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THE FERTILIZER TRADE IN CANADA

July 1, 1932—June 30, 1933

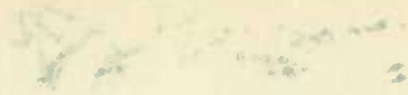
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OTTAWA
J. O. PATENAUDE
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1934



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THE FERTILIZER TRADE IN
CANADA

1911

Published by the

Department of the Interior



OTTAWA

THE FERTILIZER TRADE IN CANADA, JULY 1, 1932-JUNE 30, 1933

By W. H. Losee, B.Sc., Chief of the Mining, Metallurgical and Chemical Branch

Production and sales of fertilizers in Canada have been fairly well maintained despite the decline in the value of farm products during recent years and for the twelve months ending June 30, 1933, sales of fertilizers, except for manufacturing purposes, and sales of mixed fertilizers in Canada totalled 166,407 tons as compared with 179,983 tons during the preceding twelve months.

In order that producers and importers may gauge the markets for fertilizer materials and the trends in the changes of grades in mixed fertilizer consumption, the Mining, Metallurgical and Chemical Branch of the Bureau, in co-operation with the Fertilizer Division of the Department of Agriculture, has made, during the past few years, a survey of production in Canada, imports and exports and sales by provinces of the various fertilizers.

Every effort has been made to eliminate duplication. Each firm which manufactured fertilizer materials was requested to omit from its report to the Bureau the amounts sold to concerns which were using these materials to produce mixed fertilizers so that the total sales of fertilizer materials and mixed fertilizers should represent actual consumption in Canada for the period under review.

Plants for the manufacture and distribution of mixed fertilizers are fairly well distributed across the country, with the exception of the Prairie Provinces, since in this part of Canada the consumption of mixed fertilizers has not been very extensive. In Prince Edward Island and in New Brunswick fertilizers are used largely by potato growers. In Nova Scotia the consumption is more general. The use of fertilizers in Quebec is encouraged by a bonus to the farmers from the Provincial Government. Since Ontario has by far the largest acreage of special crops the mixtures used cover a wide range and the consumption of fertilizers is much greater than in any other province. Manitoba, Saskatchewan and Alberta use only limited amounts as yet, while from five to six thousand tons each of fertilizer materials and mixed fertilizers are sold annually for consumption in British Columbia.

Production, Imports and Exports.—According to the records received 27 plants were engaged in making mixed fertilizers in Canada and 16 produced fertilizer materials; 13 firms made both. Reports were received from 23 companies which operated as dealers only. Importers totalled 33 and exporters, 19. Production of mixed fertilizers and fertilizer materials aggregated 266,222 short tons, of which 100,727 tons or 37.8 per cent were mixed fertilizers. The principal fertilizer materials manufactured were sulphate of ammonia, 69,229 tons; cyanamide, 53,934 tons; superphosphate, 34,640 tons, and ammonium phosphate, 4,837 tons; tankage, bone meal and flour, and dried blood made up the remainder.

Imports of fertilizers totalled 117,904 tons, the largest item being superphosphate at 52,733 tons. Some 20,801 tons of phosphate rock, for the manufacture of superphosphate, were imported, which was a considerable decrease from the 108,791 tons imported during the previous year; other imports of considerable moment were nitrate of soda, muriate of potash, potash manure salts and tankage. Of the total exports amounting to 137,342 tons, 37.0 per cent was sulphate of ammonia, 49.1 per cent was cyanamide, and 11.3 per cent was mixed fertilizers.

Sales.—Sales of fertilizer materials and mixed fertilizers, including exports and excluding the fertilizers sold in Canada for the production of mixed fertilizers, totalled 303,749 tons as compared with 265,442 tons in the preceding twelve months, an increase of 14.4 per cent. Sales in Canada amounted to 166,407 tons as against 179,983 tons during the twelve months ending June 30, 1932, a decrease of 11.3 per cent. New Brunswick and Ontario were the only provinces

to register increases in the sales of fertilizer materials. Sales of mixed fertilizers almost doubled in Prince Edward Island and there were slight increases in Nova Scotia and Ontario. Sales in the other provinces were less than in the preceding year.

A study of Table IV would indicate that the largest sales of mixed fertilizers were those containing 4 per cent nitrogen, 8 per cent phosphoric acid and 10 per cent potash. Large quantities of this grade were used for potatoes in Prince Edward Island, Quebec and Ontario. Nova Scotia favoured mixtures on a basis of a 4-8-4 grade, while consumers in British Columbia showed a preference for 3-10-8, a grade which was not sold in any other province. Sales in Ontario were of many different grades, the most popular being, according to tonnage sold, the 3-8-4; 2-12-6; 3-10-5; 4-8-6; 2-16-6; and 4-8-10. The general tendency would appear to be towards reducing the number of mixtures. During the year under review forty-five different mixtures of 100 tons or more were reported, in the preceding year fifty-three and in the twelve months ending June 30, 1931, fifty-nine. In addition, the small quantities of other mixtures sold were grouped under "other mixed fertilizers."

THE USE OF FERTILIZERS IN CANADA

Submitted by the Acting Dominion Chemist, Division of Chemistry, Experimental Farm, Ottawa

Investigational work dealing with the employment of commercial fertilizers for the economical production of farm crops engages constant attention from the Federal and Provincial Departments of Agriculture. The primary object of this work is to obtain data of a fundamental nature which can be used in the study of soil fertility problems and in giving advice to the farmer to enable him to use fertilizers to the best advantage.

The fertilizer experimental work of the Federal Department of Agriculture is conducted largely by the Experimental Farms Branch, at the Central Farm, Ottawa, and at many of the Branch Farms and Stations throughout the Dominion. In addition to general work with respect to the fertilization of field crop areas, special attention is being given in Eastern Canada to the plant food requirements of pasture lands, potato soils, peat lands, tobacco soils and apple orchards. Considerable attention is also given to experimental work dealing with the employment of fertilizers in the grain growing districts of the Prairie Provinces and the fruit growing areas of British Columbia. The results of these investigations are published in annual reports and in bulletins, circulars and press articles.

The principal factors to be considered in a determination of the most suitable fertilizer to employ are the kind of crop, the nature of the soil (whether heavy, light or highly organic), the previous treatment of the soil as regards manuring and cropping, and seasonal conditions which may normally be expected. No very large number of analyses is required to satisfactorily meet the above conditions but there are on the market at the present time a great number of mixtures which, in many instances, vary but slightly in composition from others. This unnecessary diversity in analysis has led to a concerted effort on the part of the Federal and certain of the Provincial Departments of Agriculture working in co-operation with the manufacturers and farmers' representatives to reduce the number of brands of mixed fertilizers offered for sale. In this connection there have been established in recent years by Provincial Departments of Agriculture, Fertilizer Councils or Advisory Boards. An important purpose of these organizations is to effect a reduction in the number of brands of mixed fertilizers sold to the farmers. Naturally the more brands offered the more confusing it is for the farmer to select his requirements and the more brands manufactured the higher will be the cost of manufacture, which the farmer ultimately pays. Fertilizer councils have been operating in the Mari-

time Provinces and Quebec in this connection for some time, while in February, 1934, a similar board for the same purpose was organized in Ontario. The work of these provincial councils or boards receives general support from the manufacturers, farmers and officials of the Departments of Agriculture and Agricultural Colleges.

At least once a year the members of these organizations are called together to consider what further reduction may be recommended in the offerings of the trade, also to review new data in regard to the economic use of fertilizers. After careful consideration of these factors, recommendations are made to the manufacturers to confine their sales to the brands selected by the council and these brands are also recommended to the farmer. Thus, the rational use of fertilizer in the farmers' interest is being developed slowly but surely through the influence of these organizations supported by the Dominion Department of Agriculture. The 1934 recommendations of the Provincial Fertilizer Boards may be obtained by any farmer or others on application to the respective Provincial Departments of Agriculture in Eastern Canada.

There are as yet no provincial fertilizer boards in Western Canada, but it is hoped that the provinces there will organize such boards to promote the development and use of fertilizer in the farmers' interest, before confusion resulting from unrestricted competition comes, as was the case in the eastern provinces.

Most of the fertilizers used in the Prairie Provinces are applied in connection with the growth of cereals and ammonium phosphate and superphosphate are the principal forms sold. The sale of complete fertilizers is, however, increasing, particularly amongst the vegetable gardeners adjacent to the cities and towns. Any important recovery of prices of cereals to the farmer of the prairies may be expected to stimulate the use of fertilizers there.

The demand in British Columbia for fertilizers continues about the same year by year and is mainly for complete fertilizers suitable for truck crops and fruit growing.

Undoubtedly the state of infancy in the knowledge and use of fertilizers in Canada is rapidly passing and the majority of agriculturists now realize that fertilizers of the right kind properly applied give increased yields, and a better quality in product. More farmers than ever are now studying fertilizers and their effects on the different soils and crops and more are realizing every day that it is necessary to supply plant food in one form or another to the soil. The method of application and placement of the fertilizer with respect to the seed is of special importance in obtaining best results and this point is receiving much attention from agricultural investigators at the present time.

I.—Total Sales of Fertilizer Materials and Mixed Fertilizers for the Fertilizer Years ended June 30, 1932 and 1933

(Short tons)

Province	Fertilizer materials			Mixed Fertilizers		
	1932	1933	Percentage increase + decrease -	1932	1933	Percentage increase + decrease -
	tons	tons	p.c.	tons	tons	p.c.
Prince Edward Island.....	12,866	7,025	-45.4	3,127	6,200	+98.3
Nova Scotia.....	15,151	11,320	-25.3	11,605	12,036	+3.7
New Brunswick.....	14,336	20,200	+40.9	14,344	12,927	-9.9
Quebec.....	24,463	19,598	-19.9	14,295	10,333	-27.7
Ontario.....	14,067	15,868	+12.8	37,835	37,924	+0.2
Manitoba, Saskatchewan and Alberta.....	5,616	2,842	-49.4	233	72	-69.1
British Columbia.....	6,365	5,521	-13.3	5,680	4,541	-21.6
Canada.....	92,864	82,374	-11.3	87,119	84,033	-3.5
Sold for Export.....	64,992	121,839	+87.5	20,467	15,503	-24.3
Grand Total.....	157,856	204,213	+29.3	107,586	99,536	-7.5

II.—Production in Canada, Imports and Exports of Fertilizers, as Reported by the Manufacturers and Importers During the Years ended June 30, 1932 and 1933

(Short tons)

Items	1932			1933		
	Manu- factured	Imported	Exported	Manu- factured	Imported	Exported
Mixed fertilizers.....	108,123	2,471	20,467	100,727	1,761	15,503
Sulphate of ammonia.....	42,660	12,526	28,175	69,229	9,641	50,799
Cyanamide.....	39,209	400	34,750	53,934	38	67,432
Calcium nitrate.....	-	350	-	-	754	-
Nitrate of soda.....	-	4,150	14	-	4,336	353
Superphosphate*.....	51,432	60,938	701	34,640	52,733	1,377
Basic slag.....	-	10,557	3	-	6,410	2
Nitrochalk.....	-	268	1	-	-	1
Bone phosphate.....	-	-	-	-	50	-
Phosphate rock.....	-	108,791	-	-	20,801	-
Bone meal and bone flour...	678	129	-	746	126	30
Muriate of potash.....	-	18,958	264	-	13,107	606
Sulphate of potash.....	-	2,586	-	-	901	-
Potash manure salts and kainite.....	-	9,424	-	-	4,846	-
Tankage.....	1,257	1,579	312	1,122	1,305	579
Sheep manure.....	-	403	-	-	305	-
Dried blood.....	781	-	311	753	-	85
Fish meal.....	290	184	25	-	125	-
Ammonium phosphate.....	12,203	1,479	436	4,837	143	547
Other materials.....	-	792	-	234	522	28
Total.....	256,633	235,985	85,459	266,222	117,994	137,342

*Contains 16%, 19%, 20% and 45% superphosphate.

III.—Sales of Fertilizers, except for Manufacturing Purposes, during the Year ended June 30, 1933

(Short tons)

Fertilizer	P.E.I.	N.S.	N.B.	Que.	Ont.	Man., Sask. and Alta.	B.C.	Total sold in Canada	Sold for export from Canada	Grand total
Nitrate of soda.....	119	1,058	2,165	521	548	5	152	4,568	353	4,921
Sulphate of ammonia.....	1,005	1,727	2,415	2,460	1,149	34	813	9,693	50,799	60,492
Cyanamide.....	-	775	-	58	645	-	-	1,478	67,432	68,910
Nitrochalk.....	16	52	2	8	46	-	-	124	1	125
Calcium nitrate.....	-	825	4	3	2	-	2	836	-	836
Superphosphate.....	4,742	4,040	10,907	11,977	11,402	533	1,293	41,894	1,377	46,271
Phosphate rock.....	-	-	82	23	-	-	2	107	-	107
Basic slag.....	-	2,431	261	1,389	4	-	81	4,166	2	4,168
Bone meal and bone flour.....	-	157	26	1,012	519	48	472	2,234	30	2,264
Muriate of potash.....	1,135	248	3,785	1,737	203	4	216	7,328	606	7,934
Sulphate of potash.....	5	1	2	265	153	3	49	478	-	478
Potash manure salts and kainite.....	3	-	-	-	-	-	5	8	-	8
Tankage.....	-	-	473	40	455	34	411	1,413	579	1,992
Sheep manure.....	-	6	58	35	237	-	69	405	-	405
Dried blood.....	-	-	-	-	100	25	312	437	85	522
Whale products.....	-	-	-	-	-	-	428	428	-	428
Fish meal.....	-	-	20	-	-	-	986	1,006	-	1,006
Ammonium phosphate.....	-	-	-	-	-	2,156	97	2,253	547	2,800
Other fertilizer materials.....	-	-	-	70	405	-	133	608	28	636
Total Fertilizers.....	7,025	11,320	20,200	19,598	15,868	2,842	5,521	82,374	121,839	204,213
Total mixed fertilizer.....	6,200	12,036	12,927	10,333	37,924	72	4,541	84,033	15,503	99,536
Grand Total, 1933.....	13,225	23,356	33,127	29,931	53,792	2,914	10,062	166,407	137,342	303,749
Grand Total, 1932.....	15,993	26,756	28,680	38,788	51,992	5,849	12,045	179,383	85,459	265,412

IV.—Mixed Fertilizers Sold during the Year ended June 30, 1933

(Short tons)

Formulae			P.E.I.	N.S.	N.B.	Que.	Ont.	Man., Sask. Alta.	B.C.	Canada	Sold for export	Grand total
N	P ² O ⁵	K ² O										
0	10	4	-	-	-	49	82	-	-	131	-	131
0	12	4	-	-	-	-	333	-	-	333	-	333
0	12	5	-	-	-	3	1,268	-	-	1,271	-	1,271
0	12	10	-	-	-	-	36	-	95	131	-	131
0	12	15	-	-	-	3	400	-	-	463	-	463
0	14	6	-	-	-	-	163	-	13	176	-	176
2	8	4	22	706	656	483	1,376	-	-	3,243	56	3,299
2	8	5	-	-	-	-	1,192	-	-	1,192	-	1,192
2	8	8	-	-	-	251	455	-	-	706	-	706
2	8	16	-	-	-	-	160	-	-	160	-	160
2	10	2	159	1,308	603	-	-	-	-	2,070	74	2,144
2	12	6	22	1	24	1,164	7,741	-	-	8,952	15	8,967
2	12	10	-	-	-	1,498	7	-	-	1,505	-	1,505
2	16	6	-	-	-	-	2,276	-	-	2,276	-	2,276
3	8	4	-	-	53	-	8,929	-	-	8,982	63	9,045
3	8	5	-	-	-	-	121	-	-	121	-	121
3	8	6	-	-	-	-	565	-	-	565	-	565
3	9	8	-	-	-	-	744	-	-	744	-	744
3	10	5	-	-	-	31	3,491	-	326	3,848	-	3,848
3	10	6	-	-	-	-	1,356	-	-	1,356	-	1,356
3	10	8	-	-	-	-	-	-	2,359	2,359	-	2,359
3	12	5	-	-	-	-	254	-	-	254	-	254
4	6	10	250	598	2,076	54	10	-	-	2,988	2,124	5,112
4	7	10	-	-	-	-	-	-	-	-	122	122
4	8	4	66	4,723	286	170	68	-	-	5,313	145	5,458
4	8	6	1	1	2	82	2,346	-	-	2,432	3	2,435
4	8	7	1,804	1,910	441	-	-	-	-	4,245	2,237	6,482
4	8	10	2,478	45	192	4,382	2,204	2	-	9,303	256	9,559
4	8	13	1,086	314	4,422	-	-	-	-	5,822	2,071	7,893
4	9	4	-	-	-	-	157	-	-	157	-	157
4	10	4	-	-	-	-	-	-	304	304	2	306
4	10	10	-	-	-	-	-	-	390	390	-	390
4	12	4	-	-	-	15	500	-	4	609	-	609
4	12	6	-	-	-	-	126	-	-	126	-	126
5	6	9	-	-	-	565	-	-	-	565	-	565
5	8	7	2	-	2	375	732	-	-	1,111	179	1,290
5	8	12	58	11	1,486	-	-	-	-	1,555	1,474	3,029
5	9	8	125	181	2,506	-	-	-	-	2,912	6,473	9,385
5	10	5	2	1,085	13	4	205	-	99	1,408	36	1,444
6	8	10	1	-	2	824	71	-	-	898	2	900
6	10	4	-	-	-	-	-	-	110	110	-	110
6	10	10	-	-	-	-	-	-	408	408	-	408
8	16	14	-	147	-	-	-	-	-	147	-	147
9	5	7	-	992	-	-	31	-	-	1,023	-	1,023
12	5	7	-	-	-	118	1	-	-	119	-	119
Other mixed fertilizers			34	14	63	262	374	66	437	1,250	171	1,421
Total			6,299	12,036	12,927	10,333	37,924	72	4,541	84,632	15,503	99,536

V.—Nitrogen, Phosphoric Acid and Potash contained in Mixed Fertilizers Sold in Canada, during the Years ended June 30, 1932 and 1933

(Short tons)

Province	1932				1933			
	Total tonnage	Nitrogen	Phos- phoric acid	Potash	Total tonnage	Nitrogen	Phos- phoric acid	Potash
	tons	lb.	lb.	lb.	tons	lb.	lb.	lb.
Prince Edward Island	3,127	245,240	502,600	500,580	6,200	493,260	995,480	1,155,020
Nova Scotia	11,605	982,040	1,921,160	1,210,520	12,036	1,019,100	1,966,180	1,287,380
New Brunswick	14,344	1,179,560	2,206,160	2,567,600	12,927	1,067,100	2,066,740	2,035,480
Quebec	14,295	1,162,320	2,259,640	2,492,040	10,333	761,420	1,844,020	1,825,840
Ontario	37,835	1,987,480	7,406,140	4,178,720	37,924	2,045,010	7,518,580	4,323,160
Manitoba, Saskatchewan and Alberta	233	18,040	55,320	28,240	72	9,340	27,620	9,340
British Columbia	5,521	393,400	1,070,800	954,940	4,541	305,240	870,480	676,120
Sold for export from Canada	20,467	1,910,340	3,431,120	3,806,120	15,503	1,400,560	2,529,580	2,842,060
Canada	107,427	7,878,420	18,852,940	15,738,760	99,536	7,101,030	17,818,690	14,154,400
Miscellaneous (no analyses given)	159	-	-	-	219	-	-	-

VI.—Reporting Companies

Nature of Trade*	Name	Address
m.m.f.; i.	Agricultural Chemicals, Ltd.	Port Hope, Ont.
m.s.a.; e.	Algoma Steel Corporation, Ltd.	Sault Ste. Marie, Ont.
m.e.; e.; i.	American Cyanamid Co.	535 5th Ave., New York, U.S.A.
d	Armour Fertilizer Works	Sandusky, Ohio, U.S.A.
m.m.f.	Baisley, W. A.	Winona, Ont.
m.s.a.	Biggar, W. B.	Port Robinson, Ont.
m.o.	B.C. Electric Railway Co.	425 Carrall St., Vancouver, B.C.
m.o.	Burns, P. and Company	Calgary, Alta.
m.o.	"	Edmonton, Alta.
m.o.; e.	"	Regina, Sask.
m.m.f.; o.; i.	"	Winnipeg, Man.
d	"	Vancouver, B.C.
m.m.f.; o.; i.	Canada and Dominion Sugar Co., Ltd.	Chatham, Ont.
m.m.f.; o.; i.	Canada Packers Limited	St. Boniface, Man.
m.m.f.	"	West Toronto, Ont.
m.m.f.; i.; e.	"	Montreal, Que.
m.m.f.; i.; e.	"	St. John, N.B.
m.m.f.; i.; e.	Canadian Fertilizer Co., Ltd.	Chatham, Ont.
m.m.f.; i.; e.	Canadian Industries Limited	Halifax, N.S.
m.m.f.; s.p.; i.; e.	"	Beloeil, Que.
m.m.f.; s.p.; i.	"	Hamilton, Ont.
m.m.f.; s.p.; i.; e.	"	New Westminster, B.C.
m.o.; e.	Canadian Packing Co., Ltd.	Peterborough, Ont.
d.	Cedar Vale Tree Exports	Room 502, 1130 Bay St., Toronto, Ont.
d.; i.	Chemicals Limited	384 St. Paul St. W., Montreal, Que.
d.	Clarkson Dixie Fruit Growers' Assn.	Clarkson, Ont.
m.m.f.; i.; e.	Colonial Fertilizer Works	Windsor, N.S.
m.m.f.; a.p.; s.p.; i.; e.	Consolidated Mining & Smelting Co. of Canada, Ltd.	Trail, B.C.
d.; i.	Co-operative Fédérée de Quebec	130 St. Paul St. E., Montreal, Que.
d.	Davey Tree Expert Co. of Canada	57 Bloor St. W., Toronto, Ont.
d.	Dingman, M. E.	Leamington, Ont.
m.s.a.	Dominion Steel & Coal Corp., Ltd.	Sydney, N.S.
m.m.f.; o.	Dumart's Limited	Kitchener, Ont.
d.	Durham Fruit Growers' Co-operative, Ltd.	Canton, Ont.
m.o.	Fearnan Co., Ltd.	226 Rebecca St., Hamilton, Ont.
d.	Furuya Company, Limited	46 West Hastings St., Vancouver, B.C.
m.o.	Gainers Limited	South Edmonton, Alta.
d.	Georgian Bay Fruit Growers, Ltd.	Clarksburg, Ont.
d.	Gregory, F. R.	Leamington, Ont.
d.; i.	The Earle M. Grose Fertilizers	West Toronto, 9, Ont.
d.	Halliday, George	Sawyerville, Que.
m.s.a.; e.	Hamilton By-Product Coke Ovens, Ltd.	Hamilton, Ont.
d.	Hants Wholesalers, Ltd.	Windsor, N.S.
m.m.f.; o.	Harris Abattoir (Western), Limited	St. Boniface, Man.
m.m.f.; i.	Harris Abattoir Limited	Charlottetown, P.E.I.
m.o.	Harris, W. Co., Limited	200 Keating St., Toronto, Ont.
	International Agricultural Corp.	708 Stock Exchange Bldg., Buffalo, N.Y., U.S.A.
m.m.f.; i.	International Fertilizers Ltd.	71 St. Peter St., Quebec, Que.
m.m.f.; i.; e.	International Fertilizers Ltd.	Saint John, N.B.
m.m.f.; i.; e.	Island Fertilizer Co., Ltd.	Charlottetown, P.E.I.
m.m.f.; i.	Javigneur, Arthur	5118 Marquette St., Montreal, Que.
m.o.	Manchester Products	18 Ainslie St. S., Galt, Ont.
m.m.f.; o.; i.	Marquis (Estate F. Canac Marquis)	3 rue Courcellette, Quebec, Que.
d.	Martin, C. A.	Fergus, Ont.
	Milwaukee Sewerage Commission	Milwaukee, Wis., U.S.A.
e.	Montreal Coke Manufacturing Co.	P.O. Box 1660, Montreal, Que.
d.; i.	New Brunswick Agricultural Societies	East Centreville, N.B.
d.	Niagara Fruit Co., Ltd.	Queenston, Ont.
d.	Niagara Packers Limited	Grimby, Ont.
d.; i.	Norfolk Fruit Growers Association	Simcoe, Ont.
d.; e.	Paterson, R. Downing	89 Water St., Saint John, N.B.
d.; i.	P.E.I. Potato Growers' Assoc., Inc.	Charlottetown, P.E.I.
m.m.f.	Saguenay Fertilizer Company	Chirotimi, Que.
d.	St. Catharines Cold Storage & Forwarding Co., Ltd.	Davidson St., St. Catharines, Ont.
m.m.f.; i.	Sayer and Sun, Ltd.	822 Main St., Vancouver, B.C.
m.o.; e.	Schneiders Limited, J. M.	321 Courtland Ave. E., Kitchener, Ont.
m.m.f.; i.	Scottish Fertilizers Ltd.	Welland, Ont.
m.s.a.; e.	Steel Company of Canada, Ltd.	Hamilton, Ont.

VI.—Reporting Companies—concluded

Nature of Trade*	Name	Address
m.m.f.; o.; i.	Stone, Wm., and Sons, Limited.....	Ingersoll, Ont.
m.m.f.; i.; e.	Summers Fertilizer Co., Ltd.....	St. Stephen, N.B.
m.m.f.; o.	Swift Canadian Company Limited.....	Keele & St. Clair, West Toronto, Ont
d.; i.	Toronto Chemical & Fertilizer Co.....	248 Keele St., Toronto, Ont.
d.; i.	United Fruit Companies of Nova Scotia, Ltd..	Kentville, N.S.
m.m.f.; i.	Vancouver Milling and Grain Co.....	Vancouver, B.C.
d.	Vineland Growers Co-operative Co., Ltd.....	Vineland Station, Ont.
d.; i.	Witts Fertilizer Works.....	Norwich, Ont.
m.m.f.; o.	Young and Company.....	166 Keating St., Toronto, Ont.

*m.—Manufacturing.

m.a.p.—Manufacturing ammonium phosphate.

m.c.—Manufacturing cyanamide.

m.m.f.—Manufacturing mixed fertilizers.

m.o.—Manufacturing organics.

m.s.a.—Manufacturing sulphate of ammonia.

m.s.p.—Manufacturing superphosphate.

m.p.—Manufacturing carbonate of potash.

e.—Exports.

i.—Imports.

d.—Dealer.

The Fertilizers Act.—This Act comes under the Criminal Code of Canada. It is effective throughout the Dominion and is administered by the Fertilizer Division of the Dominion Department of Agriculture. There are no provincial fertilizer laws in Canada.

The following is a brief summary of the purposes and main provisions of the Act:—

Since the value of a fertilizer depends mainly on its physical and chemical constituents, which may be determined mainly by chemical and physical analysis, fraud in the sale of fertilizers could be practised generally if there were no adequate means to prevent it. Products that contain little, if any, of the essential plant foods, i.e., nitrogen, phosphoric acid and potash, could be sold as fertilizer and the buyer would be unaware of this until his crop failed to respond to the fertilizer. Such a condition would not only permit fraud to flourish but would undermine public confidence in the value of fertilizers generally. It is therefore vital to the Canadian farmer and to the fertilizer industry that the Act be maintained on a high level of efficiency for the prevention of fraudulent and damaging practices in the sale of fertilizers in Canada.

The principal control provisions of the Act may be explained as follows:—

Registration.—Every fertilizer, except a few standard chemicals, must be registered with the Department before offered for sale. The application for registration is not accepted when the brand name, guaranteed analysis or ingredients are regarded as unsatisfactory for one reason or another, and the sale of such fertilizer is not allowed. The registration provisions of the Act are therefore the first line of defence against poor and inferior fertilizers and misleading brand names.

Guaranteed Analyses.—Every fertilizer when delivered to the buyer must be labelled with the guaranteed analysis in terms of nitrogen, phosphoric acid and potash, and showing the minimum percentages of these plant foods. This guaranteed analysis on the label is the buyer's security against being delivered a fertilizer of lower analysis than that purchased. The inspectors who enforce the Act are constantly checking these guaranteed analyses so as to ensure that they be met. Buyers when suspicious as to the analysis of the fertilizer delivered to them have a right under the Act to submit samples to any official analyst. The samples must be taken according to the prescribed regulations. Many buyers each year protect themselves in this way.

Another provision of the Act prohibits the use of fertilizer ingredients which may prove harmful to soils and crops. This provision has saved many a crop. Since it came into effect the use of potash containing borax and other harmful materials has been discontinued by the manufacturers. Then there is section 6 which requires that no fertilizer contain less than 14 per cent of the plant foods, nitrogen, phosphoric acid and potash. The effectiveness of this has been very definite as the records of the Department show that hundreds of brands which contained little or no plant food have been eliminated from the market. To-day every fertilizer which may be legally sold should give some good results in crop production when used according to directions. The general effect has been to make it safe for the farmer to buy fertilizer as a profitable investment.

Each year the Department publishes in pamphlet form the results of analyses of the samples taken by the inspectors, so that farmers and others may know the record of each of the vendors in meeting guaranteed analyses. Since these reports give adverse publicity to offenders of the Act they have a considerable effect in achieving its enforcement. The public is invited to use this annual report as a guide when buying fertilizer.

List of Publications.—The following government publications in connection with fertilizer may be obtained free on application to the Publications Branch, Department of Agriculture, Ottawa, Canada:—

1. The Fertilizers Act (with regulations and amendments).
2. Annual Report on Fertilizer Analyses (small).
3. Manures and Fertilizers (revised edition).
4. Manuring of Market Garden Crops.
5. Seaweed as a Fertilizer.
6. Potash in Agriculture.
7. Peat and Muck.
8. Alkali Soils.
9. The Influence of Grain Growing on the Nitrogen and Organic Matter Content of the Western Prairie Soils of Canada.
10. Western Prairie Soils.
11. Prince Edward Island Soils.
12. Most of the Provincial Departments of Agriculture issue free publications dealing with the use of fertilizers under the different soil and crop conditions. Applications for these should be addressed to the Provincial Department of Agriculture for each province.
13. Some of the larger fertilizer manufacturers maintain educational bureaus which frequently publish very valuable information which may also be obtained free on application.



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