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Wood distillation Historical File Copy Industry Canada

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Montreal P. Q. CanadaDominion Statistician: R. H. Coats, LL.D., F.R.S.C., F.S.S. (Hon.)
Chief - Mining, Metallurgical and Chemical Branch: W. H. Losee, B.Sc.ANNUAL INDUSTRY BULLETINCHEMICALS AND ALLIED PRODUCTS GROUPTHE HARDWOOD DISTILLATION INDUSTRY, 1936.

Products made in Canada from the distillation of hardwoods were valued at \$857,647 in 1936 compared with \$805,756 in 1935, an increase of 6 per cent. Five distillation plants and 1 refinery were in operation throughout the year.

The chief products of the distillation plants were charcoal, grey acetate of lime and crude methyl hydrate, but in one instance some grey acetate of lime was further processed to make acetone and acetone oils. Most of the crude methyl hydrate was shipped to Montreal for refining and for making columnian spirits and formaldehyde.

The number of employees in 1936 was 176 and payments in salaries and wages amounted to \$138,151. Capital employed was reported at \$2,064,721. Fuel and electricity cost \$93,437 and materials for manufacturing cost \$406,690 at the works. The latter figure included 47,050 cords of hardwood worth \$245,267, crude methyl hydrate for refining amounting to 314,838 gallons at a cost of \$151,122, and other materials valued at \$10,301.

Table 1 - PRINCIPAL STATISTICS OF THE HARDWOOD DISTILLATION INDUSTRY, 1920 - 1936.

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Selling value of products at works
		\$		\$	\$	\$	\$
1920	13	4,005,022	585	678,785	618,161	2,097,925	4,899,704
1921	10	2,693,924	272	326,921	221,734	1,110,220	2,201,388
1922	11	3,241,389	291	287,812	196,258	932,276	1,892,911
1923	8	2,790,149	316	328,168	277,556	976,174	2,726,998
1924	11	2,762,563	365	381,232	248,816	1,055,303	2,272,484
1925	9	2,264,447	306	234,996	191,584	846,287	1,970,430
1926	8	2,193,622	252	211,388	183,414	826,125	1,712,169
1927	10	1,889,004	288	271,088	202,743	863,717	1,571,176
1928	6	1,870,040	214	241,363	199,525	824,322	1,630,609
1929	6	2,028,757	242	252,281	169,264	736,954	1,680,332
1930	7	2,263,181	167	160,928	105,668	504,323	1,195,986
1931	5	1,644,073	123	119,132	68,712	379,147	700,937
1932	5	1,572,391	98	98,839	71,970	320,457	607,394
1933	6	2,036,570	138	113,433	91,001	454,298	669,120
1934	5	1,645,950	165	128,663	102,821	457,205	774,767
1935	6	2,064,215	168	135,011	113,885	420,866	805,756
1936	6	2,064,721	176	138,151	93,437	406,690	857,647

Table 2 - EMPLOYEES, SALARIES AND WAGES, 1930 - 1936.

Years	AVERAGE NUMBER OF EMPLOYEES					Salaries	Wages	TOTAL SALARIES and WAGES
	On salaries		On wages		TOTAL			
	Male	Female	Male	Female				
1930	15	...	152	...	167	\$ 33,293	\$ 127,635	\$ 160,928
1931	13	...	110	...	123	28,112	91,020	119,132
1932	10	...	88	...	98	26,957	71,882	98,839
1933	10	...	128	...	138	16,205	97,228	113,433
1934	10	...	155	...	165	16,200	112,463	128,663
1935	11	...	157	...	168	19,010	116,001	135,011
1936	13	...	163	...	176	21,941	116,210	138,151

Table 3 - WAGE-EARNERS, BY MONTHS, 1935 and 1936.

Months	1935		1936		Months	1935		1936	
	Male	Female	Male	Female		Male	Female	Male	Female
January	206	...	209	...	July	79	...	101	...
February	198	...	205	...	August	86	...	80	...
March	193	...	160	...	September	98	...	149	...
April	183	...	178	...	October	175	...	175	...
May	145	...	170	...	November	177	...	185	...
June	163	...	141	...	December	187	...	213	...
					Average	157	...	163	...

Table 4 - FUEL AND ELECTRICITY USED, 1935 and 1936.

Kinds	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
Bituminous coal - Canadian	short tons	2,746	\$ 18,488	2,052	\$ 13,835
Imported	short tons	9,164	57,476	6,872	41,964
Wood (for fuel only)	cord	4,131	13,697	5,554	15,178
Other fuel	xxx	...	13,306	...	12,414
Electricity purchased	K.W.H.	656,776	10,918	669,771	10,046
TOTAL	xxx	...	113,885	...	93,437

Table 5 - POWER EQUIPMENT, 1935 and 1936.

Kinds	1935		1936	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Steam engines and steam turbines ...	4	127	4	127
Total Primary Equipment	4	127	4	127
Electric motors run by purchased power	23	321	23	321
TOTAL POWER EMPLOYED	27	448	27	448
Electric motors run by primary power in same plant	2	30	2	16
Total Electric Motors	25	351	25	337
Boilers	24	3,658	24	3,650

Table 6 - MATERIALS USED, 1935 and 1936.

Materials	Unit of measure	1 9 3 5		1 9 3 6	
		Quantity	Cost at works	Quantity	Cost at works
			\$		\$
Purchased materials:-					
Hardwoods	cord	38,372	250,849	47,050	245,267
Lime	bush.	29,186	9,779	28,368	9,749
Other	xxx	...	24,802	...	552
Total purchased	xxx	...	285,430	...	255,568
Interplant shipments:-					
Crude methyl hydrate	Imp.gal.	282,159	135,436	314,838	151,122
Total interplant	xxx	...	135,436	...	151,122
TOTAL - ALL MATERIALS	xxx	...	420,866	...	406,690

Table 7 - PRODUCTS MANUFACTURED, 1935 and 1936.

Products	Unit of measure	1 9 3 5		1 9 3 6	
		Quantity	Selling value at works	Quantity	Selling value at works
			\$		\$
Made for Sale -					
Charcoal	bush.	2,013,104	307,585	1,991,575	296,103
Grey acetate of lime	lb.	4,372,471	48,149	4,892,291	73,423
Crude methyl hydrate	Imp.gal.	47,362	26,299	47,735	26,623
Refined methyl hydrate	Imp.gal.	250,176	187,632	302,650	233,041
Other products (a)	xxx	...	90,460	...	64,853
Total products for sale	xxx	...	660,125	...	694,045
Intermediate products (b) -					
Grey acetate of lime	lb.	816,372	8,164	758,324	7,583
Crude methyl hydrate	Imp.gal.	305,772	137,467	302,054	135,954
Pure methyl hydrate	Imp.gal.	33,440	20,065
Total intermediates	xxx	...	145,631	...	163,602
TOTAL - ALL PRODUCTS	xxx	...	805,756	...	857,647

(a) Includes columbian spirits, acetone, acetone oils and formaldehyde.

(b) Includes interplant shipments and products made and used again in same works.

Table 8 - TOTAL PRODUCTION OF CHARCOAL IN CANADA, 1929 - 1936 (from all industries)

Years	In the wood dis-tillation industry		In the charcoal-burning industry		T O T A L	
	Pounds	\$	Pounds	\$	Pounds	\$
1929	40,257,792	600,127	8,036,109	74,120	48,293,901	674,247
1930	29,665,536	401,363	9,105,560	78,505	38,771,096	479,868
1931	24,560,656	331,287	11,191,952	92,718	35,752,608	424,005
1932	20,438,928	255,487	11,521,569	70,595	31,960,497	326,082
1933	29,118,096	232,339	8,037,771	41,227	37,155,867	273,566
1934	28,917,008	271,006	7,953,926	48,248	36,870,934	319,254
1935	32,209,664	307,585	8,231,286	50,661	40,440,950	358,246
1936	31,869,650	296,103	NOT	YET	AVAILABLE.	



Table 9 - IMPORTS INTO CANADA AND EXPORTS OF CHARCOAL, METHYL HYDRATE, ETC.,
1935 and 1936.

Items	1 9 3 5		1 9 3 6	
	Imports	Exports	Imports	Exports
Methyl hydrate (wood alcohol)..... gal.	...	3,846	...	7,950
	\$	1,922	...	2,356
Charcoal	tons 1,078	...	817	...
	\$ 19,237	...	17,791	...
Acetate of lime	cwt. 1	27,433	...	63,550
	\$ 28	45,570	...	83,620
Acetic and pyroligneous acid	gal. 535	...	1,838	...
	\$ 1,178	...	2,305	...
Formaldehyde containing not more than 15% alcohol	\$ 60,419	...	52,979	...
Methyl alcohol to be used in denaturing alcohol for use in the arts and in- dustries and for fuel, light and power - proof gal.
	\$
Mixtures of methyl alcohol and other ingredients when imported by tanners for use exclusively as a solvent for dyes for the dyeing of leather in their own factories	proof gal. 6,402	...	6,401	...
	\$ 1,986	...	2,134	...

LIST OF HARDWOOD DISTILLATION PLANTS IN CANADA, 1936.

<u>Names of Firms</u>	<u>Location of Plants</u>	<u>Main Products, 1936</u>
Canadian Industrial Alcohol Company, Ltd.	Head Office - 910 Canada Cement Bldg., Montreal, P.Q. Plant - Lindsay, Ont.	Charcoal, grey acetate of lime, crude methyl hydrate.
Standard Chemical Co. Ltd.	Head Office - 200 Bay St., Toronto, Ont. Plants - Donald, Ont., Longford, Ont., South River, Ont. Fassett, P.Q., and Montreal, P.Q. (refinery)	Charcoal, grey acetate of lime, crude methyl hydrate, refined methyl hydrate, formaldehyde, columnian spirits, acetone, and acetone oils.
