

Some Pitfalls in the 1851-1852 Census of Agriculture of Lower Canada

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I

The 1851-52 census of agriculture is a pivotal document to the interpretation of the economic history of Lower Canada. There is a long established view that Lower Canada suffered in the first half of the nineteenth century from the weakness and the backward nature of its agricultural sector.¹ Some improvement may have been experienced in the decade of the 1850s as access to markets in the United States was attained through railway connections and reduced tariffs.² Before 1850, though, the agricultural economy of Lower Canada has been almost universally held to be inefficient, unprosperous and unprogressive. The causes and consequences of that state of affairs constitute a principal theme in the social and economic history of Quebec.

The census taken early in the year 1852, coming as it did after a long period of depressed conditions and just before improvements began to show, fell at a critical juncture in the agricultural history of Lower Canada.³ It affords us a last look at the old Quebec of unprogressive habitant farmers, struggling to eke out a living on an already overcrowded land. Although data from this census have never really been systematically exploited in a thorough analysis of agricultural conditions in Lower Canada, they have frequently been used in support of contentions that crop yields were low,

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¹ See especially Maurice SÉGUIN, *La «Nation canadienne» et l'agriculture (1760-1850)* (Trois-Rivières: Éd. du Boréal Express, 1970); R. L. JONES, "French-Canadian Agriculture in the St. Lawrence Valley, 1815-1850", *Agricultural History*, 16 (1942): 137-48; and Fernand OUELLET, *Le Bas Canada, 1791-1840. Changements structureaux et crise* (Ottawa: Éditions de l'Université d'Ottawa, 1976). OUELLET also dealt extensively with the issue in his earlier *Histoire économique et sociale du Québec, 1760-1850* (Montréal: Fides, 1966).

² Progress in the period after 1851 is the theme of R. L. JONES, "The Agricultural Development of Lower Canada, 1850-1867", *Agricultural History*, 19 (1945): 212-24.

³ There had been several previous censuses of Lower Canada since the beginning of British rule; these both provide data on agriculture and are tainted to some degree with the problems discussed in this paper. The census of 1831 was perhaps the most exemplary and collected information that later censuses did not cover. It was only in 1851, however, that a comparable census was taken in both Lower Canada and Upper Canada. Although usually referred to as the 1851 census of Canada, the enumeration was actually made in late January and early February of 1852.

farms had been reduced in size through sub-division, and outputs were generally meagre. Séguin and Ouellet both recapitulate some aggregate measures of crop yields, farm size and performance.⁴ Hamelin and Roby launch their examination of the subsequent half-century of economic growth in Quebec with a picture of the state of affairs portrayed by the returns of the 1851-52 census.⁵ They pass on quickly from their general résumé of the state of agriculture in Lower Canada to a treatment of another main theme of Quebec agricultural history — the contrast between French and British farming. In the first table of their book, Hamelin and Roby compare a purportedly typical French parish (St. Denis in Richelieu) with a purportedly typical British township (Hinchinbrooke in Beauharnois). The comparison runs in terms of land areas and outputs of individual products per farm.⁶

One is left wondering, though, if Hamelin and Roby are referring to the same census returns as Ouellet. The figures they quote for crop yields and average farm sizes do not concur with those given earlier by Ouellet, though both authors claim the same source. They offer no explanation for the difference.⁷ Before we can understand the agricultural situation of Lower Canada, we have to understand thoroughly what is indicated by the available quantitative evidence.

II

The purpose of this note is to draw attention to two major problems with the data of the 1851-52 census that have been all too frequently unrecognized and nowhere directly dealt with.⁸ It is a sorry commentary on the state of historical research in Canada that in the almost 130 years since the 1851-52 census was taken these pitfalls have rarely been recognized and never resolved.

The first of these problems is that the published census tables for 1851-52 report land areas in an amalgam of acres and *arpents* and production in mixed units of bushels and *minots*. The French farmers in the seigneurial districts reported in *arpents* and *minots*; the English districts were reported in acres and bushels. It was presumably intended that an

⁴ SÉGUIN, "Nation Canadienne", for example, pp. 74, 112, 143, 178; and OUELLET, *Histoire économique*, p. 452.

⁵ Jean HAMELIN and Yves ROBY, *Histoire économique du Québec, 1851-1896* (Montréal: Fides, 1971), pp. 6-9.

⁶ *Ibid.*, Tableau I, p. 8.

⁷ OUELLET, *Histoire économique et sociale*, p. 452, gives outputs per farm of oats as 93.6 and of barley as 5.1 *minots*. HAMELIN and ROBY, *Histoire économique*, p. 6, give these yields as 114.7 and 11.5 *boisseaux* respectively.

⁸ The pitfalls dealt with here are not the only problems with the 1851-52 census of agriculture. There was a variable degree of underenumeration, spotty reporting that often shows up even in the published tables, and arithmetic errors in the tabulation, among others. A thorough evaluation of that census has yet to be made. The two problems dealt with here, though, are the most widespread and systematic. They are major difficulties about which something can be done.

appropriate adjustment would be made in the tabulation of the returns but that was never carried out.⁹ The second problem concerns the definition of a farm. The number of "occupiers" of land includes many occupants of garden plots and other small plots. Unless these small holdings are excluded, any agricultural indicators expressed on a per farm basis will be seriously distorted. In what follows each of these problems is taken up in turn, the nature of the difficulty examined and a resolution proposed. In Table 1 below the occupied and the cultivated acreages, consistently adjusted to acres, are shown for counties of Lower Canada. A more sensible count of the number of farms is also given and, in the two right-hand columns of this table, average farm sizes are reported for each county. These statistics should be less ambiguous than those available in the published census reports. The procedures followed in adjusting the census data are clearly described so that other researchers will be able to carry out their own adjustment of acreages and outputs for individual crops.¹⁰

III

The second of the two problems identified above is the easier with which to come to grips. A sizable but widely varying proportion of the census count of farms consists of small plots occupied by persons who were not farmers. If this is not recognized and an appropriate adjustment made, a serious distortion is introduced into any comparisons made on a "per farm" basis. The problem strikes directly at the heart of comparisons between French and British farming in Lower Canada since the frequency of small units tended to be greater in French districts.¹¹

Ouellet's "per farm" figures use the census number of "farms" without adjustment. Hamelin and Roby make an adjustment but fail to explain to their readers the justification for it. The outputs and stock of animals

⁹ In M. C. URQUHART and K. A. BUCKLEY, eds, *Historical Statistics of Canada* (Cambridge: Cambridge University Press; Toronto: Macmillan, 1965), p. 343, it is stated that "the data for Quebec for the 1861 census are expressed not in thousands of acres but rather in thousands of *arpents*, where 1 acre = 1.183 *arpents*." Nothing is said about 1851 where the same problem holds. Moreover, the statement is not precisely correct because 1861, like 1851, reported *arpents* only in the French seigneurial districts and added them without adjustment to the acres reported elsewhere in Lower Canada. In the table presenting series L7-14, to which the quoted text pertains, the confusion is compounded by a footnote indicating that the 1851 figure for Quebec is in *arpents* (again not precisely true) but with no such note for 1861. In relation to series L125-138 (pp. 346 and 362) on crop statistics no indication is given that the 1851 and 1861 figures include a mixture of bushels and *minots*.

¹⁰ The author has adjusted all 1851-52 census data to uniform units and organized them on the basis of the counties of the census of 1871. Interested readers can obtain copies of these tables directly from the author.

¹¹ HAMELIN and ROBY, *Histoire économique*, p. 8, compare the English district of Hinchinbrooke with the French district of St. Denis. Their French district is drawn from one of the few areas where small plots were not enumerated as farms. They give no indication that their selection was deliberate.

per farm which they quote, and which are higher than those cited by Ouellet, are derived by dividing census totals by the number of farms in excess of twenty acres. While their use of something other than the total number of occupiers of land implies a recognition of the problem identified here, their solution is not well-founded. It seems to have been based on a realization that the number of farms reported in the census was greater than the number of persons reporting their occupation as farmer. The latter comes closest to the number of occupiers of more than twenty acres, hence their choice of that number. This appears to be based on the notion that there ought to have been a one-to-one correspondence between farms and farmers. An examination of the manuscript census enumeration forms indicates many reasons why that would not be so. Farms were held and operated by persons who entered their occupations as merchants, millers, physicians and gentlemen. There are cases of partnerships where, quite reasonably, two farmers share a farm, while widows operating farms seem typically not to have listed their occupation as farmer. Occupation alone is an inadequate basis for ascertaining what constituted a farm.

The few farms falling into the ten to twenty acre class were almost all legitimate farms, unlike those of less than ten acres. The great majority of these were garden plots of one acre or less,¹² usually occupied by persons declaring an occupation other than farmer. The substantial retabulation of the manuscript census data that could firmly and more accurately establish the number of legitimate farms is well beyond the resources available for this brief note. Nor would it likely be worthwhile, for the simple expedient of counting only farms of ten or more acres (or *arpents*) is both reliable and a lot cheaper.

Some adjusted agricultural statistics for Lower Canada in 1852 are presented on a county basis in Table 1. The number of farms is taken to be the published number of holdings of ten *arpents* or more and the measures presented on a per farm basis calculated accordingly.

¹² This conclusion is based on the detailed examination of manuscript census forms for nine districts of Lower Canada. Four of these had been examined in connection with other issues. The sample was expanded by the addition of five parishes specifically to address the problem at hand. Typical results were along the following lines. In St. Urbain (Beauharnois) only ten of sixty-six "holdings" of less than ten *arpents* contained as many as five *arpents*. Of the sixty-six, eleven reported the occupation of *cultivateur* but only four of those held more than two *arpents*. In St. Placide (Deux Montagnes) the situation was even more dramatic. Five of the eighty-five small plot farmers held more than five *arpents* and only one of those listed his occupation as farmer. In St. Jean Baptiste (Rouville) twenty-three of the forty-eight holdings of less than ten *arpents* had no more than one. Of the remainder only seven had more than five *arpents*. Only three of these listed their occupation as farmer. One had grain crops, one raised mostly potatoes, and one may have been a small dairyman, with no crops and nine *arpents* of pasture. Typically the less than ten *arpent* holding comprised less than one *arpent* and holdings as small as one-sixteenth of an *arpent* were enumerated.

Table 1. — AGRICULTURAL AREAS (ADJUSTED TO CONSISTENT UNITS)
IN LOWER CANADA, BY COUNTY, 1851-1852.

| County | Number of Farms (10 Arpents or more) | Total Acres: | | Acres per Farm: | |
|---|---|----------------------|------------|-----------------|------------|
| | | Occupied | Cultivated | Occupied | Cultivated |
| Beauharnois | 4,407 | 330,571 | 153,943 | 75.0 | 34.9 |
| Bellechasse | 1,959 | 147,807 | 86,569 | 75.5 | 44.2 |
| Berthier | 3,585 | 294,872 | 143,453 | 82.3 | 40.0 |
| Bonaventure | 1,295 | 117,565 | 21,477 | 90.8 | 16.6 |
| Chambly | 1,284 | 118,278 | 91,650 | 92.1 | 71.4 |
| Champlain | 1,765 | 163,777 | 44,303 | 92.8 | 25.1 |
| Dorchester | 4,658 ¹ | 425,266 | 193,621 | 91.3 | 41.6 |
| Drummond | 2,616 | 202,868 | 57,946 | 77.5 | 22.2 |
| Gaspé | 1,053 | 77,917 | 11,104 | 74.0 | 10.5 |
| Huntington | 3,556 | 244,788 | 168,855 | 68.8 | 47.5 |
| Kamouraska | 1,841 | 174,820 | 79,270 | 95.0 | 43.1 |
| Leinster | 3,173 | 265,198 ² | 151,860 | 83.3 | 47.9 |
| L'Islet | 1,591 | 181,452 | 84,239 | 114.0 | 52.9 |
| Lotbinière | 2,089 | 191,075 | 66,410 | 91.5 | 31.8 |
| Mégantic | 2,055 | 194,121 | 53,628 | 94.5 | 26.1 |
| Missisquoi | 1,429 | 140,301 | 66,255 | 98.2 | 46.4 |
| Montmorency | 915 | 120,047 | 52,710 | 131.2 | 57.6 |
| Montreal | 1,287 | 104,644 | 84,853 | 81.3 | 65.9 |
| Nicolet | 2,202 | 165,654 | 68,732 | 15.2 | 31.2 |
| Ottawa | 2,681 | 317,607 | 68,907 | 118.5 | 25.7 |
| Portneuf | 2,357 ³ | 230,633 | 79,869 | 97.9 | 33.9 |
| Quebec | 1,249 | 110,327 | 44,174 | 88.3 | 35.4 |
| Richelieu | 2,291 | 169,667 | 90,624 | 74.1 | 39.6 |
| Rimouski | 3,356 | 323,142 | 93,512 | 96.3 | 27.9 |
| Rouville | 2,851 | 202,259 | 111,914 | 70.9 | 39.3 |
| Saguenay | 2,118 | 246,631 | 84,405 | 116.4 | 39.9 |
| St. Maurice | 2,331 | 213,211 | 90,568 | 91.5 | 38.9 |
| St. Hyacinthe | 3,054 | 201,586 | 110,665 | 66.0 | 36.2 |
| Shefford | 2,231 | 210,198 | 66,757 | 94.2 | 29.9 |
| Sherbrooke | 2,230 | 232,436 | 88,876 | 104.2 | 39.9 |
| Stanstead | 1,784 | 230,607 | 98,326 | 129.3 | 55.1 |
| Terrebonne | 2,513 ⁴ | 209,293 | 103,887 | 83.3 | 41.4 |
| Two Mountains | 2,749 | 269,183 | 121,666 | 97.9 | 44.3 |
| Vaudreuil | 1,922 | 129,877 | 82,358 | 68.0 | 42.9 |
| Verchères | 1,300 | 111,990 | 84,825 | 86.1 | 65.3 |
| Yamaska | 1,574 | 117,583 | 51,128 | 74.7 | 32.5 |
| Lower Canada, Total | 81,351 ⁵ | 7,187,251 | 3,153,339 | 88.3 | 38.8 |
| Published Census Figure (Mixed Units) | 95,813 (81,336) | 8,113,408 | 3,605,167 | 84.7 | 37.6 |

¹ Published census includes a small addition error in the number of farms in the parish of Ste. Claire.

² Published census has an error of 10,000 in land occupied in the parish of St. Roch.

³ Published census has addition errors in numbers of farms shown for Deschambault and Pointe aux Trembles.

⁴ Published census includes several errors in the count of farms in Terrebonne that are partly but not wholly offsetting.

⁵ Several changes have been made to the published count of farms to correct errors of addition.

The average size of farm (88.3 acres occupied) turns out to be a little larger than that obtained by a direct calculation from published census aggregates (84.7). Curiously, Hamelin and Roby quote the 84.7 acre (*arpent*) farm size before shifting to measures based on farms of twenty acres or more. Had they consistently divided total farm area by the number of holdings over twenty acres, adjusting the numerator for the acreage in the small size classes, they would have turned up an average farm area of about one hundred acres, which if properly interpreted as being mainly in *arpents* would be close to the eighty-eight acre average given above.

Had the census takers in 1851 been really consistent in their procedures, the number of small plots of less than ten *arpents* would have been a useful indicator of villages, with their concentrations of labourers, merchants and craftsmen. Unfortunately, enumerators appear to have been given varying instructions. In some counties small, non-farm units were not enumerated;¹³ more commonly small plots were scrupulously recorded down to a quarter of an *arpent* or less. Over the extensive part of Lower Canada where that was the case the frequency of small plots might give some insight into village development. To study farms, however, one is best to stick to holdings of ten acres or more.

IV

The problem of units of measurement is more serious and cannot be resolved so easily. The issue is complicated by linguistic problems as well. French farmers in English survey districts may have used the term *arpents* to describe land areas that were actually in acres. The census forms read acres in English and *arpents* in French but there was no necessary relationship between the use of the form in one or the other language and the units in which a district was actually surveyed.¹⁴

The broad division of the province is clear enough: the predominantly French seigneurial areas were in *arpents* and the townships laid out after British rule were in acres. It is the precise borderlines that are in doubt. A scattering of back townships in the predominantly seigneurial counties was in acres and some largely English districts such as the townships of Russell and St. Armand were in *arpents*. The most tenable hypothesis is that, regardless of what respondents called their land areas, the actual units were those of the original surveys. On that basis, an adjustment to consistently measured units would require a close examination of Lower Canada, district by district. We can only regret that a century of scholarship has not provided us with that.

¹³ The county of Richelieu is a good example.

¹⁴ In the parish of St. Bernard Lacolle, about half English and half French, the enumerator seems to have used English and French forms at random. There is a mixture of farmers of both languages on each page.

The census of 1871 did, however, make an adjustment to consistently measured units. Moreover, that was done under the careful and knowledgeable guidance of J. C. Taché. His clerks, as close to the time as they were, should have been in as good a position as anyone to make the correct adjustment.¹⁵ We are able to compare the summary totals on the manuscript records of the 1871 census with the figures that were published to determine which districts were adjusted and which were not. The figures of Table 1 have been prepared on that basis.

Table 1 shows occupied and cultivated land areas by county following the rule of adjusting all parishes and townships for which the census clerks in 1871 made such an adjustment. A guide to the units of measurement used in the 1851-52 census in each county is added to this note as an Appendix. As is noted there, in a few instances one might be inclined to disagree with the 1871 census clerks but such cases are infrequent. Furthermore, the differences are, in the nature of the case, quantitatively unimportant since they almost invariably involve sparsely settled, frontier districts. For the present, as a consistent and fairly objective rule, the 1871 census has been strictly followed. Future research may settle one way or the other the state of some of the questionable districts.

What the adjusted figures of Table 1 show is that the published 1851-52 census areas would be more reliably, but still not accurately, referred to as *arpents* since seventy-four percent of the occupied farm land was originally reported in the French units. In consistently measured acres, the land in farms in Lower Canada amounted to 7,187,251 rather than the figure of 8,113,408 (mainly *arpents*) reported in the published census and so frequently cited. At this high level of aggregation the difference of 11½ percent may not be all that great, but it is just as well to be clear about what units one is using. For individual counties or parishes the adjustment is of greater importance. The difference is also greater for particular categories of land. If the published census figures are interpreted as acres they would imply an overstatement of the area of cultivated land by about half a million acres. Of course the error would be much less had the published census figure been interpreted as *arpents* but then it would still involve an understatement of three percent. In future, researchers may be more careful to adjust land area figures to the units they wish to use.

V

The importance of appropriately adjusting the 1851-52 census data becomes more evident when one combines the two points raised in this note to look at average farm size.¹⁶ The size of farms in Lower Canada has

¹⁵ The same point could be made about the 1861 census where, again, an intended adjustment to put the data into comparable units was never made. It would be a relatively straightforward matter to adjust the 1861 data on a parish by parish and township by township basis along the lines pursued in this paper.

¹⁶ As do HAMELIN and ROBY, *Histoire économique*, p. 6.

often been referred to in the interpretation of the agricultural situation in that province. By 1852 the subdivision of farms upon inheritance is claimed to have reduced the size of the average holding. The original concessions in the seigneurial areas appear to have averaged 112 *arpents* or 94.7 acres. The usual procedure of dividing the reported area occupied by the number of occupiers results in an 1851-52 average farm of 84.7 *arpents*. That figure is widely quoted and it indeed suggests a considerable reduction in farm size. A farm of 84.7 *arpents* amounts to only 71.6 acres in area. The adjusted occupied acreage per farm of more than ten acres, that is per actual farm, averages 88.3. This is not the place to argue whether that is a small average size, or whether it represents a decline over time. It certainly conveys a different impression from an average of 71.6 acres.

Yields per acre are also affected by the adjustment. Crop outputs were reported in *minots* in the French districts and in bushels in the English. If the published average yield of wheat (7.5) for Lower Canada as a whole is read as bushels per acre,¹⁷ the situation looks rather grim. One *minot* per *arpent*, however, equals 1.32 bushels per acre and an average yield of almost ten bushels per acre. While far from outstanding, this would not put Lower Canada much out of line with the mid-nineteenth century experience of the settled parts of eastern North America.

One cannot be as definite about adjusting output data to consistent units as was the case with land areas. Farms were surveyed under one system or the other. French farmers may have sold grain in bushels in some areas, and we know that English newspaper reports of the Montreal market quoted in *arpents*. We are unlikely ever to know precisely which units of output prevailed in every district. For the present, the best that we can do is to assume that French or English units were used according to whether land was measured in *arpents* or acres.¹⁸ This might at least capture the main distinction between French and English districts, but it should be recognized that for some specific districts the adjustment may not be appropriate.

¹⁷ This was the procedure followed by the clerks tabulating the 1871 census.

¹⁸ Would French farmers, moving into the Bois Francs in Drummond or Mégantic, into the northern fringe townships in Joliette or Terrebonne, or even into the Eastern Townships themselves, have given up the *minot* as a measure of grain production? One would expect the use of *minots* to relate more to linguistic make-up than to original land survey. In townships with French language but English land survey, such as Morin or Abercrombie to the north of the St. Lawrence, or Aston, Bulstrode or Upton to the south, it was probably the case that output was measured in *minots* rather than bushels. On the other hand a predominance of English-speaking inhabitants would be no guarantee that outputs would have been reported in bushels. Predominantly English settlements in the seigneurial region, such as St. Bernard Lacolle in Huntington county reported in *minots*.

Table 2. — AGRICULTURAL PRODUCTION (ADJUSTED TO CONSISTENT UNITS)
IN LOWER CANADA, BY COUNTY, 1851-1852.

| <i>County</i> | <i>Acres in Wheat</i> | <i>Bushels Produced</i> | <i>Yield per Acre</i> | <i>Acres in Oats</i> | <i>Bushels Produced</i> | <i>Yield per Acre</i> |
|---|-------------------------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|-------------------------------|
| Beauharnois | 20,061 | 211,109 | 10.5 | 18,744 | 384,519 | 20.5 |
| Bellechasse | 4,892 | 45,655 | 9.3 | 19,007 | 319,983 | 16.8 |
| Berthier | 12,948 | 114,459 | 8.8 | 38,152 | 771,312 | 20.2 |
| Bonaventure | 1,885 | 24,026 | 12.7 | 3,933 | 103,271 | 26.3 |
| Chambly | 12,533 | 127,680 | 10.2 | 13,101 | 270,030 | 20.6 |
| Champlain | 3,356 | 42,087 | 12.5 | 10,094 | 222,382 | 22.0 |
| Dorchester | 6,747 | 60,323 | 8.9 | 37,525 | 647,040 | 17.2 |
| Drummond | 7,246 | 66,099 | 9.1 | 7,766 | 141,853 | 18.3 |
| Gaspé | 542 | 3,785 | 7.0 | 752 | 11,033 | 14.7 |
| Huntington | 33,994 | 267,097 | 7.9 | 28,454 | 566,265 | 19.9 |
| Kamouraska | 10,440 | 96,028 | 9.2 | 8,905 | 21,731 | 24.4 |
| Leinster | 18,107 | 181,045 | 10.0 | 29,957 | 586,981 | 19.6 |
| L'Islet | 13,126 | 75,198 | 5.7 | 11,475 | 225,630 | 19.7 |
| Lotbinière | 5,299 | 49,682 | 9.4 | 13,215 | 247,736 | 18.7 |
| Mégantic | 1,971 | 22,299 | 11.3 | 4,877 | 93,127 | 19.1 |
| Missisquoi | 2,686 | 36,555 | 13.6 | 3,755 ¹ | 117,881 | 31.4 |
| Montmorency | 3,429 | 35,872 | 10.5 | 14,171 | 162,835 | 11.5 |
| Montreal | 16,341 | 134,905 | 8.3 | 13,464 | 275,566 | 20.5 |
| Nicolet | 8,689 | 90,258 | 9.9 | 14,363 | 295,388 | 20.6 |
| Ottawa | 5,675 | 54,573 | 9.6 | 13,879 | 217,754 | 15.7 |
| Portneuf | 4,626 | 45,762 | 9.9 | 17,429 | 318,225 | 18.3 |
| Quebec | 1,227 | 16,641 | 13.6 | 8,291 | 176,764 | 21.3 |
| Richelieu | 15,321 | 138,361 | 9.0 | 15,888 | 215,184 | 13.5 |
| Rimouski | 10,223 | 86,862 | 8.5 | 5,210 | 67,818 | 13.0 |
| Rouville | 23,797 | 159,709 | 6.7 | 15,257 | 291,545 | 19.1 |
| Saguenay | 10,980 | 77,591 | 7.1 | 5,676 | 78,265 | 13.8 |
| St. Maurice | 2,489 | 31,058 | 12.5 | 9,628 | 224,784 | 23.3 |
| St. Hyacinthe | 21,416 | 185,765 | 8.7 | 19,124 | 257,795 | 13.5 |
| Shefford | 3,348 | 30,209 | 9.0 | 4,366 | 86,173 | 19.7 |
| Sherbrooke | 4,726 | 53,625 | 11.3 | 6,986 | 182,435 | 26.1 |
| Stanstead | 4,851 | 62,882 | 13.0 | 5,705 | 167,256 | 29.3 |
| Terrebonne | 11,174 | 83,473 | 7.5 | 20,334 | 398,476 | 19.6 |
| Two Mountains | 15,199 | 173,265 | 11.4 | 21,792 | 392,083 | 18.0 |
| Vaudreuil | 13,403 | 151,392 | 11.3 | 12,535 | 275,412 | 22.0 |
| Verchères | 14,436 | 144,626 | 10.0 | 13,467 | 264,862 | 19.7 |
| Yamaska | 8,116 | 82,518 | 10.2 | 9,396 | 173,080 | 18.4 |
| Lower Canada, Total | 355,299 | 3,262,474 | 9.2 | 496,673 | 9,252,474 | 18.6 |
| Published Census Figure ² | 410,043 | 3,073,943 | 7.5 | 591,521 | 8,977,380 | 15.2 |

¹ Oats acreage in the Township of Sutton, shown in the published census as 3, should be 663.² Mixed units.

The yields given in Table 2 represent a tentative resolution of the problem. While they reveal areas of decidedly low productivity, they present on the whole a somewhat more optimistic picture of agriculture in Lower Canada than has usually been painted. Further work of a systematically quantitative nature on the agriculture of Lower Canada will

help to clarify the validity of the adjustments underlying these figures. Alternative approaches to the problem merit experimentation.¹⁹ In the meantime the data of Table 2 are offered as an improvement on the pre-existing situation.

The main point of this note has been to argue that we can be more careful about the use of data from the 1851-52 census than we have been in the past. There has been far too little recognition of some important pitfalls in those data. The adjusted statistics reported here offer at least a first step towards a more precise understanding of the agricultural situation of Lower Canada.

Appendix. — UNITS OF LAND AREA, LOWER CANADA, 1851-1852.

| <i>County</i> | <i>Parish or Township</i> | <i>Units</i> |
|---------------|--|--------------|
| Beauharnois | St. Anicet | acres |
| | St. Regis | acres |
| | Elgin | acres |
| | Beauharnois Village | arpents |
| | Dundee | acres |
| | Huntingdon Village | acres |
| | Hinchinbrooke | acres |
| | St. Urbain | arpents |
| | Godmanchester | acres |
| | St. Timothée | arpents |
| | St. Clément | arpents |
| | Hemmingford | acres |
| | St. Louis de Gonzague | arpents |
| | St. Jean Chrysostôme | arpents |
| | Russell | arpents |
| | St. Malachy | arpents |
| Ste. Martine | arpents | |
| Bellechasse | All parishes | arpents |
| | except Buckland, Standon and Ware ¹ | acres |
| Berthier | All parishes | arpents |
| | except Kildare, St. Alphonse and Daillebout | acres |
| Bonaventure | All districts ² | arpents |
| Chambly | All parishes | arpents |
| Champlain | All parishes | arpents |
| Dorchester | St. Joseph, Pointe lévy | arpents |
| | Notre Dame de Lévy | arpents |

¹⁹ One alternative might be to follow the handling of other units of output measurement that varied between French and English areas. Hay, for example, was commonly measured in "bundles" of sixteen pounds each in the French districts but in tons of 140 bundles each in the English districts. Cured pork and beef were often reported in *quintaux* in French districts but in barrels in English. In both of the foregoing cases an appropriate adjustment was usually, although not invariably, made in the published census. It might be a reasonable hypothesis that in districts where hay was measured in traditional French units, grain would be measured in *minots*, but one cannot be entirely confident. French townships in Drummond and Mégantic uniformly reported by production in tons. That was also the case with French parishes in Beauharnois. What is more puzzling is that the entire county of l'Islet reported in tons as did also the counties of Gaspé and Bonaventure.

| <i>County</i> | <i>Parish or Township</i> | <i>Units</i> |
|---------------|--|-------------------------|
| | St. Jean Chrysostôme | <i>arpents</i> |
| | St. Nicolas | <i>arpents</i> |
| | St. Henri | <i>arpents</i> |
| | St. Anselme | <i>arpents</i> |
| | St. Isidore | <i>arpents</i> |
| | St. Lambert | <i>arpents</i> |
| | Ste. Claire | <i>arpents</i> |
| | Ste. Marguerite | <i>arpents</i> |
| | St. Bernard | <i>arpents</i> |
| | St. Elzéar | <i>arpents</i> |
| | Ste. Marie | <i>arpents</i> |
| | St. Joseph | <i>arpents</i> |
| | St. Frederic | acres |
| | St. Francis | acres |
| | St. George | acres |
| | Frampton | acres |
| | Cranbourne | acres |
| | Jersey, Linière, etc. | acres |
| Drummond | All townships | acres |
| Gaspé | All districts | <i>arpents</i> |
| Huntington | All districts | <i>arpents</i> |
| Kamouraska | All parishes ³ | <i>arpents</i> |
| Leinster | St. Sulpice | <i>arpents</i> |
| | Repentigny | <i>arpents</i> |
| | Lachenaie | <i>arpents</i> |
| | Mascouche | <i>arpents</i> |
| | St. Lin | <i>arpents</i> |
| | St. Esprit | <i>arpents</i> |
| | L'Assomption | <i>arpents</i> |
| | St. Jacques | <i>arpents</i> |
| | St. Alexis | <i>arpents</i> |
| | St. Roch | <i>arpents</i> |
| | Kilkenny | acres |
| | Ste. Julienne | acres |
| | St. Patrick | acres |
| | Chertsey | acres |
| | Wexford | acres |
| L'Islet | All parishes except Ashford and Montmini | <i>arpents</i> acres |
| Lotbinière | All parishes except Somerset | <i>arpents</i> acres |
| Mégantic | All townships | acres |
| Missisquoi | St. Armand West | <i>arpents</i> |
| | St. Armand East | <i>arpents</i> |
| | Phillipsburg | acres |
| | Sutton | acres |
| | Stanbridge | acres |
| | Dunham | acres |
| Montmorency | All parishes | <i>arpents</i> |
| Montreal | All parishes | <i>arpents</i> |
| Nicolet | All parishes | <i>arpents</i> |
| | except St. Célestin ⁴ and township of Blandford | acres |
| Ottawa | All districts except Petite Nation | acres <i>arpents</i> |
| Portneuf | All parishes ⁵ | <i>arpents</i> |
| Quebec | All parishes | <i>arpents</i> |
| Richelieu | All parishes | <i>arpents</i> |
| Rimouski | St. George Kacouna | <i>arpents</i> |

| <i>County</i> | <i>Parish or Township</i> | <i>Units</i> |
|---------------|---|----------------|
| | Isle Verte | <i>arpents</i> |
| | Ste. Flavie and St. Joseph | <i>arpents</i> |
| | Fraserville | <i>arpents</i> |
| | Matane | <i>acres</i> |
| | St. Simon | <i>arpents</i> |
| | St. Fabien | <i>arpents</i> |
| | St. Eloi | <i>arpents</i> |
| | St. Germain | <i>arpents</i> |
| | Viger | <i>acres</i> |
| | Metis | <i>arpents</i> |
| | Ste. Cecile du Bic | <i>arpents</i> |
| | Whitworth | <i>acres</i> |
| | McNider | <i>acres</i> |
| | Ste. Luce and Neigette | <i>arpents</i> |
| | St. Arsène | <i>arpents</i> |
| | Rivière du Loup | <i>arpents</i> |
| | Chemin du Lac | <i>acres</i> |
| | Trois Pistoles | <i>arpents</i> |
| Rouville | All parishes | <i>arpents</i> |
| Saguenay | Baie St. Paul | <i>arpents</i> |
| | St. Urbain | <i>arpents</i> |
| | Petite Rivière | <i>arpents</i> |
| | Isle aux Coudres | <i>arpents</i> |
| | Éboulements | <i>arpents</i> |
| | St. Iréné | <i>arpents</i> |
| | Ste. Agnès | <i>arpents</i> |
| | Malbaie | <i>arpents</i> |
| | St. Fidèle | <i>arpents</i> |
| | Callière | <i>arpents</i> |
| | All remaining districts (later the counties of Chicoutimi and Saguenay) | <i>acres</i> |
| St. Maurice | All parishes ⁶ | <i>arpents</i> |
| | except township of Hunterstown | <i>acres</i> |
| St. Hyacinthe | All parishes | <i>arpents</i> |
| Shefford | All townships | <i>acres</i> |
| Sherbrooke | All townships | <i>acres</i> |
| Stanstead | All townships | <i>acres</i> |
| Terrebonne | All parishes | <i>arpents</i> |
| | except the townships of Morin and Abercrombie | <i>acres</i> |
| Two Mountains | St. Benoit | <i>arpents</i> |
| | St. Placide | <i>arpents</i> |
| | Ste. Scholastique | <i>arpents</i> |
| | St. Hermas | <i>arpents</i> |
| | St. Colomban | <i>arpents</i> |
| | Mission du Lac | <i>arpents</i> |
| | St. Raphaël | <i>arpents</i> |
| | St. Eustache | <i>arpents</i> |
| | St. Augustin | <i>arpents</i> |
| | St. André | <i>arpents</i> |
| | Lachute | <i>arpents</i> |
| | Chatham | <i>acres</i> |
| | Wentworth | <i>acres</i> |
| | Grenville | <i>acres</i> |
| | Harrington | <i>acres</i> |
| | Gore | <i>acres</i> |
| Vaudreuil | All parishes ⁷ | <i>arpents</i> |
| Verchères | All parishes | <i>arpents</i> |
| Yamaska | All parishes | <i>arpents</i> |

¹ One might doubt the treatment of the township of Armagh as having been reported in *arpents* but the census clerks in 1871 adjusted its area downward by 15.6 percent before publication.

² Some of these districts were surveyed after the beginning of British rule; regardless, all districts of Bonaventure and Gaspé were treated in the census of 1871 as having reported in *arpents*.

³ The township of Ixworth was surely surveyed in acres but the 1871 census adjusted it as though reporting had been in *arpents*.

⁴ One wonders about the 1871 census treatment of St. Célestin as reporting in acres. It lies closer to the St. Lawrence than two other parishes that were treated as reporting in *arpents*.

⁵ An adjustment was made in 1871 in the township of Alton as though it reported in *arpents*. For most purposes in 1851-52 it is combined with Deschambault.

⁶ In 1871 Shewenagan was considered to have reported in *arpents* even if that seems doubtful.

⁷ The township of Newton was presumably surveyed in acres. By 1871 it had been absorbed into another parish. Fortunately it contained only fourteen farms in 1851.