

GROWTH OF THE PULP AND PAPER INDUSTRY

OUTPUT FIGURES GIVEN IN REPORT SHOW INCREASE

Statistics Reveal Thriving Condition of Business whose Production was Valued at almost One Hundred Millions in 1917.

The report on the pulp and paper industry of Canada in the Census of Industry series, just issued by the Dominion Bureau of Statistics, shows a considerable growth when the statistics in the present report are compared with those of 1915.

In 1915 the number of active mills was 80, and the value of production \$40,348,001. In 1917 there were 83 mills in operation, with a production of \$96,340,327, an increase in the latter year of nearly 140 per cent, as shown in the report.

Another important measure of growth, according to the report, is found in the consumption of pulp-wood which in 1915 was 1,405,836, and in 1917 was 2,104,334 cords, or an increase of nearly 50 per cent during the same period. The total cut of pulpwood was 2,355,550 cords in 1915 and 3,122,188 cords in 1917, exports of pulpwood having risen from 949,714 cords in 1915, to 1,017,854 cords in 1917.

The production of wood-pulp in Canada in 1917 in all classes of mills amounted to 1,464,308 tons, compared with 1,296,084 tons in 1916 and 1,074,805 tons in 1915. Of the 1917 product, 804,472 tons were used by the producing mills in the manufacture of paper, while 659,836 tons were made for sale. The amount received for pulp sold was \$32,824,626, or an average price per ton for all classes of pulp of \$49.75. The average value of the different kinds of pulp made for sale was \$28.06 for ground wood, \$72.31 for sulphite fibre, and \$68.26 for sulphate fibre. The export price of mechanical or ground wood pulp in 1917 was \$28.32 and of chemical pulp, \$73.01. The value of the entire output of wood-pulp if calculated at the average price per ton realized for that portion which was sold would be \$72,849,323.

RAW MATERIALS

The consumption of pulp-wood in all mills making pulp, whether purchased or cut from own limits, was 2,104,334 cords of the value of \$18,817,483 in 1917 as compared with 1,764,912 cords valued at \$13,104,458 in 1916 and 1,405,836 cords valued at \$9,426,217 in 1915, or an increase of 688,498 cords, or nearly 49.7 per cent, in the two year period. The average price per cord was \$6.71 in 1915, \$7.42 in 1916, and \$8.94 in 1917, an increase of \$2.23 per cord or nearly 33.2 per cent in the two years.

The order of importance of the five provinces remained the same as in 1916, Quebec leading with 1,109,869 cords or over half the total. Ontario was second with 735,691 cords or over a third of the total. British Columbia was third with 134,814 cords, New Brunswick fourth with 105,586 cords, and Nova Scotia last with 18,374 cords. The quantity of pulp-wood consumed in each province is an increase in every case as is the average value per cord of wood.

Spruce continues to lead all classes of wood, being 79.7 per cent of the total in 1917, balsam fir and hemlock being next in order of importance. These three woods all show increases from 1916. Poplar and pine show decreases from the preceding year and tamarack and cedar are reported from British Columbia for the first time in several years.

The greatest proportion of the wood used still goes into the manufacture of ground wood-pulp although the three chemical processes are making heavier demands on the wood supply each year. In 1915, 52.9 per cent of the wood was used in making ground wood-pulp. In

1916 this proportion decreased to 46.9 per cent and a further decrease to 45.8 per cent is recorded for 1917. The increase in the proportion of wood used for the manufacture of chemical pulp does not represent an equal increase in the production of pulp by these methods. Where over a ton of pulp per cord of wood is produced on the average by the mechanical process, only 1,105 pounds are produced by the sulphate process, 1,063 by the sulphite process, and only 930 pounds by the soda process.

The mechanical process does not demand the use of the most expensive grades of wood, and the average value, \$8.07 per cord, is therefore the lowest on the list. Certain species such as jack pine which cannot be used to advantage in other processes are useful in making kraft pulp and the average value of wood used in the sulphate process, \$8.10 per cord, is also low. The best quality of pulp-wood goes into the manufacture of sulphite at \$10.18, and soda pulp at \$10.07 per cord.

For the mechanical process the highest average number of pounds of pulp produced per cord of wood was 2,305 in British Columbia and the lowest 1,818 in Nova Scotia the average for the Dominion being 2,043 pounds per cord. By the sulphite process in the manufacture of paper the highest average 1,137 pounds is again found in British Columbia, and lowest 961 pounds in Ontario, the average for the Dominion being 1,063 pounds. The sulphate process shows highest in Ontario with 1,176 pounds and lowest in Quebec with 1,063 pounds, the average for the Dominion being 1,105 pounds. The soda process shows the lowest production, viz. 930 pounds per cord.

The quantity and value of pulp used in

the manufacture of paper, whether produced or purchased, includes ground wood, 617,029 tons with a cost valuation of \$9,984,597; sulphite fibre, 239,129 tons valued at \$10,613,617; sulphate fibre, 28,822 tons valued at \$1,773,029; and soda fibre, 6,001 tons of a value of \$448,746. The value of other materials used, such as rags, old or waste paper, alum, etc., was \$5,797,445. The total cost of all materials used was \$28,617,434.

CAPITAL INVESTED.

The report shows a total capital investment of \$186,787,405, of which \$84,609,584 was in Quebec, \$72,006,972 in Ontario, and \$22,584,652 in British Columbia. Land and buildings represent an investment of \$84,461,837, machinery of \$59,266,596, whilst working capital was \$15,156,506.

Over 76 per cent of the total investment is in the class of combined mills, 19 per cent in mills producing pulp only and nearly 5 per cent in mills making paper only.

Each province shows an increase in capital over 1915 except Nova Scotia,

where the decrease amounted to \$199,030. British Columbia's capital investment rose from \$8,344,416 in 1915 to \$22,584,652 in 1917; New Brunswick from \$3,927,858 to \$7,136,277; Ontario from \$57,173,623 to \$72,006,972, and Quebec from \$63,641,956 to \$84,609,584.

The average total capital invested in pulp mills was \$1,057,610; in pulp and paper mills, \$6,192,365; and in paper mills, \$323,241.

The total yearly capacity of mills making ground wood-pulp in the Dominion was 1,088,431 tons, dry weight, of which Quebec's equipment represented 601,436 tons or 55.2 per cent. Ontario represented 357,250 tons, or 32.8 per cent, followed by British Columbia with 100,600 tons, or 9.2 per cent, New Brunswick with 21,145 tons or 1.9 per cent, and Nova Scotia with 8,000 tons or less than one per cent. The actual output of ground wood-pulp in 1917 was 923,731 tons.

The quantities and values of the different kinds of paper products are shown by the following table:—

	Tons.	Value.
Newsprint paper	689,847	\$38,868,084
Book and writing paper	48,141	9,310,138
Wrapping paper	50,360	5,646,750
Boards	54,080	3,543,164
Other paper products	11,261	1,487,122
All other products (value only)	3,438,107

The average value per ton for each group was as follows: Newsprint, \$56.35; book and writing papers, \$193.40; wrapping paper, \$112.12;

boards, \$65.50; and other paper products, \$132.06.

Capital investment in pulp and paper mills for the years mentioned are summarized in the report as follows:—

	1915.	1917.	Increase.
Land, buildings and fixtures	\$ 74,383,608	\$84,461,837	\$10,078,229
Machinery and tools	31,856,265	59,266,596	27,410,331
Materials on hand, stocks in process, etc.	17,254,317	27,902,466	10,648,149
Cash, trading and operating accounts, etc.	10,242,613	15,156,506	4,913,893
Totals	\$133,736,803	\$186,787,405	\$53,050,602

IMPORTS AND EXPORTS.

The total quantity of wood pulp exported in 1917 was 511,803 tons of the value of \$26,129,906, of which 250,043 tons valued at \$7,082,206 was mechanical, and 261,760 tons valued at \$19,110,700 was chemical pulp. There was a decided falling off in the exports of

mechanical pulp, amounting to 79,709 tons, though the value shows an increase of \$1,432,841. On the other hand, there was a marked increase in the export of chemical pulp, amounting to 32,613 tons, and a correspondingly marked increase in the value amounting to \$7,415,823. More than 92.5 per cent of the quantity and 88 per cent of the value of all pulp was exported to the United States. The average value per ton for all kinds of pulp exported was \$51.17 in 1917, as compared with \$31.03 in 1916 and \$25.48 in 1915. Mechanical pulp rose from \$15.67 per ton in 1915 to \$17.13 in 1916 and \$28.32 in 1917. Chemical pulp, which was \$38.36 per ton in 1915, rose to \$51.04 in 1916 and \$73.01 in 1917.

No pulpwood is imported into Canada.

The total value of paper imported increased from \$2,402,557 in 1915 to \$4,204,968 in 1917. The total value of paper exported in 1915 was \$18,430,013, while the total value exported in 1917 was \$35,774,636. That is, our imports of paper in 1917 increased in value over those of 1915 by \$1,802,411, or by 75 per cent, while our exports of paper in the same period increased by \$17,344,623, or by 94.1 per cent.

Pulp Mills in Canada.

The report on the pulp and paper industry prepared by the Dominion Bureau of Statistics shows that during the year 1918 there were in operation in Canada 101 mills producing pulp and paper, 37 of which were in Ontario, 45 in Quebec, 7 in Nova Scotia, 6 in New Brunswick, and 6 in British Columbia.

U.S. Tourists' Prospect.

Canada should at once pay attention to the big stream of American tourists who, according to the information received by the Canadian Trade Commission at Ottawa, will this year be unable to go to Europe, Mexico or South America, and who do not want to go to their own West.

Buy Canadian Goods.

The Canadian Trade Commission believes that buying Canadian-made goods at home, together with more exporting, will solve the war-debt problem.

PRODUCTION, MANUFACTURE AND EXPORTS OF PULP-WOOD COMPARED FOR THE CALENDAR YEARS 1915, 1916 AND 1917 BY PROVINCES.

Schedule.	1915.			1916.		
	Quantity.	Value.	Value per	Quantity.	Value.	Value per
<i>Canada.</i>	Cords.	\$	\$	Cords.	\$	\$
Production	2,355,550	15,590,330	6.62	2,833,119	19,971,127	7.05
Manufacture	1,405,836	9,426,217	6.71	1,764,912	13,104,458	7.42
Export	949,714	6,164,113	6.49	1,068,207	6,866,669	6.43
<i>Quebec.</i>						
Production	1,322,231	8,348,525	6.31	1,711,151	12,037,603	7.03
Manufacture	697,962	4,237,083	6.06	924,272	6,840,489	7.40
Export	624,269	4,111,492	6.59	786,879	5,197,114	6.60
<i>Ontario.</i>						
Production	682,866	5,063,618	7.42	787,357	5,931,450	7.53
Manufacture	480,627	3,806,804	7.92	637,612	5,016,425	7.87
Export	202,239	11,256,814	6.21	149,745	915,025	6.1
<i>New Brunswick.</i>						
Production	235,738	1,503,346	6.38	207,324	1,317,998	6.36
Manufacture	115,842	732,521	6.32	79,594	591,705	7.43
Export	119,896	770,875	6.43	127,730	726,293	5.69
<i>British Columbia.</i>						
Production	90,535	550,809	6.08	109,115	580,153	5.32
Manufacture	90,535	550,809	6.08	108,997	579,799	5.32
Export	118	354	3.54
<i>Nova Scotia.</i>						
Production	24,180	124,032	5.13	18,172	103,923	5.72
Manufacture	20,870	99,050	4.75	14,437	76,040	5.27
Export	3,310	24,982	7.55	3,735	27,883	7.47