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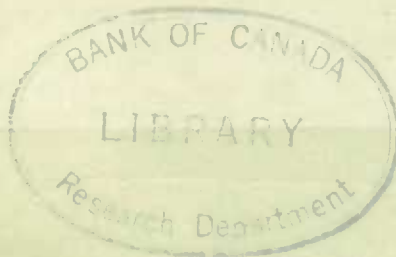
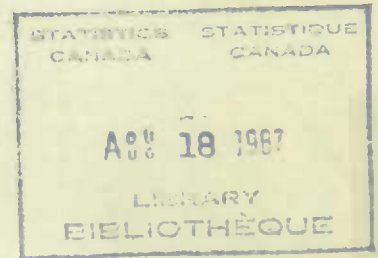
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Mfgs. of Mineral Fertilizers 46-220



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THE FERTILIZERS INDUSTRY 1959



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PUBLICATIONS

The results of the annual Census of Industry are published by the Dominion Bureau of Statistics in a series of industry reports which are released each year as the compilations are completed. Reports for industries classified to the **Chemicals and Allied Products** Major Group are listed below, along with current and annual publications of related interest. Similar reports are issued for other industries. A complete catalogue of publications of the Bureau is available on request from the Information Services Division, Dominion Bureau of Statistics, Ottawa, or from the Queen's Printer, Ottawa.

	A - Annual	B - Biennial	M - Monthly	S.C. - Special Compilation	
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EXPLANATORY NOTES

This report is one in a series of about 130 publications which present the results of the 1959 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and for major industry groups. An annual Census of Manufactures has been carried out by the Dominion Bureau of Statistics since 1916.

Industry statistics given in these reports refer to number of establishments, employees, salaries and wages, cost of materials, supplies, fuel and electricity, gross value of shipments, inventories and value added by manufacturing. Details of materials used and products shipped are also given. Descriptions of the principal industry statistics, with special reference to 1959 are as follows:

Period Covered

Firms are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where the firms find it impossible to supply calendar year data from accounting records. However the data on employees, salaries and wages are requested on a calendar year basis in all cases.

Establishment

Data for the annual census is collected on an establishment basis. A firm with more than one plant is required to file a report for each plant. In most cases an establishment is a complete factory. Sometimes, however, a plant is divided into two or more establishments when it carries out operations classifiable to different industries and when separate accounting records are available. Usually the statistics for an establishment relate only to the manufacturing activities. Other activities such as construction at the plant by its own employees, wholesale or retail activities carried on at the plant location, etc., are not included. Plants engaged solely in repair work (except in the case of furniture, shipbuilding, boat building, aircraft and railway rolling stock industries) are not included but plants occupied in assembling parts into complete units are included.

Employees

Administrative and office employees include all executives and supervisory officials such as presidents, vice-presidents, secretaries, treasurers, etc., together with managers, professional and technical employees, superintendents and factory supervisors above the working foremen level and clerical employees. Working owners and partners are also included in this category.

Production and related workers include all other factory workmen whether paid on a monthly, weekly, hourly or piece-work basis. Working foremen doing work similar to that of the employees they supervise are included, as are maintenance, warehousing and delivery staffs. Employees on new construction work, in retail or wholesale operations, on outside piece work etc., are not included.

Production workers are reported by months, an average for the year being obtained by summing the monthly figures and dividing by twelve. This procedure is followed even though the plant did not operate in all months. Figures on employment refer to calendar years whether or not some establishments reported other data on a financial year basis.

Salaries and Wages

Salaries and wages refer to gross earnings of the employees described above, including salaries, wages, commissions, bonuses, the value of room and board where provided, deductions for income tax and social services such as sickness and unemployment insurance, pensions, etc., as well as any other allowances forming part of the employees' wages. Payments for overtime are included.

Salaries refer to amounts paid to administrative and office employees. Withdrawals by working owners or partners for normal living expenses for self and family are included but not their withdrawals for income tax. Wages refer to the amounts paid to production and related workers as defined above. Data on earnings refer to the calendar year whether or not some establishments reported other data on a financial year basis.

Cost of Fuel and Electricity

Figures for fuel refer to amounts actually used, (including fuel used in cars and trucks), not to purchases unless the quantities are the same. Values refer to the laid-down cost at the works, including freight, duty, etc.

Materials and Supplies Used

Figures represent quantities and laid-down cost values, at the works, of materials and supplies actually used during the year whether purchased from others or received as transfers from other plants of the reporting company. Amounts paid to other manufacturers for work done on materials owned by the reporting company are included. Returnable containers or any other items charged to capital account are not included. Fuels are not included. Goods bought from others or received as transfers from other plants of reporting companies for resale without further processing are not included. Maintenance and repair supplies not chargeable to capital account are included.

Factory Shipments

Factory shipments refer to shipments of goods made from own materials either in the reporting plant or by other manufacturers on the basis of a charge to the reporting plant for work done. All products and by-products shipped from the establishment are included whether for domestic use, export, or for government departments. Transfer shipments to sales outlets, distributing warehouses or to other manufacturing units of the reporting firm are included. Goods bought or received as transfers and resold without further processing are not included. Values are computed on f.o.b. plant or

plant warehouse basis, and do not include sales tax or excise duties. Values of containers not returnable are included. Amounts received in payment for work done on materials owned by others are included.

In a few industries such as shipbuilding, aircraft, etc., where work on principal products extend over a relatively long period, the value of production is recorded rather than the value of shipments. For those industries production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on finished units delivered in the year under review.

Inventories

Values represent the book values of manufacturing inventories owned and held at the reporting plant. Figures include inventories held in warehouses or selling outlets which have been included with plant operations for purposes of reporting shipments.

Value Added by Manufacturing

Figures are computed from value of shipments plus or minus changes in inventories of finished goods and goods in process less cost of materials, fuel and electricity. This figure is sometimes referred to as net production.¹

Standard Industrial Classification

The Standard Industrial Classification Manual, prepared by the Dominion Bureau of Statistics, provides for 135 three-digit industries in the manufacturing sector, arranged in 17 major groups. Reporting establishments are classified or allotted to specific industries on the basis of the value of principal products made or shipped.

Short Forms

Between 1949 and 1957, in an effort to ease the reporting burden for smaller firms, a short form was used asking for the total value of shipments only or, in a few cases where losses of detail were significant, for quantities and values of principal products. For purposes of publication, missing data were estimated on the basis of appropriate ratios. In general the cut-off point for these short forms was set at \$50,000 value of shipments. About 40% of the total number of establishments reported on the short form and accounted for less than 3 per cent of the total value of shipments.

In 1958, in order to establish a new base year, the small firms were asked to report all items of principal statistics together with some detail on materials and products.

¹ To arrive at the National Accounts concept of "gross domestic product at factor cost", it would be necessary to subtract also the cost of office supplies used, advertising, insurance and other goods and services obtained from other businesses. Data on these inputs are not collected on the annual Census of Manufactures. Value added figures for "The primary industries and construction" are published in D.B.S. publication 61-202, *Survey of Production*.

For the 1959 Census, the short form was used again, but further steps were taken to ease the respondents' burden. First, the general limit for short forms was raised to \$100,000 value of shipments. In addition, a new intermediate form was developed. This form is a shortened version of the long form in that most of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000-\$500,000 value of shipments, but in the case of both the short and intermediate forms there were lower cut-offs for a number of industries in which the smaller firms accounted for a larger share of total shipments. On the other hand, limits were raised where this could be done without a significant loss of coverage. On most of the short forms for 1959, in addition to total value of shipments, data on principal products were requested. In a few industries, where loss of employment and earnings data were considered too large because of higher cut-offs, a question on total payroll was placed on the short form.

The intermediate and long forms provide complete data for the compilation of all elements of principal industry statistics and the details of materials and products. The one-page short form, although containing data on principal products and total value of shipments, does not request information on other elements of principal statistics such as value of inventories, materials, fuel and electricity and, in most cases, employment and salaries and wages, nor does it contain detailed data on volume and value of materials used. For purposes of compiling aggregates of principal statistics by industry and by geographic location, the missing data for each establishment were estimated for 1959 by using, in general, ratios based on the change in the value of shipments between 1958 and 1959. The proportion of the estimated data was generally less than 5 per cent of the total in each category of principal statistics.

The general request for the principal items of products on the short form for 1959 permitted a fairly complete compilation of the detailed quantities and values of commodity shipments. In the case of the detailed quantities and values of materials, fuel and electricity, however, and the monthly distribution of production workers, only the totals of data actually reported on the intermediate and long forms are contained in published reports and no attempt was made as in past years to estimate the generally small proportion of individual totals represented by detailed items omitted from the short forms.

The new approach has relieved an additional 12,000 establishments from filling out the regular long form. Establishments now receiving the short form number in excess of 20,000 and account for more than 54 per cent of the total number of establishments and a little more than 3 per cent of the total value of shipments.

THE FERTILIZERS INDUSTRY

1959

Factory shipments by plants in Canada which were engaged principally in the manufacture of fertilizers were valued at \$96,278,304 in 1959 compared with \$89,145,796 in 1958. In addition, there was a production of 192,961 tons of cyanamid (excluding cyanamid for non-agricultural purposes) ammonium sulphate, mixed fertilizers and fish fertilizers valued at \$6,807,593 by establishments which were classified to other industrial groups.

Forty-five plants were occupied chiefly in the manufacture of fertilizers in 1959, there being 24 in Ontario, 7 in Quebec, 4 in British Columbia, 3 in Nova Scotia, 3 in New Brunswick, 2 in Prince Edward Island and 2 in Alberta. The total number of employees in 1959 was 3,001 compared with 2,993 in the previous year and payments in salaries and wages amounted to 13,804,715 as against \$13,424,810 in 1958.

Factory shipments of mixed fertilizers in 1959, from all industries amounted to 757,000 tons worth \$41,498,000 compared with 751,900 tons worth \$40,001,000 in 1958.

Superphosphate was manufactured in 1959 by Canadian Industries Limited with plants at McMasterville, Quebec and Hamilton, Ontario. Green Valley Fertilizer and Chemical Co. Ltd. at North Surrey, British Columbia and Elmira Fertilizers at Elmira, Ontario. Production by the latter two companies was mainly for their own use in the manufacture of mixed fertilizers.

Ammonium nitrate (fertilizer grade) was manufactured in 1959 by Cyanamid of Canada Ltd. (Welland Works) at Niagara Falls in Ontario, by Consolidated Mining and Smelting Company of Canada, Limited at Trail, British Columbia and at Calgary, Alberta, and by Northwest Nitro-Chemicals Ltd. at Medicine Hat, Alberta. The output figures are not published separately since there were only two major producers of ammonium nitrate and one major producer of superphosphate.

Ammonium sulphate was made by Consolidated Mining and Smelting Company of Canada, Limited at Trail, British Columbia and also by the following coke manufacturers: Algoma Steel Corporation at Sault Ste. Marie, Ontario; Dominion Iron and Steel Ltd. at Sydney, N.S.; Quebec Natural Gas Corporation at Montreal, Quebec and The Steel Company of Canada, Limited at Hamilton, Ontario. Another firm Sherritt-Gordon Mines Limited at Fort Saskatchewan, Alberta, recovered ammonium sulphate as a by-product in connection with a special process used for refining nickel. Factory shipments during the calendar year 1959 amounted to 307,121 tons and imports totalled 5,941 tons. Ammonium phosphate was made by the Consolidated Mining and Smelting Company of Canada, Limited at Trail, British Columbia and Kimberley, British Columbia and by Northwest Nitro-Chemicals Ltd. at Medicine Hat, Alberta.

A special survey of the fertilizer trade in Canada during the fertilizer year ended June 30, 1960 has been completed by the Dominion Bureau of Statistics and the results have been published in a special report. Summary figures on the sales of fertilizers have been reprinted in Tables 11-15 of this bulletin. A total of 935,428 tons of mixtures and materials was sold in Canada during the year ended June 30, 1960 compared with 908,214 tons during the preceding twelve-month period.

Note: Due to lack of inventory data, figures for value added by manufacture prior to 1954 were obtained by subtracting the cost of materials used, including fuel and electricity, from the total value of factory shipments. In 1954 and 1955 the "Value added" adjustment incorporated the increase or decrease to shipments values resulting from changes in the value of inventories over the period. For these two years, the adjustments that were made used only the change in finished product inventory owned by manufacturers. Beginning with 1956 the calculation of the "Value added" figure was further adjusted to take into account the "Goods in process" as well as the finished goods held at plant or plant warehouse.

TABLE 1. Principal Statistics of the Fertilizers Industry, Significant Years 1929-59, and by Provinces, 1958 and 1959

Year and province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at works	Cost at plant of materials used	Value added by manufacture ¹	Gross selling value of products ²
	number				dollars		
1929	12	251	265,650	17,386	1,450,253	791,141	2,256,780
1933	20	667	776,847	322,849	2,796,726	1,166,476	4,286,051
1937	20	1,023	1,447,625	506,965	6,693,841	3,066,147	10,266,953
1939	27	1,211	1,819,612	706,003	8,140,498	4,318,663	13,165,164
1945	26	2,146	4,418,916	1,116,081	18,706,175	14,681,500	34,505,756
1946	29	2,805	5,929,796	3,232,099	22,865,328	23,895,016	49,991,443
1949	32	3,269	9,004,943	1,772,400	31,671,468	33,984,199	67,428,067
1955	39	2,935	11,542,380	2,641,870	41,396,928	45,895,045	92,498,839
1956	45	2,956	11,757,117	2,700,397	43,295,343	37,343,843	83,399,218
1957	44	3,011	12,899,267	3,151,337	47,134,450	35,459,400	83,807,556
1958							
Prince Edward Island	2	109	275,832	20,693	2,563,257	973,815	3,685,450
Nova Scotia	3						
New Brunswick	3	122	426,300	64,160	2,971,709	915,475	4,429,997
Quebec	7	375	1,685,363	82,090	6,021,282	3,624,259	9,815,106
Ontario	24	774	3,472,608	1,061,382	18,243,580	11,442,941	32,225,600
Alberta	2	1,613	7,564,707	2,052,770	18,794,131	20,252,693	36,989,643
British Columbia	4						
Canada	45	2,993	13,424,810	3,281,095	48,593,959	37,209,183	89,145,796
1959							
Prince Edward Island	2	85	265,443	23,693	2,499,615	1,005,183	3,353,799
Nova Scotia	3						
New Brunswick	3	120	413,857	53,295	2,629,249	1,399,058	4,252,004
Quebec	7	384	1,775,436	92,086	6,698,066	3,489,691	10,880,170
Ontario	24	831	3,809,634	1,066,837	20,213,022	12,451,192	32,740,017
Alberta	2	1,581	7,540,345	2,119,094	18,230,168	22,387,781	45,052,314
British Columbia	4						
Canada	45	3,001	13,804,715	3,355,005	50,470,120	40,732,905	96,278,304

¹ See note to text.

Note: Profits or losses cannot be calculated from above figures as data are not available for general expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

TABLE 2. Inventories,¹ 1959

Province	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
Opening:				
Prince Edward Island and Nova Scotia	468,138	335,283	499,806	1,303,227
New Brunswick	395,574	575,617	12,607	983,798
Quebec	1,468,640	1,038,098	1,594,576	4,101,314
Ontario	2,914,894	3,048,966	1,366,740	7,330,600
Alberta and British Columbia	6,210,003	171,097	7,492,895	13,873,995
Canada	11,457,249	5,169,061	10,966,624	27,592,934
Closing:				
Prince Edward Island and Nova Scotia	529,719	436,316	573,465	1,539,500
New Brunswick	381,238	593,864	23,958	999,060
Quebec	1,172,781	1,062,212	970,135	3,205,128
Ontario	2,692,202	3,936,160	1,470,580	8,098,942
Alberta and British Columbia	5,143,645	136,874	5,211,847	10,492,366
Canada	9,919,585	6,165,426	8,249,985	24,334,996

¹ (a) Book value of all manufacturing inventories owned and held at plant and plant warehouses.

(b) Beginning with 1954, information on the value of year-end inventory holdings at plant and plant warehouses is being collected as part of the annual Census of Industry. These data were formerly collected by a separate survey. The summarized results for the Fertilizers Industry for the year under review are shown in the above table.

(c) The opening inventory for the current year may not necessarily agree with the closing inventory published the previous year because of changes in the composition of the industry, such as: the addition of new establishments, the disappearance of old ones, or the transfer of establishments to other industries for statistical purposes. The figure for value added by manufacture for the previous year does not need to be altered because of such changes in the composition of the industry.

TABLE 3. Products of the Fertilizers Industry, Calendar Years, 1958 and 1959

Product	1958		1959	
	Quantity	Value of factory shipments	Quantity	Value of factory shipments
	tons	\$	tons	\$
Mixed fertilizers	747,067	39,656,970	747,809	40,730,919
Superphosphate, ammonium nitrate (fertilizer grade), ammonium phosphate, ammonium sulphate and ammonium nitrate phosphate (completely manufactured) ¹	943,496	43,870,770	1,026,051	48,904,089
Superphosphate, milled and screened only	14,853	617,584	15,875	619,162
Ammonium sulphate, milled and screened only	468	29,708	296	19,500
Muriate of potash, milled and screened only	3,393	196,176	2,901	167,304
All other products .....	...	4,774,588	...	5,837,330
Total for fertilizers industry .....	...	89,145,796	...	96,278,304
Fertilizers made in other industries (cyanamid, ammonium sulphate, mixtures, etc.) .....	...	6,783,902	...	6,807,593
Total value of all fertilizers produced² .....	...	95,929,698	...	103,085,897

¹ Production of these items was accounted for mainly by only one or two firms in this industry, hence the production figures cannot be shown separately.

² Excludes value of calcium cyanamid produced for non-agricultural purposes.

.. Figures not appropriate or not applicable.

Note: The Fertilizers Industry includes only the concerns which are engaged chiefly in the manufacture of fertilizers. Some fertilizers are made also in the other industries; for example, ammonium sulphate is produced as a by-product in coke plants; cyanamid is made by a firm which is classified to the heavy chemicals industry and a small amount of mixed fertilizer is made in the slaughtering and meat-packing industry. For the total production of mixed fertilizers, see Table 5.

TABLE 4. Materials Used in the Fertilizers Industry, 1958 and 1959

Material	1958		1959	
	Quantity	Cost at works	Quantity	Cost at works
	short tons	\$	short tons	\$
Ammonia, anhydrous	74,298	8,289,354	75,672	3,392,715
Ammonium nitrate	1,922	147,542	2,472	189,815
Ammonium phosphate:				
11-48-0	8,741	794,245	7,869	724,746
16-20-0	2,821	184,502	1,907	134,807
Ammonium sulphate (sulphate of ammonia)	30,809	1,255,258	32,216	1,283,304
Borax	159	15,267	199	20,291
Calcium cyanamide (cyanamid)	789	51,415	590	37,824
Coke (except for fuel)	74,342	1,461,300	56,186	1,172,353
Diatomaceous earth	11,313	623,650	10,628	570,832
Limestone	18,698	80,736	13,548	56,138
Lime or land plaster	310	8,181	423	5,959
Magnesium oxide (all forms, including brucite, mag 70, etc.)	1,617	66,371	1,761	78,031
Magnesium sulphate	100	9,206	104	10,276
Nitrogen solutions	37,195	2,408,403	36,347	2,360,621
Phosphate rock	583,584	7,900,373	621,126	8,363,080
Potassium chloride (muriate of potash)	120,474	4,342,279	132,017	4,608,764
Potassium nitrate (nitrate of potash)	60	9,744	71	9,992
Potassium sulphate (sulphate of potash)	17,124	801,139	20,576	980,480
Potassium magnesium sulphate (sulphate of potash magnesia)	2,552	79,292	4,519	137,556
Sand	44,324	127,957	41,234	132,505
Sodium nitrate (nitrate of soda)	224	14,759	339	21,528
Sulphuric acid, 100%	673,045	4,487,526	687,796	4,802,354
Superphosphate:				
16-18% P ₂ O ₅	45,991	1,051,041	14,568	315,679
20% P ₂ O ₅	268,694	6,407,911	325,878	7,182,686
38-48% P ₂ O ₅	42,910	2,570,410	55,309	3,230,143
Ammoniated	367	12,853	11,058	310,848
Urea	1,320	157,066	1,362	131,106
All other materials	—	4,598,293	—	4,548,377
Containers and shipping materials	—	5,637,886	—	5,657,310
Totals	—	48,593,959	—	50,470,129

TABLE 5. Total Production¹ of Mixed Fertilizers, from All Industrial Groups, Calendar Years, 1950-59

Year	Quantity	Selling value at works	Year	Quantity	Selling value at works
	tons	\$		tons	\$
1950	669,900	26,519,000	1955	685,700	33,112,000
1951	696,600	29,193,000	1956	703,200	34,408,000
1952	648,800	30,364,000	1957	723,100	37,026,000
1953	694,600	32,751,000	1958	751,900	40,001,000
1954	668,200	32,120,000	1959	757,000	41,498,000

¹ Factory shipments since 1952.

Note: Figures in this table represent the total Canadian Production of mixed fertilizers regardless of the industries in which produced.

TABLE 6. Principal Statistics of the Fertilizers Industry in Canada, classified according to Type of Ownership, 1958 and 1959

Type	Estab-lish-ments	Employees	Salaries and wages	Cost at plant of materials used	Selling value of factory shipments
	number			dollars	
1958					
Individual	2	} 2,993	13,424,810	48,593,959	89,145,796
Co-operatives	3				
Incorporated companies	40				
Totals	45	2,993	13,424,810	48,593,959	89,145,796
1959					
Individual	1	} 3,001	13,804,715	50,470,120	96,278,304
Co-operatives	3				
Incorporated companies	41				
Totals	45	3,001	13,804,715	50,470,120	96,278,304

TABLE 7. Principal Statistics of the Fertilizers Industry in Canada, grouped according to Selling Value of Factory Shipments, 1958 and 1959

Establishments having a production of	Estab-lish-ments	Employees	Salaries and wages	Cost at plant of materials used	Selling value of factory shipments
	number			dollars	
1958					
\$ 25,000 to \$ 49,000	2	} 31	75,533	308,600	329,727
100,000 " 199,999	2				
200,000 " 499,999	7				
500,000 " 999,999	15				
1,000,000 " 4,999,999	16				
5,000,000 and over	3	1,101	4,782,516	23,293,161	37,700,815
Head offices	-	108	689,784	-	-
Totals	45	2,993	13,424,810	48,593,959	89,145,796
1959					
\$ 10,000 to \$ 49,999	2	} 33	79,117	202,887	299,236
100,000 " 199,999	2				
200,000 " 499,999	8				
500,000 " 999,999	13				
1,000,000 " 4,999,999	16				
5,000,000 and over	4	1,614	7,783,917	16,516,340	47,492,938
Head offices	-	103	646,973	-	-
Totals	45	3,001	13,804,715	50,470,120	96,278,304

TABLE 8. Capital and Repair Expenditures in the Fertilizers Industry, 1955-59

Year	Capital expenditures		Sub-total	Repair and maintenance expenditures		Sub-total	Total capital and repair expenditures
	Construction	Machinery and equipment		Construction	Machinery and equipment		
	thousands of dollars						
1955	3,512	1,594	5,106	260	3,183	3,443	8,549
1956	11,847	4,942	16,789	359	3,047	3,406	20,195
1957	858	1,539	2,397	299	3,817	4,116	6,513
1958	1,253	1,546	2,799	323	4,383	4,706	7,505
1959 ^P	754	1,737	2,491	356	3,934	4,285	6,781

^P Preliminary figures.

TABLE 9. Employees and their Earnings, by Provinces, 1958 and 1959

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
1958								
New Brunswick	18	6	98	-	122	128,403	297,897	426,300
Quebec	122	62	191	-	375	1,025,127	660,236	1,685,363
Ontario	181	57	531	5	774	1,221,564	2,251,044	3,472,608
British Columbia	243	22	832	3	1,100	1,500,781	3,643,711	5,144,492
Other provinces	159	26	435	2	622	984,708	1,711,339	2,696,047
Canada	723	173	2,087	10	2,993	4,860,583	8,564,227	13,424,810
1959								
New Brunswick	18	6	96	-	120	138,555	275,302	413,857
Quebec	127	60	197	-	384	1,004,147	771,289	1,775,436
Ontario	183	58	585	5	831	1,386,420	2,423,214	3,809,634
British Columbia	243	22	812	3	1,080	1,480,070	3,684,080	5,164,150
Other provinces	158	28	398	2	586	1,002,957	1,638,681	2,641,638
Canada	729	174	2,088	10	3,001	5,012,149	8,792,566	13,804,715

TABLE 10. Production Workers, by Months, 1958 and 1959

Month	1958			1959		
	Male	Female	Total	Male	Female	Total
	number					
January	2,066	10	2,076	2,095	10	2,105
February	2,125	10	2,135	2,067	10	2,077
March	2,172	10	2,182	2,084	10	2,094
April	2,471	10	2,481	2,436	10	2,446
May	2,393	10	2,403	2,435	10	2,445
June	2,030	10	2,040	1,908	10	1,918
July	1,919	9	1,928	1,899	10	1,909
August	1,918	9	1,927	1,980	10	1,990
September	2,044	9	2,053	2,084	10	2,094
October	2,021	9	2,030	1,967	10	1,977
November	1,922	9	1,931	2,056	10	2,066
December	1,940	9	1,949	2,024	10	2,034
Averages	2,087	10	2,097	2,088	10	2,098

TABLE 11. Sales of Fertilizers, Except for Manufacturing Purposes, during the Year Ended June 30, 1960

Kind	New-found-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total sold in Canada
tons (2,000 pounds)											
Fertilizer materials											
Animal manure	1	10	66	20	645	969	—	—	—	82	1,793
Anhydrous ammonia (for direct application only)	—	—	—	—	—	1,995	52	—	368	3	2,418
Ammonium nitrate	83	231	824	222	952	22,473	1,031	1,475	11,265	3,722	42,278
Ammonium nitrate phosphate — 23-23-0	—	—	—	—	—	—	1	1	1	1	1
24-20-0	—	—	—	—	—	—	1	1	1	1	1
27-14-0	—	—	—	—	—	—	1	1	1	1	1
Ammonium phosphate — 11-48-0	—	—	—	—	363	4,968	12,817	26,847	37,420	1,585	84,000
13-39-0	—	—	—	—	5	742	—	—	—	—	—
16-20-0	—	—	—	—	—	—	5,217	3,726	21,188	3,511	34,889
Basic slag	—	—	—	—	783	3	—	—	—	—	786
Bone meal, bone flour and bone-phosphate	3	4	85	27	88	936	28	3	75	493	1,740
Cyanamide (fertilizer grade only)	—	2	19	3	42	1,342	—	—	—	69	1,477
Muriate of potash — 80%	2	12	89	131	455	4,969	3	4	29	562	6,256
Natural phosphate rock	—	—	—	2	1,732	8	—	—	—	13	1,755
Nitrogen solution	—	—	—	—	92	2,665	—	—	—	—	2,757
Nitrate of soda	200	—	7	8	67	276	—	—	—	6	564
Sewage sludge	—	—	27	32	118	5,912	5	2	—	659	6,755
Sulphate of ammonia	5	14	71	29	55	548	86	156	3,808	2,032	6,605
Sulphate of potash	—	—	3	—	83	638	—	—	2	317	1,043
Sulphate of potash magnesia	—	—	—	—	—	429	—	—	—	—	442
Superphosphate — 20% (P ₂ O ₅)	46	102	535	211	9,296	21,575	1	—	12	1,050	32,828
Superphosphate (triple) — 45% (P ₂ O ₅)	—	—	171	—	145	1,342	—	4	3	507	2,172
Tankage	—	—	—	—	37	51	—	—	—	164	252
Urea (for fertilizer use only)	—	1	116	11	104	646	—	—	—	53	931
Other fertilizer materials ¹	—	4	107	32	79	1,310	2,369	2,549	5,152	877	12,479
Total materials	340	380	2,120	728	15,142	73,798	21,607	34,766	79,122	15,717	243,720
Mixed fertilizers (see Table 12)	4,684	53,549	24,717	67,130	158,624	363,334	857	135	756	17,922	691,708
Totals, 1959-60	5,024	53,929	26,837	67,858	173,766	437,132	22,464	34,901	79,878	33,639	935,428
Totals, 1958-59	5,530	48,631	27,790	61,619	150,424	467,617	21,094	27,632	65,185	32,692	908,214

¹ Included with "Other fertilizer materials".² Does not include lime.

TABLE 12. Mixed Fertilizers Sold During the Year Ended June 30, 1960

Analysis	New-found-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba, Saskatchewan and Alberta	British Columbia	Total sold in Canada	Exported from Canada
short tons										
N P ₂ O ₅ K ₂ O										
0 12 20	—	—	—	—	18	1,413	—	—	1,431	—
0 12 24	—	—	—	—	—	2,039	—	—	2,039	—
0 14 14	—	—	—	—	1,559	868	—	—	2,427	—
0 15 15	—	—	—	—	—	688	—	78	766	5
0 20 10	—	—	—	—	1,460	1,824	—	—	3,284	—
0 20 20	74	77	961	400	4,371	8,083	—	—	13,966	610
2 10 20	—	—	—	—	2,268	104	—	—	2,372	—
2 12 10	—	—	—	—	27,969	47,068	—	—	75,037	—
2 12 12	—	—	—	—	2,361	27,358	—	—	29,719	—
2 12 14	—	—	—	—	294	17,241	—	—	17,535	—
2 12 16	—	—	—	—	634	15,055	—	—	15,689	—
2 12 20	—	—	—	—	—	4,700	—	—	4,700	—
2 14 8	—	—	—	—	3,811	223	—	—	4,034	—
2 14 14	—	—	—	—	—	1,615	—	—	1,615	—
2 15 15	—	—	—	—	—	169	—	1,044	1,213	—
2 16 6	—	—	—	—	17,233	1,773	—	—	19,006	—
2 18 18	—	4	—	—	4	8,931	3	—	8,942	—
2 20 20	—	—	—	—	—	233	—	—	233	—
3 12 12	—	—	—	—	2,784	2,802	—	—	5,586	—
3 12 16	—	—	—	—	—	1,015	—	—	1,015	—
3 15 6	659	4,098	5,769	5,487	575	—	—	—	16,608	9
3 15 10	—	—	—	—	—	8,551	—	—	8,551	—
3 15 30	—	—	—	—	161	—	—	—	161	—
3 16 16	5	7	1,477	67	—	—	—	—	1,556	—
3 18 9	—	—	—	—	—	15,537	—	—	15,537	—
3 18 15	—	—	—	—	—	1,120	—	—	1,120	—
3 18 18	—	—	—	—	—	529	—	—	529	—
4 10 10	—	—	—	—	—	—	—	3,257	3,257	—
4 12 8	2	5	—	9	—	353	—	50	449	17

TABLE 12. Mixed Fertilizers Sold during the Year ended June 30, 1960 - Concluded

Analysis	New-found-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba, Saskatchewan and Alberta	British Columbia	Total sold in Canada	Exported from Canada
N P ₂ O ₅ K ₂ O										
4 12 10	-	-	-	-	15	15,869	-	-	15,884	-
4 12 16	-	-	-	-	-	2,304	-	-	2,304	-
4 16 16	-	-	-	-	-	702	-	-	702	-
4 24 12	-	-	-	-	127	15,736	-	-	15,863	-
4 24 20	-	-	-	-	19,607	35,007	-	-	54,614	-
5 8 11	-	-	-	-	3,124	4	-	-	3,128	-
5 10 10	21	148	1,099	13,238	16,396	1,669	-	-	32,571	1,783
5 10 13	1,828	19,111	1,098	5,608	35,086	2,361	-	-	65,092	26
5 10 15	-	-	-	-	700	22,900	5	-	23,605	-
5 10 30	-	-	-	-	-	682	-	-	682	-
5 20 0	-	-	-	-	-	2,058	-	-	2,058	-
5 20 10	-	-	-	-	71	14,997	-	-	15,068	-
5 20 20	-	-	-	-	20	12,678	-	-	12,698	-
6 8 6	-	-	-	-	-	-	-	2,289	2,289	-
6 9 6	41	-	60	21	1,035	1,259	20	-	2,436	-
6 9 9	-	-	-	620	-	-	-	-	620	263
6 9 12	-	-	-	10	-	-	-	-	10	1,645
6 10 4	-	-	-	-	75	327	28	63	513	-
6 10 10	-	-	-	-	-	1	-	468	469	-
6 12 6	17	2	103	10	24	-	-	-	156	72
6 12 8	407	295	1,154	14,801	7	-	-	-	18,664	18
6 12 12	1,556	29,675	11,058	23,225	7,007	5,410	-	-	77,931	-
6 24 24	-	-	-	-	-	-	-	156	156	-
6 27 25	-	-	-	-	-	-	-	157	157	-
6 30 15	-	-	-	-	-	-	-	1,223	1,223	-
7 7 7	-	-	-	1	6	4,807	-	-	4,814	-
7 8 6	-	-	-	-	-	-	-	1,720	1,720	-
8 9 10	-	100	-	403	-	-	-	-	503	2,219
8 10 6	-	-	-	-	-	-	-	1,166	1,166	-
8 12 12	-	-	8	657	-	-	-	-	665	10,323
8 12 16	-	-	-	-	73	-	-	-	73	534
8 16 8	2	-	865	1,231	-	-	-	-	2,098	-
8 16 16	-	-	-	-	2,476	4,255	-	-	6,731	3,003
8 24 20	-	-	-	-	-	101	-	-	101	-
8 32 16	-	-	-	-	-	-	-	-	-	3,234
9 5 10	-	-	139	-	-	-	-	-	139	-
9 9 7	1	5	871	39	-	16	-	-	932	4
10 5 5	-	-	-	-	133	13	-	-	146	-
10 5 10	-	-	-	-	703	1,218	-	-	1,921	-
10 6 4	56	6	-	60	640	2,438	-	354	3,554	15
10 10 10	5	16	-	535	2,774	33,738	-	-	37,068	7,694
10 15 15	-	-	-	30	-	60	-	-	90	1,131
10 20 0	-	-	-	-	-	230	-	-	230	-
10 20 10	-	-	-	11	15	120	5	1,716	1,867	-
10 20 20	-	-	-	-	-	302	-	-	302	-
10 24 12	-	-	-	-	76	800	-	-	876	-
10 30 10	-	-	-	-	-	17	970	954	1,941	3,787
10 52 17	-	-	7	2	11	178	-	-	198	2
12 12 12	-	-	-	-	-	741	-	-	741	896
13 13 13	-	-	-	-	-	-	99	41	140	5,798
13 16 10	-	-	-	-	-	-	-	2,662	2,662	-
14 7 7	-	-	-	-	-	477	-	-	477	-
14 14 7	-	-	-	-	-	-	177	1	178	6,024
Other mixes	10	-	28	665	2,921	10,537	441	503	15,105	1,253
Totals, 1960	4,684	53,549	24,717	67,130	158,624	363,334	1,748	17,922	691,708	50,365
Totals, 1959	5,017	48,225	25,500	60,943	135,525	395,173	1,524	17,646	689,553	40,358

Note: Figures in this table include tobacco fertilizers containing boron and magnesium oxide.

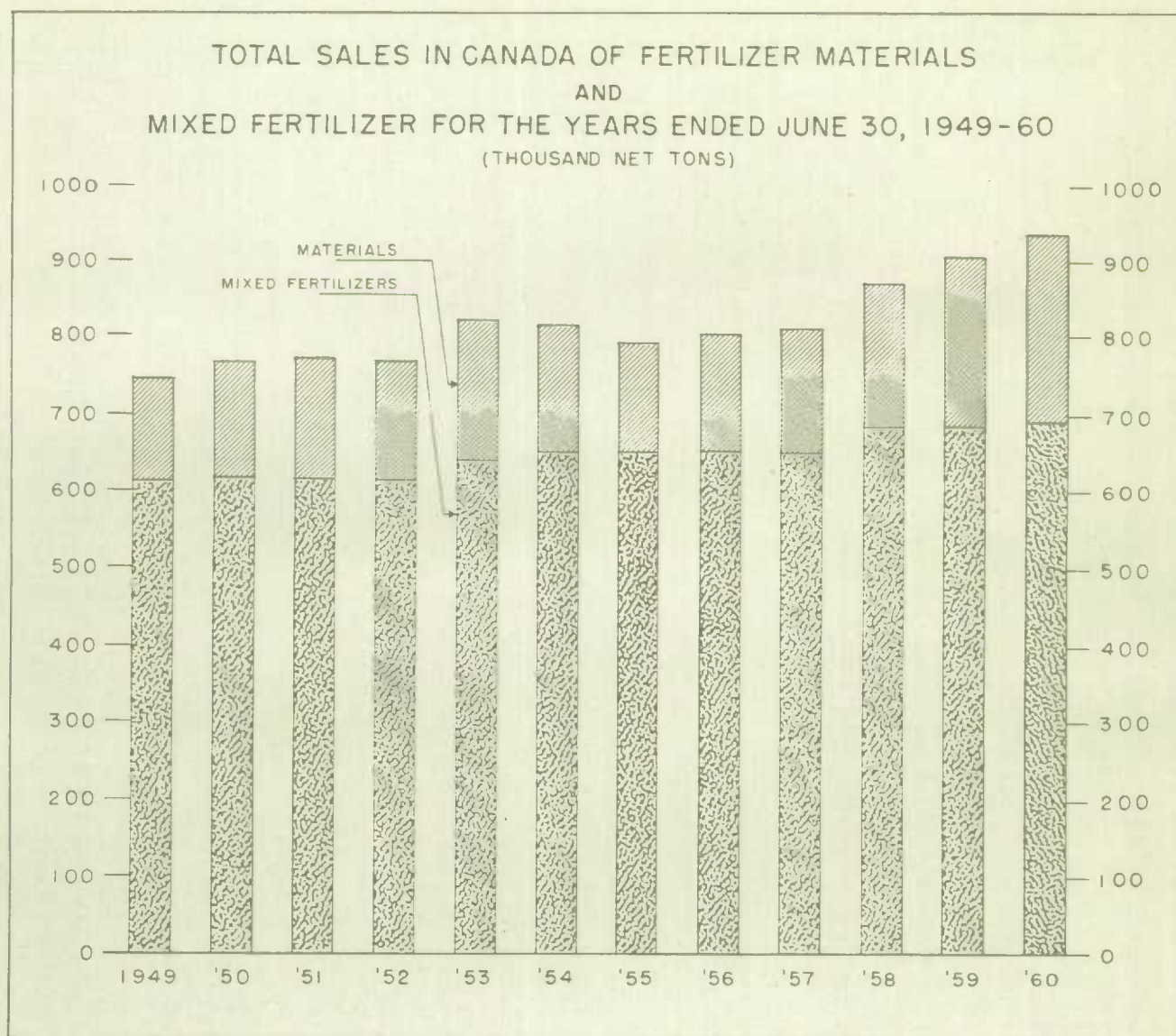


TABLE 13. Nitrogen, Phosphoric Acid and Potash Contained in Fertilizers Sold in Canada during the Year Ended June 30, 1960

Province	In materials			In mixtures			Total		
	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
	short tons								
Newfoundland	60	10	1	241	545	522	301	555	523
Prince Edward Island	80	21	7	2,895	6,167	6,360	2,975	6,188	6,367
Nova Scotia	343	205	56	1,234	3,237	2,606	1,577	3,442	2,662
New Brunswick	89	50	79	3,736	7,880	6,837	3,825	7,930	6,916
Quebec	492	2,830	326	6,080	21,375	19,332	6,572	24,205	19,658
Ontario	11,966	7,802	3,402	14,964	53,564	47,359	26,930	61,366	50,761
Manitoba	3,259	7,540	2	93	155	70	3,352	7,695	72
Saskatchewan	4,671	13,982	2	15	18	10	4,686	14,000	12
Alberta	13,561	22,965	18	78	193	74	13,639	23,158	92
British Columbia	2,634	2,128	494	1,330	2,576	1,718	3,964	4,704	2,212
Totals, Canada	37,155	57,533	4,387	30,666	95,710	84,888	67,821	153,243	89,275

TABLE 14. Total Sales¹ in Canada of Fertilizer Materials and Mixed Fertilizers, for the Years Ended June 30, 1951-60

Year ended June 30	Fertilizer materials	Mixed fertilizers	Total sold in Canada
	tons (2,000 pounds)		
1951	153,933	616,574	770,507
1952	156,049	612,496	768,545
1953	179,600	640,203	819,803
1954	160,481	651,160	811,641
1955	139,301	651,473	790,774
1956	148,037	652,643	800,680
1957	156,497	651,754	808,251
1958	181,973	688,566	870,539
1959	218,661	689,553	908,214
1960	243,720	691,708	935,428

¹ Except for manufacturing purposes.

TABLE 15. Nitrogen, Phosphoric Acid and Potash Contained in Fertilizers Sold during the Years Ended June 30, 1951-60

Year ended June 30	In materials			In mixtures			Total		
	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
	short tons								
1951	16,167	48,745	2,181	18,328	73,142	53,949	34,495	121,887	56,130
1952	17,357	46,413	2,594	19,213	72,951	55,423	36,570	119,364	58,017
1953	20,956	52,829	2,838	22,933	79,873	64,749	43,889	132,702	67,587
1954	18,213	42,108	3,327	23,812	80,239	66,641	42,025	122,347	69,968
1955	17,422	32,672	3,120	25,410	82,032	71,219	42,832	114,704	74,339
1956	19,687	33,229	3,472	25,324	84,702	73,472	45,011	117,931	76,944
1957	23,062	35,384	3,290	26,611	85,806	75,064	49,673	121,190	78,374
1958	26,947	39,945	4,282	28,393	91,793	80,393	55,340	131,738	84,675
1959	32,721	50,102	4,443	29,401	94,774	83,631	82,122	144,876	88,074
1960	37,155	57,533	4,387	30,666	95,710	84,888	67,821	153,243	89,275

TABLE 16. Production,¹ Imports and Exports of Ammonium Sulphate, 1950-59

Year	Production	Imports	Exports
	tons		
1950	211,534	103	209,106
1951	209,159	314	145,724
1952	226,664	845	199,681
1953	186,540	21,254	147,371
1954	174,967	14,101	154,760
1955	311,371	7,029	..
1956	339,510	3,144	..
1957	316,634	3,288	..
1958	300,049	5,892	..
1959	307,121	5,941	..

¹ Factory shipments since 1952.
.. Figures not available.

TABLE 17. Imports and Exports of Fertilizers, 1958 and 1959

Item	1958		1959	
	Quantity	Value	Quantity	Value
		\$		\$
Imports				
Ammonia, sulphate of..... ton	5,892	218,599	5,941	208,159
Potash, muriate of	132,305	3,089,714	95,299	2,282,054
Potash, sulphate of	15,539	556,227	24,742	815,011
Nitrate of soda or cubic nitre	22,728	1,011,175	21,684	880,470
Nitrogen solution	25,846	1,429,435	21,826	1,154,091
Nitrogen fertilizer, n.o.p.	40	3,270	376	59,166
Triple superphosphate	48,269	2,019,957	64,328	2,865,308
Superphosphate, n.o.p.	173,457	3,292,119	142,142	2,605,896
Phosphate fertilizer n.o.p.	3,325	235,208	3,985	273,386
Sulphate of potash magnesia	3,128	61,118	4,451	72,250
Mixed fertilizers	3,053	471,282	8,094	749,778
Fertilizer materials, n.o.p.	9,417	565,054	10,307	804,963
Exports				
Ammonium sulphate	—	8,223,655	—	8,506,770
Nitrogen fertilizer, n.o.p.	—	17,106,496	—	14,420,401
Nitrogen phosphate fertilizers	—	21,039,405	—	22,894,111

Note: In each case, the period covered in the above table refers to the "calendar" year.

TABLE 18. Fuel and Electricity Used in the Fertilizers Industry, 1958 and 1959

Kind	1958		1959	
	Quantity	Cost at works	Quantity	Cost at works
		\$		\$
Bituminous coal—Canadian	6,732	61,889	5,745	59,996
Imported	50,197	503,062	50,396	505,326
Anthracite coal	49	1,022	39	822
Coke (for fuel only)	160	3,481	120	2,700
Gasoline (including gasoline used in cars and trucks) .. Imp. gal.	284,522	94,633	277,865	90,177
Fuel oil	790,645	109,269	1,248,042	157,808
Gas—Liquefied petroleum gases	3,667	1,406	4,662	1,811
Natural	1,511,217	207,320	1,506,398	215,876
Other fuel	—	2,298	—	2,248
Electricity purchased ¹	1,221,603,003	2,296,715	1,191,719,583	2,318,241
Totals	—	3,281,095	—	3,355,005

¹ The bulk of the electricity shown here was generated by one of the reporting companies but was generated by off-plant equipment and therefore, for statistical purposes, this has been treated as purchased electricity.

List of Firms in the Fertilizers Industry, 1959

Name of firm	Location of plant
Prince Edward Island:	
Island Fertilizer Inc.	Charlottetown
Canada Packers Limited	Summerside
Nova Scotia:	
Canadian Industries Limited	Pier 9, Halifax
Canada Packers Limited	Port Williams
Colonial Fertilizer Co. Ltd.	Nesbit St., Windsor
New Brunswick:	
Canada Packers Limited (Fertilizer Division)	Bayside Drive, East Saint John
International Fertilizers Limited	East Saint John
Summers Fertilizers Co. Inc.	Prince William St., St. Stephen
Quebec:	
Agricultural Chemicals Ltd.	Chambly Canton
Canada Packers Limited	6000 St. Patrick St., Montreal
Canada Packers Limited	Ste. Foy
Canadian Industries Limited	1490 Marlborough St., Montreal
Canadian Industries Limited	McMasterville
Houde, William, Limited	La Prairie
International Fertilizers Limited	Wolfe's Cove, Quebec
Ontario:	
Agricultural Chemicals Ltd.	Orangeville
Agricultural Chemicals Ltd.	Marsh St., Port Hope
Agricultural Chemicals Ltd.	London
Biorganic Fertilizers Ltd.	R.R. 1, Kingsville
Bradford Fertilizer & Chemical Co.	Aurora
Canada Packers Limited	Chatham
Canada Packers Limited	2200 St. Clair Ave. W., Toronto
Canada Packers Limited	Welland
Canadian Industries Limited	King St. E., Chatham
Canadian Industries Limited	Burlington St. E., Hamilton
Canadian Industries Limited	Ingersoll
Canadian Industries Limited	Norwich
Cyanamid of Canada Limited	Niagara Falls
Elmira Fertilizers Ltd.	Elmira
Hy-Trous Co. of Canada (1959) Ltd.	Cornwall
Manchester Products	Galt
Misner Fertilizer Limited	Port Dover
"Na-Churs" Plant Food Co. (Canada) Ltd.	2 Langarth St. W., London
Ontario Plant Foods Ltd.	Delhi
Rainbow Chemicals Ltd.	Tilbury
Swift Canadian Co. Limited	1400 The Queensway, Etobicoke
United Co-operatives of Ontario	4004 Dundas St. W., Toronto
United Co-operatives of Ontario	Stratford
United Co-operatives of Ontario	Thamesville
Alberta:	
Consolidated Mining and Smelting Co. of Canada Limited	Calgary
North-West Nitro Chemicals Ltd.	Medicine Hat
British Columbia:	
Consolidated Mining and Smelting Co. of Canada Limited	Kimberly
Consolidated Mining and Smelting Co. of Canada Limited	Trail
Globe Fertilizer Co. Ltd.	Foot Crompton Road, Vancouver
Green Valley Fertilizer & Chemical Co. Ltd.	North Surrey

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