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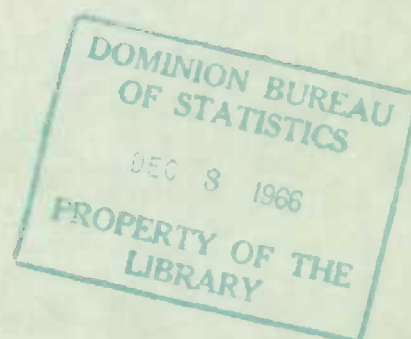
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ANNUAL



LIME MANUFACTURERS 1964

ANNUAL CENSUS
OF MANUFACTURES



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PUBLICATIONS

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A — Annual

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LIME MANUFACTURERS

1964

This report includes statistics for industry 343 - Lime Manufacturers of the Standard Industrial Classification Manual (Catalogue No. 12-501).

Data presented in this report under the heading of Lime Manufacturers reflect the implementation of the revised Standard Industrial Classification (S.I.C.) and the New Establishment Concept which are being used by the Dominion Bureau of Statistics in its compilation of industry statistics - see items "Standard Industrial Classification" and "Establishment" in the Explanatory Notes section of this report.

Commodity statistics are shown in Table 13 and subsequent tables. These tables include data from other industries. As an example, the lime shipped by an operator classified in the chemical industry was included in Table 13. The lime producers shipped 1,540,727 tons of lime valued at \$19,409,000 in 1964 compared with 1,450,731 tons valued at \$18,504,000 in the preceding year.

Quicklime shipments totalled 1,249,394 tons of which 1,196,901 tons were sent to chemical or industrial plants and 52,493 tons were used in the building trades and other uses. Hydrated lime shipped to industrial plants amounted to 187,824 tons and there were 103,509 tons shipped to non-industrial users. The tonnage of limestone burned was estimated at 1,821,856 tons.

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- p preliminary figures.
- * revised figures.
- x confidential to meet secrecy requirements of the Statistics Act.

TABLE 1. Principal Statistics, 1961-64

Year and province	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec-tricity	Cost of materials and supplies	Value of shipments of goods of own manu-facture	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000		\$'000					\$'000		\$'000	
1961													
Totals	21	734	1,676	3,065	2,239	1,785	12,989	8,955	x	x	847	3,598	8,941
1962													
Totals	22	775	1,736	3,232	2,505	2,153	14,503	9,792	x	x	949	4,016	9,766
1963													
Newfoundland	—	—	—	—	—	—	—	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—	—	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—	—	—	—	—	—	—	—
New Brunswick	1	x	x	x	x	x	x	x	—	—	x	x	x
Quebec	5	144	330	641	614	476	3,138	2,051	x	x	217	995	2,025
Ontario	8	329	711	1,551	1,422	1,206	7,365	4,732	x	x	382	1,832	4,727
Manitoba	3	66	146	241	182	118	1,978	1,690	—	—	104	410	1,754
Saskatchewan	—	—	—	—	—	—	—	—	—	—	—	—	—
Alberta	2	x	x	x	x	x	x	x	—	—	x	x	x
British Columbia	2	x	x	x	x	x	x	x	—	—	x	x	x
Yukon and Northwest Territories	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	21	698	1,535	3,118	2,427	2,211	14,914	10,277	x	x	866	4,058	10,365
1964													
Newfoundland	—	—	—	—	—	—	—	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—	—	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—	—	—	—	—	—	—	—
New Brunswick	1	x	x	x	x	x	x	x	—	—	x	x	x
Quebec	3	x	x	x	x	x	x	x	—	—	x	x	x
Ontario	8	318	714	1,610	1,585	1,285	8,571	5,684	x	x	366	1,865	5,674
Manitoba	3	67	145	241	184	139	1,871	1,547	—	—	101	399	1,578
Saskatchewan	—	—	—	—	—	—	—	—	—	—	—	—	—
Alberta	2	x	x	x	x	x	x	x	—	—	x	x	x
British Columbia	—	—	—	—	—	—	—	—	—	—	—	—	—
Yukon and Northwest Territories	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	17	619	1,369	2,836	2,594	2,302	15,419	10,473	x	x	815	3,897	10,478

TABLE 2. Principal Statistics classified by Size Group based on Value of Shipments of Goods of Own Manufacture, 1963 and 1964

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000				\$'000			\$'000		\$'000	
1963													
Under \$10,000	4												
\$ 10,000 to \$ 24,999		13	23	35	14	7	74	50	x	x	16	42	50
25,000 " 49,999													
50,000 " 99,999													
100,000 " 199,999		67	149	198	130	96	553	316	—	—	77	246	379
200,000 " 499,999	6	218	475	951	496	642	3,806	2,669	—	—	248	1,105	2,662
500,000 " 999,999		400	888	1,934	1,786	1,467	10,481	7,242	—	—	460	2,260	7,234
1,000,000 " 4,999,999	6												
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	85	405	39
Totals	21	698	1,535	3,118	2,427	2,211	14,914	10,277	x	x	886	4,058	10,365
1964													
Under \$10,000	4												
\$ 10,000 to \$ 24,999		14	25	37	17	15	79	43	x	x	19	49	44
25,000 " 49,999													
50,000 " 99,999													
100,000 " 199,999		66	147	209	144	94	544	303	—	—	72	241	329
200,000 " 499,999	3	99	212	417	236	308	1,815	1,261	—	—	110	485	1,256
500,000 " 999,999		440	986	2,172	2,197	1,891	12,981	8,865	—	—	508	2,542	8,838
1,000,000 " 4,999,999	7												
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	106	581	11
Totals	17	619	1,369	2,836	2,594	2,302	15,419	10,473	x	x	815	3,897	10,478

TABLE 3. Principal Statistics classified by Size Group based on Manufacturing Value Added, 1963 and 1964

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000				\$'000			\$'000		\$'000	
1963													
Under \$10,000	3												
\$ 10,000 to \$ 24,999		7	12	18	8	1	31	22	x	x	8	20	21
25,000 " 49,999													
50,000 " 99,999		41	77	126	111	83	399	193	—	—	48	149	232
100,000 " 199,999													
200,000 " 499,999	4	115	264	415	241	177	1,459	1,048	—	—	123	465	1,074
500,000 " 999,999		283	612	1,321	769	1,326	6,206	4,106	—	—	338	1,617	4,094
1,000,000 " 4,999,999	3	252	570	1,238	1,299	625	6,819	4,908	—	—	284	1,402	4,904
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	85	405	39
Totals	21	698	1,535	3,118	2,427	2,211	14,914	10,277	x	x	886	4,058	10,365
1964													
Under \$10,000	5												
\$ 10,000 to \$ 24,999		23	43	63	70	45	207	82	x	x	29	77	83
25,000 " 49,999													
50,000 " 99,999													
100,000 " 199,999		118	259	433	254	216	1,433	962	—	—	126	485	985
200,000 " 499,999	4	171	385	831	677	656	4,345	2,970	—	—	208	1,037	2,958
500,000 " 999,999		307	683	1,508	1,591	1,384	9,434	6,459	—	—	346	1,718	6,440
1,000,000 " 4,999,999	4												
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	106	581	11
Totals	17	619	1,369	2,836	2,594	2,302	15,419	10,473	x	x	815	3,897	10,478

TABLE 4. Principal Statistics classified by Size Group based on Total Value Added, 1963 and 1964

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1963													
Under \$10,000	3	7	12	18	8	1	31	22	x	x	8	20	22
\$ 10,000 to \$ 24,999													
25,000 " 49,999	5	41	77	126	111	83	399	193	—	—	48	149	232
50,000 " 99,999													
100,000 " 199,999	4	115	264	415	241	177	1,459	1,048	—	—	123	465	1,074
200,000 " 499,999													
500,000 " 999,999	6	283	612	1,321	769	1,326	6,206	4,106	—	—	338	1,617	4,094
1,000,000 " 4,999,999	3	252	570	1,238	1,299	625	6,819	4,908	—	—	284	1,402	4,904
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	85	405	39
Totals	21	698	1,535	3,118	2,427	2,211	14,914	10,277	x	x	886	4,058	10,365
1964													
Under \$10,000	5	23	42	63	70	45	207	82	x	x	29	77	83
\$ 10,000 to \$ 24,999													
25,000 " 49,999	—	—	—	—	—	—	—	—	—	—	—	—	—
50,000 " 99,999													
100,000 " 199,999	4	118	259	433	255	216	1,433	962	—	—	126	485	985
200,000 " 499,999													
500,000 " 999,999	4	171	385	831	677	656	4,345	2,970	—	—	208	1,037	2,958
1,000,000 " 4,999,999	4	307	683	1,508	1,591	1,384	9,434	6,459	—	—	346	1,718	6,440
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	106	581	11
Totals	17	619	1,369	2,836	2,594	2,302	15,419	10,473	x	x	815	3,897	10,478

TABLE 5. Principal Statistics classified by Size Group based on Total Employed, 1963 and 1964

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1963													
Under 5 employed	8	48	89	144	118	84	430	215	x	x	56	168	254
5 - 14 employed													
15 - 49 "	7	207	462	838	505	470	4,413	3,452	—	—	227	946	3,474
50 - 99 "													
100 - 199 "	6	443	984	2,136	1,803	1,657	10,071	6,610	—	—	518	2,538	6,598
200 - 499 "													
500 employed and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	85	405	39
Totals	21	698	1,535	3,118	2,427	2,211	14,914	10,277	x	x	886	4,058	10,365
1964													
Under 5 employed	5	23	43	63	70	45	207	82	x	x	29	77	83
5 - 14 employed													
15 - 49 "	7	214	470	891	590	538	4,804	3,460	—	—	235	1,013	3,479
50 - 99 "													
100 - 199 "	5	382	857	1,881	1,934	1,719	10,608	6,931	—	—	445	2,227	6,904
200 - 499 "													
500 employed and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	106	581	11
Totals	17	619	1,369	2,836	2,594	2,302	15,419	10,473	x	x	815	3,897	10,478

TABLE 6. Principal Statistics classified by Type of Organization, 1963 and 1964

Type of organization	Establishments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and electricity	Cost of materials and supplies	Value of shipments of goods of own manufacture	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	Withdrawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1963													
Individual ownerships	3	7	12	18	8	6	46	31	x	x	9	23	30
Partnerships	—	—	—	—	—	—	—	—	—	—	—	—	—
Incorporated companies	18	691	1,523	3,100	2,419	2,205	14,868	10,246	—	—	792	3,630	10,295
Co-operatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	85	405	39
Totals	21	698	1,535	3,118	2,427	2,211	14,914	10,277	x	x	886	4,058	10,365
1964													
Individual ownerships	17	619	1,369	2,836	2,594	2,302	15,419	10,473	x	x	709	3,316	10,467
Partnerships													
Incorporated companies													
Co-operatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	106	581	11
Totals	17	619	1,369	2,836	2,594	2,302	15,419	10,473	x	x	815	3,897	10,478

TABLE 7. Calculation of Output, Input and Value Added, 1963 and 1964

	Manufacturing activity		Non-manufacturing activities		Total activity	
	1963	1964	1963	1964	1963	1964
\$'000						
Output						
1. Shipments and other revenue	14,914	15,419	576	374	15,490	15,793
Inventories—Goods of own manufacture:						
Add closing—Goods in process	24	24	...	...	24	24
Finished goods	164	112	...	...	164	112
Deduct opening—Goods in process	21	24	...	...	21	24
Finished goods	166	161	...	...	166	161
2. Net inventory change	1	(49)	...	...	1	(49)
3. Gross output (1 + 2)	14,915	15,370	576	374	15,491	15,744
Input						
4. Purchases of goods not of own manufacture .....	...	...	429	235	429	235
Inventories—Goods not of own manufacture:						
Add opening .....	...	...	53	82	53	82
Deduct closing .....	...	...	89	75	89	75
5. Cost of goods sold (not of own manufacture) .....	...	...	393	242	393	242
6. Materials, supplies, etc.	2,211	2,302	95	127	2,306	2,429
7. Fuel and electricity	2,427	2,594	...	...	2,427	2,594
8. Gross input (5 + 6 + 7)	4,638	4,896	488	369	5,126	5,265
Value added (3 - 8)	10,277	10,473	88	5	10,365	10,478

TABLE 8. Employment and Payroll, 1963 and 1964

Year and province	Employees										Salaries and wages				
	Production and related workers				Adminis- trative and office		Sales and distribution		Total		Production and related workers		Admin- istra- tive and office	Sales and distrib- ution	Total
	Manufacturing		Other								Manufacturing	Other			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female						Manufacturing	Other
1963	number										\$'000				
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	x	-	x	-	x	x	-	-	x	x	x	x	x	-	x
Quebec	144	-	-	-	45	12	10	6	199	18	641	-	263	91	995
Ontario	329	-	-	-	46	7	-	-	375	7	1,551	-	281	-	1,832
Manitoba	66	-	-	-	31	7	-	-	97	7	241	-	169	-	410
Saskatchewan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alberta	x	-	x	-	x	x	-	-	x	x	x	x	x	-	x
British Columbia	x	-	x	-	x	x	-	-	x	x	x	x	x	-	x
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	698	-	2	-	139	31	10	6	849	37	3,118	13	835	91	4,058
1964	number										\$'000				
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	x	-	x	-	x	x	x	x	x	x	x	x	x	x	x
Quebec	x	-	x	-	x	x	x	x	x	x	x	x	x	x	x
Ontario	318	-	-	-	42	6	-	-	360	6	1,610	-	255	-	1,865
Manitoba	66	1	-	-	27	7	-	-	93	8	241	-	157	-	399
Saskatchewan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alberta	x	-	x	-	x	x	x	x	x	x	x	x	x	x	x
British Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	618	1	3	-	148	30	9	6	778	37	2,836	13	951	98	3,897

TABLE 9. Production and Related Workers, - Manufacturing Activity, 1963 and 1964

Month	1963		1964	
	Male	Female	Male	Female
number				
Establishments reporting monthly detail (large establishments only):				
January	700	-	580	-
February	700	-	582	1
March	646	-	598	1
April	681	-	613	1
May	729	-	655	1
June	738	-	642	1
July	719	-	635	1
August	715	-	643	1
September	715	-	619	1
October	693	-	635	1
November	672	-	616	-
December	659	-	574	-
Averages	698	-	618	1
Establishments reporting annual averages (small establishments only) .....	...	-	...	-
Average for all establishments	698	-	618	1

Note: The total employees reported above represent 243 employees in quarry and 455 employees in kiln in 1963 and 162 employees in quarry and 457 employees in kiln in 1964.

TABLE 10. Inventories, 1964

Province	Manufacturing				Non-manufacturing	Total inventories
	Materials, supplies, etc.	Goods in process	Finished goods of own manufacture	Total	Products or materials purchased for resale	
book value \$'000						
Opening:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—
New Brunswick	x	x	x	x	x	x
Quebec	x	x	x	x	x	x
Ontario	282	12	52	346	1	348
Manitoba	81	11	16	109	77	186
Saskatchewan	x	x	x	x	x	x
Alberta	—	—	—	—	—	—
British Columbia	—	—	—	—	—	—
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	615	24	161	801	82	882
Closing:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—
New Brunswick	x	x	x	x	x	x
Quebec	x	x	x	x	x	x
Ontario	287	6	42	335	6	341
Manitoba	71	16	10	98	64	162
Saskatchewan	x	x	x	x	x	x
Alberta	—	—	—	—	—	—
British Columbia	—	—	—	—	—	—
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	567	24	112	703	75	778

TABLE 11. Purchased Fuel and Electricity Used in Manufacturing Activity, 1963 and 1964

Description	1963		1964	
	Quantity	Cost	Quantity	Cost
		\$'000		\$'000
1. Large establishments reporting commodity detail:				
Bituminous coal:				
(a) From Canadian mines	ton	880	314	4
(b) Imported	"	89,364	1,127	1,106
Sub-bituminous coal (from Alberta mines only)	"	602	5	4
Anthracite coal	"	—	—	—
Lignite coal	"	9,026	56	61
Coke	"	—	—	—
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	194,466	54	185,537
Fuel oil including kerosene or coal oil	"	7,163,155	559	7,678,690
Wood	cord	6,312	42	7,227
Gas:				
(a) Liquefied petroleum gases	Imp. gal.	2,080	—	3,492
(b) Other manufactured gas	M cu. ft.	—	—	—
(c) Natural gas	"	513,911	221	757,375
Other fuel .....		...	1	...
Electricity purchased	kwh.	36,508,025	349	36,076,879
Steam purchased .....		...	—	...
2. Small establishments not reporting commodity detail:				
Estimate for fuel and electricity .....		...	—	...
3. All establishments:				
Total fuel and electricity used .....		...	2,427	2,594

TABLE 12. Materials and Supplies Used in Manufacturing Activity, 1964

Details on materials and supplies used not collected. See Tables 1-6 for totals.

TABLE 13. Producers' Shipments¹ of Lime, by All Operators, Showing Purposes for Which Used² or Shipped, 1963

Uses	Shipped from plants in						
	New Brunswick	Quebec	Ontario	Manitoba	Alberta	British Columbia	Canada
tons of 2,000 pounds							
Quicklime							
Building trades:							
Finishing lime	ton	—	2,021	3,238	8,437	—	13,696
	\$'000	—	37	82	148	—	267
Mason's lime	ton	999	5,912	1,462	326	—	8,699
	\$'000	27	88	39	7	—	160
Agriculture	ton	—	705	207	—	159	1,141
	\$'000	—	1	3	—	4	17
Industrial:							
Uranium plants	ton	—	6,305	90,852	—	—	97,257
	\$'000	—	41	1,086	—	—	1,129
Non-ferrous smelters	ton	—	7,715	4,143	6,515	3,437	21,810
	\$'000	—	89	42	95	58	284
Iron and steel furnaces	ton	108	12,246	194,009	11,290	2,472	220,540
	\$'000	3	143	2,228	181	41	2,603
Cyanide and flotation mills	ton	—	2,850	6,517	1,564	2,841	14,024
	\$'000	—	36	83	33	45	203
Pulp and paper mills	ton	13,340	126,120	25,758	14,772	1,701	192,557
	\$'000	296	1,459	259	183	26	2,401
Glass works	ton	—	2,513	—	696	—	3,209
	\$'000	—	14	—	14	—	29
Sugar refineries	ton	125	—	5,784	—	13,481	19,380
	\$'000	3	—	33	—	283	320
Tanneries	ton	—	94	727	77	—	898
	\$'000	—	3	8	2	—	13
Fertilizer plants	ton	—	4	2,827	—	—	2,831
	\$'000	—	—	32	—	—	33
Sand-lime brick plants	ton	—	4,500	15,520	—	846	20,866
	\$'000	—	45	177	—	14	236
Insecticide plants	ton	—	—	—	—	230	230
	\$'000	—	—	—	—	4	4
Other industrial works	ton	—	75,548	488,798	—	1,200	565,935
	\$'000	—	1,710	5,164	—	18	6,902
Other consumers	ton	—	493	8,569	2,082	10,597	21,741
	\$'000	—	7	99	39	170	315
Totals, quicklime	ton	14,572	244,370	847,692	40,767	45,342	1,204,824
	\$'000	329	3,637	9,296	639	809	14,915
Hydrated lime							
Building trades:							
Finishing lime	ton	—	1,658	55,076	5,477	2,348	64,559
	\$'000	—	16	1,318	167	40	1,540
Mason's lime	ton	1,339	16,091	11,613	—	—	29,043
	\$'000	31	198	207	—	—	436
Agriculture	ton	112	4,912	1,971	—	100	7,354
	\$'000	3	48	29	—	12	86
Industrial:							
Uranium plants	ton	—	—	105	—	1,500	1,605
	\$'000	—	—	2	—	28	27
Non-ferrous smelters	ton	—	38,419	787	—	60	39,316
	\$'000	—	190	12	—	1	204
Iron and steel furnaces	ton	—	650	170	—	—	820
	\$'000	—	6	3	—	—	9
Cyanide and flotation mills	ton	—	10,557	670	—	180	11,499
	\$'000	—	104	10	—	3	119
Pulp and paper mills	ton	—	6,684	1,770	—	—	8,599
	\$'000	—	73	25	—	—	101
Sugar refineries	ton	51	6,189	1,190	8,435	—	15,865
	\$'000	1	87	13	97	—	198
Tanneries	ton	—	835	3,279	—	—	4,114
	\$'000	—	8	49	—	—	57
Fertilizer plants	ton	94	505	—	—	—	599
	\$'000	2	2	—	—	—	4
Sand-lime brick plants	ton	—	5,149	274	—	460	5,883
	\$'000	—	65	4	—	8	77
Insecticide plants	ton	—	86	581	200	—	867
	\$'000	—	1	11	6	—	17
Other industrial works	ton	421	15,510	22,382	—	730	39,377
	\$'000	10	112	374	—	12	515
Other consumers	ton	330	6,586	5,385	—	4,106	16,407
	\$'000	8	38	82	—	70	198
Totals, hydrated lime	ton	2,347	113,831	105,253	14,112	9,484	245,907
	\$'000	54	950	2,139	269	161	3,589
Grand totals	ton	16,919	358,201	952,945	54,879	54,826	1,450,731
	\$'000	383	4,586	11,434	909	971	18,504

¹ Shipments include amounts used in producers' own works.

² Not necessarily consumed in provinces where produced; includes by-product lime.

Note: 1. Of the total quantity of 1,450,731 tons of lime produced 562,745 tons were consumed by the producers themselves. Of this latter amount, 13,076 tons of hydrated lime and 425,601 tons of quicklime were consumed in Ontario: 74,344 tons of quicklime and 5,837 tons of hydrated lime in Quebec; and the balance, 35,034 tons of quicklime and 8,863 tons of hydrated lime, in other provinces.

2. The totals in the above table include lime recovered by all producers including operators classified as establishments in the Lime Manufacturers Industry as well as other operators which have been reclassified to other industries as a result of combinations in line with the New Establishment Concept. On this account, also, value figures in the above table are higher than the value figures shown under the heading of "Value of shipments of goods of own manufacture". See Tables 1 to 12. The latter refer only to operators classified as establishments to the Lime Manufacturers Industry in accordance with the new S.I.C.

TABLE 14. Producers' Shipments¹ of Lime, by All Operators, showing Purposes for which Used² or Shipped, 1964

Uses	Shipped from plants in						
	New Brunswick	Quebec	Ontario	Manitoba	Alberta	British Columbia	Canada
tons of 2,000 pounds							
Quicklime							
Building trades:							
Finishing lime	ton	—	10	—	3,165	8,391	—
Mason's lime	\$'000	—	—	—	80	142	—
Mason's lime	ton	976	900	1,774	528	—	—
Mason's lime	\$'000	31	15	39	9	—	—
Agriculture	ton	—	58	12,089	—	—	—
Road Stabilization	\$'000	—	1	138	—	—	—
Road Stabilization	ton	—	—	—	4,831	200	—
Road Stabilization	\$'000	—	—	—	81	4	—
Industrial:							
Uranium plants	ton	—	2,405	43,040	—	—	—
Non-ferrous smelters	\$'000	—	15	464	—	—	—
Non-ferrous smelters	ton	—	4,639	20,741	6,045	3,338	—
Non-ferrous smelters	\$'000	—	54	224	77	57	—
Iron and steel furnaces	ton	304	17,423	242,789	10,333	2,997	—
Cyanide and flotation mills	\$'000	7	210	2,772	153	46	—
Cyanide and flotation mills	ton	—	2,504	6,225	1,743	3,443	—
Pulp and paper mills	\$'000	—	35	86	32	57	—
Pulp and paper mills	ton	960	132,645	24,675	12,137	4,596	—
Glass works	\$'000	24	1,542	278	155	78	—
Glass works	ton	—	3,388	—	954	—	—
Sugar refineries	\$'000	—	21	—	20	—	—
Sugar refineries	ton	131	984	7,852	—	14,932	—
Tanneries	\$'000	4	12	44	—	329	—
Tanneries	ton	—	92	762	88	25	—
Fertilizer plants	\$'000	—	3	9	2	—	—
Fertilizer plants	ton	—	2	8,300	—	150	—
Sand-lime brick plants	\$'000	—	—	94	—	3	—
Sand-lime brick plants	ton	—	4,315	18,967	—	504	—
Water and sewage treatment	\$'000	—	43	218	—	8	—
Water and sewage treatment	ton	—	—	506	—	10,495	—
Other industrial works	\$'000	—	—	7	—	168	—
Other industrial works	ton	—	52,064	528,009	1,049	350	—
Other consumers	\$'000	—	885	5,988	22	6	—
Other consumers	ton	—	14	19,002	—	555	—
Other consumers	\$'000	—	—	219	—	10	—
Totals, quicklime	ton	2,371	221,443	934,731	40,873	49,976	—
Totals, quicklime	\$'000	66	2,838	10,579	630	906	—
Hydrated lime							
Building trades:							
Finishing lime	ton	—	4,671	60,608	4,317	2,394	—
Mason's lime	\$'000	—	21	1,591	133	41	—
Mason's lime	ton	1,254	13,618	11,405	—	420	—
Mason's lime	\$'000	28	179	215	—	7	—
Agriculture	ton	—	3,846	546	—	400	—
Road stabilization	\$'000	—	46	12	—	6	—
Road stabilization	ton	—	30	—	—	—	—
Road stabilization	\$'000	—	—	—	—	—	—
Industrial:							
Uranium plants	ton	—	130	—	—	1,500	—
Non-ferrous smelters	\$'000	—	1	—	—	73	—
Non-ferrous smelters	ton	—	68,085	—	—	275	—
Non-ferrous smelters	\$'000	—	374	—	—	5	—
Iron and steel furnaces	ton	—	1,250	6,914	—	—	—
Cyanide and flotation mills	\$'000	—	10	113	—	—	—
Cyanide and flotation mills	ton	—	4,651	—	—	277	—
Pulp and paper mills	\$'000	—	66	—	—	5	—
Pulp and paper mills	ton	—	13,416	2,341	—	100	—
Sugar refineries	\$'000	—	225	41	—	2	—
Sugar refineries	ton	48	7,580	3,589	11,570	—	—
Tanneries	\$'000	1	102	63	140	—	—
Tanneries	ton	—	942	2,121	—	—	—
Fertilizer plants	\$'000	—	11	37	—	—	—
Fertilizer plants	ton	83	5,355	—	—	200	—
Sand-lime brick plants	\$'000	2	48	—	—	3	—
Sand-lime brick plants	ton	—	6,743	—	—	690	—
Water and sewage treatment	\$'000	—	78	—	—	10	—
Water and sewage treatment	ton	889	626	—	436	2,089	—
Other industrial works	\$'000	22	10	—	14	36	—
Other industrial works	ton	328	12,484	27,543	—	240	—
Other consumers	\$'000	7	89	476	—	4	—
Other consumers	ton	—	4,184	—	—	1,145	—
Other consumers	\$'000	—	24	—	—	19	—
Totals, hydrated lime	ton	2,602	147,611	115,067	16,323	9,730	—
Totals, hydrated lime	\$'000	60	1,285	2,548	287	209	—
Grand totals	ton	4,973	369,054	1,049,798	57,196	59,706	—
Grand totals	\$'000	126	4,123	13,128	917	1,116	—

¹ Shipments include amounts used in producers' own works.

² Not necessarily consumed in provinces where produced; includes by-product lime.

Note: Of the total quantity of 1,540,727 tons of lime produced 543,095 tons were consumed by the producers themselves. Of this latter amount 17,479 tons of hydrated lime and 465,870 of quicklime were consumed in Ontario; 45,956 tons of quicklime and 6,988 tons of hydrated lime in Quebec; and the balance, 14,932 tons of quicklime and 11,870 tons of hydrated lime in other provinces.

See Notes Table 13 and text.

TABLE 15. Producers' Shipments of Lime, 1955 - 64

Year	shipped for sale	Used by producers	Total	
			Quantity	Value
	short tons			\$'000
1955	832,874	498,244	1,331,118	15,811
1956	822,812	472,887	1,295,699	15,668
1957	839,979	538,638	1,378,617	16,679
1958	1,077,763	518,659	1,596,422	19,466
1959	1,122,965	562,760	1,685,725	21,298
1960	979,725	549,843	1,529,568	19,302
1961	879,057	536,233	1,415,290	19,217
1962	848,196	576,263	1,424,459	17,647
1963	887,986	562,745	1,450,731	18,504
1964	997,632	543,095	1,540,727	19,409

See Notes Table 13 and text.

TABLE 16. Producers' Shipments of Lime, by Months, 1963 and 1964

Month	1963	1964	Month	1963	1964
	tons			tons	
January	105,486	119,066	August	118,160	118,639
February	110,722	116,339	September	116,503	131,599
March	123,064	134,484	October	136,468	148,178
April	125,460	119,493	November	117,621	137,462
May	135,154	115,125	December	118,306	146,249
June	117,582	128,422			
July	126,205	125,671	Totals	1,450,731	1,540,727

See Notes Table 13 and text.

TABLE 17. Lime Shipped or Used for Chemical and Other Purposes, 1955 - 64

Year	Lime shipped or used for chemical and industrial purposes				Lime shipped or used for building or other non-industrial purposes			
	Quicklime		Hydrated lime		Quicklime		Hydrated lime	
	short tons	\$'000	short tons	\$'000	short tons	\$'000	short tons	\$'000
1955	904,600	10,756	216,582	1,425	91,039	1,466	118,897	2,164
1956	861,784	10,484	208,449	1,390	85,532	1,369	139,934	2,425
1957	1,010,841	11,952	178,806	1,318	63,497	1,097	125,473	2,312
1958	1,194,054	14,289	204,595	1,498	64,035	1,083	133,738	2,596
1959	1,296,807	16,171	194,011	1,488	62,859	1,085	132,048	2,560
1960	1,168,180	14,764	196,628	1,429	45,417	846	119,343	2,264
1961	1,085,090	14,700	161,515	1,440	57,264	931	111,421	2,146
1962	1,110,853	13,069	133,623	1,366	70,205	1,080	109,778	2,132
1963	1,159,547	14,156	128,544	1,329	45,277	759	117,363	2,260
1964	1,196,901	18,640	187,824	2,110	52,493	769	103,509	2,279

See Notes Table 13 and text.

TABLE 18. Imports and Exports of Lime, 1963 and 1964

	1963		1964	
	tons	\$'000	tons	\$'000
Imports				
From:				
United States	44,110	709	20,551	476
United Kingdom	163	3	152	2
France	18	1	88	2
Totals	44,291	714	20,791	480
Exports				
To:				
Pakistan	—	—	1	—
Bermuda	80	3	70	2
United States	95,690	1,114	102,725	1,171
Ghana	—	—	43	2
British Guiana	2,310	24	3,500	33
Netherlands Antilles	4	—	4	—
Totals	98,084	1,141	106,343	1,208

TABLE 19. Lime Kiln Capacities,¹ 1960-64

Year	Total kilns			Kilns in use during the year		
	Number		Total capacity	Number		Total capacity
	Stack	Rotary	Tons per 24 hours	Stack	Rotary	Tons per 24 hours
1960	119	29	8,408	105	24	7,190
1961	113	29	8,245	106	25	7,440
1962	96	30	8,429	83	26	7,196
1963	96	30	8,599	84	27	7,729
1964	81	28	8,154	65	22	6,818

¹ Includes lime kilns of other industries.

TABLE 20. World Production of Quicklime, Hydrated Lime, and Dead-burned Dolomite, Sold or Used

Country ¹	1960	1961	1962	1963	1964
	thousand short tons				
North America:					
Canada	1,530	1,415	1,424	1,451	1,491
Costa Rica ²	4	4	4	6	7
Honduras	12	11	3	3	3
Nicaragua	27	28	29	31 ²	29
Puerto Rico	1	1	1	4	18
United States (sold or used by producers)	12,934	13,249	13,753	14,521	16,089
West Indies:					
Bahamas	3	3	2	3	3
Barbados	11	3	3	3	3
Dominican Republic	8	8 ³	8	3	3
Haiti ²	180	180	180	180	180
South America:					
Argentina	1,100 ²	1,100 ²	3	3	3
Brazil	1,179	1,410	1,308	1,332	3
Colombia	68	90	94	107	3
Paraguay	15	15	16	14	20
Peru	85	77	88	94	102
Uruguay ²	36	36	36	33	3
Venezuela	43	38	49	53	77 ²
Europe:					
Austria	747	784	740	759	802
Belgium	2,125	2,120	2,245	2,227	2,533
Bulgaria	474	698	766	830	913
Czechoslovakia	2,543	2,598	2,611	2,485	2,587
Denmark	146	162	162	167	176
Finland	236	245	246	229	265
France	3,224	3,248	3,078	2,919	3,056
Germany:					
East	3,363	3,116	3,686	3,811	3,900 ²
West	10,702 ⁴	10,939	10,690	10,775	11,921
Hungary	643	676	685	685	807
Ireland	32	32	83	39	47
Luxembourg	39	13	...	...	...
Malta	44	45	39	18	3
Norway	—	—	3	3	121
Poland	2,048	2,071	2,186	2,209	2,326
Rumania	658	724	746	806	830 ²
Spain	126	286	203	234	3
Sweden	1,033	3	798	949	3
Switzerland	185	205	212	203	221
U.S.S.R.	17,790	18,955	18,237	17,651	19,300 ²
United Kingdom	3	3	3	3	3
Yugoslavia	767	800	847	947	999
Asia:					
Cyprus	—	—	50	65	3
Indonesia	119	3	3	3	3
Japan	3	3	1,291	1,527	1,798
Kuwait	—	—	—	—	13
Lebanon	8 ²	8	10 ²	39	29
Mongolia ²	—	—	23	28	33
Philippines	21	28	47 ²	35	86
Ryuku Islands	1	3	1	1 ³	3
Saudi Arabia	3	3	3	7	3
Syrian Arab Republic	3	3	3	3	3
Taiwan	49	84	83	88	101

See footnotes at end of Table.

TABLE 20. World Production of Quicklime, Hydrated Lime, and Dead-burned Dolomite, Sold or Used - Concluded

Country ¹	1960	1961	1962	1963	1964
	thousand short tons				
Africa:					
Algeria	18	3	3	3	3
Cape Verde Islands	1	2	3	3	3
Ethiopia ² (including Eritrea)	3	5	6	5	7
Kenya	—	—	—	—	4
Libya ³	17	18	19	3	3
Mozambique	12	3	3	3	3
South Africa, Republic of (sales)	852	758	726	719	771
South-West Africa	3	4	3	3	4
Tanzania (sales and exports)	4	4	3	1	2
Tunisia	139	133	142	164	193
Uganda	17	16	18	12	3
Oceania:					
Australia ⁴	125	124	139	3	3
Fiji Islands	3	4	3	6	4

¹ Lime is also produced in Chile, China, Republic of the Congo, Ecuador, Greece, Guatemala, India, Iran, Israel, Italy, Republic of Korea, Mexico, Morocco, New Zealand, Pakistan, Federation of Rhodesia and Nyasaland, Rwanda, and Viet-Nam, but production data are not available. In addition, Bermuda, El Salvador, Guadeloupe, Netherlands Antilles, Sarawak and St. Thomas and Principe Islands produce less than 1,000 tons.

² Estimate.

³ Data not available.

⁴ Including Saar, beginning 1960.

⁵ Negligible.

⁶ Year ended September 10 of year stated.

⁷ Year ended June 30 of year stated.

Source: The "Minerals Yearbook" published by the United States Bureau of Mines.

Directory of Firms which Operated Lime Kilns, 1964

Includes firms classified to other industries, i.e. chemicals, construction, etc.

Name	Head office address	Location of plant
New Brunswick:		
Bathurst Power & Paper Co. Ltd.	Bathurst	Bathurst
Snowflake Lime Limited ¹	Box 954, Saint John	Saint John
Quebec:		
Aluminium Company of Canada, Limited	Box 6090, Montreal 3	Wakefield
Bousquet, Adrien ¹	St-Dominique de Bagot	St-Dominique
Dominion Lime Limited ¹	Lime Ridge	Lime Ridge
Domtar Chemicals Ltd. (Gypsum Lime Division) ¹	1155 Dorchester Blvd. W., Montreal	Joliette
Raffinerie de Sucre de Québec	St-Hilaire Est	St-Hilaire
Shawinigan Chemicals Limited	600 Dorchester St. W., Montreal	Shawinigan Falls
Ontario:		
Bonnechere Lime Limited ¹	Carleton Place	Grattan Twp.
Brunner Mond Canada, Limited c/o Allied Chemical Canada Ltd.	1155 Dorchester Blvd. W., Montreal 2, Quebec	Anderson Twp.
Canada & Dominion Sugar Co. Ltd.	Chatham	Chatham
Canadian Gypsum Company, Limited ¹	Box 4034, Postal Station, A., Toronto	Guelph Twp.
Carleton Lime Products Co. ¹	Box 100, Carleton Place	Carleton Place
Chemical Lime Limited ¹	Box 100, Ingersoll	Ingersoll
Cyanamid of Canada Limited	Niagara Falls	Niagara Falls
Dominion Magnesium Limited	Haley	Ingersoll
Domtar Chemicals Ltd. (Gypsum Lime Division) ¹	1155 Dorchester Blvd. W., Montreal	Haley
Indusmin Ltd. ¹	7 King St. E., Toronto	Beachville and Hespeler
Rockwood Lime Company Ltd. ¹	Rockwood	Coboconk
		Rockwood
Manitoba:		
Building Products & Coal Co. Ltd. ¹	111 Christie St., Winnipeg	Inwood
Domtar Construction Materials Ltd. (Gypsum Division) ¹	Box 506, Station F., Toronto 5, Ontario	Winnipeg
Manitoba Sugar Co. Ltd.	Box 608, Winnipeg 1	Fort Garry
Selkirk Silica Co. Ltd. ¹	491 Portage Ave., Winnipeg 2	Spearhill and Stonewall
Western Gypsum Products Ltd. ²	Clarkson, Ontario	Winnipeg
Alberta:		
Canadian Sugar Factories Limited	306-10th St. S., Lethbridge	Raymond, Picture Butte and Taber
Loder's Lime (Alberta) Limited (Lime Division) ¹	Box 1200 Station A, Calgary	Kananaskis
Summit Lime Works Limited ¹	Box 700, Lethbridge	Lethbridge
British Columbia:		
Crown Zellerbach Canada Limited	Box 2079, Vancouver 3,	Ocean Falls and Elk Falls

¹ These establishments comprise the industry "Lime Manufacturers" for statistical purposes.

² Purchases quicklime, makes hydrated lime.

Note: Firms in the above directory include all producers of lime including operators classified as establishments in the Lime Manufacturers Industry as well as other operators which have been reclassified to other industries as a result of combinations in line with the New Establishment Concept.

CONCEPTS AND DEFINITIONS

Census of Manufactures

General

The Census of Manufactures is an annual mail survey covering Canada's Manufacturing Industries. It is based on the Standard Classification of Industries and full details concerning the system may be found in the Standard Industrial Classification manual, Catalogue No. 12-501 which is available from the Queen's Printer or the Dominion Bureau of Statistics. In summary, the Classification as it relates to the manufacturing industries provides for a breakdown into 140 industries arranged in 20 major industry groups. Of the 140 (3 digit) industries, 18 are further broken down into 56 (4 digit) sub classes. At the Canada level, principal statistics are collected and compiled for 176 separate industries. They cannot all be published separately by province, however, because of the confidential nature of the data in certain provinces.

The reporting unit for the Census is designated as the **establishment** (see definition of "Establishment" in following section) and a return is requested from every establishment classified to a manufacturing industry. Although respondents are required to submit reports covering the calendar year, financial year reports other than the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. When an establishment is operated for only part of a year a report is required covering the period of operation.

There are four different questionnaires used in the Census of Manufactures; (a) short form (b) long form (c) head office questionnaire and (d) commodity questionnaire. The short and long forms are used to obtain principal statistics and commodities shipped from establishments classified to manufacturing industries and differ only in the amount of detail requested. The short form is a single-sheet questionnaire sent to small manufacturers generally reporting shipments of less than \$100,000; this cut-off, however, varies somewhat between industries. The head office questionnaire is generally used for company head offices and/or auxiliary units separately located from the manufacturing establishment(s), (see following notes on Head offices and auxiliary units). The Commodity questionnaire is used to survey certain establishments which are coded (on the basis of their principal activity) to industries other than manufacturing in the Standard Industrial Classification system, but which undertake some manufacturing as a subsidiary activity. This single-sheet questionnaire is designed to collect information on the quantity and value of goods of own manufacture shipped by such establishments in order to achieve full coverage of domestically manufactured commodities (see the following note under Shipments).

The results of the Census are presented in some 140 publications. In addition to these annual industry publications there are annual summary reports for Canada and the provinces and special reports giving principal statistics by detailed geographic areas, by type of ownership and size of establishment. A special annual report covering the shipments of all manufactured commodities arranged in alphabetical order is also published.

Since 1960 the following major changes have been implemented in the Census of Manufactures: (a) a revised Standard Industrial Classification (b) a new establishment definition and (c) an extension of the establishment definition to cover the non-manufacturing activities of manufacturing establishments. The statistics presented in the various 1963 reports reflect the complete implementation of these changes and enable comparisons to be made with the years 1961 and 1962. For a complete description of the procedures followed in establishing the revised series, reference should be made to the Explanatory Notes included in the 1960, 1961 and 1962 industry publications. The statistical framework within which the Census of Manufactures is now carried out is based on the following concepts and definitions which have been developed as part of a general programme to achieve a fully integrated system of economic statistics.

Establishment

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. The majority of such establishments are firms but many firms have more than one establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements embodied in the following definition of the "establishment":

"The smallest unit which is a separate operating entity capable of reporting the following principal statistics:

- Materials and supplies used
- Goods purchased for resale as such
- Fuel and power consumed
- Number of employees and salaries and wages
- Man-hours worked and paid
- Inventories
- Shipments or sales."

Each establishment is required to report on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on the different activities (manufacturing, trading in goods not of own manufacture, construction by own labour

force, revenue from services, etc.) are requested to be reported separately. It should be noted that the statistics for separate activities are not completely consistent since some respondents cannot distinguish, in their records, materials, shipments and inventories relating solely to their own manufacturing activities. For example, inventory of goods purchased for re-sale may not be distinguishable from inventory of own manufactured goods. Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level and for studies or statistical measures requiring accurate coordinated data, the "total" statistics should be used.

The number of establishments represents the number of operating units that are principally engaged in the activities of the manufacturing industries to which they have been classified. These units do not necessarily represent the total number engaged in the production of a commodity mainly produced in a certain industry. Some commodities are produced as secondary products in other manufacturing and non-manufacturing industries. It should be noted that head offices and auxiliary units which are surveyed separately are not included in the establishment count, (see following notes on head offices and auxiliary units).

Head Offices and Auxiliary Units

All head offices and auxiliary units of companies classified to the manufacturing industries such as sales offices, administrative offices, warehouses, laboratories, etc. are now surveyed as part of the Census of Manufactures.

These head offices and auxiliary units are either included in an establishment report or are surveyed by means of the head office questionnaire. The former is the most common case where a single establishment firm has its executive personnel, sales office, etc. located at the site of the manufacturing plant (establishment). The special head office questionnaire is generally used where a firm, regardless of the number of establishments, has separately located offices or auxiliary units. Such offices or units do not constitute establishments within the Census of Manufactures as they do not normally generate operational revenues, but give rise only to costs of operations (mainly salaries and wages) which are automatically included in the value of shipments or sales. Although not considered as establishments, and hence, not included in the "establishment" count for an industry, the operational costs are reflected in either the "Industry" statistics (3 or 4 digit level) or the "Major group" statistics (2 digit level) according to the following rules:

(a) In the case of single establishment firms, statistics for separately located offices and units are classified to the same industry (3 or 4 digit) as the establishment;

(b) In the case of multi-establishment firms, the statistics for such offices and units are coded to the same industry as the establishments of the firm, when all establishments are in the same industry (3 or 4 digit). When establishments of

such firms are coded (1) to different industries within a major group, (2) to industries in different major groups or (3) to industries in different divisions of the Standard Industrial Classification, then the statistics are included in the major group totals (2 digit level) in which the major part of the company's operations are classified. Although this may result in some distortion of major group statistics in the case of (2) and (3) the statistics at the industry (3 or 4 digit) level in all cases will be left free of these company-wide data.

Employees

(a) Production and related workers — Manufacturing activities

In addition to those engaged in production and assembling activities, they include those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees engaged in maintenance, repair, janitorial and watchman services and line supervisors (working foremen) engaged in similar work to that of the employees they supervise. For those establishments reporting on the "long" form, production and related workers engaged in manufacturing activity are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by 12. This procedure is followed even though the establishment did not operate in all months in order to arrive at equivalent annual full-time employment. The numbers are somewhat affected by turnover, in that employment is overstated when an employee changes employment during a pay period. In the case of those establishments reporting on the "short" form, respondents are requested to report average annual figures. The man-hours of production and related workers in manufacturing activity represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays, etc.). Data on man-hours are not collected from establishments reporting on the short form. Man-hours for these establishments are estimated on the basis of ratios derived from the 1958 census. During this census all establishments reported on the long form. In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in average hourly earnings and does not represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

(b) Production and related workers — Non-manufacturing activities

Such employees include those on manufacturing establishments' payrolls engaged in activities such as construction undertaken for the use of these establishments, some outside piece-workers employed in certain industries, logging employees who are reported as part of a sawmilling establishment and any other production workers who are not engaged in manufacturing-type operations.

(c) Administrative and office employees

This category includes all executive and supervisory officials such as presidents, vice-presidents, comptrollers, secretaries, treasurers, etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the line supervisor or working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical, etc. It should be noted that prior to 1961 this category also included working owners and partners. Also included in this category are employees located at head offices or auxiliary units separately located from the establishment; these are generally included in the figures for the province in which they are located according to the rules outlined under "Head offices and auxiliary units" above.

(d) Sales and distribution workers

This category includes office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truckdrivers and their helpers, etc. It may also include some sales employees who are reported as part of a manufacturing establishment but are not working at the establishment's location. These are generally broken down by province in cases where more than 15 employees are involved in any one province. The figures exclude persons working on a commission basis who are not considered regular employees of the establishment.

(e) Total Employees

This total comprises the foregoing categories including employees located at separately located head offices and auxiliary units. The numbers of employees included under categories (b), (c) and (d) are reported in the form of annual averages and represent as closely as possible full time employment; adjustments are made when reported figures indicate the existence of part time or seasonal employment. In all the above categories, figures on employment refer to the calendar year whether or not other establishment statistics can only be reported on a fiscal year other than the calendar year.

Working Owners or Partners

These are not now included in the statistics of employees and salaries and wages. There is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each Census return. Withdrawals of working owners are defined as amounts withdrawn by owners or partners for normal living expenses excluding withdrawals for payment of income tax.

Salaries and Wages

Salaries and wages refer to gross earnings of employees **before** deductions for income tax and employees contributions to social services such as sickness, accident and unemployment insurance, pensions, etc. They include all salaries, wages,

bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only) as well as any other allowance forming part of the worker's earnings. Payments for over-time are included. Figures on salaries and wages refer to the calendar year.

Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives, etc.), not to purchases unless the quantities are substantially the same. **Any fuel and electricity produced by establishments for internal consumption are not included in the total cost.** Values represent laid down cost at the establishment including freight, duty, etc. Although fuel and electricity used is considered part of manufacturing activity it should be noted that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

Materials and Supplies

(a) Manufacturing activities

Figures represent quantities and laid down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in manufacturing activities and related processes. These statistics represent only commodity items or physical goods (cost of services or overhead charges such as advertising, insurance, depreciation, etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

(b) Non-manufacturing activities

1. Purchases for re-sale as such

Figures represent cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.

2. Other materials and supplies used

Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Amounts paid to outside contractors for construction and repair work are not included nor is the cost of

purchased machinery and equipment. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid and medical supplies, laboratory supplies, etc.

Shipments

(a) General

The figures represent revenue from all production, sales, services and related activities of reporting establishments with shipments valued in Canadian dollars at the point at which the establishment relinquishes control. The unsold portion at year end of consignment shipments in Canada is treated as inventory and not as shipments but all shipments to foreign countries for which the form B13 "Customs Canada Export Entry" has been completed, are treated as shipments.

In those industries where work on principal products extends over a relatively long period, (Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair Industry) the value of production rather than the value of shipments is recorded. There are certain establishments in other industries which also operate on a basis of progress payments. For these establishments, shipments are also adjusted to work put in place on the basis of the net change in progress payments over the year.

(b) Shipments of goods of own manufacture

These figures represent shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishments for work done. Included are revenue from repair and custom work, amounts received in payment for work done on materials owned by other establishments and the cost (book value) of any goods shipped on a rental basis.

All products and by-products of own manufacture shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other manufacturing plants of the reporting firm, when such units are treated as separate establishments. The value of shipments are net of returned goods, discounts, returns, allowances, sales tax and excise taxes and duties, returnable containers and charges for outward transportation by common or contract carriers. Transportation or delivery expense incurred by the reporting establishment's own carriers are included.

Shipments of goods of own manufacture of establishments which are coded to some other division of the Standard Industrial Classification (on the basis of principal activity) but which are engaged in manufacturing as a subsidiary activity

are collected by means of the Commodity questionnaire referred to earlier. Such shipments together with shipments of goods of own manufacture of establishments forming the universe of manufacturing industries are compiled and recorded in the various industry publications.

(c) Shipments of goods not of own manufacture

These figures represent the net selling value at establishment (net of discounts, returns, allowances, sales taxes and excise duties and taxes and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. For those industries which ship such goods on a rental basis, the value of shipments represents the book value of these goods. All sales of consignment goods from other countries are included.

(d) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs, alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishment's own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity and from any operations performed by the establishment's own employees, such as revenue from goods produced or purchased for rental (the book value of such goods are included as part of shipments of goods of own manufacture or shipments of goods not of own manufacture), servicing revenues, commissions on sales (when not included in value of sales), revenue for company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishment's own products, sale of used materials (excluding sale of used fixed assets) research and development work, etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

Inventories

(a) Manufacturing activities

Values represent the book values of manufacturing inventory owned in Canada. Inventories held for which progress payments have been received are not included. Where progress payment accounts are maintained, the change in these accounts is treated as a net adjustment to shipments. Figures consist of inventory owned at the plant and at warehouses or selling outlets which are treated as extensions of establishments for the purpose of reporting shipments. Inventory owned in transit in Canada or on consignment in Canada is included. Goods shipped abroad and held in inventory are included in shipments. Opening inventories may differ from the closing inventories of the previous year because of changes in classification, the

receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

(b) Non-manufacturing activities

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by the reporting establishments and held at plants and at any warehouses or selling outlets which are treated as extensions of establishments. Other characteristics are the same as in (a) above.

Value Added

(a) By manufacturing activities

Figures are compiled by deducting the cost of manufacturing materials, supplies, etc. and fuel and electricity consumed from the (value of shipments of goods of own manufacture adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By non-manufacturing activities

The figures are compiled by deducting the cost of goods purchased for re-sale (adjusted for changes in the value of inventories of goods pur-

chased for re-sale) and the cost of non-manufacturing materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

(c) By Total activities

The figures consist of value added by manufacturing activities plus value added by non-manufacturing activities. This total value added figure may, in some cases, be less than value added by manufacturing activities as a result of expenditures associated with non-manufacturing exceeding revenues from such activities or because of a decrease in inventory of goods not of own manufacture exceeding the mark-up on the sale of such goods. "Value added" is sometimes referred to as net output or net production. However, to arrive at the National Accounts concept of net production, or Gross Domestic Product at "Factor cost" it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected as part of the annual Census of Manufactures. "Value added" figures for the primary industries, manufacturing and construction are published in DBS publication Catalogue No. 61-202, "Survey of Production".

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