CANADA

DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS

FOREST PRODUCTS BRANCH

SUMMARY
of
FOREST PRODUCTION OPERATIONS IN THE WOODS
in
CANADA
1927

Published by Authority of the Hon. James Malcolm, M.P.,
Minister of Trade and Commerce

OTTAWA

1929

DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS - CANADA
FOREST PRODUCTS BRANCH

Dominion Statistician: R. H. Coats, B.A., F.S.S., (Hon.), F.R.S.C.
Forest Products Statistics: R. G. Lewis, B.Sc.F.

SUMMARY OF FOREST PRODUCTION, 1927

Ottawa, April 22, 1929.- An estimate of the total forest production of Canada for 1927 has just been completed by the Forest Products Branch of the Dominion Bureau of Statistics. The estimate includes all the products of operations in the woods, the unmanufactured materials cut in Canadian forests during the year.

An attempt has also been made to estimate the extent to which our forests are being depleted annually in the process of exploiting these materials. For this purpose converting factors based on actual measurements have been used. Each of these factors represents in cubic feet the quantity of standing timber that must be cut in the forest in order to produce one unit of the material in question, based on the total cubic contents of the tree. By the use of these factors it has been estimated that our total forest production in 1927 involved the cutting of 2,880,137,911 cubic feet of standing timber. This constitutes only the depletion for use and to it must be added the volume of material destroyed by fire, insects, fungi, windfall and other destructive agencies which would bring the total depletion to more than 4,400,000,000 cubic feet per annum.

The latest available estimate places Canada's forest resources at 224,304 million cubic feet of standing timber which is capable of yielding 424,637 million feet board measure of sawn lumber and 1,121,993 thousand cords of pulpwood, ties, poles and other smaller materials. With the population of the Dominion estimated at 9,519,000 in 1927 this represents a per capita supply of 23,564 cubic feet of standing timber to provide an annual per capita consumption for use alone of over 269 cubic feet.

A total depletion of 4,400,000,000 cubic feet per annum does not necessarily imply that our total resources of 224,304,000,000 cubic feet are reduced by that amount every year and that the supply will therefore be exhausted in fifty years. Estimating the probable duration of our supply of forest products is not a matter of simple arithmetic. The rate of utilization is far from constant. It tends to increase with the discovery of new uses for wood, the increase in our population and the increase in the demand for forest products from other countries whose supplies have been reduced to a greater extent than our own. The rate of destruction from fires and other agencies is also very uncertain but tends to increase with the increase of population and the extension of settlement unless measures are taken to prevent this tendency.

On the other hand there is a steady increase in volume taking place in all healthy stands of timber due to annual growth. By the application of scientific forest management this annual growth can be stimulated and could be made to take place over our entire area of potential forest land. If all the land in Canada which is better suited for the growing of timber than for any other purpose were under intensive forest management on a sustained yield basis it would furnish enough timber and forest products annually in perpetuity to supply the needs of a much larger population than we have at present with a sufficient surplus for profitable exportation.

There is reason to believe that in time the loss due to forest fires will be practically eliminated once the general public realizes the necessity of precaution, as ninety per cent of forest fires are due to human carelessness. Scientific methods of controlling insect and fungus damage are being rapidly developed and in time the depletion will consist almost entirely of material cut for use.

The use of substitutes for wood may tend to reduce consumption but this is usually exaggerated as a factor in forest conservation. The increasing scarcity of wood will result in increasing prices which will tend to limit consumption. It is now a profitable investment to plant trees in Canada under certain conditions and the planting and management of forest lands will become increasingly profitable as supplies decrease and prices advance, but before this planting and management can possibly result in forest crops sufficient for our needs we will pass through a period of lean years whose duration and intensity will depend entirely on how soon and how efficiently we apply scientific management to our existing forests.

As far as the value of forest products is concerned logs and bolts for further manufacture in Canadian mills headed the list in 1927 with almost seventy million dollars. These logs and bolts also head the lists, as far as value is concerned, in the provinces of British Columbia, and New Brunswick. Pulpwood for use in

SUMMARY OF FOREST PRODUCTION, 1927.

Canada's pulp and paper mills comes second on the list for the Dominion with a total value exceeding fifty-four millions and is the most valuable item of forest production in the provinces of Ontario and Quebec. Firewood, with a total of over forty million dollars comes third on the list for the Dominion as a whole but heads the list in Saskatchewan, Alberta, Nova Scotia and Prince Edward Island. Pulpwood for export, with a total value of over fifteen millions; hewn railway ties with over six millions; logs for export with over five millions; square timber with over two and three quarter millions and telephone poles with almost four million dollars are among the more important of the other items. The total estimated value of all these primary forest products is $205,631,727, an increase of .6 per cent over the estimated value for 1926.

Comparing forest products on the basis of equivalent volume of standing timber, we find that logs and other raw materials for sawmilling in Canada head the list for the Dominion as a whole and form the most important items in British Columbia and New Brunswick. The production of firewood is the next most important item in this respect, but as this is made up chiefly of inferior material of smaller sizes than in the case of saw logs, it is a less serious drain on our forest resources and often forms a valuable outlet for material that might otherwise be left in the woods to increase the fire menace. Firewood heads the lists as far as volume is concerned in the provinces of Quebec, Ontario, Nova Scotia, Prince Edward Island and the three Prairie Provinces. Pulpwood for use in Canadian pulp mills is the next most important item for the Dominion and comes second in Quebec and Ontario and third in New Brunswick. Other forest products in order of importance from the volume standpoint are pulpwood for export, hewn railway ties, logs for export, square timber for export, posts, round mining timber, poles, rails and wood for distillation.

The province of Quebec heads the list for forest production, both for value of material produced and for its equivalent in standing timber. It heads the lists in the production of pulpwood both for domestic use and for export and also in the production of firewood, fencing materials and miscellaneous products and exports. It comes second on the list of provinces for the production of square timber and wood for distillation. Ontario is the second most important province on the list for total value of production and third for volume of production. It leads in wood distillation and takes second place in the production of logs and bolts for saw mills, pulpwood for domestic use and export, firewood, poles and miscellaneous exports. British Columbia comes third on the list for total value of production and second for volume, but leads in the production of logs and bolts for domestic use and export, square timber and poles. This province comes second on the list in the production of hewn ties and round mining timber. New Brunswick and Nova Scotia come next in order, being important producers of logs, pulpwood and firewood. Nova Scotia is the most important producer of round mining timber in the Dominion. Forest production in the three Prairie Provinces and Prince Edward Island is made up chiefly of firewood, logs and fencing materials together with pulpwood [illegible] and round mining timber in Alberta.

Under the item "Miscellaneous products" are included piling, boom timber, masts, spars, knees and futtocks, tan bark and minor products. Under "Miscellaneous exports" are included stave, shingle and lath bolts, match blocks, masts, etc. piling, hop, and hoop poles and tanbark.

Reports received from about 600 of the more important logging concerns operating in Canada in 1927 account for over a third of the total estimated cut. Using these reports as a basis it has been estimated that operations in the woods in Canada in 1927 involved the investment of $166,000,000 in logging equipment most of which is employed in the industry in British Columbia where power logging has reached its highest development. These operations are estimated to give employment for a part of the year to more than 86,000 men and to distribute over $74,000,000 in wages and salaries. The largest number of employees were reported from Quebec, Ontario and British Columbia in the order mentioned.

Table 4 shows forest production in 1927 from a different angle giving first under "Total production" the quantities of forest products in the units of measurement commonly used in the industry and in the adjacent column, these same quantities converted into their equivalent volume in standing timber. The third column in each case gives the estimated values of these products.

The next three columns under "Home consumption" include similar details for material which was used in Canada in the form in which it was taken from the woods or imported, together with material subjected to some further manufacturing process in Canada before being sold or exported. The third section of the table under "Exportation" shows the details in connection with the exports from Canada of raw or unmanufactured forest products for use or further manufacture in other countries. The final portion of

the table gives the details of our imports of raw forest products which are used in Canada in the form in which they are imported or are further manufactured in some Canadian industry.

Out of a total of over 2,880 million cubic feet of standing timber cut in Canada in 1927 about 88.4 per cent was retained in the country for immediate use or as raw material for some Canadian industry, and 11.6 per cent was exported in a more or less unmanufactured form.

Manufacturers of commodities whose chief component material is wood or paper depend on the products of the forest as their principal raw material. This group of wood and paper using industries in Canada ranks first among similar groups of industries in capital investment, number of employees, wages and salaries paid and net value of products. In gross value of production they are exceeded only by the manufacturers of vegetable products.

In 1927 the total value of capital invested in the wood and paper group of industries was $1,023,301,749. The employees numbered 150,550 and were paid $167,995,734 in wages and salaries. The net value of production or value added by manufacture was $357,786,924 and the gross value $629,567,156.

There are a number of other industries in which wood and paper are important raw materials although they are not the principal component materials used and still others in which wood and paper are used indirectly in connection with the manufacture of articles which do not contain wood or paper as a component part. Practically no form of industrial activity is entirely independent of the use of forest products, directly or indirectly.

The logs and bolts were converted into more than four billion feet board measure of sawn lumber and other sawmill products with a value added by manufacture of over fifty-six million dollars. Less than eight per cent of the saw-logs cut in Canada in 1927 were exported unmanufactured.

Of the sawn lumber manufactured about half was exported but a large part of this was planed or matched after leaving the sawmill and considerable value added to it in this way before being exported. The remaining half of the lumber sawn was used in the rough for structural work in Canada or went into Canadian wood-using industries as the raw material in the manufacture of sash, doors and planing mill products, furniture, vehicles, boxes, etc.

About a quarter of the pulpwood cut was exported before being manufactured into pulp but three quarters of this exported material was rossed or barked pulpwood whose value had been increased thereby to the extent of two dollars or more a cord. Three quarters of our total cut of pulpwood was used as the principal raw material in the pulp and paper industry, the most important of all the manufacturing industries in Canada. In pulp-making, the first stage in this industry, the value added to the raw pulpwood by manufacture amounted to over fifty million dollars in 1927. Forty per cent of this pulp was exported and the remainder was made into paper in Canada with a value added in this stage of the process of over eighty-five million dollars. The value added by manufacture in the pulp and paper industry as a whole was about a hundred and thirty-five million dollars. The square timber made in Canada was practically all exported and the wood used for distillation was all consumed in Canada.

The firewood, hewn ties, poles, round mining timber, posts and rails were largely used locally and when exported do not represent an economic loss as they are used in the form in which they leave the woods and would not have received any further manufacturing if they had been retained in Canada.

The economic loss to Canada involved in the exportation of unmanufactured or incompletely manufactured forest products for further manufacture in other countries is a serious matter but the loss was relatively small in comparison to our total forest production in 1927. The loss was most serious in connection with the exportation of the approximate equivalent to 50,426,000 cubic feet of rough pulpwood, 80,968,000 cubic feet of saw-logs and 27,656,000 cubic feet of square timber, making a total of 159,050,000 cubic feet of standing timber or about 5.5 per cent of the cut in 1927. The loss involved in this connection is partly offset by the importation into Canada of similar unmanufactured products for use as raw materials in Canadian mills.

SUMMARY OF FOREST PRODUCTION, 1927.

A total of 2,565,916,982 cubic feet of home grown and imported forest products valued at $178,299,699 were consumed in Canada in 1927 including wood consumed in the form in which it was taken from the woods and wood used as raw material in Canadian industry. The proportion which this material forms of our total cut is tending to increase while the proportion of material exported in the raw or incompletely manufactured state is decreasing annually.

ANNUAL SUMMARY OF FOREST PRODUCTION - Operations in the Woods, 1926 and 1927.

Table 1.- Forest Production, by Products, 1926 and 1927.

Products	Unit of Measurement used	Quantity reported or estimated		Per cent increase or Decrease over 1926	Converting factor	Equivalent volume in standing timber		Total Value	
		1926	1927			1926	1927	1926	1927
						cubic feet	cubic feet	$	$
TOTAL.....		-	-	-	-	2,838,105,611	2,880,137,911	204,436,328	205,631,727
Logs and bolts, sawn.....	M ft.b.m.	4,424,543	4,325,313	- 2.2	219	968,974,917	947,243,547	70,982,675	69,215,284
Pulpwood used.....	cords	4,229,567	4,387,687	+ 3.7	117	494,859,339	513,359,379	54,033,273	54,582,190
Firewood.....	cords	9,279,010	9,406,485	+ 1.4	95	881,505,950	893,616,075	40,032,804	40,582,774
Pulpwood exported.....	cords	1,391,738	1,541,769	+ 10.8	117	162,833,346	180,386,973	14,067,030	15,702,705
Hewn railway ties.....	number	9,803,214	9,637,786	- 1.7	12	117,638,568	115,653,432	6,792,087	6,242,865
Logs exported.....	M ft.b.m.	322,527	369,717	+ 14.6	219	70,633,413	80,968,023	4,809,257	5,054,783
Square timber exported...	M ft.b.m.	116,986	126,283	+ 7.9	219	25,619,934	27,655,977	2,643,543	2,865,906
Telegraph and telephone poles.....	number	895,726	1,002,134	+ 11.9	13	11,644,438	13,027,742	3,828,193	3,948,723
Round mining timber.....	M lin. ft.	63,251	66,893	+ 5.8	328	20,746,328	21,940,904	1,566,938	1,657,162
Fence posts.....	number	13,494,929	13,172,853	- 2.4	2	26,989,858	26,345,706	1,318,291	1,281,633
Wood for distillation....	cords	48,254	56,292	+ 16.7	123	5,935,242	6,923,916	462,818	482,277
Fence rails.....	number	5,147,932	5,042,187	- 2.1	2	10,295,864	10,084,374	440,097	431,057
Miscellaneous exports....	cords	249,055	206,987	- 16.9	117	29,139,435	24,217,479	2,493,365	2,072,619
Miscellaneous products used....	cords	96,487	159,952	+ 65.8	117	11,288,979	18,714,384	965,957	1,511,749

ANNUAL SUMMARY OF FOREST PRODUCTION, 1926 and 1927

Operations in the Woods

TABLE 2.- Forest Production, by Provinces, 1926 and 1927.

Provinces	Equivalent volume in standing timber		Total Value	
	1926	1927	1926	1927
	cubic feet	cubic feet	$	$
CANADA	2,838,105,611	2,880,137,911	204,436,328	205,631,727
Prince Edward Island	15,692,676	16,103,043	705,457	738,732
Nova Scotia	124,884,826	126,960,204	8,120,919	8,885,293
New Brunswick	218,769,496	202,068,856	17,164,585	17,913,709
Quebec	845,401,959	856,247,703	64,976,437	65,708,565
Ontario	740,088,991	699,020,407	58,453,487	54,055,133
Manitoba	58,097,527	98,894,978	2,908,882	5,179,640
Saskatchewan	53,065,103	55,546,078	2,236,558	2,387,260
Alberta	67,800,439	86,875,434	3,211,314	4,163,215
British Columbia	714,304,594	738,421,208	46,658,689	46,600,180

TABLE 3.- Review of total value of Forest Production

by Products, 1923 to 1927.

Products	1923	1924	1925	1926	1927
	$	$	$	$	$
TOTAL.....	197,459,331	213,146,710	209,276,561	204,436,328	205,631,727
Logs and bolts sawn.....	69,352,821	83,141,692	71,854,926	70,982,675	69,215,284
Pulpwood used	43,594,592	44,241,582	48,012,602	54,033,273	54,582,190
Firewood.....	38,723,272	39,336,771	39,515,657	40,0[illegible],804	40,582,774
Pulpwood exported.....	13,525,004	13,536,058	14,168,935	14,067,030	15,702,705
⁄Hewn railway ties.....	13,228,547	14,251,450	14,491,557	6,792,087	6,242,865
Logs exported.....	5,095,168	4,855,298	4,778,108	4,809,257	5,054,783
Square timber exported.....	4,037,030	3,317,225	2,643,543	2,643,543	2,865,906
Telegraph poles	2,998,852	3,621,415	3,802,036	3,828,193	3,948,723
Round mining timber.....	1,615,667	1,296,710	1,249,021	1,566,938	1,657,162
Fence posts.....	1,423,478	1,414,363	1,418,961	1,318,291	1,281,633
Wood for distillation.....	540,541	562,525	463,616	462,818	482,277
Fence rails.....	444,189	452,377	454,910	440,097	431,057
Miscellaneous exports.....	1,723,683	2,281,013	2,674,693	2,493,365	2,072,619
Miscellaneous products.....	1,156,487	838,231	3,747,996	965,957	1,511,749

⁄ The figures for 1923, 1924 and 1925 include sawn ties which are included under "logs and bolts sawn" in the 1926 and 1927 estimates.

ANNUAL SUMMARY OF FOREST PRODUCTION

Operations in the Woods

TABLE 4.- Production, home consumption, exports and imports, 1926

Products	Unit of measurement used	Converting factor	Total Production			Home Consumption		
			Quantity reported or estimated	Equivalent volume in standing timber	Total Value	Quantity reported or estimated	Equivalent volume in standing timber	Total Value
TOTAL.....	-	-	-	2,880,137,911	205,631,727	-	2,565,916,782	178,299,699
Logs and bolts.....	M ft. b.m.	219	4,695,030	1,028,211,570	74,270,067	4,344,693	951,487,767	69,757,416
Pulpwood.....	cords	117	5,929,456	693,746,352	70,284,895	4,387,687	513,359,379	54,582,190
Firewood.....	"	95	9,406,485	893,616,075	40,582,774	9,390,879	892,133,505	40,478,978
Hewn ties.....	number	12	9,637,786	115,653,432	6,242,865	9,424,543	113,094,516	6,104,738
Square timber.....	M ft. b.m.	219	126,283	27,655,977	2,865,906	3,091	676,929	116,089
Poles.....	number	13	1,002,134	13,027,742	3,948,723	238,503	3,100,539	686,109
Round mining timber.....	M lin. ft.	328	66,893	21,940,904	1,657,162	66,893	21,940,904	1,657,162
Posts.....	number	2	13,172,853	26,345,706	1,281,633	12,774,450	25,548,900	1,246,469
Wood for distillation...	cords	123	56,292	6,923,916	482,277	56,292	6,923,916	482,277
Fence rails.....	number	2	5,042,187	10,084,374	431,057	5,042,187	10,084,374	431,057
Miscellaneous products..	cords	117	366,939	42,931,863	3,584,368	235,609	27,566,253	2,757,214

TABLE 4.- (Continued)

Products	Unit of Measurement used	Converting factor	Exportation			Importation		
			Quantity reported or estimated	Equivalent volume in standing timber	Total Value	Quantity reported or estimated	Equivalent volume in standing timber	Total Value
TOTAL.....	-	-	-	333,872,570	29,677,478	-	19,651,641	2,345,450
Logs and bolts.....	M ft. b.m.	219	369,717	80,968,023	5,054,783	19,380	4,244,220	542,132
Pulpwood.....	cords	117	1,541,769	180,386,973	15,702,705	-	-	-
Firewood.....	"	95	21,807	2,071,665	134,091	6,201	589,095	30,255
Hewn ties.....	number	12	602,942	7,235,304	390,554	389,699	4,676,388	252,427
Square timber.....	M ft. b.m.	219	126,283	27,655,977	2,865,9[illegible]	3,091	676,929	116,089
Poles.....	number	13	790,353	10,274,589	3,406,387	26,722	347,386	143,773
Round mining timber.....	M lin. ft.	328	-	-	-	-	-	-
Posts.....	number	2	531,280	1,062,560	50,433	132,877	265,754	15,269
Wood for distillation...	cords	123	-	-	-	-	-	-
Fence rails.....	number	2	-	-	-	-	-	-
Miscellaneous products..	cords	117	206,987	24,217,479	2,072,619	75,657	8,851,869	1,245,465

- Where no figures appear there are no exports or imports of the commodity in question or the quantities are small and are included under "Miscellaneous products."