

URBAN DEVELOPMENT

IN THE

NIAGARA FRUIT BELT

BY

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ABSTRACT

Urban development in the Niagara fruit belt has long been a problem for the area. The gradual beginnings of small non-rural land uses created demand for the infrastructure that literally paved the way for large scale urbanization of this agricultural land. Development has continued to the point that the fruit belt's viability as an agricultural resource, is threatened. This paper outlines a history of events the fruit belt, it's importance to Canada's agricultural industry, the threats to the area and the conflicting views in order to determine whether or not the fruit belt can be preserved for agriculture. In this, it was discovered that the greatest threats to the area originate from economic conditions favouring urban development. This thesis provides a basis on which future planning and development for the fruit belt can be assessed. It also indicates the extent of damage and conditions in order to determine the possibility of saving the area.

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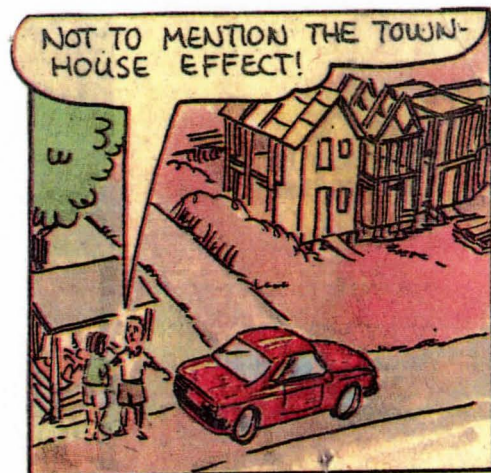
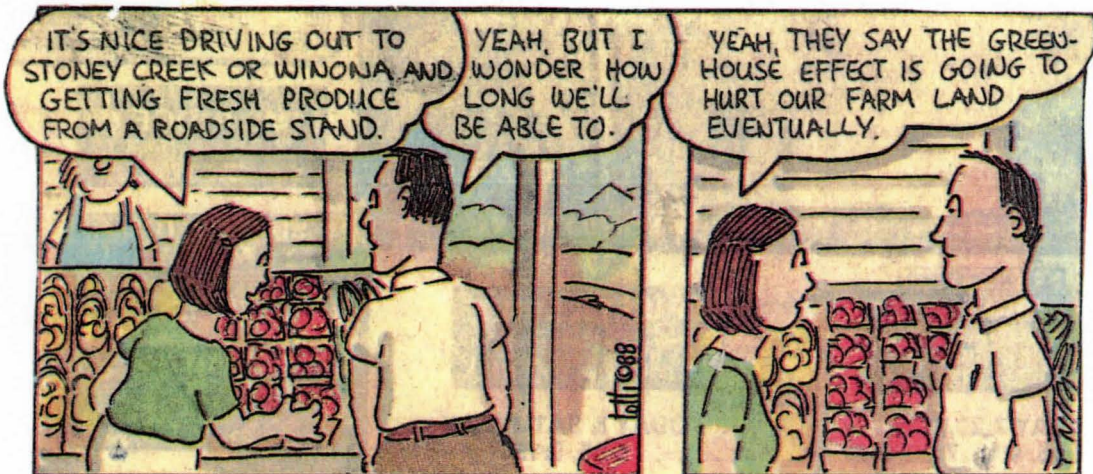
I would also like to thank the Planning Department of The City of Stoney Creek and Gracia Janes, President of the Preservation of Agricultural Lands Society for contributing their time to assist me.

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THE HERKIMERS



(Source: The Hamilton Spectator, 1988).

1.1 . INTRODUCTION

The issue of urban development in the Niagara fruit belt clearly needs attention and planning. Until recently, this has not been the case and so development has taken place unimpeded. The result of this haphazard urbanization of irreplaceable, agricultural land is an area of mixed agricultural, residential, commercial and industrial uses. Consequently, the agricultural potential of this area is questionable due to the ever present threat of continued urbanization. In answering the question; "Can the fruit belt be preserved for agriculture?", several methods are incorporated. To reach an acceptable resolution to this goal and thereby bring in possible measures to achieve it, several key issues in the development process of the area are examined in this paper. In reaching an answer, a history of the fruit belt will outline the conditions leading to the present appearance and extent of development. A look at the importance of the Niagara fruit belt to the agricultural industry of Ontario and Canada will show how vital this area is agriculturally. By pointing out and evaluating the threats to the fruit belt, the extent of damage already incurred will be visible and thereby any hope and measures to preserve the area will become defined. Finally, a review of different views and objectives for the fruit belt by varying interests will be examined. This look

at different governmental views and preservationists' goals will further define the viability of preserving the fruit belt. At this point, recommendations can be made for possible measures for preservation and areas needing attention in order to allow agriculture to continue.

1.2 LITERATURE REVIEW

Several categories of readings can be identified in this research. They can be split between those with conservationist views and others that are pro-development. They will be reviewed accordingly, beginning with readings interested in conservation of the fruit belt. These readings express concern over the issue of urban development in the fruit belt and emphasize the need for conservation. They include several by Ralph Krueger, an expert in this issue, and several other readings including Niagara Conservation Strategy by the Preservation of Agricultural Lands Society.

Several writings of Ralph R. Krueger have been important to the research of this thesis. These writings will now be looked at, individually and related to this thesis. First, his article in The Geographical Bulletin, "The Geography of the Orchard Industry in Canada", 1965, looks at the Canadian orchard industry with respect to trends in the types of orchards, the economic conditions and the elimination of the orchard regions.

This writing relates to this thesis because it

identifies the Niagara Fruit Belt as an area essential to the agricultural industry of Canada. Despite this, the area is facing varied economic difficulties that hinder its survival and functionability. In Krueger's evidence it can be seen that the writing emphasizes a need to preserve this area for fruit production and somehow alleviate the economic threats it is facing in order to allow it to function as a viable resource.

The next writing encountered by Ralph Krueger, "The Disappearing Niagara Fruit Belt", in the Canadian Geographical Journal 1959, shows the conflicting interests over the issue of development in the Niagara Fruit Belt. This is presented in this article in the form of a question: How important is the Niagara Fruit Belt to the Provincial and National economies?

In order to answer this Krueger looks at several factors. They are, the importance of the market the fruit belt serves, the value of protection and the possibility of alternate supplies of these fruits if the fruit belt is lost to development. Through this approach, Krueger reaches the conclusion that all evidence shows the fruit belt is an important part of the agricultural industry of Canada, and it cannot be afforded to be lost to development.

The third writing by Krueger is a copy of a seminar on land use problems in Ontario. The writing gives an idea of what the Niagara Fruit Belt would have been like by 1980.

The article was written in the 1950's and was a prediction of future land uses. Krueger noticed a trend away from grain farming and a movement of peaches onto what is identified as tender fruit soil. He shows the losses of land to non-farm and urban land uses, mainly scattered developments in urban areas.

In relation to this thesis, this paper identifies factors making the loss of this land a serious matter to be dealt with. Krueger recognizes haphazard development as dangerous because it threatens much of the present farming area. To alleviate the problem, Krueger sees the need for orderly and compact development in order to have a 'happy balance of land uses'.

Krueger comes to several conclusions about the Niagara Region. He notes that the physical resources for this industry are very limited. This means that the limited area must supply an ever growing market. It cannot be transferred to another site but can only be located where it is. The only areas suitable for this type of farming are the South Okanagan area of British Columbia, the Kent-Essex area and the Niagara Fruit Belt. By identifying options to this area and dismissing them as possible alternatives to the fruit belt, he emphasizes the importance of Niagara's agricultural area. Krueger also shows the problems the industry is facing.

These are seen as mainly marketing related problems that

make it difficult for farming to persist. This aspect of Krueger's article supports the section of the research paper identifying reasons for the loss of interest in farming in the Fruit Belt and the increases in development.

Krueger's intentions for the area are clear throughout his writings, as in this he points out the extent of development in the area and the extent of damage up until the period in which this particular literature was written, 1959. This article relates to the topic of the thesis in that it identifies the fruit belt as an important part of Canada's fruit industry. It's loss cannot be justified and something must be done to preserve the land. The writing suggests this preservation could be accomplished through some type of orderly development in the area that will see only the least viable lands developed while the most productive and viable are preserved. This is also necessary to this thesis in that it gives an overall view of the Fruit Belt and the events surrounding the development issue that is of major concern here.

Niagara Conservation Strategy, 1989, identifies the need to protect the Niagara fruit belt from development. It identifies government actions that have led to present conditions and the uniqueness of the fruit belt in order to point out why the region needs to be maintained as an agricultural producing region. It also identifies sections of the fruit belt that are facing development and identifies

their importance and ecologic uniqueness. The book makes known the extent of the struggle to preserve the region and the reasons justifying the group's struggle for preservation.

The Niagara Region: Trends and Prospects, The Challenge of Change, takes an overall look at the Niagara Region's fruit industry and its characteristics. In doing so it identifies the importance of the Region to the agriculture industry of Canada. It then focuses attention to identifying the problems the area is facing. These problems are consistent with those identified in this thesis and show the effects of factors such as economic conditions, the Queen Elizabeth Way, trade policy, tariff levels and urban encroachment, on the agricultural industry.

This writing shows that the Niagara Fruit Belt is faced with many and varied problems, all of which threaten the area and make development the farmer's only escape for survival. It identifies problems the Niagara Fruit Belt faces and the factors influencing development. These factors can be alleviated by economic measures that will help farmers make profits, enabling them to stay in business. The Queen Elizabeth Way is also identified as a permanent hindrance to agriculture and a threat to the industry. This is important because information will be used to show the extent to which the Queen Elizabeth Way has affected the Fruit Belt. This is so because the

alternative possible location for the highway would have avoided the agricultural lands of the fruit belt.

Fruit Production and Urban Development in Saltfleet Township From 1943 to 1975, 1976, is a study pointing out the extent of development in the Saltfleet Township. This area is now known as the City of Stoney Creek and is a part of the Niagara Fruit Belt. The study was conducted by the Saltfleet Growers Co-operative and Winona Ratepayers for Pollution Control. The group preparing the paper is very interested in preserving the fruit belt for agriculture rather than allow it to be lost to development.

The study shows that there has been far too much development on the agricultural land of the fruit belt and points out the extent of urban sprawl. It identifies the specialization of products, the reasons for this happening and indicates the importance of the area. The study also indicates the extent of services in the area and the resulting demand for more land for development. This will pressure the future loss of more land.

The sum of this study leads to it's purpose as well as a point of the thesis. The emphasis here is on a need to develop a means of preserving the agricultural land of the Niagara Fruit Belt. If nothing is done to preserve the fruit belt more irreplaceable land is sure to be lost.

A separate category of readings can be identified by the government publications encountered in the research.

These readings are less concerned with preservation of the fruit belt. This is seen in the Ontario Municipal Board's Housing: A Proposed Policy Statement of the Government of Ontario, 1988. This publication shows concern with facilitating economic development in industrial, commercial and residential needs rather than agricultural.

Hamilton's 1967 Official Plan for Undeveloped Areas, 1970, is a document indicating the intention to allow development in areas that are capable of allowing it. This means that even agricultural land can be seen as capable of supporting development and thus should be developed. This is a clear indication that the municipal government of Hamilton Wentworth is interested in developing some agricultural lands of the fruit belt.

This conflict of interest between preservationists and government is consistent with this thesis in that it will show that although agriculture in Niagara Fruit Belt is essential and must be preserved, there are those with other intentions. The municipal governments would like to see development in some agricultural zones in order to increase their revenue through higher assessments of residential, industrial or commercial zoning rather than rural.

It was also seen that still other government publications such as the Stoney Creek Official Plan, 1987, and the Stoney Creek Municipal Housing Statement - Final Report, 1985, show governmental concern over the Niagara

fruit belt and urban development occurring within its boundaries. These two publications both indicate that there is no immediate need and likely will not be for at least twenty years, to further develop the agricultural lands beyond the city's present urban boundary.

Use of this information will indicate the conflict of interests in the Niagara Fruit Belt development issue. As indicated, development is seen as a problem and economic criteria will be seen as important in determining the extent of conversions of rural to urban land uses. These economic criteria must be corrected in order to allow agriculture to exist, but without government support of these intentions, hope of preserving the fruit belt will fade.

Niagara Region Agricultural Research Report: Fruit Belt, 1969, by L.G. Reeds also examines land uses in the region surrounding the City of Hamilton. Reeds analyzed the reasons for the many varying types of non-agriculture development in the area. The reasons for these varying land uses are categorized and seen as relating to economic criteria. The sum of these criteria result in far too much pressure for the agriculture industry to sustain. This pressure causes a declining interest in agriculture and increased interest in the quick escape through development which will often be chosen by farmers seeking to make quick money rather than struggle for a profit through agriculture. Reeds concludes that the presentation of the fruit belt is

unrealistic. This is because of the present economic conditions that are pushing agriculture out. In order to allow the possibility of agriculture to remain untouched, major changes in the mentioned economic conditions are necessary.

From this, several trends can be clearly seen. It is clear that the Niagara Fruit Belt is an important part to the agricultural industry of Canada. This is expressed in the categorized readings with conservationist views. It can also be seen that there are several distinct causes for the development. These causes can be categorized as economic reasons, the Queen Elizabeth Way and conflicting interests over the issue of the Fruit Belt and its preservation. There is also a trend in identifying the consequences of continued development and hence a growing concern over the area. The other category of readings made up of government publications show interests in urban development in the Niagara fruit belt. Motivated by capitalist goals, higher levels of government stand to gain in terms of revenue from the development of the area and so their goals follow. It should also be noted that municipalities are intent on preserving the area.

2 BACKGROUND INFORMATION

In pointing out the possibility of preserving the fruit belt for agriculture, rather than allow the continuation of urban development, an examination of the history of events the area has experienced is needed. This look at the events that have shaped the character and physical appearance of the fruit belt will give insight into the origins of the problems the area has faced and what may ahead in the future.

In 1788, what is now Ontario was divided into four districts, for administrative purposes. These districts were Lunenburg, Mechlenburg, Hesse and Nassau. In 1791, the district of Nassau was subdivided into townships, by Augustus Jones. One of these townships was number 7, which was later renamed Saltfleet, by Governor Simcoe.

Immediately west of Saltfleet was, and is still dominantly present, Hamilton. By the late nineteenth century Hamilton had become a growing centre of industry and commerce. Extremely favorable conditions of the harbour, rail lines, and judicial administration combined to allow development. In order to accommodate this growth Hamilton expanded through annexations of lands, primarily those of the fruit belt. With Lake Ontario to the north and the escarpment as a barrier to the south, eastward expansion was the only alternative. Through annexations, Hamilton had

extended it's limits as far as 200 feet west of Centennial Parkway, Highway 20, by 1959.

With respect to the beginnings and further development and refinement of agriculture in the Niagara fruit belt, several conditions and occurrences have been associated with the rise of the area's importance as an agricultural region.

With the beginnings of settlement in the area, agriculture quickly took root as the livelihood of the settlers. The main purpose of this was to provide subsistence for themselves. The crops at this time were grain, which provided the main diet of the people. Soon more land was cleared and settlement continued as the population of the surrounding area increased. By this time farmers had begun replacing their vast grain fields with more economically viable crops. The ideal location of this area, between Lake Ontario and the escarpment provided a good climate and a low risk of frost during the early growing stages.

By 1900 the production of fruits had become even more specialized and the feasibility of some crops, such as Apples had diminished. With experience, it was also discovered that the area was exceptionally good for the production of tender fruits, such as Peaches and Plums. The events that led to this realization occurred between 1897 and 1904. During these years a series of harsh winters in

the Kent and Essex Counties destroyed the crops. At the same time the Niagara fruit belt was spared.(Krueger, 1964, p.51).

This contributed greatly to the emergence of the fruit belt as the most important region of tender fruit production in Canada. The production of tender fruits increased and the population continued to grow along with the standard of living. All these conditions allowed the fruit belt to grow as well and increase production levels. But, as expected, the population and industrial growth of the surrounding centres became a threat to the fruit belt. Especially applicable in the Saltfleet area, early development was confined to the fruit belt area.

Residential and industrial development continued in the fruit belt well into the twentieth century, without impedance. At this time there existed neither a land use policy nor an intent on preserving the agricultural land. This was so even though:

Politicians, political parties and government agencies were all denouncing or stating that 26 acres of agricultural lands were disappearing every hour, every day, 365 days a year.
(Saltfleet Growers Cooperative, 1976, p.29)

In 1942, preceding the most prosperous period in Canadian history, the government issued the Veteran's Land Act and soon after development took place at an alarming

rate. This was because the government offered land to war veterans at very cheap rates. Soon non-rural land uses in the fruit belt emerged. In an effort to escape 'city life', people were moving to the cheaper priced country properties. This caused the emergence of many strip developments throughout the fruit belt. (Saltfleet Growers Cooperative, 1976, p.30). The realization that this type of development was a problem occurred by 1955 when the township of Saltfleet initiated an attempt for more orderly development to take place in the area. This was expressed in By-Law 1515, which states that:

The Council may by By-Law designate an area within the municipality as an area of subdivision control and thereon no person shall convey land in the area by way of a deed or transfer on any sale or enter into an agreement of sale and purchase or enter into any agreement that has the effect of granting the use of/or right in the land directly or by entitlement for a period of 21 years or more.
(Saltfleet Growers Cooperative, 1976, p.32).

It is interesting to note that although the township did attempt to 'order' development, there was still no attempt to preserve the fruitlands. There seems to have existed a view that agricultural lands were undeveloped lands, not being utilized to their full potential. During this period urban development occurred at the expense of Barton Township and parts of Saltfleet. These lands were being annexed by Hamilton. This came to an end in 1959 with

the last annexations and the loss of over 7 000 acres of Saltfleet's lands. (Saltfleet Growers Cooperative, 1976, p.32). Unfortunately, this did not end urbanization of fruit belt lands in Stoney Creek or other municipalities.

TABLE 1 ANNEXATIONS TO THE CITY OF HAMILTON

Date	From	To	Acres
September 27, 1909	Barton	Hamilton	1 272.0
June 9, 1910	Barton	Hamilton	52.2
March 10, 1910	Barton	Hamilton	650.8
January 8, 1912	Barton	Hamilton	170.0
March 18, 1920	Barton	Hamilton	767.9
December 22, 1922	Barton	Hamilton	3.0
March 11, 1924	Barton	Hamilton	<u>253.8</u>
			3 178.7
May 14, 1959	Barton	Hamilton	8 282.0 (complete)
January 28, 1943	Saltfleet	Hamilton	630.0
January 10, 1949	Saltfleet	Hamilton	3 326.0
February 13, 1956	Saltfleet	Hamilton	2 600.1
January 1, 1959	Saltfleet	Hamilton	<u>662.0</u>
			7 218.0

(Source: Fruit Production and Urban Development
in Saltfleet Township, p. 28)

Development caused the population of the Golden Horseshoe to increase and soon ecological problems arose. Problems that would in turn lead to further development in the area. The influx of population and the inability of the land to support it caused wells to become contaminated. There arose a need for storm and sanitary sewers to be installed in agricultural lands to serve the small communities in the fruit belt. In Stoney Creek, these

services were provided by construction of sewage lines from Hamilton's water treatment plant to Green Road by 1962. By 1976, they extended as far as DeWitt Road in Stoney Creek. The services created the potential for growth and soon developers began to buy agricultural land.

3 . IMPORTANCE OF THE FRUIT BELT

The Niagara fruit belt is located in Canada's fastest growing economic market, the Golden Horseshoe. In the last several census periods, this area of Southern Ontario has experienced rapid urban and population growth. This is seen in Hamilton Wentworth's population growth of almost 12 000 people between 1981 and 1986, a 2.9 percent growth rate. (BS 92 C114, 1986, Table 2, p.5).

TABLE 2 POPULATION GROWTH 1981-1986

	1981	1986	% Change
Hamilton Wentworth			
Reg. Mun.	411 445	423 398	2.9
Niagara Reg. Mun.	368 288	370 132	0.5
Peel Reg. Mun.	490 731	592 169	20.7
York Reg. Mun.	252 063	350 602	39.1
Toronto Metro. Mun.	2 137 395	2 192 721	2.6
Halton Reg. Mun.	253 883	271 389	6.9
ONTARIO (total)	8 625 107	9 101 691	5.5

(Source: BS 92 C114, 1986, Table 2, pp.5-20)

The entire area has experienced a population growth of 476 584 people over the five year period. Evident from the census information is the fact that the area between Toronto and Hamilton is experiencing the most growth.

With existing population trends persisting in the future, the population of the Golden Horseshoe and that of Ontario will continue to increase. This will put an added

strain on the agricultural land and decrease the amount of stored supply of produce which is presently at a low 54 days. That is, there is only a 54 day reserve supply of fruits, before shortages become visible. With continued development and growth in the surrounding regions, this supply will continue to decrease and the strain on farmland will increase. This strain will force more intense farming, which may eliminate the possibility of crop rotations and other practices which maintain and improve the soil's nutrients and productive capabilities. This will undermine the potential of the soil and thereby decrease future harvests. It is also believed that if the fruitland can persist against the tide of development and hold it's land, it will soon not be able to produce enough to meet the demand. (Krueger, 1965, p.106).

The Niagara fruit belt is a unique area, capable of growing tender fruits with a low risk of losing the crop to frost or other extreme weather conditions. These favourable qualities have allowed it to develop into the major supplier of tender fruits in Ontario and Canada. The loss of this land would mean the loss of almost all the tender fruits in Ontario, and therefore an extreme tender fruit trade imbalance with competing countries, especially the United States would result. This is important because a large trade imbalance already exists in other sectors and the addition of tender fruits would only magnify the burden and

Canada's dependence on the United States.

In looking at the fruit tree census data, it is clear that the Niagara fruit belt is the major supplier of tender fruits in Ontario's agricultural industry. This is seen in the fact that the fruit belt contains over 87 percent of all Peach trees and 96 percent of all Grape vines in Ontario. (Ontario Fruit Tree Census, Grapes 1981, p.8; Peaches 1981, p.18). Another important factor to consider is that the total numbers of these trees and vines have also decreased significantly since 1956. This is a problem that will become more important as time and damage continues.

The fruit belt is also important in that a great deal of revenue is generated from agriculture, as well as the food processing industry supplied by the fruit belt and it's related employment. It is estimated that over 200 million dollars per year is generated from Ontario's agricultural industry, a major part of which is in the Niagara fruit belt. Statements that industrial uses of the land can generate more revenue than agricultural uses, can be refuted by the fact, as stated by the President of the Preservation of Agricultural Lands Society, that there is already enough industrial land in this region to supply a much larger population than is already present.

Another reason for the importance of the Niagara fruit belt is the fact that there is no feasible alternative supply of this type of fruit. Even the fertile Okanagan

Valley of British Columbia produces only between 10 and 20 percent of the crop types of the fruit belt.(Chudleigh, 1972, p.2). If this production level was higher, British Columbia is still not a feasible alternative source because of the great distance to Ontario and eastern Canada. This is too great a distance to allow continuous shipments of tender fruits that damage easily.

All of these factors and conditions point out the importance of the fruit belt and a major reason for it's preservation. It is for these reasons that every effort must be made to stop urban encroachment and maintain it's viability.

4 THREATS TO THE FRUIT BELT

Development in the area has clearly been a major factor in shaping the fruit belt as it appears today. Development, from a highway to industrial facilities, is visible on the landscape today and will continue to shape the area in the future. This development issue is one needing attention and planning. Until recently this has not been the case and so development has progressed undisturbed. The results of this haphazard development of the fruit belt, is an area of mixed agricultural, residential, commercial and industrial land uses. Consequently, the agricultural viability of the area is questionable, and so is it's preservation. Several reasons can be identified for the occurrence and continuation of urban development in the fruit belt. These causes will now be identified and discussed with reference to their effect on the area and thereby the possibility of preserving the fruit belt.

4.1 ROADS AND INFRASTRUCTURE

A major factor in the development issue is the Queen Elizabeth Way. The Niagara Peninsula is not a physical peninsula but rather a political one. In this respect the area functions as an extension of Canada into the United States. It can be seen as an access route between Canada's fastest growing market and the eastern United States. In order to allow efficient access, a modern, high volume

transportation network was needed. This network would surely bring urban development onto the agricultural lands. (Jackson, p.21).

When the highway was proposed in the 1930's there were two choices for it's location. It could have been constructed where it is located or above the Niagara Escarpment. (Janes et al, 1989, p.3). The latter alternative would have meant the arrival of potential growth, inevitable with the new highway. This area is relatively unused land capable of supporting a great deal of development. This land is not as fertile or productive as the lower land of the fruit belt. Following completion of the highway, economic growth such as light industry dependent on the highway, was sure to have arrived.

The former alternative, which was chosen, had devastating results on the fruit belt. Located between Lake Ontario and the Niagara Escarpment, the highway split productive farmland in half. This effectively destroyed accessibility between farms and production on the farms, due to land lost to the road, service roads and drainage basins which even split single farms. The construction also brought in many types of industry and manufacturing to the area. These industries have also created much pollution and damage to the fruit belt, which has harmed crop production. Such industries include light steel manufacturers, chemical plants and quarries such as that in Fonthill. A further

point illustrating the Queen Elizabeth Way's role in damaging the fruit belt is the damage caused by salt spreading on the highway in winter. This is known to have decreased crop production as far as 100 metres away from the road. One farmer has gone so far as to sue the government for damages, and winning the case.

4.2 EXTENSION OF SERVICES

Another important threat to the fruit belt is the extent of services onto the agricultural land. What is meant by services is storm and sanitary sewers which remove waste and excess water. The installation of these onto plots of land increases the tax assessment as well as land values, which will be discussed later. In Stoney Creek, these services were installed following the initial periods of non-rural land uses. The influx of population onto the land created a need to stop well contamination. This was mainly for the community of Winona and the E.D. Smith plant, on the fruit belt lands. As outlined by a Stoney Creek planner, there had been pressure by the residents to have these services installed, not considering the effects. This is that they would pay for them through increased property taxes. The extension of the services has created an area of "...fully serviced farmland." This rare situation has threatened the existence of farming in the area and will continue to do so. Further damaging to the farmers is the criteria of assessment. Based on frontage, taxes increase

with the width of the land along the artery for the pipelines. Since most farms are situated on large holdings, the taxes are usually high.

With the services in place and the encouragement of development, farming is threatened. This was observed in 1962 when an engineer, William Sears, negotiated for sewage to run into the Woodward Avenue treatment plant in Hamilton. The trunk line was constructed as far as DeWitt Road by 1976. (Saltfleet Growers Cooperative, 1976, p.35). Development was now unavoidable and encouraged to continue.

4.3 COMPETITION FROM IMPORTS

Another threat to the fruit belt is the competition from imported produce. This is the case because the products imported from the United States have tariffs imposed on them. This includes both fresh produce as well as processed products, such as wines. These tariffs increase the prices of the American products in order to make the Canadian products more competitive. Without these tariffs, the American products would enter the Canadian market, practically eliminating the viability of the fruit belt farmers.

The American products with an earlier peak season in comparison to the Canadian season can be imported during Canadian pre-season. During the Canadian season's prime production period, tariffs are imposed on the American product. The imbalance in agricultural trade between Canada

development in the fruit belt can be observed through accumulated statistics. The effects of the Free Trade Agreement between Canada and the United States though cannot be observed yet. Rather, these effects will be seen in the coming years and judgments made accordingly.

As discussed in terms of competition from imports, the Niagara fruit belt is dependent on tariffs placed on products from the United States and government subsidies to processors. The subsidies are given to Ontario processors and wineries to ensure the purchase of Ontario produce rather than cheaper United States products. Under the Free Trade Agreement, many complex issues have arisen regarding these conditions. According to Gracia Janes, if the government continues to subsidize wineries rather than producers, and tariffs on American produce are removed, the American produce will be more economical for wineries. For this reason The Preservation of Agricultural Lands Society has proposed the possibility of government subsidies to farmers rather than processors in the industry. With this strategy, farmers will be able to sell their produce for less and counter any interest in American produce.

Further complication in this issue is the concern over unfair subsidies. What is meant by this is that government subsidizing of the agriculture industry may be blocked by the United States' interest in Free Trade. The United States may declare the subsidies as unfair in giving

Canadian producers an unfair advantage. By this, The United States will attempt to have the tariffs removed. The Premier of Ontario, David Peterson has stated that Ontario has no intention to do so, but the outcome is yet to be determined. This is a likely move on the part of the United States and Gracia Janes stated that the Canadian government may counter it by citing other factors as unfair advantages. Some of these could be the earlier growing season for tender fruits and the cheap labour costs in the United States. Therefore, in an attempt to preserve the fruit belt for agriculture, Free Trade has become an important factor and must be dealt with in order to preserve the area.

4.4 ASSESSMENT PRACTICES

The installation of sewage services to the rural community of Winona, the E.D. Smith plant, along Highway 8, and the Service road area influenced the extent of development onto the fruit belt. As indicated by a planner for the City of Stoney Creek, the services were needed and it was in the best interest of the city to install them. What was not considered was the fact that the costs of the service construction and maintenance were reaccumulated through increased property taxes. As stated by the planner, this area is serviced farmland. With suburbanization, the desirability of the area as a place to live rather than farm increased. With this, development quickly followed, encouraged by farmers and other landholders willing to

reduce off their holdings in an attempt to restore the economic viability of their farms or simply sell out, completely. Any government action attempting to alleviate the problems faced by the fruit belt should include studies of the assessment criterion of farms. This is needed in order to maintain the viability of this and other farmland areas.

The extent and magnitude of the assessment problem in the fruit belt is seen in the presence of corn fields in Niagara. Several of these are Stoney Creek and Grimsby, the parts of the fruit belt most threatened by urban development. The presence of these corn fields is important in pointing out the assessment practices as a cause of development. This is so because the city has different tax rates for different crops. Obviously, tender fruits are best suited for the area, but the assessment for orchards is higher than it is for corn. In many cases the assessment is so high that a farmer cannot afford to plant fruit crops, so maintains the corn until he/she is bought out by a developer, which is often the case.

In several cases, such as the Landmart development site, the property has already been sold to developers and is now awaiting zoning changes to allow development. In this case, the fertile soil has been reduced to a field of weeds over 65 acres of land. Interestingly, this case and the prior represent almost all of the agricultural land

remaining in Stoney Creek, and are showing signs of loss to urbanization. This case will be further discussed ahead in identifying government action in the preservation of the land for agriculture.

4.5 LAND USE PRESSURE

In researching the land value situation for the area, several extreme situations of urban development were identified in the Stoney Creek and Grimsby areas. A 22 acre property bound by Barton Street to the South, the railway to the North and Winona Road to the West, was listed for sale and did not sell during the period of this research. As studies have shown, Niagara fruit belt farms need to be greater than 20 acres in size in order to be viable. This seems to be an under-estimation in this case as the farm was listed for sale at 60 000 dollars per acre. This agricultural zoned area was quoted by the acre, thereby emphasizing greater expectancy that the area will be divided into smaller plots for hobby farms rather than a more productive single unit.

The Glover Industrial Park, on Barton Street, is another area of prime agricultural land, yet it is zoned for industrial use. The Stoney Creek Industrial Park, which spans the North side of Barton Street from Gray's Road to Winona Road, is located for easy access to rail and highway transportation, but also consumes agricultural land. This particular parcel is planted with grape vines but will soon

be paved over due to "pressures to expand industrial land." (Janes et al, 1989, p.14).

According to Gracia Janes, the President of the Preservation of Agricultural Lands Society, the overabundance of industrial land has not attracted industry and has undermined the agricultural industry by increasing already high servicing costs. She believes, regional competition for industrial land is exaggerated, and can be seen in Stoney Creek by the extent of industrial land within the city.

What is likely an influencing factor in the increasing land values of the fruit belt land is its situation attributes. Its location, in Canada's fastest growing market and near the United States, allows for easy accessibility to both markets. In the case of Hamilton, the lower portion of the city has always been the most important. With this in consideration, the city was therefore limited by the escarpment and the harbour. These limiting factors created an east-west orientation, and now Stoney Creek has taken over from this point.

In the recent past, there has been a trend for migration from increasingly expensive areas, such as Toronto, to somewhat more affordable Hamilton and especially Stoney Creek. Toronto suburb housing can cost as much as twice that of the Stoney Creek area, creating an even greater demand for agricultural land conversions and

continued increasing land values.

The fact that the municipality of Stoney Creek has experienced rapid growth in the last few years and that the land of the area is in demand, causes the land values to increase greatly. This is seen in that one of the latest subdivision projects in Stoney Creek was developed on what was agricultural land. 120 lots were sold in this area almost one year before the servicing and road construction were completed. These lots sold for prices that ranged from 45 900 to 75 000 dollars per lot. The total sale of this subdivision was over 6 350 000 dollars.

The sale of this and other parcels of land have become an escape mechanism for farmers. Rather than work and devote oneself to the land for a net income averaging 3 058 dollars in 1987 (Agricultural Statistics for Ontario 1987, p.12), farmers would rather sell the land to a developer and avoid future hardship.

TABLE 4 THE VALUE OF LAND AND BUILDINGS OF CENSUS FARMS IN ONTARIO, 1961-76

	1961	1976	%Change
Value of land and buildings	2 572 303	13 822 388	170.0
Per hectare value of land and buildings	342.1	2 207.3	224.2

(Source: Johnston and Smit, 1985, p. 230)

4.6 PRICE TRENDS - The Price-Cost Squeeze

Compounding the problem of the rapidly rising land values is the economic root of the farmers problems and the major factor influencing their sellout to new livelihoods. For a long period of time land values have been increasing along with farmers costs of producing their products. The inequity arises due to the fact that production costs have increased and are continuing to do so at a much faster rate than have the returns farmers are receiving for their products. This price-cost squeeze is a major factor in the amount of farm bankruptcies in Ontario.

This is seen in that by 1988, the cost of pesticides had increased more than 20 percent since 1981.(BS 62 004, p.11). Along with this, hired labour costs increased by more than 42 percent, property taxes by 17 percent and farmer's mortgages by 35 percent, all over the same period. Other costs, such as insurance had increased by as much as 70 percent. All these costs add up and undermine profitability to the point that average net incomes are very low for farmers.

In looking at the prices farmers were receiving for their products, a different picture emerges. Over the years the amount farmers have received for their output has increased but not nearly as much as the costs. This is seen throughout the fruit belt in the fluctuating prices farmers receive for their produce. Between 1981 and 1987, prices

farmers were receiving for their peach harvests decreased by more than 7 percent and plums decreased by more than 8 percent. In this same period farmers costs were increasing and much faster. Further clarification of these increases are illustrated in Appendix 3.

These large inequities have been responsible for the unusually high number of farm bankruptcies in Ontario, of which there were 625 between 1983 and 1987. (Agricultural Statistics for Ontario 1987, p.14). There has also been a decrease of almost 10 000 census farms in Ontario between 1981 and 1986. This decrease in farms, of 11.8 percent is 3.9 percent greater than the national average. (Agricultural Statistics for Ontario 1987, p.10).

Many farmers have indicated that they would not sell their land if they could get a fair price for their product. (Reeds, 1969, p.57). With the persistence of present conditions, farmers will easily lose the incentive to improve farm viability, thereby making closures, conversions and sellouts a growing trend. Since prices received by farmers would be difficult to change in order to balance the differences, subsidies to farmers may be an answer.

5 CONFLICTING VIEWS

By stressing and outlining the importance of the Niagara fruit belt, and well as the threats the area is facing, the extent of the problem is put in perspective. From this there also emerges the realization that measures need to be taken in order to alleviate these problems. Since the root of the problems are economic in nature and the government is a participant, government action and intervention seems to be a logical approach in an attempt to correct or at least reduce the problems faced by the region. With respect to government interests in preserving the land, there are conflicting views over issues concerning the region. These issues were discussed with planners with the City of Stoney Creek and with the President of the Preservation of Agricultural Lands Society.

City officials have expressed an interest in the preservation of the fruit belt lands remaining within the city boundary. This has been stated in the official plan of the city and suggested to officials in consultant reports. The Report of Municipal Housing Statement suggested, in 1985, that "...the City's boundary need not be expanded beyond Fruitland Road for the purposes of accommodating additional residential development..."(Housing Report, 1985, p.76). This decision was based on evidence that:

The City has more than sufficient residential development potential within the urban boundary as presently set to meet needs to at least the end of the century.

It is likely that the type of housing to be developed east of Fruitland Road would be of low density. The City has more than adequate potential for low density housing within the present urban boundary.

The cost of providing services to support development east of Fruitland Road is unlikely to be justified. Moreover, servicing potential within the current urban boundary could remain underutilized resulting in an inefficient and uneconomic use of servicing systems.

Expansion beyond Fruitland Road would also incur costs with regard to the provision of commercial services, schools, and other community facilities.

If a future extension of the urban boundary is considered it would be preferable in the West Mountain Planning District.

(Source: City of Stoney Creek Municipal Housing Statement, 1985, p.76)

The Official Plan, section A.9 also indicates the extent to which land preservation measures apply.

- 9.2.6 Council shall ensure the preservation of PRIME AGRICULTURAL LANDS and SPECIAL CROP AREAS for agricultural production.
- 9.2.7 Every effort will be made to encourage the retention of farms in large units to provide as broad an economic base as possible. In this respect, the unnecessary division of viable farms shall be prevented.
- 9.3.2 THE FRUITLAND AREA
(points identifying measures to halt further urbanization of these lands)
(Source: Official Plan City of Stoney Creek 1987, pp.39-42).

Aside from these measures there is also a need within the municipal government to improve the efficiency of the land. In this an ordering of land uses will occur. An example is the Industrial area designated from Gray's Road to Winona Road north of Barton Street. This will see the loss of prime agricultural land designated for industrial use. The 'mishmash' of land uses will soon be eliminated through zoning changes. This ordering of development will see the preservation of agricultural land within the city boundary and the elimination of other agricultural land presently located within industrialized areas.

In 1976 and reconfirmed in 1986, Stoney Creek's urban boundary was set at Fruitland Road. This is expected to remain well into the next century. In this case conflict arises in the Ontario Municipal Board policy that planning jurisdictions consider their actions on the availability of housing to meet future needs. (The Planning Act, 1983, p.4). In this, it is the policy of the Province that:

Municipalities and planning boards ensure that sufficient land is available to meet expected growth through new residential development and larger scale residential intensification for a ten year planning time-frame.

All municipalities and planning boards provide in their planning documents for at least 25% of total housing units resulting from new residential development and residential intensification through

conversion of non-residential structures, infill and redevelopment to be affordable housing.

(Source: The Planning Act, 1983, pp.4-5).

These policies, implemented into the official plans, threaten the existing agricultural lands surrounding urbanized areas. In Stoney Creek, the need to maintain a ten year planning time-frame will soon mean the loss of more prime agricultural land. As outlined by a City Planner, when the present supply of land lowers to about 8 or 9 years, the municipality must designate more land for residential use.

The present situation in the Niagara fruit belt is one that was defined by the Ontario Municipal Board's Urban Boundary hearings that lasted from the fall of 1978 to the fall of 1980. In these hearings the Preservation of Agricultural Lands Society suggested the redirection of development to the South. The argument was based on the fact that there was abundant space and resources to support population growth in these areas, such as Port Colbourne. This proposal was accepted and the second hearing set permanent boundaries, redirected development to the South, and set out to increase densities in these areas. With respect to the fight to protect the agricultural lands from government policy, Gracia Janes strongly believes the Preservation Society has been holding up.

It was likely the decision to redirect development

to the South that has influenced Stoney Creek's interest in developing the 900 hectares of land above the escarpment. Development in this area can effectively double the population of the City, one quarter of which is already above the escarpment. (Rino Mostacci, Planner, City of Stoney Creek) It is the view of City officials that directing growth only eastward will limit the city's potential for growth. When asked of the purpose of the Landmart Development sign, a notice of residential development east of the urban boundary, it was stated that the billboard is an illegal sign. The owner/developer of the land is attempting to create an interest in the land in an attempt to provoke development.

The difficulty here arises in the differences between the city's objectives and those set by the Ontario Municipal Board. In order to supply the housing stock desired by the province more land will have to be designated for development. This land will eventually come from the fruit belt. In order to maintain the ten year supply of land for housing, the City boundary of Stoney Creek will eventually have to be extended into the fruit belt. Although this will not happen immediately, it cannot be ignored today.

In support of preserving the agricultural land, there are also contradictions between different government ministries. In order for an urban boundary change to be

implemented, approval must be given by the Ontario Municipal Board and in some cases, the Ministry of Agriculture and the Niagara Escarpment Commission. Changes are therefore very difficult to implement but do occur. If the ten year supply of land is low, this may be sufficient proof of the need for the land and conversions will likely take place. This will likely be the fate of the fruit belt lands within the Stoney Creek boundary.

With respect to sufficient government measures to protect the fruit belt, Gracia Janes stresses that the provincial government is not doing enough to protect it. "There is nothing in the history of Ontario to indicate that the Government has seriously tried to protect the fruitland." (French, 1983, p.1). There is no government legislation enacted for agricultural lands. Foodland preservation policies are still in draft stages and there is no government funding for preservationists. This is important because other groups such as environmentalists do receive funding. The Ontario government, while fighting terms of the Free Trade Agreement, has no anti-development policy for agricultural land. Gracia Janes also feels that concern over preservation is not as much for the Liberal Government as it was for the Conservatives. A major concern is that there have been 65 occasions on which the provincial government has negotiated boundaries rather than subject the issues to public hearings on defining them.

These concerns on the parts of the Municipalities, Ministries and preservationists point to much conflict over what is to happen to the Niagara fruit belt. There is much conflict and contradiction over the region and therefore, whether or not it can be preserved for agriculture.

6 . RECOMMENDATIONS

Through this evaluation and analysis of development in the fruit belt, the problem of the feasibility of preserving the area for agriculture is placed in perspective. At this point, several recommendations can be made. There is clearly an interest on the part of the municipalities, such as Stoney Creek, to preserve the fruit belt lands. This is expressed in the City's plan. Problems arise in the objectives of the provincial government. Interest here is in maintaining a uniform policy for all municipalities within the province. With no regard for individuality and different conditions of different regions, the provincial policy is to maintain a ten year land reserve. This is so even if individual or local conditions make this long term planning difficult or unnecessary.

Further difficulties facing the area are economic in nature. These include the increasing land values in the fruit belt, the price-cost squeeze and the impacts of the Free Trade Agreement. The answer to the fruit belt's difficulties may lie in government action or intervention in the food industry. As proposed by the Preservation Society, government subsidizing of farmers, rather than food producers and processors, would enable better competitiveness in Canada's agriculture industry. This would help increase the profitability of Canadian farmers

and thus maintain the incentive to farm. This may continue to change conditions presently facing the fruit belt by reducing closures and sellouts by farmers.

The occurrence of development in the fruit belt is also a point of concern. In this research, it has often been the case that the fruit belt is referred to as undeveloped. The answer to this problem is seen in urban development. The fruit belt should be seen as an area of importance to the Canadian people and economy. Once lost, this land can no longer be regained.

This case of concern can also be seen as a classic situation in North America. In this sense the fruit belt is an area that few are concerned with, even with the problems it is facing and the future conditions that may arise due to present policies and events. With extreme conditions in the future, there may be change for the area. It has been the case in the past that only in desperate situations, are problems realized and dealt with. This was seen in the frenzy over new energy sources during the oil shortage of the late seventies, and may possibly be the case in this situation. In identifying the possibility of preserving the fruit belt, this paper may contribute to the knowledge of the problems of the fruit belt, and generate concern and understanding of the nature of it's problems.

7 CONCLUSION

The Niagara fruit belt can now be seen as an area in transition. The region's historical evolution and specialization as a tender fruit producing area has resulted in the importance of the fruit belt to Canada's agricultural industry. The fruit belt, as a tender fruit producing region, accounts for a high percentage of the total produce of this category. Aside from this, the area faces a very real threat by urban development. Several factors of the economy favour development in the area and hinder agriculture. It has been shown that several threats individually and compoundedly threaten the continuation of agriculture in the area. In order to alleviate these conditions and favour agriculture, many economic conditions need to be altered. Such changes would increase the profitability of farming in the area and reduce farmers' risks in this livelihood. With the persistence of present economic conditions, the feasibility of agriculture will be continually undermined and land will be continually lost. Finally, the conflicting views over the area summarize the struggle for preservation and further clarifies the possibility of maintaining the fruit belt. The sum of this research points to the conclusion that the fruit belt can be preserved only after a re-evaluation of priorities of the various levels of government. These may include incentives

to farmers rather than to wineries, the stabilization of farm incomes and production costs thereby increasing farm profitability. A further need is a definition of government intentions for the area. Some form of legislation is needed to create a protectionist attitude toward the area and hinder further development. Only then will the Niagara fruit belt be preserved for agriculture.

THE FRUIT BELT IN PHOTOGRAPHS



Illegal development sign - On Highway 8,
east of Fruitland Road in Stoney Creek.



Site of future industrial park on present
orchards between the Queen Elizabeth Way
and Barton Street in Stoney Creek.



Fertile soil is reduced to corn field due to pressure of high property tax assessment rates.



Envelope sticker by P.A.L.S. - Acronym for eat all things. Used to create awareness of the fruit belt and it's importance.

APPENDICES

APPENDIX 1

1 NUMBER AND AREA OF CENSUS FARMS IN ONTARIO

	1981	1986	Percentage Change
NUMBER	82,448	72,713	-11.8
'000 acres	14,923.3	13,953.0	- 6.5

(Source: Agricultural Statistics for Ontario 1987, p.10)

2 NIAGARA PERCENTAGE OF FRUIT TREES IN ONTARIO

	1971	1976	1981
Grape Vines	98.7	99.3	96.9
Peaches	75.5	76.8	87.2
Pears	79.4	77.2	79.1
Plums	91.7	87.5	83.2

(Source: Ontario Fruit Tree Census, 1971, 1976, 1981)

APPENDIX 2

3 FRUITLAND MEADOWS SUBDIVISION
 PART OF LOT 15, CONCESSION 1
 PLAN 62 M
 CITY OF STONEY CREEK

LOT #	FEET	PRICE
1	50 x 115	\$46,900
2	50 x 114	46,900
3	50 x 114	46,900
4	50 x 114	46,900
5	50 x 114	46,900
6	50 x 114	46,900
7	50 x 114	46,900
8	50 x 114	46,900
9	50 x 114	46,900
10	50 x 114	46,900
11	50 x 114	46,900
12	50 x 114	46,900
13	50 x 114	46,900
14	50 x 114	46,900
15	50 x 114	46,900
16	65 x 114	51,900
17	65 x 100	50,900
18	50 x 114	45,900
19	50 x 114	45,900
20	50 x 118	46,900
21	50 x 126	47,900
22	50 x 130	48,500
23	50 x 131	48,500
24	50 x 131	48,900
25	55 x 131	51,900
26	41 x 110	60,000
27	49 x 137	69,900
28	53 x 131	69,000
29	53 x 136	69,000
30	53 x 141	69,000
31	53 x 146	68,500
32	53 x 151	68,500
33	54 x 156	68,500
34	39 x 148	69,500
35	36 x 226	75,000
36	42 x 156	63,000
37	39 x 141	68,000
38	50 x 141	49,900
39	50 x 141	49,900
40	50 x 140	49,900
41	50 x 139	49,900

42	50 x 134	49,900
43	50 x 125	49,900
44	50 x 118	48,900
45	65 x 118	60,900
46	43 x 138	48,900
47	59 x 138	46,900
48	65 x 102	51,900
49	50 x 102	46,900
50	50 x 102	46,900
51	50 x 102	46,900
52	50 x 102	46,900
53	65 x 102	49,900
54	50 x 166	51,900
55	51 x 163	51,000
56	51 x 156	51,000
57	50 x 150	51,000
58	50 x 148	51,000
59	78 x 103	54,000
60	51 x 103	46,900
61	51 x 113	46,900
62	51 x 123	48,900
63	65 x 133	55,900
64	50 x 147	48,900
65	50 x 149	48,900
66	50 x 155	49,900
67	50 x 163	52,900
68	50 x 166	54,000
69	65 x 124	54,000
70	59 x 124	54,000
72	59 x 124	54,000
73	59 x 124	54,000
74	86 x 119	54,900
75	84 x 126	54,900
76	84 x 110	54,900
77	84 x 116	54,900
78	49 x 115	54,900
79	59 x 115	54,900
80	59 x 114	54,900
81	59 x 114	54,900
82	59 x 113	54,900
83	62 x 102	51,900
84	50 x 102	48,000
85	50 x 102	48,000
86	59 x 102	48,900
87	50 x 109	48,000
88	50 x 109	48,000
89	50 x 109	48,000
90	50 x 109	48,000
91	50 x 109	48,000
92	39 x 125	51,000

93	33 x 125	55,000
94	47 x 118	54,000
95	50 x 102	48,900
96	50 x 102	48,000
97	50 x 102	48,000
98	59 x 102	48,000
99	50 x 110	48,000
100	50 x 110	48,000
101	50 x 110	48,000
102	59 x 102	49,900
103	50 x 102	45,000
104	59 x 102	48,000
105	50 x 102	48,900
106	50 x 109	48,000
107	50 x 109	48,000
108	50 x 109	48,000
109	59 x 102	51,000
110	50 x 102	48,000
111	50 x 102	48,000
112	59 x 102	51,900
113	59 x 102	51,900
114	50 x 102	48,000
115	50 x 102	48,000
116	65 x 114	53,900
117	65 x 114	53,900
118	50 x 102	48,000
119	50 x 102	48,000
120	59 x 102	52,900
BLOCK 127	59 x 102	52,900

TOTAL SALE PRICE

\$6,352,400

(Source: Hamilton Real Estate Board, July 1986)

APPENDIX 3

4	FARM INPUT PRICE INDEX 1981-1988							1981= 100
	(Eastern Canada)							
	1982	1983	1984	1985	1986	1987	1988	
Farm Inputs Total	102.9	104.4	107.1	106.2	108.7	110.9	115.9	
Building Replacement	107.0	118.2	121.6	125.1	131.7	137.6	142.9	
Materials	106.3	116.0	119.6	123.1	131.4	138.2	144.3	
Labour	108.2	122.5	125.8	129.2	132.3	136.4	140.1	
Vehicles	108.9	112.5	116.0	119.3	118.1	117.9	121.8	
Vehicle Operation	112.7	115.7	120.2	126.4	119.7	116.9	120.1	
Vehicle Insurance	130.6	135.1	135.2	139.6	162.0	171.2	182.9	
Pesticides	104.3	105.0	105.9	109.9	118.8	122.3	119.7	
Crop Insurance	110.9	146.3	162.9	174.5	171.6	169.9	169.9	

(Source: BS 62 004 Farm Input Price Index,
3rd Quarter 1988)

Base weighted indexes give estimates of how much it would cost to buy specific items at a specific time compared to what it cost in 1981.

5 FARM OUTPUT PRICE INDEX 1971-1987
(Ontario) 1981=100

	1971	1976	1982	1983	1984	1985	1986	1987
Grapes	51.0	64.0	111.6	123.3	111.8	115.9	111.7	116.7
Peaches	34.0	54.5	107.1	84.3	103.1	91.1	100.2	92.7
Pears	40.6	69.2	102.6	100.1	120.8	130.3	123.5	126.6
Plums	33.1	69.7	126.1	96.1	127.5	216.4	107.7	91.8

(Source: BS 22 003 Fruit and Vegetable Production, December 1988, 1986, 1984, 1982, 1978 and November 29 1972)

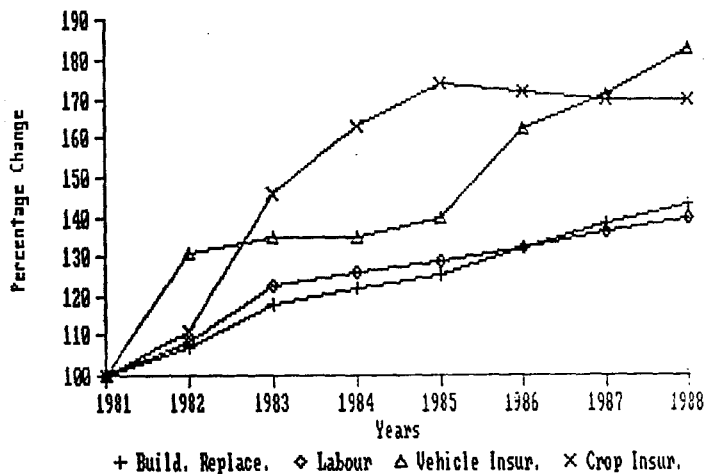
Base weighted indexes give estimates of how much farmers received for specific items at a specific time compared to what they received in 1981.

6 FARM OUTPUT PRICE INDEX 1945-1970
(Ontario) 1945=100

	1950	1955	1960	1965	1970
Grapes	85.5	100.6	114.9	114.9	N/A
Peaches	75.0	75.7	96.5	117.9	109.6
Pears	94.4	74.0	91.7	107.8	129.3
Plums	50.7	49.9	63.0	75.9	105.6

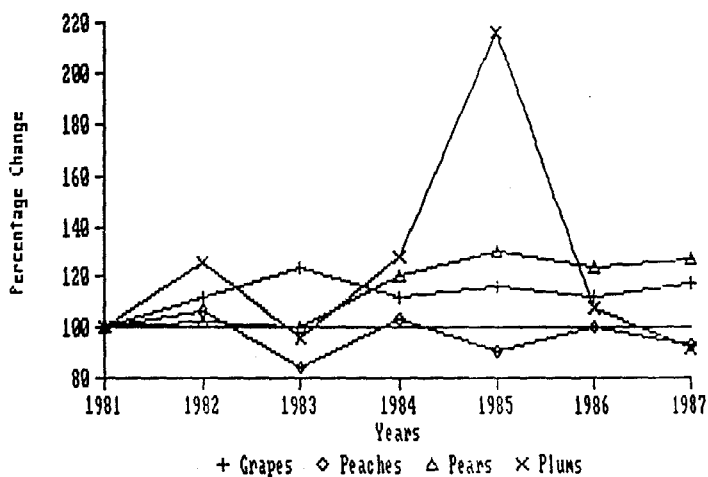
(Sources: BS 21 512 Handbook of Agricultural Statistics Part V, Vegetables and Fruits, pp.79-85
BS 22 003 Fruit and Vegetable Crop Reports, August 18 1970, p.5)

FARM INPUT PRICE INDEXES
1981 TO 1988

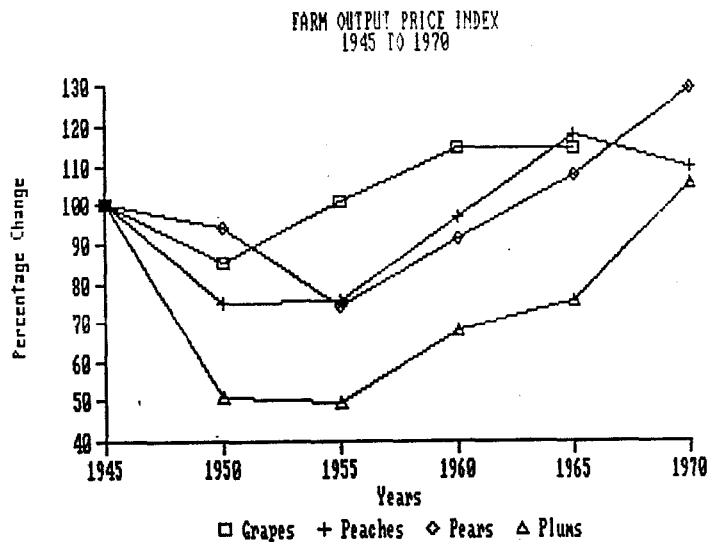


1. Steadily increasing costs for farmers since 1981.

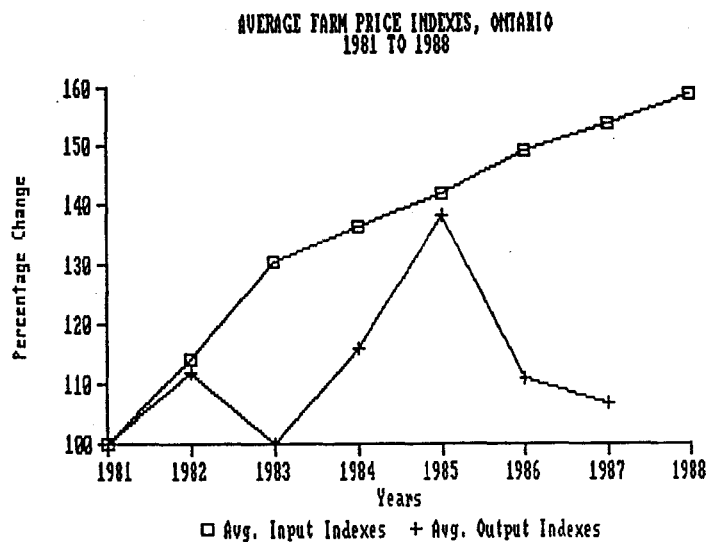
FARM OUTPUT PRICE INDEXES
1981 TO 1987



2. Fluctuating prices received by farmers since 1981. Increases are small and lowering prices are also common.



3 Fluctuating prices received by farmers since 1945.



4 Large gap between farmers costs and prices received. From 1981 average costs increased by more than 55%, while prices for produce increased by less than 10%.

7 FARM OUTPUT PRICES FOR ONTARIO
(Dollars/Ton)

	GRAPES	PEACHES	PEARS	PLUMS
1987	398.15	518.16	442.72	470.70
1986	380.97	559.77	431.87	552.22
1985	395.00	508.87	455.77	1109.40
1984	381.12	576.44	422.47	653.65
1983	420.27	471.21	350.03	492.58
1982	380.30	598.61	358.97	646.52
1981	340.94	558.92	349.79	512.65
1976	218.28	304.61	241.93	357.41
1971	173.88	189.98	141.91	169.80

(Source: BS 22 003 Fruit and Vegetable Production,
Dmber 1988, 1986, 1984, 1982, 1978 and
November 29 1972).



CITY OF STONEY CREEK

GENERAL LAND USE
PLAN

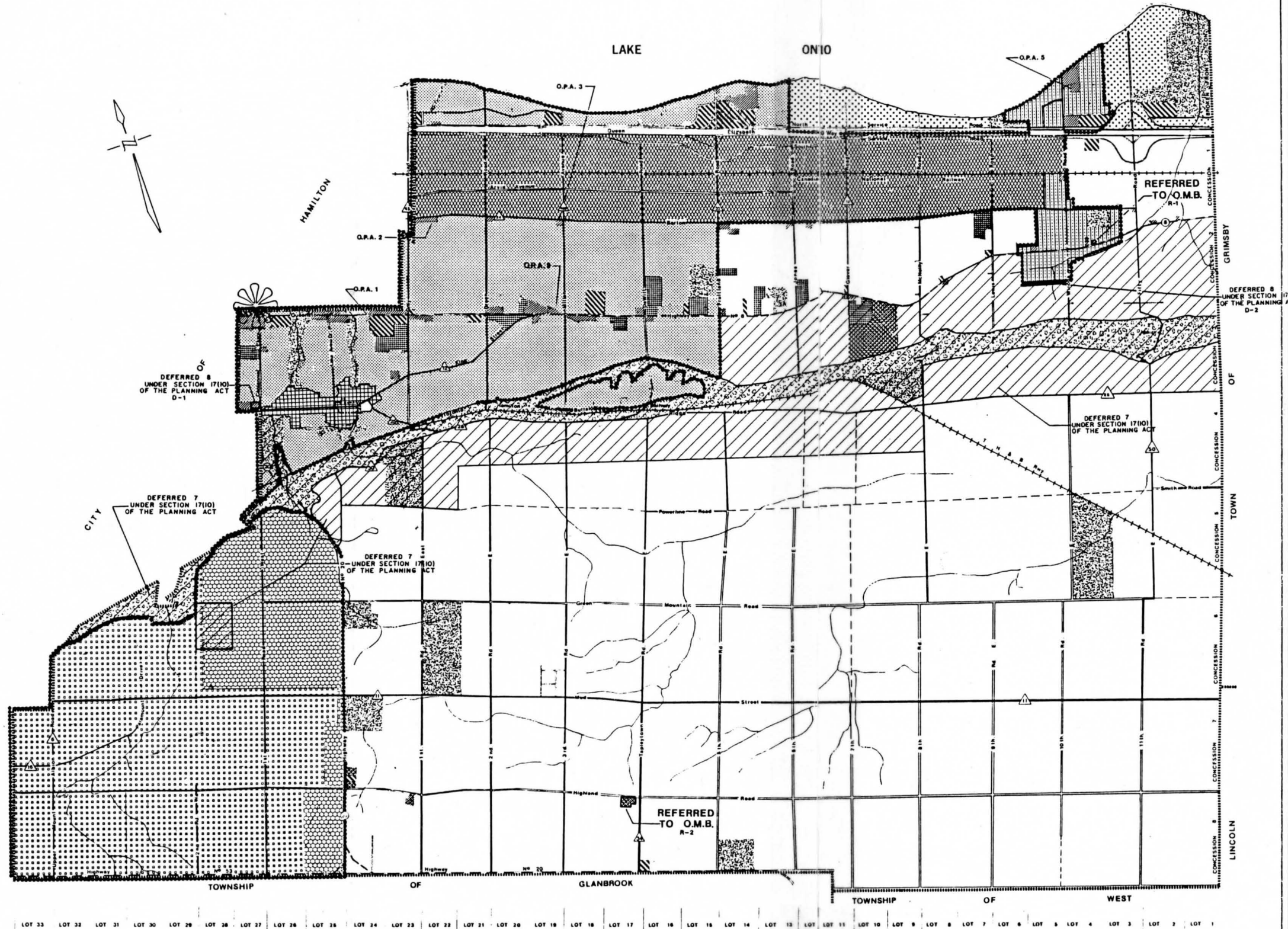
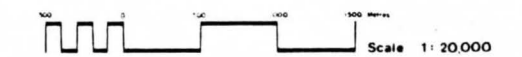
**City Of Stoney Creek
Official Plan
Schedule "A"
General Land Use Plan**

Legend

Land Use Designations

-  Residential
-  Central Area
-  Shopping Centres
-  General Commercial
-  Highway Commercial
-  Industrial Business Park
-  Institutional
-  Winona Urban Community
-  Open Space
-  Escarpment Natural Area
-  Agricultural
-  Rural Lakeshore
-  Rural Industrial
-  Sub-Regional Centre
-  Municipal Boundary
-  Business Improvement Area (B.I.A.)
-  Provincial Highway
-  Regional Road
-  Municipal Road
-  Railway
-  Water Course
-  Urban Policy Areas
-  O.P.A. Official Plan Amendment
-  Special Policy Area "A"
-  Special Policy Area "B"

Approved by the Ministry of Municipal Affairs
on May 12, 1986



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