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DOMINION BUREAU OF STATISTICS

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REPORT

on the

BISCUIT & CONFECTIONERY INDUSTRY

in

CANADA

1922

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DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

OTTAWA, CANADA

Dominion Statistician: R. H. Coats, B.A., F.S.S., F.R.S.C.  
 Chief, Census of Industry: J. C. Macpherson.

THE BISCUIT AND CONFECTIONERY INDUSTRY

IN CANADA, 1922.

Ottawa, February, 1924.- The manufacture of Biscuits and Confectionery for the calendar year 1922 is presented herewith by the Dominion Bureau of Statistics. The number of individual plants reporting to the Bureau was 368, divided among the provinces as follows:- Ontario, 199; Quebec, 48; British Columbia, 40; Manitoba, 23; Alberta, 20; Nova Scotia, 13; New Brunswick, 11; Saskatchewan, 10 and Prince Edward Island, 4. Of the total number of factories reporting, 15 were engaged in the manufacture of biscuits only, 21 in the manufacture of biscuits and confectionery combined, and 332 in the manufacture of confectionery only.

PRINCIPAL STATISTICS

The accompanying table presents the principal statistics of the industry by provinces for the calendar year 1922. Compared with the previous year, there were increases in capital investment of \$3,024,671, in the number of persons employed of 715, and in the amount paid in salaries and wages of \$551,383. Decreases appear in the number of firms reporting, in the cost of raw and partly manufactured materials and consequently in the value of products. The following table gives the average prices of a list of the principal commodities used in the industry for the calendar years 1921 and 1922, together with the total and percentage decreases and increases for each of the several items included in the table.

Commodity Prices Compared, 1921 and 1922.

Materials	Unit	Average Price		Decrease or Increase	
		1921	1922	per bbl. doz. or lb.	Per cent
Flour .....	bb1.	\$ 8.170	\$ 5.874	- 2.296	28.1
Sugar .....	lb.	.089	.072	- .017	19.1
Lard .....	lb.	.162	.145	- .017	10.5
Butter .....	lb.	.407	.331	- .076	18.7
Eggs .....	doz.	.388	.340	- .048	12.4
Glucose .....	lb.	.045	.037	- .008	17.8
Cocoa butter	lb.	.302	.309	+ .007	2.3
Chocolate ...	lb.	.237	.213	- .024	10.1
Coccanut ....	lb.	.199	.177	- .022	11.0

THE BISCUIT AND CONFECTIONERY INDUSTRY IN CANADA, 1922.

PRINCIPAL STATISTICS (Continued)

The Province of Ontario, as the following table indicates leads with more than 50 per cent of the various items comprising the table. Quebec is next with nearly 13 per cent, the remaining provinces ranking in the principal statistical items, as follows:- Nova Scotia, New Brunswick, Manitoba, British Columbia, Alberta, Saskatchewan and Prince Edward Island. The total value of production fell from \$46,758,014 in 1921 to \$42,416,311 in 1922, or a decrease of \$4,341,703 or 9.3 per cent, which is accounted for by the fall in the prices of commodities entering into the manufactured product (see table Page ).

Principal Statistics of the Industry, 1922.

Provinces	Estab- lish- ments	Capital	Em- ploy- ees	Salaries & Wages	Cost of Materials	Value of Products
CANADA	368	33,680,280	12,001	10,288,672	19,917,649	42,416,311
Alberta ....	20	702,004	225	249,350	494,156	1,066,969
Br. Columbia	40	822,188	337	320,527	678,390	1,327,582
Manitoba ...	23	1,033,310	434	403,146	1,068,741	1,987,544
New Brunswick	11	1,647,825	654	523,990	1,324,783	2,358,234
Nova Scotia .	13	1,912,667	1,080	772,639	1,186,933	3,125,693
Ontario .....	199	19,938,628	6,244	5,766,443	9,972,139	22,833,349
Prince Edward Island ....	4	30,556	8	6,134	13,821	26,445
Quebec .....	48	7,527,043	2,932	2,142,363	5,146,465	9,621,957
Saskatchewan	10	61,059	26	24,030	32,213	68,538

PRODUCTION

The statistics of production for the industry are shown in Table 1 for Canada and the provinces during 1922 by principal items. There was a decrease in the quantity of biscuits manufactured, as compared with 1921, amounting to 1,292 tons, whilst the quantity of confectionery manufactured increased by 11,548,241 pounds during the same period. Ice Cream manufactured in the industry also shows a decrease in quantity, of 439,035 gallons. A summary table follows showing the per capita production of biscuits, confectionery and ice cream for the calendar years 1920, 1921 and 1922, based on estimated populations of 8,600,00, 8,800,000 and 8,900,000 respectively.

Per Capita Production, 1920-21-22.

Items	Unit of Measure	1920		1921		1922	
		Quan.	Value	Quan.	Value	Quan.	Value
Biscuits ....	lb.	5.73	1.89	7.62	1.68	7.22	1.39
Confectionery	lb.	11.81	3.88	10.15	3.09	11.00	2.80
Ice cream ...	gal.	.67	.98	.62	.87	.53	.75

The per capita consumption of biscuits, confectionery and ice cream, being the production, added to imports, less exports, is presented in the accompanying table. Owing to the absence of export figures showing quantities of confectionery, the consumption is expressed in terms of value only. A comparison of the annual per capita production and consumption shows the extent to which we are becoming dependent on home industry for supplying the needs of the nation.

Per Capita Consumption, 1920-21-22

Items	Unit of Measure	1920		1921		1922	
		Quan.	Value	Quan.	Value	Quan.	Value
Biscuits ....	lb.	5.75	1.90	7.83	1.73	7.27	1.40
Confectionery	lb.	-	3.65	-	3.04	-	2.80
Ice cream ...	gal.	.67	.98	.62	.87	.53	.75



THE BISCUIT AND CONFECTIONERY INDUSTRY IN CANADA, 1922.

CAPITAL INVESTMENT

The capital investment in the industry is shown by items for the Dominion and the provinces in Table 2. Compared with 1921, "land, building and fixtures" show an increase of \$465,490, "machinery, and tools" of \$2,646,887, "cash, trading and operating accounts" of \$192,292, whilst "materials on hand, stocks in process, etc." show a decrease of \$279,977. The first two items, representing fixed capital, were 60 per cent of the total investment, and the latter two, representing working capital, 40 per cent.

Table 2.- Capital Investment, 1922.

Provinces	Land, buildings and fixtures	Machinery and tools	Materials on hand, stocks in process, &c.	Cash, trading and operating accts. etc.	Total Capital
CANADA	10,944,543	9,894,610	5,678,891	7,162,236	33,680,280
Alberta	292,380	153,183	130,780	124,661	702,004
Br. Columbia	274,092	171,474	200,823	175,799	822,188
Manitoba	369,754	252,263	260,654	155,639	1,038,310
New Brunswick	356,438	329,856	478,032	483,499	1,647,825
Nova Scotia	316,379	398,109	406,396	793,783	1,912,667
Ontario	7,025,686	6,260,692	3,366,436	3,205,814	19,938,628
P. E. Island	9,341	17,741	2,122	1,352	30,556
Quebec	2,268,976	2,303,671	818,120	2,136,275	7,527,043
Saskatchewan	30,497	9,621	15,528	5,413	61,059

EMPLOYEES, SALARIES AND WAGES

Table 3(a) gives the number of persons employed in the industry by classes, sex and remuneration for the calendar year 1922. There was an increase of 326 in the number of male employees and 389 in the number of female employees, as compared with 1921, whilst the salary and wage total also increased by \$551,883. The average salary, which in 1921 for salaried officers of corporations was \$3,883, rose to \$3,988 in 1922; general superintendents and managers rose from \$2,302 in 1921 to \$2,606 in 1922, and technical experts, accountants, etc., from \$1,543 to \$1,600. Clerks, stenographers, etc., on the other hand decreased from \$1,277 in 1921 to \$1,276 in 1922, whilst the wage earnings showed a much greater decrease, having fallen from \$727 in 1921, to \$703 in 1922.

Table 3(a) Classes of Employment, 1922.

Classes of Employment	Male No.	Female No.	Salaries and Wages
Salaried officers of corporations	153	15	670,008
General superintendents, managers	174	16	495,172
Technical experts, accountants, &c.	88	11	156,434
Clerks, stenographers, salesmen, etc.	1,066	407	1,879,431
Employees, on wages, (Average number)	4,340	5,731	7,085,577
Outside piece-workers	-	-	-
<b>TOTAL</b>	<b>5,821</b>	<b>6,180</b>	<b>10,288,672</b>

THE BISCUIT AND CONFECTIONERY INDUSTRIES IN CANADA, 1922.

EMPLOYEES, SALARIES AND WAGES (Continued)

In Table 3(b) the employment statistics are grouped by provinces. Ontario furnished 51.3 per cent of the total employees engaged in the industry on wages, and 55.8 per cent of the total amount paid for labour. Quebec had 24.5 per cent of the number of employees, but only 19.5 per cent of the total wages for labour. These two provinces provide practically 75 per cent of the total of employees and of the wages paid in the industry.

Table 3(b) Employees, Salaries and Wages by Provinces, 1922.

	Employees on Salaries			Employees on Wages		
	Male	Female	Salaries	Male	Female	Wages
CANADA	1,481	449	3,203,095	4,340	5,731	7,085,577
Alberta .....	32	8	63,680	81	104	185,670
British Columbia	47	5	96,991	136	149	223,536
Manitoba .....	46	27	165,813	164	247	317,328
New Brunswick ..	70	21	181,403	214	349	342,587
Nova Scotia .....	87	43	114,204	413	546	658,485
Ontario .....	786	290	1,813,028	2,237	2,931	3,953,415
P. E. Island ...	2	1	3,100	5	-	3,034
Quebec .....	410	93	760,935	1,070	1,399	1,381,428
Saskatchewan ...	1	1	3,936	19	5	20,094

OTHER LABOUR STATISTICS

The statistics of working time per year, per week and per day are shown in Table 4 for the provinces and the Dominion, together with the averages of each per plant.

Table 4.- Working Time, 1922.

Provinces	No. of operating plants	Days in Operation			Hours worked		Averages of		
		On full time	On part time	Idle	per day	per week	Days in operation	Hrs. per day	Hours per week
CANADA	368	95,916	10,074	11,194	3,058	17,326	282.53	8.31	43.44
Alberta .....	20	5,224	402	674	158	954	281.30	7.90	46.70
Br. Columbia ..	40	9,653	1,314	1,048	305	1,798	286.30	7.63	44.95
Manitoba .....	23	6,408	360	431	107	1,154	294.26	8.86	50.17
New Brunswick	11	3,277	50	116	36	564	302.45	8.73	51.27
Nova Scotia ..	15	3,477	143	474	118	702	278.35	9.07	54.00
Ontario .....	199	50,491	5,034	6,712	1,640	9,513	279.27	8.24	47.80
P. E. Island .	4	1,170	39	43	33	198	302.25	8.25	49.50
Quebec .....	48	12,077	1,447	1,500	435	2,519	281.75	9.07	52.48
Saskatchewan .	10	2,164	730	256	76	444	239.40	7.60	44.40

THE BISCUIT AND CONFECTIONERY INDUSTRY IN CANADA, 1922.

MATERIALS USED

The quantity and cost value delivered at the factory or works of the materials used in the industry during the year 1922 are presented in Table 5 for the provinces and the Dominion. Reference has already been made under the head of "Principal Statistics" to commodity prices for the years 1921 and 1922. The percentage of decrease in the cost of construction ranged from 28.1 for flour to 10.1 for chocolate. But a single item of the table (cocoa butter) showed an increase of 2.3 per cent in cost, as between 1921 and 1922.

Table 5.- Materials Used, 1922.

Materials		C A N A D A		Alberta		Br. Columbia		Manitoba		New Brunswick	
		Quantity	Value	Quan.	Value	Quan.	Value	Quan.	Value	Quan.	Value
Flour	bbl.	304,861	1,790,809	14,867	104,891	10,217	68,930	16,682	101,163	16,325	105,132
Malt	lb.	24,666	3,445	-	-	50	9	5,993	899	354	52
Yeast	lb.	106,635	29,962	2,438	968	2,101	909	4,200	1,692	341	119
Salt	bbl.	19,087	48,009	283	1,144	1,055	2,928	546	2,105	263	1,221
Sugar	lb.	59,539,667	4,304,107	378,248	78,021	1,495,479	113,358	3,253,513	269,673	4,267,136	262,759
Butter	lb.	1,117,229	369,844	6,268	2,247	44,601	16,303	62,553	22,222	26,908	8,490
Lard	lb.	4,825,414	699,294	306,944	49,357	111,742	18,539	509,228	71,498	333,824	43,977
Shortening	lb.	850,267	139,010	-	-	-	-	-	-	115,043	24,943
Cream	gal.	693,063	911,768	4,180	6,233	52,620	92,528	23,957	30,323	3,008	4,982
Milk - fresh	gal.	879,146	195,384	5,927	2,124	22,379	7,806	4,636	1,583	6,663	996
condensed	lb.	1,355,427	123,298	13,182	1,665	9,039	841	17,005	2,152	56,864	5,723
powdered	lb.	1,743,445	279,793	14,846	1,810	24,901	5,230	17,663	3,006	9,890	3,141
Eggs	doz.	542,740	184,704	8,309	3,047	4,008	1,832	67,352	21,406	7,869	2,766
Fruits	lb.	3,248,754	608,082	85,536	13,160	30,228	4,208	51,136	18,688	74,033	12,332
Extracts, essences and flavourings	-	-	231,299	-	4,195	-	8,900	-	12,373	-	9,375
Nuts	lb.	4,706,077	918,711	34,046	7,180	119,359	21,787	80,925	30,428	267,317	50,899
Glucose	lb.	22,171,074	833,424	270,500	14,576	749,665	48,115	2,258,069	91,180	1,350,852	53,723
Syrups	gal.	265,969	124,230	5,753	6,349	119,592	25,223	3,424	2,874	6,233	4,137
Chocolate	lb.	7,002,523	1,490,321	158,542	39,271	289,593	72,177	782,858	175,093	739,092	125,200
Cocconut	lb.	2,068,626	353,114	39,911	7,463	57,886	9,036	100,112	16,663	134,735	31,726
Cocoa butter	lb.	3,638,096	1,125,176	13,626	2,945	41,024	11,913	8,401	3,122	311,698	105,607
Boxes, cases, tins, labels	-	-	2,881,848	-	117,017	-	107,721	-	139,511	-	247,565
All other materials	-	-	2,272,017	-	30,473	-	40,105	-	51,087	-	219,918
<b>TOTAL</b>			<b>19,917,649</b>		<b>494,156</b>		<b>678,398</b>		<b>1,068,741</b>		<b>1,324,783</b>

THE BISCUIT AND CONFECTIONERY INDUSTRY IN CANADA, 1922.

MATERIALS USED (Continued).

Materials		Nova Scotia		Ontario		P. E. Island		Quebec		Saskatchewan	
		Quantity	Value	Quan.	Value	Quan.	Value	Quan.	Value	Quan.	Value
			\$		\$		\$		\$		\$
Flour	bb1.	28,771	193,960	139,577	761,647	-	-	78,369	454,594	53	492
Malt	lb.	1,800	243	15,726	2,075	-	-	735	164	-	-
Yeast	lb.	74,471	19,067	19,837	6,062	-	-	2,727	977	520	208
Salt	bb1.	646	3,012	14,731	33,048	67	149	1,330	3,862	164	540
Sugar	lb.	4,575,449	285,937	29,211,769	2,039,059	29,600	2,321	15,773,373	1,247,285	49,500	4,694
Butter	lb.	105,971	38,421	687,755	216,887	60	21	176,295	62,623	6,818	2,630
Lard	lb.	324,385	46,852	2,043,366	298,311	-	-	1,191,345	169,997	4,580	763
Shortening	lb.	-	-	185,110	30,277	-	-	540,114	83,790	-	-
Cream	gal.	38,289	45,311	490,287	607,536	5,096	7,277	69,876	109,331	5,750	8,195
Milk - fresh	gal.	11,492	2,895	295,269	63,656	1,128	450	529,409	114,904	2,243	970
condensed	lb.	222,956	17,255	886,746	79,937	564	65	149,932	15,660	-	-
powdered	lb.	26,107	4,558	1,622,226	258,367	5,200	754	22,612	2,927	-	-
EGGS	doz.	94,741	29,451	262,120	90,958	-	-	91,614	33,103	6,727	2,141
Fruits	lb.	291,764	44,541	2,188,030	414,878	-	-	522,492	99,500	5,465	775
Extracts, essences and flavourings	-	-	28,153	-	109,365	-	151	-	57,658	-	1,129
Nuts	lb.	272,656	73,313	2,660,912	466,612	1,440	449	1,245,932	252,778	3,490	1,265
Glucosa	lb.	1,519,801	58,984	9,517,818	317,375	4,230	203	6,479,020	248,091	20,999	1,177
Syrups	gal.	1,821	2,057	96,625	60,378	9	9	32,292	22,743	215	460
Chocolate	lb.	119,822	25,553	3,347,132	678,183	2,974	903	1,544,960	369,084	17,550	4,847
Cocoa nut	lb.	19,713	2,535	1,021,486	187,846	100	20	633,146	97,461	1,725	344
Cocoa butter	lb.	349,910	108,121	1,736,188	549,849	305	148	1,124,514	343,313	450	158
Boxes, cases, tins, labels, etc.	-	-	25,139	-	1,204,238	-	659	-	938,953	-	940
All other materials	-	-	130,610	-	1,331,438	-	242	-	417,659	-	485
<b>TOTAL</b>			<b>1,186,933</b>		<b>9,972,139</b>		<b>13,821</b>		<b>5,146,465</b>		<b>32,213</b>

THE BISCUIT AND CONFECTIONERY INDUSTRY IN CANADA, 1922.

FUEL CONSUMPTION

The quantity and cost value delivered at the works of the different classes of fuel used during the year are shown in Table 6. The principal fuel used was coal, being nearly 75 per cent of the total cost of all fuel consumed. Gas, artificial and natural, ranks next with 16 per cent, the remaining fuels constituting 9 per cent of the total cost.

Table 6.- Fuel Consumption.

Classes of Fuel	Unit of Measure	Quantity	Cost Value
			\$
Bituminous coal .....	ton	40,078	303,874
Anthracite coal .....	"	11,929	174,729
Lignite coal .....	"	1,358	9,747
Coke .....	"	2,154	23,862
Gasoline .....	gal.	34,928	12,501
Oil (fuel) .....	"	69,566	4,880
Wood .....	cd.	1,621	13,207
Gas .....	mcft.	174,985	105,152
Other fuel .....	-	-	3,416
TOTAL			651,368

POWER EMPLOYED

The power used in the industry is shown in Table 7 by the number of installations of each class, and the horse-power capacity according to the manufacturers' rating. 75 per cent of all power used was of electric origin.

Table 7.- Power Installation.

Classes of power	Number of Units	Total H.P. according to manufacturers' rating
Steam engines and turbines .....	47	3,617
Gas engines .....	6	46
Oil and gasoline engines .....	6	45
Hydraulic turbines or water wheels ..	14	470
Electric motors operated by power generated by establishment .....	591	5,712
Electric motors operated by purchased power .....	1,039	7,096
TOTAL	1,703	16,986

BRIEF AND OTHER FACTORY PRODUCTS, 1922.

FUEL CONSUMPTION

The quantity and cost value delivered at the factory or shop of the classes of fuel consumed during the year is shown for the Dominion in Table 6. Coal of all kinds amounting to \$487,577 was the principal fuel, followed in order by wood to the value of \$345,433, coke to the value of \$322,160, gas, artificial and natural to the value of \$86,602, gasoline \$35,508 and all other fuel to the value of \$3,704, making a total cost for fuel of \$1,290,984.

Table 6.- Fuel Consumption by Classes, 1922.

Classes of fuel	Unit of Measure	Quantity	Cost Value
Bituminous coal .....	tons	14,339	149,007
Anthracite coal .....	"	18,206	294,204
Lignite coal .....	"	5,024	44,366
Coke .....	"	26,305	322,160
Gasoline .....	Gal.	91,923	35,508
Oil (Fuel) .....	"	660	136
Wood .....	cds.	60,354	345,433
Gas .....	m.c.ft.	120,168	86,602
Other fuel .....	-	-	13,568
<b>TOTAL</b>			<b>\$1,290,984</b>

POWER STATISTICS

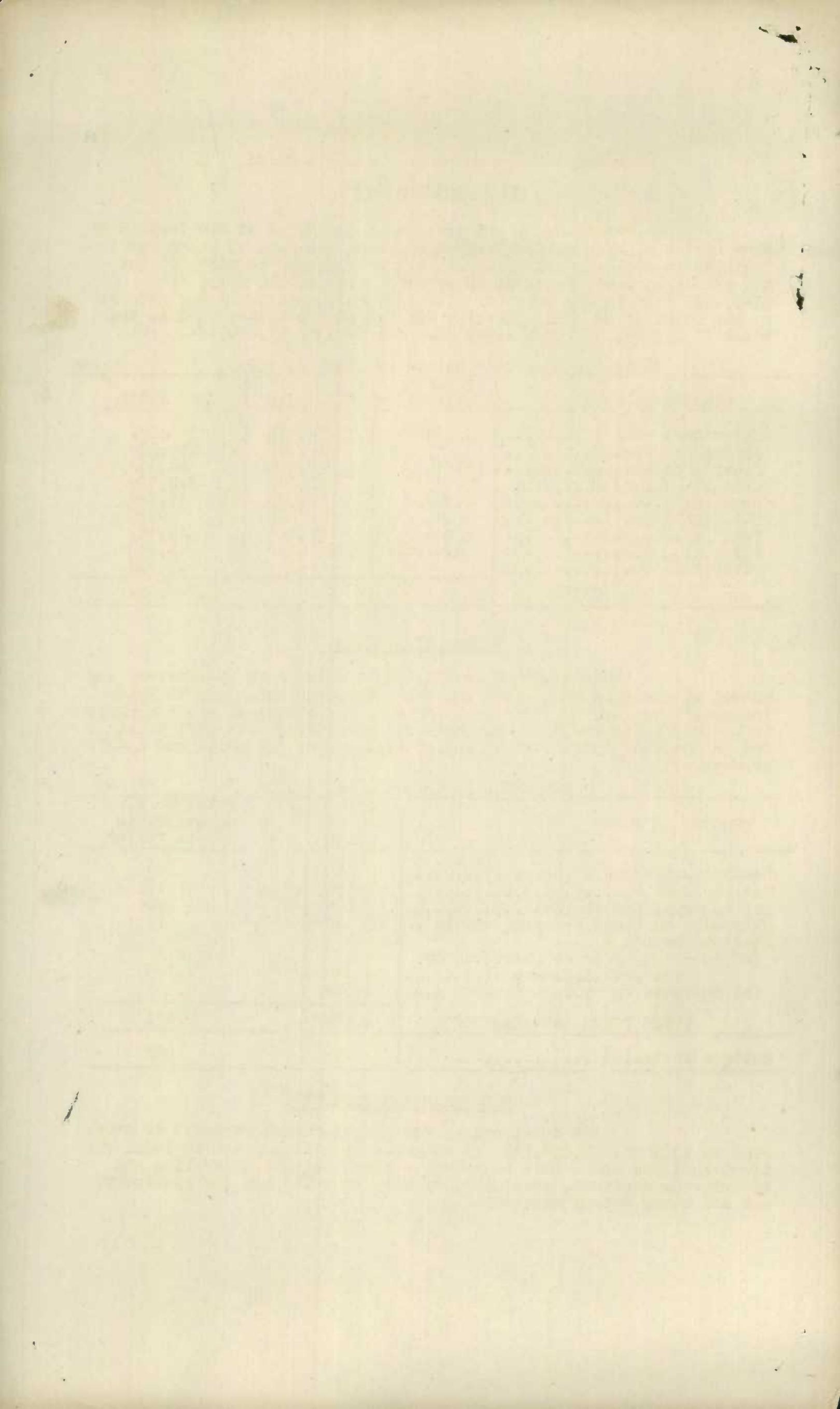
Power employed in the industry is shown by classes, the number of units in each class and the horsepower according to manufacturer's rating. Electrical power is the principal power employed with 1,627 units and 6,052 horsepower. Compared with 1921 there was an increase in electrical energy employed of 646 units and 1,417 horsepower.

Table 7.- Power employed, 1922.

Classes of Power	No. of units	Total H. P. according to mfr's. rating
Steam engines and turbines .....	13	163
Gas engines .....	73	317
Oil and gasoline engines .....	260	892
Hydraulic turbines or water wheels ..	14	52
Electric motors -		
(a) operated by power generated by the establishment .....	318	1,185
(b) operated by purchased power ....	1,309	4,867
<b>TOTAL POWER INSTALLATION</b>	<b>1,987</b>	<b>7,476</b>
Boilers installed .....	36	982

MISCELLANEOUS EXPENSES

The total outlay for miscellaneous expenses or overhead in 1922 was \$5,208,132, as compared with \$4,420,980 in 1921. The items included under this head were:- rents, taxes, travelling and advertising expenses, insurance, repairs to buildings and machinery, and all other sundry expenses.







THE BISCUIT AND CONFECTIONERY INDUSTRY IN CANADA, 1922.

IMPORTS AND EXPORTS

Tables 8(a) and 8(b) show respectively the imports and exports of biscuits and confectionery for the calendar year 1922, by principal countries.

Table 8(a) Imports for Calendar Year 1922.

Articles Imported	Total Imports	United Kingdom		United States		Other Countries	
		Quan.	Value	Quan.	Value	Quan.	Value
	\$	lb.	\$	lb.	\$	lb.	\$
Biscuits, not sweetened .	80,418	374,481	33,183	282,341	42,528	31,572	4,707
Biscuits, sweetened	69,908	98,908	36,735	113,893	25,107	26,869	8,016
Chocolate, confectionery ....	55,986	36,038	25,338	52,807	19,843	23,220	10,805
Sugar candy	536,227	1,503,288	342,382	1,337,833	165,039	127,804	28,806
TOTAL	742,539	2,017,715	437,638	1,786,929	252,517	209,465	52,334

Table 8(b) Exports for Calendar Year, 1922.

Articles Exported	Total Exports	United Kingdom		United States		Other Countries	
		Quan.	Value	Quan.	Value	Quan.	Value
	\$	cwt.	\$	cwt.	\$	cwt.	\$
Biscuits & bread ...	70,297	7	158	1,119	11,538	3,595	53,601
Confectionery (value only)	52,214	-	4,463	-	2,103	-	45,648
TOTAL	122,511	-	4,621		13,641		104,249