

## Examining Farmland Loss in Ontario

**Adèle Labbé (Ecologist), Beacon Environmental; B. James Deaton (Assistant Professor), Alfons Weersink (Professor) and Glenn Fox (Professor), University of Guelph**

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### 1.0 Objective and Background

The issue of farmland loss in Ontario is non-trivial. Ontario is home to 52% of Canada's class 1 agricultural land<sup>1</sup> (Statistics Canada 2000). Agriculture and the agri-food sector are, together, the second largest sector in Ontario's economy (Ontario Election 2003).

The objective of this policy brief is to illustrate the effect of analytical criteria (spatial and temporal) on public perception of farmland loss in Ontario. Depending on the criteria used to evaluate land loss, different conclusions on the importance of land loss can be drawn from the results. The issue of the importance of farmland loss in Ontario is discussed.

### 1.1 The Ontario Greenbelt Plan

In February 2005, Ontario's Greenbelt legislation set forth a set of rules aiming to protect the provincial agricultural land base and valuable ecological features. A stated objective of the Greenbelt legislation is to preserve Ontario's agricultural land.

The goal of the Ontario Greenbelt Plan is to enhance the quality of urban and rural communities by protecting viable agricultural land and preserving natural heritage features. Together with the Places to Grow Act, the visions of the Greenbelt Plan are to protect the land from urban sprawl and to provide the proper tools for healthy provincial planning. The Places to Grow Act was passed in November of 2005 and consists of a provincial growth plan with goals such as where to grow and at what density in order to accommodate Ontario's increasing population.

The Greenbelt legislation added 4,047 km<sup>2</sup> to land that has been preserved through the Oak Ridges Moraine Conservation Plan (ORMCP) and the Niagara Escarpment Plan (NEP). Covering a total of 7,284 km<sup>2</sup>, the greenbelt envelops the Greater Golden Horseshoe, one of the fastest growing metropolitan regions in North America. The Greenbelt Plan builds upon the existing Niagara Escarpment Plan and Oak Ridges Moraine Conservation Plan designating the corridors

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<sup>1</sup> Class 1 agricultural land is designated by the Canadian Land Inventory and includes land that is not hampered by severe constraints for crop production, is of the highest quality and is found in the best climatic regions.

of land linking these two areas as the Protected Countryside, which is the land it mainly governs. Presently, Ontario continues to add agricultural land to the protected greenbelt.

## 2.0 Public Support for Farmland Preservation

Four factors that motivate public support for farmland preservation include food security, urban planning, environmental protection and local economic benefits of agriculture. Understanding the relative importance of these motivations is significant when setting the standards for implementing a farmland preservation program.

For example, preserving class 1 agricultural land may be the most important criteria for a farmland preservation program, motivated primarily by a concern about Ontario's capacity to sustain high levels of agricultural productivity. Alternatively, a more targeted preservation program may be needed if the public wants to preserve a specific area of regional importance (Deaton *et. al*, 2003).

Public motivation for farmland preservation is influenced, in part, by perceptions of farmland loss, agricultural productivity, urban growth, environmental quality, and farmer well being. For this reason, statistics of farmland loss frequently accompany arguments for farmland preservation. However, the use of statistics with respect to farmland loss can be highly selective. For example, a recent publication stated that over the past half century, farmland in central Ontario declined by 49% and in southern Ontario it was reduced by 13% (Centre for Land and Water Stewardship 2004). The above statistic is highly selective in that it is based on both a spatial restriction (i.e. central Ontario) and a temporal restriction (i.e. past half century).

## 3.0 Characterizing Farmland Loss in Ontario

Analysis of data from the Census of Agriculture illuminated three key points pertaining to farmland loss in Ontario: (1) trends in farmland loss depend on the point of time reference chosen by the analyst; (2) the total number of census farms in Ontario is decreasing but the average land area of those farms is increasing; and (3) the difference between absolute levels of urban area and farmland area in Ontario help explain why percentage increases in urban area will be higher than percentage decreases in farmland.

### 3.1 Reference Period

Total farm area and census farm numbers<sup>2</sup> in Ontario over an eighty-year period are presented in Figure 1. Both total farm area and census farm numbers display declining trends but the degree of the decline varies depending on the timeline chosen to analyze the data. When evaluating total farm area in Ontario from 1921 to 2001 the decline is 40%. However, from 1981 to 2001, the decline in farm area is 9.5%, and from 1991 to 2001, farm area actually increases by 0.27%<sup>3</sup>.

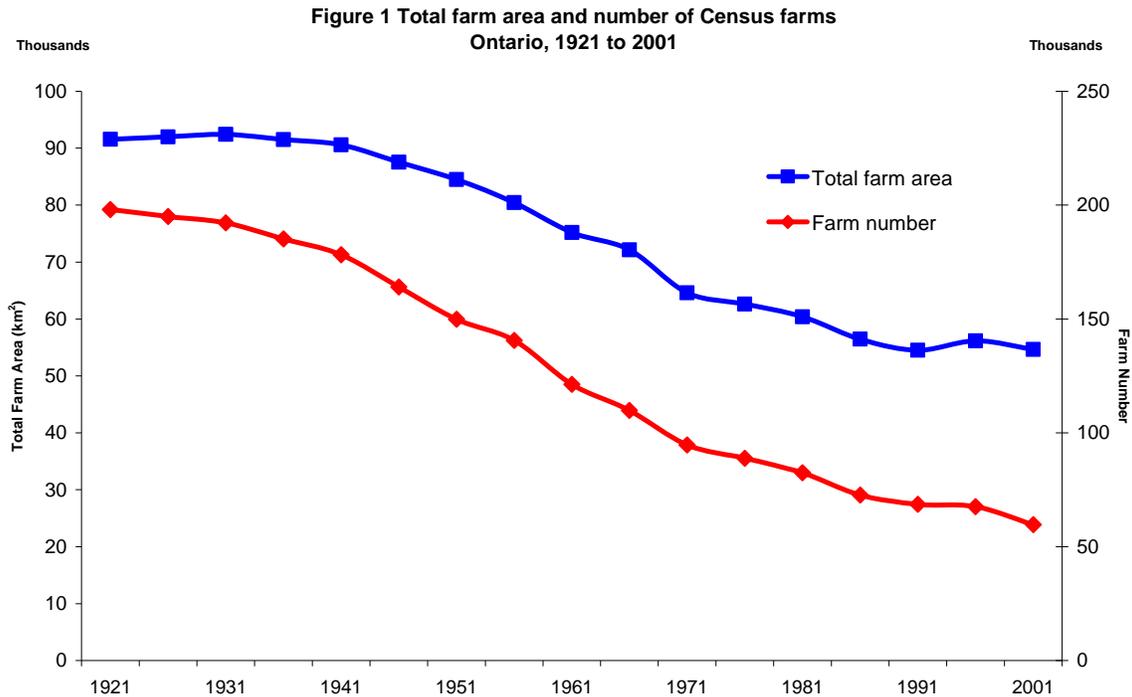
<sup>2</sup> Total farm area is the total area of land found on a census farm. A census farm is defined as an agricultural operation that produces at least one of the following products intended for sale: crops (hay, field crops, tree fruits or nuts, berries or grapes, vegetables, seed); livestock (cattle, pigs, sheep, horses, game animals, other livestock); poultry (hens, chickens, turkeys, chicks, game birds, other poultry); animal products (milk or cream, eggs, wool, furs, meat); or other agricultural products (Christmas trees, greenhouse or nursery products, mushrooms, sod, honey, maple syrup products).

<sup>3</sup> Calculated using data from the Census of Agriculture (Figure 1), the difference in total farm area between 1991 (54, 513 km<sup>2</sup>) and 2001(54, 662 km<sup>2</sup>) divided by the total farm area of 1991.

These figures illuminate the extent to which data on farmland loss are influenced by a chosen reference point.

A similar but less surprising result occurs with changes in farm numbers. From 1921 to 2001, Ontario farm numbers fell by about 70%. Between 1981 and 2001 there was a 28% decline and from 1991 to 2001 the number of farms declined by 13%.

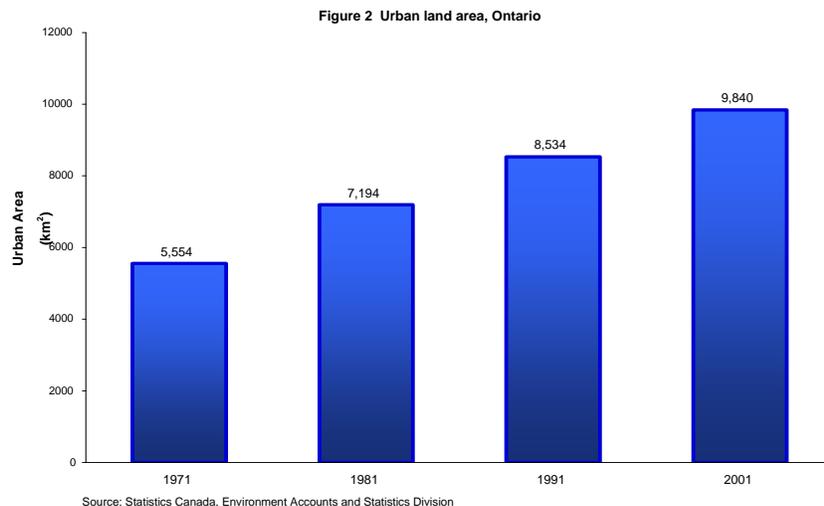
Reductions in census farm numbers are not necessarily good indicators of farmland loss. The number of census farms in Ontario has generally been falling more quickly than the area of farmland in the province; hence the land area of the average farm has been increasing. Other measures of size have exhibited a similar trend. For example, the number of farms in the Ontario dairy industry decreased by 50% from 1981 to 2001, but the average number of dairy cows per farm increased by 54%. In addition, productivity per cow has also been increasing. From 1984 to 2004, the number of litres of milk sold per cow per year has increased by 27% (Ontario Dairy Summary 2004). Census data indicates that between 1981 and 2001, the average acreage per farm in Ontario has increased by 25%. Consistent with the above trends, the number of farms of 560 acres or more has increased by 27% while the number of farms below this size decreased by 30%. Hence, statistics regarding reductions in the number of farms are unlikely to be good measures of farmland loss.



Source: Statistics Canada, Census of Agriculture, 2001.

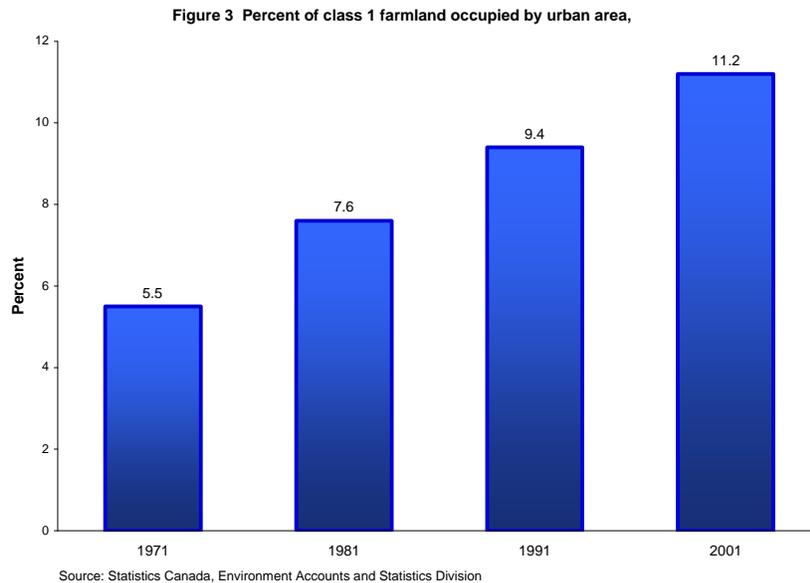
High rates of urban growth may also be associated with perceptions of farmland loss. The majority of Ontarians live in urban areas<sup>4</sup> and may witness the transformation of farmland into urban land uses. The total amount of urban land in Ontario in 2001 was 9,840 square kilometres, which is 18%<sup>5</sup> of Ontario's total farm area of 54,662 square kilometres.

The discrepancies between the absolute levels of urban land and farmland helps to explain why a high percentage increase in urban land use does not translate into a high percentage decline in farmland use. For example, a 50% increase in urban land is not associated with a 50% decline in farmland (Figure 2). Data from Statistics Canada indicates that between 1981 and 2001, the urban land area in Ontario grew by 36%. During this same time period, total farm area decreased by 9.5%. This point is of interest if statistics that characterize percentage changes in urban growth are perceived to be symmetric with the percentage changes in farmland (Figure 3). With respect to class 1 farmland, in 1981, 7.6% was occupied by urban area in Ontario whereas in 2001 that area grew by 3.6 percentage points (Figure 3).



<sup>4</sup> Urban area has a minimum population concentration of 1,000 persons and a population density of at least 400 persons per square kilometer

<sup>5</sup> This figure was calculated by dividing the amount of farmland in 2001 by the amount of urban land in 2001 and multiplying it by 100. The source of total farmland in Ontario was the 2001 Census of Agriculture.



Quite logically, the statistics of farmland loss vary depending on the spatial unit analyzed. From 1981 to 2001, counties encompassing the Greater Toronto Area (GTA) such as Durham, York, Peel and Halton, lost 11.6%, 25.0%, 23.7% and 23.5% of farmland, respectively. The county of Wellington, just to the west of the GTA, lost only 5.9% of its total farm area.<sup>6</sup>

#### 4.0 Policy Implications

The use of statistics describing farmland loss and urban growth influences public perception and, in turn, may affect public policy. For this reason, the “facts of the matter,” matter. However, the “facts of the matter” are sensitive to the analysts’ point of reference. Statistics surrounding farmland loss depend on a variety of choices including both the time and area under consideration. Moreover, the size of farms, on average, has been increasing. Hence, the statistics on the decline in farm numbers will only partially explain farmland loss. Finally, the area in farmland is far greater in magnitude than the area in urban use and it was demonstrated how this difference affects the way farmland loss and urban expansion can be characterized. While the aforementioned points will not be surprising to some, we believe our analysis helps illuminate just how sensitive these statistics can be.

Due to variations in point of reference and area under consideration, policy implications are few, if any. Depending on how the data are analysed, different conclusions on the importance of agricultural land loss in Ontario may be drawn and therefore, totally different policy implications may result.

<sup>6</sup> These data were obtained from the Census of Agriculture by identifying the Census division of each region. To obtain the figure for each region, total farm area in 1981 was divided by the difference in total farm area between 1981 and 2001 and then multiplied by 100.

## References

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## Contact information:

Adèle Labbé (Ecologist)  
Beacon Environmental  
8 Main St. N  
Markham, ON L3P 1X2  
Work: (905)201-7622 ext. 226  
Home: (416)826-1590  
Email: [adele\\_labbe@yahoo.ca](mailto:adele_labbe@yahoo.ca); [alabbe@beaconenviro.com](mailto:alabbe@beaconenviro.com)

B. James Deaton (Assistant Professor)  
Department of Food, Agricultural and Resource Economics  
University of Guelph  
(519) 824-4120 x52765  
Email: [bdeaton@uoguelph.ca](mailto:bdeaton@uoguelph.ca)

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