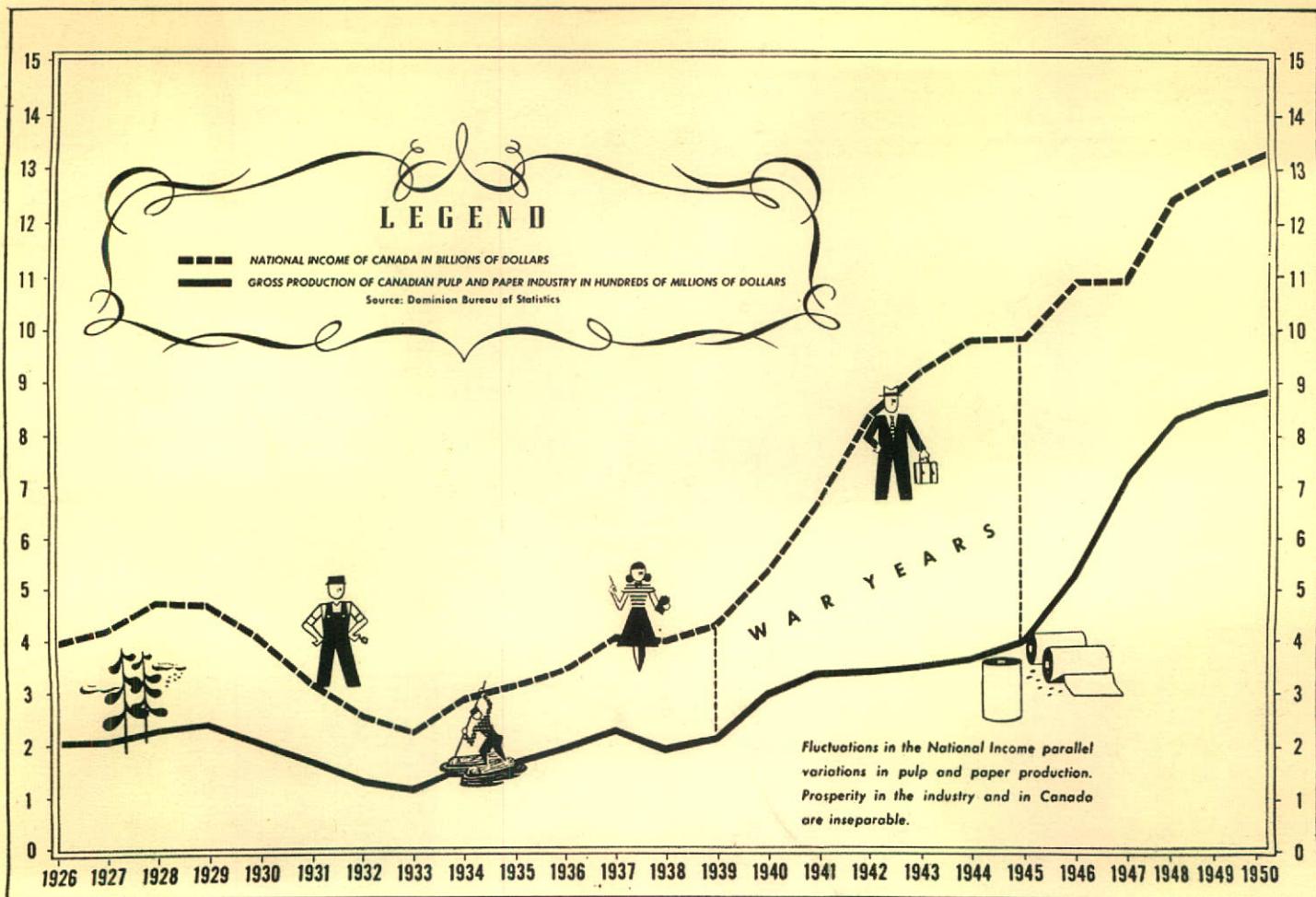


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Reference Tables

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Introduction

These tables published annually present a succinct picture of pulp and paper operations, their intimate relationship with the forest resources and the forest crop, and something, too, of the importance of the industry in the economy of Canada.

While the material herein is clearly set forth in the index, it should be noted that Section "B" gives a bird's-eye view of the operations of the industry from its pulpwood harvest to its markets; and that in Section "F" may be found, not only the figures revealing the national significance of the industry, but also general statistics covering its operations as a whole.

Unless otherwise noted, all figures for the 1949 year include Newfoundland. In most of the newsprint tables in Section "D," which has been compiled by the Newsprint Association of Canada, the Newfoundland statistics have been consolidated with those of Canada for all preceding years. Elsewhere, the figures prior to 1949 have not been consolidated as Newfoundland statistics were not compiled on the same basis as those of the Dominion Bureau of Statistics. The figures covering Newfoundland's production up to Confederation will be found in the appropriate sections of the book in Tables 23, 42, 43, 51 and 75.

The publication of these tables has largely been made possible through the kindly aid of L. J. Pouliot, chief of the Forestry Section of the Dominion Bureau of Statistics; and to him grateful acknowledgment is made.

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"A"—FORESTS AND PULPWOOD

Table 1.
Forest Extent

	Square Miles
Forested Areas of Canada*:	1,274,840
All of which, save for 123,000 square miles, lies within the provinces.	
Forested Areas Classed as Unproductive:	573,608
Small trees in adverse locations not expected to reach merchantable size.	
Productive Forest Areas:	701,232
Capable of producing continuous crops of timber.	
Productive Forest Not Presently Accessible:	228,232
Accessible Productive Forests:	473,000
Two-fifths of this area bears trees large enough for use; the remainder is younger growth.	
Privately Owned Forests:	92,626
Farm wood lots	32,594
Others	60,032
	92,626
Accessible Productive Forests Owned by the Crown:	380,374
Cutting Rights Leased by the Crown:	180,104
Pulp and paper licences	142,202
Saw timber licences	33,942
Timber sales	3,169
Permit berths	791
	180,104
Unoccupied Accessible Productive Forest Owned by the Crown:	200,270
(Reserves and parks form part of the Accessible Productive Forests. Restricted cutting is permitted in some of these areas.)	

* Not including Newfoundland.

Source: Federal Forestry Branch.

Table 2.
Forest Holdings

	In accessible Productive Forests	Sq. Miles	Per Cent
Private holdings		92,626	20.
Crown Lands			
Leased by pulp and paper cos.	142,202	30.	
Leased by others	37,902	8.	
Unoccupied	200,270	42.	
Accessible Productive Forests*	473,000	100.	

* Not including Newfoundland.

Source: Federal Forestry Branch.

Table 3.
Forest Volume

In 000,000's of cubic feet of merchantable timber in the Productive Forest Areas*		
Accessible Forests:		
Conifers	129,966	
Broad leaved	59,085	
Presently Inaccessible Forests:		
Conifers	102,140	
Broad leaved	11,267	

* Not including Newfoundland.

Source: Federal Forestry Branch.

Table 4.
Coniferous Stands

	Estimated Stands of Accessible Conifers by Provinces*	Millions of cubic feet	Pulp Production Tons — 1949
Prince Edward Island	61	nil	
Nova Scotia	2,939	†	
New Brunswick	6,100	†	
Quebec	45,928	3,698,401	
Ontario	30,784	2,138,444	
Manitoba	1,004	†	
Saskatchewan	388	nil	
Alberta	7,724	nil	
British Columbia	35,038	666,542	
Nfld., N.S., N.B. and Manitoba	.....	1,349,611	
		129,966	7,852,998

† Figures for Nfld., N.S., N.B. and Manitoba are not compiled separately.

* Not including Newfoundland.

Source: Federal Forestry Branch and Dominion Bureau of Statistics.

Table 5.
Forest Consumption

	Average Annual Depletion 1939-1948*	000's of cu. ft.	%	%
Logs and bolts for domestic use	1,021,316	29.9	38.0	
Logs and bolts for export	26,399	.8	1.0	
Pulpwood for domestic use	662,292	19.4	24.6	
Pulpwood for export	151,324	4.4	5.6	
Fuelwood	725,768	21.2	27.0	
Ties, poles, pit-props, posts, rails	65,101	1.9	2.5	
Miscellaneous	35,773	1.1	1.3	
		2,687,973		
Fire	228,266			
Insects and disease	300,000	728,266	21.3	
		3,416,239		
			100.0	

* Not including Newfoundland.

Source: Federal Forestry Branch.

Table 6.
Forest Increment

Complete estimates of the rate of growth of Canadian forests have not been compiled, but the following facts are known:

Cubic feet per acre

While there is but a small growth in many areas, over considerable tracts growths have been recorded by the Federal Forestry Branch of:

25—40

Managed forests in Scandinavia produce:

28

Replacement of annual depletion in the accessible productive forest areas requires an annual average growth of:

11

The foregoing figures by no means indicate that there is no cause for anxiety regarding the future maintenance of the forests and their proper conservation for use.

Other factors affecting these figures include:

1. While the annual increment appears to exceed the annual depletion, no comprehensive and proper estimate of forest increment in Canada as a whole has yet been prepared, or is under way.
2. Insects and diseases in the forests periodically reach epidemic proportions; unless checked they will affect the existing balance between depletion and increment.
3. In many instances the depletion is concentrated in the more accessible areas. Growth that accrues in more remote areas is not used.
4. Repeated fires retard and often make impossible the proper regeneration of the forests.
5. Land tenures are often such that there is no economic or other urge upon some loggers to operate along scientific methods.
6. The fire hazard is greater in the more accessible forests, a situation naturally having a bearing on the cutting methods pursued by owners or operators.

Source: Federal Forestry Branch.

"B"—1949 FIGURES
Including Newfoundland for the full year.

Table 12.
Pulpwood Production 1949

	Cords	Value
Apparent pulpwood production	11,850,254	\$270,697,980
Pulpwood imports	5,491	65,304
Total supply	11,855,745	\$270,763,284
Less pulpwood exports	1,612,278	30,383,947
Pulpwood used in Canadian mills	10,243,467	\$240,379,337

Source: Dominion Bureau of Statistics.

Table 13.
Pulp Supply 1949

	Tons	Value
Groundwood pulp	4,718,806	\$166,591,741
Chemical pulp	2,891,418	272,355,430
Other pulp*	242,774	6,191,323
Total wood pulp production	7,852,998	\$445,138,494
Wood pulp imports	35,432	3,963,086
Other wood fibre used	1,721	42,480
Other fibres and stock used**	383,489	10,705,679
Total supply	8,273,640	\$459,849,739

* Includes screenings, off-quality, semi-chemical, defibrated and exploded pulp.

** Includes rags, straw, leather scrap and wastepaper.

Source: Dominion Bureau of Statistics.

Table 14.
Total Production 1949

	Tons	Value
Pulp Exported		
Mechanical	207,359	\$ 11,920,602
Bleached sulphite	483,615	65,100,878
Unbleached sulphite	354,444	36,076,547
Sulphate	470,160	54,812,327
Other wood pulp	27,471	3,369,959
Chemical pulp screenings	6,169	143,563
Mechanical pulp screenings	8,130	80,287
	1,557,348	\$171,504,163
Pulp for Domestic Sale	313,135a	23,143,696b
Pulp Production For Sale	1,870,483	\$194,647,859
Paper Production		
For domestic market	1,587,686	\$184,507,212
Exported	4,952,283c	456,952,626
	6,539,969	\$641,459,838
Gross Production	8,410,452d	\$836,107,697

- a: Total production less exports and pulp made for mills own use. Some of this tonnage was made for affiliated mills.
- b: Gross value of production less pulp for paper production and pulp exports.
- c: Excludes tonnage of bags, cartons, and other paper products having value of \$2,087,245.
- d: As most of the pulp for domestic sale was utilized in the manufacture of paper, there is some duplication in this figure.

Source: Dominion Bureau of Statistics.

Table 15.
Output by Products 1949

	000' tons	%	000,000'	%
Market pulp*	1,870.4	22.2	194.6	23.3
Newsprint	5,187.2	61.7	468.0	56.0
Paperboard	793.0	9.4	80.6	9.6
Other Papers	559.9	6.7	92.9	11.1
	8,410.5	100.	\$836.1	100.

* See Note d of Table 14.

Source: Dominion Bureau of Statistics.

Table 16.
Markets 1949

These figures show the relation between pulp supply and export markets:

Pulp Exports	Tons	Value
To U.S.A.	1,305,334	\$141,641,380
To U.K.	181,830	20,137,715
Elsewhere	70,184	9,725,068
Total pulp exports	1,557,348	\$171,504,163
Pulp and other paper stock for domestic use	6,716,292	288,345,576
	8,273,640	\$459,849,739

Of the 6,716,292 tons of pulp and other paper stock for domestic use, about 313,000 tons of pulp were sold on the domestic market and 6,403,157 tons of pulp and other paper stock valued at \$265,201,880 were converted into 6,539,969 tons of paper and paper board valued at \$641,459,838. The exports from this production, including paper products, were as follows:

Newsprint Exports (a)		
To U.S.A.	4,364,045	\$396,362,860
To U.K.	109,091	10,004,944
To other countries	334,669	34,854,422
	4,807,805	\$441,222,226
Other Paper Exports		
To U.S.A.	93,119	\$ 7,552,133
To U.K.	12,679	1,790,100
To other countries	38,680	6,388,167
	144,478	\$ 15,730,400
Paper Products Exports (b)		
To U.S.A.	—	\$ 893,280
To U.K.	—	74,224
To other countries	—	1,119,741
	—	\$ 2,087,245
Paper Exports	4,952,283	\$459,039,871
Pulp and Paper Exports	6,539,631	\$630,544,034

a: Includes mutilated newsprint.

b: Includes bags, box, hanging paper, and miscellaneous paper products.

Source: Dominion Bureau of Statistics.

Table 17.
Pulp Use and Sale 1949

The figures in this table showing the amount of pulp made for various purposes naturally differ fractionally from those of actual exports, domestic sales, and domestic consumption during the 1949 year.

Tons	Made for own use	Made for Domestic Sale	Made for sale abroad	Total Production
Groundwood	4,424,606	78,346	215,854	4,718,806
Sulphite	989,894	169,024	832,541	1,991,459
Sulphate	363,151	38,360	454,273	855,784
Screenings & others	204,864	40,498	41,587	286,949
	5,982,515	326,228	1,544,255	7,852,998

Source: Dominion Bureau of Statistics.

Table 18.
Paper Production 1949

	Tons	Value
Newspaper	5,187,206	\$467,976,343
Book & Writing	199,317	40,598,820
Wrapping	195,585	30,033,478
Paperboard	797,023	80,632,075
Tissue	68,340	13,950,007
All other	92,498	8,269,115
	6,539,969	\$641,459,838

Source: Dominion Bureau of Statistics.

Table 19.

Pulp and Paper Exports 1949

	Total Exports		To U.S.A.		To Other Countries	
	Tons	Value	Tons	Value	Tons	Value
PULP —						
Sulphate — Kraft	470,160	\$ 54,812,327	438,472	\$ 51,624,078	31,688	\$ 3,188,249
Bleached	331,902	41,610,544	22,095	1,711,804	896	156,143
Unbleached	138,258	13,201,783	107,696	10,169,677	30,562	3,032,106
Sulphite — Bleached	483,615	65,100,878	390,142	50,544,366	95,473	14,556,512
Dissolving	243,095	37,146,886	162,077	24,129,080	81,018	13,017,806
Paper Grades	240,520	27,953,992	228,065	26,415,286	12,455	1,538,706
Sulphite — Unbleached	354,444	36,076,547	251,543	25,559,845	102,901	10,516,702
Strong	232,259	23,671,519	162,593	16,385,861	69,666	7,285,658
News Grade	122,185	12,405,028	88,950	9,173,984	33,235	3,231,044
Total Chemical	1,308,219	\$155,989,752	1,080,157	\$127,728,289	228,062	\$28,261,463
Mechanical	207,359	11,920,602	184,003	10,363,576	23,356	1,557,026
Other Pulps	27,471	3,369,959	27,199	3,334,411	272	35,548
Screenings	14,299	223,850	13,975	215,104	524	8,746
Chemical	6,169	143,563	6,169	143,563	—	—
Mechanical	8,130	80,287	7,806	71,541	324	8,746
Total Miscellaneous	249,129	\$ 15,514,411	225,177	\$ 13,913,091	23,952	\$ 1,601,320
TOTAL PULP	1,557,348	\$171,504,163	1,305,334	\$141,641,380	252,014	\$29,862,783
NEWSPRINT PAPER —						
Standard	4,789,296	440,044,067	4,346,414	395,259,575	442,882	44,784,492
Mutilated	18,509	1,178,159	17,631	1,103,285	878	74,874
TOTAL NEWSPRINT	4,807,805	\$441,222,226	4,364,045	\$396,362,860	443,760	\$44,859,366
OTHER PAPER —						
Wrapping — Coated	1,469	361,797	x	76	1,469	361,721
Wrapping — Kraft — n.o.p.	8,530	1,393,184	321	32,572	8,209	1,360,612
Wrapping — n.o.p.	3,423	555,329	1,010	94,880	2,413	460,449
Book Paper	13,438	2,165,837	8,212	1,046,498	5,226	1,119,339
Bond & Writing — Uncut	3,347	923,088	71	13,002	3,276	910,086
Paperboard — n.o.p.	56,557	5,907,085	33,048	2,867,317	23,509	3,039,768
Roofing & Building	1,785	108,995	28	2,159	1,757	106,836
Pulp & Fibre Wallboards	11,968	1,258,749	9,639	1,023,797	2,339	234,952
Waste Paper — n.o.p.	17,356	518,798	17,344	518,079	719	—
Pulpboard for Wallboard	22,991	1,798,317	330,776	41,434,401	1,126	86,513
Tissue	52	15,834	—	—	52	15,834
Toilet	3,562	723,387	1,351	241,949	2,211	481,438
TOTAL OTHER PAPER	144,478	\$ 15,730,400	93,119	\$ 7,552,133	51,359	\$ 8,178,267
PAPER PRODUCTS — (a)						
Bags, Boxes & Cartons	—	778,364	—	125,690	—	652,674
Bags	—	167,601	—	2,034	—	165,567
Boxes & Cartons	—	610,763	—	123,656	—	487,107
Hangings or Wall Paper	—	723,927	—	698,910	—	25,017
Hanging not Printed	—	—	—	—	—	—
Writing — n.o.p.	—	90,858	—	1,238	—	89,620
Handkerchiefs — Tissues	—	8,505	—	100	—	8,405
Napkins & Towels	—	22,910	—	—	—	22,910
Blank Books	—	136,529	—	1,426	—	134,903
Paper — n.o.p.	—	157,837	—	26,410	—	131,427
Other paper products	—	168,515	—	39,506	—	129,009
TOTAL PAPER PRODUCTS	—	\$ 2,087,245	—	\$ 893,280	—	\$ 1,193,965
GRAND TOTAL	6,509,631	\$630,544,034	5,762,498	\$546,449,653	747,133	\$84,094,381

n.o.p. Not otherwise provided for.

(a): Weight of paper products is unavailable.

x: Less than one ton.

Source: Dominion Bureau of Statistics.

Table 28.

Screenings

	Screenings — Chemical and Mechanical							
	Production Tons	Value	Apparent Consumption (b) Tons	Value	Exports (a) Tons	Value	Imports Tons	Value
1923	43,966	\$ 797,506	c	c	c	c	—	\$ —
1924	50,777	816,248	c	c	c	c	—	—
1925	65,364	1,106,633	c	c	c	c	—	—
1926	77,310	1,132,290	c	c	c	c	—	—
1927	78,282	1,098,737	59,437	\$ 734,196	18,845	\$ 364,541	—	—
1928	87,591	1,134,702	55,898	513,806	31,693	620,896	—	—
1929	99,182	1,217,743	62,774	573,554	36,408	644,189	—	—
1930	71,158	882,027	47,496	466,421	23,662	415,606	—	—
1931	64,745	685,053	51,209	460,619	13,536	224,434	—	—
1932	53,789	406,708	46,257	328,771	7,532	77,937	—	—
	Screenings — Chemical							
1933	27,700	228,953	18,661	83,441	9,039	145,512	—	—
1934	29,851	296,107	21,540	156,301	8,311	139,806	—	—
1935	28,230	226,254	36,541	116,561	8,311	109,693	—	—
1936	38,504	305,942	27,718	172,549	10,786	133,393	—	—
1937	48,871	527,450	38,765	360,376	10,106	167,074	—	—
1938	22,739	198,939	20,113	155,468	2,626	43,471	—	—
1939	27,760	231,642	24,400	192,908	3,360	38,734	—	—
1940	42,741	434,257	39,725	379,621	3,016	54,636	—	—
1941	48,270	560,969	36,668	332,063	11,602	228,906	—	—
1942	51,905	727,736	40,096	468,801	11,809	258,935	—	—
1943	51,053	787,239	33,219	379,227	17,834	408,012	—	—
1944	48,826	803,729	37,706	486,508	11,120	317,221	—	—
1945	53,121	797,527	42,725	487,527	10,396	310,000	—	—
1946	66,277	1,268,027	54,951	877,146	11,326	390,881	—	—
1947	82,228	2,125,787	69,335	1,474,569	12,893	651,218	—	—
1948	83,894	2,288,892	72,357	1,799,377	11,537	489,515	—	—
1949	71,179	1,579,401	65,010	1,435,838	6,169	143,563	—	—
	Screenings — Mechanical							
1933	34,496	181,481	26,950	105,140	7,546	76,341	—	—
1934	54,324	318,648	49,562	282,493	4,762	36,155	—	—
1935	59,116	289,104	48,487	217,157	10,629	71,947	—	—
1936	73,944	423,103	61,264	320,896	12,680	102,207	—	—
1937	76,227	519,551	62,683	374,017	13,544	145,534	—	—
1938	58,741	479,301	53,132	423,609	5,609	55,692	—	—
1939	58,082	467,971	51,352	399,120	6,730	68,851	—	—
1940	62,725	512,784	58,507	450,542	4,218	62,242	—	—
1941	55,363	422,520	48,186	334,229	7,177	88,291	—	—
1942	48,021	407,032	41,036	323,913	6,985	83,119	—	—
1943	34,838	294,784	28,785	245,482	6,053	49,302	—	—
1944	36,846	428,558	32,872	387,684	3,974	40,874	—	—
1945	38,953	348,424	34,388	306,599	4,565	41,825	—	—
1946	68,876	863,096	61,082	700,505	7,794	162,591	—	—
1947	69,360	1,237,425	60,087	1,139,287	9,273	98,138	—	—
1948	69,101	1,092,077	60,609	997,744	8,492	94,333	—	—
1949	54,143	1,029,384	46,013	949,097	8,130	80,287	—	—

a: Estimated on basis of known quantity and value "made for export" prior to 1946.

b: Estimated on basis of production plus imports minus exports.

c: Exports not available prior to 1927.

Note: Screenings were not reported separately prior to 1923. It is assumed that these were included with "Other wood-pulps".

Source: Dominion Bureau of Statistics.

Table 29.

Defibrated and Exploded Pulps

	Production Tons	Value	Apparent Consumption (a) Tons	Value	Tons	Exports Value	Tons	Imports Value
1946	48,009	\$1,019,492	48,009	\$1,019,492	—	\$ —	—	\$ —
1947	52,613	1,244,072	52,613	1,244,072	—	—	—	—
1948	65,636	2,544,930	65,636	2,544,930	—	—	—	—
1949	75,403	2,289,933	75,403	2,289,933	—	—	—	—

a: Estimated on basis of production plus imports minus exports.

Note: Prior to 1946 defibrated and exploded fibres were not considered as pulps and were shown only as paper-making materials under the headings "Other wood fibre purchased" or "Other fibre and stock purchased".

Source: Dominion Bureau of Statistics.

Table 43.

Exports of Mechanical Pulp from Newfoundland

Year†	TOTAL		UNITED KINGDOM		UNITED STATES		CANADA		OTHER COUNTRIES	
	Quantity Tons	Value $	Quantity Tons	Value $	Quantity Tons	Value $	Quantity Tons	Value $	Quantity Tons	Value \$
1910	6,853	69,164	6,698	67,611	155	1,553	—	—	—	—
1911	27,177	251,048	21,355	196,787	5,822	54,261	—	—	—	—
1912	42,102	361,149	35,619	316,257	6,483	44,892	—	—	—	—
1913	51,487	436,352	40,367	314,568	11,120	121,784	—	—	—	—
1914	51,605	372,676	51,605	372,676	—	—	—	—	—	—
1915	48,451	379,220	46,969	364,400	1,482	14,820	—	—	—	—
1916	22,892	197,608	—	—	22,892	197,608	—	—	—	—
1917	27,413	351,072	16,604	167,568	10,809	183,504	—	—	—	—
1918	11,494	111,358	—	—	11,494	111,358	—	—	—	—
1919	3,128	43,265	1,940	34,920	691	4,715	—	—	497	3,630
1920	17,540	129,125	15,559	119,450	1,981	9,675	—	—	—	—
1921	26,838	246,009	24,521	211,856	2,317	34,153	—	—	—	—
1922	19,932	364,514	19,932	364,514	—	—	—	—	—	—
1923	21,680	364,289	21,680	364,289	—	—	—	—	—	—
1924	31,674	531,833	24,405	408,873	2,000	33,841	5,269	89,119	—	—
1925	12,711	215,896	12,265	208,343	446	7,553	—	—	—	—
1926	11,147	175,325	8,505	134,633	2,642	40,692	—	—	—	—
1927	3,689	56,801	—	—	3,689	56,801	—	—	—	—
1928	22	143	22	143	—	—	—	—	—	—
1929	65	956	—	—	65	956	—	—	—	—
1930	—	6	—	—	—	—	—	—	6	—
1931	—	—	—	—	—	—	—	—	—	—
1932	—	—	—	—	—	—	—	—	—	—
1933	—	—	—	—	—	—	—	—	—	—
1934	—	—	—	—	—	—	—	—	—	—
1935	—	—	—	—	—	—	—	—	—	—
1936	—	—	—	—	—	—	—	—	—	—
1937	—	—	—	—	—	—	—	—	—	—
1938	—	—	—	—	—	—	—	—	—	—
1939	—	—	—	—	—	—	—	—	—	—
1940	98	3,463	98	3,463	—	—	—	—	—	—
1941	8,685	252,557	7,920	234,715	765	17,842	—	—	—	—
1942	22,779	790,137	11,777	395,780	9,783	334,548	—	—	1,219	59,809
1943	24,825	870,777	19,356	672,342	5,469	198,435	—	—	—	—
1944	35,517	1,463,790	32,733	1,376,396	2,784	87,394	—	—	—	—
1945	38,250	1,814,895	36,238	1,684,157	1,922	126,988	90	3,750	—	—
1945*	12,389	744,931	11,862	721,631	527	23,300	—	—	—	—
1946	246	14,986	—	—	—	—	246	14,986	—	—
1947	404	24,900	404	24,900	—	—	—	—	—	—
1948	2,435	154,637	374	23,016	828	58,228	1,233	73,393	—	—

† 1910-1942, fiscal years ending June 30; 1943, 9 months ending March 31; 1944-45, fiscal year ending March 31; 1945*, 9 months ending December 31; 1946-1948, calendar years.

This table is included for reference purposes only. Since Confederation with Canada in 1949, Newfoundland figures have been incorporated into the Canadian totals and will not be shown separately in future.

Source: Newfoundland Customs Returns.

Table 69.
Production of Building Boards and Building Papers

	Building Boards (a)	Building Papers (b)
	Tons	Tons
1921	23,542	\$ 1,437,740
1922	31,176	1,580,496
1923	46,401	2,601,533
1924	49,577	2,787,633
1925	42,599	2,213,490
1926	45,694	2,378,861
1927	43,331	2,269,956
1928	46,569	2,406,554
1929	53,829	2,687,387
1930	48,718	2,723,436
1931	43,328	2,345,093
1932	28,035	1,410,426
1933	23,050	1,131,872
1934	28,920	1,391,812
1935	34,424	1,620,583
1936	44,838	2,114,207
1937	51,934	2,567,715
1938	46,203	2,359,366
1939	56,649	2,862,506
1940	83,356	3,086,688
1941	108,585	6,767,709
1942	109,961	6,750,198
1943	116,834	7,845,612
1944	111,554	7,682,631
1945	119,391	8,440,191
1946	138,425	10,459,532
1947	164,374	14,059,205
1948	194,067	18,255,528
1949	182,631	16,703,056

(a) Includes woodpulp board used in paper converting plants to produce laminated wallboards.

(b) Figures for years prior to 1936 include some saturated felts and sheathings.

Source: Dominion Bureau of Statistics.

Table 70.

Exports of Paper (Except Newsprint) — Volume

In the past, the basis and classification upon which exports of paper other than newsprint have been compiled have been modified from time to time. Consequently, only figures covering recent years are included in this and in the succeeding table.

Moreover, because they are compiled on a somewhat different basis, the two tables which follow are not comparable to the production figures in tables 67 and 68.

Tons	1949	1948	1947	1946	1945	1944	1943	1942	1941
Wrapping — Coated	1,469	3,095	2,659	2,259	.....	17,941	16,275	17,797	24,282
Wrapping — Kraft — n.o.p.	8,530	11,215	12,960	14,270	22,113	.....	.....	.....	.....
Wrapping — n.o.p.	3,423	7,283	5,674	5,924	6,983	7,550	6,650	16,306	10,839
Book	13,458	36,882	37,291	24,676	17,124	17,402	10,193	5,968	5,136
Bond & Writing	3,347	5,036	9,655	6,175	4,184	3,989	3,893	1,860	2,830
Paperboard — n.o.p.	56,557	90,443	62,444	59,799	64,643	62,580	44,668	82,227	137,949
Roofing Paper — all kinds	1,785	5,341	11,018	4,146	3,366	3,088	2,987	2,947	8,557
Pulp & Fibre Wallboards	11,968	15,852	20,209	14,294	17,914	13,641	13,179	20,871	33,689
Waste Paper — n.o.p.	17,356	15,185	10,451	10,421	11,260	10,669	7,915	16,922	23,424
Pulpboard for Wallboards	22,991	29,164	31,636	27,610	29,625	28,147	27,801	23,194	20,303
Tissue Paper	52	794	1,682	328	377	709	871	170	2,256
Toilet Paper	3,562	5,716	3,339	1,878	2,980	2,479*	.....	.....	.....
	144,478	226,006	209,018	171,780	180,569	168,195	134,342	188,062	269,265

n.o.p.: not otherwise provided for.

* : included in other categories in preceding years.

Source: Dominion Bureau of Statistics.

Also, some of the exports go through a converting plant before shipment. Thus, many of the exports have a value enhanced by the conversion or packaging process, whereas the production figures show the valuation at the basic rate.

Again, the tonnage figures for certain paper products exported are not available. The dollar figures covering these exports will be found in the succeeding table under the heading "Paper Products".

Table 74.
Pulp and Paper Exports and Canadian Trade

Pulp and paper Exports	Total domestic exports of Canada	Pulp and paper exports to total exports — %	Trade Balance
1919 . . .	\$97,168,278	\$1,235,958,483	7.86
1920 . . .	163,127,988	1,268,014,533	12.86
1921 . . .	108,644,620	800,149,296	13.58
1922 . . .	115,863,742	880,408,645	13.16
1923 . . .	140,798,453	1,002,401,467	14.05
1924 . . .	139,491,469	1,029,699,449	13.55
1925 . . .	154,555,951	1,239,554,207	12.47
1926 . . .	173,491,635	1,261,241,525	13.76
1927 . . .	176,633,728	1,210,596,998	14.59
1928 . . .	192,771,615	1,339,409,562	14.39
1929 . . .	198,287,106	1,152,416,330	17.21
1930 . . .	177,590,222	863,683,761	20.56
1931 . . .	141,170,685	887,653,440	24.02
1932 . . .	105,253,603	489,883,112	21.48
1933 . . .	95,750,769	529,449,529	18.09
1934 . . .	113,078,565	649,314,236	17.42
1935 . . .	121,667,321	724,977,459	16.78
1936 . . .	142,108,123	937,824,933	15.15
1937 . . .	177,979,899	997,366,918	17.84
1938 . . .	140,603,514	837,583,917	16.79
1939 . . .	153,127,766	924,926,104	16.77
1940 . . .	231,809,675	1,178,954,420	19.66
1941 . . .	262,081,761	1,621,003,175	16.17
1942 . . .	253,104,957	2,363,773,296	10.71
1943 . . .	260,838,237	2,971,475,277	8.78
1944 . . .	278,853,306	3,439,953,165	8.11
1945 . . .	309,066,903	3,218,330,353	9.60
1946 . . .	401,458,464	2,312,215,301	17.36
1947 . . .	550,872,950	2,774,902,355	19.85
1948 . . .	628,245,992	3,075,438,085	20.43
1949 . . .	630,544,034	2,998,356,417	21.03

—: Unfavourable balance.

Domestic exports cover exports of Canadian produce. In the last 20 years, domestic exports cover approximately 98 per cent or more of total Canadian exports.

Pulp and paper export figures 1919-1930 estimated by DBS from fiscal year figures.

Source: Dominion Bureau of Statistics.

Table 75.
Products of Newfoundland's Pulp and Paper Mills
(Finished products for sale)

Calendar Year	Newsprint & Sideruns	Sulphite Pulp	Mechanical Pulp	Sundries*	Total Production Tons
1938 . . .	268,625	885	—	323	269,833
1939 . . .	308,530	3,975	—	326	314,831
1940 . . .	361,703	26,647	6,432	361	395,143
1941 . . .	360,930	44,470	14,806	657	420,863
1942 . . .	283,358	62,970	29,025	1,386	376,739
1943 . . .	239,882	47,007	38,502	4,393	329,784
1944 . . .	278,159	27,005	44,161	7,404	356,729
1945 . . .	344,573	37,014	14,237	4,337	400,161
1946 . . .	374,993	17,952	—	4,528	397,473
1947 . . .	387,097	43,020	4,468	4,144	434,729
1948 . . .	397,983	54,899	3,228	3,867	459,977

* Includes mill wrappers, sheathing paper, sulphite wrapping for local use.

This table is included for reference purposes only. Since Confederation with Canada in 1949, Newfoundland figures have been incorporated into the Canadian totals and will not be shown separately in future.

Source: Newfoundland Department of Natural Resources.

Table 76.
Exports of Canadian Produce to the United States

	1948	%	1949	%
Pulp	\$ 184,983,027	12.3	\$ 141,641,380	9.4
Newsprint*	342,795,392	22.8	396,362,860	26.2
Other paper and paper products	11,381,253	.8	8,445,413	.6
	<hr/>	<hr/>	<hr/>	<hr/>
	\$ 539,159,672	35.9	\$ 546,449,653	36.2
Wood, wood products and paper	\$ 754,937,316	50.3	\$ 713,960,304	47.3
Animals and animal products	217,940,763	11.1	201,819,831	13.4
Non-ferrous metals and their products	166,546,176	14.5	198,196,619	13.1
Agricultural and vegetable products	139,322,445	9.3	170,640,438	11.3
Iron and its products	92,218,545	6.2	108,735,176	7.2
Non-metallic minerals and their products	57,462,451	3.8	52,248,771	3.5
Chemicals and allied products	33,568,378	2.2	33,358,815	2.2
Fibres, textiles and textile products	17,034,717	1.1	11,180,374	.7
Miscellaneous commodities	21,955,930	1.5	19,999,514	1.3
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total, excluding gold	\$1,500,986,721	100.	\$1,510,139,842	100.

* Includes mutilated newsprint valued at \$2,461,347 in 1948 and \$1,103,285 in 1949.

Source: Dominion Bureau of Statistics.

Table 85.
Distribution of Sales Dollar

The average distribution of the sales dollar in the industry is as follows:	
Labour, mills and offices*	19.2¢
Woods costs, including labour & stumpage*	28.5
Materials purchased	15.5
Power & fuel	7.9
Taxes, income, corporation & municipal	12.
Depreciation	4.8
Remaining in the business for working capital and other needs	6.7
Bond interest	1.5
Dividends	3.9
	100.0¢

* As more than two-thirds of the cost of wood is paid out in wages, workers in the mills and woods in 1947 received 38¢ of every income dollar.

Source: Estimate of Canadian Pulp and Paper Association based on a breakdown of the figures covering almost 60 per cent of the industry during the first ten months of 1947.

Note: Covering 1949 operations, Abitibi Power & Paper Company Limited published the following breakdown of its sales dollar:

Materials and services	35.7¢
Depreciation & depletion	6.0
Retained in business	6.9
Government and municipal taxes	10.0
Bond interest	1.7
Wages and salaries	33.3
Employee retirement income plan, group insurance, etc.	1.7
Dividends	4.7
	100.0¢

Table 86.
Growth in Employment and Wages

	1915	1949	% increase
Mill workers	15,300	52,050	240
Wages and salaries paid	\$11,000,000	\$157,703,868	1,333

The average wage paid mill workers in 1949 was \$2,852 while the average salary was \$3,977.

Source: Dominion Bureau of Statistics.

Table 87.
Domestic Trade 1949

	Pulp and Paper	Paper
Gross value of production	\$836,107,697	\$641,459,838
Exports	630,544,034	459,039,871
For domestic market	\$205,563,663	\$182,419,967
Per cent of production retained for domestic use	24.6	28.4

Source: Dominion Bureau of Statistics.

Table 88.
Principal Expenditures 1949

Transportation†	\$130,000,000
Chemicals & mill supplies*	65,965,020
Fuel*	41,370,633
Electricity*	22,739,514
Fibre and fibre stock*	10,705,679
Purchased pulpwood**	44,070,244
Food†	14,700,000
Fodder†	3,150,000
Taxes & other pay's to Gov'ts†	115,000,000
Wages, including woods workers**	246,501,868

† Canadian Pulp and Paper Association estimate.

* Dominion Bureau of Statistics figures.

** Expenditures for purchased pulpwood in 1949 totalled \$72,520,244 from which has been deducted \$28,450,000 covering the estimated wages paid in harvesting this wood. The latter figure is included in the \$246,501,868 shown as wages. See also Table 84.

Table 89.
Purchases of Mill Supplies 1949

Chemicals, minerals, size, glue, dyes, etc.	\$28,780,732
Pulp stones	427,994
Machine clothing (woollen felts)	7,447,854
Miscellaneous supplies	20,053,270
Mill wrapping and packing material	5,520,621
Wire mesh (fourdrinier & cylinder)	3,734,544
	\$65,965,020

Source: Dominion Bureau of Statistics.

Table 90.
Fuel Purchased 1949

Quebec	\$16,747,539
Ontario	13,978,058
British Columbia	3,364,682
Newfoundland, New Brunswick, Nova Scotia & Manitoba	7,280,354

Source: Dominion Bureau of Statistics.

Table 91.
Electricity Purchased 1949

Quebec	\$15,163,258
Ontario	4,855,139
British Columbia	218,416
New Brunswick, Nova Scotia and Manitoba	2,502,701

\$22,739,514

Note: In addition to purchased electricity the pulp and paper mills own hydro-electric plants which furnished 3,778,110,254 kilowatt hours of electricity to the mills in 1949.

Source: Dominion Bureau of Statistics.

Table 92.
Car Loadings and Revenue Freight Carried

	Car Loadings for 52 weeks ending Dec. 31 '49	Revenue Freight Carried Calendar year 1949
Pulp and paper	Carloads 204,458 173,832	% 5.23 4.45
Pulpwood	378,290	9.68
Other forest products	257,321	6.59
	635,611	16.27
Agricultural Products		
Grain	380,813	9.75
Grain Products	130,712	3.34
Other Agricultural Products	93,996	2.41
	605,521	15.50
Animal Products	133,823	3.43
Mineral Products		
Coal	311,939	7.98
Coke	31,532	.81
Ores and Concentrates	164,664	4.21
Sand, Stone, Gravel, Plaster, Lime, Brick, Cement, Sewer Pipe, Tile	216,263	5.54
Other Mineral Products	99,526	2.55
	823,924	21.09
Gasoline, Petroleum Oils and Products	256,448	6.56
Iron & Steel products, implements, machines, boilers, autos and parts, canned food & sugar, fertilizer	256,432	6.56
Other Products of Manufactures and Miscellaneous	271,172	6.94
Merchandise, L.C.L.	923,724	23.65
Total Revenue Cars Loaded	3,906,655	100.
		162,292,226

Note: Car loadings of pulp and paper and pulpwood in 1949, were equivalent to 560 cars and 476 cars respectively, every day in the year. A proportion of the pulpwood car loadings included pulpwood for export. Deducting an estimate for pulpwood shipped abroad, the pulp and paper industry's car loadings of pulpwood and finished products were equivalent to ten trains of a mile in length daily. Annual loadings of pulpwood for the mills and of finished products would thus fill a train 3,078 miles in length.

In addition, the pulp and paper industry creates a vast rail traffic of coal, chemicals, and other supplies required for the operations at the mills and in the woods.

Source: Dominion Bureau of Statistics.

Table 93.
Payrolls and Weekly Earnings
in Important Industries
1949

Industry	Average Number of Employees	Average Weekly Payrolls	Average Weekly Earnings
Pulp & Paper	49,214	\$2,799,929	\$56.90
Non-ferrous metal products*	47,528	2,329,403	49.03
Chemicals**	43,115	2,052,722	47.61
Meat packing & slaughtering	20,261	966,075	47.65
Shipbuilding	14,823	695,553	46.98
Automobiles & parts	46,324	2,442,632	52.71
Electrical apparatus	52,685	2,517,967	47.79
Crude, rolled and forged iron & steel products	38,189	2,001,196	52.41
Rubber products	21,281	959,329	45.07
Lumber products	31,141	1,013,428	32.54

Note: Compiled from monthly returns received from establishments employing 15 persons or more. Pulp and paper payrolls do not include woods workers.

* Includes the manufacture of non-ferrous metal products, as well as the smelting and refining of non-ferrous metals.

** Includes all classes of chemical manufactures.

Source: Dominion Bureau of Statistics.

Table 94.
Power Utilization

	in 000's of kwh including off-peak power		
	1947	1948	1949
Generated by Central Electric Stations for			
Pulp and paper industry	9,972,705	8,022,261	7,967,897
Other industries	19,034,749	21,050,344	a
Mining companies	1,851,447	1,909,506	a
Domestic customers (homes and farms)	4,383,222	4,984,280	a
Commercial customers, street lighting and free service	2,374,383	2,478,470	a
Export	2,066,487	1,658,113	1,730,690
Line losses, etc.	3,741,806	4,465,875	a
	43,424,799	44,568,849	46,673,214
Generated for own use by			
Pulp and paper industry	2,316,377	2,327,304	3,778,110
Other industries	1,148,185	2,263,373	a
Mining companies	269,412	283,589	a
Total electricity generated	47,158,773	49,443,115	a
Less: Exports	2,066,487	1,658,113	1,730,690
Line losses, etc.	3,741,806	4,465,875	a
	41,350,480	43,319,127	a
Plus: Imports	53,037	84,994	26,062
Canadian consumption	41,403,517	43,404,121	a

a: Not available.

Note: The power consumption of the pulp and paper mills accounts for about 30 per cent of all the power generated for industry and for mining. Of the power generated by industry for its own use, the pulp and paper mills accounted for 66.9 per cent in 1947 and 50.7 per cent in 1948. Of the total consumption of electricity in Canada, the pulp and paper mills accounted for 29.7 per cent in 1947 and 23.8 per cent in 1948.

Source: Dominion Bureau of Statistics.

Table 95.
Exports 1949

	Ex gold in millions of dollars	%
Forest products	\$ 882.0	29
Agricultural & vegetable products	771.3	26
Animal & animal products	341.4	11
All others	1,003.7	34
	\$2,998.4	100

Source: Dominion Bureau of Statistics.

Table 96.
Canadian Exports 1949

	Ex gold in millions of dollars	
Wood, Wood Products, and Paper	\$ 882.0	
Pulp and Paper	\$630.5	
Pulp	\$171.5	
Newsprint	441.2	
Other Paper	15.7	
Paper Goods	2.1	
Pulpwood	30.4	
Planks and Boards	161.0	
Other Wood Products	60.1	
Agricultural and Vegetable Products	771.3	
Wheat	435.2	
Other Grains	64.2	
Flour of Wheat	97.3	
Alcoholic Beverages	34.5	
Other Vegetable Products	140.1	
Animal and Animal Products	341.4	
Iron and its Products	291.6	
Vehicles, chiefly of iron	61.8	
Farm Implements and Machinery	92.5	
Other Machinery	31.2	
Ferro-alloys	19.2	
Other Iron and Steel Products	86.9	
Non-ferrous Metals and their Products	428.6	
Chemicals and Allied Products	70.3	
Non-metallic Minerals and their Products	72.0	
Fibres, Textiles and Textile Products	24.4	
Miscellaneous Commodities	116.8	
TOTAL	\$2,998.4	

Source: Dominion Bureau of Statistics.

Table 97.
Pulp, Paper and Mining 1949

Gross value of pulp and paper production	...	\$836,107,697
Mineral production of Canada (a)		
Gold	\$148,446,648	
Other metallics	390,520,610	
Coal, gas, peat, petroleum	184,294,709	
Other non-metallics	64,585,216	
Clay products, cement, lime, stone, sand & gravel	113,903,079	\$901,750,262

a: Preliminary estimate.

Source: Dominion Bureau of Statistics.

Table 98.

Ten Leading Canadian Industries 1948

	Gross Value of Production		Salaries and Wages		Employment		Net Value of Production	
	'000 \$	Rank b	'000 \$	Rank b	No.	Rank	'000 \$	Rank b
Pulp and Paper	\$825,857	1	\$151,662a	1	51,924	3a	\$412,770	1
Slaughtering and Meat Packing	689,546	2	51,828	12	21,879	15	92,329	13
Non-ferrous Metal Smelting and Refining	576,383	3	52,276	11	19,701	20	146,830	4
Electrical Apparatus and Supplies	425,725	4	122,113	2	53,873	2	241,333	2
Sawmills	409,267	5	95,065	3	56,756	1	196,936	3
Automobiles	398,056	6	68,477	7	24,703	13	145,601	5
Petroleum Products	394,934	7	22,061	31	8,493	34	63,137	27
Butter and Cheese	378,230	8	37,916	23	21,824	16	73,102	19
Flour and Feed Mills	310,768	9	14,055	36	7,124	36	39,294	36
Primary Iron and Steel	282,167	10	77,357	5	29,367	9	125,276	7

a: Covers only mill workers; the inclusion of the 9,700 men permanently employed in the woods places pulp and paper first, instead of third, in employment.

b: Rank in Canadian industry as a whole.

Source: Dominion Bureau of Statistics.

Table 99.

Gross Value of Canadian Production

	1948		1949		MANUFACTURES:	1948		1949e	
	'000 \$	Rank	'000 \$	Rank		'000\$	'000\$		
PRIMARY PRODUCTION:									
Agriculture	\$2,709,617,000		\$2,672,601,000e						
Wheat	588,307,000		634,004,000e						
All grains (including wheat)	869,980,000		740,185,000e						
Forestry	1,821,420,204								
Operations in the woods	586,295,068								
Fisheries	202,779,295								
Trapping	20,178,077								
Mining	1,299,707,149								
Mineral production	820,248,865								
Electric Power	257,377,490								
Less Duplication (Forest production on farms)	—129,287,000								
Total, Primary Production	\$6,181,792,215								
SECONDARY PRODUCTION:									
Manufactures	\$11,876,790,012		\$12,378,731,000e						
Construction	1,665,561,000								
Custom and Repair	411,485,000								
Total, Secondary Production	\$13,953,836,012								
Less Duplication in Manufactures (See Notes below)	—1,992,441,375								
Grand Total	\$18,143,186,852								
* Industries included both in primary and secondary production.									
e: Preliminary estimates. Other figures not yet available.									
NOTES: The gross value of commodity production figures given above are not comparable with those of the "gross national product" given in Table 77. The methods used are entirely different and the "gross national product" comprises, in addition, depreciation allowances, similar business costs, and indirect taxes less subsidies.									
While the statistics of gross production are of interest as indicating the amount of revenue produced by the corporations and other operators in the field, the total includes a large element of duplication: often the products of one industry become the materials of other industries. The net value of production obtained by deducting the cost of materials, fuel and electricity is a more accurate measure of the contribution to the national economy.									
The value of agricultural production includes forest products produced on farmers' wood lots. As such products are also reported under forestry, the amount of duplication is deducted.									
A survey of production must differentiate between the more important branches and at the same time present a grand total that will be free from overlapping. For example, the products of pulp and paper and sawmills are included in forestry production as being the first finished products of commercial value resulting from the productive process. They may, however, be classified under manufactures in view of the nature of the production process — either allocation being quite correct according to the point of view. Production of such industries is regarded both as primary and as secondary, but the duplication is eliminated from the grand total.									
A break-down of the manufactures figures is given for the seventeen industrial groups in the adjoining column, which also gives the value of production of the principal industries in each group as well as that of all industries (marked *) included both in the primary and secondary production figures.									
Source: Dominion Bureau of Statistics.									

CANADA'S PULP AND PAPER INDUSTRY

1. The Canadian pulp and paper industry is one of the major industrial enterprises of the world.
2. In newsprint paper, Canada has a production five times that of any other country. She provides three of every five newspaper pages printed throughout the world. Canada is the second greatest producer and exporter of pulps in the world; and at the same time has a large production of papers and paperboards of every type and kind.
3. Canada is the greatest exporter of pulp and paper in the world. Some 75 per cent of the total pulp and paper production moves abroad and 94 per cent of her newsprint is exported.
4. The domestic trade in pulp and paper would alone make the industry a leader in Canadian trade. The quarter of the pulp and paper output sold at home has a value far exceeding Canada's output of gold, of farm implements, or of cotton yarn and cloth.
5. Amidst Canadian industry, pulp and paper stands first in employment; first in total wages paid; first in export values; first in value of production; first in capital invested.
6. Canada's pulp and paper output is currently some \$900 million a year. In value it approximates Canada's output of wheat and all other grains combined; it is twice as great as the gross value of production of the automobile industry; and it equals Canada's total annual mineral production.
7. Pulp and paper is exporting at the rate of \$670 million annually. It is the largest item in Canada's trade abroad accounting for 36 per cent of the exports to the United States and 21 per cent of all exports.
8. Fluctuations in the national income closely parallel variations in pulp and paper production. The ups and downs in Canadian exports also closely follow the trend of pulp and paper exports. Pros-
perity in the industry and in Canada are inseparable.
9. Pulp and paper is the largest industrial buyer of goods and services in the Dominion. In 1949 it paid out \$246 million in wages, \$130 million for transportation, and \$158 million for supplies and electricity, and \$72 million for purchases of pulpwood.
10. The annual wage bill of the industry exceeds \$246 million of which \$157 million went to mill workers and the remainder to woods workers. No single industry pays more. No industry has a better labour-management record. Generally, wages and working conditions in the mills are covered by collective labour agreements.
11. In hydro-electric power, Canada is the second nation in the world. Pulp and paper has been largely responsible for the development of Canadian hydro-electric resources. Pulp and paper mills use about 30 per cent of all the power generated for industry.
12. There are 85 pulp and paper companies in Canada, some large some small, operating 130 mills in seven provinces. In addition to pulps and newsprint, they have a highly developed production of fine paper, wrapping paper, tissues, paperboard, and other cellulose products.
13. Canada's rag papers, fine papers, specialty papers, wrapping papers, and paperboards are of a quality unsurpassed anywhere. Canada produces a thousand varieties of pulps, papers, paperboards, and specialty pulp and paper products.
14. In the value of its production the pulp and paper industry has headed the list of Canadian peacetime manufacturing industries for a score of years.
15. In 1949 the industry took pulpwood valued at \$240 million and converted it into products having a gross value of \$836 million. The industry thus increases by 3½ times the value of the wood which it uses.

- 16.** Including woods operations, pulp and paper produces employment for some 254,000 workers; helps directly to provide a livelihood for a million Canadians; and indirectly supports hundreds of thousands more as one of the chief buyers of transportation, power, fuel, supplies, and equipment.
- 17.** Pulp and paper represents the savings of many thousands of Canadians who, over the years, have received few dividends.
- 18.** The export pulp markets are worth \$190 million annually to Canada. Paper exports are worth another \$480 million. Every Canadian has an interest in the maintenance of these markets.
- 19.** The pulp and paper industry has made its own way against world competition without subsidies, price floors, guarantees, or similar forms of public financial assistance. The industry has at times disappointed investors but, in war or peace, it has always been a contributor to—never a drain on—the public treasury. Canada has no better asset, nor any worth more care.
- 20.** The four great sources of Canadian wealth are forests, farms, minerals, and water power. The industry uses the water power to convert the forest crop into dollars of national income chiefly obtained from abroad by exports, and chiefly paid out in wages.
- 21.** Of the average annual forest consumption in the ten years ending 1948, Canadian pulp and paper mills accounted for 19.4 per cent, fuelwood for 21.2 per cent, timber and other products for 38.1 per cent, and fire, insect, and disease for 21.3 per cent.
- 22.** With an investment exceeding \$1 billion in plants which cannot be moved and which cannot operate without pulpwood, and as the largest lease-holder of Crown woodlands, pulp and paper has a vital interest in the maintenance of the forests and in their conservation for future use. The industry is engaged in implementing on its limits its declared Forest Policy of perpetual yield.
- 23.** Spurred by self-interest and its responsibilities, pulp and paper employs some hundreds of trained foresters whose aim is the scientific cutting of the forests and their conservation for future use. Selective and other cutting methods pursued encourage natural regrowth. Pulp and paper spends large sums for the protection of the forests from fire and other hazards. The industry operates the best managed forests in Canada.
- 24.** Provincial governments, which control the natural resources, have set up departments to deal with the forests. The Dominion government's expenditures on forest matters have been considerably below the level of expenditures for much less important national assets.
- 25.** Through pulp and paper operations have been created vast sources of government revenue. For many years the Dominion Government has operated departments for agriculture and fisheries. No such recognition has been given to the forest industries.
- 26.** Over 90 per cent of the Canadian forests are owned by the public. In area, the forests more than double the land in Canada classed as having a present or potential value for agriculture. Pulp and paper development roughly parallels the extent of the forests in the various provinces.
- 27.** Replacement of the annual depletion in the accessible productive forest areas requires an average annual growth of 11 cubic feet per acre. While there is a small growth in many areas, over large tracts the Federal Forestry Branch has recorded growths of from 25 to 40 cubic feet per annum. It appears that the existing forests can supply the present demands made upon them. A reduction in the fire, insect, and disease hazards would permit a substantial development of forest industries.
- 28.** Through devastation by fire, insects, and disease, much more of the forest crumbles into decay or goes up in smoke than is used to produce pulp, paper, and paperboard. Unless these ravages be checked, the depletion of the forests will ultimately exceed the increment. Fires often make impossible the proper regeneration of the forests.
- 29.** The forests are and can be maintained as a renewable asset yielding harvests in perpetuity. They are not merely a source of public revenue, they are also a public responsibility demanding adequate expenditures for their maintenance.
- 30.** Because of what pulp and paper means in the economy—in employment, in exports, in expenditures, and in domestic trade—every Canadian benefits from the operations of this great national industry.

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