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MANUFACTURERS OF MIXED FERTILIZERS 1961

The list of firms normally included in this report has been omitted from this issue, along with certain tables. See introductory text for details.

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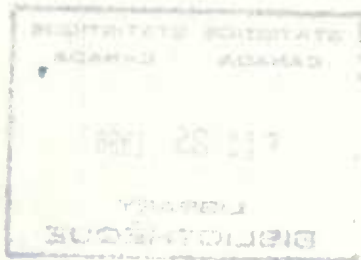
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SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.



EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1961 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and for major industry groups. Implementation of the new definition of the establishment in the 1961 Census has resulted in certain changes and necessitated some adjustments to the statistics for previous years in order to maintain comparability of the data. (See following note on "Establishment".)

Industry statistics given in these reports refer to number of establishments, employees, salaries and wages, cost of materials, supplies, fuel and electricity, gross value of shipments, inventories and value added by manufacturing. Details of materials used and products shipped are also given. Descriptions of the principal industry statistics, with special reference to 1961, are as follows:

Period Covered

Firms 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 the firms find it impossible to supply calendar year data from accounting records. However the data on employees, salaries and wages are requested on a calendar year basis in all cases.

Establishment

The reporting unit in the Census of Manufactures is the **establishment**. Beginning with the 1961 Census, the establishment is defined as follows:

The smallest unit which is a separate operating entity capable of reporting all the following:

- Materials and supplies used,
- Goods purchased for resale as such,
- Fuel and power consumed,
- Number of employees and their pay,
- Inventories,
- Shipments or sales.

The establishment is to be distinguished from smaller subdivisions or departments which do not have records which 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 operations which were classifiable to different industries. Beginning with 1961, separate reports for such operations will be required only in cases where accounting records can provide all the elements of principal statistics enumerated above. 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.

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing operations. Prior to 1961, the Census of Manufactures attempted to cover the manufacturing activities of all establishments, whether or not they were principally engaged in manufacturing operations. 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. Again adjustments to the industry statistics were made to reflect the removal of such reporting units for the period 1957-1960. These reporting units are now listed as establishments in other Bureau industry surveys, such as Wholesale Trade, Construction, etc. In order, however, to maintain complete coverage of certain commodity items produced mainly in manufacturing establishments, many non-manufacturing establishments are now surveyed for commodity shipments only and the latter are included in those tables of industry reports showing shipments of certain commodities "from all industries".

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 earlier.

Prior to 1961, the main emphasis in the Census of Manufactures was on manufacturing activity whereas, beginning with 1961, each establishment reports on the total operations carried out within its accounting boundaries (except income from investments such as rent, interest and dividends). However, data on different activities (manufacturing, selling, construction by own labour force etc.) are requested separately. The 1961 statistics in this report are confined to manufacturing activity in order to maintain comparability with previous years. In the 1962 reports it is planned to show both 1961 and 1962 data on the "total activity" basis in addition to the data on manufacturing operations.

Employees

Administrative and office employees include all executives and supervisory officials such as presidents, vice-presidents, secretaries, treasurers, etc., together with managers, professional and technical employees, superintendents and factory supervisors above the working foremen level, and clerical employees. Working owners and partners are also included in this category but will be shown separately in subsequent years.

Production and related workers include all other factory workmen whether paid on a monthly, weekly, hourly or piece-work basis. Working foremen doing work similar to that of the employees they supervise are included, as are maintenance, handling, warehousing and delivery staff. Employees on new construction work, in retail or wholesale operations, on outside piece work, etc. are not included.

Production workers are reported by months, 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. Figures on employment refer to the calendar year whether or not some establishments reported other data on a financial year basis.

Salaries and Wages

Salaries and wages refer to gross earnings of the employees described above, including salaries, wages, commissions, bonuses, the value of room and board where provided, deductions for income tax and social services such as sickness and unemployment insurance, pensions, etc., as well as any other allowances forming part of the employees' wages. Payments for overtime are included.

Salaries refer to amounts paid to administrative and office employees. Withdrawals by working owners or partners for normal living expenses for self and family are included with salaries, but will be shown separately in subsequent years. Wages refer to the amounts paid to production and related workers as defined above. Data on earnings refer to the calendar year whether or not some establishments reported other data on a financial year basis.

Cost of Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars and trucks), not to purchases unless the quantities are the same. Values refer to the laid-down cost at the establishment including freight, duty, etc.

Materials and Supplies Used

Figures represent quantities and laid-down cost values, at the establishment, of materials, supplies and components actually used during the year whether purchased from others or received as transfers from other plants of the reporting company. Amounts paid to other manufacturers for work done on materials owned by the reporting company are included. Returnable containers or any other items charged to capital account are not included. Fuels are not included. Goods bought from others or received as transfers from other plants or reporting companies for resale without further processing are not included. Maintenance and repair supplies not chargeable to capital account are included.

Factory Shipments

Factory shipments generally refer to 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 establishment for work done. All products and by-products shipped from the establishment are included whether for domestic use, export, or for government departments. Transfer shipments to sales outlets, distributing warehouses or to other manufacturing units of the reporting firm which are treated as separate establishments are included. Goods bought or received as transfers and resold without further processing are not included. Values are requested

on f.o.b. establishment basis, and do not include sales tax or excise duties. Values of containers not returnable are included. Amounts received in payment for work done on materials owned by others are included.

In a few industries such as shipbuilding, air craft, etc., where work on principal products extend over a relatively long period, the value of production is recorded rather than the value of shipments. For those industries 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 finished units delivered in the year under review.

Inventories

Values represent the book value of manufacturing inventory. Figures consist of inventory at the plant and at warehouses or selling outlets which are treated as extensions of the plants for the purpose of reporting shipments.

Value added by Manufacturing

Value added is compiled by deducting the cost of materials, 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). Value added is sometimes referred to as net production.¹

Standard Industrial Classification

The revised Standard Industrial Classification which was introduced with the 1960 Census of Manufactures provides for a breakdown of the universe into 140 industries arranged in 20 major groups compared with 135 industries in 17 major groups in the old classification which was used in the compilations for the years 1949 to 1959 inclusive. Full details 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. Reporting establishments are classified or allotted to specific industries on the basis of the value of principal products made or shipped.

Establishments engaged solely in repair work are not included in manufacturing industries (except in the case of furniture, shipbuilding, boat building, aircraft and railroad rolling stock industries) but establishments principally engaged in assembling parts into complete units are included.

¹ To arrive at the National Accounts concept of "gross domestic product at factor cost", it would be necessary to subtract also the cost of advertising, insurance and other business costs which are not collected in the annual Census of Manufactures. Value added figures for the primary industries, manufacturing and construction are published in D.B.S. publication 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 only for certain principal items of shipments. For purposes of publication, missing data were estimated on the basis of appropriate ratios. For the 1959 and 1960 censuses the general limit for short forms was raised from \$50,000 to \$100,000 value of shipments and a new intermediate 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 inter-

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

In the 1961 Census, in addition to the question on shipments of goods of own manufacture, 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, are generally estimated by using ratios based on the change in the value of shipments from year to year. This is to permit the complete compilation of basic industry statistics by industry and by geographic location. The proportion of the estimated data is generally less than 5 per cent of the total in each category of principal statistics.



MANUFACTURERS OF MIXED FERTILIZERS

1961

Data presented in this report under the heading of Manufacturers of Mixed Fertilizers 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 1961 industry statistics—see items "Standard Industrial Classification" and "Establishment" in the Explanatory Notes section of this report. For statistical purposes the industry titled Manufacturers of Mixed Fertilizers in the revised Standard Industrial Classification covers the operations of establishments primarily engaged in manufacturing superphosphate and mixed fertilizers. Establishments primarily engaged in manufacturing chemicals which in addition to their use as fertilizer materials also have other important industrial uses, e.g. ammonium nitrate, are classified in the Manufacturers of Industrial Chemicals industry.

The introduction of the new definition of establishment (reporting unit) in the 1961 Census of Manufactures has resulted in certain changes and necessitated some adjustments to the statistics. In the case of the industry under review such changes were minimal. Table 1B reflects the adjustments on account of the new concept changes, for the years 1957 to 1961.

As a result of increased work loads and staff shortages it has been necessary to suspend publication of certain tables normally contained in this report. It is planned to resume publication of these tables in the 1962 reports. The tables affected are the following: Directory of Firms—Imports—Exports—Capital and Repair Expenditures.

TABLE 1A. Principal Statistics of the Fertilizers Industry, Significant Years 1929 - 59

Basis: Standard Industrial Classification in use prior to 1960

Year	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Value of factory shipments ¹
	number		dollars				
1929	12	251	265,650	17,386	1,450,253	791,141	2,258,780
1933	20	667	776,647	322,849	2,796,726	1,166,476	4,286,051
1937	20	1,023	1,447,625	506,965	6,693,841	3,066,147	10,266,953
1939	27	1,211	1,819,612	706,003	8,140,498	4,318,663	13,165,164
1945	26	2,146	4,418,916	1,116,081	18,708,175	14,681,500	34,505,756
1946	29	2,805	5,929,796	3,232,099	22,865,328	23,895,016	49,992,443
1949	32	3,269	9,004,943	1,772,400	31,671,468	33,984,199	67,428,067
1955	39	2,935	11,542,380	2,641,870	41,396,928	45,895,045	92,498,839
1956	45	2,958	11,757,117	2,700,397	43,295,343	37,343,843	83,399,218
1957	44	3,011	12,899,267	3,151,337	47,134,450	35,459,400	83,807,556
1958	45	2,993	13,424,810	3,281,095	48,593,959	37,209,183	89,145,796
1959	45	3,001	13,804,715	3,355,005	50,470,120	40,732,905	96,278,304

¹ Value of production prior to 1952.

TABLE 1B. Principal Statistics, Manufacturers of Mixed Fertilizers, by Provinces, 1957-61

Basis: Revised Standard Industrial Classification and New Establishment Concept.

Year and province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Selling value of factory shipments
	number		dollars				
1957							
New Brunswick	3	122	389,650	74,566	2,978,133		3,862,744
Quebec	7	361	1,602,192	79,479	5,900,799		8,882,268
Ontario	22	484	1,819,699	135,549	15,158,785	1	22,803,644
Other provinces.....	7	108	283,951	26,686	2,856,713		3,668,445
Totals.....	39	1,075	4,095,492	316,280	26,894,430		39,217,101
1958							
New Brunswick	3	122	426,300	64,160	2,971,709	915,475	4,429,997
Quebec	7	375	1,685,363	82,090	6,021,282	3,605,783	9,792,630
Ontario	22	487	2,057,981	210,176	15,852,435	6,904,793	24,460,469
Other provinces.....	7	151	407,111	30,873	3,232,394	1,228,029	4,511,245
Totals.....	39	1,135	4,576,755	387,299	28,077,820	12,654,080	43,194,341
1959							
New Brunswick	3	120	413,857	53,295	2,829,249	1,399,058	4,252,004
Quebec	7	384	1,775,436	92,086	6,698,066	3,490,776	10,855,255
Ontario	23	573	2,509,634	266,837	18,079,023	7,794,403	25,160,229
Other provinces.....	7	121	382,038	30,644	3,155,358	1,184,370	4,210,891
Totals.....	40	1,198	5,080,965	442,862	30,761,696	13,868,607	44,478,379
1960							
New Brunswick	3	108	436,969	47,120	3,260,089	1,000,635	4,184,051
Quebec	7	370	1,998,481	88,206	7,523,797	3,279,945	11,240,381
Ontario	25	605	2,801,484	333,543	18,452,382	7,483,082	26,112,952
Other provinces.....	7	111	379,061	28,186	3,313,966	877,137	4,162,888
Totals.....	42	1,194	5,615,995	497,055	32,550,234	12,640,799	45,700,272
1961							
New Brunswick	3	115	456,486	50,162	3,678,960	1,036,480	4,858,573
Quebec	6	442	2,442,045	97,235	9,646,445	4,377,985	13,894,692
Ontario	27	719	3,304,211	540,692	22,862,043	7,789,622	30,744,588
Other provinces.....	7	102	399,701	31,122	3,460,166	1,222,176	4,763,551
Totals.....	43	1,378	6,602,443	719,211	39,647,614	14,426,263	54,261,404

¹ Because of lack of inventory data "Value added" figures on revised basis are not available for 1957.**TABLE 2. Inventories:¹ Manufacturers of Mixed Fertilizers, 1961**

Province	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
Opening:				
New Brunswick	114,599	116,883	46,519	278,001
Quebec	1,188,557	788,722	821,878	2,799,157
Ontario	2,819,015	4,143,866	1,098,535	8,061,416
Other provinces	436,795	681,897	351,550	1,470,242
Canada	4,558,966	5,731,368	2,318,482	12,608,816
Closing:				
New Brunswick	139,574	51,686	18,745	210,005
Quebec	1,711,692	756,954	1,080,619	3,549,265
Ontario	2,881,421	3,427,290	2,262,880	8,571,591
Other provinces.....	542,391	636,645	346,715	1,525,751
Canada	5,275,078	4,872,575	3,708,959	13,856,612

¹ (a) Book value of all manufacturing inventories owned and held at plant and plant warehouses.

(b) The opening inventory for 1961 differs from the closing inventory for 1960 because of the receipt of revised data, the inclusion of new establishments, the removal of figures for establishments which did not operate during 1961, changes in classification, and the implementation of the New Establishment Concept.

TABLE 3. Factory Shipments: Manufacturers of Mixed Fertilizers, 1960 and 1961

Product	1960		1961	
	Quantity	Selling value of factory shipments	Quantity	Selling value of factory shipments
	tons	\$	tons	\$
Mixed fertilizers	751,322	40,326,573	839,137	47,155,492
Superphosphate, milled and screened only	13,138	526,312	17,618	725,501
Ammonium sulphate, milled and screened only	355	20,811	441	30,495
Muriate of potash, milled and screened only	2,269	139,561	2,947	168,357
All other products (including superphosphates) .....	..	4,846,733	..	6,319,981
Totals .....	...	45,859,990	...	54,399,826
Less adjustment for value of sales taxes, excise duties and outward transportation charges which were not deducted from individual commodity items detailed above .....	...	...	...	138,422
Totals .....	...	45,859,990	...	54,261,404

Note: Data for 1960 presented in above table are based on the revised 1960 Standard Industrial Classification without revisions for the New Establishment Concept. While not exactly comparable with 1961 figures actual differences are minimal.

TABLE 4. Materials Used: Manufacturers of Mixed Fertilizers, 1960 and 1961

Material	1960		1961	
	Quantity	Cost at plant	Quantity	Cost at plant
	short tons	\$	short tons	\$
Ammonia, anhydrous	6,255	541,931	9,645	860,408
Ammonium nitrate	3,497	289,520	6,111	467,941
Ammonium phosphate	10,466	801,165	10,547	805,509
Ammonium sulphate (sulphate of ammonia)	30,091	1,159,138	38,551	1,475,090
Borax	143	13,808	262	27,419
Calcium cyanamide (cyanamid)	580	38,840	288	17,484
Limestone	17,598	81,251	17,524	73,341
Lime or land plaster	687	6,759	821	5,940
Magnesium oxide (all forms, including brucite, mag 70, etc.)	1,783	76,943	2,887	108,443
Magnesium sulphate	130	11,101	162	12,973
Nitrogen solutions	42,991	2,779,857	51,363	3,344,331
Phosphate rock	157,421	2,271,538	239,408	3,518,325
Potassium chloride (muriate of potash)	138,123	4,764,068	155,080	5,982,033
Potassium nitrate (nitrate of potash)	50	6,679	61	8,993
Potassium sulphate (sulphate of potash)	19,347	935,988	23,254	1,195,653
Potassium magnesium sulphate (sulphate of potash magnesia)	4,803	155,967	4,278	153,310
Sand	38,477	124,203	38,404	128,360
Sodium nitrate (nitrate of soda)	72	4,138	161	9,976
Sulphuric acid, 100%	101,821	2,042,825	126,512	2,628,578
Superphosphate:				
22% or less P ₂ O ₅	304,601	6,606,066	334,064	7,400,180
More than 22% P ₂ O ₅	70,846	4,015,399	75,827	4,321,105
Ammoniated	16,555	531,679	18,150	559,233
Urea	1,819	168,943	2,033	180,008
All other materials ¹ .....	..	2,618,383	..	2,858,392
Containers and shipping materials .....	..	2,504,045	..	3,504,589
Totals .....	...	32,550,234	...	39,647,614

¹ No detailed information on materials used was collected from small establishments. The estimated value of materials used by these establishments was \$175,000 in 1960 and \$200,000 in 1961 and these amounts are included in "All other materials".

Note: Data for 1960 presented in above table are based on the revised 1960 Standard Industrial Classification without revisions for the New Establishment Concept. While not exactly comparable with 1961 figures actual differences are minimal.

TABLE 5. Factory Shipments of Mixed Fertilizers, 1953 - 61 (from All Industries)

Year	Quantity	Selling value of factory shipments
	tons	\$
1953	694,600	32,751,000
1954	668,200	32,120,000
1955	685,700	33,112,000
1956	703,200	34,408,000
1957	723,100	37,026,000
1958	751,900	40,001,000
1959	757,000	41,498,000
1960	791,000	42,739,000
1961	871,000	49,344,000

Note: Figures in this table represent the total Canadian shipments of mixed fertilizers regardless of the industries in which produced.

TABLE 6. Total Sales¹ in Canada of Fertilizer Materials and Mixed Fertilizers, for the years Ended June 30, 1953 - 62

Year ended June 30	Fertilizer materials	Mixed fertilizers	Total sold in Canada
	tons (2,000 pounds)		
1953	179,600	640,203	819,803
1954	160,481	651,160	811,641
1955	139,301	651,473	790,774
1956	148,037	652,643	800,680
1957	156,497	651,754	808,251
1958	181,973	688,566	870,539
1959	218,661	689,553	908,214
1960	243,720	691,708	935,428
1961	297,730	779,682	1,077,412
1962	344,800	799,200	1,144,000

¹ Except for manufacturing purposes.

Note: A special survey of the fertilizer trade in Canada during the fertilizer year ended June 30, 1962 has been completed by the Dominion Bureau of Statistics and the results have been published in a special report, "Fertilizer Trade", copies of which are available on application to the Information Services Division of the Dominion Bureau of Statistics.

TABLE 7. Factory Shipments¹ and Imports of Ammonium Sulphate, 1953 - 61

Year	Factory shipments	Imports
	tons	
1953	186,540	21,254
1954	174,967	14,101
1955	311,371	7,029
1956	339,510	3,144
1957	318,634	3,288
1958	300,049	5,892
1959	307,121	5,941
1960	349,677	8,686
1961	278,527	9,940

¹ From all industries.

**TABLE 8. Principal Statistics classified according to Type of Ownership:
Manufacturers of Mixed Fertilizers, 1961**

Type	Estab- lish- ments	Em- ployees	Salaries and wages	Cost at plant of materials used	Selling value of factory shipments
	number		dollars		
Co-operatives	3	} 1,378	6,602,443	39,647,614	54,261,404
Incorporated companies	40				
Totals	43	1,378	6,602,443	39,647,614	54,261,404

**TABLE 9. Principal Statistics classified according to Selling Value of Factory Shipments:
Manufacturers of Mixed Fertilizers, 1961**

Establishments reporting a value of factory shipments	Estab- lish- ments	Em- ployees	Salaries and wages	Cost at plant of materials used	Selling value of factory shipments
	number		dollars		
Under \$200,000	5	31	117,534	276,190	485,579
\$ 200,000 to \$ 499,999	6	73	271,518	1,551,432	1,907,218
500,000 " 999,999	11	169	692,469	5,533,013	7,570,733
1,000,000 " 4,999,999	21	966	4,488,773	32,286,979	44,297,874
Head offices	—	139	1,032,149	—	—
Totals	43	1,378	6,602,443	39,647,614	54,261,404

TABLE 10. Employees and their Earnings: Manufacturers of Mixed Fertilizers, 1961

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
New Brunswick	14	6	95	—	115	107,334	349,152	456,486
Quebec	151	67	223	1	442	1,473,992	968,053	2,442,045
Ontario	172	56	489	2	719	1,254,254	2,049,957	3,304,211
Other provinces	22	6	74	—	102	139,573	260,128	399,701
Canada	359	135	881	3	1,378	2,975,153	3,627,290	6,602,443



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CHEMICAL AND CHEMICAL PRODUCTS INDUSTRIES

TABLE 11. Production Workers, by Months: Manufacturers of Mixed Fertilizers, 1961

Month	Male	Female
	number	
January	856	2
February	831	2
March	879	3
April	1,153	3
May	1,270	3
June	755	3
July	638	3
August	689	3
September	791	4
October	833	5
November	864	5
December	955	5
Averages	881	3

Note: The monthly detail of production workers was not collected from small establishments. Only annual averages were collected from these establishments.

TABLE 12. Fuel and Electricity Used: Manufacturers of Mixed Fertilizers, 1961

Kind	Quantity	Cost at plant	
		\$	
Bituminous coal - Canadian	ton	1,962	28,274
Imported	"	403	5,300
Anthracite coal	"	44	930
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	351,040	109,218
Fuel oil	"	1,211,389	131,657
Gas - Liquefied petroleum gases	"	18,712	7,292
Natural	M cu. ft.	125,369	113,625
Other fuel .....	..	..	150
Electricity purchased	kwh.	20,251,307	285,737
Steam .....	..	..	37,028
Total .....	...	...	719,211

Note: No detailed information on fuel and electricity used was collected from small establishments.