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Minister of Trade and Commerce

**CANADA**

**DEPARTMENT OF TRADE AND COMMERCE**

**DOMINION BUREAU OF STATISTICS**

**CENSUS OF INDUSTRY**

**MINING, METALLURGICAL & CHEMICAL BRANCH**

**THE SALT INDUSTRY**

**IN**

**CANADA**

**1944**



**OTTAWA  
1945**

Price 25 cents

THE CANADIAN PACIFIC RAILWAY COMPANY  
LIMITED

CANADA

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LIMITED

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LIMITED

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THE CANADIAN PACIFIC RAILWAY COMPANY

IN

CANADA

1914

—



OTTAWA  
1914

Printed by the Canadian Pacific Railway Company

Dominion Statistician: S. A. Cudmore, M.A. (Oxon.), LL.D. (Tor.), F.S.S., F.R.S.C.  
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### SALT, 1944

Production of common salt or natural sodium chloride in Canada during 1944 totalled 695,217 short tons valued at \$4,074,021 compared with 637,686 short tons worth \$4,372,378 in 1943. The quantity produced in 1944 was the greatest ever realized by the Canadian salt industry and its value was only surpassed by that of 1943. The mineral in 1944 was produced in Nova Scotia, Ontario, Manitoba and Alberta, and of the total production Ontario contributed 603,326 short tons or 86.9 per cent. Statistics of production represent the recovery of salt from brine wells with the exception of Nova Scotia where the output comes entirely from the underground mining of rock salt deposits.

Of the total salt produced in 1944, there were 370,192 short tons or 53 per cent consumed directly by the producers in the manufacture of caustic soda and other chemicals. Producers' sales of other salt in 1944 included 23,776 short tons of table and dairy grades; 172,275 short tons of common fine, and 55,476 short tons of common coarse. The balance, as shipped by the producers, consisted of various grades, including salt for agriculture and for highway maintenance.

The number of Canadian firms reporting primary salt production in 1944 totalled 8 and plants numbered 9. Employees numbered 710, including 119 females. Salaries and wages amounted to \$1,302,143; \$652,126 were expended for fuel and electricity, and \$134,235 for chemicals and other process supplies.

Statistics relating to Canadian salt production are available only since 1886, and salt output in the Dominion since that year and to the close of 1944 totalled 11,476,121 short tons valued at \$66,367,860. Statistics relating to world production of salt have not been available since 1938. In that year the world production was estimated at 32,000,000 long tons, of which the British Empire contributed 5,200,000 long tons.

Canadian exports of salt in 1944 totalled 3,182 short tons valued at \$80,672; imports during the same period amounted to 147,282 short tons worth \$847,057.

The following information pertaining to recent developments in the salt industry is from a report prepared by the Bureau of Mines, Ottawa:

"At Nappan, near Amherst, Cumberland county, Nova Scotia, a well was drilled in 1931 by Imperial Oil Limited in a search for oil and gas. . . . To obtain further information on this structure the Nova Scotia Department of Mines undertook a drilling campaign in 1943. The results of the drilling gave ample evidence of huge deposits of salt in the district. Maritime Industries Limited, a subsidiary of Standard Chemical Company, Limited, was organized early in 1945 to establish a plant near Amherst for the production of salt from the salt beds in this area.

"Lion Oil Refining Company, of Arkansas State, U.S.A., did some drilling for oil during the summer of 1944 near Mabou, Inverness county, Cape Breton, Nova Scotia. One hole drilled about 7,000 feet proved the existence of several beds of rock salt. The company holds a large acreage in Inverness county and was carrying

on geological investigations in this area.

"In New Brunswick a salt basin was discovered in 1921 as a result of drilling in the vicinity of Coutreau, south of Moncton, on the east side of the Petitcodiac river. . . . There are many millions of tons of salt in this basin available for future development.

"An important discovery of salt was made in 1945, 14 miles south of Vermilion, Alberta. The strike was made at a depth of 3,400 feet, and the bed has a thickness of 400 feet. The Waterways salt bed is at a depth of 700 feet with a thickness of 200 feet. Natural gas, which is available at Vermilion, will prove of importance in the development of this new bed."

According to Canadian Chemistry and Process Industries (Toronto), prices for the several grades of salt were as follows in 1944: specially purified (99.9 per cent NaCl) 94 cents per 100 pound lot; industrial fine, in bulk car lots f.o.b. plant, \$6.53 per ton; and industrial coarse \$10.63 per ton.

Table 1 - PRODUCTION OF SALT IN CANADA, BY GRADES, 1943 and 1944

	1	9	4	3	1	9	4	4
	Manu- factured	Sold	Value of salt sold (Not in- cluding containers)		Manu- factured	Sold	Value of salt sold (Not in- cluding containers)	
	tons	tons	\$		tons	tons	\$	
Table, dairy and pressed blocks ...	100,562	99,706	1,823,446		94,478	93,776	1,847,320	
Common, fine .....	164,658	167,547	1,074,229		173,564	172,275	1,124,148	
Common, coarse .....	68,106	70,833	451,462		55,969	55,476	472,056	
Highway salt .....	269	269	(x) 1,468		293	293	(x) 2,124	
Land salt .....	132	157	1,223		103	98	826	
Other grades .....	3,044	2,979	43,208		2,930	3,100	45,052	
Brine for chemical works (salt equiva- lent sold or used) (A) .....	346,145	346,145	984,342		(x) 370,199	370,199	(x) 575,495	
TOTAL .....	682,316	687,686	4,372,378		637,591	635,217	4,074,021	
Value of containers	...	...	309,250		...	...	712,063	
GRAND TOTAL .....	...	...	5,138,628		...	...	4,786,084	

(x) Value partly estimated.

(A) Including dry salt used by producers for manufacture of chemicals.



Table 2 - PRODUCTION OF SALT, BY PROVINCES(x), 1932-1944

Year	Nova Scotia		Ontario		Manitoba		Alberta	
	Tons	\$	Tons	\$	Tons	\$	Tons	\$
1932 ...	31,897	150,708	231,138	1,789,751	508	7,092	...	...
1933 ...	34,278	161,989	244,107	1,755,087	1,499	18,338	...	...
1934 ...	42,896	191,917	276,751	1,734,196	1,664	20,137	...	...
1935 ...	38,701	161,659	320,003	1,698,508	1,538	18,765	...	...
1936 ...	53,774	183,915	350,044	1,557,072	2,498	32,151	...	...
1937 ...	47,865	216,401	407,701	1,539,599	3,391	43,465	...	...
1938 ...	44,950	194,759	388,130	1,657,140	2,920	34,979	4,045	46,035
1939 ...	47,885	213,029	370,843	2,200,189	2,453	35,388	3,319	37,526
1940 ...	42,435	220,528	412,401	2,371,780	3,076	45,731	6,742	185,430
1941 ...	54,007	307,637	477,170	2,512,166	13,051	115,367	16,617	260,995
1942 ...	50,139	317,798	558,407	2,793,328	22,706	397,101	22,360	335,960
1943 ...	47,775	245,157	594,889	3,356,870	27,523	497,227	17,499	280,124
1944 ...	38,809	281,482	603,806	2,906,117	27,267	488,776	25,335	397,646

(x) In addition, Saskatchewan produced 231 tons valued at \$4,510 in 1933, 452 tons at \$8,703 in 1934, and 101 tons at \$2,046 in 1935.

Table 3 - TOTAL PRODUCTION OF SALT IN CANADA FOR YEARS SPECIFIED, 1886-1944

Year	Tons	\$	Year	Tons	\$
1886 .....	62,359	227,195	1931 .....	259,047	1,904,149
1890 .....	43,754	198,857	1932 .....	263,543	1,947,551
1900 .....	62,055	279,458	1933 .....	280,115	1,939,874
1913 .....	100,791	491,280	1934 .....	321,753	1,954,953
1914 .....	107,038	493,648	1935 .....	360,343	1,880,979
1915 .....	119,300	600,226	1936 .....	391,316	1,773,144
1916 .....	132,903	717,653	1938 .....	440,045	1,912,913
1917 .....	139,909	1,047,792	1939 .....	424,500	2,486,632
1918 .....	131,727	1,285,039	1940 .....	464,714	2,823,269
1919 .....	148,301	1,397,229	1941 .....	560,845	3,136,165
1920 .....	209,355	1,544,724	1942 .....	653,672	3,844,187
1921 .....	164,658	1,673,685	1943 .....	687,686	4,379,378
1929 .....	230,264	1,578,036	1944 .....	695,217	4,074,021

Table 4 - SALT PRODUCED FOR CHEMICAL PURPOSES(x), 1928-1944

Year	Quantity tons (2000 lb.)	Per cent of total salt output	Year	Quantity tons (2000 lb.)	Per cent of total salt output
1928 .....	135,138	45	1937 .....	205,149	45
1929 .....	168,327	51	1938 .....	170,938	39
1930 .....	114,737	42	1939 .....	187,958	44
1931 .....	97,958	38	1940 .....	224,009	48
1932 .....	96,242	37	1941 .....	253,711	46
1933 .....	104,740	37	1942 .....	327,548	50
1934 .....	124,132	39	1943 .....	346,145	50
1935 .....	145,433	40	1944 .....	370,199	53
1936 .....	165,882	42			

(x) Used in the manufacture of chemicals by producers of salt.

Table 5 - AVAILABLE STATISTICS ON CONSUMPTION OF SALT, IN SPECIFIED CANADIAN INDUSTRIES, 1942 and 1943(x)

Industry	1	9	4	2	1	9	4	3
	Quantity		Cost at		Quantity		Cost at	
	used		works		used		works	
	Pounds		\$		Pounds		\$	
Fish canning and curing (factories only) .....	44,918,800		460,162		48,349,100		528,320	
Slaughtering and meat packing .....	112,575,017		775,059		120,899,226		859,676	
Acids, alkalies and salts--								
Brine (salt content) and dry salt .....	613,076,907		886,119		756,465,273		933,623	
Soaps and cleaning preparations .....	4,365,370		22,822		3,864,220		19,203	
Dyeing, cleaning and laundry work .....	6,286,284		56,970		6,234,358		56,024	
Dyeing and finishing of textiles .....	5,564,143		25,709		7,611,943		33,834	
Artificial ice .....	474,440		3,720		549,990		4,516	
Abrasives--Artificial .....	784,000		4,172		820,000		4,793	
Waterworks .....	3,596,200		(a)		4,821,900		(a)	
Leather tanneries .....	16,412,227		85,305		16,859,409		88,867	
Pulp and paper mills .....	28,606,000		132,161		28,546,000		136,642	
Stock and poultry foods .....	8,158,000		63,376		13,386,000		106,991	
Bread and other bakery products .....	15,481,319		183,333		16,978,891		199,602	
Fruit and vegetable preparations .....	13,212,011		98,254		11,539,260		83,370	
Biscuits, confectionery, etc. .....	1,894,910		18,615		2,158,560		23,103	
Foods, breakfast .....	1,386,367		10,976		3,024,751		18,821	
Sausage and sausage casings..	637,966		7,054		612,884		9,097	
Ice cream industry .....	458,925		2,203		393,817		9,806	
Breweries .....	1,055,986		8,977		701,867		6,744	
Malt and malt products .....	220,500		1,278		305,185		1,729	
Macaroni, vermicelli, etc. ..	115,602		1,213		136,203		1,447	
Ice cream cones .....	6,394		66		8,460		78	
Foods, miscellaneous, including coffee, tea, etc. ....	2,693,050		27,063		4,110,262		43,447	
Butter and cheese .....	...		240,607		...		239,184	
Starch and glucose .....	623,360		2,625		553,268		2,633	
Animal oils and fats .....	364,000		1,850		428,000		2,184	
Condensed milk .....	...		409		...		330	
Cheese processed .....	239,263		4,573		239,809		5,339	

(x) In addition, large quantities of salt are used on highways.

(a) Data not available.

Table 6 - PRODUCTION IN CANADA, IMPORTS, EXPORTS AND CONSUMPTION OF SALT,  
1943 and 1944

	1	2	3	4	5
	Tons	Value	Tons	Value	
		\$		\$	
Production .....	687,686	4,379,378	695,217	4,074,021	
Imports -					
Salt, for the use of the sea or gulf fisheries .....	21,037	161,255	31,458	173,123	
Salt, in bulk, n.o.p. ....	47,687	245,913	91,353	461,953	
Salt, n.o.p., in bags, barrels, etc. ....	16,064	181,240	24,466	211,981	
Total .....	84,788	589,108	147,282	847,057	
Exports .....	8,061	113,174	3,132	80,672	
Apparent consumption of salt .....	764,413	4,850,312	839,317	4,840,406	

Table 7 - POTASH SALTS USED IN THE MANUFACTURE OF CANADIAN MIXED FERTILIZERS,  
1942 and 1943

	1	2	3	4	5
	Tons	Cost at works	Tons	Cost at works	
		\$		\$	
Nitrate of potash .....	30	876	...	...	
Kainite and potash manure salts .....	30,182	587,439	23,753	447,619	
Muriate of potash .....	41,648	1,686,724	51,500	1,369,055	
Sulphate of potash .....	4,525	136,754	5,430	248,702	

Table 8 - SALES OF POTASH SALTS FOR FERTILIZER PURPOSES, OTHER THAN FOR THE MANUFACTURE OF MIXED FERTILIZERS, YEARS ENDED JUNE 30, 1943 and 1944

	1	2	3	4	5
					(short tons)
Muriate of potash .....	5,378		4,924		
Sulphate of potash .....	29		143		

Complete statistics relating to world production of potash are not available as publication of potash production statistics by European governments virtually ceased in the summer of 1939, and no adequate data are available since.

Natural potash salts are not yet mined or recovered on an extensive commercial scale in Canada. Potash occurs in small quantities in rock salt strata at Malagash, Cumberland county, Nova Scotia, and at Cautreau, Westmorland county, New Brunswick. Potassium chloride occurs at Malagash in a number of definite bands in the salt mass in the form of crystalline beds of pink and yellowish green sylvite in the matrix of halite.



Caustic soda, chlorine and hydrochloric acid are now manufactured by Canadian Industries Limited from salt obtained from the company's wells located at Sandwich. This company operates chemical plants at Windsor, Cornwall, Shawinigan Falls and Quebec.

The Brunner, Mond Canada, Limited, located at Amherstburg, Ontario, manufactures soda ash from natural brine; calcium chloride is also recovered as a by-product by this company.

Table 9 - PRINCIPAL STATISTICS OF THE SALT INDUSTRY IN CANADA, 1942-1944

	1 9 4 2	1 9 4 3	1 9 4 4
Number of firms (x) .....	9	9	9
Capital employed .....	\$ 5,687,511	5,490,594	(/)
Number of employees--On salary ....	134	135	146
On wages .....	541	547	564
Total .....	675	682	710
Salaries and wages--Salaries .....	\$ 337,080	366,555	337,113
Wages .....	\$ 777,524	856,454	905,030
Total .....	\$ 1,114,574	1,223,009	1,302,143
Selling value of products (gross) ..	\$ 4,604,003	5,188,628	4,786,084
Cost of purchased process materials ..	\$ 133,733	134,272	134,235
Cost of fuel and electricity .....	\$ 536,643	596,252	652,126
Value of containers .....	\$ 748,816	809,250	712,063
Net value of sales .....	\$ 3,184,755	3,643,854	3,287,660

(x) 6 in Ontario; 1 in Nova Scotia; 1 in Manitoba; 1 in Alberta.

(/) Data not available.

Table 10 - WAGE-EARNERS, BY MONTHS, 1940-1944 (On the last day of each month or nearest work day)

Month	1940	1941	1942	1943	1 9 4 4		Female
					Male		
					Surface	Under-ground	
January .....	431	428	515	545	470	30	61
February .....	439	435	526	535	468	28	59
March .....	442	449	516	543	459	30	57
April .....	463	484	522	537	455	30	61
May .....	490	516	533	534	467	31	58
June .....	477	543	560	542	484	32	58
July .....	493	558	565	562	480	29	57
August .....	503	564	548	566	479	30	57
September .....	490	565	548	539	481	28	56
October .....	483	574	542	541	479	29	64
November .....	492	563	569	551	486	31	65
December .....	396	556	545	560	485	30	55
AVERAGE .....	466	520	541	547	474	30	60



Table 11 - NUMBER OF WAGE-EARNERS WHO WORKED THE NUMBER OF HOURS(x) SPECIFIED DURING ONE WEEK IN MONTH OF HIGHEST EMPLOYMENT, 1944

Hours	Male	Female	Hours	Male	Female
30 or less .....	38	4	49-50 .....	56	...
31-43 .....	39	22	51-54 hours ....	51	5
44 .....	9	5	55 .....	18	...
45-47 .....	29	14	56-64 .....	101	2
48 .....	144	12	65 and over ....	46	...

(x) Grand total employees in week specified: male, 531; female, 64.

Total wages paid in week specified: male \$19,817; female \$1,569.

Table 12 - FUEL AND ELECTRICITY USED IN THE CANADIAN SALT INDUSTRY, 1943 and 1944

Kind	Unit of measure	1943		1944	
		Quantity	Cost at works \$	Quantity	Cost at works \$
Bituminous coal--Canadian ...	short ton	10,229	63,281	9,945	67,268
Imported ...	short ton	66,007	421,213	68,753	471,995
Lignite coal .....	short ton	23,890	88,420	23,473	88,987
Gasoline .....	Imp.gal.	10,907	3,090	8,266	2,403
Kerosene .....	Imp.gal.	82	23	257	69
Fuel oil .....	Imp.gal.	343	30	486	52
Gas, natural .....	M cu.ft.	91	51	78	42
Electricity purchased .....	K.W.H.	3,701,270	20,144	3,729,678	21,310
TOTAL .....	...	...	596,352	...	652,126
Electricity generated for own use .....	K.W.H.	7,675,462	...	7,853,875	...

Table 13 - POWER EQUIPMENT (including stand-by or emergency equipment) 1944

Description	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total horse power(x)	Number of units	Total horse power(x)
Steam engines .....	16	1,385	...	...
Steam turbines .....	14	1,840	...	...
Gasoline, gas and oil engines, other than Diesel engines .....	3	27	1	12
Electric motors (except motor-generator sets) -				
(a) Operated by purchased power ...	172	1,080	10	73
Total .....	205	4,332	11	85
(b) Operated by power generated by above primary units .....	231	2,307	18	266
Stationary boilers .....	8	3,970	7	1,135
Motor-generator sets .....	2	18	...	...

(x) According to manufacturers' rating.

DIRECTORY OF CANADIAN SALT PRODUCING FIRMS, 1944

Name of Firm	Head or Executive Office	Location of Plant
<u>NOVA SCOTIA -</u>		
Malagash Salt Co. Limited	196 Provost St., New Glasgow	Cumberland Co.
<u>ONTARIO -</u>		
Brunner, Mond Canada, Ltd.	Canadian Bank of Commerce Bldg., Toronto	Essex Co.
Canadian Industries Limited	Box 10, Montreal, Que.	Essex Co.
Goderich Salt Co. Ltd.	Box 577, Goderich	Goderich
Sifto Salt Co. Ltd.	2240 Sun Life Bldg., Montreal, Que.	Sarnia
Warwick Pure Salt Co. Ltd.	R. R. 5, Watford	Lambton Co.
Purity Flour Mills Ltd.	287 MacPherson Ave., Toronto	Goderich
<u>MANITOBA -</u>		
Canadian Industries Ltd.	Box 10, Montreal, Que.	Neebawa
<u>ALBERTA -</u>		
Industrial Minerals Ltd.	2240 Sun Life Bldg., Montreal, Que.	Waterways





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