071	79.9
New Jersey.....	2,055	<i>2,317</i>	2,450	2,540	2,582	2,584	2,865	3,273	3,722	3,846	3,924	2,763	2,594	59.0
New York.....	15,615	<i>14,023</i>	15,333	15,721	15,772	14,786	14,598	14,850	15,622	16,340	16,730	16,451	16,444	86.1
Ohio.....	8,451	<i>4,931</i>	4,913	4,753	4,538	4,698	5,046	5,819	6,361	6,361	6,089	6,584	6,007	68.6
Pennsylvania.....	11,010	<i>10,018</i>	10,514	10,809	11,094	10,850	10,958	11,221	11,407	11,804	11,426	11,014	10,996	84.9
Tennessee.....	1,397	<i>1,257</i>	1,318	1,366	1,313	1,334	1,321	1,322	1,442	1,624	1,629	1,535	1,413	77.1
Texas.....	1,950	<i>1,740</i>	1,760	1,880	1,924	1,929	1,984	1,955	2,008	2,162	2,078	2,038	1,875	80.8
Utah.....	1,123	<i>1,005</i>	1,052	1,054	1,078	1,102	1,140	1,057	1,018	1,107	1,227	1,326	1,310	76.8
Virginia.....	855	<i>762</i>	776	817	840	877	905	901	923	936	880	785	859	81.4
Washington.....	1,596	<i>1,441</i>	1,422	1,501	1,448	1,448	1,550	1,516	1,542	1,630	1,873	1,888	1,893	75.1
Wisconsin.....	4,123	<i>3,708</i>	3,974	3,984	3,876	3,750	3,800	3,909	4,164	4,312	4,612	4,714	4,673	78.7
States showing large proportion of females.														Per ct. av. is of state.
California.....	2,339	<i>2,002</i>	2,057	2,134	2,152	2,061	2,058	2,038	2,298	2,559	2,812	2,962	2,935	57.3
Colorado.....	462	<i>351</i>	369	379	354	376	391	412	472	511	616	611	602	59.0
Georgia.....	385	<i>330</i>	308	308	768	737	708	832	845	983	1,066	1,038	1,080	57.0
Illinois.....	4,277	<i>3,850</i>	4,232	4,148	3,892	3,638	3,520	3,348	4,346	4,899	5,361	5,314	4,792	48.7
Iowa.....	954	<i>913</i>	929	869	879	881	879	781	898	1,001	1,069	1,213	1,076	54.9
Louisiana.....	505	<i>509</i>	556	564	528	455	415	399	431	518	593	579	543	61.7
Maryland.....	1,763	<i>1,569</i>	1,630	1,709	1,671	1,634	1,320	1,312	1,432	1,916	2,057	2,454	2,446	58.6
Massachusetts.....	7,780	<i>7,404</i>	7,967	8,171	7,844	7,463	7,126	6,965	7,871	7,918	8,420	8,328	7,965	67.2
Michigan.....	911	<i>925</i>	909	829	798	781	743	750	807	888	1,116	1,208	1,178	52.2
Minnesota.....	1,290	<i>1,183</i>	1,266	1,229	1,089	1,096	993	1,049	1,342	1,351	1,549	1,633	1,700	65.8
Missouri.....	1,902	<i>1,794</i>	1,820	1,818	1,741	1,705	1,664	1,660	1,828	1,954	2,205	2,385	2,270	61.8
New Jersey.....	1,546	<i>1,188</i>	1,265	1,325	1,309	1,251	1,332	1,644	1,950	2,129	2,298	1,482	1,334	52.3
New York.....	8,159	<i>8,250</i>	8,358	8,666	8,487	7,435	6,719	7,093	7,725	8,272	8,997	8,899	9,007	52.3
Ohio.....	2,895	<i>2,753</i>	2,712	2,565	2,296	2,297	2,261	2,261	2,875	3,505	3,900	3,847	3,468	53.1
Utah.....	686	<i>618</i>	643	645	653	661	677	603	583	662	776	868	843	61.1
Washington.....	1,062	<i>967</i>	955	1,022	951	923	993	970	975	1,051	1,283	1,319	1,335	66.5
Wisconsin.....	2,659	<i>2,455</i>	2,651	2,633	2,546	2,426	2,388	2,428	2,609	2,733	2,977	3,041	3,026	64.5

TABLE 19.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44and under.	Be-tween 44and 48.	48.	Be-tween 48and 54.	54.	Be-tween 54and 60.	60.			44and under.	Be-tween 44and 48.	48.	Be-tween 48and 54.	54.	Be-tween 54and 60.	60.
United States.....	95,648	10,382	5,658	27,052	15,484	14,351	11,258	5,623	5,840	1,959	108	45	672	656	273	65	119
California.....	4,083	127	94	2,928	462	149	153	85	85	3,669	84	245	198	840	1,038	484	60
Colorado.....	783	16	600	4	91	33	25	14	14	2,955	341	24	1,498	400	1,180	190	112
District of Columbia.....	617	7	239	5	3	47	22	323	323	15,615	1,574	1,229	5,851	3,589	2,014	840	320
Georgia.....	1,553	7	1,041	113	220	22	110	110	110	5,451	122	284	1,044	1,713	728	845	488
Illinois.....	8,779	5,992	78	714	387	473	412	356	367	11,010	320	167	915	1,600	4,119	2,382	563
Indiana.....	1,713	17	3	113	269	258	514	188	351	1,397	8	191	166	29	564	332	117
Iowa.....	1,739	6	201	347	274	252	552	106	106	1,950	5	183	144	830	22	218	548
Kentucky.....	797	8	30	178	102	28	350	101	101	1,123	390	262	197	217	6	70	132
Louisiana.....	818	34	8	91	7	28	129	426	95	855	36	115	165	203	5	34	17
Maryland.....	3,008	69	10	92	1,154	411	776	247	249	1,599	415	84	1,014	232	220	2,262	137
Massachusetts.....	11,585	271	2,941	7,211	692	406	18	23	23	4,123	26	73	1,026	22	220	2,262	137
Michigan.....	1,746	50	395	287	590	34	119	276	276								

MANUFACTURES.

TABLE 20.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Estab- lish- ments	Wage earn- ers (average number).	No wage earn- ers.	1 to 5 wage earn- ers, inclusive.		6 to 20 wage earn- ers, inclusive.		21 to 50 wage earn- ers, inclusive.		51 to 100 earn- ers, inclusive.		101 to 250 wage earn- ers, inclusive.		251 to 500 wage earn- ers, inclusive.		501 to 1,000 wage earn- ers, inclusive.		Over 1,000 wage earn- ers.	
			Estab- lish- ments.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.
United States...	6,624	95,648	1,037	3,750	7,881	1,043	11,088	410	13,207	192	13,752	135	21,649	37	12,615	17	11,635	3	3,821
California.....	298	4,083	34	157	347	63	735	29	953	8	580	6	926	1	542	1	542	1	542
Colorado.....	91	783	13	56	112	12	128	6	162	2	130	2	251	1	251	1	251	1	251
District of Columbia....	23	617	1	12	35	6	52	2	82	1	132	1	132	1	316	1	316	1	316
Georgia.....	60	1,553	5	31	71	12	129	6	187	2	143	2	364	2	659	2	659	2	659
Illinois.....	462	8,779	76	280	472	81	900	42	1,379	17	1,271	12	2,009	1	351	2	1,310	1	1,087
Indiana.....	235	1,713	37	152	324	27	269	11	337	5	357	3	426	1	344	1	344	1	344
Iowa.....	182	1,739	23	120	234	22	242	7	239	9	680	1	281	1	281	1	281	1	281
Kentucky.....	87	797	16	56	135	10	98	2	72	1	63	1	172	1	257	1	257	1	257
Louisiana.....	41	818	1	22	72	13	134	2	95	1	150	3	517	1	281	1	281	1	281
Maryland.....	170	3,008	32	93	167	25	266	8	297	4	297	6	907	1	456	1	618	1	618
Massachusetts.....	278	11,585	16	143	315	61	656	23	819	11	696	13	2,184	6	2,151	3	2,030	2	2,734
Michigan.....	184	1,746	34	107	247	27	292	9	286	3	225	3	415	1	231	1	231	1	231
Minnesota.....	117	1,959	18	53	118	27	347	9	255	6	396	3	449	1	394	1	394	1	394
Missouri.....	220	3,609	41	126	262	25	227	11	317	4	270	11	1,808	1	260	1	525	1	525
New Jersey.....	245	2,955	35	154	318	34	340	10	296	9	632	1	249	1	355	1	765	1	765
New York.....	930	15,615	172	531	1,031	108	1,136	50	1,572	36	2,579	20	3,218	8	2,590	5	3,439	1	3,439
Ohio.....	380	5,451	65	191	390	61	643	33	1,073	15	1,147	14	1,869	1	329	1	329	1	329
Pennsylvania.....	839	11,010	187	447	956	120	1,292	46	1,553	15	1,084	16	2,690	6	2,016	2	1,419	1	1,419
Tennessee.....	68	1,397	9	23	39	19	187	11	294	2	150	3	446	1	281	1	281	1	281
Texas.....	193	1,950	18	121	281	33	374	11	367	7	487	3	441	1	281	1	281	1	281
Utah.....	49	1,123	10	21	46	9	97	5	168	1	73	2	376	1	363	1	363	1	363
Virginia.....	76	855	4	44	83	15	153	8	228	5	391	1	391	1	391	1	391	1	391
Washington.....	119	1,596	13	58	151	32	308	11	302	3	228	1	197	1	410	1	410	1	410
Wisconsin.....	150	4,123	14	76	138	31	335	13	423	8	553	5	935	2	802	1	937	1	937

TABLE 21.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
	1919	1914	1919	1914	1919	1914	1919	1914
All classes.....	6,624	4,754	95,648	61,936	\$637,209,168	\$209,668,656	\$268,390,998	\$83,204,414
Less than \$5,000.....	1,371	1,483	590	1,184	3,508,077	3,872,560	1,616,510	1,961,681
\$5,000 to \$20,000.....	2,322	1,859	4,113	5,439	25,275,653	19,062,101	10,854,891	8,865,516
\$20,000 to \$100,000.....	1,907	981	12,430	11,331	32,883,531	41,440,149	32,508,775	16,985,945
\$100,000 to \$500,000.....	764	369	25,437	33,938	168,109,573	81,622,684	66,802,764	42,139,944
\$500,000 to \$1,000,000.....	136	43	14,615	10,094	94,450,874	30,238,272	39,478,671	13,251,328
\$1,000,000 and over.....	124	19	38,463	10,094	262,981,490	35,402,830	117,138,087	13,251,328
PER CENT DISTRIBUTION.								
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	20.7	31.2	0.6	1.9	0.6	1.8	0.6	2.4
\$5,000 to \$20,000.....	35.1	39.1	4.3	8.8	4.0	9.1	4.0	10.7
\$20,000 to \$100,000.....	28.8	20.6	13.0	18.3	13.0	19.8	12.1	20.4
\$100,000 to \$500,000.....	11.5	7.8	26.6	54.8	26.4	38.9	24.9	50.6
\$500,000 to \$1,000,000.....	2.1	0.9	15.3	16.3	14.8	14.4	14.7	15.9
\$1,000,000 and over.....	1.9	0.4	40.2	16.3	41.3	15.9	43.6	15.9

TABLE 22.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919 AND 1914.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.				POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
			Amount.		Per cent distribution.					Amount.		Per cent distribution.	
	1919	1914	1919	1914	1919	1914		1919	1914	1919	1914	1919	1914
Primary power, total.....	21,094	9,274	179,991	98,393	100.0	100.0	Primary power—Continued.						
Owned.....	1,307	1,414	64,713	55,951	36.0	56.9	Rented.....	19,787	7,860	115,278	42,442	64.0	43.1
Steam.....	745	764	62,763	45,107	29.3	45.8	Electric.....	19,787	7,860	115,069	41,836	63.9	42.5
Engines.....	723	764	51,250	45,107	28.5	45.8	Other.....			209	606	0.1	0.6
Turbines.....	22		1,513		0.8		Electric.....	23,429	10,935	138,344	62,540	100.0	100.0
Internal-combustion en- gines.....	543	630	11,800	10,781	6.6	11.0	Rented.....	19,787	7,860	115,069	41,836	83.2	66.9
Water wheels, turbines, and motors.....	19	20	150	63	0.1	0.1	Generated by establishments reporting.....	3,642	3,075	23,275	20,704	16.8	33.1

CONFECTIONERY AND ICE CREAM

97

TABLE 23.—CHARACTER OF OWNERSHIP, BY SELECTED STATES: 1919 AND 1914.

STATE.	Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
						Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Individ- uals.	Corpora- tions.	All others.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.				
United States..	1919	3,486	1,555	1,583	95,648	12,680	72,865	10,103	13.3	76.2	10.6	\$637,209,168	\$85,955,945	\$481,845,322	\$60,407,901	13.5	75.6	10.9				
	1914	2,667	1,060	1,027	61,986	11,429	43,712	6,845	18.4	70.5	11.0	209,068,059	39,504,073	145,201,048	24,902,086	18.0	69.3	11.9				
California.....	1919	178	57	63	4,083	1,103	2,064	916	27.0	50.6	22.4	23,225,675	5,939,970	12,217,625	5,008,080	25.6	52.6	21.8				
	1914	102	35	45	2,098	749	1,274	777	21.4	41.6	37.0	7,619,431	1,403,439	3,613,076	2,542,917	19.2	47.4	33.4				
Georgia.....	1919	28	23	9	1,553	180	1,274	93	12.0	82.0	6.0	9,680,022	1,085,281	7,998,204	566,477	11.2	82.6	0.2				
	1914	19	15	8	726	187	517	22	25.8	71.2	3.0	2,455,233	433,747	1,888,806	82,680	19.7	76.9	3.4				
Illinois.....	1919	219	144	99	8,779	856	7,487	436	9.8	85.3	5.0	73,066,890	6,649,262	62,749,904	3,697,724	9.1	85.8	5.1				
	1914	150	100	75	5,399	757	4,145	497	14.0	76.8	9.2	20,088,220	2,932,925	14,844,690	2,310,605	14.0	73.9	11.5				
Indiana.....	1919	132	45	58	1,713	449	1,047	217	26.2	61.1	12.7	11,104,689	2,998,988	6,509,427	1,686,274	26.8	58.1	15.1				
	1914	103	32	55	1,263	298	837	128	23.6	66.3	10.1	4,603,575	1,187,648	2,877,499	538,428	25.8	62.5	11.7				
Iowa.....	1919	90	41	51	1,739	168	1,347	224	9.7	77.5	12.9	11,534,628	1,461,669	8,535,335	1,537,624	12.7	74.0	13.3				
	1914	99	36	41	1,519	229	1,218	72	15.1	80.2	4.7	5,086,438	949,039	3,741,746	395,653	18.7	73.0	7.8				
Maryland.....	1919	105	29	36	3,003	509	2,283	216	16.9	75.9	7.2	17,995,081	3,177,877	13,809,025	1,008,179	17.7	70.7	5.6				
	1914	73	22	30	1,672	324	1,172	170	19.4	70.1	10.5	4,721,213	978,727	3,232,528	514,958	20.6	68.5	10.9				
Massachusetts.....	1919	125	90	63	11,585	673	10,201	621	5.8	88.8	5.4	68,896,885	4,755,639	58,839,091	5,302,155	6.9	85.4	7.7				
	1914	155	60	58	7,250	690	6,239	321	9.5	86.1	4.4	22,901,916	2,697,221	19,032,595	1,272,100	11.3	83.1	5.0				
Michigan.....	1919	90	30	64	1,746	344	905	497	10.7	51.8	28.5	12,626,501	2,493,155	7,264,649	2,868,697	10.7	57.5	22.7				
	1914	73	20	20	1,173	341	647	185	29.1	55.2	15.8	4,816,201	1,272,064	2,745,417	706,820	20.4	57.0	16.5				
Minnesota.....	1919	36	38	43	1,959	179	1,598	182	9.1	81.6	9.3	10,055,805	1,245,623	7,805,017	1,005,165	12.4	77.6	10.0				
	1914	41	28	33	978	158	668	152	16.2	68.3	15.5	3,876,914	643,027	2,582,830	651,037	16.6	60.6	16.8				
Missouri.....	1919	103	50	67	3,669	550	2,975	144	15.0	81.1	3.9	23,497,553	3,000,292	19,422,450	1,074,802	12.8	82.7	4.6				
	1914	69	41	43	2,782	225	2,396	161	8.1	86.1	5.8	8,649,577	808,032	7,151,561	686,084	9.4	82.7	8.0				
New Jersey.....	1919	155	48	42	2,955	454	2,302	199	15.4	77.9	6.7	16,898,953	3,103,543	11,923,416	1,871,904	18.4	70.5	11.1				
	1914	87	29	25	1,810	268	1,287	255	14.8	71.1	14.1	6,079,244	881,773	4,116,577	1,080,894	14.5	67.7	17.8				
New York.....	1919	529	193	208	15,615	1,688	11,654	2,273	10.8	74.6	14.6	110,068,958	12,654,339	80,426,701	16,987,828	11.5	73.1	15.4				
	1914	286	134	103	11,667	3,046	7,070	1,551	26.1	60.6	13.8	37,934,704	10,046,729	22,584,204	5,304,771	26.6	50.5	14.0				
Ohio.....	1919	148	118	114	5,451	351	4,495	605	6.4	82.5	11.1	39,185,084	2,657,140	32,117,440	4,410,504	6.8	82.0	11.3				
	1914	131	83	68	3,757	412	2,834	511	11.0	75.4	13.6	13,197,372	1,244,858	10,488,831	1,403,683	9.4	76.5	11.1				
Pennsylvania.....	1919	560	114	165	11,010	2,583	7,348	1,079	23.5	66.7	9.8	71,120,044	10,718,710	48,044,152	6,357,182	23.5	67.0	8.0				
	1914	467	76	109	8,038	2,181	5,127	730	27.1	63.8	9.1	24,087,510	7,163,972	14,040,694	2,282,034	29.7	60.8	9.5				
Tennessee.....	1919	20	34	14	1,397	46	1,200	151	3.3	85.9	10.8	10,017,191	327,640	8,449,179	1,243,303	3.3	84.3	12.4				
	1914	21	25	9	888	69	758	61	7.8	85.4	6.9	3,044,035	183,565	3,208,859	249,211	5.1	88.0	6.8				
Texas.....	1919	102	34	57	1,950	324	1,242	394	16.6	63.7	19.7	13,309,435	2,383,043	8,526,220	2,400,172	17.9	64.1	18.0				
	1914	60	33	30	968	119	688	161	12.3	71.1	16.6	3,526,382	862,456	2,627,123	636,803	10.3	71.7	18.1				
Utah.....	1919	18	15	16	1,123	51	1,030	42	4.5	91.7	3.7	6,238,375	333,369	5,540,781	355,225	5.3	80.0	5.7				
	1914	30	18	11	702	52	694	16	6.8	91.1	2.1	2,615,172	173,833	2,358,537	82,802	6.6	90.2	3.2				
Virginia.....	1919	37	31	8	855	122	720	13	14.3	84.2	1.5	6,691,049	726,648	5,839,962	125,030	10.9	87.3	1.9				
	1914	31	22	12	578	87	455	36	15.1	78.7	6.2	2,474,954	378,316	1,924,789	171,840	15.8	77.8	6.0				
Washington.....	1919	48	50	21	1,596	146	1,315	135	9.1	82.4	8.5	10,301,924	1,038,317	8,415,679	848,028	10.1	81.7	8.2				
	1914	48	32	20	638	119	446	73	18.7	69.9	11.4	2,474,506	423,370	1,749,775	301,301	17.1	70.7	12.2				
Wisconsin.....	1919	66	59	25	4,123	149	3,893	81	3.6	94.4	2.0	24,388,617	1,158,992	22,558,176	671,449	4.8	92.5	2.8				
	1914	51	34	15	2,420	138	2,263	38	5.6	92.8	1.6	7,243,167	430,302	6,655,145	167,720	5.9	91.9	2.2				

TABLE 24.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (bar- rels).	Gas- oline and other volatile oils (bar- rels).	Gas (1,000 cubic feet).	STATE.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (bar- rels).	Gas- oline and other volatile oils (bar- rels).	Gas (1,000 cubic feet).
	Anthra- cite (tons, 2,240 pounds).	Bitumi- nous (tons, 2,000 pounds).						Anthra- cite (tons, 2,240 pounds).	Bitumi- nous (tons, 2,000 pounds).				
United States..	126,566	458,614	9,998	75,258	16,295	1,853,508	New Jersey.....	6,399	19,236	263	571	579	21,074
	109,148	307,309	16,162	31,776	(1)	1,453,393	New York.....	72,696	28,915	889	195	1,248	189,128
California.....	3	152	6	20,012	590	100,743	Ohio.....	517	34,362	302	64	1,396	226,408
Georgia.....	563	4,412	408	135	333	96,848	Pennsylvania.....	26,827	80,515	303	691	5,003	246,261
Illinois.....	556	55,020	585	4	803	20,745	Tennessee.....		13,355	1,305	60	23	9,541
Indiana.....	400	21,964	297	4	160	11,510	Texas.....		6,537	173	21,305	880	87,143
Iowa.....	387	17,148	246	4,676			Utah.....	72	2,642	194		70	3,890
Maryland.....	2,723	9,830	136	212	714	134,997	Virginia.....	99	6,178	370		74	4,620
Massachusetts.....	6,943	26,262	400	19	161	67,051	Washington.....	6	1,418	171	1,510	9	26,159
Michigan.....	473	9,123	370	6	141	49,730	Wisconsin.....	918	16,940	841	4	179	12,836
Minnesota.....	1,527	5,214	735		528	15,203							
Missouri.....	105	30,409	640	1,155	448	26,046							

¹ Included in figures for fuel oils.

MANUFACTURES.

SPECIAL STATISTICS.

Detailed statistics of materials.—Table 25 gives the cost and, with the exceptions of "milk and milk products" and "flavors," the quantity of the principal materials used in the manufacture of confectionery and ice cream.

Detailed statistics of products.—Table 26 gives the specific value of confectionery and ice cream manufactured in each state and shows that confectionery is 67 per cent of the total value of products while ice cream is 28 per cent.

TABLE 25.—QUANTITY AND COST OF MATERIALS: 1919.

MATERIAL.	Pounds.	Cost.	MATERIAL.	Pounds.	Cost.
Total cost.....		\$368,809,170	Cocoa:		
Sugar.....	823,865,409	83,893,562	Beans.....	57,346,865	\$10,260,057
Milk and milk products.....	71,473,454	71,473,454	Butter.....	14,584,527	5,437,901
Chocolate:			Powder.....	4,439,002	1,050,901
Coatings.....	95,657,903	26,067,234	Flavors.....		6,163,036
Liquors.....	15,210,483	4,578,306	Nuts.....	90,865,274	21,139,617
Corn sirup.....	355,956,148	20,186,135	Fruits.....	17,553,427	5,190,162
			All other materials including mill supplies, containers, fuel, and rent of power.....		112,763,725

TABLE 26.—PRODUCTS, BY GEOGRAPHIC DIVISIONS AND STATES: 1919.

DIVISION AND STATE.	AGGREGATE.		CONFECTIONERY.			ICE CREAM.			All other products.
	Number of establishments.	Value of products. ¹	Total value.	Reported by establishments classified as—		Total value.	Reported by establishments classified as—		
				Confectionery.	Ice cream.		Confectionery.	Ice cream.	
UNITED STATES.....	6,624	\$637,209,168	\$427,635,837	\$422,024,010	\$5,611,827	\$178,893,847	\$6,752,654	\$172,141,193	\$30,679,484
NEW ENGLAND.....	620	80,725,124	63,830,755	63,268,459	562,296	15,107,505	577,887	14,529,618	1,786,864
Maine.....	87	2,032,500	902,377	855,688	46,689	1,056,345	71,234	985,111	73,787
New Hampshire.....	22	410,799	64,114	50,010	14,104	342,835	8,546	334,289	3,850
Vermont.....	25	1,756,560	1,129,763	1,107,507	22,256	499,512	22,348	477,164	127,285
Massachusetts.....	278	68,896,885	59,348,465	59,018,456	330,009	8,212,404	214,359	7,998,045	1,336,016
Rhode Island.....	87	2,368,490	555,944	535,769	20,175	1,749,385	111,086	1,638,299	63,161
Connecticut.....	121	5,259,881	1,811,415	1,682,352	129,063	3,247,024	150,314	3,096,710	201,442
MIDDLE ATLANTIC.....	2,014	198,087,955	130,489,553	128,425,074	2,064,479	59,493,415	1,534,164	57,959,251	8,104,987
New York.....	930	110,068,958	81,026,832	79,770,906	1,254,926	23,838,392	754,256	23,084,136	5,204,734
New Jersey.....	245	16,898,953	9,679,397	9,242,243	437,154	6,968,275	213,730	6,754,545	263,172
Pennsylvania.....	839	71,120,044	39,784,324	39,411,925	372,399	28,686,748	566,178	28,120,570	2,648,972
EAST NORTH CENTRAL.....	1,411	160,491,781	111,250,505	110,383,401	867,104	41,189,484	1,540,137	39,649,347	8,051,792
Ohio.....	380	39,185,084	24,090,408	23,893,237	197,169	13,366,185	485,622	12,880,563	1,728,493
Indiana.....	235	11,194,689	5,533,387	5,299,651	233,736	5,078,716	197,610	4,881,106	582,586
Illinois.....	462	73,096,890	56,999,450	56,720,708	278,742	13,894,541	340,993	13,553,548	2,202,899
Michigan.....	184	12,626,501	6,692,034	6,498,302	93,732	4,665,786	444,029	4,221,757	1,368,681
Wisconsin.....	150	24,388,617	18,035,228	17,971,603	63,725	4,184,256	71,883	4,112,373	2,169,133
WEST NORTH CENTRAL.....	726	55,005,029	36,173,745	35,728,421	445,324	15,673,599	997,974	14,675,625	3,157,685
Minnesota.....	117	10,055,805	7,483,629	7,337,619	33,337	2,401,960	78,258	2,323,702	136,879
Iowa.....	182	11,534,628	7,438,723	7,317,619	121,104	3,743,323	119,397	3,623,926	362,582
Missouri.....	220	23,497,553	16,181,867	16,071,078	110,789	5,833,242	446,405	5,186,837	1,682,444
North Dakota.....	20	757,057	466,337	394,662	71,675	217,634		217,634	73,086
South Dakota.....	19	1,607,901	1,093,747	1,074,621	19,126	475,777	208,432	387,345	38,377
Nebraska.....	53	3,665,749	2,042,717	2,010,143	32,574	1,458,881	44,521	1,414,360	164,151
Kansas.....	115	3,886,336	1,433,388	1,376,669	56,719	1,742,782	100,961	1,641,821	710,166
SOUTH ATLANTIC.....	563	47,653,325	25,902,345	25,739,530	162,815	19,031,429	305,500	18,725,929	2,719,551
Delaware.....	24	666,480	215,668	208,641	7,027	409,103	35,579	373,524	41,709
Maryland.....	170	17,995,081	13,680,103	13,679,460	6,643	4,056,453	83,184	3,973,269	262,525
District of Columbia.....	23	4,659,038	997,134	993,334	3,800	3,966,584	57,545	3,909,039	195,380
Virginia.....	76	6,691,649	3,084,226	3,083,176	16,050	3,215,038	750	3,214,288	392,385
West Virginia.....	75	3,177,938	605,971	452,723	53,248	2,333,409	50,841	2,282,568	338,553
North Carolina.....	66	2,035,817	649,109	624,787	24,322	1,217,574	9,801	1,207,773	168,634
South Carolina.....	42	1,436,080	341,741	320,769	20,972	1,016,363	13,800	1,002,563	77,976
Georgia.....	60	9,680,022	6,626,543	6,503,143	28,400	1,927,307	54,000	1,873,307	1,226,172
Florida.....	27	1,111,660	195,850	188,497	7,353	889,598		889,598	26,212
EAST SOUTH CENTRAL.....	215	19,732,653	13,132,021	13,043,026	88,995	5,364,965	176,301	5,188,664	1,235,667
Kentucky.....	87	5,265,290	3,503,132	3,465,911	37,221	1,321,678	27,975	1,293,703	430,480
Tennessee.....	68	10,017,191	7,258,122	7,206,548	51,574	2,156,072	146,528	2,009,546	602,997
Alabama.....	39	3,249,105	1,949,217	1,949,217	200	1,207,672	1,800	1,205,872	92,016
Mississippi.....	21	1,211,067	421,350	421,350		679,543		670,543	110,174
WEST SOUTH CENTRAL.....	371	24,589,615	12,782,060	12,355,239	426,821	9,990,599	323,021	9,675,548	1,810,986
Arkansas.....	64	2,692,993	956,216	895,174	61,042	1,356,145	23,532	1,332,613	280,632
Louisiana.....	41	5,096,473	3,176,365	3,091,555	84,810	1,737,450	107,918	1,629,532	182,658
Oklahoma.....	73	3,590,714	1,026,007	1,020,503	7,504	1,957,250	7,445	1,949,805	605,457
Texas.....	193	13,309,435	7,621,472	7,348,007	273,465	4,945,724	184,126	4,761,598	742,239
MOUNTAIN.....	250	13,930,278	10,222,402	9,754,946	467,456	3,412,367	381,621	3,030,746	295,509
Montana.....	37	809,950	446,364	367,803	78,561	352,962	23,240	329,722	10,624
Idaho.....	20	788,317	577,865	557,675	20,290	175,851	35,936	139,915	34,601
Wyoming.....	13	222,624	52,289	50,591	15,078	139,111	15,040	124,071	31,244
Colorado.....	91	5,003,989	3,610,386	3,407,467	142,889	1,230,350	133,753	1,046,597	163,253
New Mexico.....	12	198,767	27,778	26,340	20,938	153,938		153,938	17,051
Arizona.....	19	514,546	151,579	102,821	48,758	353,073	12,864	340,209	9,894
Utah.....	49	6,238,375	5,321,061	5,201,719	119,342	888,472	108,548	779,924	28,842
Nevada.....	4	153,710	35,100	20,100	15,000	118,610	2,240	116,370	
PACIFIC.....	454	36,993,408	23,852,451	23,325,914	526,537	9,624,514	916,049	8,708,465	3,516,443
Washington.....	119	10,301,924	7,383,829	7,336,707	50,323	1,878,732	136,844	1,741,888	1,034,363
Oregon.....	37	3,465,809	2,085,254	2,076,678	8,576	1,204,776	48,952	1,155,824	175,779
California.....	298	23,225,675	14,378,368	13,910,730	467,638	6,541,006	730,253	5,810,753	2,806,301

¹ In addition, confectionery and ice cream to the value of \$14,001,298 and \$6,237,400, respectively, were reported by establishments engaged primarily in other industries.

CONFECTIONERY AND ICE CREAM.

99

GENERAL TABLES.

Comparative summary of the industry, by states.—Table 27 gives for 1919 and 1914, by states, the number of establishments, and shows the average number of wage earners, primary horsepower, wages, cost

of materials, and value of products for the industry.

Detailed statistics, by states.—Table 28 presents for 1919 statistics in detail for the industry as a whole, and for each state separately.

TABLE 27.—COMPARATIVE SUMMARY BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Expressed in thousands.			STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Expressed in thousands.		
					Wages.	Cost of mate- rials.	Value of prod- ucts.						Wages.	Cost of mate- rials.	Value of prod- ucts.
United States.....	1919 1914	6,624 4,764	95,648 61,986	179,991 98,393	\$70,160 27,488	\$368,809 126,464	\$637,209 209,669	Montana.....	1919 1914	37 27	134 130	218 95	\$130 67	\$452 272	\$810 495
Alabama.....	1919 1914	39 33	486 281	814 527	325 108	1,760 699	3,249 1,027	Nebraska.....	1919 1914	53 43	607 399	1,466 767	425 175	2,251 888	3,666 1,466
Arkansas.....	1919 1914	64 43	301 178	1,248 418	298 89	1,565 560	2,593 878	New Hampshire.....	1919 1914	22 17	60 40	132 74	49 24	252 99	411 165
California.....	1919 1914	298 182	4,083 2,098	5,766 2,202	3,258 1,111	13,403 4,341	23,226 7,619	New Jersey.....	1919 1914	245 141	2,955 1,810	4,286 3,369	2,294 822	10,177 3,920	16,899 6,079
Colorado.....	1919 1914	91 63	783 502	936 481	570 214	2,697 916	5,004 1,652	New York.....	1919 1914	930 523	15,615 11,667	31,022 17,025	13,519 5,248	62,425 23,118	110,069 37,935
Connecticut.....	1919 1914	121 73	849 421	2,376 845	641 246	3,057 913	5,260 1,709	North Carolina.....	1919 1914	66 29	316 110	1,011 234	245 42	1,146 306	2,035 475
Delaware.....	1919 1914	24 28	98 70	168 139	88 30	430 109	666 285	North Dakota.....	1919 1914	20 6	107 109	172 90	79 52	440 322	757 474
District of Columbia.....	1919 1914	23 15	617 262	3,478 1,307	772 144	1,857 610	4,859 1,226	Ohio.....	1919 1914	380 282	5,451 3,757	14,385 8,105	4,571 1,700	21,822 7,871	39,185 13,197
Florida.....	1919 1914	27 30	105 72	395 90	74 36	762 171	1,112 346	Oklahoma.....	1919 1914	73 88	381 156	2,074 1,386	362 91	2,291 542	3,591 931
Georgia.....	1919 1914	60 42	1,553 726	1,903 817	1,003 278	5,253 1,520	9,680 2,455	Oregon.....	1919 1914	37 34	450 313	872 653	392 178	2,220 876	3,466 1,439
Idaho.....	1919 1914	20 13	161 58	212 44	92 26	432 107	788 212	Pennsylvania.....	1919 1914	570 652	11,010 8,038	26,742 14,271	8,954 3,303	42,530 14,628	71,120 24,088
Illinois.....	1919 1914	462 325	8,779 5,399	14,379 9,359	8,367 2,646	41,096 12,137	73,097 20,088	Rhode Island.....	1919 1914	87 65	292 312	1,050 406	277 155	1,461 604	2,368 1,138
Indiana.....	1919 1914	235 190	1,713 1,263	4,053 2,505	1,237 555	7,213 2,823	11,195 4,604	South Carolina.....	1919 1914	42 28	204 111	1,819 176	140 48	890 156	1,436 344
Iowa.....	1919 1914	182 176	1,739 1,519	4,183 2,850	1,285 721	6,871 3,100	11,535 5,086	South Dakota.....	1919 1914	19 13	195 129	409 223	141 69	912 459	1,608 688
Kansas.....	1919 1914	115 73	584 342	1,263 945	446 203	2,394 731	3,886 1,252	Tennessee.....	1919 1914	68 55	1,397 888	1,985 1,828	913 372	5,982 2,226	10,017 3,645
Kentucky.....	1919 1914	87 62	797 647	1,044 467	633 236	2,915 1,088	5,255 1,826	Texas.....	1919 1914	193 123	1,950 968	4,368 1,919	1,407 410	8,229 2,016	13,309 3,526
Louisiana.....	1919 1914	41 24	818 248	832 379	443 90	3,076 443	5,096 850	Utah.....	1919 1914	49 59	1,123 762	1,109 1,040	670 328	3,299 1,549	6,238 2,615
Maine.....	1919 1914	87 62	313 217	573 254	244 102	1,285 499	2,032 742	Vermont.....	1919 1914	25 10	350 165	241 191	191 66	1,080 307	1,757 498
Maryland.....	1919 1914	170 125	3,008 1,672	6,349 2,419	2,124 607	11,336 3,015	17,995 4,721	Virginia.....	1919 1914	76 65	855 578	2,272 980	715 223	4,010 1,736	6,692 2,475
Massachusetts.....	1919 1914	278 273	11,585 7,250	11,236 6,699	8,523 3,037	40,354 13,841	68,897 22,902	Washington.....	1919 1914	119 100	1,596 638	1,491 642	1,339 366	5,684 1,380	10,302 2,475
Michigan.....	1919 1914	184 122	1,746 1,173	3,738 2,702	1,402 551	7,168 2,839	12,626 4,815	West Virginia.....	1919 1914	75 45	342 195	2,817 1,105	394 118	1,880 584	3,178 984
Minnesota.....	1919 1914	117 102	1,959 978	2,340 1,363	1,223 441	5,683 2,244	10,056 3,877	Wisconsin.....	1919 1914	150 100	4,123 2,429	6,010 2,990	2,744 936	14,420 4,501	24,389 7,243
Mississippi.....	1919 1914	21 13	158 56	645 51	198 23	706 103	1,211 177	All other states.....	1919 1914	53 27	141 68	312 71	156 41	660 148	1,091 295
Missouri.....	1919 1914	220 153	3,669 2,782	5,773 3,831	2,837 1,159	12,928 5,017	23,497 8,650								

MANUFACTURES.

TABLE 28.—DETAILED STATEMENT,

INDUSTRY AND STATE.		Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						Capital.
			Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.						
						Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.	Female.					
									Maximum month.						Minimum month.				
1	Total for the industry.....	6,624	122,028	7,051	5,415	7,908	6,008	95,648	Oc 107,004	Ja 80,491	104,181	45,452	55,046	1,006	2,677	Dollars.			
2	Confectionery.....	3,149	93,982	3,146	3,609	6,337	4,397	76,493	Oc 88,216	Jy 67,064	85,792	29,383	52,954	799	2,656	317,043,923			
3	Ice cream.....	3,475	28,046	3,905	1,806	1,569	1,611	19,155	Jy 24,836	Ja 14,600	18,389	10,069	2,092	207	21	219,634,520			
4	Alabama.....	39	602	41	36	23	16	486	Se 567	Ja 422	483	321	160	2	.....	1,127,715		
5	Arizona.....	19	119	23	10	2	2	82	No 104	Fe 71	97	52	44	.....	1	161,000		
6	Arkansas.....	64	574	85	32	36	24	391	Au 463	Fe 331	412	270	137	5	.....	1,264,766		
7	California.....	298	5,299	321	199	426	271	4,083	No 4,829	Ja 3,497	4,726	1,859	2,843	3	21	10,736,500			
8	Colorado.....	91	1,123	90	80	83	87	783	Se 993	Ja 623	947	355	583	4	5	2,110,257			
9	Connecticut.....	121	1,157	149	53	41	65	849	Jy 977	De 756	779	455	248	11	65	2,796,634			
10	Delaware.....	24	130	25	6	1	.....	98	Ap 103	De 89	103	57	45	1	.....	425,326	
11	District of Columbia.....	23	765	21	47	40	40	617	Jy 755	Ja 513	597	463	134	.....	.....	3,372,850	
12	Florida.....	27	181	37	10	14	15	105	My 115	Fe 98	168	128	32	5	3	462,270			
13	Georgia.....	60	1,984	48	111	192	80	1,553	Oc 1,850	My 1,355	1,893	749	1,101	3	10	4,120,222			
14	Idaho.....	20	226	18	19	15	13	161	No 213	Ja 124	203	56	147	.....	.....	513,967	
15	Illinois.....	462	11,026	458	578	686	525	8,779	Oc 10,600	Jy 7,407	9,485	4,597	4,549	78	261	30,663,459			
16	Indiana.....	235	2,381	263	128	162	115	1,713	Se 1,898	Mh 1,523	1,846	946	820	17	63	5,128,756			
17	Iowa.....	182	2,432	201	145	241	106	1,739	No 1,996	Mh 1,539	1,971	810	1,118	35	8	4,955,580			
18	Kansas.....	115	845	140	44	47	30	584	Jy 657	Ja 479	632	323	308	1	.....	1,621,276		
19	Kentucky.....	87	1,072	96	48	60	71	797	Fe 854	De 705	725	400	321	.....	4	2,423,624		
20	Louisiana.....	41	1,029	28	55	79	49	818	Oc 900	Je 719	864	309	529	2	24	2,651,099			
21	Maine.....	87	480	88	34	22	25	313	Oc 356	Ja 260	362	172	188	.....	.....	1,062,844	
22	Maryland.....	170	3,612	190	99	187	128	3,008	No 3,770	Jy 2,558	3,784	1,322	2,371	14	77	8,402,750			
23	Massachusetts.....	278	13,613	291	498	627	612	11,585	Oc 12,593	Ja 10,708	11,856	3,661	6,909	225	1,071	28,133,527			
24	Michigan.....	184	2,398	239	113	117	93	1,746	No 2,096	My 1,519	2,091	903	1,183	3	2	5,725,391			
25	Minnesota.....	117	2,516	129	97	227	104	1,959	De 2,507	Je 1,594	2,458	814	1,072	1	1	5,508,985			
26	Mississippi.....	21	238	27	25	16	12	153	Jy 201	Fe 107	173	127	45	1	.....	2,300,856		
27	Missouri.....	220	4,655	260	187	401	138	3,069	No 4,215	Ja 3,368	4,119	1,850	2,238	7	24	12,265,529			
28	Montana.....	37	195	40	8	5	.....	134	Oc 153	Ja 107	153	60	91	2	.....	398,219	
29	Nebraska.....	53	810	57	60	57	29	607	Oc 679	Ap 515	670	281	394	1	.....	1,856,822		
30	Nevada.....	4	17	6	.....	.....	1	10	No 12	Fe 9	11	3	8	.....	.....	40,191
31	New Hampshire.....	22	108	30	7	5	6	60	Se 84	Mh 40	67	43	23	.....	1	224,404		
32	New Jersey.....	245	3,713	250	103	266	139	2,955	Oc 3,924	Ja 2,817	3,311	1,480	1,737	32	62	7,820,491			
33	New Mexico.....	12	41	10	3	1	1	26	Jy 30	Ja 24	27	22	4	1	.....	61,725		
34	New York.....	930	19,971	1,001	802	1,269	1,284	15,615	Oc 16,730	Je 14,398	16,160	7,442	8,667	17	34	65,489,990			
35	North Carolina.....	66	455	86	25	19	9	316	Se 379	Fe 246	381	236	139	3	3	1,121,610			
36	North Dakota.....	20	167	18	16	13	3	107	De 123	Ja 82	133	56	77	.....	.....	596,894	
37	Ohio.....	380	7,248	417	361	494	525	5,451	Oc 6,089	Ap 4,588	6,230	2,652	3,526	37	15	18,347,323			
38	Oklahoma.....	73	583	79	47	40	16	381	Se 473	Ja 256	420	241	178	1	.....	2,271,356		
39	Oregon.....	37	637	38	41	65	43	450	De 496	Fe 392	495	179	316	.....	.....	1,210,956	
40	Pennsylvania.....	839	13,701	940	461	724	566	11,010	Se 11,804	Ja 10,018	11,756	5,842	5,485	209	220	36,859,964			
41	Rhode Island.....	87	439	103	15	8	21	292	Jy 349	Fe 222	322	195	116	4	7	1,188,192			
42	South Carolina.....	42	303	47	22	18	12	204	Oc 224	Fe 190	211	159	35	12	5	537,218			
43	South Dakota.....	19	276	19	17	29	16	195	No 237	My 127	230	90	140	.....	.....	812,097	
44	Tennessee.....	68	2,022	58	102	315	150	1,397	Oc 1,629	Mh 1,256	1,434	814	619	1	.....	5,277,774		
45	Texas.....	193	2,503	128	143	234	108	1,950	Se 2,162	Ja 1,746	1,966	1,223	723	18	2	5,988,120			
46	Utah.....	49	1,405	55	62	106	59	1,123	No 1,326	Ja 1,005	1,346	463	801	36	46	3,672,045			
47	Vermont.....	25	424	27	16	11	20	350	Au 381	No 317	326	151	175	.....	.....	1,141,483	
48	Virginia.....	76	1,149	54	99	98	43	855	Se 936	Ja 762	866	550	316	.....	.....	3,627,656	
49	Washington.....	119	1,931	101	105	31	98	1,596	De 1,893	Fe 1,422	1,896	570	1,320	2	4	4,314,598			
50	West Virginia.....	75	540	74	43	38	43	342	Je 414	Fe 263	341	261	76	4	.....	2,894,918		
51	Wisconsin.....	150	4,943	126	198	313	185	4,123	No 4,714	Ja 3,708	4,625	1,431	2,350	206	638	12,973,190			
52	Wyoming.....	18	50	21	1	.....	5	23	Je 27	Ja 19	24	19	5	.....	.....	81,513

¹ Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

CONFECTIONERY AND ICE CREAM.

101

BY STATES: 1919.

EXPENSES.										POWER.									
Salaries and wages.			For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	Primary horsepower.					Electric horsepower generated in establishments reporting.				
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water-power. ¹		Rent- ²			
Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.										
19,612,246	20,183,783	70,169,806	1,191,586	6,233,367	27,517,170	360,517,580	8,291,590	637,209,168	268,399,968	179,991	51,250	1,513	11,800	150	11,5278	23,275			
14,396,411	16,848,059	54,461,057	1,071,449	4,666,590	23,837,274	248,264,352	4,169,339	447,726,103	195,292,412	77,297	31,090	895	880	119	44,343	19,437			
5,215,835	8,335,724	21,698,809	120,137	1,660,777	3,679,896	112,253,228	4,122,251	189,483,065	73,107,586	102,694	20,160	648	10,920	31	70,935	3,838			
80,548	52,434	325,452	1,500	30,064	127,213	1,719,342	40,760	3,249,105	1,488,997	814	128	.....	52	.....	634	41	
15,004	3,900	89,463	.....	13,318	5,296	321,635	11,869	514,546	181,042	121	.....	.....	.....	.....	121	.....		
130,417	93,167	297,941	1,007	39,826	44,342	1,521,580	43,292	2,592,993	1,028,121	1,248	115	.....	232	.....	901	.....		
572,962	773,357	3,257,896	16,332	385,136	505,257	13,189,781	303,521	23,225,675	9,732,373	5,766	465	.....	34	.....	5,297	.....		
182,532	309,922	569,522	5,450	74,935	237,032	2,641,594	55,462	5,003,989	2,306,933	936	218	.....	2	.....	716	112	
151,735	92,532	641,014	50	78,674	165,239	2,938,715	118,154	5,259,881	2,203,012	2,376	401	38	3	.....	1,984	108		
19,020	65	88,089	200	8,192	11,715	418,502	11,690	6,666,480	236,288	168	22	.....	35	.....	111	.....		
240,922	78,457	771,632	8,639	15,177	114,200	1,707,488	149,656	4,859,098	3,001,954	3,478	1,620	.....	.....	.....	1,858	.....		
24,414	32,583	74,054	200	10,281	12,820	729,484	32,655	1,111,660	349,521	395	95	.....	33	.....	267	51	
476,041	366,782	1,002,740	2,200	56,896	476,446	5,147,990	105,356	9,680,022	4,426,976	1,903	360	.....	.....	.....	1,543	420
40,982	60,680	92,340	1,311	10,140	61,027	421,330	10,201	788,317	350,777	212	36	.....	.....	.....	176	.....		
2,230,727	1,839,691	8,367,426	138,312	564,072	3,404,204	40,313,450	782,071	73,096,890	32,001,369	14,379	2,292	1	376	4	11,706	1,634			
387,439	308,737	1,236,592	3,334	164,999	556,288	7,047,712	165,362	11,194,689	3,981,615	4,053	1,065	161	53	.....	2,783	445		
383,347	635,235	1,285,396	24,037	92,190	519,937	6,681,838	189,051	11,534,628	4,668,725	4,183	1,427	61	312	.....	2,383	182		
112,252	130,427	446,203	1,648	46,188	106,068	2,309,460	84,179	3,886,330	1,492,997	1,293	237	40	35	.....	951	17		
124,163	145,002	632,551	509	57,318	309,197	2,857,880	57,141	5,255,290	2,340,263	1,044	312	.....	39	.....	693	81	
174,214	231,217	443,387	.....	31,918	145,663	3,031,577	44,712	5,096,473	2,020,184	832	80	.....	27	.....	725	.....		
78,848	33,029	244,210	.....	39,125	65,736	1,238,730	26,620	2,032,609	767,153	573	76	.....	12	.....	485	.....		
439,098	364,897	2,123,842	6,081	93,685	502,640	11,111,086	225,330	17,995,081	6,658,665	6,349	953	.....	277	.....	5,119	189	
1,856,174	1,769,493	8,523,320	8,142	614,724	3,024,883	39,728,401	625,608	68,696,885	28,542,870	11,236	4,116	810	111	1	6,198	3,841			
323,849	373,290	1,402,128	1,285	200,787	549,910	7,015,984	152,412	12,626,501	5,458,105	3,738	500	.....	29	.....	3,209	257	
326,517	557,452	1,222,465	1,500	140,129	544,287	5,559,950	127,650	10,055,805	4,368,205	2,340	570	.....	8	.....	1,762	352	
92,463	29,293	108,333	2,403	7,260	23,960	670,704	34,896	1,211,067	505,407	645	443	.....	25	.....	177	.....		
642,586	1,030,009	2,837,406	10,777	259,219	1,008,404	12,633,637	294,381	23,497,653	10,569,535	5,773	2,675	.....	113	.....	2,985	1,273	
17,200	19,293	129,690	1,250	25,048	7,057	435,160	17,052	809,950	357,748	218	.....	.....	5	.....	213	.....		
156,163	171,010	425,092	6,034	31,540	119,404	2,180,635	70,136	3,665,749	1,414,978	1,496	200	.....	60	.....	1,236	54	
.....	1,354	11,922	.....	4,200	87,493	87,493	1,850	153,710	64,397	38	.....	.....	.....	.....	.....	.....
6,726	8,610	48,792	.....	8,376	2,014	245,599	5,954	410,799	159,240	132	.....	.....	15	.....	117	.....		
437,990	570,908	2,294,250	5,229	200,211	420,783	9,879,369	297,560	16,898,953	6,722,024	4,280	1,234	110	661	.....	2,275	322		
5,162	1,590	25,026	.....	3,660	2,756	120,366	2,190	198,767	76,202	45	.....	.....	.....	.....	45	.....		
3,389,494	3,277,548	13,518,749	844,216	1,347,213	5,267,484	61,116,260	1,309,038	110,098,958	47,643,600	31,022	15,707	16	2,205	8	13,080	8,780			
93,111	33,721	245,412	360	29,499	22,866	1,095,509	50,372	2,035,317	889,445	1,011	214	.....	307	.....	490	40	
24,684	37,259	78,904	.....	4,608	44,342	428,647	11,716	757,057	316,604	172	42	.....	59	.....	91	28
1,349,734	1,185,703	4,571,120	4,820	344,820	1,805,337	21,312,276	503,503	39,185,934	17,363,305	14,385	1,694	.....	1,661	.....	10,740	978	
118,016	78,951	362,344	750	31,774	51,761	2,206,493	84,946	3,500,714	1,299,275	2,074	1,300	.....	46	7	721	70		
120,511	142,918	391,534	182	23,379	49,474	2,176,907	42,920	3,465,809	1,245,892	872	75	.....	26	.....	771	.....		
2,145,452	1,742,556	8,953,733	31,586	485,816	2,556,820	41,411,279	1,118,612	71,120,044	28,590,153	20,742	7,487	258	3,641	2	15,354	2,526			
53,820	19,085	276,090	270	25,269	45,371	1,415,281	45,499	2,368,490	907,710	1,050	.....	.....	118	.....	930	.....		
58,347	39,491	139,080	75	29,134	27,935	862,459	27,428	1,436,080	546,193	1,819	80	.....	.....	.....	1,739	.....		
73,682	103,292	140,457	176	16,830	82,503	888,411	24,098	1,607,901	695,302	409	.....	.....	64	12	333	22	
436,920	531,000	913,402	200	63,753	631,342	5,848,317	133,195	10,017,191	4,035,679	1,985	300	.....	16	.....	1,660	288	
443,996	508,280	1,406,599	12,620	141,558	437,044	7,961,293	297,631	13,309,435	5,080,541	4,365	1,079	.....	350	.....	2,939	167	
158,548	435,900	669,487	.....	45,273	119,762	3,249,875	49,042	6,238,375	2,939,458	1,109	150	.....	.....	.....	950	56
57,135	47,524	191,252	.....	11,728	66,672	1,087,291	12,748	1,759,560	670,621	241	100	.....	.....	.....	141	31
364,953	217,988	715,121	14,240	58,674	313,234	3,894,087	116,108	6,691,649	2,661,454	2,272	552	.....	28	.....	1,692	.....		
328,140	517,195	1,339,181	15,743	108,245	273,682	5,582,359	101,361	10,301,924	4,618,204	1,491	75	.....	.....	14	1,402	5	
95,377	78,916	394,443	300	89,207	30,807	1,790,980	69,233	3,177,938	1,317,725	2,817	752	.....	705	.....	1,330	193	
726,603	1,034,975	2,743,738	12,709	102,884	1,322,619	14,192,597	226,961	24,388,617	9,966,059	6,010	1,704	18	20	100	4,198	602			
1,200	3,750	28,602	.....	3,525	1,473	111,025	4,379	222,624	107,220	108	8	.....	5	.....	95	.....		

¹ Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

FLOUR-MILL AND GRISTMILL PRODUCTS.

GENERAL STATISTICS.

General character of the industry.—At the censuses of 1904 and 1914 the canvass of the flour-mill and gristmill industry was confined to merchant mills. At all other censuses statistics were also collected for custom mills engaged exclusively in grinding for local consumption. Mills purchasing part of the grain ground have been classified as merchant mills, even though a large part of their business may have consisted of custom grinding.

Because of the omission of custom mills at the censuses of 1904 and 1914, it seems desirable, in presenting the general statistics of manufactures included in other bulletins and reports, to confine the statistics for the industry for 1919 to merchant mills, showing the statistics for custom mills separately, and excluding them in the grand total for all industries. In most of the tables of this special report only merchant mills are represented, Tables 1, 12, and 21 being the only tables which contain statistics for the custom mills.

Importance and growth of the industry.—Table 1 presents a summary of the statistics of the industry as a whole, and for merchant and custom mills separately for 1919 and 1909, with percentages of increase for the ten-year period, while Table 2 summarizes the statistics of the merchant mills for each census since 1899, with the percentage of increase for each census period.

For both merchant and custom mills the value of products includes the estimated value of the flour and other products obtained from grain ground on a custom basis, and likewise the figures for cost of grain include the estimated cost of such grain.

With few exceptions increases are noticeable at each succeeding census. The large increases for the merchant mills, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products are due largely to the general rise of prices following the World War, and do not, therefore, fairly measure the growth of the industry for that period. The addition of the Federal income tax since 1914 accounts for the large increase in "Rent and taxes."

States, ranked by value of products.—Table 3 summarizes the more important statistics of the industry, by states, the states being arranged according to the value of products reported for 1919.

Minnesota continues to be the leading state in the industry; in 1919 the mills of the state gave employment to 13.3 per cent of the total number of wage earners engaged in the industry and reported 18.6 per cent of the total value of products. Kansas ranked second and New York third in value of products and

value added by manufacture. Although not shown in the table, there were a number of changes in the relative rank of the states from 1914 to 1919 as measured by value of products. Thus, Kansas, which ranked third in 1914, advanced to second place in 1919, displacing New York; and Pennsylvania, which ranked sixth in 1914, dropped to tenth place in 1919, being displaced by Missouri, Washington, Indiana, and Texas in the order named.

Persons engaged in the industry.—The classification by age of the average number of wage earners in Table 4 is an estimate obtained by the method described in the "Explanation of terms." The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the classification by age. Figures for individual states will be found in Table 20.

Wage earners, by months.—As shown by Table 5, the number of wage earners employed in the industry ranged from a maximum of 49,393 in December to a minimum of 42,179 in March, the minimum number being equivalent to 85.4 per cent of the maximum. Figures are given for the states separately, while for the United States for 1919 the number of males and females is also shown.

Prevailing hours of labor.—Table 6 shows a marked shortening of the working day for the industry since 1914. In that year only 9.5 per cent of the wage earners were reported as employed fewer than 54 hours per week, as against 40.1 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 79.7 per cent of the total number of wage earners, as compared with 47 per cent in 1919.

Size of establishments, by average number of wage earners.—As shown by Table 7, there were 3,181 establishments in 1919, or 29.7 per cent of the total number for the industry, which employed no wage earners. These were comparatively small establishments in which the work was done by the proprietors and firm members. Of the total number of mills, 58.1 per cent employed 1 to 5 wage earners, and 8.6 per cent from 6 to 20. There were only 134 establishments that employed an average of more than 50 employees, and of these only 52 employed over 100.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have

been compiled, however, from the returns for 1914. Table 8, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919 the three groups having products of \$100,000 and over included 1,978 establishments, or 18.5 per cent of the total number for the industry; but employed 36,256 wage earners, or 79.7 per cent of the total average number; and reported products to the value of \$1,822,762,172, or 88.8 per cent of the total value of products.

Character of ownership.—Table 9 shows that in 1919, of the total number of establishments reported for the industry, 24.9 per cent were under corporate ownership. While corporations thus controlled only about one-fourth of the total number of establish-

ments, they employed 76.6 per cent of the total average number of wage earners and reported 83.5 per cent of the total value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 10, there was an increase in the total horsepower for the industry of 54,021 horsepower, or 6.6 per cent. This increase, however, is wholly due to the gain of 151,019 horsepower, or 133.2 per cent, in rented power, there having been a decrease of 96,998 horsepower, or 13.7 per cent, in power owned.

Fuel consumed.—Table 11 shows, by states, the principal kinds of fuel used in the industry in 1919 and 1914. Of the total quantity of bituminous coal used in the industry in 1919, Minnesota and Missouri together reported 27.3 per cent, while Kansas reported 45.5 per cent of the fuel oils consumed, and Ohio and Oklahoma together, 40.8 per cent of the gas.

MANUFACTURES.

TABLE 1.—MERCHANT AND CUSTOM MILLS—COMPARATIVE SUMMARY: 1919 AND 1909.

	TOTAL.			MERCHANT MILLS.			CUSTOM MILLS.		
	1919	1909	Per cent of increase. ¹	1919	1909	Per cent of increase. ¹	1919	1909	Per cent of increase. ¹
Number of establishments.....	21,135	23,652	-10.6	10,708	11,691	-8.4	10,427	11,961	-12.8
Persons engaged.....	90,597	88,840	2.0	75,769	66,054	14.7	14,828	22,795	-35.0
Proprietors and firm members.....	24,386	30,204	-19.3	11,937	14,570	-18.1	12,449	15,634	-20.3
Salaried employees.....	18,596	12,178	52.7	18,351	12,031	52.5	245	147	66.7
Wage earners (average number).....	47,615	46,467	2.5	45,481	39,463	15.3	2,134	7,014	-69.2
Primary horsepower.....	1,095,299	1,126,347	-2.8	876,405	853,584	2.7	218,894	272,763	-19.7
Capital.....	\$830,495,722	\$370,410,289	124.2	\$801,624,507	\$349,151,779	129.6	\$28,871,215	\$21,258,510	35.8
Salaries and wages.....	\$84,856,230	\$35,167,693	141.3	\$82,901,413	\$33,981,153	144.0	\$1,954,817	\$1,186,540	64.7
Salaries.....	\$32,187,911	\$12,564,595	156.2	\$32,013,030	\$12,516,767	155.8	\$174,881	\$47,828	265.3
Wages.....	\$52,668,319	\$22,603,098	133.0	\$50,888,383	\$21,464,386	137.1	\$1,779,936	\$1,138,712	56.3
Paid for contract work.....	\$960,799	(²)	.....	\$942,256	\$669,271	40.8	\$18,543	(²)	.....
Rent and taxes.....	\$19,673,005	(²)	.....	\$19,263,367	\$2,754,128	599.4	\$409,638	(²)	.....
Cost of materials.....	\$1,878,138,382	\$813,891,347	130.8	\$1,799,180,987	\$767,576,479	134.4	\$78,957,395	\$46,314,888	70.3
Value of products.....	\$2,147,218,913	\$938,699,958	128.7	\$2,052,434,385	\$883,584,405	132.3	\$94,784,628	\$55,115,553	72.0
Value added by manufacture ³	\$269,080,531	\$124,808,611	115.6	\$263,253,398	\$116,007,926	118.3	\$15,827,133	\$8,800,085	79.8
Grain ground, bushels.....	888,305,973	872,950,743	1.8	830,026,293	806,247,961	2.9	58,270,680	66,702,782	-12.6

¹ A minus sign (-) denotes decrease.² Figures not available.³ Value of products less cost of materials.

TABLE 2.—MERCHANT MILLS—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	1919	1914	1909	1904	1899	PER CENT OF INCREASE. ¹			
						1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments.....	10,708	10,788	11,691	10,051	9,476	-0.7	-7.7	16.3	0.1
Persons engaged.....	75,769	65,635	66,054	59,623	(²)	15.4	-0.6	10.8	.....
Proprietors and firm members.....	11,937	12,669	14,570	13,098	(²)	-5.8	-13.0	11.2	.....
Salaried employees.....	18,351	13,248	12,031	7,415	5,522	38.5	10.1	62.3	31.3
Wage earners (average number).....	45,481	39,718	39,463	39,110	32,226	14.5	0.7	(³)	(³)
Primary horsepower.....	876,405	822,384	853,584	775,318	670,719	6.6	-3.7	10.1	15.6
Capital.....	\$801,624,507	\$380,257,420	\$349,151,779	\$265,117,434	\$189,281,330	110.8	8.9	31.7	40.1
Salaries and wages.....	82,901,413	40,963,303	33,981,153	27,174,553	21,543,154	102.4	20.5	25.0	26.1
Salaries.....	32,013,030	16,370,141	12,516,767	7,352,357	5,257,991	95.0	30.8	70.2	39.9
Wages.....	50,888,383	24,593,162	21,464,386	19,822,196	16,285,163	106.9	14.6	8.3	21.7
Paid for contract work.....	942,256	115,447	669,271	95,218	(²)	718.2	-82.8	602.9	.....
Rent and taxes.....	19,263,367	3,798,482	2,754,128	42,196,945	(²)	407.1	37.9	25.4	.....
Cost of materials.....	1,799,180,987	752,270,021	767,576,479	619,971,161	428,118,757	139.2	-2.0	23.8	44.3
Value of products.....	2,052,434,385	877,679,709	883,584,405	713,033,395	501,396,804	133.8	-0.7	23.0	42.2
Value added by manufacture ³	253,253,398	125,409,688	116,007,926	98,062,234	73,279,547	101.9	8.1	24.7	27.6

¹ A minus sign (-) denotes decrease.² Exclusive of internal revenue.³ Figures not available.⁴ Figures not strictly comparable.⁵ Value of products less cost of materials.

FLOUR-MILL AND GRISTMILL PRODUCTS.

105

TABLE 3.—MERCHANT MILLS—STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.	10,708	45,481	100.0	....	\$2,052,434	100.0	....	\$253,253	100.0	....	Idaho.....	78	304	0.7	27	\$13,501	0.7	23	\$1,673	0.7	27
Minnesota.....	248	6,049	13.3	1	381,249	18.6	1	43,376	17.1	1	West Virginia.....	203	371	0.8	25	13,077	0.6	27	2,546	1.0	24
Kansas.....	385	3,493	7.7	2	206,881	10.1	2	24,548	9.7	2	Georgia.....	161	371	0.8	25	11,991	0.6	28	1,443	0.6	25
New York.....	716	3,012	6.6	4	155,272	7.6	3	19,638	7.8	3	South Dakota.....	80	221	0.5	31	8,873	0.4	29	982	0.4	32
Illinois.....	322	2,740	6.0	5	116,503	5.7	4	13,397	5.3	5	Arkansas.....	166	267	0.6	28	8,046	0.4	30	1,573	0.6	28
Missouri.....	690	3,015	6.6	3	113,297	5.5	5	15,113	6.0	4	Utah.....	77	249	0.5	29	7,569	0.4	31	1,017	0.4	30
Ohio.....	577	2,122	4.7	8	89,397	4.4	6	12,294	4.8	6	Vermont.....	108	169	0.4	32	6,144	0.3	32	812	0.3	33
Washington.....	119	1,536	3.4	12	81,141	3.9	7	7,986	3.2	11	New Jersey.....	150	232	0.5	30	6,040	0.3	33	1,004	0.4	31
Indiana.....	450	2,280	5.0	6	75,112	3.7	8	9,371	3.7	9	Maine.....	118	144	0.3	34	5,443	0.3	34	734	0.3	34
Texas.....	222	1,507	3.4	11	73,004	3.6	9	9,665	3.8	7	Massachusetts.....	75	123	0.3	35	4,878	0.2	35	620	0.2	36
Pennsylvania.....	1,138	2,198	4.8	7	69,447	3.4	10	9,402	3.7	8	Alabama.....	143	152	0.3	33	4,555	0.2	36	717	0.3	35
California.....	134	1,779	3.9	9	65,448	3.2	11	8,566	3.4	10	New Hampshire.....	48	88	0.2	37	3,391	0.2	37	465	0.2	37
Wisconsin.....	221	1,348	3.0	14	58,304	2.8	12	6,507	2.6	13	Connecticut.....	64	80	0.2	38	2,507	0.1	38	424	0.2	38
Nebraska.....	218	1,063	2.3	16	53,521	2.6	13	5,902	2.4	15	Arizona.....	12	72	0.2	39	2,392	0.1	39	425	0.2	38
Tennessee.....	661	1,472	3.2	13	51,913	2.5	14	6,736	2.6	12	South Carolina.....	30	70	0.2	40	2,147	0.1	40	342	0.1	41
Oklahoma.....	227	958	2.1	17	49,844	2.4	15	5,904	2.2	17	Mississippi.....	54	61	0.1	42	2,092	0.1	41	195	0.1	45
Kentucky.....	533	1,584	3.5	10	45,774	2.2	16	6,193	2.4	14	Delaware.....	56	95	0.2	36	2,056	0.1	42	300	0.2	40
Michigan.....	345	1,128	2.5	15	44,145	2.1	17	5,959	2.4	16	Wyoming.....	28	37	0.1	45	1,411	0.1	43	228	0.1	43
Oregon.....	116	822	1.8	19	42,550	2.1	18	4,748	1.9	19	Louisiana.....	17	48	0.1	44	1,384	0.1	44	196	0.1	44
Virginia.....	537	937	2.1	18	36,164	1.8	19	5,226	2.1	18	New Mexico.....	30	66	0.1	41	1,324	0.1	45	232	0.1	42
North Dakota.....	87	568	1.2	21	29,282	1.4	20	3,059	1.2	21	Rhode Island.....	25	29	0.1	46	1,133	0.1	46	155	0.1	46
North Carolina.....	374	629	1.4	20	24,258	1.2	21	3,213	1.3	20	Nevada.....	10	25	0.1	47	1,116	0.1	47	125	(1)	47
Iowa.....	189	509	1.1	22	21,325	1.0	22	2,712	1.1	22	Dist. Columbia.....	3	23	0.1	48	901	(1)	48	95	(1)	47
Colorado.....	120	490	1.1	23	19,954	1.0	23	2,357	0.9	25	Florida.....	27	52	0.1	43	508	(1)	49	98	(1)	48
Maryland.....	247	478	1.1	24	19,004	0.9	24	2,647	1.0	23											
Montana.....	69	360	0.8	26	16,386	0.8	25	2,294	0.9	26											

1 Less than one-tenth of 1 per cent.

TABLE 4.—MERCHANT MILLS—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	
					Male.	Fe- male.						Male.	Fe- male.
All classes.....	1919	75,769	70,804	4,965	93.4	6.6	Clarks and other subordinate salaried employees.	1919	12,224	8,834	3,390	72.3	27.7
	1914	65,035	62,794	2,241	95.7	4.3		1914	8,904	7,008	1,896	78.7	21.3
	1909	66,054	63,492	2,562	96.1	3.9		1909	7,838	6,284	1,554	80.2	19.8
Proprietors and officials.....	1919	18,064	17,480	584	96.8	3.2	Wage earners (average number).....	1919	45,481	44,490	991	97.8	2.2
	1914	17,013	16,575	438	97.4	2.6		1914	39,718	39,211	507	98.7	1.3
	1909	18,763	18,286	477	97.5	2.5		1909	39,453	38,922	531	98.7	1.3
Proprietors and firm members....	1919	11,937	11,466	471	96.1	3.9	16 years of age and over.....	1919	45,435	44,446	989	97.8	2.2
	1914	12,669	12,264	405	96.8	3.2		1914	39,642	39,135	507	98.7	1.3
	1909	14,570	14,111	459	96.8	3.2		1909	39,320	38,796	524	98.7	1.3
Salaried officers of corporations...	1919	2,541	2,465	76	97.0	3.0	Under 16 years of age.....	1919	46	44	2	95.7	4.3
	1914	1,743	1,719	24	98.6	1.4		1914	76	76	0	100.0	0.0
	1909	1,486	1,473	13	99.1	0.9		1909	133	126	7	94.7	5.3
Superintendents and managers...	1919	3,586	3,549	37	99.0	1.0							
	1914	2,601	2,592	9	99.7	0.3							
	1909	2,707	2,702	5	99.8	0.2							

MANUFACTURES.

TABLE 5.—MERCHANT MILLS—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment for each state is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	45,481	45,123	42,837	48,170	43,056	43,018	42,261	43,434	46,941	48,822	49,378	49,330	49,393	85.4
Males.....	44,490	44,026	41,950	47,318	42,180	42,212	41,447	42,609	45,889	47,600	48,231	48,183	48,241	85.6
Females.....	991	1,097	887	852	876	806	814	825	1,052	1,222	1,147	1,147	1,152	66.0
1914.....	39,718	39,284	39,140	39,058	38,824	37,921	38,114	39,560	40,526	41,684	41,234	41,028	40,743	91.0
1909.....	39,453	39,120	39,281	39,154	37,776	37,466	36,911	38,021	39,629	40,887	41,702	41,898	41,600	88.1
California.....	1,779	1,822	1,710	1,615	1,631	1,646	1,637	1,800	1,773	1,835	1,894	2,005	1,980	80.5
Colorado.....	490	479	471	427	491	506	400	412	500	546	539	553	556	71.9
Illinois.....	2,740	2,680	2,597	2,567	2,580	2,579	2,577	2,701	2,875	2,937	2,934	2,934	2,919	87.4
Indiana.....	2,280	2,263	2,183	2,087	2,170	2,185	2,084	2,227	2,336	2,473	2,463	2,432	2,457	84.3
Iowa.....	509	518	507	503	493	477	476	475	484	497	542	560	576	82.5
Kansas.....	3,493	3,349	3,074	3,055	3,075	3,189	3,048	3,181	3,871	4,053	4,051	3,999	3,971	75.2
Kentucky.....	1,584	1,525	1,506	1,423	1,477	1,487	1,554	1,656	1,730	1,725	1,667	1,626	1,632	82.3
Maryland.....	478	438	439	445	448	448	465	478	503	521	515	512	524	83.6
Michigan.....	1,128	1,266	1,045	1,095	1,078	1,038	1,022	1,051	1,129	1,172	1,211	1,216	1,213	80.7
Minnesota.....	6,049	6,228	5,645	5,607	5,881	5,967	5,822	5,715	5,972	6,261	6,486	6,500	6,504	86.2
Missouri.....	3,015	2,909	2,783	2,775	2,765	2,752	2,722	2,845	3,334	3,583	3,262	3,210	3,210	76.0
Montana.....	360	397	399	405	398	361	347	244	327	348	356	368	370	60.2
Nebraska.....	1,063	1,070	1,001	1,016	1,005	994	981	1,012	1,092	1,101	1,139	1,150	1,195	82.1
New York.....	3,012	3,106	2,795	2,685	2,870	2,875	2,809	2,860	3,051	3,239	3,322	3,292	3,300	79.0
North Carolina.....	620	624	622	613	601	601	594	616	649	632	663	671	662	88.6
North Dakota.....	558	580	584	551	547	551	546	538	555	600	619	592	553	86.9
Ohio.....	2,122	2,064	1,957	2,003	2,067	2,030	2,033	2,022	2,260	2,281	2,243	2,252	2,272	84.9
Oklahoma.....	958	911	896	876	856	783	772	989	1,098	1,092	1,070	1,084	1,089	69.5
Oregon.....	822	865	826	824	785	760	690	658	830	848	895	940	959	68.0
Pennsylvania.....	2,198	2,151	2,153	2,152	2,151	2,150	2,170	2,156	2,151	2,213	2,285	2,315	2,349	90.8
Tennessee.....	1,472	1,471	1,385	1,315	1,344	1,299	1,207	1,552	1,619	1,611	1,657	1,570	1,544	78.3
Texas.....	1,567	1,489	1,473	1,428	1,418	1,438	1,394	1,573	1,877	1,703	1,711	1,709	1,791	77.8
Virginia.....	937	904	905	905	897	902	900	937	971	994	992	976	967	89.6
Washington.....	1,536	1,473	1,468	1,360	1,459	1,449	1,413	1,332	1,417	1,688	1,768	1,829	1,771	72.8
Wisconsin.....	1,348	1,212	1,187	1,221	1,341	1,344	1,350	1,215	1,383	1,442	1,558	1,469	1,464	76.2

TABLE 6.—MERCHANT MILLS—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States.....	1919	45,481	859	48	16,597	723	3,636	2,236	16,182	5,200
	1914	39,718	(2)	(2)	3,414	355	2,949	1,331	22,714	8,955
	1909	39,453	(2)	(2)	3,395	591	2,602	1,075	19,060	12,130
California.....	1919	1,779	4	.....	1,434	42	230	14	44	11
	1914	1,067	(2)	(2)	34	46	136	96	745	10
Colorado.....	1919	490	30	.....	14	34	94	.....	305	13
	1914	393	(2)	(2)	9	.....	5	4	64	311
Illinois.....	1919	2,740	144	.....	710	168	326	119	1,111	162
	1914	2,398	(2)	(2)	97	4	111	82	1,294	810
Indiana.....	1919	2,280	23	2	624	10	157	100	1,066	298
	1914	2,281	(2)	(2)	80	15	52	36	1,440	658
Iowa.....	1919	509	3	.....	112	9	30	3	284	88
	1914	790	(2)	(2)	26	2	15	.....	655	92
Kansas.....	1919	3,493	7	9	1,612	3	116	158	1,118	470
	1914	2,357	(2)	(2)	61	1	34	2	1,377	382
Kentucky.....	1919	1,584	31	.....	426	15	82	31	824	175
	1914	1,447	(2)	(2)	321	15	48	16	746	301
Maryland.....	1919	478	16	4	9	8	25	29	213	174
	1914	473	(2)	(2)	9	2	8	11	274	169
Michigan.....	1919	1,128	3	4	146	13	66	63	821	12
	1914	1,370	(2)	(2)	80	14	87	19	903	267
Minnesota.....	1919	6,049	16	.....	4,800	29	100	249	646	299
	1914	4,564	(2)	(2)	1,458	.....	904	18	1,646	538
Missouri.....	1919	3,015	65	.....	773	13	174	181	1,125	664
	1914	2,096	(2)	(2)	116	5	104	11	1,049	811
Montana.....	1919	360	.....	.....	210	.....	97	.....	46	7
	1914	256	(2)	(2)	96	.....	95	.....	63	2
Nebraska.....	1919	1,063	7	.....	152	6	47	44	498	309
	1914	682	(2)	(2)	14	7	18	4	410	229

* Includes 48 and under for 1914 and 1909.

* Corresponding figures not available.

FLOUR-MILL AND GRISTMILL PRODUCTS.

107

TABLE 6.—MERCHANT MILLS—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914—Continued.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48. ¹	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
New York.....	1919	3,012	30	.....	1,286	50	453	212	976	5
	1914	3,070	(²)	(²)	76	47	252	115	2,577	3
North Carolina.....	1919	629	21	1	18	13	11	92	437	36
	1914	588	(²)	(²)	11	.....	5	15	399	158
North Dakota.....	1919	568	7	.....	371	1	45	.....	119	25
	1914	424	.....	.....	.....	.....	13	1	317	93
Ohio.....	1919	2,122	23	7	429	27	171	68	1,280	108
	1914	2,363	(²)	(²)	115	18	210	105	1,683	226
Oklahoma.....	1919	953	1	.....	331	1	31	7	214	373
	1914	700	(*)	(²)	27	3	30	.....	252	388
Oregon.....	1919	822	.....	.....	399	2	49	166	203	3
	1914	450	(²)	(²)	50	3	14	.....	383	.....
Pennsylvania.....	1919	2,198	139	9	234	84	198	370	906	253
	1914	2,595	(²)	(²)	80	69	327	262	1,334	523
Tennessee.....	1919	1,472	157	.....	15	3	72	34	495	606
	1914	1,497	(²)	(²)	47	4	24	102	484	836
Texas.....	1919	1,567	2	.....	674	4	162	25	347	353
	1914	1,300	(²)	(²)	22	1	103	94	475	605
Virginia.....	1919	937	17	.....	42	10	34	45	512	277
	1914	1,082	(²)	(²)	53	3	5	63	730	228
Washington.....	1919	1,536	1	6	1,129	2	79	.....	300	19
	1914	923	(²)	(²)	156	59	8	43	655	7
Wisconsin.....	1919	1,348	1	.....	257	2	262	29	788	9
	1914	1,116	(²)	(²)	108	1	76	6	722	293

¹ Includes 48 and under for 1914 and 1909.

* Corresponding figures not available.

TABLE 7.—MERCHANT MILLS—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earn- ers.	1 to 5 wage earn- ers, inclusive.		6 to 20 wage earn- ers, inclusive.		21 to 50 wage earn- ers, inclusive.		51 to 100 wage earn- ers, inclusive.		101 to 250 wage earn- ers, inclusive.		251 to 500 wage earn- ers, inclusive.		501 to 1,000 wage earn- ers, inclusive.		Over 1,000 wage earn- ers.	
			Estab- lish- ments.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.	Estab- lish- ments.	Wage earn- ers.
United States. 1919..	10,708	45,481	3,181	6,220	11,325	922	9,462	251	7,613	82	5,774	42	5,852	7	2,222	1	601	2	2,632
1914..	10,788	39,718	1,887	7,667	14,366	953	9,625	195	6,046	65	4,515	16	2,202	3	1,191	2	1,773	.....	.....
California.....	134	1,779	13	88	127	19	202	7	226	2	139	3	539	2	546	.....	.....	.....	.....
Colorado.....	120	490	22	75	109	19	205	3	115	1	61	.....	.....	.....	.....	.....	.....	.....	.....
Illinois.....	322	2,740	101	123	283	64	724	22	652	7	483	5	598	.....	.....	.....	.....	.....	.....
Indiana.....	450	2,280	57	329	681	43	403	13	368	5	393	3	435	.....	.....	.....	.....	.....	.....
Iowa.....	189	509	40	133	212	12	141	3	104	1	52	.....	.....	.....	.....	.....	.....	.....	.....
Kansas.....	385	3,493	82	174	315	81	947	36	1,077	8	547	4	607	.....	.....	.....	.....	.....	.....
Kentucky.....	533	1,584	180	312	622	31	269	6	173	2	117	1	128	1	275	.....	.....	.....	.....
Maryland.....	247	478	88	142	240	15	142	1	21	1	75	.....	.....	.....	.....	.....	.....	.....	.....
Michigan.....	345	1,128	85	226	432	26	254	3	90	5	352	.....	.....	.....	.....	.....	.....	.....	.....
Minnesota.....	248	6,049	23	151	334	31	346	23	661	12	823	4	550	2	703	.....	.....	.....	.....
Missouri.....	690	3,015	236	361	588	63	649	20	600	5	361	4	493	1	315	.....	.....	.....	.....
Montana.....	69	360	6	43	64	11	119	3	115	1	62	.....	.....	.....	.....	.....	.....	.....	.....
Nebraska.....	218	1,063	42	142	298	25	295	6	154	1	74	2	212	.....	.....	.....	.....	.....	.....
New York.....	716	3,012	201	443	771	52	507	14	450	4	300	.....	.....	1	383	1	601	.....	.....
North Carolina.....	374	629	129	227	407	14	111	4	111	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Dakota.....	87	568	14	51	99	15	130	5	207	2	132	.....	.....	.....	.....	.....	.....	.....	.....
Ohio.....	577	2,122	113	385	827	61	533	13	398	4	261	1	113	.....	.....	.....	.....	.....	.....
Oklahoma.....	227	958	92	99	175	26	265	6	212	4	306	.....	.....	.....	.....	.....	.....	.....	.....
Oregon.....	116	822	23	63	150	17	182	5	144	1	66	2	280	.....	.....	.....	.....	.....	.....
Pennsylvania.....	1,138	2,198	320	749	1,283	62	593	4	95	2	118	1	109	.....	.....	.....	.....	.....	.....
Tennessee.....	661	1,472	332	201	521	28	282	6	204	1	62	3	403	.....	.....	.....	.....	.....	.....
Texas.....	222	1,567	59	111	215	31	365	14	429	6	435	1	123	.....	.....	.....	.....	.....	.....
Virginia.....	537	937	224	284	511	24	215	4	109	.....	.....	1	102	.....	.....	.....	.....	.....	.....
Washington.....	119	1,536	10	72	148	22	276	8	240	3	222	4	650	.....	.....	.....	.....	.....	.....
Wisconsin.....	221	1,348	38	149	269	23	230	6	152	2	187	3	510	.....	.....	.....	.....	.....	.....

MANUFACTURES.

TABLE 8.—MERCHANT MILLS—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes.....	10,708	10,788	11,691	45,481	39,718	39,453	\$2,052,434,385	\$877,679,709	\$883,584,405	\$253,253,398	\$125,409,688	\$116,007,926
Less than \$5,000.....	1,499	1,876	1,651	186	961	847	4,024,716	5,347,012	4,781,883	806,577	1,245,806	962,213
\$5,000 to \$20,000.....	3,080	4,175	4,333	1,659	4,598	4,489	36,392,972	47,675,997	50,280,039	6,735,789	9,375,467	9,314,478
\$20,000 to \$100,000.....	4,151	3,529	4,411	7,380	9,680	11,300	189,254,525	147,254,921	187,287,491	30,385,551	24,841,349	30,761,856
\$100,000 to \$500,000.....	1,331	899	1,158	8,082	12,404	12,788	275,539,175	193,837,516	193,837,516	37,340,124	39,040,509	39,418,431
\$500,000 to \$1,000,000.....	249	156	138	4,042	12,015	10,029	172,691,000	107,237,655	322,187,333	21,363,439	8.4	35,550,948
\$1,000,000 and over.....	398	153	138	24,152	12,015	10,029	1,374,531,997	376,328,608	319,047,659	156,621,918	50,906,557	35,550,948
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	14.0	17.4	14.1	0.4	2.4	2.1	0.2	0.6	0.5	0.3	1.0	0.8
\$5,000 to \$20,000.....	28.8	38.7	37.1	3.6	11.6	11.4	1.8	5.4	5.7	2.7	7.5	8.0
\$20,000 to \$100,000.....	38.8	32.7	37.7	16.2	24.4	28.6	0.2	16.8	21.2	12.0	19.8	26.5
\$100,000 to \$500,000.....	12.4	8.4	9.9	17.7	31.4	32.4	13.4	22.1	36.5	14.7	31.1	34.0
\$500,000 to \$1,000,000.....	2.3	1.4	1.2	8.9	30.2	25.4	8.4	12.2	36.1	61.8	40.6	30.6
\$1,000,000 and over.....	3.7	1.4	1.2	53.1	30.2	25.4	67.0	42.9	36.1	61.8	40.6	30.6

TABLE 9.—MERCHANT MILLS—CHARACTER OF OWNERSHIP, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
		Indi- vid- uals.	Corpo- ra- tions.	All oth- ers.	Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
						Indi- vid- uals.	Corpo- ra- tions.	All oth- ers.	Indi- vid- uals.	Corpo- ra- tions.	All oth- ers.		Indi- vid- uals.	Corpo- ra- tions.	All oth- ers.	Indi- vid- uals.	Corpo- ra- tions.	All oth- ers.				
United States..	1919	4,711	2,667	3,330	45,481	5,293	34,841	5,347	11.6	76.6	11.8	\$2,052,434,385	\$152,127,809	\$1,713,800,083	\$186,506,493	7.4	83.5	9.1				
	1914	5,426	2,264	3,098	39,718	7,831	25,211	6,676	19.7	63.5	16.8	877,679,709	113,784,139	645,047,622	118,847,948	13.0	73.5	13.5				
	1909	5,908	2,271	3,512	39,453	9,053	22,880	7,520	22.9	58.0	19.1	883,584,405	149,987,044	588,189,883	145,407,478	17.0	66.6	16.5				
California.....	1919	25	90	19	1,779	28	1,705	46	1.6	95.8	2.6	65,448,352	1,061,692	62,902,291	1,484,369	1.6	96.1	2.3				
	1914	31	70	22	1,067	50	989	28	4.7	92.7	2.6	24,078,735	1,802,460	22,004,744	771,531	5.4	91.4	3.2				
Colorado.....	1919	21	86	13	490	19	450	21	3.9	91.8	4.3	19,954,119	592,436	18,701,687	659,996	3.0	93.7	3.3				
	1914	15	58	10	393	18	364	11	4.6	92.6	2.8	7,535,633	295,984	7,048,962	190,687	3.9	93.5	2.5				
Illinois.....	1919	130	106	86	2,740	244	2,248	238	8.9	82.4	8.7	116,562,915	5,513,169	102,149,917	8,899,829	4.7	87.6	7.6				
	1914	193	97	116	2,398	420	1,660	318	17.5	69.2	13.3	49,493,224	7,281,852	37,022,238	5,189,134	14.7	74.8	10.5				
Indiana.....	1919	202	132	116	2,280	320	1,074	286	14.0	73.4	12.5	75,111,435	7,332,454	60,545,702	7,233,279	9.8	80.6	9.6				
	1914	218	124	170	2,281	412	1,416	453	18.1	62.1	19.9	37,488,223	4,542,704	32,545,751	5,690,708	12.1	72.8	15.1				
Iowa.....	1919	92	47	50	509	87	337	85	17.1	66.2	16.7	21,324,678	2,846,386	15,758,411	2,719,881	13.3	73.9	12.8				
	1914	117	40	70	790	124	531	135	15.7	67.2	17.1	14,336,576	1,771,662	10,995,646	1,969,268	12.4	73.9	13.7				
Kansas.....	1919	110	167	108	3,493	176	2,962	355	5.0	84.8	10.2	206,881,300	3,994,058	187,284,398	15,602,844	1.9	90.5	7.5				
	1914	142	119	99	2,357	260	1,767	330	11.0	75.0	14.0	72,894,736	5,211,923	58,582,532	9,120,281	7.2	80.3	12.5				
Kentucky.....	1919	264	69	200	1,584	251	915	418	15.8	67.8	26.4	45,773,798	4,572,952	30,308,782	10,892,064	10.0	66.2	23.8				
	1914	177	87	178	1,447	202	770	415	18.1	53.2	28.7	21,229,203	2,575,957	13,332,434	5,320,812	12.1	62.8	25.1				
Maryland.....	1919	164	30	53	478	148	230	100	31.0	48.1	20.9	19,004,169	3,970,188	10,402,781	4,631,200	20.9	54.7	24.4				
	1914	174	32	41	473	211	192	70	44.6	40.6	14.8	8,163,869	3,684,638	3,541,657	937,574	45.1	43.4	11.5				
Michigan.....	1919	146	85	114	1,128	203	746	179	18.0	66.1	15.9	44,144,434	6,572,213	30,150,339	7,421,882	14.9	68.3	16.8				
	1914	203	83	141	1,370	332	731	307	24.2	53.4	22.4	27,381,474	5,609,028	16,384,336	5,388,110	20.5	59.8	19.7				
Minnesota.....	1919	67	131	50	6,049	135	5,749	165	2.2	95.0	2.7	381,248,891	5,641,000	366,266,121	9,841,770	1.5	96.1	2.5				
	1914	105	105	76	4,564	282	3,984	298	6.2	87.3	6.5	148,243,708	5,999,856	134,861,980	7,381,872	4.0	91.0	5.0				
Missouri.....	1919	315	179	196	3,015	259	2,539	217	8.6	84.2	7.2	113,297,359	6,390,869	100,638,609	6,367,981	5.6	88.7	5.6				
	1914	284	152	205	2,096	398	1,345	358	18.8	64.2	17.1	38,686,309	4,328,928	27,838,468	6,518,913	11.2	72.0	16.9				
Montana.....	1919	17	43	9	360	26	316	18	7.2	87.8	5.0	16,386,055	852,151	14,415,056	1,118,848	5.2	88.0	6.8				
	1914	8	22	3	256	13	237	6	5.1	92.6	2.3	4,890,275	208,925	4,670,000	111,350	4.3	93.4	2.3				
Nebraska.....	1919	87	71	60	1,063	130	782	151	12.2	73.6	14.2	53,521,388	3,888,197	42,615,278	7,037,913	7.2	79.6	13.1				
	1914	95	55	61	682	155	390	137	22.7	67.2	20.1	15,022,126	2,459,519	10,093,307	2,460,300	16.4	67.2	15.4				
New York.....	1919	369	136	211	3,012	417	2,292	303	13.8	76.1	10.1	155,272,104	13,490,187	131,642,404	10,139,513	8.7	84.8	6.5				
	1914	515	130	246	3,070	650	2,014	406	21.2	65.6	13.2	77,408,764	10,590,186	58,721,082	8,097,496	13.7	75.9	10.5				
North Carolina.....	1919	192	75	107	629	191	822	116	30.4	51.2	18.4	24,258,213	5,609,155	14,468,627	4,180,431	23.1	59.6	17.2				
	1914	136	54	103	588	221	190	177	37.6	32.3	30.1	8,963,501	2,640,852	3,784,363	2,538,286	29.5	42.2	28.3				
North Dakota.....	1919	23	49	15	568	32	501	35	5.6	88.2	6.2	29,282,056	1,073,858	27,095,305	1,112,893	3.7	92.5	3.8				
	1914	13	37	9	424	38	354	32	9.0	83.5	7.5	12,029,905	1,005,772	10,745,596	678,537	8.4	86.0	5.6				
Ohio.....	1919	220	143	214	2,122	378	1,338	406	17.8	63.1	19.1	99,896,619	10,294,759	66,600,605	12,541,355	11.5	74.5	14.0				
	1914	263	137	249	2,363	478	1,294	591	20.2	54.8	25.0	45,171,200	6,438,927	28,824,681	9,907,922	14.3	63.8	21.9				
Oklahoma.....	1919	93	76	53	958	57	832	69	5.9	86.8	7.2	49,843,800	1,997,989	44,485,782	3,360,029	4.0	89.3	6.7				
	1914	117	66	70	700	97	508	95	13.9	72.6	13.6	16,688,690	1,086,923	14,022,694	1,579,073	6.5	84.0	9.5				
Oregon.....	1919	49	47	20	822	79	702	41	9.6	85.4	5.0	42,549,987	2,316,798	38,821,400	1,411,798	5.4	91.2	3.3				
	1914	34	40	21	450	46	372	32	10.2	82.7	7.1	11,192,673	1,050,684	9,586,401	555,488	9.4	85.6	5.0				
Pennsylvania.....	1919	372	87	679	2,198	620	699	879	28.2	31.8	40.0	69,446,449	18,742,221	26,254,450	24,449,778	27.0	37.8	35.2				
	1914	878	75	312	2,595	1,139	755	701	43.9	29.2	27.0	53,626,556	15,824,454	10,785,970	11,015,932	36.3	38.5	25.3				
Tennessee.....	1919	358	86	217	1,472	215	1,030	227	14.6	70.0	15.4	51,012,531	5,942,923	38,876,607	7,093,001	11.4	74.9	13.7				
	1914	257	70	185	1,497	312	905	280	20.8	60.5	18.7	26,418,574	3,847,636	18,506,701	4,059,237	14.6	70.1	15.4				
Texas.....	1919	88	78	56	1,567	111	1,352	104	7.1	86.3	6.6	73,064,361	3,110,483	66,941,148	3,012,730	4.3	91.6	4.1				
	1914	78	71	42	1,300	154	941	205	11.8	72.4	15.8	35,110,301	1,995,021	27,061,885	6,053,395	5.7	77.1	17.2				
Virginia.....	1919	297	67	173	937	249	333	355	26.6	35.5	37.9	86,154,105	7,803,717	13,389,614	14,960,774	21.6	37.0	41.4				
	1914	327	58	148	1,082	422	306	354	39.0	28.3	32.7	18,084,413	5,792,360	5,294,456	6,907,507	32.0	29.8	38.3				
Washington.....	1919	27	72	20	1,536	34	1,464	38	2.2	95.3	2.5	81,141,020	1,162,489	78,343,365	1,635,166	1.4	96.6	2.0				
	1914	28	56	16	928	55	846	27	5.9	91.2	2.9	23,665,382	1,519,030	21,735,290	411,062	6.4	91.8	1.7				
Wisconsin.....	1919	99	62	60	1,348	119	1,131	98	8.8	83.9	7.3	58,304,432	5,476,691	48,397,150	4,430,591	9.4	83.0	7.6				
	1914	122	60	70	1,116	170	709	237	15.2	63.5	21.2	28,697,413	2,981,868	21,417,656	4,297,889	10.4	74.6	15.0				

FLOUR-MILL AND GRISTMILL PRODUCTS.

109

TABLE 10.—MERCHANT MILLS—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	20,766	18,048	18,080	876,405	822,384	853,584	100.0	100.0	100.0
Owned.....	11,099	14,136	16,589	611,967	708,965	800,383	69.8	88.2	93.8
Steam.....	2,982	4,580	6,758	329,589	403,186	473,671	37.6	49.0	55.6
Engines.....	2,916	(²)	(²)	302,826	(²)	(²)	34.6	.....	.....
Turbines.....	66	(²)	(²)	26,763	(²)	(²)	3.1	.....	.....
Internal-combustion engines.....	3,427	2,922	2,540	96,291	76,451	62,681	11.0	9.3	7.3
Turbines.....	4,690	6,634	7,291	186,087	229,328	264,131	21.2	27.9	30.9
Water wheels, turbines, and motors.....									
Rented.....	9,667	3,912	1,491	264,438	113,419	53,201	30.2	13.8	6.2
Electric.....	9,667	3,912	1,491	263,497	112,441	49,901	30.1	13.7	5.8
Other.....				941	978	3,300	0.1	0.1	0.4
Electric.....	11,493	4,919	2,026	309,610	150,248	67,666	100.0	100.0	100.0
Rented.....	9,667	3,912	1,491	263,497	112,441	49,901	85.1	74.8	74.4
Generated by establishments reporting.....	1,826	1,007	535	46,113	37,807	17,165	14.9	25.2	25.6

¹ Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.

² Not reported separately.

TABLE 11.—MERCHANT MILLS—FUEL CONSUMED, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Cen- sus year.	COAL.		Coke (tons 2,000 lbs.).	Fuel oils (barrels).	Gas- oline and other volatile oils (bar- rels).	Gas (1,000 cubic feet).	STATE.	Cen- sus year.	COAL.		Coke (tons 2,000 lbs.).	Fuel oils (barrels.)	Gas- oline and other volatile oils (bar- rels).	Gas (1,000 cubic feet).
		Anthra- cite (tons, 2,240 lbs.).	Bitu- minous (tons, 2,000 lbs.).							Anthra- cite (tons, 2,240 lbs.).	Bitu- minous (tons, 2,000 lbs.).				
United States...	1919	57,034	1,532,494	5,134	645,553	84,636	1,157,455	Nebraska.....	1919	140	31,705	15	21,474	1,490	.....
Per cent of increase ¹	1914	56,953	1,809,968	13,941	441,693	(¹)	1,627,252	1914	1914	50	38,067	4	22,059	(¹)	300
California.....	1919	.....	69	.....	79,464	713	4,722	New York.....	1919	2,937	51,219	103	1,630	2,819	71,740
1914	1914	.....	237	.....	84,712	(¹)	3,522	1914	1914	5,585	84,053	175	6,731	(¹)	56,326
Colorado.....	1919	168	39,063	30	940	620	162	North Carolina.....	1919	114	8,638	2	1,873	2,891	.....
1914	1914	.....	20,753	2,476	785	(¹)	.....	1914	1914	155	7,083	70	1,610	(¹)	.....
Illinois.....	1919	269	179,678	964	1,087	1,006	125	North Dakota.....	1919	283	79,962	2	814	970	.....
1914	1914	6	206,412	558	1,726	(¹)	233	1914	1914	1,002	64,547	.....	686	(¹)	.....
Indiana.....	1919	132	150,958	1,733	3,154	1,956	16,445	Ohio.....	1919	100	105,017	135	2,315	2,554	212,076
1914	1914	1,268	189,101	524	2,224	(¹)	17,618	1914	1914	880	148,071	830	3,082	(¹)	238,027
Iowa.....	1919	515	28,024	7	3,063	836	12	Oklahoma.....	1919	50	23,504	.....	54,952	1,192	259,662
1914	1914	20	52,346	2,005	2,302	(¹)	.....	1914	1914	.....	27,854	.....	19,435	(¹)	250,160
Kansas.....	1919	3,845	72,324	9	293,650	14,210	137,723	Oregon.....	1919	5	281	50	2,554	243	18
1914	1914	20	119,808	1,314	185,373	(¹)	570,910	1914	1914	.....	183	.....	3,628	(¹)	.....
Kentucky.....	1919	617	73,958	.....	7,096	6,738	18,110	Pennsylvania.....	1919	30,722	36,363	84	1,869	2,415	125,686
1914	1914	.....	78,911	2,185	4,967	(¹)	20,396	1914	1914	34,946	54,344	273	3,287	(¹)	122,621
Maryland.....	1919	1,893	10,683	.....	2,156	1,085	439	Tennessee.....	1919	1,906	64,382	83	2,306	5,017	50
1914	1914	2,470	14,028	.....	1,136	(¹)	2,353	1914	1914	.....	61,272	700	1,835	(¹)	25
Michigan.....	1919	407	46,841	104	2,386	1,875	.....	Texas.....	1919	62	19,507	1,030	87,418	1,851	141,696
1914	1914	529	59,027	1,074	2,985	(¹)	423	1914	1914	.....	62,944	748	47,992	(¹)	158,993
Minnesota.....	1919	683	225,748	114	7,579	341	87	Virginia.....	1919	1,020	11,800	.....	4,948	3,066	.....
1914	1914	3,017	249,002	54	1,601	(¹)	.....	1914	1914	349	18,306	11	2,037	(¹)	1,125
Missouri.....	1919	302	206,350	36	28,436	4,041	5,183	Washington.....	1919	112	1,748	9	13,659	691	220
1914	1914	74	134,496	2	4,919	(¹)	14,209	1914	1914	6	1,878	.....	19,683	(¹)	1,000
Montana.....	1919	1	16,560	330	478	373	602	Wisconsin.....	1919	4,706	34,225	40	1,486	922	.....
								1914	1914	2,874	45,643	157	1,612	(¹)	.....
								All other states.....	1919	5,865	65,887	254	19,271	24,702	562,807
									1914	3,942	71,002	1,281	15,286	(¹)	169,021

¹ Included in figures for fuel oils.

² A minus sign (—) denotes decrease.

SPECIAL STATISTICS.

The special schedule used in collecting the statistics for the flour-mill and gristmill industry required details of the quantity of the different kinds of grain ground or milled and the quantity and value of the different products manufactured. In addition to the figures shown for the industry, flour-mill and gristmill products to the value of \$46,515,270 were reported by establishments engaged primarily in other industries. Also a large quantity of grain was used by establishments whose chief products were breakfast foods, classified in the general reports on manufactures as

"Food preparations." While no figures are available to show the kinds and quantities of grain used in other branches of manufacture, there were 64,939,315 bushels of corn and 186,039 bushels of wheat consumed in the manufacture of glucose and starch alone.

Merchant and custom mills—grain ground and value of products.—Table 12 shows the quantity of each of the principal kinds of grain ground and the quantity and value of the products manufactured for all mills for 1919 and 1909, for merchant mills for 1919, 1914, and 1909, and for custom mills for 1919 and 1909.

TABLE 12.—MERCHANT AND CUSTOM MILLS—DETAILED STATISTICS OF QUANTITY OF GRAIN GROUND AND QUANTITY AND VALUE OF PRODUCTS: 1919 AND 1909.

	ALL MILLS.		MERCHANT MILLS.			CUSTOM MILLS.	
	1919	1909	1919	1914	1909	1919	1909
GRAIN GROUND.							
Total.....bushels..	888,305,973	872,950,743	830,026,293	818,929,321	806,247,061	58,279,680	66,702,782
Wheat.....bushels..	618,667,518	503,468,555	612,502,471	545,728,431	496,480,314	6,105,047	6,988,242
Corn.....bushels..	137,420,486	244,547,967	113,760,971	180,115,704	209,281,237	23,605,515	35,286,730
Rye.....bushels..	17,639,280	13,374,095	16,951,961	12,813,531	11,503,969	1,741,289	1,870,126
Buckwheat.....bushels..	6,538,736	5,394,120	4,794,830	5,478,045	7,156,052	823,936	1,238,058
Barley.....bushels..	28,339,013	30,639,401	21,151,343	20,288,396	24,509,770	7,187,670	6,129,631
Oats.....bushels..	70,471,255	63,801,092	58,679,943	50,227,050	50,241,593	17,891,323	13,059,494
Other grains.....bushels..	4,119,674	9,225,512	3,254,774	4,277,864	7,075,011	884,900	2,150,501
PRODUCTS.							
Total.....value..	\$2,147,218,013	\$938,699,958	\$2,052,434,385	\$877,679,709	\$883,584,405	\$94,784,528	\$55,115,553
Wheat flour.....barrels..	133,670,672	107,108,461	132,405,604	116,403,770	105,756,645	1,205,068	1,351,816
value.....	\$1,450,353,051	\$557,814,979	\$1,436,444,111	\$543,539,598	\$550,110,254	\$13,908,940	\$7,698,725
Corn meal and corn flour.....barrels..	14,780,976	27,168,352	10,682,952	16,327,693	21,552,737	4,107,024	5,635,615
value.....	\$113,639,114	\$37,083,530	\$82,059,560	\$54,663,301	\$60,941,095	\$31,599,554	\$20,147,435
Rye flour.....barrels..	2,675,542	1,591,735	2,627,752	1,037,355	1,532,139	47,790	59,587
value.....	\$21,676,938	\$6,644,659	\$21,235,803	\$7,845,213	\$6,383,538	\$441,080	\$261,121
Buckwheat flour.....pounds..	104,677,003	200,959,917	90,137,407	125,622,189	170,081,891	14,539,601	24,878,026
value.....	\$8,147,689	\$5,384,616	\$5,244,530	\$3,754,857	\$4,063,561	\$903,150	\$721,055
Barley meal.....pounds..	100,362,712	33,640,182	91,809,114	14,000,739	28,550,952	8,553,598	5,098,230
value.....	\$3,485,054	\$550,654	\$3,217,484	\$242,343	\$486,000	\$207,590	\$94,654
Hominy and grits.....pounds..	202,280,975	837,333,466	288,625,592	870,364,453	827,987,702	3,765,383	9,345,704
value.....	\$9,305,290	\$12,689,902	\$9,247,224	\$13,767,601	\$12,509,493	\$148,006	\$180,469
Oatmeal.....pounds..	37,457,699	.....	28,120,640	30,451,551	.....	9,337,050	.....
value.....	\$1,423,171	.....	\$1,100,875	\$757,804	.....	\$322,296	.....
Bran and middlings.....tons..	4,817,357	10,170,530	4,760,326	4,666,534	9,236,411	57,031	940,119
value.....	\$214,196,068	\$256,141,439	\$211,435,518	\$104,702,735	\$230,356,342	\$2,769,548	\$25,785,097
Feed and offal.....tons..	5,329,876	(1)	4,666,855	4,753,280	(1)	769,621	(1)
value.....	\$306,825,066	(1)	\$262,733,518	\$137,067,959	(1)	\$44,091,548	(1)
Breakfast foods.....pounds..	97,250,673	.....	96,531,673	92,676,085	.....	719,000	.....
value.....	\$4,381,551	.....	\$4,349,541	\$2,932,238	.....	\$32,010	.....
All other cereal products.....value..	\$10,072,201	.....	\$10,033,062	\$2,244,130	.....	\$39,130	.....
All other products.....value..	\$5,603,792	\$12,355,119	\$5,833,165	\$5,562,000	\$12,128,122	\$270,627	\$226,997

¹ Not reported separately in 1909.

The total quantity of grain ground by all mills in 1919 represented an increase of 15,355,230 bushels, or 1.8 per cent, over the amount reported for 1909. For the merchant mills the increase was 23,778,332 bushels, or 2.9 per cent, but the quantity reported for the custom mills showed a decrease of 8,423,102 bushels, or 12.6 per cent. As the custom mills, as a rule, keep no exact records of the amount of grain ground, their reports as to this item are largely estimates based on the receipts for toll. Of the total quantity of grain ground both in 1919 and 1909, more than 90 per cent were reported by the merchant mills.

Wheat was the principal kind of grain used both in 1919 and 1909, the amount ground in 1919 being an increase of 115,198,962 bushels, or 22.9 per cent, over

that reported for 1909. The relative importance of wheat increased during the ten-year period, the proportion which it formed of the total quantity of grain reported being 69.6 per cent in 1919 and 57.7 per cent in 1909.

Corn was the next grain in importance, the quantity reported in 1919 represented 15.5 per cent of the total amount of grain used, but was a decrease of 107,121,481 bushels, or 43.8 per cent, as compared with the quantity reported for 1909, when it formed 28 per cent of the total amount of grain used.

Oats, barley, rye, and buckwheat, in the order named, ranked next in importance in number of bushels reported. From 1909 to 1919 there were increases in the quantity of oats and rye used of 20.8

FLOUR-MILL AND GRISTMILL PRODUCTS.

111

per cent and 32.6 per cent, respectively, while the quantity of barley showed a decrease of 7.5 per cent, and that for buckwheat 33.4 per cent.

Of the total quantity of grain ground in merchant mills in 1919, wheat constituted 73.8 per cent, corn 13.7 per cent, and oats 7.1 per cent; while in 1909 wheat formed 61.6 per cent of the total, corn 26 per cent, and oats 6.2 per cent. There was an increase of 23,778,332 bushels, or 2.9 per cent, in the quantity of all kinds of grain ground in these mills in 1919 as compared with the quantity ground in 1909.

While the schedule called for the selling value or price of the product at the mill, it was not always possible to obtain this value, and in some instances the amount received at the place of delivery was reported. Even when the selling prices at the point

of production were obtained, they were in some cases retail prices and in others wholesale rates. For this reason no attempt has been made to compute from the reported total values the average value per unit for the different classes of products.

The total quantity of wheat flour reported for 1919, 133,670,672 barrels, represents an increase of 26,562,211 barrels, or 24.8 per cent, over the quantity reported for 1909. In the production of corn meal and corn flour, however, a decrease of 12,398,376 barrels, or 45.6 per cent, is shown for the decade.

Grain ground in merchant mills.—Table 13 shows for merchant mills, for the United States and by states, the quantities of wheat and corn ground in 1919, 1914, and 1909, and also the quantities of other grains ground in 1919.

TABLE 13.—QUANTITY OF GRAIN GROUND IN MERCHANT MILLS, BY STATES: 1919, 1914, AND 1909.

STATE.	WHEAT (BUSHELS).			CORN (BUSHELS).			OTHER GRAIN (BUSHELS): 1919.				
	1919	1914	1909	1919	1914	1909	Rye.	Buckwheat.	Barley.	Oats.	All other.
United States.....	612,562,471	545,728,431	496,480,314	113,760,971	180,115,704	209,281,237	15,951,961	4,764,830	21,151,343	58,579,943	3,174,125
Alabama.....	210,445	115,100	78,326	1,772,154	1,925,919	2,783,224	.....	.....	(1)	141,611	(1)
Arizona.....	668,738	385,508	385,183	192,581	8,758	8,550	.....	.....	258,148	(2)	11,612
Arkansas.....	1,643,919	1,401,408	1,134,890	4,664,091	4,723,726	4,723,726	.....	.....	(1)	602,485	(1)
California.....	15,700,708	9,554,542	8,866,746	1,995,760	930,666	804,009	59,501	(1)	7,118,138	2,227,734	600,834
Colorado.....	6,942,507	5,737,849	4,574,480	1,335,577	1,367,084	1,570,185	40,051	.....	531,203	430,404	32,677
Connecticut.....	2,614	718	16,141	1,191,027	1,984,451	2,139,404	13,085	540	11,636	332,149	.....
Delaware.....	576,308	734,619	882,483	234,344	498,815	596,202	1,527	7,490	(1)	(1)	.....
Florida.....	(1)	.....	20	200,228	101,561	123,754	.....	.....	.....	(1)	32
Georgia.....	2,208,702	1,616,748	2,088,586	2,305,707	3,060,287	5,135,892	(1)	.....	.....	217,915	.....
Idaho.....	5,118,004	2,900,253	1,800,276	52,783	50,943	16,585	3,895	.....	305,683	96,496	(1)
Illinois.....	33,430,497	31,020,794	30,303,512	7,051,542	10,257,035	12,637,221	804,094	173,941	627,165	4,863,433	72,967
Indiana.....	20,042,070	21,199,657	22,905,586	8,701,829	14,052,854	13,388,248	513,072	32,806	439,327	1,172,597	31,191
Iowa.....	5,925,297	7,117,783	7,093,273	1,797,818	3,344,472	3,350,442	99,087	87,512	154,495	1,355,180	(1)
Kansas.....	73,942,142	59,945,127	49,676,585	3,567,710	6,052,316	10,584,717	175,082	5,761	287,643	218,069	195,706
Kentucky.....	12,449,831	13,114,197	13,575,601	4,688,724	4,700,161	4,971,835	20,630	45,856	37,910	284,558	9,441
Maine.....	168,420	44,430	66,898	2,436,522	4,198,565	4,757,998	2,250	41,388	16,337	610,561	.....
Maryland.....	5,705,777	5,310,157	5,420,008	849,411	1,610,070	1,997,086	38,201	73,270	23,079	73,877	18,638
Massachusetts.....	42,114	56,701	88,441	1,887,583	4,042,175	5,205,210	28,964	(1)	24,883	529,788	.....
Michigan.....	12,020,886	14,621,098	16,733,707	2,372,083	5,395,035	6,580,049	1,836,287	363,423	668,110	2,814,630	325,685
Minnesota.....	130,865,606	124,339,078	104,042,999	1,620,800	3,092,696	3,440,937	5,513,501	63,621	3,594,284	1,736,637	34,163
Missouri.....	32,738,674	25,277,533	27,004,019	7,303,824	8,632,276	10,474,264	104,673	483,344	495,072	3,049,170	111,851
Montana.....	5,730,171	4,142,848	1,701,589	106,585	5,731	.....	1,625	(1)	30,668	508,546	(1)
Nebraska.....	15,947,132	11,404,925	10,741,279	2,951,487	2,247,669	5,198,794	121,432	23,413	205,963	654,816	23,705
Nevada.....	397,384	193,019	204,075	(1)	5,827	.....	.....	.....	54,686	32,102	.....
New Hampshire.....	407,149	402,325	400,548	960,363	2,208,037	2,921,923	5,498	2,822	19,581	555,803	.....
New Jersey.....	594,466	832,821	1,377,248	1,195,590	2,447,371	3,336,651	510,829	55,107	23,070	540,830	187,188
New Mexico.....	454,222	290,889	269,944	19,950	25,779	77,696	(1)	.....	6,281	(1)	.....
New York.....	43,336,537	38,185,270	30,073,407	10,380,388	21,065,163	21,593,807	1,242,223	1,241,497	1,123,243	13,028,699	35,711
North Carolina.....	6,227,571	4,703,195	3,715,284	2,668,332	2,538,184	2,749,135	20,460	1,875	(1)	175,698	(1)
North Dakota.....	10,088,580	10,396,683	8,821,071	60,172	55,827	94,809	6,186	(1)	243,375	330,281	23,248
Ohio.....	27,348,147	27,780,349	27,271,412	4,847,433	9,544,909	11,326,991	291,523	173,718	408,584	3,624,485	124,532
Oklahoma.....	15,786,681	9,590,956	10,074,282	2,977,938	5,576,923	8,329,146	14,064	(1)	273,903	329,471	53,604
Oregon.....	14,001,092	8,638,891	6,414,594	112,014	48,686	54,445	9,490	120	576,931	1,114,975	(1)
Pennsylvania.....	15,947,019	19,344,465	18,320,116	7,621,209	14,638,339	15,665,222	1,650,272	1,288,703	185,832	4,150,689	395,312
Rhode Island.....	164	505	170	522,692	815,543	1,108,956	434	(1)	(1)	79,466	(1)
South Carolina.....	299,033	99,769	27,900	553,583	287,008	315,580	(1)	1,072	.....	52,646	.....
South Dakota.....	3,004,892	4,488,397	4,697,391	89,614	163,557	208,873	7,663	.....	113,181	155,671	54,168
Tennessee.....	13,122,128	14,578,618	6,013,632	8,023,114	9,971,656	9,971,656	282	4,435	132,040	893,627	9,715
Texas.....	21,337,622	18,978,767	16,243,203	5,000,082	8,626,359	9,961,386	8,687	.....	164,508	732,955	234,549
Utah.....	2,686,917	2,524,748	2,258,841	40,108	35,709	47,883	4,864	.....	81,092	319,264	.....
Vermont.....	64,028	15,329	1,565	1,983,749	3,799,582	4,211,911	1,560	18,710	107,363	1,805,615	60,830
Virginia.....	10,468,458	10,232,083	9,072,288	3,210,689	5,127,104	5,876,745	73,065	38,578	80,592	140,776	1,414
Washington.....	26,836,116	17,566,736	12,854,599	1,144,345	475,381	352,969	45,897	(1)	1,040,686	1,980,880	186,531
West Virginia.....	2,928,138	2,535,501	3,086,082	2,018,614	3,299,908	3,292,377	81,685	113,553	23,783	440,459	43,700
Wisconsin.....	13,337,487	13,806,270	16,262,688	3,926,061	6,728,233	3,847,801	3,090,324	372,980	1,675,307	5,480,135	197,711
Wyoming.....	436,720	491,772	27,692	27,692	21,066	128,181	2,814	.....	(1)	19,231	.....
All other states ¹	330,904	1,000	326,000	1,080,272	944,143	1,252,935	4,280	48,905	22,501	680,629	94,410

¹ Figures included with those for "All other states" to avoid disclosure of individual operations.

² Includes District of Columbia, Louisiana, and Mississippi.

Products of merchant mills.—Table 14 shows for merchant mills, by states, the quantity and value of wheat flour and of corn meal and corn flour reported for 1919, 1914, and 1909. Table 15 gives, for 1919, similar statistics for rye flour, buckwheat flour, barley meal, hominy and grits, bran and middlings, and feed and offal.

Minnesota, the most important flour-producing state, showed an increase in the production of wheat flour during the decade 1909 to 1919 amounting to

5,767,632 barrels, or 25.4 per cent. Kansas ranked second in this respect, and showed an increase of 5,269,477 barrels, or 48.4 per cent, for the same period. The total output of the two states combined in 1919 represented a little more than one-third (33.7 per cent) of the total production of wheat flour for the United States. Tennessee ranked first in 1919 in the manufacture of corn meal and corn flour, Minnesota first in rye flour, and Pennsylvania first in buckwheat flour.

TABLE 14.—WHEAT FLOUR AND CORN MEAL AND CORN FLOUR PRODUCED BY MERCHANT MILLS, BY STATES: 1919, 1914, AND 1909.

STATE.	WHEAT FLOUR.						CORN MEAL AND CORN FLOUR.					
	1919		1914		1909		1919		1914		1909	
	Quantity (barrels).	Value.	Quantity (barrels).	Value.	Quantity (barrels).	Value.	Quantity (barrels).	Value.	Quantity (barrels).	Value.	Quantity (barrels).	Value.
United States...	132,465,604	\$1,436,444,111	116,403,770	\$543,839,568	105,756,645	\$550,116,254	10,682,952	\$82,059,500	16,327,093	\$54,963,301	21,552,737	\$66,941,005
Alabama.....	47,670	540,681	18,104	102,209	16,296	97,350	343,580	2,652,384	318,466	1,239,191	534,288	1,856,501
Arizona.....	150,254	1,655,632	79,414	493,648	76,526	530,244	8,090	75,034	2,414	9,756	1,902	9,121
Arkansas.....	354,322	3,874,738	291,064	1,510,427	239,003	1,302,017	237,272	1,901,421	468,338	1,544,048	514,502	1,666,670
California.....	3,883,303	37,296,512	1,783,007	10,341,020	1,805,248	10,375,701	113,250	1,064,400	93,165	410,157	50,969	222,399
Colorado.....	1,480,736	14,944,461	1,229,225	4,923,302	977,779	5,172,638	52,287	491,002	10,443	61,354	21,958	74,704
Connecticut.....	341	4,077	44	318	3,465	18,405	23,831	179,669	196,170	630,466	299,647	912,105
Delaware.....	110,494	1,283,733	157,852	797,625	174,224	1,011,511	33,379	401,089	67,790	229,967	77,399	239,772
Florida.....	(1)	(1)	(1)	(1)	(1)	(1)	42,567	308,764	20,082	114,663	24,832	73,054
Georgia.....	401,402	5,769,888	348,421	2,155,527	415,220	2,634,638	541,962	4,050,824	619,110	3,012,837	1,369,971	4,069,704
Idaho.....	1,104,634	11,088,516	571,065	2,261,403	386,022	1,810,581	1,785	18,674	5,048	18,809	180	1,016
Illinois.....	7,261,918	77,749,717	6,043,983	31,904,077	6,336,547	33,992,494	552,385	4,045,507	600,515	1,942,702	738,804	2,168,824
Indiana.....	4,305,436	47,088,134	4,526,879	21,183,688	4,794,847	25,315,671	512,179	4,451,959	934,239	3,080,308	855,409	2,483,265
Iowa.....	1,251,770	13,728,744	1,488,811	7,149,334	1,523,264	7,953,976	145,364	1,106,980	818,590	1,089,155	184,801	582,323
Kansas.....	16,157,221	171,564,543	12,777,682	56,514,360	10,887,744	52,589,913	241,247	1,980,184	388,756	1,371,077	570,941	1,767,903
Kentucky.....	2,689,701	30,317,827	2,728,464	13,880,767	2,832,288	15,921,025	826,775	6,457,901	774,322	2,045,406	984,217	3,071,856
Maine.....	33,697	389,272	8,820	54,598	13,076	87,956	72,596	590,035	659,195	2,150,281	818,597	2,373,095
Maryland.....	1,282,219	13,107,473	1,105,577	5,152,538	1,130,165	6,007,871	128,005	1,019,061	170,431	605,583	230,332	741,075
Massachusetts.....	7,047	91,865	14,272	9,887	50,616	6,016	116,422	832,550	720,254	2,140,998	1,165,288	3,461,181
Michigan.....	2,537,386	28,366,273	3,056,744	16,056,643	3,447,800	18,838,591	84,175	812,361	131,646	461,630	177,189	606,706
Minnesota.....	28,505,036	311,764,407	27,132,155	117,988,654	22,737,404	114,185,351	126,621	1,072,114	53,845	185,008	66,705	204,893
Missouri.....	7,122,417	75,273,500	5,402,391	25,633,116	5,723,536	30,508,109	822,994	6,235,585	763,678	2,641,988	1,020,738	3,129,694
Montana.....	1,271,861	13,794,193	871,018	3,919,318	375,440	1,860,681	(1)	(1)	318	1,509	1,222,670	1,222,670
Nebraska.....	3,416,087	38,062,423	2,383,097	10,944,855	2,267,550	11,451,310	103,560	712,495	230,968	702,795	425,413	1,222,670
Nevada.....	87,862	881,059	40,329	202,624	61,938	380,540	30,798	222,030	135,191	443,482	511,620	1,485,779
New Hampshire.....	86,659	998,947	88,432	514,496	80,141	500,879	40,513	318,494	65,634	234,074	190,451	585,412
New Jersey.....	122,622	1,425,707	167,330	920,775	275,365	1,524,216	3,698	28,542	2,707	10,840	771	3,253
New Mexico.....	93,588	1,050,856	59,445	317,998	55,190	322,556	466,303	2,622,848	1,470,365	4,382,960	2,090,537	5,967,948
New York.....	9,063,389	99,985,220	8,522,011	40,798,737	6,096,628	35,659,891	624,431	4,980,429	543,491	2,043,292	590,872	2,264,852
North Carolina.....	1,315,322	15,423,355	951,805	5,231,853	759,072	4,763,956	205	1,794	445	2,129	1,026	5,124
North Dakota.....	2,225,155	24,907,484	2,165,078	9,864,400	1,825,920	9,034,418	371,042	2,716,482	524,941	1,696,817	865,250	2,528,843
Ohio.....	5,790,288	63,380,697	5,707,781	27,852,222	5,723,536	30,508,109	293,863	2,316,596	286,284	964,488	382,721	1,124,244
Oklahoma.....	3,464,289	37,048,315	2,072,240	9,832,201	2,205,039	10,959,367	567	4,534	2,807	14,050	559	2,236
Oregon.....	3,341,756	34,477,758	1,791,334	7,749,619	1,360,281	6,015,845	271,435	2,051,136	760,299	2,509,596	767,452	2,369,701
Pennsylvania.....	3,312,713	36,821,709	3,975,031	19,795,116	3,749,842	20,150,978	40,970	325,543	25,700	83,003	268,673	728,371
Rhode Island.....	38	462	104	760	38	220	124,086	976,641	71,456	283,632	74,617	253,849
South Carolina.....	49,992	585,521	20,120	103,906	5,590	32,825	3,400	31,200	5,244	18,555	6,845	23,413
South Dakota.....	629,753	7,184,128	920,070	4,458,144	968,286	5,067,797	1,088,123	8,373,779	1,601,617	5,460,920	1,081,746	6,505,710
Tennessee.....	3,085,030	31,413,719	3,083,197	15,620,227	3,009,089	17,267,395	713,288	5,848,489	1,042,654	3,729,947	877,314	2,375,994
Texas.....	4,583,879	52,743,029	4,089,378	21,805,623	3,342,035	19,124,834	3,292	27,663	154	886	259	1,239
Utah.....	545,256	5,710,921	505,224	2,242,417	459,248	2,355,109	211,215	1,540,559	458,617	1,453,199	853,051	2,511,964
Vermont.....	11,530	134,387	8,133	17,467	169	1,014	723,003	6,555,781	1,099,215	3,861,142	1,410,351	4,456,117
Virginia.....	2,207,724	24,311,601	2,161,767	10,702,588	1,898,712	10,263,031	6,433	55,297	620	3,453	6,240	23,669
Washington.....	5,911,381	60,903,485	3,766,070	15,685,353	2,804,242	12,484,701	233,070	1,922,416	233,582	775,034	318,293	986,375
West Virginia.....	555,918	6,645,431	520,949	2,732,789	634,132	3,615,913	209,961	1,173,791	163,531	610,958	85,532	287,740
Wisconsin.....	2,809,320	30,804,789	3,056,954	13,817,821	3,499,965	17,909,089	1,072	11,523	1,646	7,829	1,033	4,094
Wyoming.....	103,748	1,154,906	106,189	580,528	99,537	505,294	56,885	513,798	36,920	127,319	121,272	405,947
All other States ¹	72,752	803,467	20	100	66,682	320,761						

¹ Included in "All other states" to avoid disclosure of individual operations.

² Includes District of Columbia, Louisiana, and Mississippi.

FLOUR-MILL AND GRISTMILL PRODUCTS.

113

TABLE 15.—OTHER PRODUCTS OF MERCHANT MILLS, BY STATES: 1919.

STATE.	RYE FLOUR.		BUCKWHEAT FLOUR.		BARLEY MEAL.		HOMINY AND GRITS.		BRAN AND MIDDINGS.		FEED AND OFFAL.	
	Quantity (barrels).	Value.	Quantity (pounds).	Value.	Quantity (pounds).	Value.	Quantity (pounds).	Value.	Quantity (tons).	Value.	Quantity (tons).	Value.
United States....	2,527,752	\$21,235,808	90,137,407	\$5,244,539	91,809,114	\$3,217,404	283,525,592	\$9,247,224	4,760,326	\$211,435,518	4,566,855	\$262,733,518
Alabama.....	(1)	(1)	(1)	(1)	(1)	(1)	493,205	22,010	3,048	150,225	19,129	1,064,122
Arizona.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	5,732	239,777	8,854	421,566
Arkansas.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	13,244	618,581	34,515	2,243,229
California.....	3,541	33,024	(1)	(1)	19,599,133	769,973	667,951	33,903	129,859	6,682,593	283,206	17,268,767
Colorado.....	5,335	47,406	(1)	(1)	(1)	(1)	(1)	(1)	50,859	1,829,542	49,263	2,617,571
Connecticut.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Delaware.....	1,836	17,112	10,875	938	(1)	(1)	(1)	(1)	69	3,540	36,831	2,297,553
Florida.....	(1)	(1)	176,194	9,310	(1)	(1)	(1)	(1)	5,099	288,592	1,166	73,011
Georgia.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	3,769	230,754
Idaho.....	2,822	21,077	(1)	(1)	(1)	(1)	1,264,950	50,642	21,050	1,075,514	13,733	867,517
Illinois.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	39,907	1,504,845	14,051	791,844
Indiana.....	137,712	1,109,966	850,570	50,103	(1)	(1)	101,199,037	3,306,491	284,744	12,857,317	270,762	16,650,649
Iowa.....	30,695	338,026	757,616	50,829	(1)	(1)	93,958,630	3,222,770	165,615	7,995,893	179,555	10,602,964
Kansas.....	11,166	97,436	1,821,294	118,398	61,502	1,584	3,246,619	101,903	54,516	2,504,998	62,006	3,466,387
Kentucky.....	17,450	153,524	(1)	(1)	(1)	(1)	(1)	(1)	598,119	24,972,803	123,724	6,342,772
.....	809	6,738	(1)	(1)	(1)	(1)	18,397,250	500,635	96,433	4,837,504	58,390	3,454,981
Maine.....	(1)	(1)	1,003,730	71,331	(1)	(1)	(1)	(1)	1,514	67,701	72,620	4,313,434
Maryland.....	835	5,231	1,632,083	91,042	(1)	(1)	(1)	(1)	50,633	2,009,099	16,876	1,035,674
Massachusetts.....	5,792	49,655	43,650	2,536	(1)	(1)	326,350	14,820	(1)	(1)	59,609	3,805,531
Michigan.....	137,750	1,248,024	7,981,873	598,603	832,407	31,053	(1)	(1)	103,752	4,548,040	138,614	8,342,228
Minnesota.....	1,097,252	8,756,612	1,302,611	76,910	59,665,119	2,006,493	(1)	(1)	831,293	34,940,427	494,101	22,248,089
Missouri.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Montana.....	6,403	52,926	9,672	740	2,107,162	59,185	8,073,600	236,176	275,382	12,901,429	242,320	13,495,953
Nebraska.....	138	1,494	(1)	(1)	(1)	(1)	(1)	(1)	46,202	1,689,705	7,427	439,920
Nevada.....	15,201	144,587	99,015	7,068	(1)	(1)	(1)	(1)	119,191	5,093,577	176,364	8,803,487
New Hampshire.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	3,148	111,797	2,160	122,743
.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	3,562	178,140	83,165	1,985,169
New Jersey.....	71,837	628,650	928,241	54,661	(1)	(1)	(1)	(1)	7,823	408,241	47,456	3,186,708
New Mexico.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	4,225	213,443	382	23,589
New York.....	178,850	1,664,362	25,619,032	1,589,400	1,406,671	55,015	(1)	(1)	355,285	15,412,561	532,969	33,508,054
North Carolina.....	1,070	10,542	38,125	2,350	(1)	(1)	(1)	(1)	59,322	2,802,102	14,881	930,808
North Dakota.....	361	3,357	(1)	(1)	(1)	(1)	(1)	(1)	68,267	2,779,831	32,609	1,489,373
Ohio.....	22,044	189,374	3,853,140	220,015	69,500	5,316	(1)	(1)	229,515	10,568,845	192,610	12,063,914
Oklahoma.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	132,036	5,908,371	72,526	4,148,441
Oregon.....	(1)	(1)	4,500	245	1,132,930	20,961	(1)	(1)	98,122	3,800,078	66,239	3,840,156
Pennsylvania.....	103,922	1,539,631	27,331,935	1,576,265	504,775	20,534	(1)	(1)	130,505	7,239,864	299,597	18,002,515
Rhode Island.....	80	896	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	12,522	802,788
South Carolina.....	(1)	(1)	(1)	(1)	(1)	(1)	387,250	15,474	2,277	128,298	6,413	426,827
South Dakota.....	551	5,388	30,804	2,202	(1)	(1)	(1)	(1)	25,615	1,107,880	10,736	541,136
Tennessee.....	(1)	(1)	40,752	2,520	(1)	(1)	(1)	(1)	99,335	4,520,838	127,842	7,288,045
Texas.....	834	8,382	(1)	(1)	(1)	(1)	(1)	(1)	183,437	9,003,810	87,014	5,418,824
Utah.....	465	3,910	(1)	(1)	(1)	(1)	(1)	(1)	22,784	920,776	3,157	366,607
Vermont.....	(1)	(1)	72,175	4,745	(1)	(1)	(1)	(1)	544	26,042	69,464	4,429,667
Virginia.....	3,578	22,432	986,695	55,052	276,730	10,496	(1)	(1)	83,514	4,122,698	29,092	1,664,125
Washington.....	6,772	67,977	(1)	(1)	(1)	(1)	(1)	(1)	194,970	7,561,139	173,093	11,266,474
West Virginia.....	(1)	(1)	2,735,765	169,891	(1)	(1)	(1)	(1)	33,009	1,850,818	31,410	1,964,654
Wisconsin.....	601,360	5,092,950	11,573,754	418,639	761,376	31,188	20,810,186	1,021,825	118,872	5,068,171	301,160	14,802,574
Wyoming.....	313	3,518	(1)	(1)	(1)	(1)	(1)	(1)	3,841	169,641	1,478	81,696
All other states ¹	940	8,701	1,167,306	74,940	5,392,909	196,666	31,202,564	720,570	2,927	146,961	47,167	2,915,778

¹ Included in "All other states" to avoid disclosure of individual operations.

² Includes District of Columbia, Louisiana, and Mississippi.

Classification of wheat flour mills, according to output.—Table 16 shows the number of merchant mills producing wheat flour in the more important states for the censuses of 1919, 1914, and 1909, classified according to the number of barrels produced.

Of the 10,708 merchant mills reporting in 1919, there were 3,975 which produced no wheat flour. From 1914 to 1919 there was a decrease of 143 in the number of mills producing such flour. Increases in number are shown for only two of the five groups—those producing less than 1,000 barrels during the year and those with an output of 100,000 barrels or more. Mills which produced less than 5,000 barrels comprised 71 per cent of the wheat flour mills in 1919

and 69 per cent in 1914. There was an increase of 56 in the number of mills producing 100,000 barrels or more during the five-year period.

Minnesota, the leading state in the production of flour, shows a decrease in the number of wheat flour mills from 1914 to 1919, and shows increases only for two of the five classes of mills—those producing 1,000 to 5,000 barrels and those whose output was 100,000 barrels or more. Decreases in the total number of mills producing wheat flour took place also in New York, Illinois, and Missouri, which ranked third, fourth, and fifth, respectively, in the production of such flour in 1919, as shown by Table 16, but the number increased in Kansas, which ranked second.

TABLE 16.—MERCHANT MILLS MANUFACTURING WHEAT FLOUR, GROUPED ACCORDING TO NUMBER OF BARRELS PRODUCED, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Total number of mills.	Less than 1,000 barrels.	1,000 but less than 5,000 barrels.	5,000 but less than 20,000 barrels.	20,000 but less than 100,000 barrels.	100,000 barrels or more.	STATE.	Census year.	Total number of mills.	Less than 1,000 barrels.	1,000 but less than 5,000 barrels.	5,000 but less than 20,000 barrels.	20,000 but less than 100,000 barrels.	100,000 barrels or more.
United States.....	1919	6,733	2,041	2,739	1,185	494	274	New Jersey.....	1919	58	31	19	8	.....	.....
	1914	6,876	1,821	2,920	1,377	540	218		1914	66	30	25	10	1	.....
	1909	7,342	1,721	3,145	1,733	550	193		1909	100	42	40	17	1	.....
Arkansas.....	1919	96	34	53	7	1	1	New York.....	1919	217	88	59	41	17	12
	1914	58	17	30	9	2	.....		1914	244	101	69	42	19	13
	1909	51	13	30	6	2	.....		1909	270	105	86	49	19	11
California.....	1919	59	10	21	12	10	6	North Carolina.....	1919	290	97	150	38	1	4
	1914	59	10	23	12	9	5		1914	239	48	137	49	5	.....
	1909	66	12	22	19	9	4		1909	208	51	120	84	3	.....
Colorado.....	1919	60	13	15	10	18	4	North Dakota.....	1919	77	17	29	13	11	7
	1914	48	6	13	12	13	4		1914	59	4	17	15	13	7
	1909	48	9	13	14	10	2		1909	64	6	10	26	15	.....
Georgia.....	1919	32	14	9	3	5	1	Ohio.....	1919	492	81	243	131	27	10
	1914	46	29	10	3	3	1		1914	549	88	282	145	23	11
	1909	47	20	18	5	3	1		1909	593	66	296	188	33	10
Idaho.....	1919	64	12	23	12	15	2	Oklahoma.....	1919	103	27	28	18	17	13
	1914	51	9	18	15	9	.....		1914	79	23	15	16	18	7
	1909	48	4	19	21	4	.....		1909	92	15	16	34	22	5
Illinois.....	1919	212	49	57	53	38	15	Oregon.....	1919	97	24	25	26	13	9
	1914	253	64	83	52	42	12		1914	84	21	30	21	9	3
	1909	309	87	87	76	47	12		1909	104	9	46	38	8	3
Indiana.....	1919	352	67	170	81	16	9	Pennsylvania.....	1919	767	313	316	111	23	4
	1914	417	79	197	105	29	7		1914	824	290	392	114	24	4
	1909	463	62	227	148	28	8		1909	917	332	427	141	14	3
Iowa.....	1919	138	55	46	21	10	1	South Dakota.....	1919	61	10	26	17	7	1
	1914	150	53	52	25	11	4		1914	65	2	28	24	9	2
	1909	195	73	64	44	11	3		1909	80	10	31	33	11	1
Kansas.....	1919	213	23	41	38	59	52	Tennessee.....	1919	406	177	166	46	11	6
	1914	199	27	23	41	63	45		1914	409	119	205	63	17	5
	1909	255	46	32	61	81	35		1909	353	79	181	78	10	5
Kentucky.....	1919	344	110	160	54	10	4	Texas.....	1919	130	20	51	25	20	14
	1914	350	64	180	94	10	2		1914	90	10	21	16	32	11
	1909	353	50	188	99	14	2		1909	102	18	20	33	22	9
Maryland.....	1919	201	70	86	24	10	2	Utah.....	1919	75	8	40	23	4	.....
	1914	203	76	87	32	6	2		1914	69	8	28	27	6	.....
	1909	235	79	114	37	3	2		1909	59	3	24	28	4	.....
Michigan.....	1919	262	84	112	45	10	5	Virginia.....	1919	413	147	190	63	11	2
	1914	341	103	142	70	21	5		1914	428	129	224	59	12	4
	1909	389	96	173	87	21	7		1909	348	103	181	47	13	4
Minnesota.....	1919	215	25	82	50	18	40	Washington.....	1919	73	13	9	15	23	13
	1914	240	29	80	67	30	34		1914	70	13	13	14	22	8
	1909	270	22	96	87	33	32		1909	65	5	14	16	24	6
Missouri.....	1919	469	162	188	66	34	21	West Virginia.....	1919	168	78	70	15	5	.....
	1914	477	122	219	84	39	13		1914	163	71	73	14	5	.....
	1909	499	111	237	105	32	14		1909	137	56	70	25	6	.....
Montana.....	1919	56	15	18	8	12	3	Wisconsin.....	1919	144	39	64	29	7	5
	1914	20	3	9	9	6	2		1914	171	75	60	24	8	4
	1909	12	.....	3	5	4	.....		1909	218	69	95	34	14	6
Nebraska.....	1919	190	28	84	53	17	8	All other states.....	1919	204	91	76	29	8	.....
	1914	190	22	74	73	18	3		1914	159	71	61	21	6	.....
	1909	203	14	86	79	23	1		1909	163	64	74	19	6	.....

Output of merchant mills producing 1,000 barrels or more of wheat flour in 1919.—In order to exclude the small merchant mills which grind wheat and other grain chiefly for local trade, Table 17 shows, by states, the quantity of wheat used, the number of barrels of flour manufactured, and its value for those mills producing 1,000 barrels of wheat flour or more in 1919 and 1914.

There was a decrease of 363 in the number of mills producing 1,000 barrels or more of wheat flour between 1914 and 1919, but the output of this class of mills increased 15,909,023 barrels, or 13.8 per cent. Minnesota reported 21.7 per cent of the total number of barrels produced by the mills of this class in 1919 and 23.4 per cent in 1914.

FLOUR-MILL AND GRISTMILL PRODUCTS.

115

TABLE 17.—MERCHANT MILLS PRODUCING 1,000 BARRELS OR MORE OF WHEAT FLOUR, BY STATES: 1919 AND 1914.

STATE.	Census year.	Number of establishments.	Wheat used (bushels).	WHEAT FLOUR PRODUCED.		STATE.	Census year.	Number of establishments.	Wheat used (bushels).	WHEAT FLOUR PRODUCED.	
				Quantity (barrels).	Value.					Quantity (barrels).	Value.
United States.....	1919	4,692	607,086,887	131,595,773	\$1,426,503,672	Kentucky.....	1919	234	12,166,540	2,634,387	\$29,678,795
	1914	5,055	542,620,843	115,686,760	640,107,717		1914	286	12,956,108	2,606,843	13,708,173
Minnesota.....	1919	190	130,809,031	28,493,454	311,627,174	Michigan.....	1919	178	11,819,206	2,498,449	27,926,052
	1914	211	124,267,178	27,117,914	117,908,516		1914	238	14,387,254	3,010,667	15,809,508
Kansas.....	1919	190	73,907,376	16,150,052	171,482,381	North Dakota.....	1919	60	10,041,185	2,215,675	24,881,249
	1914	172	59,919,438	12,772,478	56,489,465		1914	52	10,390,933	2,163,938	9,853,100
New York.....	1919	129	43,203,302	9,026,497	99,673,171	Virginia.....	1919	266	10,121,257	2,137,003	23,514,125
	1914	143	38,030,814	8,402,489	40,641,818		1914	299	9,923,462	2,099,328	10,346,819
Illinois.....	1919	163	33,334,928	7,244,693	77,542,392	Colorado.....	1919	47	6,920,735	1,470,250	14,893,615
	1914	189	30,940,199	6,627,369	31,815,570		1914	42	5,723,392	1,220,731	4,910,323
Missouri.....	1919	307	32,449,767	7,075,525	74,624,403	North Carolina.....	1919	193	5,996,439	1,268,823	14,884,435
	1914	355	25,036,618	5,364,186	26,381,818		1914	191	4,605,653	931,982	5,122,225
Washington.....	1919	60	26,811,418	5,904,805	60,840,166	Montana.....	1919	41	5,686,103	1,263,457	13,681,483
	1914	57	17,540,245	3,760,873	15,661,494		1914	26	4,134,087	870,065	3,908,705
Ohio.....	1919	411	26,016,005	5,738,298	62,821,141	Maryland.....	1919	122	5,532,610	1,247,409	12,708,591
	1914	461	27,681,757	5,667,605	27,640,879		1914	127	5,151,046	1,073,700	4,901,525
Texas.....	1919	110	21,288,674	4,573,889	52,624,883	Iowa.....	1919	78	5,862,581	1,238,257	13,573,743
	1914	80	18,967,182	4,085,185	21,783,232		1914	92	7,039,082	1,473,196	7,066,637
Indiana.....	1919	285	19,897,003	4,276,959	46,765,517	Idaho.....	1919	52	5,095,233	1,100,140	11,039,369
	1914	338	21,030,091	4,494,402	21,016,635		1914	42	2,892,909	668,711	2,247,152
Oklahoma.....	1919	76	15,735,526	3,453,932	36,933,186	South Dakota.....	1919	51	2,932,472	625,355	7,126,827
	1914	56	9,572,492	2,093,536	9,814,280		1914	63	4,485,332	919,448	4,455,574
Nebraska.....	1919	162	15,860,652	3,404,637	37,923,944	West Virginia.....	1919	90	2,730,370	546,762	6,188,739
	1914	168	11,368,083	2,375,810	10,906,829		1914	92	2,357,723	485,699	2,542,048
California.....	1919	49	15,682,750	3,379,705	37,256,765	Utah.....	1919	67	2,662,508	541,166	5,665,917
	1914	49	9,530,954	1,778,345	10,314,493		1914	61	2,502,200	500,722	2,217,469
Oregon.....	1919	73	14,945,031	3,334,000	34,392,635	Georgia.....	1919	18	2,181,977	486,164	5,707,132
	1914	63	8,597,961	1,783,023	7,706,536		1914	17	1,576,623	340,075	2,104,720
Pennsylvania.....	1919	454	15,202,871	3,184,009	35,404,057	Arkansas.....	1919	62	1,558,660	337,559	3,686,061
	1914	534	18,759,381	3,857,993	19,185,814		1914	41	1,360,845	283,878	1,468,050
Tennessee.....	1919	229	12,727,277	3,005,468	30,472,192	New Jersey.....	1919	27	542,324	111,622	1,307,284
	1914	290	14,303,610	3,037,901	15,321,426		1914	36	789,174	168,564	873,821
Wisconsin.....	1919	105	13,273,354	2,796,476	30,453,081	All other states.....	1919	113	3,931,598	823,913	9,200,167
	1914	96	13,675,817	3,080,863	13,681,829		1914	88	3,212,335	578,233	3,206,114

Output of flour mills producing 100,000 barrels or more of wheat flour in 1919.—Table 18 shows, by states, the number of mills producing 100,000 barrels or more of wheat flour, the quantity of wheat used, and the quantity and value of the flour manufactured.

The 274 mills reporting 100,000 barrels or more of wheat flour in 1919 used 67.9 per cent of the total quantity of wheat reported for all establishments in the industry, produced 68.6 per cent of the total num-

ber of barrels of wheat flour, while the value of the output represented 68.4 per cent of the total value of such flour for the United States.

Kansas led in the number of mills of this class, with 52 with an average production of 240,852 barrels. The three states reporting the greatest average output per establishment were Minnesota, with 40 mills, with an average of 672,812 barrels; New York, 12 mills, with an average of 643,856 barrels; and California, 6 mills, with an average of 460,542 barrels.

TABLE 18.—MILLS PRODUCING 100,000 BARRELS OR MORE OF WHEAT FLOUR, BY STATES: 1919.

STATE.	Number of establishments.	Average production per establishment (barrels).	Wheat used (bushels).	Flour produced (barrels).	Value.	STATE.	Number of establishments.	Average production per establishment (barrels).	Wheat used (bushels).	Flour produced (barrels).	Value.
United States..	274	331,495	415,749,379	90,829,763	\$984,602,277	New York.....	12	643,856	36,907,945	7,726,272	\$84,973,640
California.....	6	460,542	12,408,297	2,763,251	30,060,643	North Carolina.....	4	139,026	2,573,538	550,102	6,658,587
Colorado.....	4	147,882	2,609,246	591,526	5,928,993	North Dakota.....	7	238,487	7,505,382	1,669,406	18,760,316
Illinois.....	15	307,882	21,084,061	4,618,227	48,828,532	Ohio.....	10	266,588	12,294,501	2,665,882	29,113,132
Indiana.....	9	252,480	10,433,883	2,272,318	24,732,677	Oklahoma.....	13	192,666	11,326,074	2,504,553	26,604,978
Kansas.....	52	240,852	67,094,101	12,524,284	132,647,538	Oregon.....	9	287,311	11,375,065	2,585,796	26,336,193
Kentucky.....	4	358,741	6,397,928	1,434,965	15,795,499	Pennsylvania.....	4	191,975	3,567,385	767,901	9,575,937
Michigan.....	5	232,150	5,328,619	1,160,751	13,148,497	Tennessee.....	6	240,211	6,784,612	1,441,264	16,323,957
Minnesota.....	40	672,812	123,234,904	26,912,468	293,524,338	Texas.....	14	224,078	14,432,202	3,137,095	36,067,250
Missouri.....	21	212,527	20,605,036	4,463,073	47,816,606	Washington.....	13	343,030	20,062,186	4,459,387	46,264,550
Montana.....	3	185,635	2,456,247	556,905	5,922,147	Wisconsin.....	5	397,308	8,794,599	1,988,538	20,893,239
Nebraska.....	8	238,245	8,860,316	1,905,962	21,476,905	All other states.....	10	212,674	9,624,269	2,125,737	22,673,070

GENERAL TABLES.

The principal data secured by the census inquiry concerning flour mills and gristmills, other than those relating to quantity and value of materials and products, are presented, by states, in Tables 19, 20, and 21.

Comparative summary, by states.—Table 19 relates to merchant mills, and shows, for 1919, 1914, and 1909, the number of establishments, average number of

wage earners, primary horsepower, wages, cost of materials, and value of products.

Detailed statement, by states.—Table 20 gives more detailed statistics for merchant mills for 1919.

Detailed statement for custom mills.—Table 21 gives statistics for 1919 for the mills engaged exclusively in custom grinding.

TABLE 19.—MERCHANT MILLS—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
United States.....	1919	10,708	45,481	876,405	\$50,888	\$1,799,181	\$2,052,434	Maine.....	1919	118	144	4,744	\$147	\$4,709	\$5,443
	1914	10,788	39,718	822,384	24,593	752,270	877,680		1914	148	217	6,025	128	3,959	4,426
	1909	11,691	39,463	853,584	21,464	767,576	883,584		1909	173	225	7,720	101	4,027	4,507
Alabama.....	1919	143	152	4,904	133	3,848	4,565	Maryland.....	1919	247	478	11,351	449	16,357	19,004
	1914	73	125	2,914	48	1,918	2,179		1914	247	473	11,398	241	6,919	8,164
	1909	72	168	3,559	57	2,405	2,770		1909	295	506	13,807	227	8,003	9,298
Arizona.....	1919	12	72	923	98	1,967	2,392	Massachusetts.....	1919	75	123	4,013	130	4,250	4,878
	1914	8	38	536	34	1,065	1,065		1914	105	176	4,900	101	3,424	3,811
	1909	10	54	784	42	1,129	1,317		1909	120	229	5,642	126	4,131	4,632
Arkansas.....	1919	106	267	7,005	243	7,073	8,646	Michigan.....	1919	345	1,128	29,928	1,257	38,185	44,146
	1914	102	282	5,880	123	5,172	5,802		1914	427	1,370	35,321	859	23,299	27,381
	1909	113	312	5,946	122	4,850	5,615		1909	520	1,530	38,991	806	29,359	34,861
California.....	1919	134	1,779	10,866	2,229	56,883	65,448	Minnesota.....	1919	248	6,049	114,764	7,781	337,873	381,249
	1914	132	1,067	13,374	812	19,504	24,079		1914	286	4,564	100,638	3,407	127,315	148,244
	1909	125	948	11,545	732	21,892	25,188		1909	322	4,345	98,849	2,782	124,217	139,136
Colorado.....	1919	120	490	9,074	569	17,597	19,954	Mississippi.....	1919	54	61	1,634	49	1,897	2,062
	1914	83	393	6,740	316	6,436	7,536		1914	17	48	783	14	344	410
	1909	77	282	6,810	220	6,672	7,868		1909	13	18	609	5	131	153
Connecticut.....	1919	64	80	2,351	84	2,083	2,507	Missouri.....	1919	690	3,015	47,546	3,154	98,185	113,297
	1914	85	113	2,071	59	1,631	1,881		1914	641	2,096	39,003	1,122	33,262	38,686
	1909	98	145	3,616	72	1,731	2,024		1909	680	2,198	43,175	1,040	38,826	44,508
Delaware.....	1919	56	95	2,736	95	1,665	2,056	Montana.....	1919	69	360	6,572	\$474	\$14,092	\$16,386
	1914	60	127	3,287	59	1,203	1,483		1914	33	256	4,078	209	3,902	4,890
	1909	65	139	3,349	57	1,500	1,752		1909	12	105	2,313	105	1,693	2,175
District of Columbia.....	1919	3	23	295	26	806	901	Nebraska.....	1919	218	1,063	21,854	1,240	47,559	53,521
	1914	3	5	190	3	72	78		1914	211	682	17,830	514	12,983	15,022
	1909	7	38	556	16	432	506		1909	249	839	19,907	519	15,217	17,836
Florida.....	1919	27	52	1,093	33	470	568	Nevada.....	1919	10	25	482	27	991	1,116
	1914	13	22	352	7	134	166		1914	7	28	465	21	277	387
	1909	6	11	141	5	139	164		1909	8	24	395	24	496	598
Georgia.....	1919	161	371	9,927	314	10,549	11,991	New Hampshire.....	1919	48	83	2,942	96	2,926	3,391
	1914	128	367	8,672	144	5,254	6,084		1914	79	144	4,597	89	2,422	2,734
	1909	105	386	9,052	144	6,728	8,000		1909	105	116	5,502	62	2,809	3,187
Idaho.....	1919	78	304	5,603	361	11,828	13,501	New Jersey.....	1919	150	232	6,631	220	5,036	6,040
	1914	71	188	3,914	155	2,727	3,396		1914	196	341	8,870	188	3,590	4,320
	1909	57	125	3,595	91	2,025	2,480		1909	238	453	10,763	225	4,561	5,538
Illinois.....	1919	322	2,740	37,118	2,926	103,165	116,563	New Mexico.....	1919	30	66	1,631	65	1,092	1,324
	1914	403	2,398	35,793	1,456	42,841	49,493		1914	17	29	761	10	337	425
	1909	461	2,464	38,472	1,271	45,590	51,111		1909	16	28	532	17	354	462
Indiana.....	1919	450	2,280	39,341	2,272	65,740	75,112	New York.....	1919	716	3,012	67,326	3,391	135,634	155,272
	1914	512	2,281	41,350	1,289	32,241	37,488		1914	891	3,070	72,269	1,997	67,423	77,409
	1909	503	2,203	35,502	1,216	35,002	40,541		1909	983	2,990	79,098	1,669	60,470	69,802
Iowa.....	1919	189	509	13,729	578	18,613	21,325	North Carolina.....	1919	374	629	17,148	563	21,046	24,258
	1914	227	790	16,388	486	11,758	14,337		1914	203	588	14,227	231	7,644	8,964
	1909	277	647	18,832	382	10,934	12,871		1909	249	496	11,578	180	7,287	8,501
Kansas.....	1919	385	3,493	59,829	4,146	182,334	206,881	North Dakota.....	1919	87	568	9,064	679	26,223	29,282
	1914	380	2,357	46,015	1,680	64,242	72,895		1914	59	424	7,810	330	10,072	12,030
	1909	501	2,360	46,218	1,448	60,439	68,476		1909	84	435	8,907	283	10,055	11,685
Kentucky.....	1919	533	1,584	26,852	1,423	39,581	45,774	Ohio.....	1919	577	2,122	47,830	2,439	77,102	89,397
	1914	442	1,447	25,151	658	17,419	21,229		1914	649	2,363	53,524	1,506	38,957	45,171
	1909	440	1,401	24,773	591	18,664	22,365		1909	673	2,585	52,250	1,415	41,353	48,093
Louisiana.....	1919	17	48	600	43	1,188	1,384	Oklahoma.....	1919	227	958	16,573	1,021	44,180	49,844
	1914	7	31	313	14	624	687		1914	253	700	14,050	420	14,367	16,689
	1909	11	82	895	33	840	943		1909	295	842	16,400	473	16,493	19,144

FLOUR-MILL AND GRISTMILL PRODUCTS.

117

TABLE 19.—MERCHANT MILLS—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909—Continued.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
Expressed in thousands.							Expressed in thousands.								
Oregon.....	1919	116	822	13,314	\$1,166	\$37,802	\$42,550	Utah.....	1919	77	240	5,030	\$269	\$8,552	\$7,569
	1914	95	450	8,565	330	9,827	11,193		1914	70	198	3,519	144	2,637	3,156
	1909	114	394	11,541	278	7,067	8,891		1909	60	184	3,312	131	2,511	3,131
Pennsylvania.....	1919	1,138	2,198	55,928	2,259	59,985	69,447	Vermont.....	1919	108	169	8,051	158	5,332	6,144
	1914	1,265	2,595	61,790	1,424	37,097	43,626		1914	125	179	7,355	105	3,959	4,143
	1909	1,450	2,432	69,212	1,188	38,170	44,783		1909	133	156	8,714	76	3,528	4,133
Rhode Island.....	1919	25	29	1,253	34	978	1,133	Virginia.....	1919	537	937	22,632	826	30,928	36,154
	1914	20	74	1,062	29	690	798		1914	533	1,082	23,086	463	15,390	18,084
	1909	18	39	1,046	22	790	886		1909	458	1,014	21,454	369	15,164	17,598
South Carolina.....	1919	30	70	1,352	44	1,805	2,147	Washington.....	1919	119	1,536	20,785	2,144	73,155	81,141
	1914	37	30	1,046	12	346	421		1914	100	928	18,401	744	20,272	23,665
	1909	10	23	406	7	308	351		1909	96	644	11,773	464	15,474	17,853
South Dakota.....	1919	80	221	5,369	283	7,891	8,873	West Virginia.....	1919	203	371	8,704	378	10,530	13,077
	1914	72	255	6,412	184	4,722	5,557		1914	220	381	9,996	218	5,928	7,053
	1909	95	285	7,304	187	5,330	6,208		1909	207	452	9,950	210	6,601	7,696
Tennessee.....	1919	661	1,472	27,533	1,281	45,176	51,913	Wisconsin.....	1919	221	1,348	30,245	1,561	51,737	58,304
	1914	512	1,497	28,246	642	22,072	26,414		1914	252	1,116	26,350	737	24,980	28,697
	1909	454	1,577	27,176	559	25,280	29,070		1909	322	1,184	31,903	695	27,038	31,667
Texas.....	1919	222	1,567	23,854	1,681	63,400	73,064	Wyoming.....	1919	28	37	1,381	49	1,133	1,411
	1914	191	1,300	19,968	798	29,573	35,110		1914	16	33	1,163	27	555	722
	1909	238	1,216	20,765	669	28,657	32,485		1909	13	20	885	21	583	746

MANUFACTURES.

TABLE 20.—MERCHANT MILLS—DETAILED

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Average number.	Wage earners.		Total.	16 and over.		Under 16.		Capital. Dollars. 801,624,507	Salaries and wages.			
					Male.	Female.		Maximum month.	Minimum month.		Male.	Female.	Male.	Female.		Officials.	Clerks, etc.		
United States.....	10,708	75,769	11,937	6,127	8,834	3,390	45,481	De 49,393	Mh 42,179	49,932	48,688	1,170	72	2	Dollars. 801,624,507	Dollars. 17,203,661	Dollars. 14,809,369		
Alabama.....	143	379	177	24	21	5	152	De 174	My 134	170	176	.....	.....	.....	1,885,781	58,761	37,995
Arizona.....	12	113	3	22	11	5	72	Jy 87	Ja 64	73	73	.....	.....	.....	3,209,015	62,020	22,913
Arkansas.....	166	596	223	59	30	17	267	Se 287	Je 247	297	294	1	2	.....	3,683,631	109,633	78,944	
California.....	134	2,579	65	144	439	152	1,779	No 2,005	Mh 1,615	2,052	1,858	192	2	.....	27,077,832	355,585	802,388	
Colorado.....	120	739	39	104	88	15	490	De 556	Je 400	554	554	.....	.....	.....	8,850,998	287,339	150,349
Connecticut.....	64	170	66	14	6	4	80	De 90	Mh 73	93	93	.....	.....	.....	1,932,131	19,058	8,598
Delaware.....	56	176	71	2	6	2	95	Mh 97	Je 93	98	98	.....	.....	.....	988,397	5,800	9,552
District of Columbia.....	3	36	1	6	6	.....	23	Au 28	Ja 18	28	28	.....	.....	.....	281,530	16,810	5,200
Florida.....	27	91	27	7	4	1	52	Jy 57	Ap 48	55	55	.....	.....	.....	281,712	10,324	4,980
Georgia.....	161	679	191	60	45	12	371	No 400	Je 341	418	415	1	2	.....	4,085,258	184,931	99,656	
Idaho.....	78	468	52	50	42	20	304	De 344	Jy 260	346	343	3	.....	.....	8,797,938	132,212	73,860
Illinois.....	322	4,007	331	362	418	156	2,740	Se 2,937	Mh 2,507	2,983	2,938	45	.....	.....	46,268,650	1,337,318	742,806
Indiana.....	450	3,471	439	280	265	157	2,280	Se 2,473	Fe 2,084	2,394	2,323	71	.....	.....	29,939,740	750,807	514,561
Iowa.....	189	928	210	82	79	39	500	De 576	Jy 475	588	578	7	3	.....	9,116,142	199,066	141,705	
Kansas.....	385	5,283	341	567	629	258	3,493	Se 4,053	Je 3,048	4,066	3,994	71	1	.....	73,137,213	1,872,000	1,227,501	
Kentucky.....	533	2,830	741	168	246	91	1,584	An 1,730	Mh 1,423	1,658	1,603	53	2	.....	22,789,346	448,485	487,429	
Louisiana.....	17	74	11	9	6	.....	48	No 63	Je 35	61	59	2	.....	.....	597,764	13,435	11,240
Maine.....	118	269	114	25	6	10	144	De 150	An 134	169	154	15	.....	.....	2,706,040	51,470	10,595
Maryland.....	247	931	286	63	79	30	478	De 524	Ja 438	523	514	9	.....	.....	7,503,887	151,610	102,098
Massachusetts.....	75	238	79	18	7	11	123	De 138	Mh 116	143	135	8	.....	.....	3,135,522	32,931	15,652
Michigan.....	345	1,947	400	166	145	108	1,128	Ja 1,266	Je 1,022	1,224	1,125	99	.....	.....	18,096,143	399,982	266,556
Minnesota.....	248	10,686	180	612	2,988	857	6,049	De 6,504	Mh 5,607	6,561	6,380	174	7	.....	111,366,446	2,021,226	3,870,348	
Mississippi.....	54	127	33	7	6	.....	61	Oc 65	Ap 58	62	62	.....	.....	.....	806,420	14,045	7,038
Missouri.....	690	4,693	754	420	336	168	3,015	Oc 3,583	Je 2,722	3,190	3,079	109	2	.....	46,760,101	1,149,853	647,838	
Montana.....	69	566	33	77	67	29	390	Mh 405	Jy 244	384	376	8	.....	.....	9,727,396	150,609	141,556
Nebraska.....	218	1,895	269	232	245	96	1,063	De 1,195	Je 981	1,176	1,141	35	1	.....	10,122,295	612,372	470,524	
Nevada.....	10	49	4	13	4	3	25	Oc 31	Je 17	29	28	1	.....	.....	766,235	22,094	5,925
New Hampshire.....	48	160	60	6	9	2	83	De 96	Je 75	97	97	.....	.....	.....	1,419,428	29,400	10,206
New Jersey.....	150	471	171	32	19	17	232	My 239	Jy 224	240	237	2	1	.....	3,024,290	52,609	32,508	
New Mexico.....	30	119	27	18	5	3	66	Se 82	Fe 52	82	82	.....	.....	.....	1,023,473	16,156	7,177
New York.....	716	4,881	824	325	490	230	3,012	Oc 3,322	Mh 2,625	3,376	3,290	85	1	.....	54,599,928	1,214,734	844,814	
North Carolina.....	374	1,255	451	103	56	16	629	No 671	Je 594	671	664	2	5	.....	7,408,004	175,657	97,893	
North Dakota.....	87	748	53	73	42	12	568	Oc 619	Jy 538	582	577	3	2	.....	7,745,781	152,756	82,810	
Ohio.....	577	3,563	717	313	228	183	2,122	Se 2,281	Fe 1,937	2,335	2,318	13	2	2	32,284,802	926,752	453,835		
Oklahoma.....	227	1,630	224	163	218	67	958	Au 1,098	My 763	1,095	1,092	17	16	.....	18,746,451	423,717	374,804	
Oregon.....	116	1,232	50	142	113	56	822	De 959	Jy 652	954	929	25	.....	.....	23,099,592	387,018	214,125
Pennsylvania.....	1,138	4,113	1,402	206	195	112	2,198	De 2,349	Fe 2,133	2,358	2,325	25	8	.....	32,373,587	469,908	429,998	
Rhode Island.....	25	66	21	6	2	8	29	Ja 31	Jy 26	30	30	.....	.....	.....	830,185	9,850	8,389
South Carolina.....	30	120	26	21	.....	3	70	De 84	Fe 56	84	83	.....	.....	.....	690,968	33,298	12,413
South Dakota.....	80	346	39	50	17	19	221	Ja 256	Je 196	220	228	1	.....	.....	3,746,218	110,002	43,055
Tennessee.....	661	2,320	889	216	178	65	1,472	Oc 1,657	Je 1,297	1,575	1,566	6	3	.....	19,477,871	442,705	324,988	
Texas.....	222	2,403	229	237	314	56	1,567	De 1,791	Ja 1,394	1,739	1,734	3	2	.....	40,453,216	697,532	557,385	
Utah.....	77	426	86	60	19	12	249	No 284	Ja 228	268	256	11	1	.....	3,323,942	84,630	35,530	
Vermont.....	108	341	132	18	11	11	169	De 182	Jy 159	187	183	4	.....	.....	3,035,058	29,672	17,122
Virginia.....	537	1,937	695	161	89	55	937	Se 994	Ap 891	970	966	2	2	.....	23,523,470	305,350	176,381	
Washington.....	119	2,153	67	175	272	103	1,536	No 1,829	Jy 1,332	1,785	1,680	53	2	.....	39,058,570	517,564	552,184	
West Virginia.....	203	754	251	53	63	16	371	De 391	My 355	394	385	6	3	.....	5,520,372	155,170	98,680	
Wisconsin.....	221	2,091	239	146	263	95	1,348	Oc 1,553	Fe 1,187	1,471	1,461	8	2	.....	16,946,838	470,662	486,741	
Wyoming.....	28	88	26	15	7	3	37	Ja 52	Jy 23	59	59	.....	.....	.....	1,114,923	20,796	8,387

¹ Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

* Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

FLOUR-MILL AND GRISTMILL PRODUCTS.

119

STATEMENT, BY STATES: 1919.

STATE.	EXPENSES—continued.						Value of products.	Value added by manufacture.	POWER.						Electric horsepower generated in establishments reporting.
	Salaries and wages—Con.		Rent and taxes.		For materials.				Primary horsepower.						
	Wage earners.	For contract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.				Rented. ²	
										Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. ¹		
United States.	Dollars. 50,888,383	Dollars. 942,256	Dollars. 1,003,972	Dollars. 17,599,395	Dollars. 1,793,901,111	Dollars. 15,279,876	Dollars. 2,052,434,385	Dollars. 253,253,398	876,405	302,826	26,763	06,291	185,087	264,438	46,113
Alabama.....	132,981	1,312	6,775	11,402	3,793,875	54,095	4,565,179	717,239	4,991	1,305	.....	924	591	2,171	33
Arizona.....	98,435	813	.....	20,403	1,937,200	29,719	2,392,089	426,170	928	235	.....	80	180	453	.....
Arkansas.....	213,403	2,022	10,748	90,368	6,950,655	122,326	8,645,569	1,572,588	7,005	2,638	.....	1,317	609	2,881	45
California.....	2,229,241	10,088	27,912	432,702	59,476,650	406,056	65,448,352	8,565,646	16,866	3,299	10	544	420	12,693	618
Colorado.....	509,327	421	4,919	405,112	17,429,570	167,050	19,954,119	2,357,490	9,074	4,659	.....	637	806	2,972	72
Connecticut.....	84,520	200	6,302	57,289	2,067,213	15,872	2,507,114	424,029	2,351	566	.....	178	677	930	.....
Delaware.....	95,341	.....	6,504	6,707	1,613,870	21,522	2,055,735	390,343	2,736	295	.....	584	1,727	130	.....
Dist. of Columbia.....	26,082	.....	900	5,167	802,799	3,230	900,534	94,505	295	100	.....	.....	150	45	.....
Florida.....	33,057	.....	889	3,593	461,421	9,009	568,023	97,933	1,093	559	.....	222	35	256	.....
Georgia.....	313,574	100	10,432	142,760	10,439,199	109,586	11,991,429	1,442,644	9,927	2,686	180	926	2,826	3,309	145
Idaho.....	360,653	1,047	11,717	101,086	11,716,334	111,584	13,501,088	1,673,170	5,603	15	.....	75	1,217	4,296	.....
Illinois.....	2,025,744	6,051	20,238	1,556,683	102,417,294	748,158	116,562,915	13,397,463	37,118	26,810	1,121	1,261	708	7,713	2,181
Indiana.....	2,272,538	606,485	16,150	690,578	61,984,283	755,752	75,111,435	9,371,490	39,341	22,596	1,710	2,917	3,188	8,930	4,240
Iowa.....	578,181	1,547	7,555	144,508	18,372,312	210,759	21,324,678	2,711,616	13,729	5,126	.....	1,561	3,153	3,859	530
Kansas.....	4,146,056	17,823	23,507	2,606,490	180,751,636	1,581,842	200,881,300	24,547,522	59,829	22,177	4,250	7,009	5,863	20,530	4,863
Kentucky.....	1,422,801	2,673	21,596	241,095	30,114,643	466,318	45,773,798	6,192,537	26,852	13,227	206	5,847	3,174	4,398	952
Louisiana.....	43,134	.....	2,094	3,128	1,179,353	8,591	1,384,074	193,130	600	.....	.....	245	355	.....	.....
Maine.....	147,074	.....	10,684	26,199	4,677,570	31,602	5,442,728	733,556	4,744	115	75	200	2,015	2,219	.....
Maryland.....	449,132	3,612	22,100	93,553	16,165,388	189,083	19,004,169	2,646,698	11,351	2,909	45	1,929	3,772	2,696	40
Massachusetts.....	129,996	152	18,250	25,303	4,214,481	35,055	4,878,212	628,676	4,013	234	.....	120	1,162	2,497	.....
Michigan.....	1,256,772	10,144	43,809	251,841	37,776,280	408,815	44,144,434	5,959,339	20,928	9,560	845	2,044	9,767	7,712	2,210
Minnesota.....	7,780,555	45,933	669,266	3,355,611	335,682,145	2,190,367	381,248,891	48,376,379	114,764	36,591	14,316	1,017	32,420	30,420	18,947
Mississippi.....	48,678	150	3,391	14,847	1,879,641	17,167	2,091,663	194,855	1,634	450	.....	455	.....	729	.....
Missouri.....	3,153,880	8,615	33,305	692,342	97,131,800	1,052,924	113,297,359	15,112,635	47,546	25,646	250	6,321	2,623	12,760	535
Montana.....	474,533	.....	15,332	183,840	13,936,735	155,521	16,386,055	2,293,799	6,672	1,720	.....	529	250	4,073	125
Nebraska.....	1,240,076	11,405	14,515	305,462	47,078,841	480,459	53,521,388	5,962,088	21,854	5,415	225	3,742	4,720	7,752	760
Nevada.....	27,347	.....	640	0,271	981,807	9,508	1,116,199	124,884	482	40	.....	77	190	175	.....
New Hampshire.....	95,539	600	1,312	53,955	2,914,745	11,569	3,391,346	465,032	2,042	665	.....	169	1,434	674	30
New Jersey.....	219,895	2,205	18,024	25,663	4,992,500	43,188	6,040,151	1,004,463	6,631	562	30	1,147	4,367	525	18
New Mexico.....	64,551	86	720	8,362	1,060,505	31,890	1,324,340	231,945	1,631	490	.....	456	391	324	.....
New York.....	3,390,791	28,767	188,015	920,031	134,849,794	783,630	155,272,104	19,633,376	67,326	14,221	2,761	7,276	19,311	23,757	1,877
North Carolina.....	563,406	6,480	9,113	174,320	20,765,483	280,106	21,258,213	3,212,624	17,148	3,410	.....	1,592	5,695	6,442	85
North Dakota.....	679,496	.....	1,245	173,707	25,901,190	321,905	26,282,056	3,058,961	9,604	7,407	85	1,062	250	860	688
Ohio.....	2,430,116	1,800	22,811	781,557	76,334,609	767,472	80,806,619	12,294,538	47,530	22,493	75	10,737	6,211	8,314	1,236
Oklahoma.....	1,021,017	3,800	5,695	726,115	43,812,330	367,765	49,843,600	5,663,705	10,573	7,590	30	5,007	238	3,699	1,031
Oregon.....	1,165,868	30,139	19,788	274,692	37,559,277	242,471	42,549,987	4,748,239	13,314	447	.....	402	3,147	9,318	34
Pennsylvania.....	2,259,132	8,884	103,521	223,614	59,440,485	544,302	69,446,449	9,461,662	55,028	14,734	180	8,333	23,093	9,588	454
Rhode Island.....	33,796	.....	875	7,133	993,405	14,414	1,132,723	154,904	1,253	220	.....	110	302	621	.....
South Carolina.....	44,147	.....	1,164	5,456	1,778,356	26,701	2,147,216	342,169	1,352	505	20	124	68	635	.....
South Dakota.....	282,601	6,332	3,121	67,715	7,751,923	139,170	8,873,203	982,105	5,369	2,602	75	1,081	295	1,316	81
Tennessee.....	1,281,085	52,004	12,245	333,300	44,753,314	423,033	51,912,531	6,736,184	27,533	13,503	25	3,955	6,176	3,814	292
Texas.....	1,680,663	15,957	22,474	603,418	62,884,614	515,057	73,064,361	9,664,690	23,854	8,296	.....	5,694	828	9,036	1,674
Utah.....	268,769	6,948	24,080	65,942	6,483,856	68,371	7,569,434	1,017,207	5,030	100	.....	80	2,364	2,466	137
Vermont.....	158,210	4,922	6,185	32,886	5,310,823	21,473	6,143,040	811,044	8,051	105	.....	288	5,081	2,577	260
Virginia.....	825,687	21,039	33,231	280,607	30,691,260	236,582	36,154,105	5,226,263	22,632	3,622	215	2,731	11,523	4,541	293
Washington.....	2,144,047	17,878	30,808	621,684	72,753,382	401,560	81,141,020	7,986,078	20,785	2,650	.....	305	1,084	15,846	260
West Virginia.....	377,890	1,105	7,103	114,739	10,417,938	112,461	13,076,542	2,516,113	8,704	2,425	.....	3,297	1,480	1,502	513
Wisconsin.....	1,500,828	3,217	134,723	510,065	51,249,929	483,955	58,304,432	6,567,548	30,245	7,740	25	1,332	9,333	11,815	881
Wyoming.....	48,048	.....	150	11,008	1,165,363	17,557	1,411,284	228,364	1,381	486	.....	262	230	403	23

¹ Same number reported for one or more other months.

MANUFACTURES.

TABLE 21.—CUSTOM MILLS—STATISTICS, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
United States.....	10,427	14,828	12,449	245	2,134	218,894	\$23,871,215	\$174,881	\$1,779,936	\$78,957,895	\$94,784,628	\$15,827,133
Alabama.....	1,132	1,432	1,349	5	78	19,912	1,141,207	500	79,339	4,723,708	5,723,095	999,387
Arkansas.....	404	666	622	3	41	8,752	599,436	1,000	24,858	1,519,827	1,666,634	446,807
California.....	7	13	5	1	7	122	70,100	200	7,355	149,914	181,612	81,608
Colorado.....	7	10	5	1	4	165	66,095	1,050	4,891	107,640	120,683	13,043
Connecticut.....	47	64	49	1	14	1,410	228,560	1,750	14,774	412,611	498,748	86,137
Delaware.....	5	6	5	.....	1	148	9,250	.....	900	29,583	36,595	7,012
Florida.....	99	124	118	.....	6	1,643	128,237	.....	9,475	380,305	476,075	95,770
Georgia.....	1,069	1,606	1,300	12	294	20,401	2,100,478	9,060	174,084	5,933,481	7,154,599	1,221,118
Idaho.....	6	8	5	1	2	204	16,560	750	2,803	113,812	127,833	14,021
Illinois.....	120	195	148	2	45	3,916	781,893	1,430	41,696	2,618,972	3,193,058	574,086
Indiana.....	131	232	130	36	66	4,134	1,441,720	16,754	45,926	1,515,593	1,772,733	257,140
Iowa.....	120	206	155	1	50	4,042	638,527	600	41,503	2,574,078	2,971,103	396,425
Kansas.....	28	30	24	1	5	679	157,938	300	4,024	185,531	234,955	49,424
Kentucky.....	783	981	938	2	41	8,925	716,116	1,200	27,007	2,177,063	2,605,859	488,790
Louisiana.....	60	79	74	.....	5	1,212	55,812	.....	4,839	143,276	177,607	34,331
Maine.....	22	30	23	1	6	630	122,027	300	5,026	259,530	316,107	50,577
Maryland.....	66	86	71	.....	15	1,330	179,805	.....	10,422	465,996	556,547	90,551
Massachusetts.....	10	16	12	.....	4	390	46,384	.....	4,292	129,747	151,150	21,412
Michigan.....	185	313	183	24	106	6,898	1,588,117	28,159	123,752	4,523,400	5,302,793	779,393
Minnesota.....	184	249	181	6	62	4,770	777,129	2,420	66,449	4,330,262	4,956,596	626,334
Mississippi.....	598	790	731	9	50	13,253	520,726	2,260	38,498	1,830,290	2,299,950	469,660
Missouri.....	251	332	296	1	35	4,126	549,902	636	25,212	1,071,773	1,318,391	249,618
Montana.....	7	8	3	1	4	236	59,554	1,200	5,730	95,954	116,073	20,119
Nebraska.....	6	8	6	.....	2	122	68,462	.....	2,400	33,368	41,030	7,662
New Hampshire.....	12	21	17	.....	4	378	52,438	.....	4,940	59,389	69,812	10,423
New Jersey.....	24	28	24	.....	4	826	104,388	.....	3,446	182,031	220,739	38,708
New Mexico.....	10	18	11	1	6	204	59,700	75	5,577	62,565	80,621	18,056
New York.....	225	359	267	6	86	8,920	1,515,530	14,253	86,332	2,589,732	3,127,538	587,806
North Carolina.....	552	784	663	1	120	11,942	1,416,858	.....	107,032	4,345,080	5,184,382	839,302
North Dakota.....	98	109	89	2	18	2,036	357,070	1,543	15,682	1,800,135	2,124,677	324,542
Ohio.....	171	350	190	47	113	5,787	1,601,188	33,887	119,178	2,464,123	2,989,096	524,973
Oklahoma.....	96	120	114	.....	6	1,510	185,028	.....	5,826	350,847	431,360	80,513
Oregon.....	12	16	15	.....	1	208	54,066	.....	1,500	66,561	87,138	20,577
Pennsylvania.....	393	588	458	7	123	10,634	2,191,034	2,640	102,100	3,774,138	4,615,270	841,132
South Carolina.....	286	475	352	4	119	5,615	585,325	4,025	67,495	1,845,524	2,201,909	356,385
South Dakota.....	33	43	36	1	6	760	151,065	800	5,746	567,831	663,394	95,563
Tennessee.....	1,072	1,389	1,337	2	50	12,836	1,117,011	200	30,182	3,078,587	3,856,298	777,711
Texas.....	325	500	397	17	86	8,432	827,652	9,358	51,168	1,113,766	1,426,911	318,145
Utah.....	21	36	21	3	12	721	195,822	2,051	13,853	256,314	349,544	93,230
Vermont.....	25	40	28	.....	12	783	117,108	.....	9,717	249,189	329,573	80,384
Virginia.....	788	1,141	972	13	156	14,687	2,585,463	11,318	130,123	4,842,886	6,124,986	1,282,100
Washington.....	35	43	37	.....	6	579	120,256	.....	7,287	888,214	954,732	66,518
West Virginia.....	446	575	538	6	31	6,746	807,904	4,380	25,245	1,733,900	2,216,273	482,373
Wisconsin.....	382	688	431	27	230	17,735	2,784,440	20,776	220,272	13,383,729	15,339,862	1,956,133
All other states.....	5	21	19	.....	2	95	8,394	.....	2,050	26,540	30,578	4,038

GLUCOSE AND STARCH.

GENERAL STATISTICS.

General character of the industry.—This report presents statistics for establishments engaged primarily in the manufacture of glucose and starch. Since some of the establishments reported the manufacture of both products, separate statistics for each have no special significance. In all tables, except Table 1, only combined figures are presented.

Importance and growth of the industry.—Table 1 summarizes the statistics for the glucose and starch industry as a whole since 1904, with percentages of increase, and presents a summary of the statistics for each of the two classes of establishments—(1) those engaged primarily in the manufacture of glucose and (2) those engaged primarily in the manufacture of starch—as reported at the censuses of 1919, 1914, 1909, and 1904, with percentages of increase.

The large increases from 1914 to 1919, in salaries and wages, cost of materials, and value of products are due largely to the general increase in cost of production following the World War and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes."

States, ranked by value of products.—Measured by value of products, the states engaged primarily in the manufacture of glucose and starch rank as follows: (1) Illinois, (2) New Jersey, (3) Iowa, (4) Indiana, (5) New York, (6) Michigan, (7) Maine, (8) Ohio, (9) Missouri, (10) Connecticut, (11) Kentucky, (12) Minnesota, (13) Florida, (14) Massachusetts, (15) Nebraska, (16) Oregon.

Detailed statistics for states that can be shown without disclosing individual operations will be found in Table 13.

Persons engaged in the industry.—The age classification of the average number of wage earners in Table 2 is an estimate obtained by the method described in the "Explanation of terms." The classification, by sex, for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. Figures for states will be found in Table 13.

Wage earners, by months.—The statistics for wage earners in Table 3 show the regularity of employment, or the reverse, together with the percentage which the minimum number forms of the number reported for the maximum month.

Average number of wage earners, by prevailing hours of labor: 1919, 1914, and 1909.—Table 4 shows a general tendency in this industry toward a reduction in the number of hours of labor per week. In 1914, 98.4 per cent of the total number of wage earners were employed in establishments where the prevailing hours were 60 or more, as against 38.4 per cent in 1919.

Size of establishments, by average number of wage earners.—Table 5 discloses the significant fact that 42 establishments, or 75 per cent of the total number for the industry, employed fewer than 100 wage earners; while 14 establishments, or 25 per cent, employed 96.5 per cent of the total average number.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. The table, therefore, gives combined figures for these two groups or all items for 1909 and for the average number of wage earners and value added by manufacture for 1914. The statistics in Table 6 show the degree of concentration of production in large establishments.

Character of ownership.—Table 7 emphasizes the predominance of the corporate form of ownership. Corporations owned 53.6 per cent of the total number of establishments for the industry in 1919, employed 98.4 per cent of the total average number of wage earners, and reported 99.4 per cent of the value of products.

Number and horsepower of types of prime movers.—Table 8 shows, from 1914 to 1919, an increase of 26.9 per cent in total horsepower for the industry due largely to the increase in rented power.

Fuel consumed.—Table 9 shows the principal kinds of fuel used in the industry for 1919 and 1914. In 1914 gasoline and other volatile oils were included in fuel oils.

MANUFACTURES.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904	PER CENT OF INCREASE. ¹		
					1914-1919	1909-1914	1904-1909
TOTAL FOR THE INDUSTRY.							
Number of establishments.....	56	89	118	140	.....	-24.6	-15.7
Persons engaged.....	8,694	5,957	5,827	5,409	45.9	2.2	7.7
Proprietors and firm members.....	37	70	86	111	.....	.....	-22.5
Salaried employees.....	862	1,378	968	619	-37.4	42.4	56.4
Wage earners (average number).....	7,795	4,509	4,773	4,679	72.9	-5.5	2.0
Primary horsepower.....	52,846	41,639	28,257	35,986	20.9	47.4	-21.5
Capital.....	\$58,182,682	\$43,642,343	\$38,866,419	\$24,053,008	33.3	12.3	61.6
Salaries and wages.....	14,174,845	5,489,697	4,079,722	3,295,711	158.2	34.6	28.8
Salaries.....	2,212,302	1,940,132	1,413,239	654,652	14.0	37.3	115.9
Wages.....	11,962,483	3,549,565	2,666,483	2,641,059	237.0	33.1	1.0
Paid for contract work.....	551	16,394	3,820	(²)	-96.6	329.2	.....
Rent and taxes.....	4,034,324	217,529	369,028	113,089	1,754.6	-41.1	226.8
Cost of materials.....	130,328,848	40,207,592	36,898,771	* 25,518,870	224.1	9.0	44.6
Value of products.....	186,256,260	52,615,401	48,799,311	32,649,836	254.0	7.8	49.5
Value added by manufacture.....	55,927,412	12,407,809	11,900,540	7,180,960	350.7	4.3	66.9
GLUCOSE.							
Number of establishments.....	9	7	8	9	.....	.....	.....
Persons engaged.....	5,569	3,647	3,454	3,247	52.7	5.6	6.4
Proprietors and firm members.....	1	.....	6	.....	.....	.....	.....
Salaried employees.....	559	918	600	371	-39.1	53.0	61.7
Wage earners (average number).....	5,009	2,729	2,848	2,876	83.5	-4.2	-1.0
Primary horsepower.....	34,640	24,580	16,923	(²)	40.9	45.3	.....
Capital.....	\$35,104,327	\$26,572,403	\$21,446,323	\$17,045,313	32.1	23.9	25.8
Salaries and wages.....	9,288,690	3,638,197	2,594,912	2,162,837	155.3	40.2	30.0
Salaries.....	1,357,733	1,311,217	957,588	388,257	3.5	36.9	140.6
Wages.....	7,930,957	2,326,980	1,637,324	1,774,580	240.8	42.1	-7.7
Paid for contract work.....	.....	14,522	.....	(²)	.....	.....	.....
Rent and taxes.....	2,868,931	110,997	232,385	* 77,138	2,280.8	-48.4	201.3
Cost of materials.....	95,610,637	29,909,655	25,271,792	20,258,022	219.7	18.4	24.7
Value of products.....	134,548,109	38,619,383	32,930,918	24,566,932	248.4	17.3	34.0
Value added by manufacture.....	38,937,472	8,709,728	7,659,126	4,308,910	347.1	13.7	77.8
STARCH.							
Number of establishments.....	47	82	110	131	.....	-25.4	-16.0
Persons engaged.....	3,125	2,310	2,373	2,162	35.3	-2.2	9.8
Proprietors and firm members.....	36	70	80	111	.....	.....	-27.9
Salaried employees.....	303	460	368	248	-34.1	25.0	48.4
Wage earners (average number).....	2,786	1,780	1,925	1,803	55.5	-7.5	6.8
Primary horsepower.....	18,206	17,049	11,334	(²)	6.8	50.4	.....
Capital.....	\$23,078,355	\$17,069,940	\$17,420,091	\$7,007,695	35.2	-2.0	148.6
Salaries and wages.....	4,886,155	1,851,500	1,484,810	1,132,874	163.9	24.7	31.1
Salaries.....	854,629	628,015	455,651	266,395	35.9	38.0	71.0
Wages.....	4,031,526	1,222,485	1,029,159	866,479	229.3	18.8	18.8
Paid for contract work.....	551	1,872	3,820	(²)	-70.6	.....	.....
Rent and taxes.....	1,165,393	97,532	137,243	* 35,951	1,094.9	-28.9	281.8
Cost of materials.....	34,718,211	10,297,937	11,626,970	5,260,854	237.1	-11.4	121.0
Value of products.....	51,708,151	13,906,018	15,868,393	8,082,904	269.4	-11.8	96.3
Value added by manufacture.....	16,989,940	3,698,081	4,241,414	2,822,050	359.4	-12.8	50.3

¹ A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.
² Figures not available.

* Exclusive of internal revenue.

* Value of products less cost of materials.

TABLE 2.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	
					Male.	Fe- male.						Male.	Fe- male.
All classes.....	1919	8,694	7,779	915	89.5	10.5	Clerks and other subordinate salaried employees.....	1919	465	328	137	70.5	29.5
	1914	5,957	5,386	571	90.4	9.6		1914	1,208	1,006	202	83.3	16.7
	1909	5,827	5,319	508	91.3	8.7		1909	827	700	127	84.6	15.4
Proprietors and officials.....	1919	434	432	2	99.5	0.5	Wage earners (average number).....	1919	7,795	7,019	776	90.0	10.0
	1914	240	236	4	98.3	1.7		1914	4,509	4,144	365	91.9	8.1
	1909	227	225	2	99.1	0.9		1909	4,773	4,394	379	92.1	7.9
Proprietors and firm members.....	1919	37	37	.....	100.0	.....	16 years of age and over.....	1919	7,788	7,013	775	90.0	10.0
	1914	70	68	2	97.1	2.9		1914	4,506	4,142	364	91.9	8.1
	1909	83	84	2	97.7	2.3		1909	4,764	4,389	375	92.1	7.9
Salaried officers of corporations.....	1919	61	60	1	98.4	1.6	Under 16 years of age.....	1919	7	6	1	85.7	14.3
	1914	54	53	1	98.1	1.9		1914	3	2	1	66.7	33.3
	1909	49	49	.....	100.0	.....		1909	9	5	4	55.6	44.4
Superintendents and managers.....	1919	336	335	1	99.7	0.3							
	1914	116	115	1	99.1	0.9							
	1909	62	62	.....	100.0	.....						

GLUCOSE AND STARCH.

123

TABLE 3.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OF NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	7,795	8,916	8,103	6,787	6,738	7,055	7,603	<i>5,089</i>	7,345	9,116	9,089	8,690	8,109	65.7
Males.....	7,019	7,511	7,165	6,245	6,243	6,382	6,708	5,472	6,702	8,137	8,243	7,877	7,403	75.5
Females.....	776	1,305	938	542	<i>495</i>	673	835	517	643	979	846	813	706	37.9
1914.....	4,509	4,850	4,032	4,948	4,608	4,182	4,405	4,157	4,403	4,627	4,377	<i>4,189</i>	4,480	83.6
1909.....	4,773	4,731	4,827	4,954	4,624	4,578	4,586	4,245	<i>4,198</i>	4,812	5,569	5,398	4,771	75.4
Iowa.....	1,007	1,431	1,264	1,061	1,253	1,272	823	834	840	856	869	809	763	53.3
Maine.....	255	507	508	517	547	103	117	131	67	104	218	157	88	12.2
Minnesota.....	16	9	8	22	37	26	13	9	6	8	28	17	9	16.2
All other states.....	6,517	6,969	6,323	5,187	<i>4,901</i>	5,654	6,650	5,015	0,423	8,148	7,974	7,707	7,249	60.1

TABLE 4.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919, 1914, AND 1909.

HOURS PER WEEK.	AVERAGE NUMBER.			PER CENT OF TOTAL.			HOURS PER WEEK.	AVERAGE NUMBER.			PER CENT OF TOTAL.		
	1919	1914	1909	1919	1914	1909		1919	1914	1909	1919	1914	1909
Total.....	7,795	4,509	4,773	100.0	100.0	100.0	Between 48 and 54.....	17	.....	4	0.2	.....	0.1
44 and under.....	11	(¹)	(¹)	0.1	.....	.....	54.....	27	9	16	0.3	0.2	0.3
Between 44 and 48.....	(¹)	(¹)	(¹)	.....	.....	.....	Between 54 and 60.....	479	16	.....	6.1	0.4	.....
48.....	4,272	47	70	54.8	1.0	1.5	60.....	1,479	2,903	1,251	19.0	64.4	26.2
							Over 60.....	1,610	1,534	3,432	19.4	34.0	71.9

¹ Figures not available.

² Includes 48 and under for 1914 and 1909.

TABLE 5.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—											
	Establishments.	Wage earners (average number).	No wage earners.		1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.	
			Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States.....	56	7,795	3	31	69	4	37	3	105	1	60	5	1,028	5
1914.....	59	4,509	2	65	147	7	76	1	50	1	65	7	1,300	5
Iowa.....	4	1,007	1	.....	.....	.....	.....	.....	.....	.....	.....	1	231	2
Maine.....	26	255	1	23	51	1	9	.....	.....	.....	.....	1	195	.....
Minnesota.....	6	16	.....	5	8	1	8	.....	.....	.....	.....	.....	.....	.....

TABLE 6.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes.....	56	89	118	7,795	4,509	4,773	\$186,256,260	\$52,615,401	\$48,799,311	\$55,927,412	\$12,407,809	\$11,900,540
Less than \$5,000.....	4	5	21	1	4	25	12,154	10,950	60,946	2,407	5,514	19,025
\$5,000 to \$20,000.....	18	56	60	24	125	129	200,282	624,353	995,195	45,768	165,671	207,150
\$20,000 to \$100,000.....	16	11	15	124	116	85	758,847	393,231	555,487	178,650	137,086	157,907
\$100,000 to \$1,000,000.....	4	5	9	122	285	504	1,894,602	2,282,498	4,074,354	464,228	657,943	1,450,316
\$1,000,000 and over.....	14	12	13	7,524	3,997	4,033	183,390,375	49,298,364	43,443,329	55,236,359	11,441,695	10,036,142
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	7.1	5.6	17.8	(¹)	0.1	0.5	(¹)	(¹)	0.1	(¹)	.....	0.2
\$5,000 to \$20,000.....	32.1	62.9	50.8	0.3	2.8	2.6	0.1	1.2	1.4	0.1	1.3	1.7
\$20,000 to \$100,000.....	28.6	12.4	12.7	1.6	2.6	1.8	0.4	0.7	1.1	0.3	1.1	1.3
\$100,000 to \$1,000,000.....	7.1	5.6	7.6	1.6	5.9	10.6	1.0	4.3	8.3	0.8	5.3	12.2
\$1,000,000 and over.....	25.0	13.5	11.0	96.5	88.6	84.5	98.5	93.7	89.0	98.8	92.2	84.6

¹ Less than one-tenth of 1 per cent.

MANUFACTURES.

TABLE 7.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	NUMBER OF ESTABLISH- MENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Individ- uals.	Corpora- tions.	All others.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.				
United States.....	1919	17	30	0	7,795	102	7,674	19	1.3	98.4	0.2	\$188,256,260	\$885,877	\$185,149,779	\$220,604	0.5	99.4	0.1				
	1914	43	34	12	4,509	99	4,373	37	2.2	97.0	0.8	52,615,401	488,822	51,882,282	244,297	0.9	98.6	0.5				
	1909	47	55	16	4,773	1310	4,463	.....	6.5	93.5	.....	48,799,311	1,841,874	46,957,437	.....	3.8	96.2	.....			
Iowa.....	1919	.....	4	.....	1,007	.....	1,007	.....	100.0	.....	.....	24,688,750	.....	24,688,750	.....	100.0	.....	.....		
	1914	.....	3	.....	909	.....	909	.....	100.0	.....	.....	9,071,324	.....	9,071,324	.....	100.0	.....	.....		
Maine.....	1919	14	4	8	255	35	201	19	13.7	78.8	7.5	1,752,068	356,014	1,175,450	220,604	20.3	67.1	12.6				
	1914	39	5	7	114	85	11	18	74.6	9.6	15.8	628,644	438,071	59,883	130,690	69.7	9.5	20.8				
Minnesota.....	1919	.....	6	.....	16	.....	16	.....	100.0	.....	.....	89,016	.....	89,016	.....	100.0	.....	.....		
	1914	.....	6	1	14	.....	14	.....	100.0	.....	.....	85,705	.....	85,705	.....	100.0	.....	.....		
All other states.....	1919	3	16	1	6,517	167	6,450	.....	1.0	99.0	.....	159,720,426	1,529,863	159,196,563	.....	0.3	99.7	.....			
	1914	4	20	4	3,472	14	3,439	19	0.4	99.0	0.5	42,820,728	60,751	42,665,370	113,607	0.1	99.6	0.3				

¹ Includes the group "All others" to avoid disclosure of individual operations.

TABLE 8.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	283	259	259	52,846	41,639	28,257	100.0	100.0	100.0
Owned.....	141	167	248	48,451	38,998	28,069	91.7	94.1	99.3
Steam ¹	120	151	164	47,576	38,003	27,835	90.0	91.3	98.5
Engines.....	101	(²)	(²)	19,285	(²)	(²)	38.5	.....	.....
Turbines.....	10	(²)	(²)	28,201	(²)	(²)	53.5	.....	.....
Internal-combustion engines.....	13	5	3	345	102	49	0.7	0.7	0.2
Water wheels, turbines, and motors.....	8	11	8	530	893	1,185	1.0	2.1	0.6
Rented.....	142	92	11	4,395	2,641	188	8.3	5.9	0.7
Electric.....	142	92	11	3,585	2,456	163	6.8	5.9	0.6
Other.....	.....	.....	.....	810	185	25	1.5	.....	0.1
Electric.....	2,998	2,131	1,070	47,735	29,276	27,230	100.0	100.0	100.0
Rented.....	142	92	11	3,585	2,456	163	9.1	8.4	0.6
Generated by establishments reporting.....	2,856	2,039	1,059	44,150	26,820	27,067	90.9	91.6	99.4

¹ Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.² Figures not available.

TABLE 9.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	COAL.		Coke (tons, 2,000 lbs.).	Fuel oils (bar- rels).	Gas- oline and other volatile oils (bar- rels).	Gas (1,000 cubic feet).	STATE.	Cen- sus year.	COAL.		Coke (tons, 2,000 lbs.).	Fuel oils (bar- rels).	Gas- oline and other volatile oils (bar- rels).	Gas (1,000 cubic feet).
		Anthra- cite (tons, 2,240 lbs.).	Bitumi- nous (tons, 2,000 lbs.).							Anthra- cite (tons, 2,240 lbs.).	Bitumi- nous (tons, 2,000 lbs.).				
United States.....	1919	113,141	859,133	14,822	17,518	28	23,335	Minnesota.....	1919	.....	682	.....	.....	.....	.....
	1914	101,240	648,430	1,054	6,280	.....	276		1914	.....	468	.....	.....	.....	.....
Iowa.....	1919	474	166,018	586	17,518	.....	.....	All other states ¹ ..	1919	112,364	686,597	14,236	.....	21	23,315
	1914	.....	144,805	41	6,156	.....	85		1914	101,048	501,836	1,013	144	.....	191
Maine.....	1919	273	5,836	.....	.....	7	.....							
	1914	192	1,321	.....	30	.....	.....						

¹ All other states embrace, for 1919: Connecticut, 1 establishment; Florida, 1; Illinois, 4; Indiana, 3; Kentucky, 1; Massachusetts, 1; Michigan, 2; Missouri, 1; Nebraska, 1; New Jersey, 2; New York, 1; Ohio, 1; Oregon, 1. For 1914: California, 1; Connecticut, 1; Florida, 1; Illinois, 5; Indiana, 3; Maryland, 1; Massachusetts, 4; Michigan, 1; Missouri, 1; New Jersey, 1; New York, 2; Ohio, 2; Pennsylvania, 1; Wisconsin, 1.

SPECIAL STATISTICS.

Special statistics relating to materials and products.—Detailed statistics relating to quantity and value of products and kind and cost of materials used are shown in Tables 10 and 11.

TABLE 10.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, AND 1909.

PRODUCT.	1919	1914	1909	PRODUCT.	1919	1914	1909
Total value.....	¹ \$186,256,260	\$52,615,401	\$48,799,311	Grape sugar:			
Starch:				Pounds.....	157,276,442	174,368,818	159,080,478
Pounds.....	783,513,087	620,764,347	677,535,647	Value.....	\$9,314,977	\$3,765,515	\$3,620,816
Value.....	\$44,402,873	\$15,783,781	\$17,514,323	Corn oil:			
Corn—				Gallons.....	12,516,261	8,861,579	8,164,175
Pounds.....	727,962,234	574,247,697	633,825,366	Value.....	\$20,333,249	\$3,693,163	\$2,802,763
Value.....	\$40,557,690	\$13,784,654	\$15,962,916	Corn-oil cake and meal:			
Potato—				Pounds.....	61,661,977	143,001,085	(²)
Pounds.....	16,477,183	23,540,472	24,873,415	Value.....	\$1,842,427	\$1,829,365	(²)
Value.....	\$1,099,028	\$718,006	\$323,019	Dextrine:			
Other starches—				Pounds.....	28,757,233	(²)	(²)
Pounds.....	39,073,687	22,976,178	13,836,806	Value.....	\$1,838,500	(²)	(²)
Value.....	\$2,746,185	\$1,281,121	\$728,888	Stock feed, value.....	\$26,068,185	\$6,690,412	\$6,013,993
Glucose (including all sirups), value.	\$80,608,100	\$18,541,429	\$17,922,514	All other products, value.....	\$1,847,940	\$2,311,762	\$924,422

¹ In addition, starch to the value of \$47,830 were reported by establishments engaged primarily in other industries.

² Not reported separately.

TABLE 11.—KIND AND COST OF MATERIALS: 1919, 1914, AND 1909.

MATERIAL.	1919	1914	1909	MATERIAL.	1919	1914	1909
Total cost.....	\$130,328,848	\$40,207,592	\$36,898,771	Wheat flour:			
Corn:				Pounds.....	1,768,932	14,198,049	19,545,824
Pounds.....	3,636,601,683	2,488,792,405	2,240,508,915	Cost.....	\$88,433	\$301,500	\$482,263
Cost.....	\$100,161,185	\$30,207,592	\$26,674,779	Cornstarch:			
Potatoes:				Pounds.....	22,860,680	9,812,659	105,299,010
Pounds.....	120,505,745	169,878,784	210,608,127	Cost.....	\$1,035,773	\$189,296	\$1,763,173
Cost.....	\$764,247	\$498,015	\$541,359	All other materials, including fuel and rent of power, cost.....	\$27,861,640	\$9,011,150	\$7,437,197
Wheat:							
Pounds.....	11,162,340						
Cost.....	\$417,570						

GENERAL TABLES.

Comparative summary.—Table 12 gives for 1919, 1914, and 1909 the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for Iowa, Maine, and Minnesota. The returns for other states engaged in this industry can not be shown for 1914

and 1909 without disclosing the operations of individual establishments.

Detailed statement, by states: 1919.—Table 13 presents for 1919 statistics in detail for each state for which figures can be shown without disclosing the operations of individual establishments.

TABLE 12.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
United States.....	1919	56	7,795	52,848	\$11,062	\$130,329	\$186,256	Maine.....	1919	26	255	858	\$298	\$1,178	\$1,752
	1914	89	4,509	41,639	3,550	40,208	52,615		1914	51	114	1,550	56	4,847	629
	1909	118	4,773	28,257	2,666	36,899	48,799	Minnesota.....	1919	6	16	263	15	68	89
Iowa.....	1919	4	1,007	8,418	1,498	17,641	24,689		1914	7	14	292	9	62	86
	1914	3	909	7,999	639	7,000	9,071	All other states ¹	1919	20	6,517	43,307	10,151	111,442	159,726
									1914	28	3,472	31,798	2,840	28,299	42,829

¹ All other states embrace, for 1919: Connecticut, 1 establishment; Florida, 1; Illinois, 4; Indiana, 3; Kentucky, 1; Massachusetts, 1; Michigan, 2; Missouri, 1; Nebraska, 1; New Jersey, 2; New York, 1; Ohio, 1; Oregon, 1. For 1914: California, 1; Connecticut, 3; Florida, 1; Illinois, 5; Indiana, 3; Maryland, 1; Massachusetts, 4; Michigan, 1; Missouri, 1; Nebraska, 1; New Jersey, 1; New York, 2; Ohio, 2; Pennsylvania, 1; Wisconsin, 1.

MANUFACTURES.

TABLE 13.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		Capital.	Salaries and wages.	
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.		Officials.	Clerks, etc.
								Maximum month.	Minimum month.								
United States....	50	8,094	37	397	328	137	7,705	Se 9,116	Jy 5,989	9,737	8,706	933	7	1	\$58,182,682	\$1,337,247	\$876,115
Iowa.....	4	1,168	.....	31	93	34	1,007	Ja 1,431	De 763	1,216	1,183	33	.....	.....	10,548,184	239,476	375,388
Maine.....	26	297	28	9	3	2	255	Ap 547	Au 67	666	612	49	5	.....	931,298	18,142	5,655
Minnesota.....	6	31	.....	14	1	.....	16	Ap 37	Au 6	32	31	1	.....	.....	152,198	2,280	53
All other states ¹	20	7,198	9	340	231	101	6,517	.....	.....	7,823	6,970	850	2	1	46,551,002	1,077,349	494,019

STATE.	EXPENSES—continued.						Value of products.	Value added by manufacture.	POWER.						
	Salaries and wages—Con.		For contract work.	Rent and taxes.		For materials.			Primary horsepower.					Electric horsepower generated in establishments reporting.	
	Wage earners.	Total.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.			Fuel and rent of power.	Total.	Owned.				
											Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.		Water power. ²	Rent- ed.^{3}
United States.....	\$11,962,483	\$551	\$12,867	\$4,021,457	\$126,026,508	\$3,702,280	\$186,256,260	\$55,927,412	52,846	19,285	28,291	345	530	4,395	44,150
Iowa.....	1,498,247	.....	344	1,612,199	17,012,556	628,815	24,688,750	7,047,379	8,418	1,741	4,759	4	.....	1,914	5,552
Maine.....	297,962	416	8,690	20,221	1,095,377	82,477	1,752,068	574,214	858	420	.....	68	130	240	.....
Minnesota.....	14,853	135	68	8,352	62,230	5,320	89,016	21,436	263	252	.....	3	.....	8	.....
All other states ¹	10,161,321	.....	3,765	2,380,685	108,456,405	2,985,668	159,726,426	48,284,353	43,307	16,872	23,532	270	400	2,233	38,598

¹ All other states embrace: Connecticut, 1 establishment; Florida, 1; Illinois, 4; Indiana, 3; Kentucky, 1; Massachusetts, 1; Michigan, 2; Missouri, 1; Nebraska, 1; New Jersey, 2; New York, 1; Ohio, 1; Oregon, 1.

² Includes water wheels and turbines (irrespective of ownership of water supply) and water motors (operated by water from city mains).

³ Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

RICE, CLEANING AND POLISHING.

GENERAL STATISTICS.

General character of the industry.—This report presents statistics for establishments engaged in the cleaning and polishing of rice for commercial use. Practically all the rice is handled in mills engaged exclusively in this industry. Previous to the enormous increase in the production of domestic rice it was necessary for the United States to import millions of pounds of rough rice yearly.

Importance and growth of the industry.—Table 1 summarizes the statistics for each census since 1899, with percentages of increase.

The large increases from 1914 to 1919, in salaries and wages, cost of materials, and value of products are due largely to the general increase in cost of production following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes."

Principal states, ranked by value of products.—Measured by the value of products Table 2 shows Louisiana to be the leading rice-growing state, with California second and Texas third. There would be only a slight change in ranking if based on average number of wage earners or value added by manufacture.

Persons engaged in the industry.—The age classification of the average number of wage earners in Table 3 is an estimate obtained by the method described in the "Explanation of terms." The classification, by sex, for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. Figures in detail will be found in Table 14.

Wage earners, by months.—The statistics for wage earners in Table 4 show the regularity of employment, or the reverse, in accordance with industrial conditions existing during the year. Figures are given for all states reporting an average of over 200 wage earners.

Average number of wage earners, by prevailing hours of labor: 1919.—Table 5 shows the prevailing hours of labor per week for this industry, by states.

Size of establishments, by average number of wage earners.—Table 6 shows the size of establishments in the several states based upon the average number of wage earners employed.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. Table 7, therefore, gives combined figures for these two groups for all items for 1909 and for the average number of wage earners and value added by manufacture for 1914. The statistics in the table show the degree of concentration of production in large establishments. In 1919 the group "\$1,000,000 and over" included 45 establishments, or 52.3 per cent of the total number for the industry; 1,763 wage earners, or 83.4 per cent of the total average number; and reported products to the value of \$76,441,842, or 84.9 per cent of the total value of products.

Character of ownership.—Table 8 emphasizes the predominance of the corporate form of ownership. Corporations owned 73.3 per cent of the total number of establishments for the industry in 1919, employed 90 per cent of the total average number of wage earners and reported 87.7 per cent of the value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, Table 9 shows an increase in total horsepower for the industry of 75.9 per cent, due largely to the increase in rented power.

Fuel consumed.—Table 10 shows the principal kinds of fuel used in the industry for 1919 and 1914. In 1914 gasoline and other volatile oils were included in fuel oils.

MANUFACTURES.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	1919	1914	1909	1904	1899	PER CENT OF INCREASE. ¹			
						1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments.....	86	59	71	74	80				
Persons engaged.....	3,249	1,739	1,777	1,961	891	86.8	-2.1	-9.4	120.1
Proprietors and firm members.....	40	48	80	33	71				
Salaried employees.....	1,099	438	500	436	169	150.2	-12.4	14.7	153.0
Wage earners (average number).....	2,113	1,253	1,239	1,492	651	68.6	1.1	-17.0	129.2
Primary horsepower.....	27,382	15,571	19,519	15,806	7,546	75.9	-20.2	23.0	110.3
Capital.....	\$23,792,509	\$12,626,990	\$13,347,144	\$8,821,099	\$2,601,352	88.4	-5.4	51.3	239.1
Salaries and wages.....	3,441,136	1,284,034	1,176,623	1,189,194	447,618	163.0	9.1	-1.1	165.7
Salaries.....	1,503,940	633,171	613,085	548,562	132,033	139.4	4.1	11.8	201.4
Wages.....	1,932,196	645,863	563,538	640,632	265,585	199.2	14.6	-12.0	141.2
Paid for contract work.....	17,871				20,094				
Rent and taxes.....	1,184,227	83,222	90,269	2 68,411	244,325	1,323.0	-7.8	32.0	54.3
Cost of materials.....	76,633,816	20,615,880	19,501,080	13,315,065	7,575,522	271.7	5.7	48.5	75.3
Value of products.....	90,039,412	23,039,294	22,371,457	16,296,918	8,723,726	290.8	3.0	37.3	86.8
Value added by manufacture ²	13,404,596	2,423,434	2,870,377	2,981,851	1,148,204	453.1	-15.6	-3.7	159.7

¹ A minus sign (-) denotes decrease; percentages are omitted where base is less than 100. ² Exclusive of internal revenue. ³ Value of products less cost of materials.

TABLE 2.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE. ¹		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.....	86	2,113	100.0	---	\$90,038	100.0	---	\$13,404	100.2	---	Texas.....	14	23	20.0	2	\$17,801	19.9	3	\$4,091	30.5	2
Louisiana.....	40	1,121	53.1	1	41,220	45.8	1	5,203	38.8	1	Arkansas.....	5	202	9.6	4	8,996	10.0	4	1,052	7.8	4
California.....	14	337	15.9	3	20,204	22.5	2	3,095	23.1	3	All other states.....	7	30	1.4	---	1,657	1.8	---	-37	---	---

¹ A minus sign (-) indicates cost of materials exceeds value of products.

TABLE 3.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1919	3,249	3,104	85	97.4	2.6	Clerks and other subordinate salaried employees.....	1919	403	438	55	88.8	11.2
	1914	1,739	1,722	17	99.0	1.0		1914	332	319	13	96.1	3.9
	1909	1,777	1,756	21	98.8	1.2		1909	356	340	16	95.5	4.5
Proprietors and officials.....	1919	643	641	2	99.7	0.3	Wage earners (average number).....	1919	2,113	2,085	28	98.7	1.3
	1914	154	154	---	100.0	---		1914	1,253	1,249	4	99.7	0.3
	1909	182	181	1	99.5	0.5		1909	1,239	1,235	4	99.7	0.3
Proprietors and firm members.....	1919	40	39	1	97.5	2.5	16 years of age and over.....	1919	2,110	2,082	28	98.7	1.3
	1914	48	48	---	100.0	---		1914	1,250	1,246	4	99.7	0.3
	1909	38	37	1	97.4	2.6		1909	1,235	1,231	4	99.7	0.3
Salaried officers of corporations.....	1919	84	83	1	98.8	1.2	Under 16 years of age.....	1919	3	3	---	---	---
	1914	37	37	---	100.0	---		1914	3	3	---	---	---
	1909	43	43	---	100.0	---		1909	4	4	---	---	---
Superintendents and managers.....	1919	519	519	---	100.0	---							
	1914	69	69	---	---	---							
	1909	101	101	---	---	---							

RICE, CLEANING AND POLISHING.

129

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF MONTH OF NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	2, 113	3, 041	2, 423	1, 794	1, 470	1, 452	1, 243	<i>954</i>	1, 149	2, 228	2, 840	3, 354	3, 410	28.0
Males.....	2, 085	3, 000	2, 399	1, 772	1, 453	1, 421	1, 192	<i>928</i>	1, 141	2, 214	2, 815	3, 319	3, 372	27.3
Females.....	28	41	24	22	17	31	51	32	8	12	25	35	38	19.5
1914.....	1, 253	1, 758	1, 690	1, 342	1, 175	819	344	<i>352</i>	608	1, 567	1, 701	1, 852	1, 848	17.9
1909.....	1, 239	1, 513	1, 433	1, 240	990	642	437	<i>456</i>	722	1, 750	2, 017	1, 932	1, 753	21.6
Arkansas.....	202	374	299	265	216	168	68	70	70	68	156	294	370	18.2
California.....	337	621	503	410	288	189	276	221	148	141	190	487	570	22.7
Louisiana.....	1, 121	1, 410	1, 131	739	637	702	534	<i>593</i>	728	1, 063	1, 881	1, 857	1, 777	20.9
Texas.....	423	573	460	348	317	382	347	244	179	338	578	675	638	20.1

TABLE 5.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	60.			44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	60.
United States.....	2, 113	42	.....	101	.....	89	74	848	959	California.....	337	42	.....	67	.....	1	47
Arkansas.....	202	.....	.....	.....	.....	.....	.....	84	118	Louisiana.....	1, 121	.....	.....	1	.....	27	555
										Texas.....	423	.....	.....	28	.....	62	195

TABLE 6.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—										
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States	80	2, 113	7	14	22	15	187	43	1, 368	6	407	1	129
Arkansas	5	202	.....	.....	.....	1	14	3	104	1	84	.....	.....
California	14	337	.....	2	4	3	28	8	247	1	58	.....	.....
Louisiana	46	1, 121	7	6	12	7	90	23	743	2	142	1	129
Texas	14	423	.....	.....	.....	4	55	8	245	2	123	.....	.....

TABLE 7.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes.....	86	59	71	2, 113	1, 253	1, 239	\$90, 038, 412	\$23, 039, 204	\$22, 371, 457	\$13, 404, 596	\$2, 423, 434	\$2, 870, 377
Less than \$5,000.....	3	1	3	1	.....	5	7, 275	.....	11, 443	3, 060	.....	3, 430
\$5,000 to \$20,000.....	8.1	5.1	4.2	.....	1.5	3	82, 143	1, 29, 542	26, 830	50, 202	16, 488	7, 608
\$20,000 to \$100,000.....	7	3	9	.....	.....	78	378, 478	246, 484	660, 028	86, 868	51, 632	188, 854
\$100,000 to \$500,000.....	8	36	51	.....	900	947	2, 723, 508	9, 136, 563	18, 957, 715	627, 504	1, 814, 353	2, 386, 837
\$500,000 to \$1,000,000.....	9	.....	.....	.....	.....	.....	10, 405, 166	8, 498, 128	.....	2, 277, 274	.....	.....
\$1,000,000 and over.....	14	8	3	1, 763	268	206	76, 441, 842	5, 128, 577	4, 715, 441	10, 359, 688	550, 901	284, 153
	45	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
PER CENT DISTRIBUTION.												
ALL CLASSES.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	3.5	1.7	4.2	(¹)	.....	0.4	(²)	.....	0.1	(²)	.....	0.1
\$5,000 to \$20,000.....	8.1	5.1	4.2	0.2	10.4	0.2	0.1	10.1	0.1	0.4	10.3	0.3
\$20,000 to \$100,000.....	9.3	11.9	15.5	0.4	1.6	8.3	0.4	1.1	3.0	0.6	2.1	0.6
\$100,000 to \$500,000.....	10.5	61.1	.....	3.8	76.6	76.4	.....	39.7	75.8	4.7	74.9	83.1
\$500,000 to \$1,000,000.....	16.3	13.4	.....	12.1	.....	.....	11.6	38.9	.....	17.0	.....	.....
\$1,000,000 and over.....	52.3	6.8	4.2	83.4	21.4	16.6	84.9	22.3	21.1	77.3	22.7	9.9

¹ Includes the group "Less than \$5,000.

² Less than one-tenth of 1 per cent.

MANUFACTURES.

TABLE 8.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	NUMBER OF ESTABLISH- MENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Individ- uals.	Corpora- tions.	All others.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.				
United States.....	1919	15	63	8	2,113	77	1,902	134	3.6	90.0	6.3	\$90,038,412	\$3,969,633	\$78,957,433	\$7,111,296	4.4	87.7	7.9				
	1914	4	51	4	1,253	27	1,171	55	2.2	93.4	4.4	23,039,294	816,843	20,937,445	1,255,006	3.5	91.0	5.4				
	1909	8	57	5	1,289	103	1,063	73	8.3	85.8	5.9	22,371,457	1,434,535	19,907,860	1,029,062	6.4	89.0	4.6				
Arkansas.....	1919	.....	5	.....	202	.....	202	.....	100.0	.....	.....	8,995,856	.....	8,995,856	.....	.....	.....	.....
	1914	.....	5	.....	116	.....	116	.....	100.0	.....	.....	1,837,478	.....	1,837,478	.....	.....	.....	.....
California.....	1919	1	9	4	337	.....	223	100	.....	67.7	32.3	20,264,263	.....	14,203,820	16,057,443	.....	70.1	29.9
	1914	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana.....	1919	12	30	4	1,121	34	1,030	57	3.0	91.9	5.1	41,220,471	1,935,243	38,808,316	2,476,912	.....	89.3	6.0			
	1914	1	21	2	735	.....	659	176	89.7	10.4	.....	12,966,690	.....	10,983,409	1,932,281	4.7	81.7	15.3	
Texas.....	1919	1	13	.....	423	.....	423	.....	100.0	.....	.....	17,900,547	.....	17,900,547	.....	.....	100.0	.....			
	1914	.....	16	.....	345	.....	345	.....	.....	.....	.....	7,216,359	.....	7,216,359	.....	.....	.....	.....

¹ Includes the group "Individuals."

TABLE 9.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	370	120	154	27,332	15,571	19,519	100.0	100.0	100.0
Owned.....	115	71	130	19,578	14,009	18,404	71.5	90.0	91.3
Steam.....	94	68	125	18,881	13,927	18,252	69.0	89.4	93.5
Engines.....	90	(1)	(1)	18,821	(1)	(1)	68.7	(1)	(1)
Turbines.....	4	(1)	(1)	60	(1)	(1)	0.2	(1)	(1)
Internal-combustion engines.....	21	3	4	697	82	137	2.5	0.5	0.7
Water wheels, turbines, and motors.....			1			15			0.1
Rented.....	188	49	24	7,804	1,562	1,115	28.5	10.0	5.7
Electric.....	188	49	24	5,762	1,562	1,115	21.0	10.0	5.7
Other.....				2,042			7.5		
Electric.....	255	74	54	8,679	1,070	1,738	100.0	100.0	100.0
Rented.....	188	49	24	7,804	1,562	1,115	80.9	79.3	81.2
Generated by establishments reporting.....	67	25	30	875	408	623	10.1	20.7	18.8

¹ Not reported separately.

TABLE 10.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	COAL.		Fuel oils (barrels).	Gasoline and other volatile oils (bar- rels).	STATE.	Cen- sus year.	COAL.		Fuel oils (barrels).	Gasoline and other volatile oils (bar- rels).
		Anthra- cite (tons, 2,240 pounds).	Bitumi- nous (tons, 2,000 pounds).					Anthra- cite (tons, 2,240 pounds).	Bitumi- nous (tons, 2,000 pounds).		
United States.....	1919	703	10,855	54,720	346	Louisiana.....	1919	703	9,143	22,208	226
	1914		9,536	41,479			1914		8,071	13,450	
Arkansas.....	1919		1,440	712		Texas.....	1919		17	23,000	120
	1914		400				1914			28,020	
California.....	1919			5,641		All other states.....	1919		255		
	1914						1914		65		

RICE, CLEANING AND POLISHING.

131

SPECIAL STATISTICS.

Detailed statistics of quantity and value of materials and products, by states: 1919, 1914, 1909, and 1899.—The special schedule used in collecting the statistics for the rice-cleaning and polishing industry provided for reporting the quantity and value of the various

products manufactured. Table 11 shows these statistics, by states, for the last five censuses, as far as available and without disclosing individual operations.

Equipment.—Table 12 shows the equipment used in the industry, with the maximum capacity per day.

TABLE 11.—DETAILED STATISTICS OF QUANTITY AND VALUE, BY STATES: 1919, 1914, 1909, 1904, AND 1899.

	Census year.	United States.	Arkansas.	California.	Louisiana.	Texas.	All other states.
Number of establishments.....	1919	86	5	14	46	14	7
	1914	59	5	(1)	24	16	14
	1909	71	5	(1)	37	19	10
	1904	74	(1)	(1)	43	17	14
	1899	80	(1)	(1)	37	(1)	43
Rough rice treated, aggregate, pounds.....	1919	1,609,951,995	155,415,375	314,477,775	793,533,285	319,765,950	26,759,610
	1914	1,036,587,825	82,089,840	(1)	607,016,370	315,169,065	31,715,550
	1909	974,747,475	37,014,075	(1)	549,002,250	371,816,370	25,914,780
	1904	999,727,650	(1)	(1)	635,010,885	316,170,405	48,546,350
	1899	398,602,018	(1)	(1)	290,165,708	(1)	108,436,310
Domestic, tota, pounds.....	1919	1,608,014,880	155,415,375	314,238,375	793,533,285	319,765,950	25,661,895
Blue Rose, pounds.....		938,818,260	91,900,395	3,752,145	562,463,955	260,779,635	19,922,130
Honduras type, pounds.....		261,096,715	58,441,230	775,395	149,332,770	40,408,605	2,138,715
Japan type, pounds.....		349,409,775	5,073,750	250,384,455	72,679,185	18,577,710	2,754,675
All other types, pounds.....		68,680,130	59,326,380	59,326,380	9,057,375	(1)	246,375
Foreign, pounds.....		1,937,115	(1)	239,400	(1)	(1)	1,697,715
Products, total value.....	1919	\$90,038,412	\$8,905,856	\$20,264,263	\$41,220,471	\$17,900,547	\$1,657,275
	1914	\$23,039,204	\$1,837,478	(1)	\$12,066,690	\$7,216,359	\$1,018,707
	1909	\$22,371,457	\$944,726	(1)	\$12,528,666	\$8,142,438	\$755,637
	1904	\$16,296,916	(1)	(1)	\$10,718,311	\$4,640,269	\$938,336
	1899	\$8,723,726	(1)	(1)	\$5,736,451	(1)	\$2,987,275
Clean rice:							
Pounds.....	1919	1,062,813,400	108,239,360	219,945,498	505,323,945	210,826,438	18,478,159
	1914	674,872,108	52,038,773	(1)	391,728,722	206,724,899	24,379,714
	1909	626,080,489	23,197,442	(1)	351,302,414	230,117,295	15,472,338
	1904	623,900,245	(1)	(1)	394,744,386	197,423,320	31,722,639
	1899	243,031,200	(1)	(1)	173,632,724	(1)	60,398,476
Value.....	1919	\$83,462,235	\$8,508,525	\$10,345,892	\$38,544,503	\$15,486,109	\$1,577,116
	1914	\$21,055,105	\$1,735,201	(1)	\$12,106,776	\$6,840,320	\$972,808
	1909	\$20,685,982	\$810,421	(1)	\$11,040,318	\$7,571,780	\$668,463
	1904	\$15,367,133	(1)	(1)	\$10,110,144	\$4,352,058	\$894,931
Polish:							
Pounds.....	1919	36,197,025	4,280,600	7,023,586	16,778,378	7,420,561	713,900
	1914	31,053,118	2,460,420	(1)	17,984,219	9,856,739	751,740
	1909	29,821,813	1,105,072	(1)	17,553,068	10,402,638	756,035
	1904	33,290,331	(1)	(1)	22,520,750	9,500,830	1,262,751
	1899	15,134,648	(1)	(1)	11,491,319	(1)	3,643,329
Value.....	1919	\$965,655	\$100,615	\$165,442	\$490,805	\$194,515	\$14,278
	1914	\$352,271	\$26,984	(1)	\$206,963	\$107,198	\$11,126
	1909	\$362,052	\$12,275	(1)	\$207,317	\$132,258	\$10,202
	1904	\$267,647	(1)	(1)	\$178,603	\$77,578	\$11,461
Bran:							
Pounds.....	1919	142,984,394	15,780,625	24,670,037	72,248,121	27,064,999	2,340,612
	1914	99,403,200	7,475,501	(1)	60,325,729	29,251,825	2,350,345
	1909	91,208,529	3,224,991	(1)	55,215,095	29,505,946	3,261,597
	1904	120,694,130	(1)	(1)	74,531,334	40,772,421	5,390,375
	1899	69,265,012	(1)	(1)	50,243,288	(1)	19,021,724
Value.....	1919	\$2,499,788	\$263,424	\$357,647	\$1,338,093	\$498,210	\$42,414
	1914	\$772,275	\$57,093	(1)	\$463,692	\$228,199	\$23,291
	1909	\$736,215	\$24,456	(1)	\$404,442	\$276,535	\$30,782
	1904	\$501,193	(1)	(1)	\$303,886	\$169,647	\$27,660
All other products, value.....	1919	\$3,110,734	\$123,282	\$395,282	\$846,980	\$1,721,713	\$23,467
	1914	\$269,643	\$18,200	(1)	\$189,259	\$40,642	\$11,542
	1909	\$587,208	\$97,574	(1)	\$278,579	\$161,865	\$51,190
	1904	\$170,943	(1)	(1)	\$125,673	\$40,986	\$4,284

¹ Figures included under "All other states."

TABLE 12.—EQUIPMENT.

STATE.	Cen- sus year.	Shell- ing stones (num- ber).	Scour- ing ma- chines (num- ber).	COMPOSITION LEATHER.		Glaz- ing drums (num- ber).	Estimated maximum capacity of mill per day of 24 hours (bushels).	STATE.	Cen- sus year.	Shell- ing stones (num- ber).	Scour- ing ma- chines (num- ber).	COMPOSITION LEATHER.		Glaz- ing drums (num- ber).	Estimated maximum capacity of mill per day of 24 hours (bushels).
				Pol- ishers (num- ber).	Dressed pol- ishers (num- ber).							Pol- ishers (num- ber).	Dressed pol- ishers (num- ber).		
United States.....	1919	261	530	62	114	192	446,098	Louisiana.....	1919	132	239	41	54	107	194,432
	1914	176	382	146	.....	.....	276,426		1914	94	190	75	.....	.....	139,660
Arkansas.....	1919	21	50	2	10	14	41,000	Texas.....	1919	54	111	11	27	38	101,010
	1914	19	43	9	.....	.....	30,640		1914	55	102	51	.....	.....	91,180
California.....	1919	49	113	6	18	30	101,503	All other states.....	1919	5	17	2	5	3	8,153
									1914	8	47	11	.....	.....	14,946

MANUFACTURES.

GENERAL TABLES.

Comparative summary, by states.—Table 13 gives for 1919, 1914, and 1909 the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for Arkansas, Louisiana, and Texas. Cali-

fornia can not be shown for 1914 and 1909 without disclosing individual operations.

Detailed statement, by states.—Table 14 presents, for 1919, statistics for each state for which figures can be shown without disclosing individual operations.

TABLE 13.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
United States.....	1919	86	2,113	27,382	\$1,932	\$76,634	\$90,038	Louisiana.....	1919	46	1,121	12,562	\$803	\$36,017	\$41,220
	1914	59	1,253	15,571	646	20,616	23,039		1914	24	735	7,742	368	11,694	12,967
	1909	71	1,239	19,519	564	19,501	22,371		1909	37	693	10,706	327	10,971	12,529
Arkansas.....	1919	5	202	1,785	184	7,943	8,996	Texas.....	1919	14	423	7,998	414	13,809	17,901
	1914	5	116	1,520	48	1,705	1,837		1914	16	345	5,365	199	6,386	7,216
	1909	5	37	1,610	23	852	915		1909	19	430	6,274	189	7,122	8,142
California.....	1919	14	337	4,693	500	17,169	20,264	All other states.....	1919	7	30	339	31	1,694	1,657
									1914	14	57	944	31	851	1,019
									1909	10	79	929	25	556	755

TABLE 14.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	EXPENSES.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.	Salaries and wages.				
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.		Male.	Officials.		Clerks, etc.	
								Maximum month.	Minimum month.									
United States.....	88	3,249	40	003	438	55	2,113	De 3,410	Jy 954	3,432	3,390	39	3	\$23,792,509	\$831,034	\$677,906		
Arkansas.....	5	263	.....	23	34	4	202	Ja 374	Je 68	370	369	1	.....	1,488,878	82,892	48,056
California.....	14	449	15	36	37	24	337	Ja 621	Se 141	585	577	7	.....	4,329,485	139,941	100,680	
Louisiana.....	46	1,880	23	467	263	15	1,121	Oct 1,881	Jy 393	1,787	1,783	2	2	10,485,157	390,193	347,787		
Texas.....	14	604	1	70	98	12	423	Nov 675	Aug 176	630	601	29	.....	6,946,699	202,268	163,906	
All other states ²	7	44	1	7	6	.....	30	.....	.....	60	60	.....	.....	542,290	15,740	17,477

STATE.	EXPENSES—continued.							Value of products.	Value added by manufacture. ³	POWER.				
	Salaries and wages—Con.	For contract work.	Rent and taxes.		For materials.					Primary horsepower.				
			Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Total.			Owned.			Rented.	Electric horsepower generated in establishments reporting.
										Steam engines (not turbines).	Steam turbines.	Internal combustion engines.		
United States.....	\$1,032,196	\$17,871	\$122,905	\$1,061,322	\$76,335,172	\$298,644	\$90,038,412	\$13,404,596	27,382	18,821	60	697	7,804	875
Arkansas.....	183,590	.....	.....	83,350	7,930,440	13,027	8,995,856	1,052,389	1,785	1,785	.....	.....	.....	144
California.....	499,743	.....	110,485	357,460	17,094,978	74,267	20,264,263	3,095,018	4,698	350	.....	.....	3,848	.....
Louisiana.....	803,408	.....	4,235	265,196	35,896,591	120,819	41,220,471	5,203,061	12,562	9,778	60	277	2,447	264
Texas.....	414,116	17,871	6,165	349,747	13,721,606	87,824	17,900,547	4,091,117	7,998	6,103	.....	420	1,475	467
All other states ¹	31,369	.....	2,020	5,569	1,691,557	2,707	1,657,275	-36,988	339	305	.....	.....	34	.....

¹ Same number reported for one or more other months.

² All other states embrace: South Carolina, 1 establishment; Tennessee, 1; Washington, 5.

³ A minus sign (-) indicates cost of materials exceeds value of products.

THE SUGAR INDUSTRY.

GENERAL STATISTICS.

Scope of the report.—This report presents statistics for establishments engaged in the manufacture of beet and cane sugar and cane-sugar refining. Practically all of the mills engaged in the manufacture of cane sugar are located in Louisiana; those manufacturing beet sugar, in the western part of the country where the sugar beets are grown. Refineries are

located in places where the raw sugar can be most conveniently and economically obtained.

Comparative summary for the industry.—Table 1 summarizes statistics for the industry as a whole and for the three branches separately for 1919 and 1914, with percentages of increase for the five-year period.

TABLE 1.—COMPARATIVE SUMMARY FOR THE COMBINED INDUSTRY AND EACH OF THE THREE BRANCHES: 1919 AND 1914.

	TOTAL.		BEET SUGAR.		CANE SUGAR.		SUGAR REFINING.		PER CENT OF INCREASE, 1914-1919. ¹			
	1919	1914	1919	1914	1919	1914	1919	1914	Total.	Beet.	Cane.	Refin- ing.
Number of establishments.....	307	259	85	60	202	181	20	18	18.5	.....	11.6	.....
Persons engaged.....	42,186	26,739	14,190	9,634	7,045	4,544	20,921	12,561	57.7	47.3	55.0	66.6
Proprietors and firm members.....	172	181	1	1	165	172	6	8	-5.0	.....	-4.1	.....
Salaried employees.....	5,900	3,676	2,408	1,636	779	740	2,713	1,300	60.5	47.2	5.3	108.7
Wage earners (average number).....	36,084	22,882	11,781	7,997	6,101	3,632	18,202	11,253	57.7	47.3	68.0	61.8
Primary horsepower.....	281,796	239,617	127,394	76,705	101,861	113,246	52,541	49,608	17.6	66.1	-10.1	5.8
Capital.....	\$473,242,631	\$315,677,009	\$224,584,679	\$142,181,326	\$55,117,127	\$32,096,524	\$193,540,825	\$140,499,819	49.9	58.0	67.0	37.8
Salaries and wages.....	\$54,103,542	\$21,242,971	\$20,336,074	\$8,804,853	\$5,674,817	\$2,052,521	\$28,152,651	\$10,325,597	155.0	129.4	176.5	172.6
Salaries.....	\$11,535,591	\$5,252,014	\$1,427,956	\$2,258,649	\$1,065,448	\$491,145	\$5,442,187	\$2,502,220	119.6	96.0	239.1	117.5
Wages.....	\$42,627,951	\$15,990,957	\$15,908,118	\$6,606,204	\$4,609,369	\$1,561,376	\$22,710,464	\$7,823,377	166.6	140.8	156.8	190.3
Paid for contract work.....	\$891,600	\$279,915	\$796,772	\$247,657	\$27,866	\$11,088	\$67,522	\$20,270	218.5	221.7	128.3	233.1
Rent and taxes (including internal revenue).....	\$19,154,128	\$2,014,111	\$11,450,299	\$807,223	\$1,142,247	\$263,820	\$6,561,582	\$943,068	851.0	1,318.5	333.0	595.8
Cost of materials.....	\$703,316,541	\$321,442,937	\$87,029,144	\$41,399,361	\$44,143,416	\$15,958,218	\$662,143,981	\$264,085,358	146.8	110.2	178.6	150.7
Value of products.....	\$937,838,918	\$373,639,298	\$149,155,892	\$62,605,210	\$67,741,320	\$21,635,373	\$730,986,706	\$289,398,715	151.0	138.2	166.9	152.6
Value added by manufacture ²	\$144,567,377	\$52,196,361	\$62,126,748	\$21,205,849	\$13,597,904	\$5,677,155	\$68,842,725	\$25,313,357	177.0	193.0	139.5	172.0
Sugar:												
Tons (2,000 pounds).....	4,468,890	4,341,408	721,909	743,473	225,498	264,801	3,521,453	3,333,134	2.9	-2.9	-14.8	5.6
Value.....	\$888,326,173	\$363,034,123	\$138,099,693	\$58,590,466	\$36,659,085	\$18,947,683	\$713,567,895	\$285,495,974	144.7	135.7	93.5	149.9

¹ A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

² Value of products less cost of materials.

BEET SUGAR.

GENERAL STATISTICS.

Comparative summary.—Table 2 summarizes the statistics for each census since 1904, with percentages of increase for each five-year period. With few exceptions, increases are noticeable at each succeeding census. The large increases, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes." Contract work, or work performed by employees other than those in the plants reporting, has little significance, since it represents merely the methods of manufacture used by establishments, which vary from year to year.

Principal states, ranked by value of products.—Table 3 summarizes the more important statistics of the beet-sugar industry, by states. Colorado is the leading state in the manufacture of beet sugar, but on account of disclosure of individual operations can not be shown separately. Nebraska also can not be shown although it ranks fifth in the United States and shows a large production. Altogether 16 states reported the manufacture of beet sugar, but an idea of the centralization of the industry can be obtained from the fact that Colorado, Michigan, California, Utah, Nebraska, and Ohio combined produced 86.4 per cent of the total for the United States.

Persons engaged in the industry.—The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. The age classification of the average number of wage earners in Table 4 is an estimate obtained by the method described in "Explanation of terms." Figures by states will be found in Table 14.

Wage earners, by months, for states.—As shown by Table 5, the number of wage earners employed in the industry ranged from a maximum of 27,064 in November to a minimum of 4,661 in March, the minimum number being equivalent to 17.2 per cent of the maximum. Figures are given for the states separately, while for the United States the number of males and females is also shown.

Prevailing hours of labor.—Table 6 shows the average number of wage earners reported in 1919 and 1914 classed according to the number of hours of labor per week prevailing in the establishments in which they were employed. Figures for 1919 are also shown for five states, 1914 figures for these states not being available. The groups "60" and "Over 60" at both

censuses show the largest proportion of wage earners, being 96.4 per cent in 1914 and 82.5 per cent in 1919.

Size of establishments, by average number of wage earners.—Analysis of Table 7 discloses the fact that in 1919 the largest number of establishments and practically all of the wage earners were employed in the groups "51 to 100," "101 to 250," and "251 to 500," constituting 80 establishments, or 94.1 per cent of the total number and 11,607 wage earners, or 98.5 per cent of the total average number. Only 5 establishments and 174 wage earners were reported in the smaller groups.

Size of establishments, by value of products.—At the census of 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for number of establishments and value of products have been compiled, however, from the returns of 1914. This table, therefore, gives combined figures for these two groups in case of average number of wage earners and value added by manufacture for 1914. The statistics in Table 8 show the concentration of production in large establishments. In 1919, the groups "\$500,000 to \$1,000,000" and "\$1,000,000 and over" included 78 establishments, or 91.8 per cent of the total number for the industry, employed 11,392 wage earners, or 96.7 per cent of the average number, and reported products to the value of \$146,805,244, or 98.4 per cent of the total value of products.

Character of ownership.—The table illustrative of ownership can not be shown in the beet-sugar industry on account of disclosure of individual establishments. All of the establishments reporting were under corporate form of ownership except one, which was operated under individual ownership.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 9, there was an increase in the total horsepower for the industry of 50,689 horsepower, or 66.1 per cent, due largely to the increase of 4,556 horsepower, or 89.8 per cent, in rented power. There was also a large increase, 22,444 horsepower, or 175.4 per cent, in power generated by establishments reporting.

Fuel consumed.—Table 10 shows the principal kinds of fuel used for the industry for 1919 and also gives separately amounts consumed in states requiring considerable quantities of fuel used in connection with the industry. Colorado, Michigan, and Utah utilized 69.2 per cent of bituminous coal; and California 67.1 per cent of the coke and 89.8 per cent of the fuel oils.

BEET SUGAR.

135

TABLE 2.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904.

	1919	1914	1909	1904	PER CENT OF INCREASE. ¹		
					1914-1919	1909-1914	1904-1909
Number of establishments.....	85	80	58				
Persons engaged.....	14,190	9,634	8,389	4,726	47.3	14.8	77.5
Proprietors and firm members.....	1	1	1				
Salaried employees.....	2,408	1,630	1,184	763	47.2	38.2	55.2
Wage earners (average number).....	11,781	7,997	7,204	3,903	47.3	11.0	81.8
Primary horsepower.....	127,394	76,705	57,202	35,490	66.1	34.1	61.2
Capital.....	\$224,584,679	\$142,181,326	\$129,628,938	\$55,923,459	58.0	9.7	131.8
Salaries and wages.....	\$20,336,074	\$8,864,853	\$6,577,900	\$3,491,338	129.4	34.8	88.4
Salaries.....	\$4,427,956	\$2,255,649	\$1,769,454	\$1,004,636	66.0	27.6	76.1
Wages.....	\$15,908,118	\$6,609,204	\$4,808,446	\$2,486,702	140.8	37.4	93.4
Paid for contract work.....	\$796,772	\$247,657	\$1,591	\$13,255	221.7	15,460.1	-88.0
Rent and taxes.....	\$11,450,289	\$807,223	\$634,111	\$243,443	1,318.5	27.3	160.5
Cost of materials.....	\$87,029,144	\$41,399,361	\$27,265,170	\$14,486,876	110.2	51.8	88.2
Value of products.....	\$149,155,892	\$62,005,210	\$48,122,383	\$24,393,794	138.2	30.1	97.2
Value added by manufacture ³	\$62,126,748	\$21,205,849	\$20,857,213	\$9,906,918	193.0	1.7	110.5
Beets used (tons, 2,000 pounds).....	5,648,552	5,639,103	3,965,356	2,176,417	0.2	42.2	82.3
Sugar produced:							
Tons (2,000 pounds).....	721,909	743,473	501,682	253,921	-2.9	48.2	97.6
Value.....	\$138,090,693	\$53,590,466	\$45,937,629	\$23,924,602	135.7	27.5	92.0

¹ A minus sign (—) denotes decrease; percentages are omitted where base is less than 100. ² Exclusive of internal revenue. ³ Value of products less cost of materials.

TABLE 3.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States..	85	11,781			\$149,156			\$62,127			Utah.....	16	2,214	18.8	3	\$20,569	13.8	4	\$7,939	12.8	4
Michigan.....	16	1,836	15.6	2	26,379	17.7	2	9,697	15.6	3	Ohio.....	5	630	5.3	7	7,240	4.9	7	2,141	3.4	7
California.....	10	1,512	12.8	4	26,354	17.7	3	12,200	19.6	2	Wisconsin.....	4	334	2.8	8	3,246	2.2	8	1,187	1.0	8
											All other states...	34	5,255	44.6	...	65,359	43.8	...	28,963	46.6	...

TABLE 4.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1919	14,190	13,275	915	93.6	6.4	Clarks and other subordinate salaried employees.....	1919	1,737	1,266	471	72.9	27.1
	1914	9,631	9,453	176	98.2	1.8		1914	1,260	1,121	139	89.0	11.0
	1909	8,389	8,231	108	98.7	1.3		1909	865	772	93	89.2	10.8
Proprietors and officials.....	1919	672	670	2	99.7	0.3	Wage earners (average number).....	1919	11,781	11,339	442	96.2	3.8
	1914	377	377		100.0			1914	7,997	7,980	17	99.6	0.4
	1909	320	320		100.0			1909	7,204	7,189	15	99.8	0.2
Proprietors and firm members.....	1919	1	1		100.0		16 years of age and over.....	1919	11,780	11,338	442	96.2	3.8
	1914	1	1		100.0			1914	7,995	7,958	37	99.5	0.5
	1909	1	1		100.0			1909	7,108	7,183	15	99.8	0.2
Salaried officers of corporations.....	1919	113	112	1	99.1	0.9	Under 16 years of age.....	1919	1	1		100.0	
	1914	98	93		100.0			1914	2	2		100.0	
	1909	91	91		100.0			1909	6	6		100.0	
Superintendents and managers.....	1919	558	557	1	99.8	0.2							
	1914	278	278		100.0								
	1909	228	228		100.0								

MANUFACTURES.

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	11,781	11,627	5,926	4,661	5,573	6,386	7,248	7,994	9,064	10,607	23,281	27,064	21,941	17.2
1914.....	11,339	11,234	5,788	4,598	5,475	6,263	7,150	7,836	8,889	10,409	22,028	25,515	20,885	18.0
Males.....	442	393	138	65	98	123	98	158	175	198	1,253	1,549	1,056	4.2
Females.....	7,997	6,583	2,527	2,537	3,104	3,989	4,045	4,470	7,180	9,066	20,353	18,686	13,354	12.4
California.....	1,512	1,179	552	648	719	760	811	1,191	1,625	2,771	3,654	2,731	1,505	15.1
Michigan.....	1,836	2,102	870	590	741	1,050	1,349	1,362	1,453	1,476	2,314	4,342	4,383	13.5
Ohio.....	630	783	188	297	262	285	343	379	461	489	1,263	1,472	1,388	12.8
Utah.....	2,214	2,825	1,825	775	864	1,059	1,258	1,109	1,234	1,487	4,493	5,024	4,635	15.4
Wisconsin.....	834	177	57	77	83	112	131	160	191	249	781	1,032	958	5.5

TABLE 6.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	60.			44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	60.
United States.....	11,781	32	.....	175	.....	107	1,742	1,213	Michigan.....	1,836	.....	.....	112	.....	.....	107	1,617
1914.....	7,997	.....	.....	.....	.....	180	1,08	2,538	Ohio.....	630	.....	.....	.....	.....	.....	322	308
California.....	1,512	.....	.....	.....	.....	107	.....	1,405	Utah.....	2,214	32	.....	63	.....	1,383	.....	739
									Wisconsin.....	334	.....	.....	.....	.....	.....	84	250

TABLE 7.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—											
	Estab-lish-ments.	Wage earners (average number).	6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		Over 500 wage earners.	
			Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.
United States.....	1919..	85	11,781	1	16	4	158	24	1,909	47	6,875	9	2,823	.....
	1914..	60	7,997	1	8	8	333	23	1,794	22	3,504	4	1,232	2
California.....		10	1,512	1	16	1	48	1	90	6	1,000	1	358	.....
Michigan.....		16	1,836	.....	.....	.....	.....	6	472	10	1,364	.....	.....	.....
Ohio.....		5	680	.....	.....	.....	.....	3	260	2	370	.....	.....	.....
Utah.....		16	2,214	.....	.....	1	32	5	357	8	1,251	2	574	.....
Wisconsin.....		4	334	.....	.....	.....	.....	3	230	1	104	.....	.....	.....

BEET SUGAR.

137

TABLE 8.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919 AND 1914.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
All classes.....	85	60	11,781	7,997	\$149,155,892	\$62,605,210	\$62,126,748	\$21,205,849
\$100,000 to \$500,000.....	17	120	1,389	12,620	12,350,648	7,273,188	963,876	7,193,836
\$500,000 to \$1,000,000.....	20	17	1,873	5,377	15,954,011	11,931,339	5,912,765	14,012,013
\$1,000,000 and over.....	58	23	9,519		130,851,233	43,400,653	55,250,107	
PER CENT DISTRIBUTION.								
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
\$100,000 to \$500,000.....	8.3	33.3	8.3	32.8	1.6	11.6	1.6	33.9
\$500,000 to \$1,000,000.....	23.5	28.3	15.9		10.7	19.1	9.5	
\$1,000,000 and over.....	68.2	38.3	80.8	67.2	87.7	69.3	88.9	66.1

¹ Includes the group "\$20,000 to \$100,000."

TABLE 9.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919 AND 1914.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.				POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
			Amount.		Per cent distribu- tion.					Amount.		Per cent distribu- tion.	
	1919	1914	1919	1914	1919	1914		1919	1914	1919	1914	1919	1914
Primary power, total	1,136	686	127,394	76,705	100.0	100.0	Primary power—Continued.						
Owned.....	679	506	117,763	71,630	92.4	93.4	Rented.....	457	180	9,631	5,075	7.6	6.6
Steam.....	659	449	117,469	70,507	92.2	91.9	Electric.....	457	180	9,631	5,075	7.6	6.6
Engines.....	624	449	103,697	70,507	81.4	91.9	Other.....						
Turbines.....	35		13,772		10.8		Electric.....	2,406	814	44,871	17,871	100.0	100.0
Internal-combustion engines.....	19	30	259	928	0.2	1.2	Rented.....	457	180	9,631	5,075	21.5	28.4
Water wheels, turbines, and motors.....	1	18	35	195	(1)	0.3	Generated by establishments report- ing.....	1,949	634	35,240	12,796	78.5	71.6

¹ Less than one-tenth of 1 per cent.

TABLE 10.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Coke (tons, 2,000 lbs.).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).	STATE.	COAL.		Coke (tons, 2,000 lbs.).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).						Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).				
United States...1919..		1,047,643	125,262	564,050	209	57,862	Ohio.....		65,702	2,577			
1914..	37,235	632,693	37,854	803,698	(¹)	4,739	Utah.....		153,537	8,142		35	
California.....			84,065	506,277		201	Wisconsin.....		26,834	300			
Michigan.....		221,293	6,853	782	174		All other states.....		580,367	23,325	57,000		57,661

¹ Included in figures for fuel oils.

SPECIAL STATISTICS.

Detailed statistics of quantity and quality of beets treated.—Table 11 shows, for 1919, 1914, and 1909, the acreage, quantity, and quality of the beets treated for the manufacture of beet sugar. Of the total acreage in 1919, 6.6 per cent was planted directly by factory owners, 2.5 per cent by tenants of factory owners, and 90.9 per cent by independent growers. Of the total quantity of beets treated during the same year, 3.9 per cent was grown directly by the factories, 2 per cent by tenants, and 94.1 per cent by independent growers.

TABLE 11.—ACREAGE, QUANTITY, AND QUALITY OF BEETS TREATED: 1919, 1914, AND 1909.

	UNITED STATES.		
	1919	1914	1909
Total acreage of beets planted.....	602,555	532,421	415,964
By proprietors.....	39,637	28,266	29,459
By tenants.....	15,340	15,397	18,186
By independent growers.....	547,578	488,758	368,329
Total quantity of beets treated (tons of 2,000 pounds).....	5,648,552	5,639,103	3,905,353
Grown by proprietors.....	222,139	214,923	286,708
Grown by tenants.....	114,563	135,637	163,843
Grown by independent growers.....	5,311,850	5,289,543	3,554,745
Quantity of beets used:			
Average percentage of sucrose.....	15.2	16.1	16.1
Average coefficient of purity.....	83.2	84.0	84.1

The quality of the beet is indicated by "percentage of sucrose" and the "coefficient of purity." Both of these terms relate to the sugar content, the former representing the ratio between the weight of the sugar and that of the whole beet, and the latter the ratio between the weight of the sugar and that of the

solid content of the beet. In the operation of beet-sugar factories the coefficient of purity of the beets used is of great importance, as upon this depends to a considerable extent the cost of the separation of the sugar from the solids.

Detailed statement of the quantity and value of products.—Table 12 shows the quantity and value of the various products manufactured from the sugar beets for 1919, 1914, and 1909. The molasses and pulp are used largely in the preparation of stock feed.

TABLE 12.—DETAILED STATEMENT OF QUANTITY AND VALUE OF PRODUCTS: 1919, 1914, AND 1909.

PRODUCT.	UNITED STATES.		
	1919	1914	1909
Total value.....	\$149,155,892	\$62,605,210	\$48,122,383
Sugar:			
Tons (2,000 pounds).....	721,909	743,473	501,682
Value.....	\$138,099,693	\$58,590,466	\$45,937,629
Granulated—			
Tons.....	719,420	739,233	496,807
Value.....	\$137,852,387	\$58,351,324	\$45,645,810
Raw—			
Tons.....	2,489	4,240	4,875
Value.....	\$247,306	\$239,142	\$291,819
Average pounds of sugar per ton of beets..	256	264	253
Molasses:			
Gallons.....	18,841,429	26,461,291	20,812,747
Value.....	\$2,364,563	\$1,536,192	\$1,129,905
Pulp, value.....	6,798,412	2,094,863	795,900
Dried.....	4,820,568	1,510,759	(1)
Moist.....	668,844	584,104	(1)
All other products, value.....	2,893,224	383,689	258,649

¹ Not reported separately.

Products, by states.—Table 13 gives, for 1919, the detailed statement of quantity and value of products for the beet-sugar industry, by states.

TABLE 13.—DETAILED STATEMENT OF QUANTITY AND VALUE OF PRODUCTS, BY STATES: 1919.

PRODUCT.	BEET SUGAR.						
	United States.	California.	Michigan.	Ohio.	Utah.	Wisconsin.	All other states.
Total value.....	\$149,155,892	\$26,354,094	\$28,378,870	\$7,249,156	\$20,569,135	\$3,245,611	\$65,350,026
Sugar:							
Tons (2,000 pounds).....	721,909	125,194	122,708	32,838	94,659	10,701	335,809
Value.....	\$138,099,693	\$24,495,988	\$23,000,310	\$6,553,778	\$19,667,324	\$2,952,808	\$60,529,425
Granulated—							
Tons.....	719,420	124,903	122,539	32,838	94,497	10,671	333,972
Value.....	\$137,852,387	\$24,454,722	\$23,887,805	\$6,553,778	\$19,651,943	\$2,946,768	\$60,367,371
Raw—							
Tons.....	2,489	291	169	.....	162	30	1,837
Value.....	\$247,306	\$41,266	\$12,605	.....	\$15,381	\$6,100	\$172,054
Molasses:							
Gallons.....	18,841,429	2,897,249	3,435,572	941,640	6,009,046	758,980	4,798,942
Value.....	\$2,364,563	\$381,161	\$504,445	\$162,048	\$705,569	\$79,860	\$531,450
Pulp, value.....	\$5,798,412	\$1,329,878	\$1,860,475	\$505,305	\$195,984	\$212,883	\$1,093,887
Dried, value.....	\$4,820,568	\$1,142,347	\$1,860,475	\$503,805	.....	\$206,198	\$1,116,743
Moist, value.....	\$668,844	\$187,531	.....	\$1,500	\$195,984	\$6,685	\$577,144
All other products, value.....	\$2,893,224	\$147,067	\$113,640	\$28,025	\$258	.....	\$2,604,234

GENERAL TABLE.

Table 14 presents, for 1919, statistics in detail for the industry as a whole, and for each state that can be shown separately without the possibility of closing the operations of individual establishments.

TABLE 14.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		Officials.	Clarks, etc.	
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.					Male.
								Maximum month.	Minimum month.								
United States...	85	14,190	1	671	1,266	471	11,781	No. 27,064	Mh. 4,661	26,489	25,275	1,213	1	\$224,584,679	\$2,565,036	\$1,862,920	
California.....	10	1,896	.....	92	203	89	1,512	Oct. 3,654	Fe. 552	3,715	3,631	83	1	45,839,036	436,343	302,843
Michigan.....	16	2,221	.....	106	210	89	1,536	Dec. 4,383	Mh. 590	4,807	4,733	74	.....	27,673,805	365,163	290,421
Ohio.....	5	693	.....	25	20	18	630	No. 1,472	Fe. 188	1,390	1,377	13	.....	5,983,906	90,179	47,881
Utah.....	16	2,530	.....	155	117	44	2,214	No. 5,024	Mh. 775	4,724	4,249	475	.....	39,922,847	467,138	180,344
Wisconsin.....	4	393	.....	24	28	7	334	No. 1,032	Fe. 57	958	958	.....	.....	3,734,008	71,612	47,888
All other states ¹	34	6,457	1	269	688	244	5,255	.....	.....	10,895	10,327	598	.....	101,431,077	1,134,601	1,015,043

STATE.	EXPENSES—continued.						Value of products.	Value added by manufacture.	POWER.						
	Salaries and wages—Con.	For contract work.	Rent and taxes.		For materials.				Primary horsepower.						Electric horsepower generated in establishments reporting.
			Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.				Rented. ³	
										Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. ²		
United States...	\$15,908,118	\$796,772	\$7,414	\$11,442,885	\$81,650,540	\$5,378,604	\$149,155,802	\$62,126,748	127,394	103,697	13,772	259	35	9,631	35,240
California.....	2,246,411	28,228	7,152	1,389,751	13,174,193	980,168	26,354,004	12,199,733	27,155	19,895	2,300	3	.....	4,957	7,279
Michigan.....	2,764,916	70,863	.....	1,331,032	15,520,700	1,161,150	26,378,870	9,697,020	20,550	17,387	2,335	89	.....	739	4,726
Ohio.....	1,126,648	5,601	.....	199,529	4,819,409	288,707	7,249,156	2,141,040	7,180	6,650	400	35	.....	95	1,555
Utah.....	1,999,012	.....	.....	1,056,647	11,808,671	761,664	20,509,135	7,938,800	14,948	11,310	500	.....	.....	3,138	2,767
Wisconsin.....	325,555	.....	.....	26,605	1,928,191	130,138	3,245,611	1,187,282	3,565	3,380	10	4	.....	171	1,255
All other states ¹	7,445,576	692,080	202	7,439,321	34,339,376	2,056,777	65,359,026	28,962,873	53,996	45,075	8,227	128	35	531	17,668

¹ All other states embrace: Colorado, 14 establishments; Idaho, 8; Illinois, 1; Indiana, 1; Iowa, 1; Kansas, 1; Minnesota, 1; Montana, 1; Nebraska, 4; Washington, 1; and Wyoming, 1.

² Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

³ Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

CANE SUGAR, INCLUDING REFINING.

GENERAL STATISTICS.

The two industries, cane sugar and cane-sugar refining, have been combined, and, in order to prevent disclosures, statistics for states have not been shown.

Comparative summary.—Table 15 summarizes the statistics for each census since 1909. Increases are noticeable in both industries for the five-year period 1914-1919. The large increases, however, in salaries and wages, cost of materials, and value of products are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industries for that period. A truer index of conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes." Contract work, or work performed by employees other than those in plants reporting, has little significance, since it represents merely the methods of manufacture used by establishments, which vary from year to year.

Principal states, ranked by value of products.—As has been mentioned before, data for states can not be given on account of disclosure of individual operations.

New York led in sugar refining, followed by Pennsylvania, Louisiana, and California, while Louisiana was the leading state in the cane-sugar industry.

Persons engaged in the industry.—The classification by sex, for 1919, was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. The age classification of the average number of wage earners in Table 16 is an estimate obtained by the method described in the "Explanation of terms." Figures in detail will be found in Table 27.

Wage earners, by months.—The statistics for wage earners in Table 17 show the regularity of employment, or the reverse, in accordance with existing industrial conditions during the several census years, together with the percentage which the number reported by each of the several months forms of the number reported for the maximum month.

Prevailing hours of labor.—Table 18 shows a marked shortening of the working day for these two industries since 1914. In that year only 8.1 per cent were reported as employed fewer than 54 hours per week as against 26.3 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 81.2 per cent of the total wage earners as compared with 66.1 per cent in 1919.

Size of establishments, by average number of wage earners.—Table 19 shows the size of establishments by average number of wage earners as a total in com-

parison with 1914. Analysis of this table reveals the fact that in 1919, 60 establishments, or 27 per cent of the total number for the two industries, employed less than 6 wage earners each, while 86, or four-tenths of 1 per cent of the total average number of wage earners, were employed therein, evidencing the predominance of the small establishments based upon the average number of wage earners. On the other hand, the classes "501 to 1,000" and "Over 1,000" comprising 15 establishments employed 16,288 wage earners, or 67 per cent of the total average number, illustrating the extent of the manufacturing operations in a few large establishments.

Size of establishments, by value of products.—At the census of 1914, establishments with products valued at "\$100,000 to \$1,000,000," constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. The table, therefore, gives combined figures for these two groups in case of average number of wage earners and value added by manufacture for 1914. The statistics in Table 20 show the degree of concentration of production in large establishments. In 1919 the groups "\$500,000 to \$1,000,000" and "\$1,000,000 and over" included 58 establishments, or 26.1 per cent of the total, employed 21,116 wage earners, or 86.8 per cent of the total number for the industries, and reported products to the value of \$764,787,417, or 97 per cent of the total value of products.

Character of ownership.—Table 21 emphasizes the predominance of corporate form of ownership. Corporations owned 53.6 per cent of the total number of establishments for these industries in 1919, employed 85.6 per cent of the total average number of wage earners, and reported 87.9 per cent of the value of products. During the five-year period 1914 to 1919 the average number of wage earners in corporations increased 8,766, or 72.8 per cent, and the value of products \$427,082,536, or 160.6 per cent.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 22, there was a decrease in the total horsepower for these industries of 8,510 horsepower, or 5.2 per cent. The largest decrease is in the rented power, being 3,860 horsepower, or 91.4 per cent, while electric power generated by establishments reporting, increased 34,033 horsepower, or 150.8 per cent.

Fuel consumed.—Table 23 shows the principal kinds of fuel used in these two industries for 1919 and 1914 separately and as a whole.

CANE SUGAR, INCLUDING REFINING.

141

TABLE 15.—COMPARATIVE SUMMARY: 1919, 1914, AND 1909.

	TOTAL.			CANE SUGAR.			CANE-SUGAR REFINING.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Number of establishments.....	222	199	233	1 202	1 181	1 214	2 20	2 18	2 19
Persons engaged.....	27,966	17,105	15,658	7,045	4,544	5,313	20,921	12,561	10,345
Proprietors and firm members.....	171	180	204	165	172	188	6	8	6
Salaried employees.....	3,492	2,040	1,928	779	740	989	2,713	1,300	940
Wage earners (average number).....	24,303	14,885	13,526	6,101	3,632	4,127	18,202	11,253	9,399
Primary horsepower.....	154,402	162,912	160,603	101,861	113,246	122,189	52,541	49,066	38,414
Capital.....	\$248,657,982	\$173,496,343	\$153,166,561	\$55,117,127	\$32,996,524	\$37,925,770	\$103,540,825	\$140,499,819	\$115,240,791
Salaries and wages.....	\$33,827,468	\$12,378,118	\$9,875,298	\$5,674,817	\$2,052,521	\$2,600,172	\$28,152,651	\$10,325,597	\$7,275,126
Salaries.....	\$7,107,635	\$2,993,365	\$2,391,576	\$1,665,448	\$491,145	\$747,421	\$5,442,187	\$2,502,220	\$1,654,155
Wages.....	\$26,719,833	\$9,384,753	\$7,483,722	\$4,009,369	\$1,561,376	\$1,852,751	\$22,710,464	\$7,823,377	\$5,620,971
Paid for contract work.....	\$94,888	\$32,258	\$40,863	\$27,366	\$11,988	\$43,068	\$67,522	\$20,270	\$3,825
Rent and taxes (including internal revenue).....	\$7,703,829	\$1,204,883	\$888,032	\$1,142,247	\$263,820	\$315,631	\$6,561,682	\$943,063	\$570,401
Cost of materials.....	\$706,287,397	\$280,043,576	\$247,582,804	\$44,143,416	\$15,963,218	\$21,294,844	\$662,143,981	\$264,085,358	\$226,287,960
Value of products.....	\$788,728,026	\$311,034,088	\$279,249,397	\$57,741,320	\$21,635,373	\$30,620,738	\$730,989,706	\$289,398,715	\$248,628,669
Value added by manufacture.....	\$82,440,629	\$30,990,512	\$31,666,593	\$13,597,904	\$5,677,155	\$9,325,894	\$68,842,725	\$25,313,357	\$22,340,699
Sugar:									
Tons (2,000 pounds).....	3,746,951	3,597,935	(*)	225,498	264,801	326,858	3,521,453	3,333,134	(*)
Value.....	\$750,226,480	\$304,443,657	(*)	\$36,659,085	\$18,947,683	\$26,095,673	\$713,567,395	\$285,495,974	(*)

* Includes for 1919: Florida, 3 establishments; Georgia, 2; Louisiana, 189; Mississippi, 1; South Carolina, 6; and Texas, 1. For 1914: Arizona, 1; Florida, 5; Louisiana, 168; Mississippi, 2; South Carolina, 1; and Texas, 4. For 1909: Illinois, 1; Louisiana, 204; Maryland, 1; Minnesota, 2; and Texas, 6.
 * Includes for 1919: California, 2 establishments; Louisiana, 3; Massachusetts, 2; New Jersey, 2; New York, 5; Pennsylvania, 4; Texas, 1; and Georgia, 1. For 1914: California, 2; Louisiana, 3; Massachusetts, 2; New Jersey, 2; New York, 5; Pennsylvania, 3; and Texas, 1. For 1909: California, 2; Louisiana, 5; Massachusetts, 2; New Jersey, 2; New York, 5; Pennsylvania, 2; and Texas, 1.
 * Value of products less cost of materials.
 * The quantity and value for sugar refining were not reported for 1909.

TABLE 16.—PERSONS ENGAGED IN THE INDUSTRIES: 1919, 1914, AND 1909.

CLASS.	CANE SUGAR AND CANE-SUGAR REFINING.						CANE SUGAR.						CANE-SUGAR REFINING.					
	Cen- sus year.	Total.	Male.	Fe- male.	Per cent of total.		Total.	Male.	Fe- male.	Per cent of total.		Total.	Male.	Fe- male.	Per cent of total.		Male.	Fe- male.
All classes.....	1919	27,966	25,483	2,483	91.1	8.9	7,045	6,398	647	90.8	9.2	20,921	19,085	1,836	91.2	8.8	91.2	8.8
	1914	17,105	16,302	713	95.8	4.2	4,544	4,423	121	97.3	2.7	12,561	11,999	562	95.3	4.7	95.3	4.7
	1909	15,658	15,228	430	97.3	2.7	5,313	5,213	100	98.1	1.9	10,345	10,015	330	96.8	3.2	96.8	3.2
Proprietors and officials.....	1919	1,011	988	23	97.7	2.3	640	621	19	97.0	3.0	371	367	4	98.9	1.1	98.9	1.1
	1914	661	641	20	97.0	3.0	450	432	18	96.0	4.0	211	209	2	99.1	0.9	99.1	0.9
	1909	789	743	46	94.2	5.8	590	544	46	92.2	7.8	199	199	0	100.0	0.0	100.0	0.0
Proprietors and firm members.....	1919	171	150	21	87.7	12.3	165	140	19	88.5	11.5	6	4	2	66.7	33.3	66.7	33.3
	1914	180	160	20	88.9	11.1	172	154	18	89.5	10.5	8	6	2	75.0	25.0	75.0	25.0
	1909	204	160	44	78.4	21.6	198	154	44	77.8	22.2	6	6	0	100.0	0.0	100.0	0.0
Salaried officers of corporations.....	1919	206	206	0	100.0	0.0	159	159	0	100.0	0.0	47	47	0	100.0	0.0	100.0	0.0
	1914	96	96	0	100.0	0.0	72	72	0	100.0	0.0	24	24	0	100.0	0.0	100.0	0.0
	1909	140	138	2	98.6	1.4	105	103	2	98.1	1.9	35	35	0	100.0	0.0	100.0	0.0
Superintendents and managers.....	1919	634	632	2	99.7	0.3	316	316	0	100.0	0.0	318	316	2	99.4	0.6	99.4	0.6
	1914	385	385	0	100.0	0.0	206	206	0	100.0	0.0	179	179	0	100.0	0.0	100.0	0.0
	1909	445	445	0	100.0	0.0	287	287	0	100.0	0.0	158	158	0	100.0	0.0	100.0	0.0
Clerks and other subordinate sal- aried employees.....	1919	2,652	2,095	557	79.0	21.0	304	281	23	92.4	7.6	2,348	1,814	534	77.3	22.7	77.3	22.7
	1914	1,559	1,453	106	93.2	6.8	462	442	20	95.7	4.3	1,037	1,011	26	97.5	2.5	97.5	2.5
	1909	1,343	1,282	61	94.0	6.0	598	567	31	94.7	5.3	747	695	52	93.0	7.0	93.0	7.0
Wage earners (average number).....	1919	24,303	22,400	1,903	92.2	7.8	6,101	5,496	605	90.0	9.9	18,202	16,904	1,298	92.9	7.1	92.9	7.1
	1914	14,885	14,298	587	96.1	3.9	3,682	3,549	133	97.7	2.3	11,253	10,749	504	95.5	4.5	95.5	4.5
	1909	13,526	13,223	303	97.8	2.2	4,127	4,102	25	99.4	0.6	9,399	9,121	278	97.0	3.0	97.0	3.0
16 years of age and over.....	1919	24,244	22,344	1,900	92.2	7.8	6,049	5,447	602	90.0	10.0	18,195	16,897	1,298	92.9	7.1	92.9	7.1
	1914	14,813	14,235	578	96.1	3.9	3,588	3,459	129	97.8	2.2	11,225	10,729	496	95.6	4.4	95.6	4.4
	1909	13,458	13,160	298	97.8	2.2	4,104	4,080	24	99.4	0.6	9,364	9,080	274	97.1	2.9	97.1	2.9
Under 16 years of age.....	1919	59	56	3	94.9	5.1	52	49	3	94.2	5.8	7	7	0	100.0	0.0	100.0	0.0
	1914	72	60	12	83.3	16.7	44	40	4	90.9	9.1	28	20	8	71.4	28.6	71.4	28.6
	1909	68	63	5	92.6	7.4	23	22	1	95.7	4.3	45	41	4	91.1	8.9	91.1	8.9

MANUFACTURES.

TABLE 17.—WAGE EARNERS, BY MONTHS: 1919, 1914, AND 1909.

MONTH.	CANE SUGAR AND CANE-SUGAR REFINING.						CANE SUGAR.						CANE-SUGAR REFINING.					
	Number. ¹			Percent of maximum.			Number. ¹			Percent of maximum.			Number. ¹			Percent of maximum.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
January.....	23,186	10,666	9,533	65.1	42.7	37.6	8,653	1,453	1,598	44.2	9.9	10.1	14,533	8,112	7,935	70.9	71.2	79.7
February.....	23,643	10,823	9,812	66.4	43.7	38.3	4,951	893	559	25.3	6.1	3.5	18,692	9,630	8,653	91.2	77.6	86.9
March.....	21,471	12,395	10,005	61.3	50.1	41.8	2,160	673	715	11.0	4.6	4.5	19,311	11,722	9,890	94.2	91.6	99.4
April.....	20,418	12,634	10,450	57.4	51.2	41.2	1,574	701	798	7.7	4.8	5.1	18,904	11,983	9,652	92.2	93.7	97.0
May.....	21,186	12,952	10,368	59.5	52.3	40.9	1,646	723	874	8.4	4.9	5.5	19,539	12,220	9,492	95.3	95.6	95.4
June.....	21,327	13,649	10,966	59.9	54.3	43.3	1,727	857	1,040	8.8	5.9	6.6	19,600	12,792	9,926	95.6	100.0	97.7
July.....	22,346	13,533	11,074	62.8	54.7	43.7	1,845	1,062	1,122	9.4	7.3	7.1	20,501	12,471	9,952	100.0	97.5	100.0
August.....	20,851	13,414	10,533	58.6	54.2	41.6	1,793	1,017	920	9.2	6.9	5.8	19,058	12,397	9,613	93.0	95.9	96.6
September.....	21,220	12,931	11,002	59.0	52.2	43.4	1,854	1,338	1,322	9.5	9.1	8.4	19,366	11,593	9,680	94.5	90.6	97.3
October.....	25,728	17,643	19,034	72.3	71.3	75.1	8,104	7,253	9,693	41.4	49.6	61.5	17,624	10,390	9,341	88.0	81.2	93.9
November.....	35,599	24,752	25,349	100.0	100.0	100.0	19,395	14,635	15,761	99.1	100.0	100.0	16,204	10,117	9,588	79.0	79.1	93.3
December.....	34,662	23,279	24,163	97.4	94.0	95.3	19,570	12,979	15,115	100.0	88.7	95.9	15,092	10,300	9,048	73.6	80.5	90.9

¹ The figures represent the number employed on the 15th of each month or the nearest representative day. Maximum indicated by bold-faced figures, minimum by italic figures.

TABLE 18.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR CANE-SUGAR AND CANE-SUGAR REFINING: 1919 AND 1914.

INDUSTRY.	Cen- sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							INDUSTRY.	Cen- sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
			44 and un- der.	Be- tween 44 and 48.	48.1	Be- tween 48 and 54.	54.	Be- tween 54 and 60.	60.				Over 60.	44 and un- der.	Be- tween 44 and 48.	48.1	Be- tween 48 and 54.	54.	Be- tween 54 and 60.
Total.....	1919 1914	24,303 14,885	745 (2)	3 (2)	5,643 614	25 593	1,271 82	553 1,512	9,538 3,450	Cane-sugar refin- ing.....	1919 1914	18,202 11,253	(2)	(2)	5,022 614	1,252 591	6,024 3,055	5,904 5,495	
Cane-sugar.....	1919 1914	6,101 3,632	745	3	621	25	19 82	553 14	3,634 3,139										

¹ Includes 48 and under for 1914.

² Corresponding figures not available.

TABLE 19.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR CANE SUGAR AND CANE-SUGAR REFINING: 1919 AND 1914.

	1919	1914		1919	1914
Total number of establishments.....	222	199	51 to 100 wage earners—		
Total wage earners (average number).....	24,303	14,885	Establishments.....	16	10
Establishments employing:			Wage earners.....	1,101	711
No wage earners—			101 to 250 wage earners—		
Establishments.....	5	.....	Establishments.....	10	7
1 to 5 wage earners—			Wage earners.....	1,499	989
Establishments.....	55	52	251 to 500 wage earners—		
Wage earners.....	86	180	Establishments.....	7	5
6 to 20 wage earners—			Wage earners.....	2,711	2,032
Establishments.....	60	74	501 to 1,000 wage earners—		
Wage earners.....	758	942	Establishments.....	7	9
21 to 50 wage earners—			Wage earners.....	5,228	6,683
Establishments.....	55	41	Over 1,000 wage earners—		
Wage earners.....	1,800	1,237	Establishments.....	8	1
			Wage earners.....	11,060	2,131

TABLE 20.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919 AND 1914.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
All classes.....	222	199	24,303	14,885	\$788,728,026	\$311,034,083	\$82,440,629	\$30,090,512
Less than \$5,000.....	34	17	30	28	74,412	38,067	32,343	14,184
\$5,000 to \$20,000.....	17	14	36	88	143,962	178,406	47,891	36,063
\$20,000 to \$100,000.....	32	72	394	958	1,992,051	4,140,240	410,403	883,317
\$100,000 to \$500,000.....	81	74	2,727	2,558	21,730,184	14,596,958	5,371,220	4,743,591
\$500,000 to \$1,000,000.....	28	4	1,507	.....	18,813,565	2,081,702	4,298,016	.....
\$1,000,000 and over.....	30	18	10,609	11,253	746,973,862	289,398,715	72,308,856	25,313,357
PER CENT DISTRIBUTION.								
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	15.3	8.5	0.1	0.2	(¹)	(¹)	(¹)	(¹)
\$5,000 to \$20,000.....	7.7	7.0	0.1	0.6	(¹)	0.1	0.5	0.1
\$20,000 to \$100,000.....	14.4	36.2	1.6	6.4	0.3	1.3	0.5	2.9
\$100,000 to \$500,000.....	36.5	37.2	11.2	17.2	2.8	4.7	6.5	15.3
\$500,000 to \$1,000,000.....	12.6	2.0	6.2	.....	2.4	0.9	5.2	.....
\$1,000,000 and over.....	13.5	9.0	80.7	75.6	94.8	93.0	87.7	81.7

¹ Less than one-tenth of 1 per cent.

CANE SUGAR, INCLUDING REFINING.

143

TABLE 21.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Cen- sus year.	Num- ber of estab- lish- ments.	Aver- age num- ber of wage earners.	Value of products.	Value added by manufac- ture.	CHARACTER OF OWNERSHIP.	Cen- sus year.	Num- ber of estab- lish- ments.	Aver- age num- ber of wage earners.	Value of products.	Value added by manufac- ture.
All classes.....	1919 1914	222 199	24,303 14,885	\$788,728,026 311,034,088	\$82,440,629 30,990,512	Per cent distribution:					
Individual.....	1919 1914	65 55	562 388	4,386,546 3,710,938	1,095,354 959,732	Individual.....	1919 1914	29.3 27.6	2.3 5.8	0.6 1.2	1.3 3.1
Corporation.....	1919 1914	119 106	20,812 12,046	693,006,951 265,924,415	73,553,434 27,294,523	Corporation.....	1919 1914	53.6 53.3	85.6 80.9	87.9 85.5	89.2 88.1
All other.....	1919 1914	38 38	2,929 1,971	91,334,520 41,398,735	7,788,841 2,736,252	All other.....	1919 1914	17.1 19.1	12.1 13.2	11.6 13.3	9.4 8.8

TABLE 22.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919 AND 1914.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.				POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
	1919	1914	Amount.		Per cent distribution.			1919	1914	Amount.		Per cent distribution.	
			1919	1914	1919	1914				1919	1914		
Primary power, total.....	1,575	1,970	154,402	162,912	.....	.....	Primary power—Continued.						
Owned.....	1,572	1,696	154,040	158,690	99.8	97.4	Rented.....	3	274	362	4,222	0.2	2.6
Steam.....	1,399	1,644	151,004	158,183	97.8	97.1	Electric.....	3	274	360	4,222	0.2	2.6
Engines.....	1,355	(1)	130,221	(1)	84.3	.....	Other.....			2	(2)	(2)	.....
Turbines.....	44	(1)	20,783	(1)	13.5	.....	Electric.....	4,031	2,195	56,956	26,785	100.0	100.0
Internal-combustion engines.....	172	52	3,028	507	2.0	0.3	Rented.....	3	274	360	4,222	0.3	15.8
Water wheels and turbines.....	1	.....	8	.....	(2)	.....	Generated by establishments reporting.....	4,028	1,921	56,586	22,563	99.4	84.2

¹ Not reported separately.

² Less than one-tenth of 1 per cent.

TABLE 23.—FUEL CONSUMED: 1919 AND 1914.

INDUSTRY.	Cen- sus year.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
Cane sugar and cane-sugar refining, total....	1919 1914	407,481 453,797	1,017,513 906,293	542 1,639	2,741,665 1,588,712	3,514 (1)	154,277
Cane sugar.....	1919 1914	1,233 2,487	29,823 30,411	112 15	1,030,568 840,179	3,100 (1)	154,277
Cane-sugar refining.....	1919 1914	406,248 451,310	987,690 875,882	430 1,624	1,705,099 748,533	414 (1)	..... .....

¹ Included in figures for fuel oils.

SPECIAL STATISTICS.

Detailed statistics of materials used in the cane-sugar industry.—Table 24 shows statistics on the quantity and cost of the cane crushed and cost of other materials of the cane-sugar industry for 1919 and 1914. Of the total quantity of cane crushed, 46.8 per cent in 1919, as against 40.8 per cent in 1914, was grown on plantations controlled by mill owners. The average cost per ton of cane thus grown, as reported for 1919, was \$8.89, while that of cane purchased was \$10.27. Of the total cost of materials used, the cane crushed represented 80.6 per cent in 1919, as against 84 per cent in 1914.

TABLE 24.—QUANTITY AND VALUE OF MATERIALS USED IN THE CANE-SUGAR INDUSTRY: 1919 AND 1914.

MATERIAL.	1919	1914
Total cost.....	\$44,143,416	\$15,958,218
Cane crushed:		
Tons, 2,000 pounds.....	3,888,002	3,754,820
Cost.....	\$35,594,766	\$13,408,689
Grown on plantations controlled by mill owners—		
Tons, 2,000 pounds.....	1,724,435	1,532,575
Cost.....	\$15,342,707	\$5,269,933
Purchased—		
Tons, 2,000 pounds.....	1,922,398	2,168,477
Cost.....	\$10,761,721	\$7,969,882
Treated on shares or contract—		
Tons, 2,000 pounds.....	41,169	57,768
Cost.....	\$490,338	\$178,874
Fuel and rent of power, cost.....	\$1,982,180	\$1,151,610
All other materials, cost.....	\$6,566,470	\$1,397,919

Detailed statistics of products.—Table 25 gives the quantity and value of the products made from the sugar cane.

TABLE 25.—QUANTITY AND VALUE OF PRODUCTS OF THE CANE-SUGAR INDUSTRY: 1919 AND 1914.

PRODUCT.	1919	1914
Total value.....	\$57,741,320	\$21,635,373
Sugar:		
Tons, 2,000 pounds.....	225,478	264,801
Value.....	\$46,650,085	\$18,947,683
Brown or open kettle—		
Tons, 2,000 pounds.....	3,940	5,309
Value.....	\$649,593	\$361,410
Sugar other than brown—		
Tons, 2,000 pounds.....	221,538	259,492
Value.....	\$46,007,492	\$18,586,273
Refined—		
Tons, 2,000 pounds.....	35,814	53,504
Value.....	\$9,547,378	\$4,228,860
Clarified—		
Tons, 2,000 pounds.....	129,147	91,075
Value.....	\$23,563,156	\$9,742,266
Raw—		
Tons, 2,000 pounds.....	56,577	114,823
Value.....	\$9,898,958	\$7,615,147
Molasses:		
Gallons.....	20,058,248	20,875,260
Value.....	\$4,868,740	\$2,021,517
Sirup:		
Gallons.....	6,739,978	2,420,633
Value.....	\$4,189,199	\$609,696
All other products, value.....	\$2,024,296	\$56,477

The average value per pound of the sugar reported was 10.3 cents in 1919, as against 3.6 cents in 1914. The average value of molasses per gallon, from which more or less sugar content had been taken, was 24.3 cents in 1919 as against 9.8 cents in 1914.

The sirup, from which practically no sugar had been taken, averaged 62.2 cents per gallon in 1919 as against 25.2 cents in 1914.

Detailed statistics of materials and products for cane-sugar refining.—Table 26 presents statistics for the quantity and cost of materials and the quantity and value of products of the sugar-refining industry for 1919 and 1914. There are certain duplications in this table in the materials and value of products due to the use of the products of the cane sugar as material for sugar refining.

TABLE 26.—MATERIALS AND PRODUCTS OF SUGAR REFINING, 1919 AND 1914.

MATERIAL AND PRODUCT.	1919 ¹	1914
MATERIALS.		
Total cost.....	\$632,143,981	\$264,035,358
Raw sugar:		
Tons, 2,000 pounds.....	4,298,417	3,560,479
Cost.....	\$814,735,684	\$247,086,355
All other materials, cost.....	\$47,408,297	\$10,999,003
PRODUCTS.		
Total value.....	\$730,986,706	\$289,308,715
Refined sugar:		
Tons, 2,000 pounds.....	3,521,453	3,333,134
Value.....	\$713,567,395	\$285,405,974
Molasses and sirup:		
Gallons.....	44,060,988	35,802,965
Value.....	\$15,816,601	\$3,284,278
All other products, value.....	\$2,102,710	\$618,463

¹ In addition 12,171 tons of raw sugar costing \$1,467,801 with 10,929 tons of refined sugar valued at \$1,627,833 were reported by establishments not engaged primarily in the sugar refining industry.

GENERAL TABLE.

Table 27 presents, for 1919, statistics in detail for the cane sugar and cane-sugar refining industries combined and separately.

TABLE 27.—DETAILED STATEMENT OF THE CANE-SUGAR INDUSTRY, INCLUDING REFINING: 1919.

	Total.	Cane sugar.	Cane-sugar refining.		Total.	Cane sugar.	Cane-sugar refining.
Number of establishments.....	222	202	20	Primary horsepower.....	154,402	101,861	52,541
Persons engaged.....	27,966	7,045	20,921	Capital.....	\$248,657,952	\$55,117,127	\$193,540,825
Proprietors and firm members.....	171	165	6	Salaries and wages.....	33,827,468	5,674,817	28,152,651
Salaried officers, superintendents, and managers.....	840	475	365	Officials.....	3,573,824	1,173,706	2,400,118
Clerks and other subordinate salaried employees.....	2,652	304	2,348	Clerks, etc.....	3,533,811	491,742	3,042,069
Male.....	2,095	281	1,814	Wage earners.....	26,719,833	4,009,369	22,710,464
Female.....	557	23	534	Contract work.....	94,888	27,366	67,522
Wage earners—				Rent and taxes.....	7,703,829	1,142,247	6,561,582
Average number.....	24,303	6,101	18,202	Rent of factory.....	96,534	11,498	85,036
Number, 15th day of month—				Taxes, Federal, state, county, and local.....	7,607,295	1,130,749	6,476,546
Maximum month and number.....		De 19,570	Jy 20,501	Cost of materials.....	706,287,397	44,143,416	662,143,981
Minimum month and number.....		Ap 1,514	Ja 14,533	Principal materials.....	694,536,096	42,161,236	652,374,880
Wage earners Dec. 15 or nearest representative day.....	38,969	20,536	18,333	Fuel and rent of power.....	11,751,301	1,982,180	9,769,121
16 years of age and over.....	38,790	20,414	18,376	Value of products.....	738,728,026	57,741,320	730,986,706
Male.....	34,973	17,910	17,063	Value added by manufacture.....	82,440,629	13,597,904	68,842,725
Female.....	3,817	2,504	1,313				
Under 16 years of age.....	179	172	7				
Male.....	167	160	7				
Female.....	12	12	.....			