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

THE
FERTILIZER INDUSTRY
IN
CANADA
1936



OTTAWA
1937

Price 10 cents

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OTTAWA - CANADA

Dominion Statistician: R. H. Coats, LL.D., F.R.S.C., F.S.S.(Hon.)
Chief - Mining, Metallurgical and Chemical Branch: W. H. Losee, B.Sc.
Statistics - Metal and Chemical Products: H. McLeod, B.Sc.

ANNUAL INDUSTRY REPORT

CHEMICALS AND ALLIED PRODUCTS GROUP

THE FERTILIZER MANUFACTURING INDUSTRY, 1936.

Production by plants in Canada engaged principally in the manufacture of fertilizers was valued at \$7,075,831 in 1936, an improvement of 16 per cent over the \$6,075,616 reported for 1935. In addition there was a production of 198,342 tons of fertilizer materials valued at \$4,290,404 in 1936 and 175,071 tons at \$3,914,621 in 1935, by establishments which were classified to other industrial groups.

During 1936 only 20 plants in Canada produced fertilizers as their major products and of these 7 were in Ontario, 4 in Quebec, 3 in New Brunswick, 3 in British Columbia, 2 in Nova Scotia and 1 in Prince Edward Island. Capital employed dropped to \$14,800,141 from \$15,646,828 in 1935. The number of workers also declined to 930 from 996 and the pay-roll fell off to \$1,196,286 from \$1,239,337.

The total production of mixed fertilizers from all industries amounted to 175,703 tons worth \$4,222,587 at the factories in 1936, this total including 158,111 tons at \$3,754,139 made by plants in the fertilizer manufacturing industry and 16,518 tons at \$459,518 made in the meat-packing plants and glue factories. In 1935 the corresponding total was 145,844 tons at \$3,442,017 and in 1934 the output amounted to 138,750 tons at \$3,517,193.

Superphosphate was manufactured in 1936 by Canadian Industries Limited at Beloeil, P. Q., Hamilton, Ont. and New Westminster, B. C., and by the Consolidated Mining and Smelting Co. of Canada Ltd., at Trail, B. C.; the output figures are not published separately since there were only two producers.

Ammonium sulphate was made by the Consolidated Mining and Smelting Co. at Trail, B. C., and also by the following coke manufacturers: Algoma Steel Corporation Ltd. at Sault Ste Marie, Ont.; Dominion Steel and Coal Corporation Ltd. at Sydney, N. S.; Hamilton By-Product Coke Ovens, Limited at Hamilton, Ont.; Montreal Coke & Manufacturing Company at Montreal, P. Q., and the Steel Company of Canada Limited at Hamilton, Ont. Production during the calendar year 1936 amounted to 99,783 tons, imports totalled 5,729 tons and exports amounted to 85,835 tons.

Ammonium phosphate was made by the Consolidated Mining & Smelting Co. at Trail, B. C., and the Electric Reduction Company of Canada Ltd., at Buckingham, P. Q.

A special survey of the fertilizer trade in Canada during the fertilizer year ended June 30, 1937, has been completed by the Dominion Bureau of Statistics and the results have been published in a special report which may be obtained from the Bureau at a cost of 25 cents. Summary figures on the sales of fertilizers have been reprinted in Tables 14 and 15 of this bulletin.

Table 1 - PRINCIPAL STATISTICS OF THE FERTILIZER MANUFACTURING INDUSTRY, 1929 - 1936.

Years	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials at works	Gross selling value of products at works
		\$		\$	\$	\$	\$
1929	12	2,991,783	251	265,650	17,386	1,450,253	2,258,780
1930	14	4,139,498	261	262,928	18,889	1,647,478	2,504,573
1931	18	15,615,119	636	848,256	44,972	3,053,016	4,251,840
1932	19	17,083,478	748	1,097,812	49,010	2,616,333	4,006,187
1933	20	15,918,787	667	776,647	322,849	2,796,726	4,286,051
1934	20	15,452,733	776	946,178	348,716	3,647,660	5,467,154
1935	19	15,646,828	996	1,239,337	344,131	4,362,594	6,075,616
1936	20	14,800,141	930	1,196,286	443,627	4,996,084	7,075,831

Table 2 - PRINCIPAL STATISTICS, BY PROVINCES, 1935 and 1936.

Provinces	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials at works	Gross selling value of products at works
		\$		\$	\$	\$	\$
<u>1935</u>							
New Brunswick	3	746,450	69	64,095	1,695	401,739	620,514
Quebec	3	655,401	85	96,390	4,585	526,239	713,551
Ontario	7	2,447,671	287	278,718	8,352	1,264,632	1,798,597
British Columbia ...	3	11,059,264	470	713,061	324,444	1,710,739	2,288,749
Prince Edward Island	1)						
Nova Scotia	2)	738,042	85	87,073	5,055	459,245	654,205
CANADA	19	15,646,828	996	1,239,337	344,131	4,362,594	6,075,616
<u>1936</u>							
New Brunswick	3	608,630	66	70,779	1,711	616,163	828,608
Quebec	4	868,246	99	132,413	669	840,530	1,152,148
Ontario	7	2,231,013	277	267,251	5,129	1,396,538	2,102,645
British Columbia ...	3	10,416,468	391	630,028	431,241	1,652,667	2,329,795
Prince Edward Island	1)						
Nova Scotia	2)	675,784	97	95,815	4,877	490,186	662,635
CANADA	20	14,800,141	930	1,196,286	443,627	4,996,084	7,075,831

Table 3 - CAPITAL EMPLOYED, BY PROVINCES, 1935 and 1936

Provinces	Present value	Inventory value of	Operating capi-	TOTAL
	of land, build- ings, machinery and equipment	materials, supplies and finished products on hand, and stocks in process	tal (cash, bills and accounts receivable, etc.)		CAPITAL EMPLOYED
	\$	\$	\$	\$
1935				
New Brunswick	329,603	184,605	232,242	746,450
Quebec	333,685	214,980	106,736	655,401
Ontario	917,338	797,178	733,155	2,447,671
British Columbia ..	10,257,846	676,993	124,425	11,059,264
Other provinces ..	144,696	148,970	444,376	738,042
CANADA	11,983,168	2,022,726	1,640,934	15,646,828
1936				
New Brunswick	233,312	135,267	240,051	608,630
Quebec	377,867	310,587	179,792	868,246
Ontario	895,587	731,917	603,509	2,231,013
British Columbia ..	9,622,918	677,278	116,272	10,416,468
Other provinces ..	138,501	125,772	411,511	675,784
CANADA	11,268,185	1,980,821	1,551,135	14,800,141

Table 4 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1935 and 1936.

Provinces	AVERAGE NUMBER OF EMPLOYEES					Salaries	Wages	TOTAL SALARIES AND WAGES			
	On salaries		On wages		TOTAL				\$	\$	\$
	Male	Female	Male	Female							
1935											
New Brunswick	12	1	55	1	69	28,623	35,472	64,095			
Quebec	36	15	34	...	85	61,668	34,722	96,390			
Ontario	95	29	163	...	287	154,294	124,424	278,718			
British Columbia ..	60	9	401	...	470	132,778	580,283	713,061			
Other provinces ..	26	5	54	...	85	48,099	38,974	87,073			
CANADA	229	59	707	1	996	425,462	813,875	1,239,337			
1936											
New Brunswick	11	1	53	1	66	27,662	43,117	70,779			
Quebec	35	14	50	...	99	81,909	50,504	132,413			
Ontario	80	31	166	...	277	145,897	121,354	267,251			
British Columbia ..	57	7	327	...	391	128,935	501,093	630,028			
Other provinces ..	22	5	70	...	97	48,084	47,731	95,815			
CANADA	205	58	666	1	930	432,487	763,799	1,196,286			

Table 5 - WAGE-EARNERS, BY MONTHS, 1935 and 1936.

Months	1935			1936		
	Male	Female	TOTAL	Male	Female	TOTAL
January	629	1	630	525	1	526
February	600	1	601	534	1	535
March	686	1	687	601	1	602
April	950	1	951	873	1	874
May	1,103	1	1,104	1,076	1	1,077
June	717	1	718	573	1	574
July	635	1	636	566	1	567
August	692	1	693	556	1	557
September	647	1	648	752	1	753
October	616	1	617	589	1	590
November	665	1	666	702	1	703
December	615	1	616	648	1	649
AVERAGE	707	1	708	666	1	667

Table 6 - TOTAL OF WAGE-EARNERS IN MONTHS OF HIGHEST EMPLOYMENT, ACCORDING TO REGULAR HOURS WORKED PER WEEK, 1936. (overtime not included)

Regular hours worked per week	Number of wage-earners	Regular hours worked per week	Number of wage-earners
40 hours or less	411	51-53 hours	32
41-43 hours	1	54 hours	181
44 hours	7	55 hours	85
45-47 hours	61	56-59 hours	82
48 hours	103	60 hours and over	190
49-50 hours	59	TOTAL	1,212

Table 7 - FUEL AND ELECTRICITY USED, 1935 and 1936.

Kinds	Unit of measure	1 9 3 5		1 9 3 6	
		Quantity	Cost at works	Quantity	Cost at works
			\$		\$
Anthracite coal	short ton	24	360	28	395
Bituminous coal - Canadian	short ton	2,756	12,915	2,529	11,757
Imported	short ton	157	665	139	434
Coke	short ton	10	112	11	146
Gasoline	Imp. gal.	3,517	886	4,514	1,064
Kerosene or coal oil	Imp. gal.	310	100	461	150
Wood	cord	3	14	6	28
Electricity purchased	K. W. H.	221,067,443	329,079	272,228,818	429,653
TOTAL	xxx	...	344,131	...	443,627

Table 8 - POWER EQUIPMENT, 1935 and 1936.

Kinds	1 9 3 5		1 9 3 6	
	Number	Total rated of units horse power	Number	Total rated of units horse power
Steam engines and steam turbines	2	40	2	40
Gasoline, gas and oil engines	4	55	4	75
Total Primary Equipment	6	95	6	115
Electric motors operated by purchased power	692	19,201	737	21,734
TOTAL	698	19,296	743	21,849

Table 9 - MATERIALS USED IN THE FERTILIZER MANUFACTURING INDUSTRY, 1935 and 1936.

Materials	1 9 3 5		1 9 3 6	
	Quantity short tons	Cost at works \$	Quantity short tons	Cost at works \$
Ammonium phosphate	1,232	51,386	1,582	84,936
Ammonium sulphate	13,311	313,963	14,931	369,946
Basic slag	1,919	3,635	2,075	3,762
Bone meal and bone flour	273	5,604	479	8,521
Calcium cyanamide	1,956	56,273	2,437	69,570
Calcium nitrate and nitrochalk .....	...	4	173	4,952
Dried blood	97	4,631	176	7,704
Fish meal or scrap	294	9,870	515	16,749
Lime or land plaster	1,775	6,589	2,721	9,404
Kainite and potash manure salts	3,322	28,689	833	9,569
Phosphate rock	74,507	610,118	60,924	438,948
Muriate of potash	16,054	378,239	17,251	442,249
Sulphate of potash	1,829	63,163	2,551	88,854
Sodium nitrate	3,774	99,429	3,896	91,609
Superphosphate, 16% and 20%	87,823	990,793	96,676	1,079,304
Superphosphate, 45%	705	23,856	839	23,918
Sulphuric acid, 66° Be	135,456	1,300,627	142,646	1,399,320
Tankage	1,164	22,015	1,660	36,907
Whale meat, bone and blood	18	526	...	...
All other materials .....	...	91,150	...	418,582
Containers (barrels, bags, etc.) .....	...	302,034	...	391,280
TOTAL .....	...	4,362,594	...	4,996,084

Table 10 - PRODUCTS OF THE FERTILIZER MANUFACTURING INDUSTRY, CALENDAR YEARS 1935 and 1936.

NOTE - Figures in this table are for the Fertilizer Manufacturing Industry which includes only the concerns which were engaged chiefly in the manufacture of fertilizers (see directory). Some fertilizers were made also in other industries. (Table 11) For the total output of mixed fertilizers in Canada see Table 12.

Products	1935		1936	
	Quantity	Selling value at works	Quantity	Selling value at works
Mixed fertilizers	tons 132,851	3,121,510	158,111	3,754,139
All other products (x)	xx ...	2,954,106	...	3,321,692
TOTAL	xx ...	6,075,616	...	7,075,831

(x) Includes superphosphate, ammonium sulphate, ammonium phosphate, etc.

Table 11 - PRODUCTION OF FERTILIZERS AND FERTILIZER MATERIALS IN OTHER MANUFACTURING INDUSTRIES, CALENDAR YEARS 1935 and 1936.

Industries	Products	1935		1936	
		Quantity	Selling value at works	Quantity	Selling value at works
Acids, alkalies and salts..	Calcium cyanamide	110,037	2,345,988	120,635	2,505,589
Slaughtering and meat-	(Mixed fertilizers	12,303	306,707	16,253	451,678
packing	(Animal tankage	15,536	536,558	17,269	637,157
Coke and gas	Ammonium sulphate	24,452	637,353	26,828	582,816
Adhesives	Mixed fertilizers	690	13,800	1,339	16,770
Fisheries	Herring fertilizer	11,669	62,887	15,251	75,704
	Other fish fertilizer	354	11,328	767	20,690
TOTAL		175,071	3,914,621	198,342	4,290,404

Table 12 - TOTAL PRODUCTION OF MIXED FERTILIZERS IN CANADA FROM ALL INDUSTRIAL GROUPS, CALENDAR YEARS 1921 - 1936.

NOTE - Figures in this table represent the total Canadian production of mixed fertilizers, regardless of the industries in which produced.

Calendar Years	Quantity	Selling value at works
	Tons	\$
1921	46,900	2,399,855
1922	40,843	1,818,136
1923	37,587	1,366,343
1924	38,126	1,539,003
1925	47,076	1,663,129
1926	56,888	2,043,093
1927	72,112	2,552,421
1928	76,180	3,017,648
1929	75,164	3,098,567
1930	78,158	2,548,226
1931	113,632	3,247,694
1932	95,857	2,447,407
1933	106,421	2,777,702
1934	138,750	3,517,193
1935	145,844	3,442,017
1936	175,703	4,222,587

Handwritten notes:
 173
 274
 853
 3724
 1006

Table 13 - IMPORTS INTO CANADA AND EXPORTS OF FERTILIZERS AND FERTILIZER MATERIALS
Calendar Years 1935 - 1936.

	Unit of measure	1 9 3 5		1 9 3 6	
		Quantity	Value \$	Quantity	Value \$
IMPORTS -					
Tankage	ton	934	15,562	1,188	26,358
Bone dust, charred bone, bone ash, bone meal, and bone flour	ton	1,322	52,835	2,422	71,978
Fish offal or refuse	ton	898	25,479	512	15,477
Ammonium sulphate	ton	4,280	94,222	5,729	148,956
Basic slag, crushed or ground	ton	8,046	65,100	12,743	96,975
Kainite, and other German potash salts	ton	658	2,694	47	1,048
Potash, muriate of, crude	ton	30,415	485,086	29,713	583,155
Potash, sulphate of, crude	ton	2,837	73,098	3,636	104,238
Soda, nitrate of	ton	22,206	559,327	30,604	749,714
Superphosphate	ton	67,204	595,330	96,067	867,666
Fertilizers, compounded or manufactured, not specified elsewhere	ton	15,708	260,872	6,529	163,128
EXPORTS -					
Tankage	ton	13,902	373,404	14,442	471,008
Bone dust and meal	ton	326	8,258	30	1,249
Fish meal	ton	7,444	245,449	16,004	539,483
Fish offal or refuse	ton	1,139	27,325	684	17,889
Ammonium sulphate	ton	45,055	977,552	85,835	1,805,818
Cyanamide	ton	113,527	2,426,813	127,809	2,697,897
Fertilizers, manufactured	ton	33,008	839,355	39,945	1,140,290

Table 14 - TOTAL SALES IN CANADA OF FERTILIZER MATERIALS AND MIXED FERTILIZERS FOR THE YEARS ENDED JUNE 30, 1936 and 1937.

Provinces	Fertilizer Materials		Mixed Fertilizers	
	1 9 3 6	1 9 3 7	1 9 3 6	1 9 3 7
	short tons	short tons	short tons	short tons
Prince Edward Island	10,167	10,759	7,759	11,292
Nova Scotia	12,907	11,161	21,463	23,421
New Brunswick	12,897	16,133	14,490	19,699
Quebec	24,298	22,526	27,438	36,217
Ontario	23,688	30,206	60,261	89,781
Manitoba, Saskatchewan and Alberta ...	8,350	9,110	88	170
British Columbia	4,172	5,974	5,862	7,694
CANADA	96,479	105,869	137,361	188,274
Sold for Export	190,268	263,141	17,994	26,334
GRAND TOTAL	286,747	369,010	155,355	214,608

Table 15 - SALES OF FERTILIZERS IN CANADA EXCEPT FOR MANUFACTURING PURPOSES, DURING THE YEAR ENDED JUNE 30, 1937.

Fertilizers	(short tons)								TOTAL SOLD IN CANADA	EXPORTED FROM CANADA	GRAND TOTAL
	P.E.I.	N.S.	N.B.	Que.	Ont.	Man., Sask., and Alta.	B.C.				
Nitrate of soda	247	2,211	1,783	243	857	23	228	5,592 ✓	187	5,779	
Sulphate of ammonia	2,133	1,335	1,625	2,572	913	131	842	9,551 ✓	72,495	82,046	
Cyanamide .....	...	547	2	78	911	...	132	1,670 ✓	151,268	152,938
Nitrochalk	13	3	...	...	...	...	...	16	31	47
Calcium nitrate .....	...	...	...	...	...	...	12	12	...	12
Superphosphate	6,555	2,102	8,739	14,389	22,748	535	1,219	56,287 ✓	9,103	65,390	
Natural phosphate rock ...	1	8	...	26	98	...	21	154 ✓	...	154	
Basic slag .....	...	4,436	1,170	2,757	...	...	27	8,390 ✓	9	8,399
Bone meal or bone flour ..	...	118	40	41	659	182	720	1,760 ✓	33	1,793
Muriate of potash	1,805	367	2,670	2,044	1,276	...	448	8,610 ✓	96	8,706	
Sulphate of potash	5	...	56	139	135	5	119	459 ✓	16	475	
Tankage .....	...	3	31	95	463	477	164	1,233 ✓	917	2,150
Sheep manure .....	...	29	1	140	551	29	72	822 ✓	...	822
Dried blood .....	...	...	...	...	57	97	170	324 ✓	106	430
Whale products .....	...	...	...	...	...	...	557	557	376	933
Fish meal .....	...	...	15	...	...	...	665	680 ✓	3,362	4,042
Ammonium phosphate .....	...	...	...	...	1,162	7,629	537	9,328 ✓	25,142	34,470
Other fertilizer materials	...	2	1	2	376	2	41	424	...	424	
Total fertilizers	10,759	11,161	16,133	22,526	30,206	9,110	5,974	105,869	263,141	369,010	
Total mixed fertilizers .	11,292	23,421	19,699	36,217	89,781	170	7,694	188,274	26,334	214,608	
GRAND TOTAL, 1937	22,051	34,582	35,832	58,743	119,987	9,280	13,668	294,143	289,475	583,618	
GRAND TOTAL, 1936	17,926	34,370	27,387	51,736	83,949	8,438	10,034	233,840	208,262	442,102	

DIRECTORY OF FIRMS INCLUDED IN THE FERTILIZER MANUFACTURING INDUSTRY, 1936.

NOTE - This Directory gives only the names of the firms which have been included in the Fertilizer Manufacturing Industry, and is not intended to be a complete list of the concerns which manufacture mixed fertilizers or fertilizer materials.

<u>Names of Firms</u>	<u>Location of Plants</u>
<u>PRINCE EDWARD ISLAND</u> - Island Fertilizer Co. Ltd.	Charlottetown
<u>NOVA SCOTIA</u> - Colonial Fertilizer Company Canadian Industries Limited	Nesbitt St., Windsor Pier 9, Halifax
<u>NEW BRUNSWICK</u> - Canada Packers Limited International Fertilizers Limited Summers Fertilizer Co. Inc.	Bayside Ave., East Saint John East Saint John Prince William St., St. Stephen
<u>QUEBEC</u> - Canadian Industries Limited International Fertilizers Limited Saguenay Fertilizers Co. Standard Fertilizer Co. of 3 Rivers Ltd.	Belloeil National Harbours Board, Shed 29, Quebec Riviere du Moulin, Chicoutimi 2211 Bellefeuille St., Three Rivers
<u>ONTARIO</u> - Agricultural Chemicals Limited Canada Packers Limited Canadian Fertilizers Company Ltd. Canadian Industries Limited Scottish Fertilizers Limited William Stone Sons, Limited, and National Fertilizers Limited Witts Fertilizer Works	Marsh St., Port Hope St. Clair Ave. W., Toronto King St. E., Chatham Burlington & Ottawa Sts., Hamilton Welland Ingersoll Norwich
<u>BRITISH COLUMBIA</u> - Canadian Industries Limited Consolidated Mining and Smelting Co. of Canada, Ltd. Globe Fertilizer Co. Ltd.	New Westminster Trail Foot Crompton Road, Vancouver.

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