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PEAT INDUSTRY, 1942

The Canadian peat industry comprises both firms producing peat as a fuel and peat moss and humus for various other purposes. During 1942 only 172 short tons of peat fuel valued at \$1,204 were commercially produced in Canada. This output came from a bog located in Ellice township, Perth county, Ontario. At Terence Bay, Nova Scotia, a few tons of peat were cut in 1942 for experimental purposes by one of the parish priests. No other reports of the mining of peat for use as a fuel were received during the year under review.

The production of peat moss in the Dominion during 1942 showed a remarkable increase over that of the previous year. Commercial shipments totalled 53,506 short tons with a value (less cost of containers) of \$1,069,372 compared with 27,803 short tons worth \$644,253 in 1941. Production of moss in 1942 was reported from bogs located in New Brunswick, Quebec, Ontario, Manitoba, Alberta and British Columbia. Of the total tonnage shipped, 53 per cent originated in British Columbia, 24 per cent in Quebec and 18 per cent in Ontario. Shipments according to use were as follows: 12,071 tons for horticultural purposes; 113 tons as insulation; 17,344 tons as poultry and stable litter; 23,927 tons for metallurgical purposes and 51 tons for other uses. Included in the tonnage of moss sold for horticultural use were 324 tons of humus. Products were marketed in the form of bales, bags, pads and insulation manufactures. The cost of packing material and containers totalled \$237,721. Canadian moss sold for metallurgical purposes was for consumption in the United States in the production of magnesium metal.

The number of firms reported as active in the production of peat moss or the development of peat moss bogs totalled 35 in 1942. Capital was reported at \$3,212,921 and \$1,380,142 were distributed as salaries and wages to 1,316 employees. The net value of production in 1942 was estimated at \$1,031,211.

Table 1 - PRINCIPAL STATISTICS OF THE PEAT INDUSTRY IN CANADA, 1941 and 1942

		1941	1942
Number of firms		22(a)	35(b)
Number of plants or bogs		22	35
Capital employed	\$	825,154	3,212,921
Number of employees - On salary		37	69
On wages		630	1,247
Total		667	1,316
Salaries and wages - Salaries	\$	65,988	113,781
Wages	\$	420,123	1,266,361
Total	\$	486,116	1,380,142
Selling value of products (gross)	\$	646,408	1,308,297
Cost of fuel and electricity	\$	17,327	25,866
Process supplies used	\$	145	13,499
Cost of containers or packing .....	\$	...	237,721
Selling value of products (net)	\$	623,936	1,031,211

(a) Includes two producing fuel.

(b) Includes one producing fuel.

Table 2 - CAPITAL EMPLOYED IN THE PEAT INDUSTRY IN CANADA, BY PROVINCES, 1942

Province	Capital Employed as Represented by:					TOTAL
	Present cash value of land	Present value of buildings, fixtures, machinery, tools and other equipment	Inventory value of stone on hand, fuel and miscellaneous supplies on hand	Inventory value of finished products on hand	Operating capital (cash bills and accounts receivable, prepaid expenses, etc.)	
	\$	\$	\$	\$	\$	\$
Quebec	76,200	211,320	78,237	27,654	25,731	419,132
Ontario	52,900	110,145	59,305	4,500	16,129	222,979
Manitoba (x) ...	5,000	63,047	50,557	4,404	5,100	128,108
British Columbia	74,066	550,642	643,135	14,402	1,160,397	2,442,642
CANADA	188,166	935,154	831,234	50,960	1,207,357	3,212,921

(x) Includes data for 1 firm in New Brunswick and 1 in Alberta.

Table 3 - NUMBER OF FIRMS, EMPLOYEES, SALARIES AND WAGES, AND PEAT (MOSS AND FUEL) SOLD OR USED, BY PROVINCES, 1942

Province	Number of firms	Number of employees	Salaries and wages	Fuel, electricity, process supplies used and cost of containers	Production		Value (gross)
					Tons of peat sold or used		
					As fuel	Moss	
			\$	\$			\$ (a)
Quebec	10	158	112,700	94,576	...	12,982	286,641
Ontario	6	131	138,761	58,970	172(✓)	9,427	197,548
Manitoba (x) ...	6	115	99,795	36,466	...	2,577	95,322
British Columbia	13	912	1,028,886	87,074	...	23,520	728,236
CANADA	35	1,316	1,380,142	277,086	172(✓)	53,506	1,308,297

(x) Contains data for 1 firm in New Brunswick and 1 in Alberta.

(✓) Includes 7 tons used by producer.

(a) Includes cost of containers.

Table 4 - NUMBER OF WAGE-EARNERS WHO WORKED THE NUMBER OF HOURS SPECIFIED, DURING ONE WEEK IN MONTH OF HIGHEST EMPLOYMENT, INCLUDING OVERTIME

Hours	1 9 4 2		Hours	1 9 4 2	
	Male	Female		Male	Female
30 hours or less ...	236	27	51-54 hours	137	...
31-43 hours	113	17	55 hours	21	...
44 hours	125	9	56-64 hours	206	...
45-47 hours	115	24	65 hours and over.	127	...
48 hours	1,779	1	GRAND TOTAL ...	2,913	87
49-50 hours	49	9	Total wages paid in that week .. \$	54,513	

Table 5 - WAGE-EARNERS, BY MONTHS, 1942

Month	Bog		Dressing Plant	
	Male	Female	Male	Female
January	571	1	189	...
February	697	1	164	...
March	747	1	102	...
April	758	10	113	...
May	846	43	143	6
June	1,169	80	146	10
July	2,069	554	147	5
August	1,744	415	132	6
September	937	68	184	23
October	817	39	229	25
November	645	11	273	21
December	498	3	252	31

Table 6 - FUEL AND ELECTRICITY USED, 1942

Kinds	Unit of measure	Quantity	Cost at works \$
Bituminous coal - Canadian	ton	...	...
Imported	ton	...	...
Anthracite coal	ton	...	...
Coke (for fuel only)	ton	...	...
Gasoline	Imp.gal.	49,013	12,611
Kerosene or coal oil	Imp.gal.	448	93
Fuel oil	Imp.gal.	7,776	1,491
Wood	cord	654	1,969
Gas - Manufactured	M cu.ft.	...	...
Natural	M cu.ft.	...	...
Other fuel .....	...	...	...
Electricity purchased	K.W.H.	379,781	9,702
TOTAL .....	...	...	25,866
Electricity generated for own use	K.W.H.	...	...

Table 7 - POWER EQUIPMENT (Including stand-by or emergency equipment) 1942

Description	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total horse power	Number of units	Total horse power
Steam engines and steam turbines	1	50	...	...
Diesel engines	1	115	...	...
Gasoline, gas and oil engines, other than Diesel engines	76	1,999	11	539
Hydraulic turbines or water wheels .....	...	...	...	...
Electric motors run by purchased power -				
(a) Operated by purchased power	62	776	1	7
TOTAL	140	2,940	12	546
(b) Operated by power generated by above primary units ...	...	...	...	...
Stationary boilers .....	...	...	...	...
Motor generator sets .....	...	...	...	...

Table 8 - PEAT FUEL PRODUCED IN CANADA, 1928-1941 (tons of 2,000 pounds)

Year	Tons	\$
1928	1,497	5,845
1929	2,607	13,339
1930	2,847	10,932
1931	1,674	7,033
1932	3,248	7,593
1933	1,131	3,449
1934	1,878	7,343
1935	1,340	5,761
1936	1,341	7,376
1937	478	2,676
1938	620	3,500
1939	445	2,445
1940	30	75
1941	355	2,155

Note: For information of a technical nature, please refer to report No. 614 "Facts About Peat" issued by the Bureau of Mines, Ottawa.

Table 9 - PRODUCTION (SHIPMENTS) OF PEAT FUEL AND PEAT MOSS IN CANADA, BY USES AND PROVINCES, 1942

Province	Fuel		M o s s										TOTAL MOSS	
	Tons	\$	Horticulture		Insulation		Poultry and stable litter		Metallurgy		Other uses			
			Tons	\$	Tons	\$	Tons	\$	Tons	\$	Tons	\$	Tons	\$ (/)
Quebec ....	...	...	4,410	74,332	81	2,104	8,491	121,124	...	...	...	...	12,982	197,560
Ontario ...	172	1,204	5,832	89,058	1	46	3,594	58,625	...	...	...	...	9,427	147,729
Manitoba, New Bruns- wick and Alberta ..	...	...	541	8,358	31	542	2,005	56,412	...	...	...	...	2,577	65,312
British Columbia..	...	...	1,288	28,318	...	...	3,254	77,302	23,927	549,774	51	3,377	28,520	658,771
TOTAL ...	172	1,204	12,071	200,066	113	2,692	17,344	313,463	23,927	549,774	51	3,377	53,506	1,069,372

(/) Less cost of containers.

The following abstracts are from a report prepared by H. A. Leverin of the Bureau of Mines, Ottawa - Memorandum series 83 - February, 1943:

"Peat occurs in nature in two distinct forms, unhumified and humified, differing markedly in physical properties and chemical composition. Unhumified peat is the dead moss of sphagnum mosses, only slightly humified; it is fibrous, elastic, of light greyish green, yellowish to light brown colour, becoming on drying somewhat darker. It has an absorptive value of 10 to 26 times its own weight, is light in weight and porous. Humified peat in its natural state is dark brown to black, colloidal, plastic, homogeneous and somewhat elastic. It dries into a hard solid mass of a specific gravity higher than water. It has almost no absorptive value. Unhumified peat left in its natural state will humify in course of time and all fibrous matter eventually disappears. Humified peat in the trade is usually named 'fuel peat' and unhumified or slightly humified peat 'peat moss'. The latter nomenclature may be considered correct in regard to unhumified Canadian peat products, because most of them are derived from sphagnum mosses, but there are many large deposits in Canada and in the United States that originated from carex (consists mainly of the residues of straws, leaves and roots of the tall-stemmed sedges of the carex group) and other sedges, reed, hypnum and a mixture of aquatic plants and these should not be sold under the name of peat moss; these are of much lower quality than the sphagnum mosses. The name peat moss, however, has become the established trade name for unhumified and slightly humified peats. Sphagnum moss, sometimes termed 'white moss' or genuine peat moss is by far the best raw material and yields the best grade of commercial peat moss.

"Sphagnum peat moss seldom occurs in deposits in a pure state but is generally intermixed with the residues of Eriophorum (cotton grass), sedges, hypnum mosses, Andromeda Glaucophylla (bog rosemary), Ledum decumbens (labrador tea), Vaccinium oxycoccus (cranberry), Empetrum nigrum (crowberry), Sarracenia purpurea (pitcher plant), etc., etc.

"Canada possesses an abundance of sphagnum moss in every province and as it fetches the best price and costs no more to produce than the inferior grades of unhumified peat it should be possible to maintain the high quality of Canadian peat moss on the export market.

"In the peat moss trade some confusion exists in regard to the quality of the products, no standard having been so far generally adopted in regard to the name of the products, the physical and chemical standards of the peat, and the size and weight of the packages. In Canada and the United States the word peat moss is generally used, whether the product is derived from moss, sedge, reed or other aquatic plants. Bales and packages are of many sizes, in Europe ranging from 130 to 220 pounds and in Canada they range from 75 to 130 pounds, and many other sizes of smaller packages are in use according to the requirements of the trade.

"Of great importance to the peat moss industry is the fact that the United States Treasury Department, through its Procurement Division, Washington, D.C., has adopted standards for the distinct grades of peat recognized commercially, and has issued specifications to cover their purchases by the Federal Government. Peat should be furnished in the following types and classes, as specified in the invitation bids:

Type I. Moss peat (x)
Class A. - Horticultural grades (fine shreds)
Class B. - Poultry litter (medium shreds)
Class C. - Stable bedding (coarse shreds)

Type II. Reed or sedge muck

Type III. Reed peat or sedge peat
Class A. - Acid grade
Class B. - Nearly neutral grade

(x) Moss peat shall be the poorly decomposed (fibrous or cellular) stems and leaves of any of the several species of sphagnum mosses. The PH value shall be not less than 3.5 and not greater than 5.5. Peat shall be furnished in air-dry condition and shall contain not more than 35 per cent moisture by weight. Water holding capacity shall be not less than 1100 per cent by weight, on an oven-dry basis."

For more complete information, the reader is referred to the report from which the foregoing abstracts were taken.

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