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REPORT

on the

STARCH & GLUCOSE INDUSTRY

in

CANADA

1929



Published by Authority of the Hon. James Malcolm, M.P.,
Minister of Trade and Commerce

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OTTAWA

1930

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STATISTICS CANADA
STATISTIQUE DU CANADA

1971-72

TABLE 1

INDUSTRY

MANUFACTURING

1971-72

1970-71

Source: Statistics Canada

1971-72

DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

OTTAWA - CANADA

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

THE STARCH AND GLUCOSE INDUSTRY IN CANADA, 1929.

Ottawa, A report on the starch and glucose industry is herewith presented for the calendar year 1929. Returns were received from 5 individual factories, located by provinces as follows:- Prince Edward Island 3 and Ontario 2. Statistics of the industry are given for Canada only in this report to avoid the disclosure of the operations of individual plants.

Principal Statistics, 1929.

A summary of the principal statistics relating to this industry is shown in Table 1. The total value of production increased from \$5,455,035 in 1928 to \$5,504,685 in 1929, an increase of \$49,650 over the two year period.

Table 1. Principal statistics of the starch and glucose industry compared for 1928 and 1929.

Principal Statistics		CANADA	
		1929	1928
Establishments reporting	No.	5	6
Capital invested	\$	5,745,922	5,446,548
Employees on salaries -			
Males	No.	51	39
Females	No.	20	19
Total salaries	\$	155,545	156,509
Employees on wages, average -			
Males	No.	418	420
Females	No.	15	17
Total wages	\$	452,994	457,291
Cost of fuel	\$	198,757	218,385
Power equipment -			
Units	No.	240	228
Capacity	H.P.	3,342	3,062
Cost of materials	\$	3,641,501	3,778,927
Gross value of products	\$	5,504,685	5,455,035
Net value of products	\$	1,863,184	1,676,108

Size of Establishments

Owing to the limited number of firms reporting in this industry, particulars relating to the size of establishments cannot be given without disclosing statistics of individual plants.

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THE STARCH AND GLUCOSE INDUSTRY IN CANADA, 1929.

Production Statistics

The quantity and selling value at the factory of the various products of this industry are shown in Table 2, for Canada during the calendar years 1928 and 1929.

Table 2. Production in Canada, 1928 and 1929.

Classes of products	CANADA			
	1929		1928	
	Quantity	Selling Value	Quantity	Selling Value
		\$		\$
Edible corn starch	lb. 19,136,335	1,049,525	18,265,559	1,003,882
Laundry starch (corn)	" 8,974,965	462,379	8,190,392	407,616
Potato starch	" 1,277,396	49,486	2,410,601	96,732
Glucose or dextrose	" 43,268,583	1,710,058	43,202,804	1,627,652
Grape sugar	" 4,201,294	149,478	4,946,381	172,998
Corn syrup	" 15,353,759	724,514	17,046,631	780,080
Corn oil (crude)	" 3,633,419	306,163	3,314,111	295,899
" " (refined)	" 1,844,083	308,243	1,851,594	307,365
Gluten	" 35,967,306	737,191	38,807,725	750,504
All other products	-	7,648	-	12,307
Total value	-	5,504,685	-	5,455,035

Capital Investment

The amount of capital invested in the industry during the calendar year 1929 is shown for Canada in Table 3, divided as between fixed capital (including land, buildings, machinery and tools) and working capital (including materials on hand, finished products on hand, fuel and miscellaneous supplies on hand and cash, trading and operating accounts, etc.) Compared with 1928 there was an increase in total capital invested of \$299,374.

Table 3. Capital investment, compared for 1928 and 1929.

Items of Capital	CANADA	
	1929	1928
	\$	\$
Fixed capital -		
Land, buildings and fixtures, machinery and tools	3,404,884	3,231,422
Working capital -		
Materials and stocks on hand, fuel, etc.	968,450	931,670
Cash, trading and operating accounts, etc.	1,372,588	1,283,456
Total working capital	2,341,038	2,215,126
Grand total of capital	5,745,922	5,446,548

THE STARCH AND GLUCOSE INDUSTRY IN CANADA, 1929.

Employment Statistics

Tables 4, 5 and 6 present statistics of employment under three heads. Table 4 shows the number of persons employed according to classes, sex and remuneration. Table 5, the number of wage-earners employed by months according to sex and Table 6, the operating time of plants and employees.

Employees, salaries and wages: The number of persons employed in the industry in the Dominion in 1929 on salaries was 71 with salaries totalling \$155,545. Wage-earners totalled 433 in number and \$452,944 was paid for wages.

Table 4. Employees, salaries and wages in Canada, 1928 and 1929.

	Salaried employees			Wage-earners			Total employees		
	Male	Female	Total Salaries	Male	Female	Total Wages	Male	Female	Total Salaries and Wages
	No.	No.	\$	No.	No.	\$	No.	No.	\$
Canada, 1929	51	20	155,545	418	15	452,994	469	35	608,539
Canada, 1928	39	19	156,509	420	17	457,291	459	36	613,800

Employment by months: The number of persons at employment by months is shown in Table 5, for the Dominion. The month of highest employment was October with 420 and that of lowest employment August with 377. The average male employment throughout the year was 418 and female employment 15.

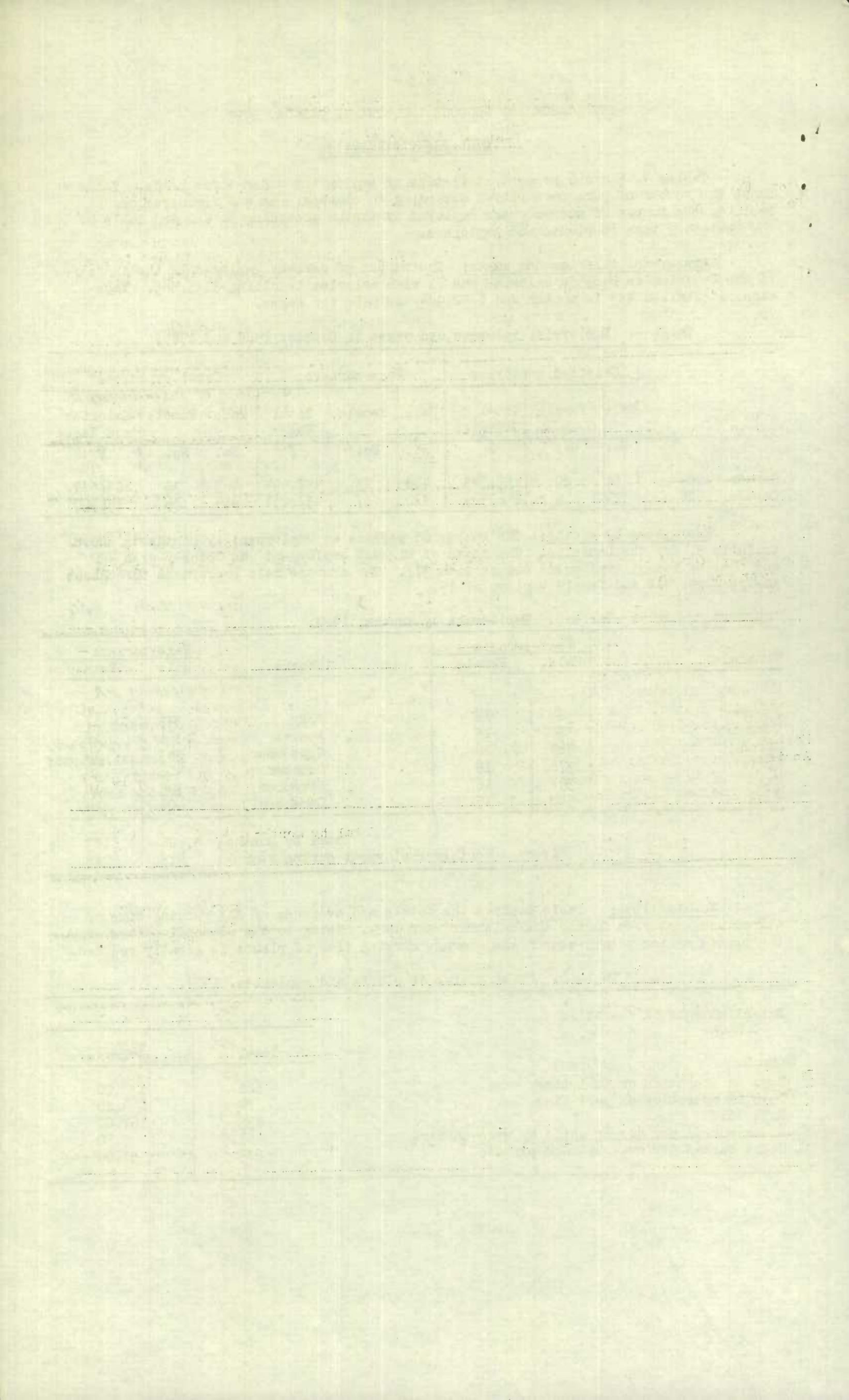
Table 5. Employment by months, 1929.

Months	Wage-earners		Months	Wage-earners	
	Male	Female		Male	Female
January	384	16	July	393	17
February	380	15	August	361	16
March	369	16	September	383	14
April	376	16	October	406	14
May	391	16	November	395	14
June	382	15	December	406	14
Total by months				4,626	183
Average monthly employment during year				418	15

Working time: Table 6 shows the totals and averages of the working time of plants and employees during the calendar year 1929. Owing to the seasonal nature of the plants making potato starch the average working time of plants is greatly reduced.

Table 6. Working time of plants and employees, 1929.

Establishments in operation	5	
	Total	Average
Days in operation on full time	661	132.20
Days in operation on part time	24	4.80
Days idle	835	167.00
Hours worked per day or shift by wage-earners	47.5	9.50
Hours worked per week by wage-earners	285	57.00



THE STARCH AND GLUCOSE INDUSTRY IN CANADA, 1929.

Other Employment Statistics

The number and percentage of wage-earners in months of highest employment working specified hours per day is shown in Table 6(a) for Canada and the provinces. For the Dominion, the number working specified hours was distributed between the classes, the percentage working 10 hours and over being highest. In Ontario over 38.5 per cent of the employees worked 10 hours per day, and in Prince Edward Island 64.44 per cent worked 9 hours. More than 20 per cent of the wage-earners in the Dominion worked over 10 hours per day.

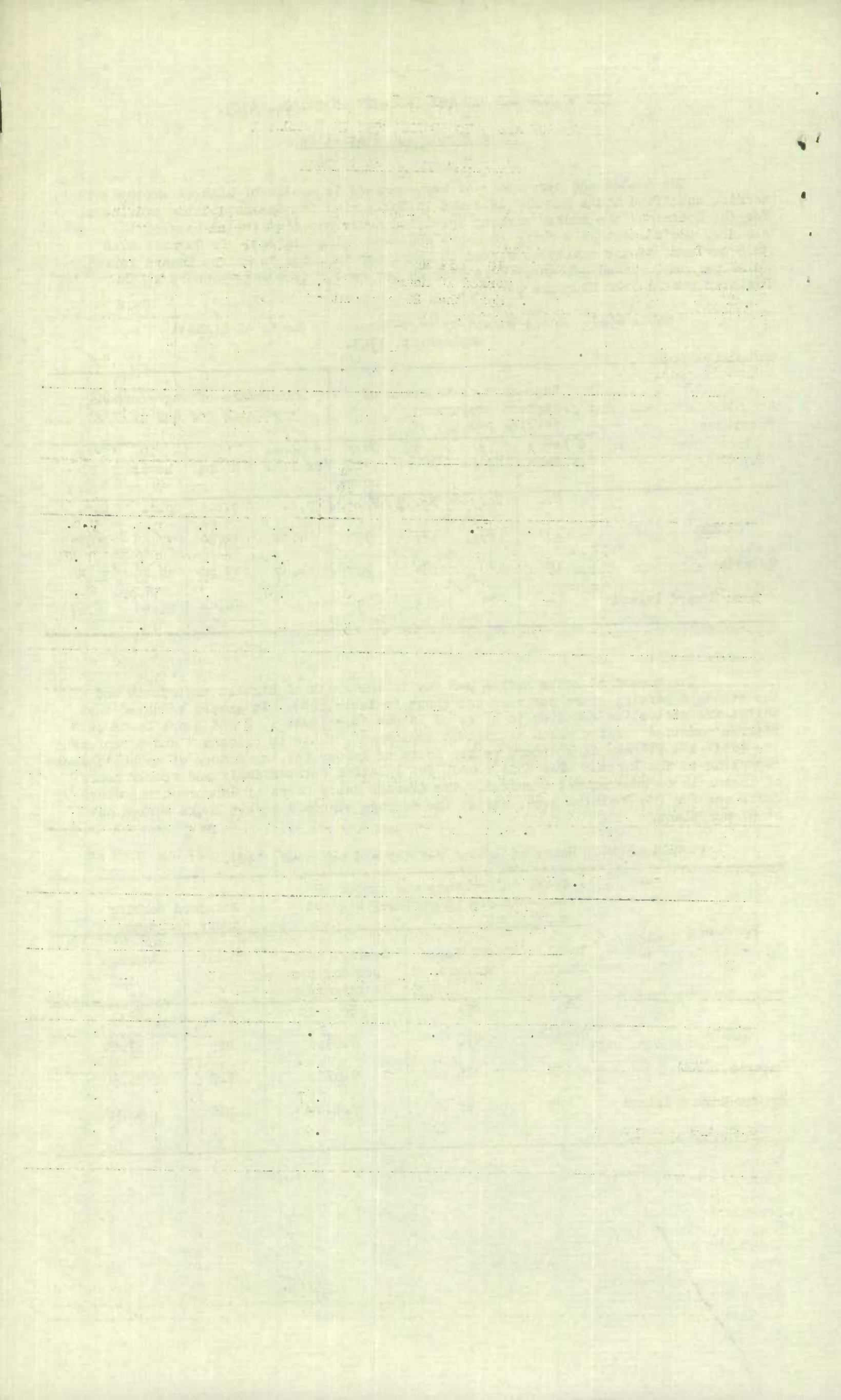
Table 6(a). Hours worked by wage-earners in month of highest employment, 1929.

Provinces	Wage-earners in month of highest employment working per day of				Percentage of wage-earners working per day of			
	8 hours or less	9 hours	10 hours	Over 10 hours	8 hours or less	9 hours	10 hours	Over 10 hours
	No.	No.	No.	No.	p.c.	p.c.	p.c.	p.c.
CANADA	19	179	177	95	4.04	38.09	37.66	20.21
Ontario	19	150	164	92	4.47	35.29	38.59	21.65
Prince Edward Island	-	29	13	3	-	64.44	28.89	6.67

The number of hours worked per day in the month of highest employment and the standard working hours per week are shown in Table 6(b). It should be noted that whilst the statistics relating to hours of labour in columns 1, 2 and 3 are based on figures compiled for the month of highest employment, those in columns 4 and 5 represent the total and average of standard weekly hours of labour for the number of establishments reporting to the Bureau. For this reason the relation between daily and weekly hours of labour is to some extent impaired. The average daily hours of labour on the above basis was for the Dominion 9.64, whilst the average standard weekly hours worked out at 57 per plant.

Table 6(b). Hours of labour per day and per week, 1929.

Provinces	Total daily hours and number of wage-earners in month of highest employment			Standard working hours per week	
	Total hours	Total Wage-earners	Average hours per day per wage-earner	Total	Average
	No.	No.	No.	No.	No.
CANADA	4,531	470	9.64	285	57.00
Ontario	4,108	425	9.67	117	58.50
Prince-Edward Island	423	45	9.40	168	56.00



THE STARCH AND GLUCOSE INDUSTRY IN CANADA, 1929.

Fuel Consumption

The consumption of fuel is shown in Table 7 by classes, quantity and cost value delivered at the factory. Coal of all kinds represented over 97 per cent of the cost of all fuel used during the year. The other principal item reported was fuel oil, to the value of \$5,599.

Table 7. Fuel consumption, 1929.

Kinds of fuel	Unit of Measure	Quantity	Cost Value
			\$
Bituminous coal	ton	38,125	190,508
Anthracite coal	ton	570	2,650
Fuel oil	gal.	65,541	5,599
All other fuel and electricity	-	-	5,132
Total cost of fuel used	-	-	203,889

Power Equipment

The power equipment employed in the Starch and Glucose industry in the Dominion in 1929 is shown in Table 8, according to manufacturers' rating. There was an increase of 12 in the total number of motors operated by power owned and an increase of 280 in rated horsepower as compared with 1928.

Table 8. Power equipment, 1929.

Description	Number of Units	Horse power according to manufacturers' rating
Steam engines	8	3,965
Gas engines	-	-
Total primary power equipment	8	3,965
Electric motors operated by power generated by establishment	240	3,342
Total power installation	248	7,307

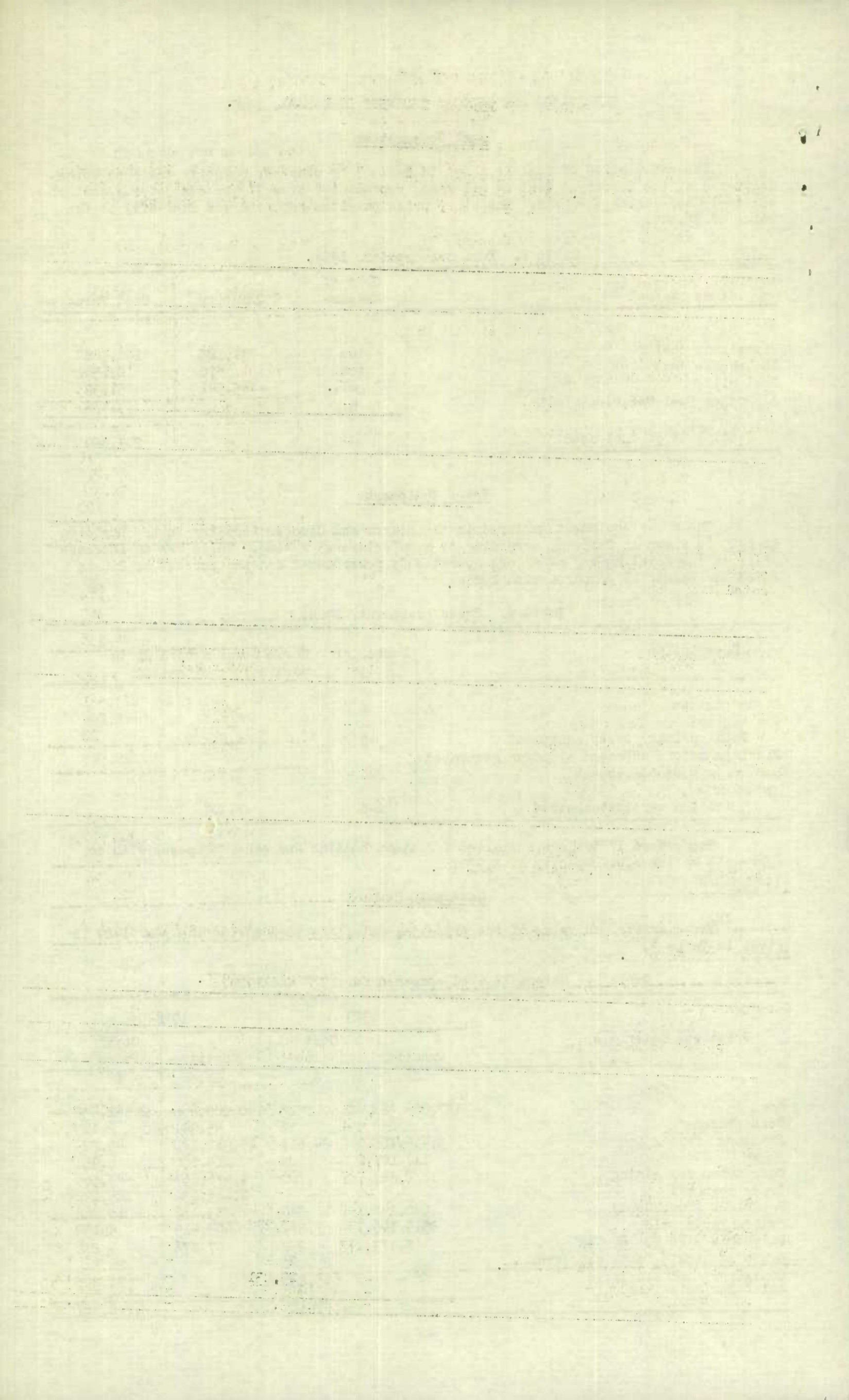
There were 17 boilers installed for steam heating and other purposes with an aggregate boiler h.p. capacity of 2,930.

Materials Used

The quantity and value of the principal materials used during the year 1929 is given in Table 9.

Table 9. Materials used compared for 1928 and 1929.

Principal Materials	1929		1928	
	Quantity	Cost Value	Quantity	Cost Value
	Lb.	\$	Lb.	\$
Corn	137,666,368	2,600,515	140,208,666	2,652,432
Corn starch	254	17	45,941	2,125
Potatoes	8,416,800	24,817	15,912,220	48,229
Sugar	117,200	6,188	114,800	6,951
Cane syrup for mixing	1,238,727	34,760	1,476,157	43,560
Crude corn oil	-	-	2,065,230	185,292
Boneblack (purchased)	240,148	11,890	353,135	18,362
Hydrochloric acid	519,146	7,272	605,419	9,152
Sulphuric acid 50° Bé	8,173	252	7,876	236
Other chemicals, soda ash, etc.	-	25,128	-	26,869
Containers and labels	-	625,231	-	671,205
All other materials	-	305,431	-	114,514
Total	-	3,641,501	-	3,778,927



THE STARCH AND GLUCOSE INDUSTRY IN CANADA, 1929.

Imports and Exports

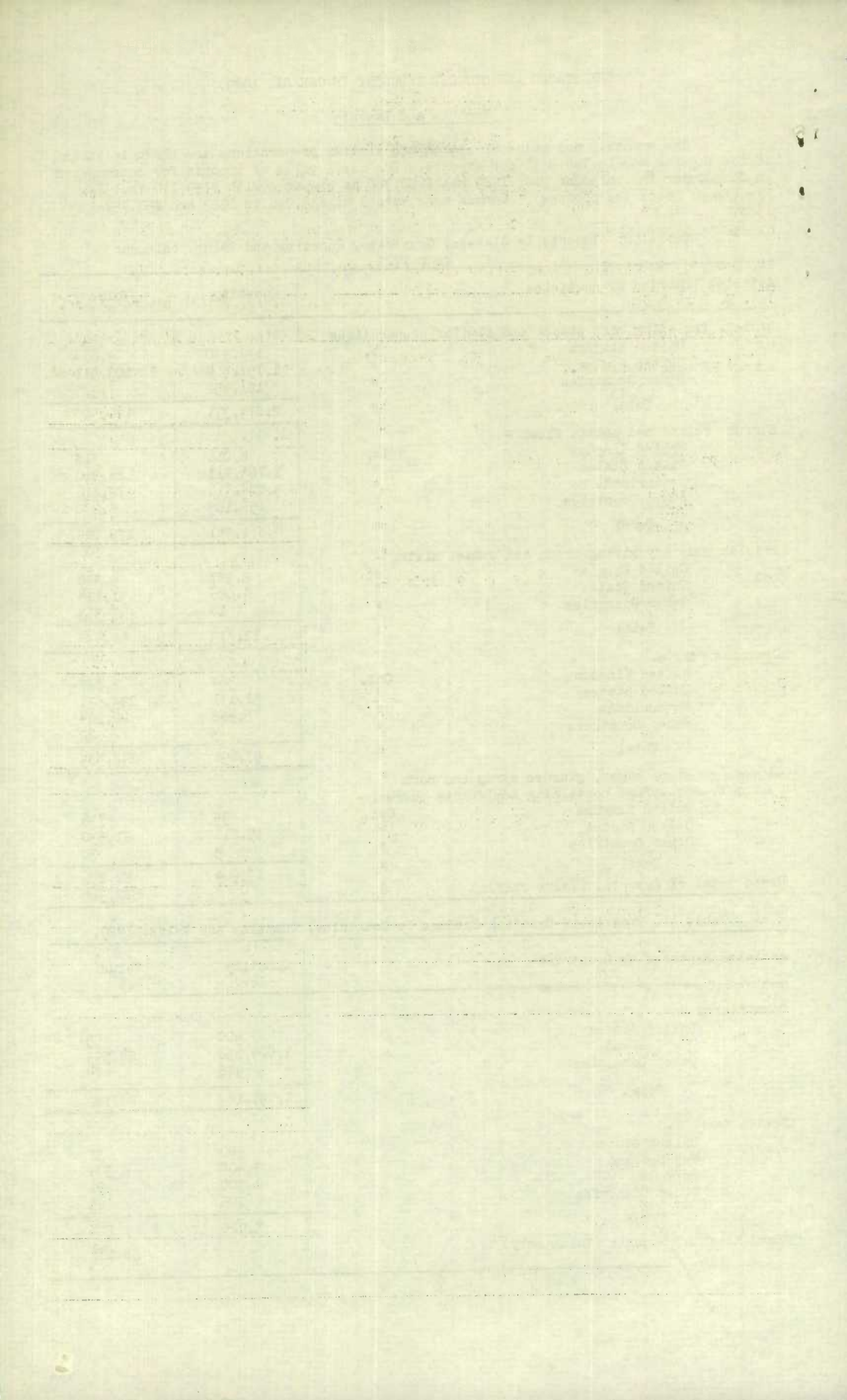
The quantity and value of starch and similar preparations are shown in Table 10 for imports and in Table 11 for exports. The total value of imports for consumption in Canada for the calendar year 1929 was \$682,360 as compared with \$789,110 in 1928. Exports of goods the produce of Canada were valued at \$55,246 in 1929 and \$53,747 in 1928.

Table 10. Imports by Classes, Countries, Quantity and Value, calendar year 1929.

Articles imported by countries		Quantity	Value \$
Starch, including corn starch and similar preparations			
United Kingdom	lb.	139,930	9,664
United States	"	1,751,509	103,511
Other Countries	"	181,952	7,325
Total	"	2,073,391	120,500
Starch, potato and potato flour -			
United Kingdom	lb.	8,016	318
United States	"	1,703,711	86,210
Netherlands	"	3,004,119	78,316
Other Countries	"	156,105	5,200
Total	"	4,871,951	170,044
British gum, dry sizing cream and enamel sizing -			
United Kingdom	Cwt.	2,357	9,398
United States	"	9,006	51,174
Other Countries	"	10	363
Total	"	11,373	60,935
Dextrine, dry -			
United Kingdom	Cwt.	569	2,828
United States	"	51,171	223,531
Netherlands	"	5,948	22,204
Other Countries	"	3	22
Total	"	57,691	248,585
Glucose or grape sugar, glucose syrup and corn syrup or any syrups containing admixtures thereof -			
United Kingdom	Cwt.	95	736
United States	"	19,811	81,530
Other Countries	"	3	30
Total	"	19,909	82,296
Grand total of Imports, (Value only)	\$	-	682,360

Table 11. Exports of Canadian Produce by Countries, Quantity and Value, 1929.

Articles Exported by Countries		Quantity Lb.	Value \$
Corn Starch -			
United States		500	55
New Zealand		1,029,656	54,593
Other Countries		988	74
Total		1,031,144	54,722
Potato Starch -			
United States		500	31
New Zealand		3,400	329
Bermuda		1,300	81
Other Countries		700	83
Total		5,900	524
Grand total of Exports (Value only)		-	55,246



APPENDIX

STARCH AND GLUCOSE MANUFACTURERS, 1929.

Canada Starch Co. Ltd.,

Cardinal, Ontario.

St. Lawrence Starch Co. Ltd.,

Port Credit, Ontario.

Geo. E. Full & Son,

Hunter River, Prince Edward Island.

St. Peter's Starch Co. Ltd.,

St. Peter's, Prince Edward Island.

Murray Harbour Starch Co.,

Murray Harbour, Prince Edward Island.

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