DEPARTMENT OF THE INTERIOR, CANADA
Hon. W. J. Roche, Minister; W. W. Cory, C.M.G., Deputy-Minister
FORESTRY BRANCH—BULLETIN No. 46
R. H. Campbell, Director of Forestry.

FOREST PRODUCTS OF CANADA

1913

PULPWOOD

COMPILED BY
R. G. LEWIS, B.Sc. F.
ASSISTED BY W. GUY H. BOYCE

OTTAWA
GOVERNMENT PRINTING BUREAU
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62961—1

LETTER OF TRANSMITTAL

FORESTRY BRANCH,
DEPARTMENT OF THE INTERIOR,
OTTAWA, MAY 25, 1914.

SIR,—I beg to transmit herewith a report on the pulpwood manufactured in Canada during the calendar year 1913, and also of that exported from the Dominion during the year specified; also of the wood-pulp imported into Canada and that exported therefrom during the period. I would recommend its publication as Bulletin No. 46 of this Branch.

The report, like similar ones in previous years, contains an account of the quantity and value of the pulpwood produced in the Dominion according to the provinces in which it was produced, the species used and the method of manufacture, of the pulp exported from the Dominion and that imported, and of the pulpwood exported from the Dominion and the several provinces in an unmanufactured state.

The report contains also a map showing the location of the pulp-mills of the Dominion.

I have the honour to be, sir,
Your obedient servant,

R. H. CAMPBELL,
Director of Forestry.

W. W. CORY, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

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62961—2½

Pulpwood Consumption, 1913.

This bulletin is based on reports received from 48 firms operating pulpmills in Canada in 1913. Altogether 64 mills are operated by these firms as follows:—Quebec, 26 firms operating 34 mills; Ontario, 12 firms operating 17 mills; Nova Scotia, 4 firms operating 6 mills; New Brunswick, 4 firms operating 4 mills; and British Columbia, 2 firms operating 3 mills.

In addition to these active firms, reports were received from 10 firms whose mills were idle in 1913, and from 5 firms with mills under construction.

The 48 active firms reporting in 1913 consumed in their mills a total of 1,109,034 cords of pulpwood, valued at the mill at $7,243,368. A total of 1,035,030 cords of unmanufactured pulpwood, valued at $7,070,571, was exported from Canada to the United States during the same year, bringing the total production of pulpwood to 2,144,064 cords valued at $14,313,939.

PULPWOOD.

Table 1 shows the quantity, total value and average value per cord of the pulpwood used in each of the provinces of Canada in 1912 and 1913, and the number of active firms reporting in each case.

TABLE 1.

PULPWOOD, 1912 AND 1913, BY PROVINCES:—Quantity cut and total value 1913, average value 1912 and 1913, and per cent distribution, 1913.

Provinces.	No. of Active Firms Reporting	Quantity.		Per Cent Distribution.	Total value	Average Value per Cord.	
		1912.	1913.	1913.	1913.	1912.	1913.
		Cords.	Cords.		$	$ c.	$ c.
Canada	**48**	**866,042**	**1,109,034**	**100·0**	**7,243,368**	**6 02**	**6 53**
Quebec	26	578,855	629,934	56·8	4,107,689	5 85	6 52
Ontario	12	173,903	321,244	29·0	2,297,389	7 10	7 15
British Columbia	2	35,067	84,173	7·6	401,218	5 51	4 77
New Brunswick	4	52,041	53,121	4·8	342,243	5 52	6 44
Nova Scotia	4	26,173	20,562	1·8	94,829	4 32	4 61

The quantity of pulpwood consumed in Canadian pulp-mills in 1913 was an increase of 28.1 per cent over that of 1912. The average price of raw pulpwood at the mill increased by 51 cents a cord, making an increase of 38.9 per cent in the total value of the raw material used in this industry.

Quebec and Ontario still led the other provinces in 1913, as in 1912 British Columbia displaced Nova Scotia from fourth place on the list in 1912 and displaced New Brunswick from third place in 1913. This province now consumes 7.6 per cent of the pulpwood used in Canada, and will probably increase this

proportion in the future, as the pulp industry on the Pacific coast is still in its infancy. There was an increase in consumption in every province but Nova Scotia, where the closing of four mills resulted in a decrease of 21.4 per cent. The increases were:—Quebec, 8.8 per cent; Ontario, 84.7 per cent; British Columbia, 140.0 per cent; New Brunswick, 2.1 per cent.

The average cost of pulpwood at the mill in Canada in 1913, was $6.53, an increase of 8.5 per cent from 1912. The cost increased in Quebec, Ontario, New Brunswick and Nova Scotia and decreased in British Columbia.

Diagram No. 1 presents in graphic form the 1913 pulpwood consumption of the various provinces.

DIAGRAM No 1

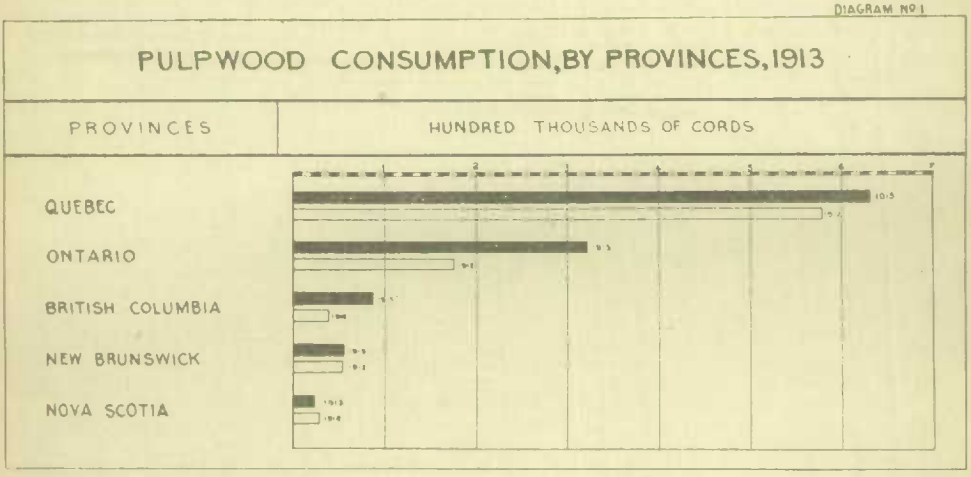


Table 2 shows the quantity, value, and per cent distribution of the kinds of wood used in making pulp in Canada in 1913.

TABLE 2.

PULPWOOD, 1912 AND 1913, BY KINDS OF WOOD: Quantity cut and total value 1913, average value 1912 and 1913, and per cent distribution, 1913.

Kinds of Wood.	Quantity.		Per Cent Distribution.	Total Value.	Average Value per Cord.	
	1912. Cords.	1913. Cords.	1913.	1913. $	1912. $ c.	1913. $ c.
Total	**866,042**	**1,109,034**	**100·0**	**7,243,368**	**6·02**	**6·53**
Spruce	677,747	754,858	68·1	5,104,221	6·09	6·76
Balsam Fir	164,587	283,292	25·5	1,806,911	5·81	6·38
Hemlock	19,178	47,360	4·3	201,480	5·53	4·25
Jack Pine	40	19,383	1·7	101,675	4·00	5·25
Poplar	4,405	4,141	0·4	29,081	6·21	7·02
Larch	85	.....	.....	.....	4 00	.....

Only five kinds of wood were used in the manufacture of pulp in 1913. Spruce headed the list with over two-thirds of the total. The percentage of balsam fir used in pulp-making has increased steadily as the prejudices against this wood have been overcome. In 1911 balsam fir formed 17.5 per cent of the

total; in 1912, 19.0 per cent ; and in 1913, 25.5 per cent. The wood has been found to make excellent pulp, equal in many cases to that made from spruce alone, but a prejudice existed against its use. Fir generally gives a 10 per cent lower yield of pulp than spruce, and is therefore not so desirable from the mill operator's standpoint.

Diagram No. 2 presents graphically the quantities of various woods used for pulp in 1913.

DIAGRAM No. 2

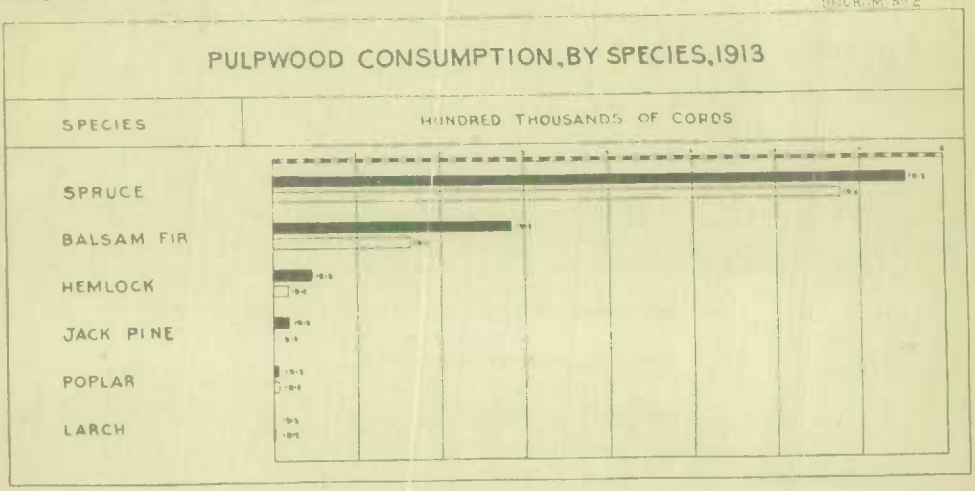


Table 3 shows the extent to which the five different kinds of wood were used in each province in 1913 in the different processes of pulp manufacture.

TABLE 3.

PULPWOOD, 1913, BY PROVINCES, KINDS OF WOOD AND PROCESSES: Quantity of wood used.

Provinces.	Total.	Spruce.	Balsam Fir.	Hemlock.	Jack Pine.	Poplar.
TOTAL.—ALL PROCESSES.						
	Cords.	Cords.	Cords.	Cords.	Cords.	Cords.
Canada	**1,109,034**	**754,858**	**283,292**	**47,360**	**19,383**	**4,141**
Quebec	629,934	389,523	222,738	705	13,327	3,641
Ontario	321,244	259,999	54,165	524	6,056	500
British Columbia	84,173	39,742	.....	44,431	.....	.....
New Brunswick	53,121	48,037	5,084	.....	.....	.....
Nova Scotia	20,562	17,557	1,305	1,700	.....	.....
MECHANICAL PROCESS.						
Canada	**600,216**	**398,429**	**182,413**	**18,894**	.....	**500**
Quebec	398,664	243,480	155,184	.....	.....	.....
Ontario	135,753	111,413	23,840	.....	.....	500
British Columbia	38,535	21,341	.....	17,194	.....	.....
Nova Scotia	20,562	17,557	1,305	1,700	.....	.....
New Brunswick	6,702	4,618	2,084	.....	.....	.....

SULPHITE PROCESS.

Canada	**367,105**	**263,228**	**74,116**	**27,761**	.....	**2,000**
Quebec	105,650	62,859	40,791	.....	.....	2,000
Ontario	175,398	144,549	30,325	524	.....	.....
British Columbia	45,638	18,401	.....	27,237	.....	.....
New Brunswick	40,419	37,419	3,000	.....	.....	.....

SULPHATE PROCESS.

Canada	**136,569**	**90,423**	**26,763**	.....	**19,383**	.....
Quebec	120,476	80,386	26,763	.....	13,327	.....
Ontario	10,093	4,037	.....	.....	6,056	.....
New Brunswick	6,000	6,000	.....	.....	.....	.....

SODA PROCESS.

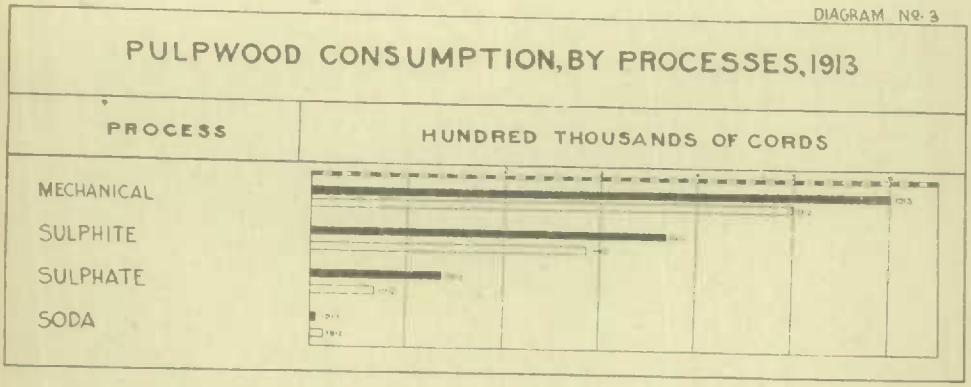
Canada	**5,144**	**2,798**	.....	**705**	.....	**1,641**
Quebec	5,144	2,798	.....	705	.....	1,641

The manufacture of ground-wood pulp still consumed over half (54.1 per cent) of the wood used for pulp-making in Canada. This percentage has been decreasing in the last few years. The sulphite process, the most important of the chemical processes, was used in converting a third of the total quantity of wood into pulp in 1913. This proportion is practically the same as in 1912.

The increased manufacture of Kraft papers has caused an increased demand for pulp made by the sulphate process. This process was used with 12.3 per cent of the pulpwood in 1913, as compared to 7.7 per cent in 1912. The manufacture of soda pulp has greatly decreased, only 5,144 cords of wood being used for this process.

Diagram No. 3. shows graphically the relative use of the various process in 1913.

DIAGRAM No. 3



MAP SHOWING PULP-MILLS IN CANADA — 1913

● ACTIVE MILLS

⊕ MILLS NOT OPERATING

BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
HUDSON BAY
ONTARIO
QUEBEC
NEWFOUNDLAND
NEW BRUNSWICK
NOVA SCOTIA
Prince Edward Isle.
UNITED STATES

Table 4 gives a summary of the information contained in the first three tables with some additional details.

TABLE 4.

PULPWOOD, 1913, BY PROVINCES, KINDS OF WOOD AND PROCESSES: Number of active firms reporting, quantity of pulpwood used, quantity of pulp produced, quantity of each kind of wood used in each process, total cost and average cost per cord.

	Total.	Quebec.	Ontario.	British Columbia.	New Brunswick.	Nova Scotia.
Number of Active Firms Reporting	48	26	12	2	4	4
Pulp Produced—						
Aggregate tons.	854,624	514,299	228,498	61,354	29,911	20,562
Mechanical "	600,216	398,664	135,753	38,535	6,702	20,562
Sulphite "	183,552	52,825	87,699	22,819	20,209	.....
Sulphate "	68,284	60,238	5,046	.....	3,000	.....
Soda "	2,572	2,572	.....	.....	.....	.....
Wood Used—						
Aggregate Cords	1,109,034	629,934	321,244	84,173	53,121	20,562
Aggregate cost	$7,243,368	$4,107,689	$2,297,389	$ 401,218	$ 342,243	$94,829
Average cost	$ 6 53	$ 6 52	$ 7 15	$ 4 77	$ 6 44	$ 4 61
Spruce—						
Total Cords	754,858	389,523	259,999	39,742	48,037	17,557
Total cost	$5,104,221	$2,623,437	$1,871,023	$ 214,607	$ 312,735	$ 82,419
Average cost	$ 6 76	$ 6 73	$ 7 20	$ 5 40	$ 6 51	$ 4 69
Mechanical Cords	398,409	243,480	111,413	21,341	4,618	17,557
Sulphite "	263,228	62,859	144,549	18,401	37,419	.....
Sulphate "	90,423	80,386	4,037	.....	6,000	.....
Soda "	2,798	2,798	.....	.....	.....	.....
Balsam Fir—						
Total Cords	283,292	222,738	54,165	.....	5,084	1,305
Total cost	$1,806,911	$1,374,315	$ 397,478	.....	$ 29,508	$ 5,610
Average cost	$ 6 38	$ 6 17	$ 7 34	.....	$ 5 80	$ 4 30
Mechanical Cords	182,413	155,184	23,840	.....	2,084	1,305
Sulphite "	74,116	40,791	30,325	.....	3,000	.....
Sulphate "	26,763	26,763	.....	.....	.....	.....
Hemlock—						
Total Cords	47,360	705	524	44,431	.....	1,700
Total cost	$ 201,480	$ 3,877	$ 4,192	$ 186,611	.....	$ 6,800
Average cost	$ 4 25	$ 5 50	$ 8 00	$ 4 20	.....	$ 4 00
Mechanical Cords	18,894	.....	.....	17,194	.....	1,700
Sulphite "	27,761	.....	524	27,237	.....	.....
Soda "	705	705	.....	.....	.....	.....
Jack Pine—						
Total Cords	19,383	13,327	6,056	.....	.....	.....
Total cost	$ 101,675	$ 80,479	$ 21,196	.....	.....	.....
Average cost	$ 5 25	$ 6 04	$ 3 50	.....	.....	.....
Sulphate Cords	19,383	13,327	6,056	.....	.....	.....
Poplar—						
Total Cords	4,141	3,641	500	.....	.....	.....
Total cost	$ 29,081	$ 25,581	$ 3,500	.....	.....	.....
Average cost	$ 7 02	$ 7 03	$ 7 00	.....	.....	.....
Mechanical Cords	500	.....	500	.....	.....	.....
Sulphite "	2,000	2,000	.....	.....	.....	.....
Soda "	1,641	1,641	.....	.....	.....	.....

The 48 active firms reporting pulp manufacture in 1913 operate altogether 64 different pulp-mills. These firms each used on an average 23,105 cords of wood, as compared to 18,042 in 1912. Each one of the individual 65 mills con-

sumed an average of 17,062 cords of pulpwood. The largest individual mills are situated in British Columbia where the average mill consumption was 28,058 cords. Quebec has the greatest number of mills, and the average consumption of these was 18,527 cords. The average mill consumption in the other provinces was as follows:—Ontario, 18,897 cords; New Brunswick, 13, 280 cords; and Nova Scotia, 5,140 cords.

The figures given in Table 4 for pulp produced are estimated from the quantities of pulpwood consumed and the method of manufacture. One cord of wood is assumed to produce one ton of ground-wood pulp or half a ton of chemical fibre, air-dry.*

So many conditions affect the average price of pulpwood that the figures given above cannot be taken too literally. Some mills purchase pulpwood on the open market and pay high prices for it, plus the cost of transportation. Other firms own their limits and pay only the cost of cutting and transporting the material. The prices, however, can be depended upon to indicate any important change from year to year.

TABLE 5.

CANADIAN PULPWOOD EXPORTED UNMANUFACTURED VS. THAT MANUFACTURED IN CANADA, 1912 AND 1913: Quantity, average value per cord and per cent distribution.

	1912.				1913.			
	Quantity.	Value.	Value per Cord.	Per Cent.	Quantity.	Value.	Value per Cord.	Per Cent.
	Cords.	$	$ c.		Cords.	$	$ c.	
Canada—								
Production	1,846,910	11,911,415	6 45	100·0	2,144,064	14,313,939	6 68	100·0
Manufacture	866,042	5,215,582	6 02	46·9	1,109,034	7,243,368	6 53	51·7
Export	980,868	6,695,833	6 82	53·1	1,035,030	7,070,571	6 83	48·3
Quebec—								
Production	1,330,670	8,371,923	6 29	100·0	1,432,594	9,495,165	6 63	100·0
Manufacture	578,855	3,386,705	5 85	43 5	629,934	4,107,689	6 52	44·0
Export	751,855	4,985,218	6 63	56·5	802,260	5,387,476	6 71	56·0
Ontario—								
Production	246,282	1,692,662	6 87	100·0	405,943	2,822,859	6 95	100·0
Manufacture	173,903	1,235,343	7 10	70·6	321,244	2,297,389	7 15	79·1
Export	72,379	457,319	6 32	29·4	84,699	525,470	6 20	20·9
New Brunswick—								
Production	202,942	1,492,567	7 35	100·0	194,674	1,449,525	7 45	100·0
Manufacture	52,041	287,060	5 52	25·7	53,121	342,243	6 44	27·3
Export	150,901	1,205,507	7 99	74·3	141,553	1,107,282	7 82	72·7
British Columbia—								
Production	35,067	193,265	5 51	100·0	84,242	402,428	4 78	100·0
Manufacture	35,067	193,265	5 51	100·0	84,173	401,218	4 77	99·9
Export	.....	.....	.....	.....	69	1,210	17 54	0·1
Nova Scotia—								
Production	31,949	160,998	5 04	100·0	26,611	143,962	5 41	100·0
Manufacture	26,176	113,209	4 32	81·9	20,562	94,829	4 61	77·3
Export	5,773	47,789	8 28	18·1	6,049	49,133	8 12	22·7

*Air-dry pulp is assumed to contain 10 per cent of moisture and 90 per cent "bone-dry" fibre.

Table 5 shows the extent to which Canada exports raw or unmanufactured pulpwood. The figures are based on information received from the Department of Customs for the calendar years 1911 and 1912.

In 1912 Canada manufactured 46.9 per cent of her pulpwood in her own mills. In 1913 this percentage increased to 51.7 per cent, and for the first time in the history of the industry more than half of the pulpwood produced in Canada was manufactured into pulp in Canadian pulp-mills.

During 1913 each province, except Nova Scotia, used an increased proportion of its pulpwood for home manufacture. The greatly increased production of pulpwood in British Columbia, together with the fact that this province manufactures practically all (99.9 per cent) of its pulpwood at home, is largely responsible for the increased proportion for the whole of Canada.

Laws exist in Ontario whose strict enforcement has checked the export of raw pulpwood. In this province 79.1 per cent of the pulpwood is used in home manufacture. The exports of raw pulpwood have increased in Nova Scotia from 0.3 per cent in 1911 to 22.7 per cent in 1913. Laws prohibiting the export of raw pulpwood from Crown lands in Quebec came into force on September 1, 1910. Since that time the export for the province has decreased steadily from 69.4 per cent in 1910 to 62.0 per cent in 1911, 56.5 per cent in 1912, and 56.0 per cent in 1913. This proportion probably represents approximately the proportion of pulpwood cut on Crown lands and privately owned limits, and may remain stable for some time. In New Brunswick the restrictive legislation of October 1, 1911, checked the export of raw material, and in 1913 a slight increase in the proportion of pulpwood consumed in the province is to be noted. This province still exports a greater proportion of its pulpwood in the raw state than any other.

Canada exported in 1913 to the United States 1,035,030 cords of unmanufactured pulpwood valued at $7,070,571, or at $6.83 a cord. Canadian pulp manufacturers operated 65 mills in that year. If the exported material had been manufactured into pulp in Canada it would have been sufficient to supply 60 mills each consuming 17,062 cords of pulpwood, the average consumption of Canada's 65 mills in 1913.

Canadian pulp-mill operators paid an average price of $6.53 per cord for their raw material. The exporters received only 20 cents a cord more than this for the wood sent to the United States.

This 1,035,030 cords of pulpwood if manufactured into pulp, would have made 1,035,030 tons of ground-wood, or 517,515 tons of chemical fibre. Ground-wood pulp is worth at least $14 a ton, which would give $14,490,420 as the value of the pulp made from the wood exported in 1913. Had this wood been made into chemical fibre at an average price of $38 a ton, its value would have been $19,665,570. In reality only $7,070,571 was received for this wood. The pulp industry lost the profit which could have been made by manufacturing this wood into pulp, and the country at large lost the money which would have represented the cost of manufacture in the form of wages, etc.

WOOD-PULP.

Table 6 shows the details of the export of manufactured wood-pulp from Canada in 1912 and 1913. The figures were furnished by the Customs Department.

TABLE 6.

EXPORT OF WOOD-PULP, 1912 and 1913: Quantity, total value, average value per ton, per cent distribution and countries to which exported.

Kinds of Pulp and Countries to which Exported.	1912.				1913.			
	Quantity.	Value.	Average Value per Ton.	Per Cent.	Quantity.	Value.	Average Value per Ton.	Per Cent.
	Tons.	$	$ c.		Tons.	$	$ c.	
Wood-pulp exported, aggregate	384,100	5,952,361	17 10	100·0	298,169	5,913,560	19 83	100·0
Total Mechanical Pulp	295,449	3,991,365	13 51	84·9	230,644	3,317,565	14 38	77·4
Total Chemical Pulp	52,651	1,960,996	37 24	15·1	67,525	2,595,995	38 44	22·6
Total to United States	218,936	4,525,569	20 67	62·9	198,110	4,471,939	22 57	66·4
Mechanical	167,448	2,607,589	15 57		137,922	2,150,227	15 59	
Chemical	51,488	1,917,980	37 25		60,188	2,321,712	38 57	
Total to Great Britain	127,981	1,384,893	10 82	36·8	92,916	1,172,750	12 62	31·2
Mechanical	127,945	1,383,026	10 81		92,722	1,167,338	12 59	
Chemical	36	1,867	51 86		194	5,412	27 90	
Total to Japan	1,046	36,665	35 05	0·3	7,031	265,071	37 70	2·4
Mechanical	56	750	13 39		.....	.....	.....	.....
Chemical	990	35,915	36 28		7,031	265,071	37 70	
Total to China	116	4,294	37 02	*	112	3,800	33 93	*
Chemical	116	4,294	37 02	.....	112	3,800	33 93	
Total to New Zealand	21	940	44 76	*	.....	.....	.....	.....
Chemical	21	940	44 76		.....	.....	.....	.....

*Less than one tenth of one per cent.

The export of wood-pulp from Canada decreased from 1912 to 1913 by 22.4 per cent, in spite of an increase of 25.2 per cent in the quantity manufactured. This would seem to indicate increased activity in the domestic manufacture of paper. Decreases are to be noted in the exports of pulp to the United States, Great Britain and China. New Zealand did not import Canadian pulp in 1913. The only increase reported was in the export of chemical pulp to Japan. The United States still takes about two-thirds of Canada's output of pulp, of which about 70 per cent is ground-wood. Great Britain takes a little less than one-third of the total, and her imports are almost entirely ground-wood or mechanical pulp. The exports to Japan and China in 1913 were of chemical fibre only. Altogether 77.4 per cent of the pulp exported was ground-wood, and the remaining 22.6 per cent chemical fibre.

The average price of ground-wood pulp increased by 87 cents and that of chemical fibre by $1.20, from 1912 to 1913. The price of mechanical pulp exported to the United States increased by only 2 cents a ton, while the increase in price of that sent to Great Britain was $1.78. The price of chemical fibre exported to the United States increased by $1.32, and of all fibre to Japan by $2.65. The chemical pulp exported to Great Britain was valued at a little more than half the value in the previous year. A reduction in price of $3.09 was also reported for the pulp exported to China.

Table 7 gives the details of the imports of wood-pulp into Canada from various countries. The figures were supplied by the Customs Department.

TABLE 7.

IMPORTS OF WOOD-PULP, 1912 and 1913: Total value, per cent distribution and countries from which imported.

Countries from which imported.	1912.		1913.	
	Value.	Per Cent.	Value.	Per Cent.
	$		$	
Total Value of Imports	**172,797**	**100·0**	**356,862**	**100·0**
United States	100,234	58·0	303,543	85·1
Sweden	64,419	37·3	36,843	10·3
Great Britain	4,764	2·7	10,197	2·8
Germany	2,546	1·5	3,886	1·1
Norway	.....	.....	1,387	0·4
Switzerland	.....	.....	1,006	0·3
Austria-Hungary	834	0·5	.....	.....

The imports of wood-pulp into Canada in 1913 were valued at $356,862. as compared to $172,797 for 1912. This is an increase of over 100 per cent, the imports from the United States having more than tripled during 1913. The importations from Great Britain more than doubled, and those from Germany increased by over half those in 1912. The importations of wood-pulp from Sweden decreased by 42.8 per cent. Pulp was imported from Norway and Switzerland in 1913, but not in the previous year. No pulp was imported from Austria Hungary in 1913. The United States in 1913 supplied over four-fifths of the total (85.1 per cent), as compared to a little over a half (58.0 p.c.) in 1912.

APPENDIX.

List of Active Canadian Pulp-mills.

The following is a list of firms operating pulp-mills in Canada in 1913 to whom the Forestry Branch is indebted for the data upon which this bulletin is compiled:

QUEBEC.

Basin Electric Light and Power Co., Ltd., Montmagny—Ground-wood Pulp.

Belgo-Canadian Pulp and Paper Company, Ltd., Shawenegan Falls—Ground-wood Pulp.

Brompton Pulp and Paper Company, Ltd., Bromptonville—Ground-wood Pulp.

Brompton Pulp and Paper Company, Ltd., East Angus (2 mills)—Ground-wood Pulp and Sulphite Fibre.

Canada Paper Company, Ltd., Windsor Mills (2 mills)—Ground-wood Pulp and Soda Fibre.

Chicoutimi Pulp Company, Chicoutimi—Ground-wood Pulp.

Dalmas Pulp Company, Dalmas—Ground-wood Pulp.

Dominion Paper Company, Kingsey Falls (2 mills), (office Montreal)—Ground-wood Pulp and Sulphate Fibre.

Eddy, E. B., Co., Ltd., Hull (2 mills)—Ground-wood Pulp and Sulphite Fibre.

Jacques Cartier Pulp and Paper Company, Pont Rouge (office Montreal)—Ground-wood Pulp.

Jonquieres Pulp Company, Ltd., Jonquieres (2 mills)—Ground-wood Pulp and Sulphite Fibre.

Lake Megantic Pulp Company, Lake Megantic—Ground-wood Pulp.

Laurentide Company, Limited, Grand Mère, (2 mills)—Ground-wood Pulp and Sulphite Fibre.

Maclaren, James, Company, Ltd., Buckingham—Ground-wood Pulp.

Menier Estate, Ellis Bay, Anticosti Island—Ground-wood Pulp.

News Pulp and Paper Company, Ltd., St. Raymond (office Montreal), —Ground-wood Pulp.

Nicolet Falls Pulp and Lumber Company, Nicolet Falls—Ground-wood Pulp.

North Shore Power Railway and Navigation Co., Clarke City—Ground-wood Pulp.

Ouiatchouan Falls Paper Company, Ouiatchouan Falls (office Chicoutimi)——Ground-wood Pulp.

Price Brothers and Company, Ltd., Kenogami (office, Jonquieres) (2 mills)—Ground-wood Pulp and Sulphite Fibre.

Price-Porritt Pulp and Paper Company, Rimouski—Ground-wood Pulp.

Quebec and St. Maurice Industrial Company, La Tuque (Office Portland, Maine)—Sulphate Fibre.

River du Loup Pulp Company, Ltd., Fraserville—Ground-wood Pulp.

Soucy, F. Florentin, St. Antonin (office, Old Lake Road)—Ground-wood Pulp.

Union Bag and Paper Company, Cap Magdeleine (office New York, N.Y.) —Ground-wood Pulp.

Wayagamack Pulp and Paper Company, Ltd., Three Rivers—Sulphate Fibre.

Wilson, J. C., Ltd., St. Jerome—Ground-wood Pulp.

ONTARIO.

Bronson Company, Ottawa—Ground-wood Pulp.

Booth, J. R., Ottawa (2 Mills)—Ground-wood Pulp and Sulphite Fibre.

Colonial Wood Products Company, Ltd., Thorold—Ground-wood Pulp.

Davy Pulp and Paper Company, Ltd., Thorold—Ground-wood Pulp.

Dryden Timber and Power Company, Ltd., Dryden—Sulphate Fibre.

Foley-Rieger Pulp and Paper Company, Ltd., Thorold—Ground-wood Pulp.

Lake Superior Paper Company, Ltd., Sault Ste. Marie (2 mills) (now Spanish River Pulp and Paper Mills, Ltd.)—Ground-wood Pulp and Sulphite Fibre.

Northumberland Paper and Electric Company, Ltd., Campbellford—Ground-wood Pulp.

Ontario Paper Company, Ltd., Thorold—Ground-wood Pulp.

Toronto Paper Manufacturing Company, Ltd., Cornwall—Sulphite Fibre.

Riordon Pulp and Paper Company, Ltd., Hawkesbury—Sulphite Fibre.

Riordon Pulp and Paper Company, Ltd., Merritton—Sulphite Fibre.

Spanish River Pulp and Paper Mills, Ltd., Sturgeon Falls (2 mills)—Ground-wood Pulp and Sulphite Fibre.

Spanish River Pulp and Paper Mills, Ltd., Espanola—Ground-wood Pulp.
Thorold Pulp Company, Ltd., Thorold—Ground-wood Pulp.

NOVA SCOTIA.

Campbell Lumber Company, Ltd., Weymouth, (2 mills)—Ground-wood Pulp.
Clyde River Pulp and Paper Company, Ltd., Clyde River—Ground-wood Pulp.
La Have Pulp Co., Ltd., New Germany (office Bridgewater)—Ground-wood Pulp.
MacLeod Pulp Company, Ltd., Milton (2 mills) (office, Liverpool)—Ground-wood Pulp.

NEW BRUNSWICK.

Dominion Pulp Company, Ltd., Chatham—Sulphite Fibre.
New Brunswick Pulp and Paper Co., Ltd., Millerton—Sulphate Fibre.
Partington, Edward, Pulp and Paper Company, Ltd., St. John—Sulphite Fibre.
St. George Pulp and Paper Company, Ltd., St. George—Ground-wood Pulp.

BRITISH COLUMBIA.

British Columbia Sulphite Fibre Company, Ltd., Mill Creek, Howe Sound, (office, Vancouver)—Sulphite Fibre.
Powell River Company, Ltd., Powell River (2 mills)—Ground-wood Pulp and Sulphite Fibre.