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DEPARTMENT OF TRADE AND COMMERCE  
DOMINION BUREAU OF STATISTICS  
CENSUS OF INDUSTRY  
MINING, METALLURGICAL AND CHEMICAL BRANCH  
OTTAWA - CANADA

Dominion Statistician:	S. A. Cudmore, M.A. (Oxon.), F.S.S., F.R.S.C.
Chief - Mining, Metallurgical and Chemical Branch:	W. H. Losee, B.Sc.
Mining Statistician:	R. J. McDowell, B.Sc.

SALT, 1942

Production of common salt or sodium chloride in Canada during 1942 totalled 653,672 net tons valued at \$3,855,137, compared with 560,345 net tons worth \$3,196,165 in 1941. The quantity and value of the output during the year under review were the highest ever realized by the Canadian salt industry. The mineral in 1942 was produced in Nova Scotia, Ontario, Manitoba and Alberta, and of the total production, Ontario contributed 558,407 net tons or 85.4 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 1942, there were 327,548 net tons or 50.1 per cent consumed by the producers themselves in the manufacture of caustic soda and other chemicals. Producers' sales of salt in 1942 included 37,743 net tons of table and dairy grades; 150,008 net tons of common fine, and 35,271 net tons of common coarse. The balance of Canadian shipments in 1942 consisted of various other varieties, including salt for agriculture and for highway maintenance. A report issued by the Bureau of Mines, Ottawa, states that definite zones in which indications of potash salts occur have been correlated from the second to the twenty-sixth level of the Malagash mine in Nova Scotia, and there appears to be an increase in the potash content in depth. The study of these zones is being continued. Detailed studies have also been started with a view to improving the grade of fishing salt obtained from this deposit, and encouraging results are being obtained. No salt deposits in the United States are known to be nearer than about 200 miles from the Atlantic coast, and some industries along the coast, such as, fish curing, have usually found it easier to use salt imported chiefly from the West Indies. The submarine menace during the early part of the present war made it increasingly difficult to obtain salt from this source and these consumers were largely obliged to obtain their supplies from within the United States and Canada.

The number of Canadian firms reporting primary salt production in 1942 totalled 9; capital employed by the industry amounted to \$5,687,511, of which \$3,500,950 represented the value of buildings, machinery, etc., and \$278,495 the value of land. Employees numbered 675, including 80 females. Salaries and wages totalled \$1,114,574; \$536,649 were expended for fuel and electricity and \$133,783 for chemicals and other process supplies.

Data relating to Canadian imports and exports of salt by countries are available only for confidential use during the continuation of the war. However, the "apparent" consumption of salt in Canada in 1942 is estimated at 718,470 net tons valued at \$4,162,257 compared with 629,754 net tons worth \$3,524,285 in 1941.

Statistics relating to Canadian salt production are available only since 1886 and salt output in the Dominion since that year to the end of 1942 totalled 10,093,218 net tons valued at \$57,925,461. Statistics relating to world production of salt have not been available since 1938.

Table 1 - PRODUCTION OF SALT IN CANADA, BY GRADES, 1941 and 1942

	1941			1942		
	Manu- factured	Sold	Value of salt sold (Not includ- ing con- tainers)	Manu- factured	Sold	Value of salt sold (Not includ- ing con- tainers)
	tons	tons	\$	tons	tons	\$
Table, dairy and processed blocks	79,683	78,901	1,372,409	89,588	87,743	1,698,210
Common, fine	133,103	131,001	733,072	147,168	150,008	900,906
Common, coarse	36,807	35,838	360,772	33,794	35,271	331,322
Highway salt	7,069	7,069	36,986	996	996	5,438
Ice	626	641	4,254	514	509	3,493
Other grades	47,208	48,684	258,019	52,239	51,597	335,037
Brine for chemical works (salt equiva- lent sold or used)	258,711	258,711	430,653	327,548	327,548	580,781
Total	563,207	560,845	3,196,165	651,847	653,672	3,855,187
Value of containers	...	...	656,334	...	...	748,816
GRAND TOTAL	563,207	560,845	3,852,499	...	...	4,604,003

Table 2 - PRODUCTION OF SALT, BY PROVINCES (x), 1932-1942

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	161,889	244,107	1,755,087	1,499	18,388	...	...
1934	42,886	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	38,774	183,915	350,044	1,557,078	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	35,888	3,319	37,526
1940	42,495	220,328	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	50,199	317,798	558,407	2,793,328	22,706	407,101	22,360	336,960

(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, 1886-1942

Year	Tons	\$	Year	Tons	\$
1886 .....	62,359	227,195	1922 .....	330,264	1,573,086
1890 .....	43,754	198,857	1921 .....	259,047	1,904,149
1900 .....	62,055	279,458	1932 .....	263,543	1,247,551
1913 .....	100,791	431,280	1933 .....	280,115	1,330,874
1914 .....	107,038	493,648	1934 .....	321,753	1,954,953
1915 .....	119,900	600,226	1935 .....	360,343	1,880,978
1916 .....	132,903	717,653	1936 .....	391,316	1,773,144
1917 .....	138,909	1,047,732	1938 .....	440,045	1,912,913
1918 .....	131,727	1,285,039	1939 .....	424,500	2,486,632
1919 .....	148,301	1,397,939	1940 .....	464,714	2,823,269
1920 .....	209,855	1,544,724	1941 .....	560,845	3,196,165
1921 .....	164,658	1,673,685	1942 .....	653,672	3,855,187

Table 4 - SALT PRODUCED FOR CHEMICAL PURPOSES(x), 1928-1942

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	1936 ...	165,032	42
1929 ...	168,327	51	1937 ...	208,143	45
1930 ...	114,737	42	1938 ...	170,338	39
1931 ...	97,953	38	1939 ...	187,958	44
1932 ...	96,242	37	1940 ...	224,009	48
1933 ...	104,740	37	1941 ...	258,711	46
1934 ...	124,132	39	1942 ...	327,548	50
1935 ...	145,433	40			

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

Table 5 - AVAILABLE STATISTICS ON CONSUMPTION OF SALT, IN SPECIFIED CANADIAN INDUSTRIES, 1940 and 1941 (x)

Industries	1	9	4	0	1	9	4	1
	Quantity used Pounds	Cost at works \$		Quantity used Pounds	Cost at works \$			
Fish canning and curing (factories only) .....	47,546,400	275,812		44,229,400	363,201			
Slaughtering and meat packing ...	94,220,916	588,536		102,888,000	702,348			
Acids, alkalies and salts--Brine (salt content) and dry salt ...	415,425,401	541,914		435,346,445	708,321			
Soaps and cleaning preparations..	4,926,412	18,661		5,823,762	24,311			
Dyeing, cleaning and laundry work	5,070,363	42,354		5,618,198	49,389			
Dyeing and finishing of textiles.	3,162,844	14,191		3,379,432	19,898			
Artificial ice .....	457,096	3,245		428,411	3,550			
Abrasives - artificial .....	786,000	4,002		826,000	4,280			
Waterworks .....	1,000,000	(-)		1,000,000	(-)			
Leather tanneries .....	14,301,372	67,025		16,212,371	84,365			
Pulp and paper mills .....	25,258,000	96,351		28,772,000	118,015			
Stock and poultry foods .....	5,278,000	44,247		6,258,000	46,353			
Bread and other bakery products..	12,744,255	153,264		14,444,713	170,892			

Table 5 - AVAILABLE STATISTICS ON CONSUMPTION OF SALT, IN SPECIFIED CANADIAN INDUSTRIES, 1940 and 1941 (x) - (Concluded)

Industries	1	9	4	0	1	9	4	1
	Quantity		Cost at		Quantity		Cost at	
	used		works		used		works	
	Pounds		\$		Pounds		\$	
Fruit and vegetable preparations..	3,377,633		70,313		14,476,063		102,009	
Biscuits, confectionery, etc. ....	1,648,845		16,487		1,609,456		17,685	
Foods, breakfast .....	1,165,733		8,630		1,290,819		10,211	
Sausage and sausage casings .....	635,106		6,524		766,466		7,996	
Ice cream industry .....	1,508,345		8,632		414,880		2,743	
Breweries .....	548,811		5,304		721,984		7,530	
Malt and malt products .....	228,100		1,257		222,150		1,236	
Macaroni, vermicelli, etc. ....	100,506		943		74,259		817	
Ice cream cones .....	3,959		125		6,006		135	
Foods, miscellaneous, including								
coffee, tea, etc. ....	1,868,735		19,774		2,603,422		26,614	
Butter and cheese .....	...		190,729		...		214,650	
Starch and glucose .....	482,783		2,102		492,467		2,302	
Animal oils and fats .....	314,000		1,400		270,000		1,200	
Condensed milk .....	...		670		...		512	
Woollen textiles .....	...		...		...		...	

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

(✓) Value not compiled.

Table 6 - POTASH SALTS USED IN THE MANUFACTURE OF CANADIAN MIXED FERTILIZERS, 1941 and 1940

	1	9	4	1	1	9	4	0
	Tons		Cost at		Tons		Cost at	
			works				works	
			\$				\$	
Nitrate of potash .....	4		566		23		1,336	
Kainite and potash manure salts	3,280		59,232		...		...	
Muriate of potash .....	42,815		1,540,783		43,902		1,348,413	
Sulphate of potash .....	2,988		134,830		5,220		206,309	

NOTE: Data for 1942 not yet complete.

Table 7 - SALES OF POTASH SALTS FOR FERTILIZER PURPOSES, OTHER THAN FOR THE MANUFACTURE OF MIXED FERTILIZERS, YEARS ENDED JUNE 30, 1942 and 1941

	1 9 4 2	1 9 4 1
	(short tons)	
Muriate of potash .....	5,419	7,425
Sulphate of potash .....	122	132

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 Gautreau, 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 8 - PRINCIPAL STATISTICS OF THE SALT INDUSTRY IN CANADA, 1940-1942

	1940	1941	1942
Number of firms (x) .....	9	9	9
Capital employed .....	\$ 4,293,914	5,559,307	5,687,511
Number of employees - On salary .....	120	143	134
On wages .....	466	520	541
Total .....	586	668	675
Salaries and wages - Salaries .....	\$ 299,521	361,661	337,050
Wages .....	\$ 536,985	656,991	777,524
Total .....	\$ 836,506	1,018,652	1,114,574
Selling value of products (gross) ...	\$ 3,322,250	3,852,499	4,604,003
Cost of purchased process materials..	\$ 40,193	69,341	133,783
Cost of fuel and electricity .....	\$ 321,589	450,291	536,649
Value of containers .....	\$ 498,981	656,334	748,816
Net value of sales .....	\$ 2,461,482	2,676,533	3,134,755

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

Table 9 - WAGE-EARNERS, BY MONTHS, 1938-1942 (On last day of each month or nearest work day)

Month	1938	1939	1940	1941	1942		
					Male	Female	
					Surface	Under-ground	Surface
January .....	411	440	431	428	447	43	25
February .....	446	426	439	435	449	50	27
March .....	441	407	442	449	442	46	28
April .....	452	424	463	484	448	48	26
May .....	448	439	490	516	462	49	28
June .....	423	459	477	543	473	57	30
July .....	439	460	493	558	482	52	31
August .....	438	416	503	564	464	52	32
September .....	477	431	490	565	458	53	37
October .....	487	458	483	574	454	52	36
November .....	474	449	492	563	472	52	45
December .....	426	408	396	556	456	50	39
AVERAGE .....	447	434	466	520	459	50	32





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Salt

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Table 10 - NUMBER OF WAGE-EARNERS WHO WORKED THE NUMBER OF HOURS(x) SPECIFIED DURING ONE WEEK IN MONTH OF HIGHEST EMPLOYMENT, 1942

Hours	Number		Hours	Number	
	Male	Female		Male	Female
30 or less .....	23	3	40-50 .....	24	7
31-43 .....	57	2	51-54 .....	42	5
44 .....	25	2	55 .....	11	...
45-47 .....	22	...	56-64 .....	119	9
48 .....	152	4	65 and over ....	76	...

(x) Grand Total employees in week specified: male, 558; female, 32.  
Total wages paid in week specified: male, \$16,294; female, \$683.

Table 11 - FUEL AND ELECTRICITY USED IN THE CANADIAN SALT INDUSTRY, 1941 and 1942

Kind	Unit of measure	1941		1942	
		Quantity	Cost at works	Quantity	Cost at works
			\$		\$
Bituminous coal - Canadian ..	short ton	14,773	31,238	23,121	166,958
Imported ..	short ton	49,331	238,492	40,599	253,367
Anthracite coal .....	short ton	...	...	...	...
Lignite coal .....	short ton	14,091	48,744	22,400	80,261
Gasoline .....	Imp. gal.	30,225	21,423	51,548	14,477
Kerosene .....	Imp. gal.	33	9	39	11
Fuel oil .....	Imp. gal.	48,930	5,422	15,482	1,775
Gas, natural .....	M cu. ft.	39	21	66	36
Electricity purchased .....	K.W.H.	2,755,387	14,876	3,610,719	19,764
TOTAL .....	...	...	450,291	...	533,643
Electricity generated for own use .....	K.W.H.	5,193,019	...	7,502,246	...

Table 12 - POWER EQUIPMENT (including stand-by or emergency equipment), 1942

Description	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total horse power*	Number of units	Total horse power *
1. Steam engines and steam turbines ...	29	4,668	7	190
2. Diesel engines .....	...	...	1	180
3. Gasoline, gas and oil engines, other than Diesel engines .....	5	133	...	...
4. Hydraulic turbines or water wheels..	...	...	...	...
5. Electric motors (except those reported under item 7) -				
(a) Operated by purchased power ...	144	976	3	11
Total 1, 2, 3, 4 and 5a .....	173	5,732	11	381
(b) Operated by power generated by 1, 2, 3 and 4 .....	213	2,174	19	234
6. Stationary boilers .....	9	4,740	7	1,135
7. Motor generator sets .....	1	15	...	...

\* According to manufacturers' rating.