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CANADA

DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

GENERAL MANUFACTURES BRANCH



REPORT

ON THE

ARTIFICIAL AND REAL SILK INDUSTRY

IN

CANADA

1941



OTTAWA
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DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
GENERAL MANUFACTURES BRANCH
OTTAWA - CANADA

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ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

The silk industry in Canada is divided into two distinct branches - real silk and artificial silk - but, owing to the fact that the manufacture of the latter is largely concentrated in a few establishments, it is necessary to combine the statistics in order to avoid disclosing individual information. Production must be shown on rather broad lines, an example of which is the impossibility of giving a break-down of synthetic filament yarns into the fundamental types of viscose and acetate.

In 1941 reports were received from thirty establishments, three more than in 1940. Twenty-two of these establishments were located in Quebec and eight in Ontario.

Fabrics, yarns, threads and all other items manufactured in the artificial and real silk industry were produced to the value of \$41,549,845 in 1941, an increase of \$10,342,036 or 33.1 per cent as compared with the previous year. Employment was given to 10,140 persons in 1941, 1,628 or 19.1 per cent more than in 1940, and the payroll, \$11,005,770, represented an additional disbursement to salaried employees and wage-earners of \$2,248,296 or 25.7 per cent. Materials used cost \$15,855,842, an increase of \$4,192,834 or 35.9 per cent. Capital invested totalled \$42,690,766, and was greater by \$4,075,708 or 10.6 per cent than in 1940.

Fabrics woven entirely of continuous filament artificial silk yarns were the most important item produced, being manufactured to the extent of 50,086,500 yards valued at \$22,376,916 in 1941 as against 35,114,903 yards with a value of \$14,772,134 in 1941. Details of production are given in table 3, to which is appended a supplementary table showing the production of fabrics of artificial silk, and cotton and artificial silk mixed, in the Cotton Yarn and Cloth Industry.

ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

Table 1. - Principal Statistics, 1920 to 1941.

Year	Estab- lish- ments No.	Capital Invested \$	Em- p- loyees No.	Salaries and Wages \$	Cost of Materials Used \$	Gross Value of Production \$
1920	5	4,901,679	1,165	817,440	3,438,792	5,376,751
1921	5	4,559,909	932	719,845	1,890,171	3,536,513
1923	7	4,594,313	1,457	1,224,036	2,677,229	5,044,968
1924	10	5,744,502	1,210	978,686	2,486,845	4,381,234
1925	11	9,224,224	1,727	1,364,857	3,361,035	5,483,363
1928	16	26,159,703	3,933	3,441,549	4,638,717	10,897,273
1929	23	28,278,657	4,372	3,825,796	6,091,124	14,476,080
1930	25	30,506,060	5,393	4,718,590	7,633,329	17,808,598
1931	23	32,205,207	6,273	5,758,995	6,482,197	18,187,492
1932	24	28,021,412	7,036	5,756,865	7,858,104	19,864,843
1933	29	30,192,870	7,801	6,138,532	7,795,542	22,754,969
1934	29	34,192,892	9,220	7,535,972	9,553,932	25,879,059
1935	33	35,063,023	10,088	8,371,037	10,946,739	28,045,340
1936	35	34,947,643	10,189	8,877,373	10,732,371	26,930,821
1937	29	34,135,176	10,246	9,099,437	10,453,196	27,871,292
1938	28	31,780,203	8,922	8,147,841	8,882,157	23,871,992
1939	26	32,343,433	8,221	7,972,404	9,872,472	25,440,527
<u>1940(x)</u>						
CANADA	27	38,615,058	8,512	8,757,474	11,662,908	31,207,809
Quebec	19	24,128,775	5,676	5,647,155	8,790,568	20,347,331
Ontario	8	14,486,283	2,836	3,110,319	2,872,340	10,860,478
<u>1941(x)</u>						
CANADA	30	42,690,766	10,140	11,005,770	15,855,842	41,549,845
Quebec	22	27,819,663	7,287	7,617,203	12,601,666	29,788,071
Ontario	8	14,871,103	2,853	3,388,567	3,254,176	11,761,774

(x) Three establishments with a combined gross value of production in excess of \$1,500,000 in 1940, and previously included under the real and artificial silk industry are now classified under the new primary textile industry "Narrow fabrics, laces, trimmings, etc."

Note: Profits or losses cannot be estimated from Census figures as no data are collected for certain expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

Table 2. - Comparison of Principal Statistics, 1940 and 1941.

Items	1940	1941	+ Increase - Decrease
Establishments reporting No.	27	30	+ 3
Capital invested \$	38,615,058	42,690,766	+ 4,075,708
Employees on salaries -			
Total No.	811	873	+ 62
Male No.	569	570	+ 1
Female No.	242	303	+ 61
Total salaries \$	1,752,648	1,977,921	+ 225,273
Employees on wages -			
Monthly average No.	7,701	9,267	+ 1,566
Male No.	5,009	5,975	+ 966
Female No.	2,692	3,292	+ 600
Total wages \$	7,004,826	9,027,849	+ 2,023,023
Power equipment -			
Units No.	26,262	27,216	+ 954
Horsepower capacity H.P.	26,583	28,593	+ 2,010
Cost of fuel and electricity ... \$	1,253,444	1,483,599	+ 230,155
Cost of materials used \$	11,662,908	15,855,842	+ 4,192,934
Gross value of production \$	31,207,809	41,549,845	+ 10,342,036

ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

Table 3. - Production, 1940 and 1941.

Principal Products	Unit of Measure	1940		1941	
		Quantity	Selling Value at Factory \$	Quantity	Selling Value at Factory \$
Woven fabrics -					
All silk	Yd.	628,562	449,955	1,140,901	873,890
All continuous filament artificial silk	"	35,114,903	14,772,134	50,086,500	22,376,916
All spun rayon	"	2,214,577	845,084	3,517,122	1,608,022
Real silk mixed with artificial silk	"	1,418,129	729,316	(1)	(1)
Continuous filament artificial silk and cotton mixtures	"	1,962,955	1,681,611	3,084,403	2,360,702
Other continuous filament artificial silk and mixtures	"	890,700	703,927	239,358	172,210
Spun rayon mixtures	"	(1)	(1)	1,313,401	554,859
All other woven fabrics	"	702,472	490,913	1,105,028	753,950
Yarn and thread -					
Real silk, including mixtures	Lb.	164,562	753,412	105,700	545,139
Artificial silk, singles ...	"	12,738,399	8,525,248	13,640,972	9,104,310
All other artificial silk, including mixtures	"	80,041	114,078	262,379	305,443
All other yarns and threads	"	220,089	410,413) 22,600)	160,376	330,726
All other products	-	-	984,669	-	1,301,947
Custom and commission work ...	-	-	724,449	-	1,261,731
TOTAL VALUE OF PRODUCTS	-	-	31,207,809	-	41,549,845

(1) Included under "All other woven fabrics".

General Note: This report covers only those establishments which manufacture principally artificial and real silk fabrics, yarns, embroidery, thread, etc. and statistics for specific products are, therefore, not to be regarded as total production in Canada. For the total Canadian production reference should be made to the Appendix to "The Manufacturing Industries of Canada".

ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

The weaving of artificial silk yarns into fabric is also carried on in cotton mills, and the production of specified fabrics in the Cotton Yarn and Cloth Industry during the year 1941 is given below:

Products	Lineal yards	Selling value at factory
All continuous filament artificial silk -		\$
Piece dyed	9,167,422	2,914,807
Other	13,255,449	3,106,719
All spun rayon (including mixtures)	10,336,982	2,834,676
Cotton and continuous filament artificial silk mixed -		
Grey and bleached	99,988	27,752
Piece dyed, yarn and stock dyed	2,314,327	948,917

Table 4. - Materials Used, 1940 and 1941.

Principal Materials	Unit of Measure	1940		1941	
		Quantity	Cost Value at Factory	Quantity	Cost Value at Factory
			\$		\$
Silk, raw	Pound	278,394	801,134	233,535	729,784
Rayon staple fibre	"	972,975	306,567	1,384,556	405,775
Yarns -					
Silk, real	"	36,449	108,505	51,039	158,501
Artificial silk (continuous filament) ...	"	6,319,783	4,324,572	8,568,151	5,993,101
Spun silk	"	37,839	86,730	51,419	132,876
Spun rayon (including spun rayon mixtures)	"	384,174	212,340	494,632	277,893
Cotton	"	653,238	330,051	1,104,969	599,069
All other	"	181,822	295,772	700,461	498,227
Chemicals and dyestuffs	-	-	2,792,721	-	3,479,431
All other materials and supplies (1)	-	-	1,450,820	-	1,639,530
Custom weaving, throwing, etc.	-	-	55,835	-	766,178
Dyeing and printing charges..	-	-	702,059	-	912,371
Packing and shipping materials	-	-	197,802	-	263,106
TOTAL COST OF MATERIALS USED	-	-	11,662,908	-	15,855,842

(1) Includes wood pulp, woven fabrics, etc.

ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

Table 5. - Capital Invested, 1927 to 1941.

Year and Provinces	Fixed Capital	Working Capital		Total Capital
	Land, buildings, fixtures, machinery, tools, etc.	Inventory value of materials on hand, stocks in process, finished products, fuel and miscellaneous supplies on hand	Operating Capital, cash, bills, and accounts receivable, prepaid expenses, etc.	
	\$	\$	\$	\$
Canada, 1927	13,348,083	2,600,098	6,379,637	22,327,818
Canada, 1928	16,797,259	3,656,489	5,705,955	26,159,703
" 1929	17,795,190	4,360,403	6,123,064	28,278,657
" 1930	18,947,649	5,029,017	6,529,394	30,506,060
" 1931	21,754,419	4,810,674	5,640,114	32,205,207
" 1932	18,131,911	4,894,436	4,995,065	28,021,412
" 1933	18,844,213	4,060,272	7,288,385	30,192,870
" 1934	22,247,906	4,917,200	7,027,786	34,192,892
" 1935	21,444,973	5,757,971	7,860,079	35,063,023
" 1936	19,735,561	6,185,698	9,026,384	34,947,643
" 1937	19,489,080	6,957,891	7,688,205	34,135,176
" 1938	20,847,100	6,898,935	4,034,168	31,780,203
" 1939	21,010,070	6,009,278	5,324,085	32,343,433
1 9 4 0				
CANADA	20,786,432	7,337,537	10,491,089	38,615,058
Quebec	13,364,504	5,088,683	5,675,588	24,128,775
Ontario	7,421,928	2,248,854	4,815,501	14,486,283
1 9 4 1				
CANADA	20,498,502	7,650,394 *	14,541,870	42,690,766
Quebec	13,741,644	6,046,402	8,031,617	27,819,663
Ontario	6,756,858	1,603,992	6,510,253	14,871,103

* The Inventory Value of finished products on hand amounted to \$1,361,419

ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

Table 6. - Size of Establishments, 1940 and 1941.

Establishments having a production of -	Estab-lish-ments No.	Capital Invested \$	Em- ployees No.	Salaries and Wages \$	Cost of Materials Used \$	Gross Value of Production \$
<u>1940</u>						
\$20,000 to under \$50,000	3	171,646	44	44,595	29,789	83,516
\$50,000 to under \$100,000	4	540,070	132	130,790	170,304	357,753
\$100,000 to under \$500,000	9	2,056,996	813	689,716	1,638,479	2,870,802
\$500,000 to under \$1,000,000	6	3,869,452	1,343	1,237,700	2,559,191	4,501,920
\$1,000,000 and over	5	31,976,894	6,180	6,654,673	7,265,165	23,393,816
TOTAL	27	38,615,058	8,512	8,757,474	11,662,908	31,207,809
<u>1941</u>						
\$20,000 to under \$50,000	2)	203,711	125	110,186	33,321	223,615
\$50,000 to under \$100,000	2)					
\$100,000 to under \$500,000	13	2,366,968	1,058	990,294	1,786,511	3,346,301
\$500,000 to under \$1,000,000	5	2,999,489	1,198	1,094,919	2,482,264	4,074,463
\$1,000,000 and over	8	37,120,598	7,759	8,810,371	11,553,746	33,905,466
TOTAL	30	42,690,766	10,140	11,005,770	15,855,842	41,549,845

Table 7. - Employees, by sex and remuneration.

	Salaried Employees		Wage-earners (Monthly Averages)				Total Employees Salaries and Wages			
	Male	Fe- male	Total Salaries	Male	Fe- male	Total Wages	Male	Fe- male	Salaries and Wages	\$
<u>1940</u>										
CANADA ...	569	242	1,752,648	5,009	2,692	7,004,826	5,578	2,934	8,757,474	
Quebec	396	180	1,250,374	3,724	1,376	4,396,781	4,120	1,556	5,647,155	
Ontario	173	62	502,274	1,285	1,316	2,608,045	1,458	1,378	3,110,319	
<u>1941</u>										
CANADA ...	570	303	1,977,921	5,975	3,292	9,027,849	6,545	3,595	11,005,770	
Quebec	415	223	1,407,851	4,667	1,982	6,209,352	5,082	2,205	7,617,203	
Ontario	155	80	570,070	1,308	1,310	2,818,497	1,463	1,390	3,388,567	

ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

Table 8. - Monthly Employment of Wage-earners, 1939, 1940 and 1941.

Months	1939			1940			1941		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.
January	5,137	2,995	8,132	5,054	2,801	7,855	5,748	3,050	8,798
February	5,130	2,952	8,082	5,117	2,786	7,903	5,855	3,080	8,935
March	4,801	2,820	7,621	5,218	2,771	7,989	5,900	3,055	8,955
April	4,680	2,612	7,292	5,245	2,722	7,967	5,912	3,016	8,928
May	4,568	2,511	7,079	3,204	2,202	5,406	5,929	3,125	9,054
June	4,297	2,113	6,410	5,055	2,543	7,598	6,068	3,308	9,376
July	4,260	2,222	6,482	4,991	2,577	7,568	6,079	3,459	9,538
August	4,484	2,411	6,895	5,078	2,753	7,831	6,064	3,441	9,505
September	4,633	2,646	7,279	5,135	2,748	7,883	6,079	3,555	9,634
October	4,883	2,937	7,820	5,200	2,836	8,036	6,043	3,524	9,567
November	5,002	2,897	7,899	5,253	2,859	8,218	6,031	3,499	9,530
December	5,102	2,844	7,946	5,426	2,815	8,241	5,972	3,405	9,377
MONTHLY AVERAGE	4,747	2,634	7,381	5,009	2,692	7,701	5,975	3,292	9,267

Table 9. - Number of Wage-earners in Month of Highest Employment with their Hours of Work per week and Average Weekly Earnings.

Number of Hours Worked per Week	1940		1941	
	Male	Female	Male	Female
	No.	No.	No.	No.
30 hours or less	150	144	237	193
31 - 43 hours	461	592	436	819
44 hours	49	72	136	78
45 - 47 hours	131	274	269	425
48 hours	712	167	782	438
49 - 50 hours	1,954	929	1,576	854
51 - 54 hours	459	304	728	264
55 hours	426	201	566	244
56 - 64 hours	334	188	1,146	331
65 hours and over	230	-	273	1
Average hours per week	50.6	46.5	50.9	46.2
Average weekly earnings	21.48	13.86	22.83	13.91

ARTIFICIAL AND REAL SILK INDUSTRY IN CANADA, 1941.

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Table 10. - Power Equipment, 1940 and 1941.

Classes of Power	1940		1941		
	Number of Units	Manufacturers' Rating of Horsepower Capacity	Number of Units	Manufacturers' Rating of Horsepower Capacity	
Steam engines and steam turbines—In use	16	4,007	14	4,070	
Idle	2	500	2	385	
Gasoline, gas and oil engines -In use	2	70	1	35	
other than diesel Idle	1	125	1	125	
Electric motors operated by -In use	26,099	21,673	27,032	23,723	
purchased power Idle	142	208	166	255	
TOTAL POWER AVAILABLE FOR MANUFACTURING PURPOSES	26,262	26,583	27,216	28,593	
Electric motors operated by power generated in the establishment	1,646	3,646	1,127	2,204	
Total Electric Motors	27,887	25,527	28,325	26,182	
Boiler installation	In use	31	21,056	37	22,072
	Idle	1	85	2	95

Table 11. - Consumption of Fuel and Electricity, 1940 and 1941.

Kind of Fuel	1940		1941		
	Quantity	Cost Value at Factory	Quantity	Cost Value at Factory	
Coal -		\$		\$	
Bituminous(2000 lb.)	52,485	325,626	70,214	487,376	
Anthracite "	11,542	70,818	12,273	74,666	
Gasoline + Imp. Gal.	9,162	2,157	21,296	5,834	
Kerosene "	-	-	150	28	
Fuel or diesel oil ... " "	5,011,094	284,574	4,156,295	275,850	
Wood cords	-	-	175	525	
Gas, natural M cu.ft.	-	-	215	258	
Other	-	88	-	1,200	
TOTAL COST OF FUEL ...	-	683,263	-	845,737	
Electricity purchased including service charges	Kw.H.	114,639,793	570,181	109,938,087	637,862
TOTAL COST OF FUEL AND ELECTRICITY	-	1,253,444	-	1,483,599	

Gasoline used includes that used in cars and trucks.

Table 12. - Mechanical Equipment, 1940 - 1941.

	1 9 4 0	1 9 4 1
	<u>Number</u>	<u>Number</u>
Spindles -		
Throwing	77,324	89,690
Winding	31,732	35,077
Doubling and twisting	33,484	53,330
Spinning	63,174	68,914
Re-drawing	10,322	9,994
Reeling	264	368
Cone winding	1,614	1,936
Quill winding	4,091	5,284
Warpers	126	112
Slashers	22	23
Looms - 40 inches and under	-	110
41 - 48 inches	617	721
49 - 56 inches	2,481	2,728
57 inches and over	914	942
Velvet	44	24
Jacquard machines in place on the above looms	176	201
Dobbies in place on the above looms	2,888	2,831
Knitting machines	177	110
Braiding machines	-	82

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