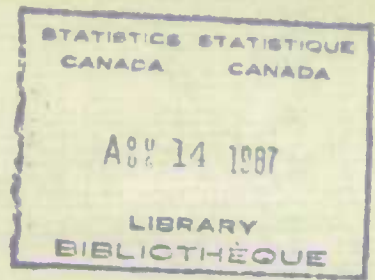


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CANADA
DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
FOREST PRODUCTS BRANCH

SUMMARY
of
FOREST PRODUCTION,
OPERATIONS IN THE WOODS
in
CANADA
1929



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Minister of Trade and Commerce

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1931

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

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SUMMARY OF FOREST PRODUCTION, 1929.

Ottawa, April, 1931. - An estimate of the total forest production of Canada for 1929 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 estimate has also been made of 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 content of the tree. By the use of these factors it has been estimated that our total forest production in 1929 involved the cutting of 3,090,614,617 cubic feet of standing timber. This constitutes only the annual depletion for use and to it must be added the volume of material annually destroyed by fire, which exceeds 346,000,000 cubic feet of merchantable timber and the young growth on 1,300,000 acres. Insects and fungi destroy annually at least 700,000,000 cubic feet so that the annual drain on our forest resources is considerably more than 4,136,000,000 cubic feet.

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.

A total depletion of 4,136,000,000 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-four 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. The fire hazard tends to increase with the increase of population and the extension of settlement unless measures are taken to prevent this tendency. During the last few years, forest fire damage in Canada has been materially reduced owing to favorable weather conditions and improved methods of detecting and fighting forest fires. Credit is also due to the general public for a greater measure of cooperation in the prevention of fires and to the various organizations which have carried on educational campaigns for forest conservation.

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 reduced to a minimum as the general public realizes the necessity of precaution. 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.

SUMMARY OF FOREST PRODUCTION, 1929.

As far as the value of forest products is concerned logs and bolts headed the list in 1929 with over seventy-nine 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 comes second on the list for the Dominion with a total value exceeding seventy-six million and is the most valuable item of forest production in the provinces of Ontario and Quebec. Firewood, with a total of over forty-one million comes third on the list for the Dominion as a whole but heads the list in Alberta, Manitoba, Saskatchewan, Nova Scotia and Prince Edward Island. Hewn railway ties with over five million; poles with over six million and square timber with over four million are among the more important of the other items. The total estimated value of all these forest products is \$219,570,129, an increase of 3.1 per cent over the estimated value for 1928.

Comparing forest products on the basis of equivalent volume of standing timber, we find that logs and bolts 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 Ontario, Nova Scotia, Prince Edward Island and the three Prairie Provinces. Pulpwood is the next most important item for the Dominion and comes first in Quebec and second in Ontario and New Brunswick. Other forest products in order of importance from the volume standpoint are hewn railway ties, logs for export, square timber, posts, poles, round mining timber, rails and wood for distillation.

The province of Quebec heads the list for value of forest production and British Columbia for volume. Quebec heads the lists in the production of pulpwood and also in the production of fencing materials. It comes second on the list of provinces for the production of firewood, square timber, wood for distillation and miscellaneous products. Ontario is the second most important province on the list for total value of production and third for volume of production. It leads in firewood, wood for distillation and miscellaneous products, and takes second place in the production of logs and bolts, pulpwood and poles. British Columbia comes third on the list for total value of production and first for volume, but leads in the production of logs and bolts, hewn ties, square timber and poles. This province comes second on the list in the production of 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 and ties in Manitoba and ties and round mining timber in Alberta.

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

Reports received from about 1,321 of the more important logging concerns operating in Canada in 1929 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 1929 involved the investment of \$167,000,000 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 97,000 men and to distribute over \$80,000,000 in wages and salaries. The largest number of employees were reported from Quebec, Ontario and British Columbia in the order mentioned.

Table 1. shows forest production in 1929 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

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SUMMARY OF FOREST PRODUCTION, 1929.

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 3,090 million cubic feet of standing timber cut in Canada in 1929 about 90.5 per cent was retained in the country for immediate use or as raw material for some Canadian industry, and 9.5 per cent was exported in a more or less unmanufactured form.

Manufactures 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 *and iron and steel.*

In 1929 the total value of capital invested in the wood and paper group of industries was \$1,152,075,234. The employees numbered 164,182 and were paid \$192,235,448 in wages and salaries. The net value of production or value added by manufacture was \$411,616,451 and the gross value \$725,819,740.

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 four and three-quarter billion feet board measure of sawn lumber and into other sawmill products with a total value added by manufacture of over sixty-three million dollars. Less than six per cent of the saw-logs cut in Canada in 1929 were exported unmanufactured.

Of the sawn lumber manufactured about 37 per cent 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 remainder 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.

Less than a fifth 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. Four-fifths 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-four million dollars in 1929. Twenty 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 ninety-three million dollars. The value added by manufacture in the pulp and paper industry as a whole was about a hundred and forty-seven 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 a great 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 in 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 1929. The loss was most serious in connection with the exportation of the approximate equivalent to 37,000,000 cubic feet of rough pulpwood, 67,073,000 cubic feet of saw-logs and 43,437,000 cubic feet of square timber, making a total of 147,510,000 cubic feet of standing timber or about 4.8 per cent of the cut in 1929. 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, 1929.

A total of 2,814,251,213 cubic feet of home grown and imported forest products valued at \$194,100,606 were consumed in Canada in 1929 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

Table 1. - Production, home consumption, exports and imports, 1929.

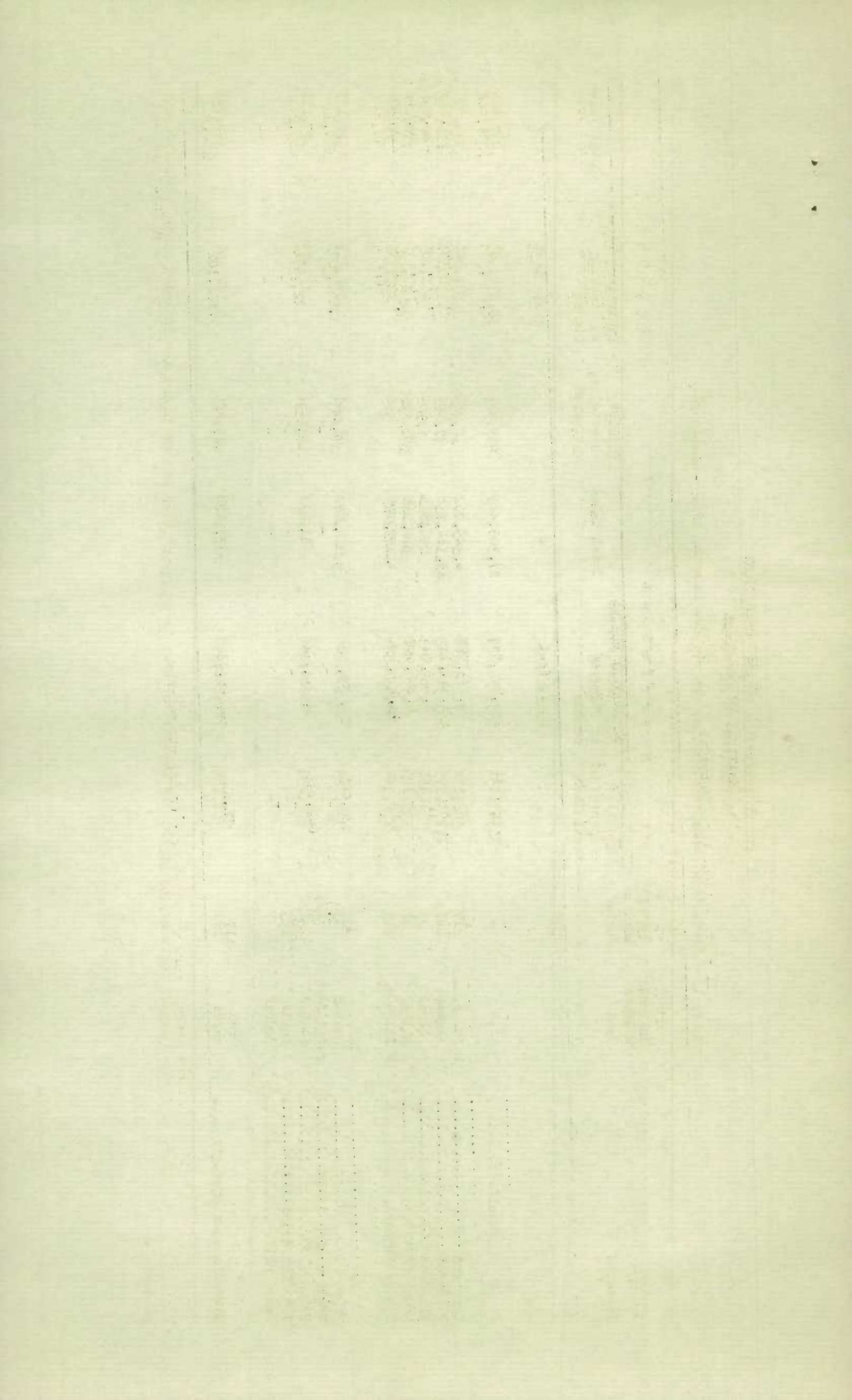
Products	Unit of Measure Used	Convert- ing Factor	TOTAL PRODUCTION			HOME CONSUMPTION		
			Quantity reported or estimated	Equivalent volume in standing timber	Total Value	Quantity reported or estimated	Equivalent volume in standing timber	Total Value
				cubic feet	\$		cubic feet	\$
Total	-	-	59,655,164	3,090,614,647	219,570,129	56,293,585	2,814,251,213	194,100,606
Logs and bolts	M ft. b.m.	219	5,317,361	1,164,502,059	79,278,543	5,027,449	1,101,011,331	75,285,636
Pulpwood	ords	117	6,536,335	764,751,195	76,120,063	5,278,422	617,575,374	63,101,138
Firewood	ords	95	9,680,393	919,637,335	41,764,507	9,653,902	917,120,690	41,586,272
Hewn ties	number	12	8,197,118	98,365,416	5,730,423	7,985,207	95,822,484	5,582,281
Square timber	M ft. b.m.	219	198,344	43,437,336	4,179,077	766	167,754	77,286
Poles	number	13	1,258,705	16,363,165	6,677,559	421,287	5,476,731	3,278,885
Round mining timber	cubic ft.	1.3	5,740,737	7,462,958	1,028,126	5,740,737	7,462,958	1,028,126
Posts	number	2	16,876,134	33,752,268	1,674,489	16,382,738	32,765,476	1,628,065
Wood for distillation	ords	123	51,346	6,315,558	455,957	51,346	6,315,558	455,957
Fence rails	number	2	5,586,258	11,172,516	477,569	5,586,258	11,172,516	477,569
Miscellaneous products	ords	117	212,433	24,854,661	2,183,816	165,473	19,360,341	1,599,391

ANNUAL SUMMARY OF FOREST PRODUCTION
OPERATIONS IN THE WOODS

Table 1. - Production, home consumption, exports and imports, 1929 - Continued.

Products	Unit of Measure Used	Convert- ing Factor	E x p o r t a t i o n			I m p o r t a t i o n		
			Quantity reported or estimated	Equivalent volume in standing timber	Total Value	Quantity reported or estimated	Equivalent volume in standing timber	Total Value
				cubic feet	\$		cubic feet	\$
Total	-	-	3,981,431	295,255,557	27,309,469	619,852	18,892,303	1,839,946
Logs and bolts	M ft. b.m.	219	306,272	67,073,568	4,345,002	16,360	3,582,840	352,095
Pulpwood	cords	117	1,294,995	151,514,415	13,314,738	37,082	4,338,594	295,813
Firewood	cords	95	31,451	2,987,845	198,871	4,960	471,200	20,636
Hewn ties	number	12	515,205	6,182,460	360,168	303,294	3,639,528	212,026
Square timber	M ft. b.m.	219	198,344	43,437,336	4,179,077	766	167,754	77,286
Poles	number	13	936,865	12,179,245	3,912,790	99,447	1,292,811	514,116
Round mining timber	cubic feet	1.3	-	-	-	-	-	-
Posts	number	2	607,133	1,214,266	61,635	113,737	227,474	15,211
Wood for distillation	cords	123	-	-	-	-	-	-
Fence rails	number	2	-	-	-	-	-	-
Miscellaneous products	cords	117	91,166	10,666,422	937,188	44,206	5,172,102	352,763

Where no figures appear there are no exports or imports reported or the quantities are small and are included under "miscellaneous products".



ANNUAL SUMMARY OF FOREST PRODUCTION
OPERATIONS IN THE WOODS

TABLE 2. - Forest production, by provinces, 1928 and 1929.

Provinces	Equivalent volume in standing timber		Total Value	
	1928 cubic feet	1929 cubic feet	1928 \$	1929 \$
CANADA	2,988,038,430	3,090,614,647	212,950,799	219,570,129
Prince Edward Island	16,158,953	10,747,881	729,746	529,666
Nova Scotia	117,933,752	120,246,169	8,169,748	7,716,067
New Brunswick	185,281,100	195,588,102	15,413,390	15,788,394
Quebec	876,900,762	810,931,266	67,991,437	65,537,957
Ontario	771,331,245	776,378,800	58,774,971	60,999,431
Manitoba	71,992,205	92,235,022	3,899,711	4,964,348
Saskatchewan	62,811,186	102,912,066	2,877,720	4,878,995
Alberta	90,639,513	142,474,289	4,494,145	6,244,173
British Columbia	794,989,714	839,106,052	50,599,931	52,911,098

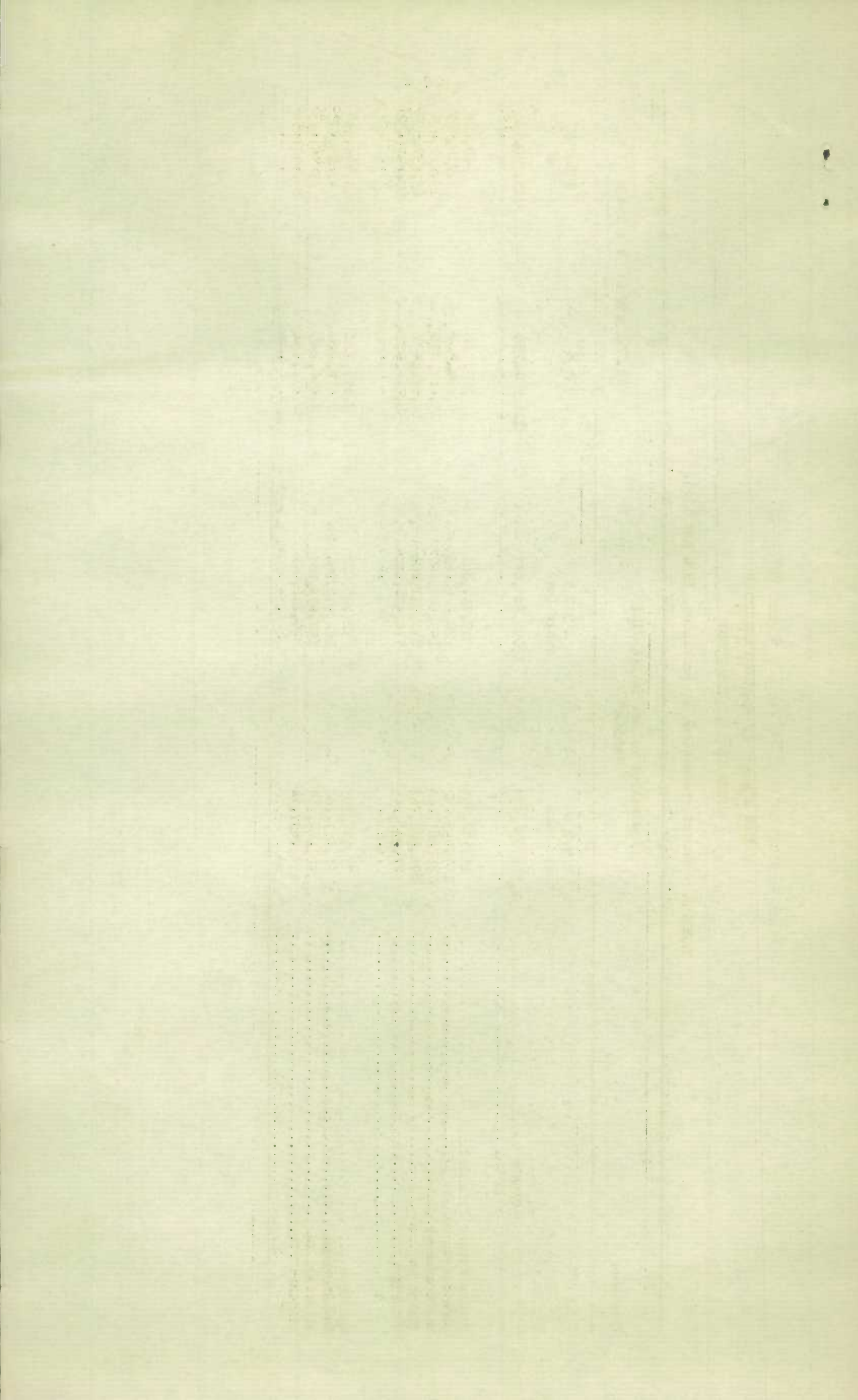


TABLE 3. - REVIEW OF TOTAL VALUE OF FOREST PRODUCTION
BY PRODUCTS, 1925 to 1929.

Products	1 9 2 5	1 9 2 6	1 9 2 7	1 9 2 8	1 9 2 9
	\$	\$	\$	\$	\$
Total.....	209,276,561	204,436,328	204,939,750	212,950,799	219,570,129
Logs and bolts	76,633,034	75,791,932	74,270,067	76,431,481	79,278,543
Pulpwood	62,181,537	68,100,303	70,284,895	74,848,077	76,120,063
Firewood	39,515,657	40,032,804	40,582,774	41,164,270	41,764,507
Hewn railway ties	14,491,557	6,792,087	6,242,865	5,871,724	5,730,423
Square timber	2,643,543	2,643,543	2,865,906	3,772,137	4,179,077
Poles	3,802,036	3,828,193	3,948,723	4,934,371	6,677,559
Round mining timber	1,249,021	1,566,938	965,185	998,146	1,028,126
Fence posts	1,418,961	1,318,291	1,281,633	1,506,050	1,674,489
Wood for distillation	463,616	462,818	482,277	476,726	455,957
Fence rails	454,910	440,097	431,057	463,469	477,569
Miscellaneous products	6,422,689	3,459,322	3,584,368	2,484,348	2,183,816

^x The figures for 1925 include sawn ties which are included under "logs and bolts sawn" in subsequent years.



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