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DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

REPORT

on the

SUGAR INDUSTRY

in

CANADA

1923

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DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

OTTAWA - CANADA

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THE SUGAR INDUSTRY IN CANADA, 1923

Ottawa, April, 1925.- A report on the Sugar Industry in Canada is herewith presented for the calendar year 1923. Although one of the lesser industries numerically, it occupies ninth place in the total value of its production, and first place in average value of production per establishment. In order to prevent disclosure of the operations of individual plants the statistical information is not available by provinces as the following statement of the location of refineries by provinces indicates. Ontario and Quebec each have two plants and British Columbia, New Brunswick and Nova Scotia each have one plant making a total of seven refineries in the Dominion.

New Beet Sugar Factory.

The Utah-Idaho Sugar Company of Salt Lake City are building a plant at Raymond, Alberta, with a capacity of 1,000 tons of beets per day, and costing a million dollars. They will manufacture all grades of sugar.

Comparative Statistics.

The accompanying table gives the principal statistics of the industry for the five year period 1919-1923.

Principal Statistics Compared 1919-1923

Principal Statistics.	1923	1922	1921	1920	1919
Refineries.....No.	7	7	7	8	8
Capital Invested.....\$	45,618,132	36,691,472	35,783,067	46,719,034	38,725,542
Employees on Salaries -					
Males.....No.	300	271	280	377	365
Females.....No.	48	46	53	68	51
Salaries.....\$	831,107	773,366	765,456	1,029,930	883,709
Employees on Wages -					
Males.....No.	1,961	2,331	2,042	2,573	2,923
Females.....No.	84	97	94	100	132
Wages.....\$	2,498,555	2,492,605	2,417,438	3,602,884	3,294,185
Cost of Fuel.....\$	1,510,367	1,918,987	1,810,176	2,807,861	2,083,315
Miscellaneous expenses...\$	4,483,744	6,149,384	4,768,134	7,270,267	6,374,053
Cost of Materials.....\$	61,817,862	56,093,942	56,832,242	103,689,088	86,308,204
Value of products and by-products.....\$	77,004,026	70,822,782	69,509,827	119,086,731	102,630,086
Value added by manufac- ture.....\$	15,186,164	14,728,840	12,627,585	15,397,643	16,321,882

THE SUGAR INDUSTRY IN CANADA 1923

Comparative Statistics of Sugar Production 1919-1923

The accompanying table affords a comparative view of sugar production by classes, quantity and value for the calendar years 1919 to 1923. A summary of beet production by acreage, yield and value is also shown in this connection.

Sugar Production, 1919-1923

Kinds of sugar	Unit	1923	1922	1921	1920	1919
Granulated Sugars:-						
Made from cane	lb.	718,049,089	1,006,099,197	636,446,914	604,173,160	823,213,445
Made from beets	lb.	39,423,160	29,911,770	52,862,377	89,280,719	37,839,342
Total value, granulated	\$	68,990,279	63,513,155	60,185,249	104,697,061	86,423,297
Soft sugars:-						
Made from cane	lb.	84,506,388	112,093,407	94,754,353	88,760,215	156,005,630
Total value, soft sugars	\$	7,154,355	6,148,861	8,442,174	12,649,281	14,288,582
Total quantity, all sugar	lb.	841,973,637	1,148,104,374	784,063,644	782,219,094	1,017,058,417
Total value, all sugar	\$	76,144,634	69,667,016	68,627,423	117,346,342	100,711,879

Sugar Beet, Factory Production, 1919-1923

Acreage	ac.	17,941	14,955	25,335	34,491	18,800
Total yield	ton	159,200	127,807	199,334	343,000	130,000
Total value	\$	1,992,668	966,522	1,974,384	5,307,243	2,630,027

Manufacture, Imports, Exports and Consumption of Sugar during the calendar years 1919-1923

Sugar Manufactured,	quantity	lb.	841,973,637	1,148,104,374	784,063,644	782,219,094	1,017,058,417
value		\$	76,144,634	69,667,016	68,627,423	117,346,342	100,711,879
Plus							
Sugar Imported	quantity	lb.	17,039,979	2,654,290	20,571,959	9,684,531	716,984
value		\$	1,241,491	96,692	2,051,780	1,375,932	58,058
Less							
Sugar Exported	quantity	lb.	119,121,347	316,651,937	86,765,970	69,014,171	242,972,128
value		\$	12,023,173	20,566,055	7,333,245	12,278,795	22,113,389
Sugar available for	Quantity	lb.	739,897,269	834,106,727	804,635,603	732,889,454	774,803,273
consumption	value	\$	65,362,952	49,197,653	66,575,643	106,443,479	78,656,543
Per Capita con-	quantity	lb.	31.46	93.30	91.55	83.75	91.38
sumption	value	\$	7.20	5.50	7.57	12.33	9.27

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THE SUGAR INDUSTRY IN CANADA 1923

SUGAR PRODUCTION 1923

The quantity and selling value at the refinery of the products and by-products of the Sugar Industry in Canada are presented in Table I. Although the quantity of refined sugar shows a decrease of 306,125,737 lbs. there was an increase in the total value of production amounting to \$6,477,613. This condition is explained by the rise in the market price of sugar, the average advancing from 6.07 cents per lb. in 1922 to 9.04 cents per lb. in 1923 or an increase of approximately 50 per cent. Cane sugar, whether granulated or soft, decreased by 315,637,127 pounds whilst on the other hand granulated beet sugar increased by 9,511,390 making a net decrease as above stated.

TABLE I. - SUGAR PRODUCTION, 1923

Products	Unit	Products Made	
		Quantity	Selling Value at factory
			\$
Granulated Sugars -			
From Cane.....lb.		718,049,039)	68,990,279
From Beets.....lb.		39,423,160)	
Soft sugars.....lb.		84,506,388	7,154,355
Syrups.....gal.		444,531	255,341
Molasses.....gal.		2,105,633	295,279
Dried beet pulp.....ton		7,987	206,334
All other products.....-		-	102,438
Total Selling Value of Products	-	-	77,004,026

CAPITAL INVESTED

Table II gives the statistics relating to capital investment under two main heads, Fixed Capital represented by (a) Land, buildings and fixtures (b) machinery and tools totalled \$33,886,361 in 1923 as compared with a total valuation in 1922 of \$25,150,839. Working capital comprising (a) materials on hand, stocks in process, fuel and miscellaneous supplies on hand and (b) cash, trading and operating accounts, etc. showed a total value of \$11,731,821 in 1923 as against \$11,540,633 in 1922.

TABLE II. - Capital Invested, 1923

Items of Capital	Amount
	\$
Fixed Capital -.....total	33,886,361
Land, buildings and fixtures.....	17,093,410
Machinery and tools.....	16,792,951
Working Capital -.....total	11,731,821
Materials on hand, stocks in process, fuel and miscellaneous supplies on hand.....	5,684,315
Cash, trading and operating accounts, etc.....	6,047,006
Grand Total of Capital	45,618,182

THE SUGAR INDUSTRY IN CANADA 1923

EMPLOYEES, SALARIES AND WAGES

The statistics of employment are shown in Table III for the Dominion by classes, sex and remuneration. Salaried employees of classes show an increase over 1922 of 31 in number and of \$57,741 in remuneration. On the other hand, with a decreased production of over 300 million pounds, the number of workers on wages fell from 2,428 in 1922 to 2,045 in 1923. The total amount paid for salaries during the year was \$831,107 and for wages \$2,498,555.

TABLE III.- Employees, Salaries and Wages, 1923

Classes of Employees	No. of Employees		Salaries and Wages
	Male	Female	
Salaried Officers of corporations.....	28	3	216,316
General superintendents, managers.....	18	--	91,417
Technical experts, engineers, chemists, accountants, etc.....	42	--	136,567
Clerks, stenographers, salesmen and other salaried employees.....	212	45	386,807
Wage earners, average number.....	1,961	84	2,498,555
TOTALS	2,261	132	3,329,662

Table IV. shows employment statistics by number and sex for each month of the year and also the average employment for the year. The month of maximum employment was that of November when 2,403 persons were entered on the payrolls. Minimum employment was reached in the month of January with a total payroll of 1,488 persons.

TABLE IV. - Employment by Months

Month	No. employed		Month	No. employed	
	Male	Female		Male	Female
January	1,439	49	July	2,042	84
February	1,953	78	August	1,913	91
March	2,041	94	September	1,569	77
April	1,983	81	October	2,203	80
May	2,107	92	November	2,302	101
June	2,187	93	December	1,792	91
Total for the Year				23,531	1,011
Average monthly employment throughout the year				1,961	84

OTHER LABOUR STATISTICS

The working time of refineries and of the persons employed there together with averages is shown in Table V. The operating time in the various plants is shown by (a) full time (b) part time and (c) time idle. That of employees is shown by the number of hours worked per day and per week.

TABLE V.- Operating Time of Plants and Employees, 1923.

Number of Refineries reporting	7	
	Totals	Averages per plant
Days in Operation --		
On full time.....	1,444	206.30
on part time.....	250	35.71
Idle.....	434	62.00
Hours worked by employees --		
Per day or shift.....	73	10.43
Per week.....	434	62.00

FUEL CONSUMPTION

The quantity and cost value of the fuel consumed by the industry, delivered at the works, is shown by classes in Table VI. Approximately 60 per cent of all the fuel consumed was bituminous coal, fuel oil being next with over 35 per cent. The total cost of all fuel used during the year amounted to \$1,510,367.

TABLE VI.- Fuel Consumption by Classes, 1923.

Kinds of Fuel	Unit	Quantity	Cost Value at Refinery
Bituminous coal, all classes.....	ton	183,549	985,483
Anthracite coal, all classes.....	"	100	775
Coke.....	"	2,533	26,277
Fuel oils.....	gal.	9,764,484	497,832
Total fuel cost	-	-	1,510,367

MISCELLANEOUS EXPENSES

The cost of all kinds of miscellaneous or overhead expenses during the year 1923 was \$4,488,744 as compared with a total outlay of \$6,149,384 in 1922. The principal items included under this head cover rents, taxes, insurance, advertising and travelling expenses, repairs to buildings, machinery, etc., office furniture and supplies, telegraph, telephone, postal and express charges, etc.

POWER EMPLOYED

The classes of power employed in the industry during 1923 are shown in Table VII according to (a) the number of units in each class and (b) the horsepower according to manufacturers' rating. Steam engines, 128 in number, with a horsepower capacity of 12,532 and electric motors with 935 units and a horsepower capacity of 14,893 supplied all the power used in the industry. Of the electric motors 490 were operated by power generated by the establishment and 445 by rented power. The number of boilers installed was 76 with a B.H.P. of 23,669 but they form no part of the power installation.

TABLE VII.- Power Employed, 1923.

Classes of power	No. of Units	Total H.P. according to manufacturers' rating.
Steam engines and turbines.....	128	12,532
Electric motors -		
Operated by power generated by the establishment.....	490	5,309
Operated by purchased power.....	445	9,584
Total power installation	1,063	27,425

THE SUGAR INDUSTRY IN CANADA, 1923

MATERIALS USED

The quantity and the cost value delivered at the refinery of the classes of materials used in the industry during the calendar year 1923 are shown in Table VIII. The cost of raw sugar rose from 4.4 cents per pound in 1922 to 6.7 cents per lb. in 1923. Likewise the cost of sugar beets advanced from \$7.56 per ton in 1922 to \$12.08 per ton in 1923.

TABLE VIII. - Materials Used, 1923

Classes of Materials	Unit	Quantity	Cost value delivered at refine
			\$
Raw Sugar.....	lb.	845,767,900	56,723,143
Sugar beets.....	ton	159,200	1,922,668
Boneblack, purchased.....	lb.	3,019,078	122,951
Infusorial earth purchased.....	lb.	1,484,807	34,563
Lime.....	lb.	849,277	5,624
Limestone.....	ton	16,349	36,118
Sulphur.....	lb.	129,082	2,571
Sulphuric and hydrochloric acids.....	lb.	124,564	3,245
Other chemicals, (value only).....	-	-	39,306
All other materials (value only).....	-	-	649,301
Boxes, bags and other containers.....	-	-	2,273,372
Total cost of Materials	-	-	61,817,852

Capacity of Canadian Refineries.

The average daily capacity of the seven refineries of the Dominion during 1923 as reported to the Bureau was as follows:

Beets used.....	tons	2,499
Raw sugarmelted.....	lbs.	6,394,560
Granulated sugar made..	lbs.	5,233,490
Soft sugars made.....	lbs.	596,086
Syrups.....	lbs.	224,513

IMPORTS AND EXPORTS 1923

Tables IX and X, present statistics of imports and exports of sugar and its products. A comparative statement of the import and export of certain articles will be found on page for the calendar year 1919 to 1923.

TABLE IX.-- Imports for Consumption, Calendar year 1923.

Articles		Quantity	Value
Sugar, n.o.p. not above No.16 D.S. in colour, etc.	lb.	847,016,372	44,562,830
Sugar, above No.16 D.S. when imported by refineries for refining only.....	lb.	1,515,536	85,124
Sugar above No.16 D.S. and all refined sugars of whatever kind, grade or standard.....	lb.	17,039,979	1,241,491
Sugar cane shredded.....	-	-	1,494
Glucose, glucose syrup and corn syrup or any admixture thereof.....	lb.	3,041,660	120,990
Molasses of cane testing under 35 degrees but not less than 20 degrees.....	gal.	160,444	41,670
Molasses produced in the process of manufacturing cane sugar not less than 35 degrees and not more than 56 degrees.....	gal.	224,755	118,010
Molasses testing not more than 56 degrees, the produce of any British country, etc.....	gal.	4,237,710	2,557,547
Molasses and syrups of all kinds, the product of sugar cane or beet and all other imitations or substitutes thereof.....	lb.	13,669,213	317,968
Total value of imports.....	-	-	49,047,124

TABLE X.-- Exports of Canadian produce, calendar year 1923

Articles		Quantity	Value
Sugar of all kinds.....	lb.	119,121,347	12,023,173
Molasses and syrups of all kinds.....	gal.	464,814	31,435
Sugarhouse syrups.....	gal.	1,656	534
Glucose and glucose syrups.....	-	-	274
Sugar beets exported.....	ton	10,762	61,965
Total value of exports	-	-	12,117,381

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