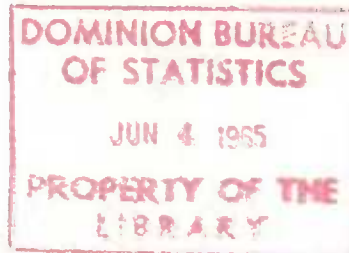


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ANNUAL.



AGRICULTURAL IMPLEMENT INDUSTRY

1962

ANNUAL CENSUS
OF MANUFACTURES

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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.
- r revised figures.

AGRICULTURAL IMPLEMENT INDUSTRY

1962

Data presented in this report under the heading of Agricultural Implement Industry reflect 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.

For statistical purposes the industry titled Agricultural Implement Industry covers the operations of establishments primarily engaged in manufacturing agricultural implements such as plows, threshing machines, binders, fertilizing machinery, milking machines, and mowing machines. The industry also includes establishments primarily engaged in manufacturing tractors. Establishments primarily engaged in manufacturing truck tractors for highway use are classified in Industry No. 323—Motor Vehicle Manufacturers. Establishments primarily engaged in manufacturing industrial tractors for handling materials in industrial plants, depots and docks are classified in Industry No. 315—Miscellaneous Machinery and Equipment Manufacturers. Establishments primarily engaged in manufacturing hand tools, such as hoes, rakes, and shovels are classified in Industry No. 306—Hardware, Tool and Cutlery Manufacturers.

The introduction of the final stage of the establishment concept in the Annual Census of Manufactures has resulted in certain changes and necessitated some adjustments to the statistics. Refer to the Explanatory Notes section of this report for a more detailed explanation. A comparison of Tables 1 and 1A indicates that the changes resulting from the implementation of the final stage of the establishment concept were of a relatively minor nature.

TABLE 1. Principal Statistics - Manufacturing Activity,¹ 1957 - 61
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Year	Estab-lish-ments	Employees						Cost of fuel and elec-tricity ⁴	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu-facture ⁴	Value added ⁴
		Production and related workers ⁴		Administrative and office employees ⁵		Total ⁴					
		Number	Wages	Number	Salaries	Number	Salaries and wages				
	No.		\$'000		\$'000				\$'000		
1957	63	7,318	26,830	2,407	10,743	9,725	37,573	1,716	58,349	118,044	..
1958	62	7,989	33,074	2,537	12,681	10,526	45,755	1,855	75,755	129,176	58,240
1959	63	10,169	44,242	2,887	15,757	13,056	59,999	2,369	99,208	166,192	75,901
1960	68	7,879	35,172	3,045	17,529	10,924	52,701	1,973	78,431	152,123	61,659
1961	67	7,004	30,995	3,483	18,543	10,487	49,539	1,865	73,947	138,045	60,093

See footnotes following Table 3 A.

TABLE 1 A. Principal Statistics - Manufacturing Activity and Total Activity,¹ 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Year and province	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec-tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu-facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000		\$'000				\$'000		\$'000		
1961	...	...	...	...	...	...	...	...	...	...	...	...
Nova Scotia ¹⁰	...	...	...	...	...	...	...	...	...	15	65	...
Quebec	11	237	496	630	56	943	2,991	2,053	4	13	318	1,049	
Ontario	27	6,208	12,738	28,692	1,629	66,772	124,191	53,336	7	18	8,886	41,888	
Manitoba	15	392	760	1,239	104	5,084	8,544	3,888	"	"	520	1,953	
Saskatchewan	5	41	108	163	10	356	1,142	765	"	"	109	507	
Alberta	7	108	207	348	80	939	2,112	1,131	"	"	210	854	1,077
British Columbia	2												
Totals	67	6,986	14,309	31,072	1,878	74,095	138,981	61,173	17	55	10,058	46,316	61,775
1962	...	...	...	...	...	...	...	...	...	...	...	...
Nova Scotia ¹⁰	...	...	...	...	...	...	...	...	...	18	74	...
Quebec	10	282	611	849	60	1,321	4,212	2,970	"	"	376	1,322	
Ontario	30	6,283	13,020	31,517	1,531	66,450	119,539	53,669	12	46	8,445	43,114	
Manitoba	15	500	1,004	1,625	118	6,407	11,688	4,783	"	"	639	2,400	
Saskatchewan	6	66	167	250	15	792	2,045	1,330	"	"	138	658	
Alberta	7	200	379	638	104	1,711	3,336	1,961	-	-	333	1,328	2,130
British Columbia	2												
Totals	70	7,331	15,182	34,879	1,828	76,680	140,820	64,713	22	66	9,949	48,896	69,085

See Table 2 and footnotes following Table 3 A.

TABLE 1 B. Principal Statistics classified by Size Groups based on Shipments of Goods of Own Manufacture, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Size group	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec-tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu-facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000		\$'000				\$'000		\$'000		
1961	...	...	...	...	...	...	...	...	...	...	...	...
Under \$10,000	6	4	5	8	2	14	48	24	4	10	5	9	26
\$ 10,000 to \$ 24,999	7	15	25	38	3	33	129	85	4	14	23	63	95
25,000 "	6	14	26	38	3	89	190	98	4	12	17	49	98
50,000 "	7	58	117	167	11	201	512	253	3	10	72	219	277
100,000 "	12	173	293	423	27	668	1,600	898	2	9	217	554	939
200,000 "	10	153	331	525	44	1,061	2,839	1,825	-	-	215	922	1,866
500,000 "	5	209	436	705	53	2,118	4,144	2,157	-	-	273	1,071	2,176
1,000,000 "	8	625	1,315	2,337	201	9,386	16,661	7,165	-	-	1,011	4,412	9,442
5,000,000 and over	6	5,735	11,759	26,831	1,535	60,526	112,858	48,668	-	-	8,061	38,247	46,855
Head offices, sales offices and auxiliary units ¹⁰	...	...	...	...	...	...	...	...	...	...	164	771	...
Totals	67	6,986	14,309	31,072	1,878	74,095	138,981	61,173	17	55	10,058	46,316	61,775

See footnotes following Table 3 A.

TABLE 1 B. Principal Statistics classified by Size Groups based on Shipments of Goods of Own Manufacture, 1961 and 1962 - Concluded

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁴
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
No.		'000			'000				'000		'000		
1962													
Under \$10,000	4	2	2	4	4	7	28	14	2	6	4	7	15
\$ 10,000 to \$ 24,999	5	1	2	3	3	25	78	50	9	14	2	6	53
25,000 " 49,999	8	18	35	50	5	101	257	151	6	17	24	68	156
50,000 " 99,999	5	24	51	79	6	110	332	217	1	5	32	104	217
100,000 " 199,999	17	206	363	578	38	824	2,360	1,512	1	4	264	807	1,581
200,000 " 499,999	11	197	445	666	58	1,554	3,916	2,546	-	-	298	1,219	2,616
500,000 " 999,999	4	155	309	500	36	1,647	3,273	1,560	3	21	204	788	1,541
1,000,000 " 4,999,999	11	1,066	2,191	4,020	309	13,211	24,714	10,851	-	-	1,495	6,294	11,912
5,000,000 and over	5	5,662	11,785	28,979	1,368	59,201	105,862	47,813	-	-	7,454	38,782	50,995
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	172	823	...
Totals	70	7,331	15,182	34,879	1,828	76,680	140,820	64,713	22	66	9,949	48,896	69,085

See footnotes following Table 3 A.

TABLE 1 C. Principal Statistics classified by Size Groups based on Manufacturing Value Added, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁴
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
No.		'000			'000				'000		'000		
1961													
Under \$10,000	10	9	14	21	3	46	122	53	6	16	15	34	58
\$ 10,000 to \$ 24,999	10	32	57	84	7	120	325	165	6	20	40	116	172
25,000 " 49,999	7	58	119	166	10	279	574	277	3	10	71	214	302
50,000 " 99,999	11	159	261	396	31	706	1,625	825	2	9	196	512	843
100,000 " 199,999	6	69	143	202	12	394	1,096	734	-	-	101	356	765
200,000 " 499,999	9	318	677	1,115	83	3,261	6,043	3,132	-	-	429	1,808	3,230
500,000 " 999,999	5	259	504	915	107	6,032	9,951	3,677	-	-	340	1,407	3,625
1,000,000 " 4,999,999	5	800	1,729	3,657	225	9,843	19,505	9,185	-	-	1,225	5,961	11,551
5,000,000 and over	4	5,282	10,805	24,518	1,400	53,415	99,740	43,125	-	-	7,477	35,138	41,228
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	164	771	...
Totals	67	6,986	14,309	31,072	1,878	74,095	136,981	61,173	17	55	10,058	46,316	61,775
1962													
Under \$10,000	7	2	2	4	6	19	68	40	9	15	4	7	40
\$ 10,000 to \$ 24,999	9	18	34	50	5	94	247	147	8	22	23	67	155
25,000 " 49,999	5	21	44	69	5	100	282	178	1	5	29	92	178
50,000 " 99,999	16	171	324	506	33	816	2,144	1,289	1	4	224	726	1,358
100,000 " 199,999	7	106	228	314	24	703	1,723	996	-	-	139	517	1,002
200,000 " 499,999	11	339	663	1,091	91	3,188	7,064	3,872	3	21	471	1,811	3,931
500,000 " 999,999	5	372	722	1,218	136	5,947	9,592	3,300	-	-	474	1,803	3,480
1,000,000 " 4,999,999	7	1,179	2,506	5,374	318	16,936	31,657	13,554	-	-	1,869	9,004	17,681
5,000,000 and over	3	5,123	10,658	26,253	1,209	48,877	88,042	41,339	-	-	6,544	34,047	41,261
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	172	823	...
Totals	70	7,331	15,182	34,879	1,828	76,680	140,820	64,713	22	66	9,949	48,896	69,085

See footnotes following Table 3 A.

TABLE 1 D. Principal Statistics classified by Size Groups based on Total Value Added, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Size group	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec-tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu-facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
No.	'000				\$'000			\$'000		\$'000			
1961													
Under \$10,000	10	9	14	21	3	46	122	53	6	16	15	34	58
\$ 10,000 to \$ 24,999	10	32	57	84	7	120	325	165	6	20	40	116	172
25,000 " 49,999	6	48	89	117	8	265	502	229	3	10	58	150	230
50,000 " 99,999	11	155	261	384	23	605	1,474	774	2	9	193	507	808
100,000 " 199,999	7	83	173	262	21	508	1,319	833	-	-	117	425	872
200,000 " 499,999	9	318	677	1,115	83	3,261	6,043	3,132	-	-	429	1,808	3,230
500,000 " 999,999	5	259	504	915	107	6,032	9,951	3,677	-	-	340	1,407	3,625
1,000,000 " 4,999,999	6	1,420	2,986	6,497	510	17,780	34,236	15,060	-	-	2,069	9,752	16,268
5,000,000 and over	3	4,662	9,549	21,677	1,115	45,498	85,009	37,250	-	-	6,633	31,347	36,511
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	164	771	...
Totals	67	6,986	14,309	31,072	1,878	74,095	138,981	61,173	17	55	10,058	46,316	61,775
1962													
Under \$10,000	7	2	2	4	6	19	68	40	9	15	4	7	40
\$ 10,000 to \$ 24,999	9	18	34	50	5	94	247	147	8	22	23	67	155
25,000 " 49,999	5	21	44	69	5	100	282	178	1	5	29	92	178
50,000 " 99,999	14	124	234	381	29	741	1,890	1,112	1	4	171	567	1,144
100,000 " 199,999	9	153	318	440	28	778	1,977	1,173	-	-	192	676	1,216
200,000 " 499,999	11	393	765	1,252	100	4,040	8,174	3,887	3	21	546	2,089	3,906
500,000 " 999,999	5	318	620	1,058	127	5,096	8,482	3,284	-	-	399	1,524	3,505
1,000,000 " 4,999,999	6	887	1,898	4,016	231	9,848	21,318	11,545	-	-	1,296	6,289	12,431
5,000,000 and over	4	5,415	11,286	27,611	1,296	55,968	98,382	43,347	-	-	7,117	36,763	46,510
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	172	823	...
Totals	70	7,331	15,182	34,879	1,828	76,680	140,820	64,713	22	66	9,949	48,896	69,085

See footnotes following Table 3 A.

TABLE 1 E. Principal Statistics classified by Size Groups based on Total Employed,¹² 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Size group	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec-tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu-facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
No.	'000				\$'000			\$'000		\$'000			
1961													
Under 5 employees	13	13	26	38	5	80	213	112	10	29	17	47	116
5- 14 employees	20	119	252	374	24	748	1,765	948	7	25	156	540	990
15- 49 "	17	348	659	1,003	86	2,456	6,037	3,538	-	-	454	1,501	3,539
50- 99 "	8	412	817	1,322	150	4,970	8,972	4,462	-	-	550	2,197	4,652
100-199 "	2	154	359	599	38	3,001	5,216	1,965	-	-	223	981	1,987
200-499 "	3	658	1,390	3,219	176	9,425	17,039	7,024	-	-	1,017	5,141	9,263
500 employees and over	4	5,282	10,805	24,518	1,400	53,415	99,740	43,125	-	-	7,477	35,138	41,228
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	164	771	...
Totals	67	6,986	14,309	31,072	1,878	74,095	138,981	61,173	17	55	10,058	46,316	61,775
1962													
Under 5 employees	15	13	28	38	12	115	318	190	16	34	19	52	193
5- 14 employees	19	119	249	414	28	780	2,108	1,330	3	11	163	602	1,357
15- 49 "	17	341	686	981	84	2,251	5,311	3,263	3	21	469	1,615	3,378
50- 99 "	7	344	711	1,206	67	5,611	10,377	4,263	-	-	438	1,810	4,319
100-199 "	6	650	1,316	2,306	228	6,966	12,703	5,647	-	-	802	3,137	5,773
200-499 "	2	449	947	2,323	113	5,009	11,620	6,674	-	-	769	4,094	7,555
500 employees and over	4	5,415	11,286	27,611	1,296	55,968	98,382	43,347	-	-	7,117	36,763	46,510
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	172	823	...
Totals	70	7,331	15,182	34,879	1,828	76,680	140,820	64,713	22	66	9,949	48,896	69,085

See footnotes following Table 3 A.

TABLE 1F. Principal Statistics classified by Type of Organization, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Type of organization	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec-tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu-facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
No.		'000			\$'000			\$'000			\$'000		
1961													
Individual ownerships	10	10	22	31	4	72	181	92	10	29	10	31	95
Partnerships	3	18	40	55	2	111	213	100	7	25	19	59	106
Incorporated companies	54	6,958	14,247	30,986	1,872	73,912	138,588	60,981	-	-	9,865	45,455	61,574
Cooperatives													
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	164	771	...
Totals.....	67	6,986	14,309	31,072	1,878	74,095	138,981	61,173	17	55	10,058	46,316	61,775
1962													
Individual ownerships	7	18	40	57	8	125	295	162	7	23	18	57	162
Partnerships	6	29	51	65	12	532	866	362	15	44	31	70	366
Incorporated companies	57	7,284	15,091	34,757	1,808	76,023	139,659	64,190	-	-	9,728	47,946	68,558
Cooperatives													
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	172	823	...
Totals.....	70	7,331	15,182	34,879	1,828	76,680	140,820	64,713	22	66	9,949	48,896	69,085

See footnotes following Table 3 A.

TABLE 2. Industry Outputs, Inputs and Value Added, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Item	1961		1962	
	\$'000			
Manufacturing activity:				
Value of shipments - Goods of own manufacture		136,981		140,820
Add: Closing inventory - Goods in process	20,083		23,465	
Finished goods	8,982	29,065	8,784	32,249
Deduct: Opening inventory - Goods in process	22,550		20,186	
Finished goods	8,350	(30,900)	9,660	(29,846)
Gross output - Manufacturing activity		137,146		143,223
Deduct: Cost of materials and supplies used in manufacturing activity	74,095		76,680	
Cost of fuel and electricity used	1,878	(75,973)	1,828	(78,508)
Value added - Manufacturing activity		61,173		64,713
Non-manufacturing activities:				
Value of shipments - Goods not of own manufacture .....		..		18,369
Add: All other revenue .....		..	206	
Closing inventory - Goods purchased for resale	2,748	..	6,159	6,365
Deduct: Purchases of goods for resale as such .....		..	12,626	
Opening inventory - Goods not of own manufacture	2,556		7,162	
Closing of all other materials and supplies used .....		..	371	(20,361)
Value added - Non-manufacturing activities		602		4,373
Total value added.....		61,775		69,085

See footnote following Table 3 A.

TABLE 3. Employment and Payroll, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Year and province	Employees										Salaries and wages						
	Production and related workers				Adminis- trative and office ^{6,9}		Sales, and distribution ⁹		Total employees ^{7,9}		Production and related workers		Admin- istrative and office	Sales, and distri- bution	Total salaries and wages		
	Manufacturing ⁴		Other ⁹		Male	Female	Male	Female	Male	Female	Manufacturing	Other					
	Male	Female	Male	Female									number										$'000
1961																	
Nova Scotia	13	2	65	
Quebec	237	-	307	11	630	1,049	
Ontario	6,159	49	8,385	501	28,692	41,888	
Manitoba	387	5	484	36	1,239	1,953	
Saskatchewan	41	-	93	16	163	507	
Alberta	99	-	176	22	326	822	
British Columbia	9	-	11	1	23	32	
Totals	6,932	54	9,469	589	31,072	46,316	
1962																	
Nova Scotia	14	4	14	4	74	74	
Quebec	277	5	1	-	48	13	32	-	358	18	849	3	218	252	1,322		
Ontario	6,236	47	-	-	1,556	324	240	42	8,032	413	31,517	-	10,221	1,376	43,114		
Manitoba	496	4	-	-	63	26	40	10	599	40	1,625	-	539	236	2,400		
Saskatchewan	66	-	-	-	6	4	52	10	124	14	250	-	75	333	658		
Alberta	191	2	-	-	41	11	65	12	297	25	616	-	286	393	1,295		
British Columbia	7	-	-	-	3	1	-	-	10	1	22	-	11	-	34		
Totals	7,273	58	1	-	1,717	379	443	78	9,434	515	34,879	3	11,350	2,664	48,896		

See footnotes following Table 3 A.

TABLE 3 A. Production and Related Workers,⁴ - Manufacturing Activity, by Months, 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Month	Establishments reporting monthly detail	
	Male	Female
	number	
January	6,707	67
February	6,936	61
March	7,206	60
April	7,284	58
May	7,210	57
June	6,817	60
July	6,473	50
August	5,897	47
September	6,181	51
October	6,917	54
November	7,459	60
December	7,977	66
Average for establishments reporting monthly detail (collected only for large establishments)	6,999	57
Average for small establishments (only annual averages collected)	274	1
Average for all establishments	7,273	58

¹ See Table 2 and Explanatory Notes concerning manufacturing and non-manufacturing activities.

² See Explanatory Notes.

³ This category, in this table only, includes working owners and partners. Since administrative and office employees are engaged in a variety of activities they have been excluded from manufacturing activity beginning with the revised 1961 series shown in the following tables. They are included here for purposes of comparison with the tabulations of previous years.

⁴ Conceptually identical to previous years. See Explanatory Notes.

⁵ Cannot be reported separately for manufacturing and non-manufacturing activities but related substantially to manufacturing activity. Identical concept to previous years.

⁶ Working owners and partners were included with administrative and office employees in the "Manufacturing series" published in former years. See Explanatory Notes.

⁷ Includes production and related workers, administrative and office employees, sales distribution and other employees. See Explanatory Notes for the treatment of head office employees and those employed in auxiliary units.

⁸ Value of total shipments and other operational revenue less total cost of materials, supplies, fuels used and purchases of products and materials for resale in the same condition; all adjusted for inventory changes where required. See Table 2 and Explanatory Notes.

⁹ Sales and distribution workers and production workers (non-manufacturing) are included for the first time as a result of the full implementation of the new definition of the establishment. The figures for production workers (non-manufacturing), administrative and office employees and sales and distribution workers are not yet available for 1961 but form part of total employees. Sales and distribution workers may include some employees that are reported as part of a manufacturing establishment but are not working at the establishment's location. Head offices, sales offices, etc., which report separately are included in the figures for the province in which they are located.

¹⁰ These data cover the activities reported by separately located units such as head offices, sales offices, administrative offices, laboratories, warehouses, etc. Such units do not usually constitute separate "establishments" as they do not normally generate all the necessary elements of input and output statistics. However, they are treated as extensions of manufacturing establishments and, in the case of individual industries, may be located in provinces where no processing plants are situated. For the most part, these units contribute only to costs of operations (mainly salaries and wages) and they are included here to provide completeness and consistency of the statistics. See Explanatory Notes which deal with Single and Multi establishments for a complete explanation of procedures.

¹¹ Confidential data.

¹² Includes paid employees and working owners but excludes unpaid family workers.

Note: Figures may not add due to rounding.

TABLE 4. Materials and Supplies Used in Manufacturing Activity, 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Description	Quantity	Cost
		\$'000
1. Materials used:		
Iron:		
Pig iron, all grades	ton 6,667	413
Castings (rough and semi-finished received from foundry):		
Iron (gray and malleable)	" 11,881	4,036
Steel	" 2,190	865
Steel, hot or cold rolled (except special alloy steel):		
Bars	" 44,473	8,213
Plates	" 7,088	1,119
Sheets, plain	" 41,786	5,840
Sheets, galvanized	" 3,429	628
Strip	" 4,542	785
Structural shapes (angles, channels, etc.)	" 11,731	1,771
Wire	" 364	59
Scrap iron and steel of all kinds	" 3,546	138
Pipe, tubing and fittings of iron and steel .....	...	2,264
Other iron and steel (except finished parts) .....	...	392
Alloy steel:		
Carbon and alloy tool steels, including high-speed .....	...	70
Stainless steels .....	...	368
Other alloy steels .....	...	874
Ferro-alloys .....	...	25
Non-ferrous metals (all forms, including scrap):		
Aluminum:		
Castings	pound 133,319	112
Sheet	" 141,615	70
Other forms	" 47,628	36
Brass and bronze		
Lead	" 189,327	76
Zinc	" 9,324	1
Babbitt metals and solder	" 218,771	33
Other non-ferrous metals	" 1,933	1
Other materials and supplies:	...	790
Paints, oils and varnishes .....	...	77
Foundry coke (used in cupola, not for heat or power)	ton 2,062	31
Foundry sands	" 3,177	157
Lumber	M ft. b. m. 1,611	10
Fireclay	ton 397	37
Cupola blocks and firebrick .....	...	8
Core oil	Imp. gal. 9,992	43,017
All other materials and components used ² .....	...	633
2. Containers and other packaging materials and supplies used		
3. Operating, maintenance and repair supplies used (excluding fuel)		
4. Amount paid out to others for work done on materials owned by establishments		
Total		76,680

¹ See Explanatory Notes.

² No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. In 1962 these estimated costs were \$1,386,920.

TABLE 5. Fuel and Electricity Used¹ in Manufacturing Activity,² 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept³

Description	Quantity	Cost
		\$'000
1. Large establishments which reported commodity detail:		
Bituminous coal:		
(a) From Canadian mines	ton 718	9
(b) Imported	" 26,694	271
Sub-bituminous coal (from Alberta mines only) .....	...	...
Anthracite coal	ton 200	3
Lignite coal	" 194	2
Coke	" 441	13
Gasoline (including gasoline used in cars and trucks)	Imp. gal. 369,178	129
Fuel oil including kerosene or coal oil	" 2,501,128	319
Wood	cord 72	1
Gas:		
(a) Liquefied petroleum gases	Imp. gal. 2,868	1
(b) Other manufactured gas .....	...	...
(c) Natural gas	M cu.ft. 404,462	251
Other fuel .....	...	1
Electricity purchased	kwh. 69,985,921	710
Steam purchased .....	...	54
2. Estimate for small establishments for which no data were collected:		
Fuel and electricity .....	...	64
3. All establishments:		
Total fuel and electricity used .....	...	1,828

¹ Does not include fuel and electricity produced for own use.

² Includes only fuel and electricity purchased. Conceptually identical to previous years in that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

³ See Explanatory Notes.

TABLE 6. Shipments of Goods of Own Manufacture, 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Description	Quantity	Value
	number	\$'000
1. Products:		
Planting, seeding and fertilizing machinery:		
Corn planters - Horse and tractor-drawn and tractor-mounted .....	...	3
Transplanters .....	...	2
Grain and fertilizer drills (combination) .....	...	2
Grain drills - Plain and press .....	...	2
Seed boxes for harrow-plows, one-way discs and tiller-combines	1,581	432
Manure spreaders .....	...	2
All other planting, seeding and fertilizing machines .....	...	9,666
Plows:		
Mouldboard plows - Tractor-drawn or tractor-mounted .....	...	3
Disc plows - Tractor-drawn .....	...	3
Harrow-plows, one-way discs, tiller-combines	3,913	2,801
All other plows	18,953	3,578
Tilling, cultivating and weeding machines:		
Harrow:		
Drag (sections)	29,748	311
Spring-tooth (sections)	3,849	167
Disc - Tractor-drawn or mounted	8,377	2,188
Soil packers	5,291	343
Field cultivators:		
Tractor-drawn	5,597	2,137
Tractor-mounted	1,495	517
Rod weeders	7,195	1,825
Other tilling, cultivating and weeding machines .....	...	1,767
Haying machinery:		
Mowers, tractor-drawn or mounted	22,035	5,683
Side rakes and tedders .....	...	4
All other haying machinery (including hay balers, hay carriers, etc.) .....	...	12,298
Harvesting machinery:		
Combine reaper-threshers and stationary threshers .....	...	5
Swathers and windrowers	6,141	8,786
Potato diggers - Horse or tractor-drawn	336	159
All other harvesting machines (including headers, push harvesters) .....	...	2,768
Machines for preparing crops for market or use:		
Grain grinders	2,517	172
Fanning mills or grain cleaners	625	307
Hammermills	181	50
Grain loaders and elevators	2,702	605
All other machines for preparing crops for market or use .....	...	354
Spraying and dusting equipment:		
All types (including attachments) .....	...	1,354
Farm wagons, trucks and sleighs:		
Wagon boxes .....	...	6
Wagon gears (standard)	8,037	894
Forage boxes .....	...	6
All other farm wagons, sleighs and trucks .....	...	435
Dairy machinery and equipment, including cream separators, milking machines, etc.		
Miscellaneous farm implements and machinery		
Parts and accessories for farm implements and machinery		
Total farm machinery and parts		
All other products		
2. Amount received in payment for work done on materials and products owned by others		718
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above		(92)
Net adjustment for establishments receiving progress payments ⁷ .....		..
Total adjusted value of shipments and work done		140,820

¹ See Explanatory Notes.

² Included with "All other planting, seeding and fertilizing machines".

³ Included with "All other plows".

⁴ Included with "All other haying machinery".

⁵ Included with "Miscellaneous farm implement and machinery".

⁶ Included with "All other farm wagons".

⁷ See footnote 1, Table 7.

TABLE 7. Industry Inventories, 1962¹

Basis: Revised Standard Industrial Classification and New Establishment Concept²

Province	Manufacturing				Non-manufacturing	Total inventories
	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total manufacturing	Products or materials purchased for resale	
book value \$'000						
Opening: ³						
Quebec	330	331	234	895	—	895
Ontario	6,516	18,325	8,091	32,933	7,074	40,007
Manitoba	1,098	1,380	865	3,343	55	3,398
Saskatchewan	59	13	93	166	—	166
Alberta	489	136	377	1,002	33	1,036
British Columbia						
Totals⁴	8,492	20,186	9,660	38,339	7,162	45,501
Closing:						
Quebec	358	347	357	1,063	—	1,063
Ontario	8,195	21,805	6,723	36,723	6,073	42,796
Manitoba	1,080	918	946	2,944	40	2,984
Saskatchewan	53	151	47	252	—	252
Alberta	499	243	710	1,452	46	1,498
British Columbia						
Totals⁴	10,185	23,465	8,784	42,433	6,159	48,592

¹ Values represent book values of inventories 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.

² See Explanatory Notes.

³ The opening inventories may differ from the closing inventories for the previous survey 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.

⁴ Figures may not add due to rounding.

TABLE 8. Shipments of Goods of Own Manufacture — All Industries,¹ 1953 - 62

A. Plows

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	21,577	4,402	1958	38,248	2,993
1954	15,443	2,979	1959	21,640	4,178
1955	24,210	4,183	1960	20,707	5,486
1956	19,573	3,272	1961	20,845	7,202
1957	13,848	2,289	1962		

B. Mowers

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	13,830	2,717	1958	17,028	4,215
1954	7,006	1,389	1959	30,605	7,008
1955	19,579	4,988	1960	25,682	5,905
1956	14,739	3,497	1961	16,683	3,667
1957	12,225	3,003	1962	22,035	5,683

C. Harrows

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	88,906	6,069	1958	35,549	3,969
1954	65,365	2,676	1959	50,031	5,628
1955	50,352	3,058	1960	48,623	3,391
1956	44,016	2,943	1961	43,636	3,407
1957	49,602	3,115	1962	43,758	2,688

See footnotes at end of table.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries, 1953-62 - Continued

D. Threshers and Reaper-Threshers

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	21,870	61,825	1958	14,645	41,482
1954	12,891	37,433	1959	18,134	51,074
1955	11,621	36,465	1960	14,265	41,421
1956	10,742	36,506	1961	9,858	31,793
1957	9,689	34,186	1962	2	2

E. Seed Drills

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	7,669	3,164	1958	606	93
1954	3,848	1,617	1959	1,255	637
1955	1,881	775	1960	786	286
1956	1,024	439	1961	1,181	587
1957	994	497	1962	2	2

F. One-way Discs, Harrow-Plows and Tiller-Combines

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	17,073	7,914	1958	4,158	2,756
1954	8,006	4,048	1959	3,996	2,729
1955	3,279	1,719	1960	5,861	3,542
1956	4,392	2,678	1961	2,740	3,797
1957	4,403	3,140	1962	3,913	2,801

G. Cultivators

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	13,558	3,466	1958	12,606	3,323
1954	9,649	2,566	1959	21,394	6,637
1955	12,870	2,809	1960	14,333	5,065
1956	13,726	3,752	1961	11,267	4,100
1957	11,222	3,627	1962	12,233	3,559

H. Weeders and Corn Planters

Year	Weeders		Corn planters	
	Number	Value	Number	Value
		\$'000		\$'000
1953	2,206	474	1,850	132
1954	2,216	607	1,201	164
1955	1,858	480	1,608	223
1956	1,577	314	1,352	218
1957	1,995	430	2,079	454
1958	1,585	333	810	252
1959	2,836	683	1,347	322
1960	4,980	1,417	894	174
1961	5,698	1,126	1,924	281
1962	7,370	1,995	2	2

See footnotes at end of table.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries,¹ 1953-62 - Concluded

I. Hay Loaders and Hay Rakes

Year	Hay loaders		Hay rakes, including combination side rakes and tedders	
	Number	Value	Number	Value
		\$'000		\$'000
1953	4,755	954	11,539	2,280
1954	1,674	398	7,773	1,790
1955	1,272	286	9,937	2,184
1956	304	63	6,987	1,155
1957	212	54	7,204	2,079
1958	149	30	8,784	4,872
1959	828	71	9,767	3,417
1960	25	15	6,304	1,784
1961	21	7	5,238	1,415
1962	2	2	2	2

J. Manure Spreaders

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	11,821	3,954	1958	4,165	1,646
1954	6,024	2,148	1959	5,502	2,591
1955	5,276	1,782	1960	8,042	4,048
1956	4,531	1,591	1961	3,489	1,709
1957	3,643	1,347	1962	2	2

K. Factory Shipments of Agricultural Implements and Parts

Year	Factory shipments
	\$'000
1953	159,851
1954	113,089
1955	109,701
1956	117,656
1957	117,896
1958	129,088
1959	151,974
1960	140,695
1961	120,795
1962	122,546

¹ Includes shipments from other industries which manufacture, as a secondary activity, the commodities listed above.

¹ Confidential.

Note: In Table 8K shipments values are computed at factory selling prices.

TABLE 9. Capital and Repair Expenditures, 1960-62

Year	Capital expenditures			Repair expenditures			Total capital and repair expenditures		
	Construction	Machinery and equipment	Sub-total	Construction	Machinery and equipment	Sub-total	Construction	Machinery and equipment	Total
	\$'000								
1960	1,793	4,183	5,976	826	3,436	4,262	2,619	7,619	10,238
1961	2,300	5,482	7,782	829	2,768	3,597	3,129	8,250	11,379
1962	872	2,141	3,013	839	2,917	3,756	1,711	5,058	6,769

Source: Business Finance Division. - DBS.

List of Firms, 1962

Name	Location
Quebec:	
Desjardins Limitée	St-André de Kamouraska
Dion Frères Inc.	Ste-Thérèse de Blainville
Houde & Fils Enr'g.	Wickham
Iberville Mach'y. Co. Ltd.	R.R. 2, St. Édouard
La Cie R.A. Lajoie Ltée	St. Pie
La Compagnie Jutras Ltée	Victoriaville
La Machinerie Idéale Ltée	St. Césaire
Ledoux, V., Steel Products Limited	St. Hyacinthe
Lemay, Armand, & Fils Ltée	St. Basile Le Grand
Safeway Farm Equipment Co. Limited	Rougemont
Ontario:	
Baertsoen, Frank, & Sons	R.R. # 5, Aylmer West
Canadian Potato Machinery Co., Ltd.	Galt
Cockshutt Farm Equipment Limited	Brantford
Deere, John, Welland Works of John Deere Limited	Welland
DeLaval Company Limited	Peterborough
Delhi Foundry & Farm Machinery Limited	Delhi
Douglas, Brown & Campbell Ltd.	Meibourne
Eagle Tie Machine Co.	London
Ebersol Farm Equipment Co. Limited	Milverton
Enright Metal Products	Preston
Ernst Bros. Company Limited	Mount Forest
Fleury-Bissell Implements Limited	Elora
Gray-Snyder Limited	Heidelberg
Harris Manufacturing	Jarvis
International Harvester Co. of Canada Ltd. (Hamilton Works)	Hamilton
Jackson's Manufacturing & Machinery Ltd.	Tilsonburg
Lobsinger Bros. Ltd.	Mildmay
Martin Metals	R.R. # 2, Waterloo
McKee Bros. Ltd.	Elmira
Massey Ferguson Ltd.	Toronto 3
Massey Ferguson Ltd.	Woodstock
Massey Ferguson Ltd.	Brantford
Prometals Limited	Dutton
Rittenhouse, M.K., & Sons, Limited	Jordan Station
Sedore, Ernest, & Son	Mount Albert
Smith Brothers (Camden)	R.R. No. 3, Thamesville
Snyder, G.H.	Copetow
South Shore Mfg. Co. Ltd.	West Lorne
Tac-Lite Limited	Galt
Manitoba:	
Canadian Co-operative Implements Ltd.	Winnipeg 5
Cascade Brothers Ltd.	Brandon
Forever Industries Limited	Winnipeg 4
Hart Emerson Simon Ltd., The	Winnipeg 3
Hydraulic Engineering Co.	West Kildonan
Imperial Steel Products Ltd.	St. James
Inland Steel & Forgings (1962) Ltd.	East Kildonan
Kilbery Industries Ltd.	St. James
Machine Industries Ltd.	St. Boniface
Malmgren Mfg. (1962) Ltd.	St. Boniface
Minn-Toba Industries Ltd.	Minnedosa
Northern Equipment Limited	Portage La Prairie
Plett's Industries	Rosenort
Schmidt Mfg.	Morden
Standard Gas Engine Works Limited	Morden
Saskatchewan:	
Brandt Electric Ltd.	Regina
Brown Industries	Drinkwater
Flexi-coil Land Packers Limited	Saskatoon
Ingham Industries Ltd.	Lanigan
Morris Rod Weeder Co. Ltd.	Yorkton
Nodge Manufacturing Co.	Swift Current
Alberta:	
Golden Arrow Sprayers Ltd.	Calgary
Kirchner Machine Ltd.	Lethbridge
McCoy-Fenn Manufacturers & Fabricators Ltd.	Calgary
Noble Cultivators Ltd.	Nobleford
Samson Rotary Rod Weeder Ltd.	Calgary
Success Automatic Land Leveller Co. Ltd.	Medicine Hat
Victory Equipment Ltd.	Lethbridge
British Columbia:	
Irrigation Products Ltd.	Osoyoos
Swanson Sprayers Ltd.	R.R. No. 1, Winfield

EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1962 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and special reports on geographical distribution and on type of ownership and size of establishments.

With the publication of the results of the 1962 Census of Manufactures, the Bureau has completed a major revision in the classification and concept of its annual census of manufacturing establishments. Because of its size and complexity, this project had to be carried out in three stages. The first stage was the change in classification and the results of the 1960 Census, together with the re-compilation of the 1957, 1958 and 1959 Censuses were published in the 1960 reports on the basis of the revised Standard Industrial Classification. This part of the project was confined entirely to a re-coding of existing reporting units. The second stage consisted of the implementation of the new definition of the reporting unit i.e. "establishment" as it applied to **manufacturing activities** of manufacturing establishments (See following note on "Establishment"). Results of the 1961 Census reflected this change in concept and, in order to provide comparability of data for recent years, the 1961 reports contained principal statistics on the basis of the new establishment definition for years back to 1957.

The third stage which was the extension of the definition of the establishment to cover **total activities** of manufacturing establishments is reflected in the statistics for 1961 and 1962 contained in this report. This full implementation of the new definition of the establishment has resulted in an extension of the data to non-manufacturing activities of manufacturing establishments and in additional changes in the 1961 statistics of manufacturing activities. Statistics on manufacturing activities will continue to be shown separately as in the past but, beginning with 1961, data on all operations (total activity) of manufacturing establishments will also be given. By definition "total activity" relates to all operational data and excludes such non-operational items as rent, interest and dividends. In addition, statistics on man-hours paid will be included as part of the regular series of industry statistics. For many industries, adjustments and revisions were made to the 1961 data on **manufacturing activities** which were published during the second stage to bring them in line with reporting procedures followed in the 1962 Census and to reflect the final application of the new concept. The 1961 statistics on manufacturing activities contained in this report are thus not entirely comparable with those published in the 1961 reports. However, the 1961 statistics are shown in this publication in both their original and revised forms in order to provide a link with the immediate past. A more complete account of recent changes and additions and brief descriptions of the principal industry statistics are given in following sections of these notes.

Standard Industrial Classification

The revised Standard Industrial Classification which was introduced with the 1960 Census of Manufactures and applied to the results of the 1957, 1958 and 1959 censuses provides for a breakdown of the manufacturing universe into 140 industries arranged in 20 major groups. Custom Tailoring Shops is the only industry class in the Manufacturing Industries Division of the classification which is not covered in the annual Census of Manufactures. It is surveyed as part of the Decennial Census of Merchandising and Service Establishments. Of the 140 "three-digit" industry classes in the Manufacturing Industries Division, 21 are further broken down into 67 "four-digit" sub-classes. With the exception of the Wood Preservation and Sound Recording industries, the figures for which are at present confidential and have to be included with those of related industries, the statistics for all of the "four-digit" sub-classes are published regularly. Thus, at the Canada level, principal statistics are compiled for 183 industries. These cannot all be published separately by province because of the confidential nature of the data in certain provinces.

Reporting establishments are classified or allotted to specific industries in the classification system on the basis of the value of principal products made or shipped. In general, establishments primarily engaged in repair work (Shoe Repair Shops, Motor Vehicle Repair Shops etc.) are not included in manufacturing industries. Exceptions are establishments primarily engaged in furniture, ship, boat, aircraft and railroad rolling stock repairs which are classified to the manufacturing industries producing the products involved. Establishments primarily engaged in assembling parts into complete units have always been included in manufacturing industries.

Full details concerning the revised classification system are contained in the Standard Industrial Classification Manual, Catalogue No. 12-501, which is available from either the Queen's Printer or the Dominion Bureau of Statistics.

It should be noted that two new industries (Poultry Processors and Dental Laboratories) and three new groups of establishments (book publishers in the Publishing Industry, electro-plating establishments in the Metal Stamping, Pressing and Coating Industry and prescription branches in the Ophthalmic Goods Manufacturers Industry) have been included in the 1961 (revised) and 1962 Census statistics and will continue to be included thereafter. They were surveyed for the first time in the 1960 Census (1961 Census in the case of prescription branches) in line with the revised classification but, since they did not represent new production, they were removed from the 1960 and 1961 compilations published in the 1961 Census reports in order to provide complete comparability of data over the period 1957-61. Statistics for this period are repeated in the 1962 reports to supply a link with the revised 1961 data and the new 1962 statistics.

Establishment

The reporting unit in the Census of Manufactures is the **establishment**. The majority of establishments are firms, but many firms have more than one manufacturing establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements described below.

Beginning with the 1961 Census of Manufactures the establishment is defined as follows:

"The smallest unit which is a separate operating entity capable of reporting all 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,
- Inventories,
- Shipments or sales."

Following is a description of the main features of the new establishment concept introduced in the 1961 Census, how they differ from those of the old "activity" concept and the steps taken to correct for breaks in continuity.

(a) The establishment is to be distinguished from smaller subdivisions or departments which do not have records that permit them to report all items required of an establishment. Prior to 1961, some establishments were required to submit two or more separate reports when they were engaged in activities which were classifiable to different industries. Beginning with 1961, separate reports for such activities are required only in cases where accounting records can provide the necessary input and output elements of principal statistics. Special reporting arrangements were made with respondents when the acceptance of combined reports would have seriously affected the statistics for particular industries or areas. Where continuity of industry statistics was affected by this change in reporting procedures, adjustments to the data were made back to 1957 in order to maintain comparability of the series for recent years.¹

(b) A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. Prior to 1961, the Census of Manufactures attempted to cover the manufacturing activities of all establishments, whether or not they were primarily engaged in manufacturing. Beginning with the 1961 Census, establishments (accounting entities) which are not primarily engaged in manufacturing are no longer included as manufacturing establishments in the basic industry statistics.¹

¹ Most of these adjustments were made when the results of the 1961 Census were being compiled. Since publication of these results in the 1961 reports additional adjustments were made to the 1961 data, as noted earlier, and these are reflected, where applicable, in the revised 1961 statistics contained in this report.

Again, adjustments were made to reflect the removal of such reporting units for the period 1957-60. These reporting units are now listed as establishments in other Bureau surveys, such as Wholesale Trade, Construction etc. This has resulted in a somewhat smaller universe represented by the Census of Manufactures. In terms of overall 1960 Census results, the number of establishments transferred to other industries totalled 2,786 or 8% but these represented only 0.7% of total employment and of total value of shipments of manufactured products. In order, however, to maintain complete coverage of certain commodity items produced mainly in manufacturing establishments, many non-manufacturing establishments are now surveyed by the Industry Division for commodity shipments only and the latter are included in those tables of industry reports showing shipments of certain commodities "from all industries".

(c) A manufacturing establishment may be, and often is, engaged in other activities in addition to its principal manufacturing activity. Prior to 1961 the main emphasis in the Census of Manufactures was on manufacturing activity. Beginning with 1961, each establishment reports on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on different activities (manufacturing, trading in goods not of own manufacture, construction by own labour force, revenue from services etc.) are requested separately. However, the statistics published in the 1961 reports were confined to manufacturing activity only in order to maintain comparability with previous years and to permit a more thorough audit of the new data. The 1962 reports contain principal statistics on total activities of manufacturing establishments for 1961 and 1962 with the main elements of manufacturing activity shown separately as in the past. It should be noted that the statistics for separate activities are not completely consistent. Some respondents cannot distinguish in their records materials, shipments and inventories relating to own manufacturing activities from those relating to goods not of their own manufacture or to other activities and can report operational data in total only under manufacturing activity. This situation has always existed, however, and is not considered important enough to invalidate the use of the data in the measurement of manufacturing as an "activity". The values assigned by the respondent to materials and shipments of own manufactured goods include costs in varying degrees that relate to internal (to the establishment) transportation, warehousing and selling activities, but it is not possible to make adjustments to arrive at a uniform valuation for manufacturing activity only; although valuation at the establishment "boundary" must be accepted, the items valued under manufacturing activities still relate, in most cases, to "goods of own manufacture". In the case of employment only data on manufacturing production workers and manufacturing man-hours can be assigned, in total, to manufacturing activity; administrative and office employees can seldom be allocated to separate activities.

Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level, and for studies or statistical measures requiring accurate co-ordinated data, the "total" statistics should be used.

(d) Additional changes resulted from intensive editing and follow-up consistent with the introduction of the new concept. An example of such changes is the provision for the elimination, in total, of sales taxes and outward transportation charges from value of shipments. Prior to 1961, although the value of shipments for each product was requested excluding taxes and transportation charges, no allowance had been made for the reporting of these items in total when the respondents' records did not permit their deduction from the values of the individual products. Another example is a change in the valuation of shipments where, prior to 1961, a manufacturing company operating warehouses or sales outlets was reporting value of shipments in terms of an estimated manufacturer's price in accordance with the old activity concept, even though his records were not kept on this basis. Since the accounting boundary in such cases extends to distribution operations, the respondent was instructed in 1961 to report shipments at the final selling price in order to obtain more realistic and accurate data.² Adjustments were made to the value of shipments for the period 1957-60 to reflect such changes and maintain continuity of the shipments data. Since no actual data to make these corrections were available for back years, 1961 adjustment ratios were applied to the previous years for each industry affected, on the assumption that the valuation changes in 1961 applied in equal proportions to the preceding period.³

(e) The new concept also demands that inventories held apart from plant be included with plant inventories if establishment boundaries extend to warehouses and sales outlets. Prior to 1961, compilations took into account only the inventories held at plant. In this case, however, most of the missing data were available from supplementary questions in the Annual Census and from the Monthly Inventories and Shipments Survey and actual corrections could be made for previous years.

² Some manufacturing firms operate sales branches or selling warehouses as separate sales establishments for which complete accounting records of receipts, expenses, employment and sales are maintained. In such cases the plants, in effect, "sell" to the sales outlets on much the same basis as they would to independent buyers. The value of plant shipments is based on factory prices and the "boundary" of the manufacturing establishment does not extend beyond the plant. The sales outlets in such cases constitute separate sales establishments and are classified to wholesale or retail trade. Some sales outlets of manufacturing firms, although they physically handle products of the plants, do not maintain separate accounts and are generally treated for statistical purposes as extensions of manufacturing operations. Special arrangements were made for separate reporting in a few cases where the treatment of such outlets as manufacturing extensions would seriously affect the significance of statistics for particular manufacturing and trade industries.

³ See footnote 1.

(f) Prior to 1961 the Census of Manufactures did not have complete coverage of head and administrative offices and had never surveyed separate sales offices, warehouses or laboratories operated by manufacturing firms. Beginning with the 1961 survey, complete coverage of these auxiliary units was effected. In the past the employment and salaries and wages of those head and administrative offices that were surveyed were either coded in total to the industry in which the greatest portion of the company's manufacturing activities was classified or else, in the case of certain large multi-unit firms with establishments in several industries, were pro-rated among the different industries involved. In the original 1961 statistics published in 1961 reports, the same coverage and treatment of head offices was applied to maintain comparability over the 1957-61 period. Beginning with the revised 1961 statistics, all head offices and auxiliary units are covered and are processed according to the methods described below.

1. Single-Establishment Companies

In the great majority of cases central administrative and executive personnel of companies consisting only of one establishment are generally located at the site of the manufacturing plant and are automatically included in the plant reports. Where head offices and auxiliary units are geographically separate from plant locations and employ a sizeable number of workers they are surveyed on special questionnaires.

Separately located head offices, sales offices, administrative offices and other separate auxiliary units (laboratories, warehouses, etc.) do not usually constitute separate establishments⁴ for purposes of industry statistics since they do not normally generate operational revenues but give rise only to costs of operation (mainly salaries and wages) which make up part of the selling price of manufactured products and which are thus included in the value of shipments or sales. Where such units belong to single-establishment companies, they will be considered as extensions of the establishment's boundaries and their operations consolidated with the establishment's total activity.

2. Multi-Establishment Companies

In the case of companies with more than one establishment the following rules are applied:

(i) Where all the establishments of a company are classified to the same (three-digit) industry, the head office and other auxiliary units are coded to that same industry.

(ii) Where the establishments of a company are not all classified to the same (three-digit) industry but are coded to different industries, or industries in different industry groups or even different divisions

⁴ See footnote 2 for exceptions.

of the Standard Industrial Classification, the inclusion of data for head office and auxiliary units in any one of the (three-digit) industries concerned would distort the relationship between items of principal statistics. In such cases, the auxiliary units are coded at the group (two-digit) level in tabulations of industry statistics. Where multi-establishment companies cut across group or major division lines of the Classification, the head office and auxiliary units will be coded to the (two-digit) industry group in which the major part of the company's operations are classified. Although this may result in some distortion of (two-digit) industry group statistics it will eliminate distortion within groups as it will leave statistics at the (three-digit) industry level free of these company-wide data.

Period Covered

Respondents are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. However, the data on employees, salaries, wages and man-hours are requested on a calendar year basis in all cases.

When establishments are operated for only a portion of a year, a report is required covering the period of operation.

Working Owners or Partners

Beginning with the revised 1961 statistics working owners and partners of unincorporated businesses are shown as a separate category in the principal statistics and are neither included in the number of employees nor in 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. In all previous reports of the Census of Manufactures these workers were included as part of the number of administrative and office employees and their withdrawals were included as part of salaries. Withdrawals are defined as amounts withdrawn by owners or partners for normal living expenses, excluding withdrawals for payment of income tax.

Number of Establishments

The number of establishments represents the number of operating units (accounting entities as per the new definition of the establishment) for which separate reports are submitted. Head offices located apart from establishments and which are surveyed separately and separate sales and administrative auxiliaries that are treated as extensions of manufacturing activities are not included in the establishment count. However, the operational statistics (employment, salaries etc.) of such auxiliary units which are coded at the "three-digit"

level are included in the principal statistics of industries coded at the same level; those units coded at the "two-digit" level are included with the statistics for groups of industries.

Employees

As noted above, the number of working owners and partners are excluded from the number of employees, beginning with the revised 1961 statistics. This change brings the definition of "employees" in the Census of Manufactures in line with that of "employees" in the Bureau's monthly Employment Survey and with that of "paid workers" in the Bureau's Labour Force Survey. For purposes of historical comparisons, the number of working owners and partners should be added to total employees (beginning with the revised 1961 data) in order to correspond with the figure of "total employees" published in previous reports concerned with the Annual Census of Manufactures.

In addition to production and related workers engaged in manufacturing activities, total employees include administrative, office, sales and distribution workers as well as any production workers employed in non-manufacturing activities such as construction undertaken for the use of the establishment by its own employees (when these are treated as a separate work force) or logging (mostly in connection with sawmills or planing mills). Number of employees represents as closely as possible equivalent annual full-time employment. Adjustments are made when reported figures indicate the existence of part-time or seasonal employment.

Administrative and office employees include all executive and supervisory officials such as presidents, vice-presidents, controllers, secretaries, treasurers etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical etc. Sales and distribution workers include office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truck drivers and their helpers, etc. They exclude persons working on a commission basis who are not considered regular employees.

Production and related workers in manufacturing activities include, in addition to those engaged in processing and assembling, those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees in related activities such as maintenance, repair, janitorial and watchman services. Working foremen doing similar work to that of employees they supervise are also included. Production workers employed in non-manufacturing activities such as construction undertaken for the use of the establishment, logging

employees or outside piece-workers employed in certain industries are excluded from the number of production and related workers but are part of the total number of employees in those industries.

Production and related workers 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 twelve. This procedure is followed even though the plant did not operate in all months in order to derive equivalent annual full-time employment. The numbers are somewhat affected by turn over, in that employment is overstated when an employee changes employment within the same industry during a pay period. Other categories of workers are reported in the form of annual averages. Figures on employment and man-hours refer to the calendar year whether or not some establishments report other data on a financial year basis.

Man-hours of production and related workers in manufacturing activities 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.). 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.

Salaries and Wages

Salaries and Wages refer to gross earnings of the employees described above, **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 workers' earnings. Payments for overtime are included.

Wages refer to amounts paid to production and related workers engaged in manufacturing operations as defined above. Salaries refer to amounts paid to all other categories of employees including relatively small numbers of production workers engaged in construction and extractive operations or who are employed as outside piece-workers. Figures on salaries and wages refer to the calendar year whether or not some establishments reported other data on a financial year basis.

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.

Materials and Supplies

(a) Used in 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. The statistics represent only commodity items or physical goods (costs 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. Respondents are required to report materials and supplies **used not purchased**. 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) Purchases for resale as such. Figures represent the 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.

(c) 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. Value of construction and repair work done by outside contractors is 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 medical supplies, laboratory supplies etc.

Shipments

In general the figures represent revenue from all production, sales, services and related activities of reporting establishments. Non-operating revenues such as rent, interest and dividends and the sale of used fixed assets are excluded.

(a) 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 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. (See notes on "Establishment").

Such shipments are net of returned goods, and value figures at the establishment exclude discounts, returns, allowances, sales taxes and excise duties, returnable containers, and charges for outward transportation by common or contract carriers. Transportation or delivery expenses incurred by the reporting establishments' own carriers are not deducted.

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 form B.13 "Customs Canada, Export Entry" has been completed, are treated as shipments.

In four industries, viz. Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair, where work on principal products extends over a relatively long period, the value of production, rather than the value of shipments, is recorded. For these industries value of production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on units delivered in the year under review. Adjustments to the value of shipments are also made for firms in these industries and in some other industries which operate on the basis of progress payments. The latter are treated as sales and not as inventory, so that for firms which use a progress payments account, an adjustment to the value of shipments is made for the net change in this account during the year.

(b) Shipments of goods not of own manufacture

These figures represent the net selling value at the establishment (less discounts, returns, allowances, sales taxes and excise duties 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 goods on a rental basis value of shipments represents the book value of such goods. All sales of consignment goods from other countries are included.

(c) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs and alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishments' 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 establishments' own employees, such as revenue from goods produced for rental (the book value of such goods are included as part of factory shipments), servicing revenues, commissions on sales (when not included in value of sales), revenue from company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishments' 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 inventory

Values represent the book value of manufacturing inventory owned in Canada. The value of inventory held for which progress payments have been received is treated as shipments and is not included in inventory owned. 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. Inventory owned abroad has already been reported as shipments and is excluded.

(b) Inventory of goods purchased for re-sale

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by reporting establishments and held at the plants and at any warehouses or selling outlets which are treated as extensions of establishments. Inventory owned in transit in Canada or on consignment in Canada is included.

Because of changes in classification, the receipt of revised data, the inclusion of new establishments or the removal of old establishments which did not operate during the latest year, the opening inventory for the latest year does not necessarily coincide with the closing inventory of the preceding year.

Value Added

(a) By manufacturing activities

Figures are compiled by deducting the cost of materials and fuel and electricity consumed from the value of production (value of shipments adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By total activities

Figures consist of value added by manufacturing activities plus value added by non-manufacturing activities and is compiled by deducting the cost of goods purchased for re-sale and the cost of other materials and supplies used from the value of shipments of goods not of own manufacture plus other revenue, adjusted for changes in the value of inventories of goods purchased for re-sale.

"Value added" is sometimes referred to as 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 in 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.

Short Forms

Since 1949, in order to ease the reporting burden for smaller firms, a one-page short form has been used asking for only a limited amount of detail. For purposes of publication, missing data were estimated on the basis of appropriate ratios. Beginning with the 1959 census, the general limit for short forms was raised from \$50,000 (the limit used since 1949) to \$100,000 value of shipments and a new medium form was used. This form is a shortened version of the long form in that some of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000-\$500,000 value of shipments, but in the case of both the

short and medium forms there are lower cut-offs for a number of industries in which the smaller firms account for a larger share of total shipments.

Prior to 1961, the short form was limited to a question on the principal items of factory shipments. In the 1961 and 1962 censuses, in addition to the question on shipments of goods of own manufacture, general questions on employment and payroll and on total revenue were added on all short forms. The other elements of principal statistics, viz. value of materials, fuel and electricity and inventories, were estimated by using ratios based on the change in the value of shipments reported in 1961 and 1962. This was done to permit the complete compilation of basic industry statistics by industry and by geographic location. The proportions of the estimated data was generally less than 5 per cent of the total in each category of principal statistics.

Beginning with the 1963 census, general questions on total purchases of materials, fuel and electricity and on total inventory were added on the short forms. The two questions, however, were designed so that the data can be easily derived from respondents' regular accounting records. This will permit a complete tabulation of principal statistics without the necessity of estimating missing items and will result in increased accuracy for rural area statistics where small firms account for a relatively important part of industrial output.

The addition of extra questions on the short form in recent years has also permitted an increase in the cut-off limits for short forms in many industries. This has meant that many more firms are now receiving the short form instead of the long or medium form. It has also resulted in the withdrawal of the medium form in a number of industries, thus further simplifying collection and tabulation procedures.

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