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

# THE FERTILIZER TRADE IN CANADA

July 1, 1931—June 30, 1932

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### THE FERTILIZER TRADE IN CANADA, JULY 1, 1931—JUNE 30, 1932

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

The use of various fertilizers by Canadian agriculturists is becoming wide-spread and in normal times reaches considerable proportions. Consumption in the Maritime Provinces, Quebec, Ontario and British Columbia has been general for some time and during the year under review the Prairie Provinces have shown a considerable increase over previous years. This is due to the recognition of the fact that the ingredients necessary to healthy growth, which have been taken from the soil by repetition of similar crops, must be replaced by artificial means and to the fact that the soils in certain districts of the Prairie Provinces are less rich in phosphoric acid than in nitrogen and potash and it has been found that a small dressing of a phosphatic fertilizer stimulates early growth and advances the date of ripening.

In order that the trend in sales of various fertilizers may be properly gauged by the manufacturers and importers, the Mining, Metallurgical and Chemical Branch of the Bureau, in co-operation with the Fertilizer Division of the Department of Agriculture have, during the past few years, made an annual survey of the production, consumption and distribution by provinces of the various

kinds of fertilizers used.

In making the survey every care was taken to avoid duplication. Each firm manufacturing fertilizer materials was asked to omit the amounts sold to companies which were using these materials in the manufacture of mixed fertilizers.

Production, Imports and Exports.—According to the records received, 29 plants were engaged in making mixed fertilizers in Canada and 31 manufactured fertilizer materials; 14 firms made both. Reports were received from 30 companies which operated as dealers only. Importers totalled 34 and exporters 13. Production of mixed fertilizers and fertilizer materials totalled 256,633 short tons, of which 108,123 or 42 per cent was mixed fertilizers. Output of fertilizer materials consisted of ammonium sulphate, 42,600 tons; calcium eyanamide, 39,209 tons; superphosphate, 51,432 tons; tankage, 1,257 tons; ammonium phosphate, 12,203 tons; the remainder being dried blood, fish meal and bone meal and flour.

Imports amounted to 235,985 tons, the largest item being 108,791 tons of phosphate rock. Superphosphate at 60,938 tons was next and other important imports were: Muriate of potash, 18,958 tons; sulphate of ammonia, 12,526 tons (principally in the Maritimes); basic slag, 10,557 tons; sulphate of potash, 9,424 tons; nitrate of soda, 4,150 tons; muriate of potash, 2,586 tons. Tankage, ammonium phosphate, cyanamide, sheep manure, calcium nitrate, nitrochalk, bone meal and flour, and fish meal were also imported in substantial quantities.

Exports totalled 85,459 tons, of which 34,750 tons were eyanamide of calcium, 28,175 tons ammonium sulphate and 20,467 tons mixed fertilizer. The principal remaining exports were superphosphate of lime, muriate of potash, tankage, dried blood, fish meal and ammonium phosphate.

Sales.—Sales of fertilizers during the year ending June 30, totalled 265,442 tons as against 362,848 tons during the preceding twelve months. Of this total 85,459 tons were exported and 179,983 tons were sold in Canada. The Canadian sales consisted of 87,119 tons of mixed fertilizer and 92,864 tons of fertilizer materials. Superphosphate comprised over 51 per cent of the total sales of fertilizer materials in Canada. Sulphate of ammonia marketed amounted to

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10,747 tons, basic slag totalled 11,611 tons, muriate of potash, 7,552 tons, nitrate of soda, 3,815 tons, and ammonium phosphate, 3,534 tons. Cyanamide, nitrochalk, calcium nitrate, phosphate rock, bone meal and flour, sulphate of potash, tankage, sheep manure, dried blood, whale products and fish meal and

milorganite were also marketed.

Superphosphate was distributed among the various provinces as follows: Prince Edward Island, 18 per cent; Nova Scotia, 8 per cent; New Brunswick, 15 per cent; Quebec, 31 per cent; Ontario, 20 per cent; Prairie Provinces, 4 per cent, and British Columbia, 3 per cent. Nova Scotia led all provinces in the purchase of ammonium sulphate; Prince Edward Island, New Brunswick and Quebec took slightly more than 1,800 tons each. Sales in Ontario and British Columbia were practically the same at 1,200 tons and a very small amount was distributed in the Prairie Provinces. Nova Scotia and Ontario were the only provinces purchasing cyanamide, and basic slag was distributed mostly in the Maritimes and Quebec. Muriate of potash was sold in all provinces, Prince Edward Island and New Brunswick purchasing the largest amounts. British Columbia and Ontario took the greater part of the tankage sold and sheep manure was marketed principally in Ontario. Dried blood was sold principally in Outario and British Columbia; whale products and fish meal were marketed almost entirely in the Pacific coast province. More amn orium phosphate was sold in the Prairie Provinces than in any other part of Carada, in fact the records show more of this material sold to the Prairies than any other fertilizer, no doubt on account of its concentrated fertilizing properties.

Although the sales of mixed fertilizers in Canada decreased to 87,119 tors from 146,404 tons in the previous year, increases were noted in certain items, more particularly the 4-6-10 and the 4-8-10 mixtures, the latter being used largely in Quebec. Sales of 3-10-6, all of which were in Ontario, more than doubled; 5-9-8 sales were about the same as in the previous year, New Brunswick being the principal consumer. Sales of 9-5-7 totalled 927 tors as against 768 tons in the previous year all of which was sold in Nova Scotia, principally for

fertilizing orehards.

A study of the compilation shows that the most popular mixture in Ontario was one containing 3 per cent nitrogen, 8 per cent phosphoric acid and 4 per cent potash, though 2-8-4; 2-12-6; 3-10-5 and 4-8-6 were also greatly in demand. A 4-8-10 mixture was the one mostly used in Quebec. The Maritimes used principally 2-10-2; 4-8-4; 4-8-7; 4-8-13; and 5-10-5. The Prairie Provinces purchased very little mixed fertilizer. In British Columbia the favourite mixtures were 3-10-8 and 4-10-10, although 4-8-12, 6-10-10 and a few other mixtures were marketed in smaller quantities.

#### THE USE OF FERTILIZERS IN CANADA

Submitted by the Dominion Chemist, Division of Chemistry, Experimental Farms, Ottawa.

Considering the decline in market values of farm products during the last few years, the interest taken in the employment of commercial fertilizers to increase crop yields, as evinced by exquiries and correspondence, has been

fairly well maintained throughout the Dominion.

Investigational work with fertilizers is carried on by the Experimental Farms System of the Department of Agriculture at its brauch farms and stations and at the Central Farm, Ottawa. The results of this work are used in furnishing agriculturists with information in respect to the economic employment of these materials. For the majority of crops the use of a "complete" fertilizer mixture—one furnishing nitrogen, phosphoric acid and potash—has been found to be advisable, especially in Eastern Canada and in British Columbia. The large

number of complete mixtures prepared by the manufacturers supply a wide range from which the farmer may choose in making the selection which he considers suitable for his particular crops and soil conditions. As might be expected, certain mixtures have been found to be more effective than others in the fertilizing of certain crops. As an example, in the Maritime Provinces, mixtures having a formula approximating a 9-5-7 is considered particularly suitable for the fertilizing of apple orchards in Nova Scotia; those of the nature of a 4-10-8 or 4-8-10 have given excellent results in the potato growing districts of New Brunswick and Prince Edward Island.

The increasing attention given to pasture fertilization in the stock raising and dairying districts of Canada is creating an appreciable increase in the demand for fertilizers, more particularly those furnishing nitrogen and phosphoric acid—the former to increase the protein cortent of the grass and the latter to give a higher ash content. In the more advanced systems of pasture management nitrogen is applied annually in one or more applications and minerals every 2 to 4 years. Of the various sources of nitrogen employed either alone or in the preparation of mixed fertilizers, sulphate of ammonia has gained precedence, due chiefly to its relatively low cost per unit of nitrogen.

In recent years the trend in fertilizer practice has been towards the use of more highly concentrated materials since this means a saving in freight and handling charges. This is evidenced by the increased manufacture and sale of 20 per cent and 45 per cent (triple) superphosphate and of ammonium phosphate carrying approximately 10 per cent nitrogen and 47 per cent phosphoric acid. The increase in the profitable use of fertilizers for grain crops in the Prairie Provinces has been due largely to the lowering of costs to the farmer through the employment of triple superphosphate and ammonium phosphate.

Investigational work dealing with the reclamation of peat areas as cultivable lands, carried on by the Division of Chemistry, Experimental Farms, Ottawa, has demonstrated that commercial fertilizers have an important place in the treatment of these lands. Peat lands are usually deficient in the mineral element of plant food and a fertilizer containing a high proportion of phosphoric acid and potash has given excellent results in the growth of field and vegetable crops.

I.—Comparative Table Showing Total Sales of Fertilizer Materials and Mixed Fertilizers for the Fertilizer Years ending June 30, 1931 and 1932

100	1317	1.(	101	18
		_		_

	Fert	ilizer mater	rials		Mixed Fertilizers				
Provinces	1931	1932	Percentage increase + decrease -		1931	1932	Percentage increase + decrease -		
	tons	tons		p.c.	tons	tons		p.e.	
Prince Edward Island Nova Scotia New Brunswick Quebec Ontario Manitoba, Saskatchewan and Alberta British Columbia	28, 494 22, 235 18, 134 37, 057 24, 189 1, 737 5, 967	12,866 15,151 14,336 24,463 14,067 5,616 6,365	1 - 1 - 1 + +	54·8 31·9 20·9 34·0 41·8 223·3 6·7	7,823 17,542 24,811 20,686 70,009	3, 127 11, 605 14, 344 14, 295 37, 835 233 5, 680		60·0 33·8 42·2 30·9 46·0 497·4 3·4	
Canada	137,813 70,889	92,864 64,992	_	32·6 8·3	146,404 7,742	87,119 20,467	+	40·5 164·4	
Grand Total	208,702	157,856	_	24 - 4	154,146	107,586		30 - 2	

II.—Production in Canada, Imports and Exports of Fertilizers, as Reported by the Manufacturers and Importers During the Year July 1, 1931 to June 30, 1932

(Short tons)

Items	Manu- factured	Imported	Exported	
Mixed fertilizers	108, 123	2,471	20,467	
Sulphate of ammonia	39,209	12,526 400	28, 175 34, 750	
Calcium nitrate	STATISTICS.	350 4,150 60,938	14 701	
Superphosphate* Basic slag Nitrochalk	-	10,557	3	
Phosphate rock Bone meal and bone flour		108,791 129	_	
Muriate of potashSulphate of potash		18,958 2,586	264	
Potash manure salts and kainit	1,257	9,424 1,579 403	312	
Onced blood. Fish meal.		184	311 25	
Ammonium phosphate	12,203	1,479 792	436	
Total	256,633	235,985	85,459	

<sup>\*</sup>Includes 16%. 19%, 20% and 45% superphosphate.

# III.—Sales of Fertilizers, except for Manufacturing Purposes, during the year July 1, 1931 to June 30, 1932

(Short tons)

Fertilizers	P.E.I.	N.S.	N.B.	Que.	Ont.	Man., Sask. and Alta.	B.C.	Total sold in in Canada	Sold for export from Canada	Grand Total
Nitrate of soda	113	786	1,225	612	973		106	3,815		3,829
Sulphate of ammonia	1,843	2,755	1,802	1,894	1,246	68	1.139	10,747		38,922
Cyanamide	-	741	-	-	325	-	-	1,066	34,750	35,810
Nitrochalk	2	11	18	112	24	-	3	170	F	171
Calcium nitrate	0.504	330	E 001	4F 4B0	0 200	4 000	1.738	446 48, 197	701	48.898
Superphosphate	8,706	3,868	7,221	15,189	9,569	1,906	1,738	48, 197	701	90,090
Phosphate rock	-	6.075	605	4,778	30	-	153	FF. 611	3	11.61
Bone meal and bone flour	1	162	25	49	419		571	1.286		1.28
Muriate of potash	2.201	417	3.049		224	5	320	7,552	264	7,810
Sulphate of potash	2,201	1	37	240	88	5	59	430	-	430
Tankage	-	5	331	137	398	66	550	1.487	312	1.799
Sheep manure	-	-	-	1	283	-	77	361	-	36
Dried blood		_	-	-	167	31	297			80
Whale products	-	-	-	-	-	-	173	173		173
Fish meal	-	80	3	-	-		993	996	25	1,02
Ammonium phosphate	~	0.0	- 1	Ξ.	-	3,476	58	3,534	436	3,97
Other fertilizer materials.	-	-	19	80	310	-	8.	417	-1-5	41
Total Fertilizer	12,866	15, 151	14.336	24,463	14, 067	5,616	6,365	92.864	64,992	157,85
Total mixed fertilizer	3, 127	11,605	14.344	14.295	37.835	233	5.680	87, 119		107.58
Grand Tutal, 1932.	15,993	26,756	28,680	38,758	51.902	5,849		179,983	85, 459	265,44
Grand Total, 1931.	36,317	39,777	42,945	57,743	94,198	1,776		284,217		362,84

# IV .- Mixed Fertilizers Sold during the Year July 1, 1931 to June 30, 1932

(Short tons)

	For	mulae	P.E.I.	N.S.	N.B.	Que.	Ont.	Man., Sask. and Alta.	B.C.	Total sold in Canada	Sold for export	Grand Total
N	PiOs	K2O										
0	10	4	-	-	-	27	117	-	-	144		14
0	10	10	-	-	610	99	36			745	_	74
0	10 12	16	-	-		106	-	-	110	110	-	11
0	12	4	_	_		100	258		_	106 258		10
0	12	5	_	_	_	1	1,960			1,961	_	25 1,96
0	12	10	-	-	-	+	34	-	82	116	-	11
2	12	4	-	302	428	- 440	754	-	-	754	-	75
2	8	5,		302	420	440	2,041 848		_	3,209	5	3,21
2	8	10	-	15	36	437	752			1,234	3	1,23
2	8	16	-	-		-	220	-	-	220	-	22
2 2	10 10	2	48	1,659	467	+	175	***	-	2,349	5	2.35
2	12	10		_	81	93	13 144	-	-	106 226	-	10
2	12	6	-	-	38	1,350	6,371		_	7,759	5	7.76
2	16	6	-			-	2,143	-	-	2,143		2.14
3	8	4	-		37	-	11,028	-	-	11.065	34	90,11
3	8	5 6	-			12	319 162	-	-	319	-	31
3	8	7	158	8	5	14	102	-		174 171	200	17 37
3	8	10	-	-	71	62	-		_	133	200	13
3	10	5	-	-	-	-	2.688	-	-	2,688		2,68
3	10	6	-		-	-	865	-	-	865	-	86
3	10	8	I			-	-	150	2,756	150 2,756		2,75
3	12	5	-	-	-	-	104	-	2,100	104	-1	10-
4	6	4	-	-	-	-	-	-	342	342	-	343
4	6	4	895	595 4,528	1,887	22	12	-		2.516	1,136	3,65
4	8	6	080	3,020	320	104	152 3,412	-	-	6,005 3,585	18 86	6,023 3,67
4	8	7	622	1.521	322	90	42	_		2,597	4.074	0,67
4	8	10	713	-	532	7,454	991		-	9,690	174	9,864
4	8	12	201 485	305	810 2.388	61	37	-	504	1,613	-	1,613
4	9	13	1001	303	2,000	_	145	-		3,178	2,373	5,55
4	10	4	attr	-	-	-	1	-	173	174	-	17-
4	10	10	-	-	-	447	-	-	1,048	1.048	-	1,04
5	12	4	1	1	15	69	608	35	-	729	-	729
5	7	5			-	872	_			872	500	87:
5	7	10	-	-	977	-	_	_	_	977	263	1,24
5	- 8	7	-	-	1,144	667	652	-	-	2,463	797	3.26
5	8	12	-	5	985	-	-	-	-	990	3,077	4.06
5	10	5		163	3.132		206	-	-	3.295	6,857	10, 15
5	12	2	-	2	10	58	42	30		1,607	-	1,60
6	8	10	-	-	9	1,629	110		-	1.748	200	1, 948
6	10 16	10	- 2	100	-	-		-	305	305	-	304
8	16	20,	2	126	-	23	-	-		128	383	128
9	5	7	-	927	-			_	-	927	383	927
2	5	7	-	-	-	206	-	-		206	-	206
ther	mixed	fertilizers	2	60	39	239	393	18	360	1,111	277	1,388
	Wedn	1	3.127	11.605	14.344	14,295	37,835	233	5,680	87,119	20,467	107.584

# V.—Nitrogen, Phosphoric Acid and Potash contained in Mixed Fertilizers Sold in Canada, during the Years ending June 30, 1931 and 1932

		19	31		1932				
Province	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. Nova Scotia. New Brunswick. Quebec. Ontario. Manitoba, Saskatchewan and Alberta. British Columbia. Sold for export from Canada.  Canada. Miscellaneous (no analyses given).	70,009 39 5,091 7,742	1,337,640 2,049,240 1,496,700 3,556,880 6,260 324,380 791,200	1,011,100	2.164,920 4,982,660 3.523,420 8,100,880 1,200 771,880 1,489,240	5,521 20,467	1,162,320 1,987,480 18,040 393,400 1,910,340	1,921,160 2,206,160 2,259,640 7,406,140	1,210,520 2,567,600 2,492,040 4,178,720 28,240 954,940 3,806,120	

## VI.—Reporting Companies

Nature of Trade*	Name	Address
	Abol Limited	Beltring, Paddock, Kent, England
m m f · i	Agricultural Chemicals, Ltd	
m.m.f.; i m.s.a.; e.	Algoma Steel Corporation, Ltd	
m.m.f.; i.	Allied Agricultural Fertilizers	4670 Christopher Columbus St.
LALICATION AS	Title Tigitourum to tilles	Montreal.
	American Agricultural Chemical Co	420 Lexington Ave., New York,
m.c.; e.; i.	American Cyanamid Co	U.S.A. 535-5th Ave., New York., U.S.A.
	Armour Fertilizer Works	Sandusky, Ohio, U.S.A.
m.m.f.	Biggar, W. B	Port Robinson, Ont.
m.s.a.	B.C. Electric Railway Co	425 Corrall St., Vancouver, B.C.
	Burlington Rendering Co	Burlington, Vt., U.S.A.
m.o.	Burns, P. and Company	Calgary, Alta.
in.o.	46 68	Edmonton, Atta.
m.o.	46 66	Window Man
m.o. m.m.f.; o.; i		Vancourer R C
d	Canada and Dominion Sugar Co., Ltd	Chatlam Ont
m.m.f.; o.; e	Canadian Fertilizer Co., Ltd.	Chetham Ont.
m.m.f.; i.	Canadian Industries Limited	Halifax, N.S.
m.m.f.; s. p.; i.	K6 46	Beloeil, Que.
m.m.f.; s. p.; i.	46 66	
m.m.f.; s. p.; i.	24 66	New Westminster, B.C.
m.o.; e.	Canadian Packing Co., Ltd	Peterborough, Ont.
d.; i	Chemicals Limited	384 St. Paul St. W., Montreal, Que
d.	Clarkson Dixie Fruit Growers' Assn	
m.m.f.; i.	Colonial Fertilizer Works	Windsor, N.S.
m.m.f.; a.p.; s.p.;	Consolidated Mining & Smelting Co. of Canada	m 1 D C
i.; e.	Ltd	Trail, B.C.
d.; i	Co-opérative Fédérée de Quebec	130 St. Paul St. E., Montreal, Que
m.m.f.	Davey Tree Expert Co. of Canada	pr Bloor St. W., Toronto, Ont.
d. m.s.a.	Dingtann, M. E. Dominion Steel & Coal Corp., Ltd.	Swington, Ont.
d.	Duniber's Limited	Kitchener, Ont.
d.	Dunnart's Limited Durham Fruit Growers' Co-operative, Ltd	Canton Ont.
d.	Empire Fertilizer, Ltd	2945 Dundas St. W., Toronto, Ont.
m.o.	Fearman Co., Ltd	2945 Dundas St. W., Toronto, Ont. 226 Rebecca St., Hamilton, Ont.
d.; i	Fertilizers and Feeds, Ltd	12980 Dundas St. W., Toronto, Ont.
m.m.f.	Fertilizer Products, Ltd	285 First Ave. E., Vancouver, B.C.
m.m.f.; i.	Fertilizer Products, Ltd	46 West Hastings St., Vancouver,
		B.C.
m.o.	Gainers Limited	South Edmonton, Alta.
d.	Georgian Bay Fruit Growers, Ltd	
m.m.f.	Globe Fettilizer Co., Ltd	Vancouver, B.C.
d.	Gregory, F. R. Gunns Limited	Hearnington, Ont. West Toronto, Ont.
m.m.f., o.; e.		
d. m.s.a.; e	Halliday, George	Hamilton, Ont.
d.	Hants Wholesalers, Ltd.	Windsor, N.S.
m,m.f.; o.	Harris Abattoir (Western), Limited	St. Boniface, Man.
m.o.	Harris, W., Co., Limited	200 Keating St., Toronto, Ont.
m.m.f.	Higgins, A. W., Co., Inc	Presque Isle, Me., U.S.A.
	International Agricultural Corp	. 708 Stock Exchange Bldg., Buffalo
		N.Y., U.S.A.
m.m.f.; i.; e.	International Fertilizers Ltd	Saint John, N.B.
d.; i	International Fertilizers	. 71 St. Peter St., Quebec, Que.
m.m.L.; i.	Island Fertilizer Co., Ltd	. Charlottetown, F.E.L.
m.m.f.; i	Lavigueur, Arthur.	Saint John N. P.
m.o.	Maritime Rendering Co., Ltd	Snint John, N.B.
m.m.f.; o.; i.	Milwankee Sewerage Commission.	
TO 5 0 ' A		
	Montreal Coke Manufacturing Co	
d.; i.	New Brunswick Agricultural Societies	East Centreville, N.B.
d.; i. d.; i.	New Brunswick Agricultural Societies Niagara Brand Suray Co., Ltd	Hast Centreville, N.B. Burlington, Ont.
m.s.a.; e. d.; i. d.; i. d.; i. d.;	New Brunswick Agricultural Societies	East Centreville, N.B. Burlington, Ont. Queenston, Ont. Grimsby, Ont.
d.; i. d.; i. d.; i.	New Brunswick Agricultural Societies	East Centreville, N.B. Burlington, Ont. Queenston, Ont. Grimsby, Ont. Shucoe, Ont.
d.; i. d.; i. d.; i. d.	New Brunswick Agricultural Societies	East Centreville, N.B. Burlington, Ont. Queenston, Ont. Grimsby, Ont. Shucoe, Ont. Roy Bldg., Barrington St., Halifa
d.; i. d.; i. d.; i. d.; d. d. d.; i.	New Brunswick Agricultural Societies. Niagara Brand Spinay Co., Ltd. Niagara Fruit Co., Ltd. Niagara Packers Limited. Norfolk Fruit Growers Association. Nova Scotia Fertilizer Co., Ltd.	East Centreville, N.B. Burlington, Ont. Queenston, Ont. Grimsby, Ont. Sincoe, Ont. Roy Bldg., Barrington St., Halifa N.S.
d.; i. d.; i. d.; i. d.; d. d. d. d.; i.	New Brunswick Agricultural Societies. Niagara Brand Spray Co., Ltd. Niagara Fruit Co., Ltd. Niagara Packers Limited. Norfolk Fruit Growers Association. Nova Scotia Fertilizer Co., Ltd. Ontario Fertilizers Limited.	East Centreville, N.B. Burlington, Ont. Queenston, Ont. Grimsby, Ont. Sinace, Ont. Roy Bldg., Barrington St., Halifa N.S. West Foronto, Ont.
d.; i. d.; i. d.; i. d. d.; i. m,m,f.; o.; i.; e. m,m,f.; i.	New Brunswick Agricultural Societies. Niagara Brand Spray Co., Ltd. Niagara Fruit Co., Ltd. Niagara Packers Limited. Norlolk Fruit Growers Association. Nova Scotia Fertilizer Co., Ltd. Ontario Fertilizers Limited. Paterson, R. Downing.	East Centreville, N.B. Burlington, Ont. Queenston, Ont. Grimsby, Ont. Sincoe, Ont. Roy Bldg., Barrington St., Halifa N.S. West Toronto, Ont. 39 Water St., Saint John, N.B.
d.; i. d.; i. d.; i. d.; d. d. d. d.; i.	New Brunswick Agricultural Societies. Niagara Brand Spray Co., Ltd. Niagara Fruit Co., Ltd. Niagara Packers Limited. Norfolk Fruit Growers Association. Nova Scotia Fertilizer Co., Ltd. Ontario Fertilizers Limited. Paterson, R. Downing. P. E. I. Potato Growers' Assoc. Inc.	East Centreville, N.B. Burlington, Ont. Queenston, Ont. Sincoe, Ont. Roy Bldg., Barrington St., Halifa N.S. West Toronto, Ont. S9 Water St., Saint John, N.B. (Charlottetown, P.E.I.
d.; i. d.; i. d.; i. d. d.; i. m,m,f.; o.; i.; e. m,m,f.; i.	New Brunswick Agricultural Societies. Niagara Brand Spray Co., Ltd. Niagara Fruit Co., Ltd. Niagara Packers Limited. Norlolk Fruit Growers Association. Nova Scotia Fertilizer Co., Ltd. Ontario Fertilizers Limited. Paterson, R. Downing.	East Centreville, N.B. Burlington, Ont. Queenston, Ont. Grimsby, Ont. Sinnose, Ont. Roy Bldg., Barrington St., Halifa N.S. West Toronto, Ont. 39 Water St., Saint John, N.B. Charlottetown, P.E.1. Royster Bldg., Norfolk, Va., U.S.

#### VI.-Reporting Companies-Concluded

Nature of Trade*	Name	Address
d.	St. Catharines Cold Storage & Forwarding Co., Ltd.	Davidson St., St. Catharines, Ont.
m.o.; e.	Schneiders Limited, J. M	321 Courtland Ave. E., Kitchener, Ont.
d. m.m.f.: i.	Scott & Peden Scottish Fertilizers Ltd	
m.s.a.; e.	Smith Agricultural Chemical Co	Columbus, Ohio. Hamilton, Ont.
m.m.f.; o.; i. m.m.f.; i.; e.	Stone, Wm., and Sons, Limited	
d.; i. d.; i.	Swift Canadian Company Limited	248 Keele St., Toronto, Ont.
d.; i.	United Fruit Companies of Nova Scotia., Ltd Vancouver Milling and Grain Co	Vancouver, B.C.
d.; i. d.; i.	Vineland Growers Co-operative Co., Ltd	93 King St. E., Toronto, Ont.
m.m.f.; i. m.m.f.; o.	Witts Fertilizer Works. Young and Company	

\*m.—Manufacturing ammonium phosphate, m.a.p.—Manufacturing ammonium phosphate, m.c.—Manufacturing eyanamide, 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.—Inports, d.—Dealer,

The Fertilizers Act.—The sale of fertilizers in Canada is controlled by the Fertilizers Act of 1922 and as amended in 1928. This Act comes under the Criminal Code of Canada and is effective throughout the Dominion. There are no provincial fertilizer laws in Canada. The Act is administered by the Fertilizer Division, Seed Branch, of the Department of Agriculture, and its principal provisions are briefly as follows:—

- 1. The registration of every fertilizer prior to its being offered for sale under a guaranteed analysis stated in minimum percentages of nitrogen, phosphoric acid and potash.
- 2. The vendors' guaranteed analysis as registered must be branded or marked on the container of the fertilizer or on the label attached thereto.
- 3. The brand names or names of fertilizer that may be used must conform with a definite nomenclature as provided by regulations under the Act.
- 4. The use of ingredients that may be injurious to soils and crops is prohibited.
- 5. Under a special regulation the importation of doubtful and low quality fertilizers is not permitted, except for manufacturing purposes.
- 6. The main purpose of the Fertilizers Act is to protect farmers and other buyers of fertilizer against fraud, so that the provisions of the Act require the sale of fertilizer under registered guaranteed analysis and this guaranteed analysis must be fully met, so that buyers will have delivered to them as much plant food as contracted for. The fertilizer inspectors inspect each fertilizer offered for sale one or more times each year. Samples are taken by the inspectors and submitted to an official analyst for report. The results of analysis thus reported are compared with the vendors' guarantee and when failure to meet this guarantee is proven the seizure and prosecution provisions of the Act are invoked with serious consequences to offenders. The results of analyses are published in an annual report of analyses by the Department of Agriculture so

that farmers and other buyers may know the record of each of the vendors in meeting their guaranteed analysis. Farmers are invited to use this annual

report of analyses as a guide when buying fertilizer.

During the year ending June 30, 1932, the inspectors under the Fertilizers Act found in the market some 333 different brands of registered fertilizers and 1,085 official samples were taken and analysed. In fairness to vendors it must be said that in recent years there has been a notable decrease in failures to meet guaranteed analyses and in other violations of the provisions of the Act. There are now few failures to meet guarantees either directly or by compensation. This improved condition is credited largely to the whole-hearted support of Canadian fertilizer manufacturers and importers in conforming with provisions of the Act and thus assisting the fertilizer inspectors in its enforcement. On the other hand, due to substantial improvements in the efficiency of modern fertilizer mixing machinery there can be little excuse for lack of uniform analysis and none for not meeting guaranteed analyses.

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 Aet (with regulations and amendments).
- 2. Annual Report on Fertilizer Analyses (small).
- 3. Manures and Fertilizers (Revised Edition).
- 4. Fertilizers and Their Use in Canada.
- 5. Manuring of Market Garden Crops.
- 6. Lime in Agriculture.
- 7. Seaweed as a Fertilizer.
- 8. Potash in Agriculture.
- 9. Composts as a Source of Humus and Nitrogen.
- 10. Fertilizers for the Potato Grop.
- 11. Fertilizers for the Lawn.
- 12. Artificial Manure.
- 13. Peat and Muck.
- 14. Alkali Soils.
- 15. The Influence of Grain Growing on the Nitrogen and Organic Matter Content of the Western Prairie Soils of Canada.
- 16. Western Prairie Soils.
- 17. Prince Edward Island Soils.
- 18. 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.
- 19. Some of the larger fertilizer manufacturers maintain educational bureaus which frequently publish very valuable information which may also be obtained free on application.



