

UNIT 4
LESSON 3

The Threat of Urbanization

RESOURCES

Background information in section 4.8, pages 4.80 to 4.86 of this unit.

CONCEPT

Urban development is causing a significant and permanent loss of prime agricultural soil in Ontario.

OBJECTIVES

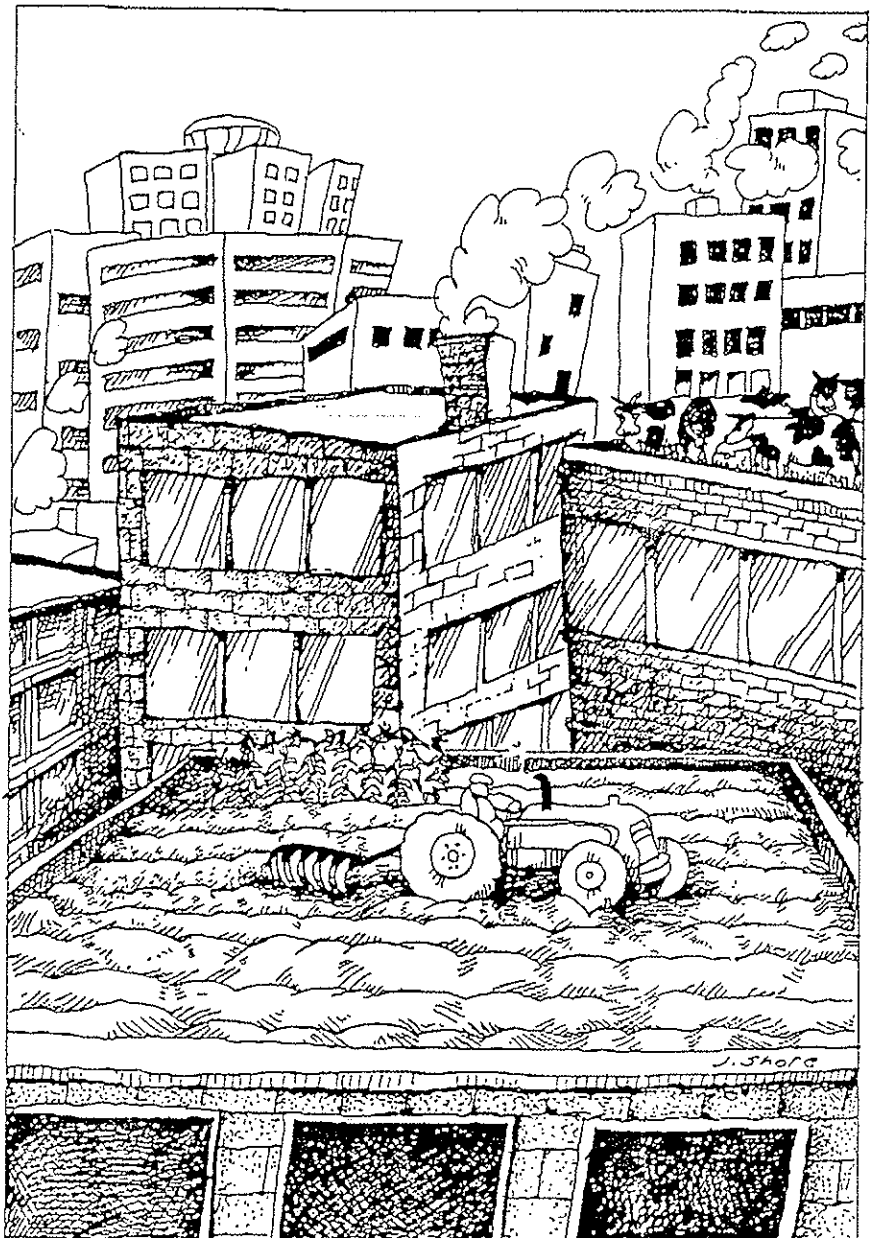
To analyse the expansion of urban area onto prime agricultural land.
To develop a concern for agricultural soil as a limited resource that must be managed wisely.

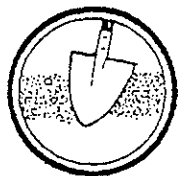
SKILLS

Analyzing, comparing, designing factsheet, dramatizing, interpreting, making graphs and pie charts, predicting, reading, role playing, simulating, summarizing, valuing, writing.

KEY WORDS

bar graph, class 1 agricultural land, line graph, pictograph, pie chart, tender fruits, urban fringe, urbanization





Digging In

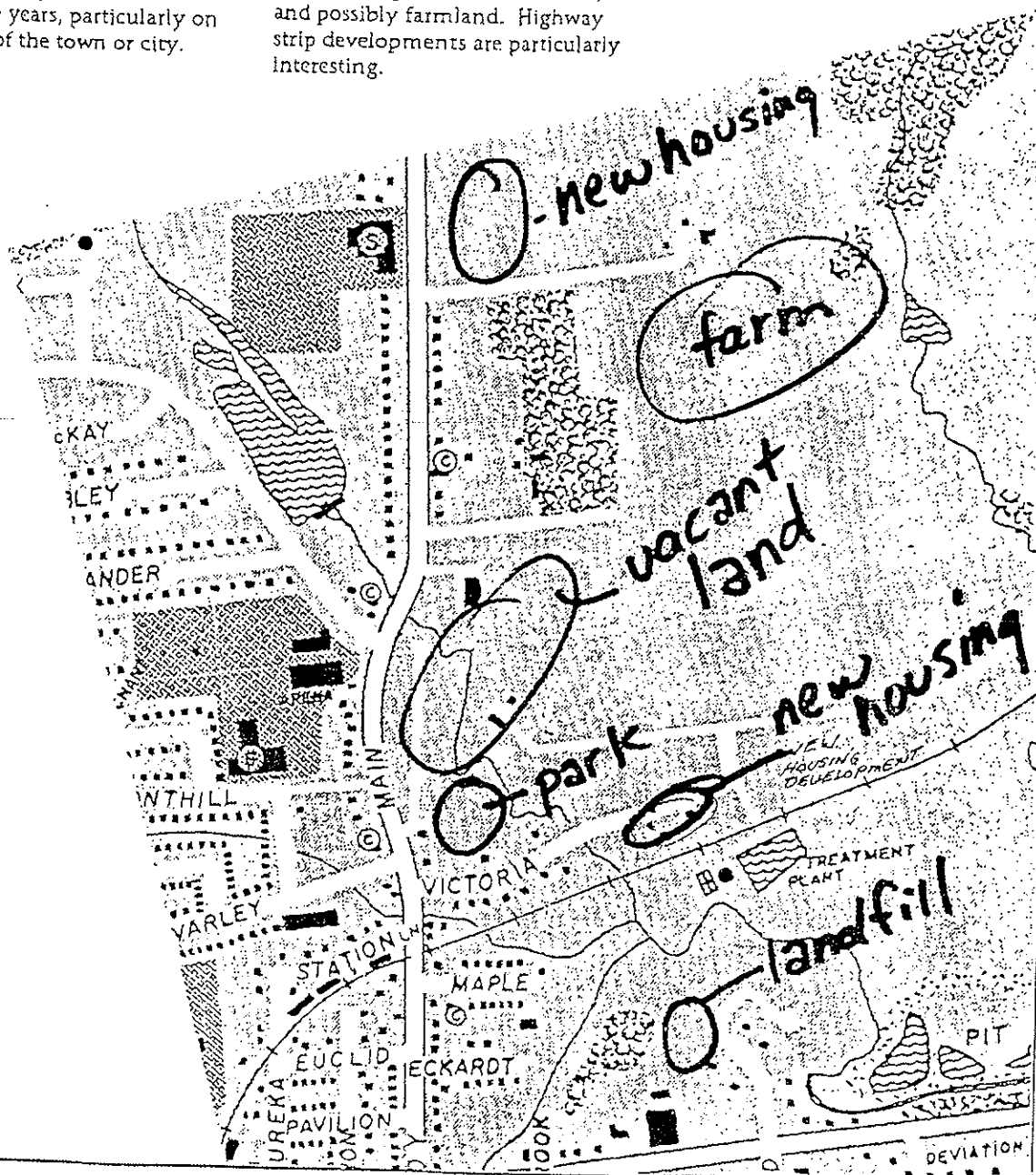
■ Many Canadians can cite from personal experiences, examples of land—once rural or forested that is now urban. Have students interview a parent, neighbour, or senior citizen who has lived in the same town for over 25 years. (In some rapidly growing urban areas e.g. Markham, Kitchener-Waterloo, students could interview someone who has been living there for five years.) Find out some of the changes that have taken place over the years, particularly on the outskirts of the town or city.

■ Invite a township, county or rural planner to your class and have them speak about pressures and conflicts on rural land in the "urban fringe".

■ Enlarge an urban fringe area from a street map of your town or city. Take a walking tour or bus tour to the area and have students mark in how land is being used. Try to choose a fringe where there is both developed and vacant land, and possibly farmland. Highway strip developments are particularly interesting.

■ Show one of the following films:

- Land Use - Huron County
- Land: The Threatened Resource (See A.V. List in resources section)



ACTIVITY 4.7

What's in the News?

TEACHER SUMMARY

Objectives:

To synthesize the information in four newspaper articles.

To examine their values in the context of the issues presented in the articles.

Time required:

Homework assignment

Preparation:

In this activity students read four newspaper articles and answer a series of questions. You may assign the reading as homework, or read the articles aloud in class.

Variation:

Two of the articles highlight a battle that went on in Brampton, Ontario in the mid 1980's. Have students do some research to see what the final decision was in Brampton.

Discussion Questions:

The following is a summary of some of the points raised in the news articles, in response to the student questions. Some questions are phrased to have students interpret what they read and examine their own values, therefore no answers are provided below.

1a) Describe the problems being discussed in the article "Farmland At Risk".

- prime agricultural land is being lost to urban development
- In Ontario, half the 100,000 ha lost between 1976 and 1981 was prime agricultural land.
- The land can be replaced but only by land with shorter growing seasons which are less suitable for agriculture. Lower quality soils are more likely to experience soil degradation, and raise the costs of production.

b) What has British Columbia done to fight the urbanization of farmland in the Okanagan Valley?

British Columbia has established land reserves of lower quality soil around the city of Kelowna. Urban development will occur there.

2a) The articles "Farmland Group in David-Goliath Battle to Halt Brampton Takeover of 7,000 Acres", and "Ontario Destroying Farmland, Critics say" describe the same issue as above, but at a local level. Summarize the issue in your own words.

- Brampton proposes to designate 7,000 acres of Farmland for urban development
- they propose the population will grow to 344,000 by the year 2005
- 4,000 acres will be residential development
- most of the land in Brampton consists of Class 1 agricultural soil
- b) Describe at least two viewpoints represented in these two articles.
 - Brampton City, Peel Region, developers, businessmen: want development and growth; predict population growth to 344,000; short term view of 25 years
 - APPEAL: taking long term view of future generations; oppose development of 7,000 acres; believe Ontario can't afford to pave over prime agricultural land; we will eventually have a food shortage
 - OMAF: supports the development of 4,000 acres for residential use; opposes zoning of land in N.E. for 2 acre lots, and land in N.W. as industrial

c) What are people in the Region of Peel doing to fight urbanization in Brampton?

- they have formed a group called APPEAL to oppose the proposed urban development of 7,000 acres of farm land in the city

3. How do you feel about Donald Sunn's statement in "Ontario Destroying Farmland, Critics Say", that the development of 4,000 acres over 25 years is reasonable?

4. If the problem described in all the articles persists, what do you think will happen? Do you think that you will be affected? Why or why not and how?

- future food storage
- our dependency on importing food will increase

5. Who is responsible for making the final decision in Brampton? What seems to be their values and attitudes? What do you think the final decision will be?

- the Ontario Municipal Board (OMB)

6. If you were making a decision on the situation in Brampton, what would you do? Outline the steps you would go through to come to a final decision.

ACTIVITY 4.7

What's in the News?

STUDENT HANDOUT

Introduction:

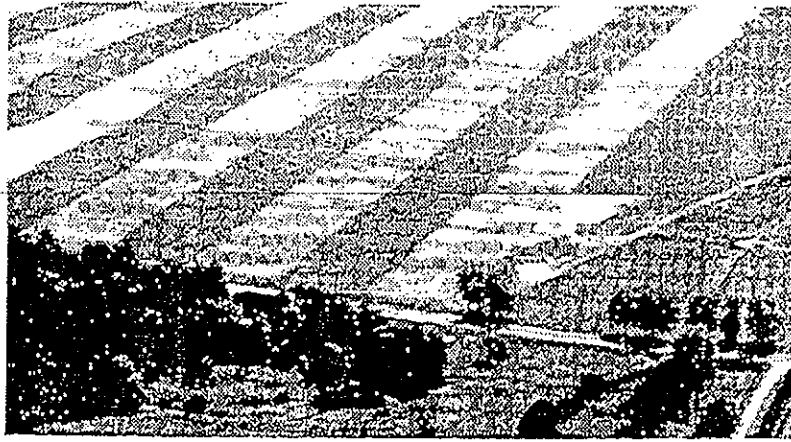
Attached are four articles. Read the articles and answer the following questions.

Questions:

- 1a) Describe the problem being discussed in the article "Farmland At Risk"?
- b) What has British Columbia done to fight the urbanization of farmland in the Okanagan Valley?
- 2a) The articles "Farmland Group in David-Goliath Battle to Halt Brampton Takeover of 7,000 Acres" and "Ontario Destroying Farmland, Critics Say" describe the same issue as above, but at a local level. Summarize the issue in your own words.
- b) Describe at least two viewpoints represented in these two articles?
- c) What are people in the Region of Peel doing to fight urbanization in Brampton?
3. How do you feel about Donald Dunn's statement in "Ontario Destroying Farmland, Critics Say" that the development of 4,000 acres over 25 years seems reasonable?
4. If the problem described in all the articles persists, what do you think will happen? Do you think that you will be affected? Why or why not and how?
5. Who is responsible for making the final decision in Brampton? What seem to be their values and attitudes? What do you think the final decision will be?
6. If you were making a decision on the situation in Brampton, what would you do? Outline the steps you would go through to come to a final decision?



Ontario Ministry of Agriculture and Food



Farmland at risk

The Globe and Mail
Tuesday, April 8, 1986

Environment Canada is on the land watch. It keeps track as Canada's prime agricultural land disappears or is hemmed in by urban development, and duly tells us how quickly our farmland is disappearing. It is not a pretty record.

Recent figures cover the years 1976 through 1981. Almost 100,000 hectares - about the size of Toronto - were converted to urban uses, and half that land qualified as prime farmland. In a way, this was good news; the proportion of prime farmland taken out of action was lower than it had been between 1966 and 1976. But the continued disappearance of that land is no less alarming. Predictably, the population of the cities grew faster than that of the towns from 1976 to 1981, and the cities might have been expected to encroach on a similar proportion of rural land. But in fact, of the 70 urban centres studied, the smaller ones were the greediest. The figures are daunting, but important: for every increase of 1,000 residents, cities with more than 500,000 people absorbed 61 hectares of rural land. In contrast, towns with fewer than 50,000 people absorbed 341 hectares. The statistics do not say much for the efficiency of the towns' land use.

What does this mean for agriculture? There are about 46 million hectares of crop-producing lands in Canada (classes 1 to 3), but only 4 million are best suited to farmland (class 1). Half the class 1 land is in Ontario, and 88 per cent of the rest is in Saskatchewan and Alberta. Cities and towns tend to sit disproportionately on the best land, and the hectares that have somehow escaped are under sustained pressure for urban development.

"The question is," a recent fact sheet from Environment Canada's Lands Directorate asks, "can agricultural production lost from these prime lands be replaced by opening up new agricultural lands in more remote areas...?"

Yes and no. The prime farmland absorbed between 1976 and 1981 enjoys a fairly good climate - a rating of 2 on a scale that ranges from a low of 1 (in northern areas) to a high of 3 (southwestern Ontario). To replace land rated as 2 with land rated as 1 would require about twice as many hectares, and there are only three regions that offer long-term potential for new agricultural development: the Peace River district of northern Alberta and British Columbia, Ontario's northern clay belt and scattered land in the Maritime provinces. Even here, the types of agricultural production would be limited by the shortened growing period, and there would be increased costs associated with clearing the land and paying a higher price for energy and transportation. The fact sheet considers the alternative of making more intensive use of existing prime land, but warns that this approach would increase the risk of land degradation, as well as raising the costs of production.

In other words, the prime farmland we have should be treated as found gold, and not recklessly paved over to permit development that could easily be directed elsewhere. Paul Rump of Environment Canada points approvingly to British Columbia's establishment of land reserves around the City of Kelowna in the Okanagan Valley - a system that will see urban development take place on land of poorer quality. If Canada expects to keep feeding itself, municipalities and provinces will have to take similar responsibility for steering around the country's most productive land.

Farmland group in 'David-Goliath' battle to halt Brampton takeover of 7,000 acres

BY LYNN MOORE
Toronto Star - November 1, 1984

A farmland preservation group began its "David and Goliath" battle yesterday at an Ontario Municipal Board hearing in Brampton that will determine how "one of Canada's fastest growing" cities enters the 21st century.

The Association of Peel People Evaluating Agricultural Land (APPEAL) hopes to block Brampton's official plan, which would designate 7,000 acres of farmland for residential, commercial and industrial development.

Brampton hopes the plan will help it shed its "bedroom community" image by celebrating the year 2005 with a population of 344,000 and industrial base providing 170,000 jobs.

At yesterday's hearing, Brampton planning director John Marshall testified that the city's boundaries must expand to cover the agricultural land if the city is to meet its "realistic and obtainable" goals.

But APPEAL chairman Verna Flowers says Ontario can't afford to "pave over" highly productive farmland, especially when it is close to heavily populated areas such as Toronto.

However, Brampton farmers are not included in APPEAL's list of supporters and the Ministry of Agriculture and Food (OMAF) has indicated it won't oppose the residential development of 4,000 acres of the contested land if it is phased in so farming can continue there as long as possible.

But the ministry opposes the rezoning of farmland in northwest Brampton for industrial use and the rezoning of farmland in northeast Brampton for homes on two acre lots.

The Region of Peel and developers, businessmen and farmers who own the contested land will support the city before the three-member panel that began hearing evidence yesterday.

Among the lawyers representing owners of the disputed land are: Metro Toronto police commissioner Jane Pepino, Ron Webb, former law partner of Premier Bill Davis, and Eddie Goodman.

(Pepino represents five land owners that want land in northwest Brampton rezoned industrial. They are: Roundtree Farms Ltd., Pioneer Lodge Farms, Pietro DiBlasio' Rachtel Development Ltd. and Mahort Investment Co. Ltd.)

Webb, assisted by Neil Davis, the premier's son, represents Great L Developments Inc. and CERTO Developments Ltd., which want about 174 acres in the Snelgrove area rezoned a "special study area."

Goodman is one of three lawyers representing Ronto Development Corp., which owns about 1,000 acres of the disputed land.)

APPEAL, which has about 160 members and a petition in support of their cause said to be signed by about 700 people, is represented by Grace Paterson. She is a member of the Canadian Environmental Law Association.

Soil and population experts and planners are expected to be called as witnesses by both sides in the dispute during the hearing that is scheduled to last 12 weeks.

Flowers said her group has yet to find one farmer who will tell the hearing he'd rather farm his land than sell it to developers.

"You can't expect a farmer not to want to sell his land when he has problems making a living but if we let the land go while waiting for all the farmers' problems to be solved, then we'll have a crisis, a food shortage," she said.

Every year Ontario imports more food to satisfy its appetite and if the next generation's stock of farmland is depleted, that dependency will worsen, she said.

"It has to be stressed that we are taking a long-term view. We have to leave some choices for our grandchildren. Once farm land is gone, it's gone," she said.

Elbert van Donkersgoed, chairman of the Ontario Coalition to Preserve Foodland, supports APPEAL and is expected to address the hearing. He said farmers aren't receiving enough support from the government and easily turn to land speculation.

"Much of that land (in Brampton) has already gone out of the control of farmers and into the hands of speculators," he said.

ONTARIO DESTROYING FARMLAND, CRITICS SAY

BY ROBERT STEPHENS

The Global and Mail - January 6, 1986

The Conservative Government of Ontario is presiding over the destruction of thousands of acres of prime agricultural land, and no where is the loss more evident than in Premier William Davis's own backyard of Brampton, critics and environmentalists say.

Earl Cowan, a spokesman for the Association of Peel People Evaluating Agricultural Land, said in an interview that the group is opposed to the development of about 7,000 acres of farm land proposed in the Brampton Official Plan.

Ontario Municipal Affairs and Housing Minister Claude Bennett, whose ministry has been studying the plan since late 1980, decided this week to refer the matter to the Ontario Municipal Board for adjudication.

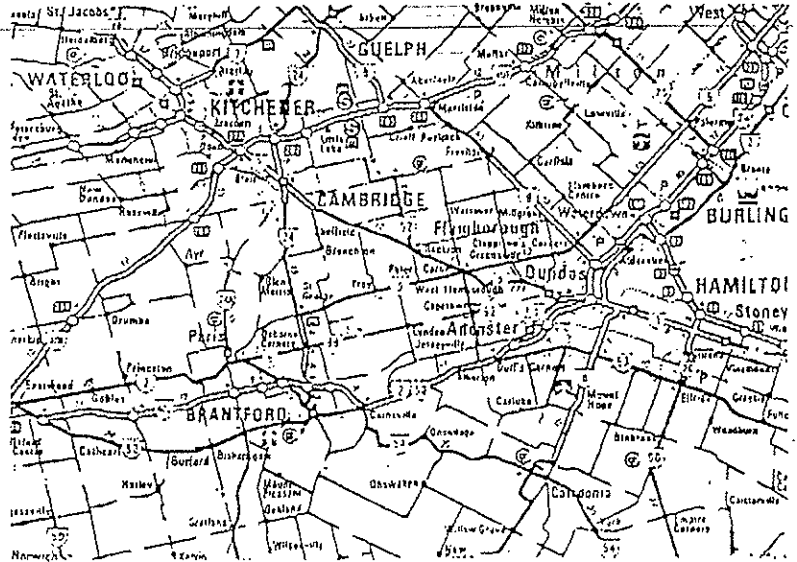
"We're up against big money, and it's going to be a tough fight," Mr. Cowan said yesterday. "The OMB tends to side with the developers. Its officers are appointed by the Government, they're loyal Conservatives, and they're aware that the Government wants Brampton to grow."

He said Neil Davis, the Premier's son, and Ron Webb, the Premier's former law partner, represent one of the major developers in the project. He added that the law firm of Goodman and Goodman, whose senior partner is a long-time friend of the Premier's, also represents development interests. It's the same thing as having Bill Davis's personal stamp of approval on the plan," Mr. Cowan said.

Verna Flowers, chairman of the Peel People association, which is known as APPEAL, said the fact that such large-scale development is to take place in Mr. Davis's own riding indicates the Government's lack of commitment to foodland preservation.

"Mr. Davis's riding should be an example of intelligent land-use planning," Mrs. Flowers said. "Instead, city council and the province seem eager to destroy some of the best farmland in Canada."

The City of Brampton covers about 66,000 acres. Mr. Cowan said about 16,000 acres were approved for development between 1971 and 1982, and less than half of the city's total acreage will be left for agriculture if the Official Plan is approved.



Mrs. Flowers said most of the land in Brampton is Class 1 - "highly productive land that we can ill-afford to lose if we want to continue to feed ourselves in this province."

Ontario Liberal Leader David Peterson said in an interview yesterday that population estimates in the Brampton Official Plan were revised upward from 260,000 to 344,000 after city council members met with the developers in 1979 and agreed to include another 4,000 acres for development.

Brampton's population now is about 165,000.

"There are so many things that smack of political influence in the case," Mr. Peterson said. "What we need is an open, objective hearing. I don't know if we'll get it from the OMB. I've seen the old-boy network in action too many times in this province to have any confidence in the system."

He also criticized the province's foodland guidelines, introduced in 1978, as a "toothless" policy that will do nothing to halt the disappearance of agricultural land in Ontario. The guidelines set out the Government's land-use policies but are not legally binding on municipalities.

Donald Dunn, foodland preservation director with the Ontario Ministry of Agriculture and Food (OMAF), said the ministry supports the development of the 4,000-acre block of land. He said "that amount seems reasonable over 25 years."

But Mr. Dunn acknowledged that his ministry did not attempt to evaluate the population estimates used to justify the additional development. "We're not in the demographics business," he said. "We have to rely on the city council's plan."

Ontario Agriculture Minister Dennis Timbrell said yesterday that his ministry has insisted on "a phasing scheme" so that development can be halted if the population growth does not materialize.

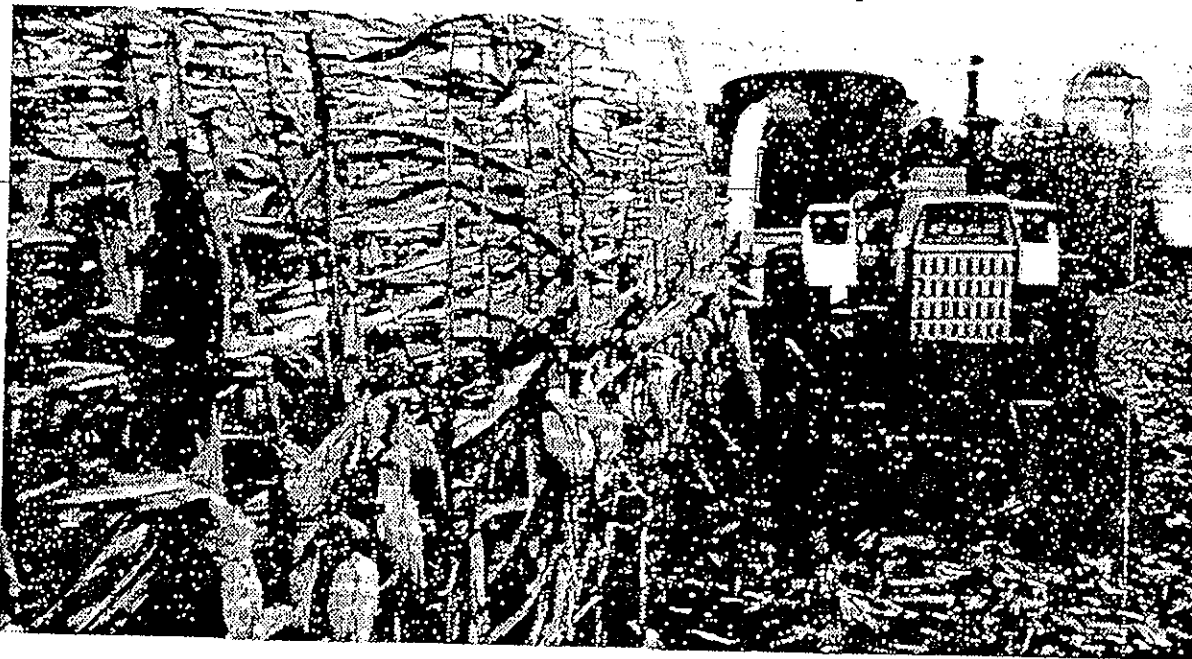
But Mr. Peterson said that the criteria for this staged development has never been defined, and thus land may be developed at any time under the plan.

Melvin Swart, agriculture critic for the Ontario New Democratic Party, said the projected population growth "will never happen... The developers always inflate the numbers to support their proposals."

Mr. Swart criticized the Conservative Government for failing to implement a comprehensive, province-wide land-use plan. He said such a plan would encourage industrial development in areas less suited to farming, and thus population growth in those centres would not result in the loss of prime agricultural land.

"It's inexcusable to use the land around Brampton for urban development," he said.

We need all the farm land we can keep



Ontario Ministry of Agriculture and Food

BY JIM ROMAHN
Kitchener-Waterloo Record
August 3, 1982

Provincial and federal governments should take stronger steps to conserve prime farm land, according to a confidential policy document prepared for Canada's agriculture ministers for a meeting earlier this month.

"A concerted and co-ordinated effort towards the conservation of good-quality agricultural land does not yet exist in Canada, but is necessary if the goal of the Agri-Food Strategy for Canada is to be met," says the policy paper prepared by the New Brunswick department of agriculture and rural development.

The provinces hold the political power to control land use, but in most cases they have delegated that power to the municipal level where "there has generally been a laissez-faire attitude towards agricultural land use," the policy paper says.

In a review of provincial policies, the paper says Ontario's system of foodland guidelines is only "marginally successful" and concludes that "generally, farmland is not well protected in Canada, particularly near urban centres where conversion pressures are the greatest."

Raymond Scovil, deputy minister of agriculture in New Brunswick, sent a copy of the paper, clearly marked "confidential," to The Record in response to a telephone request.

An official in Alberta did likewise for another confidential document on the conservation and development of land and water resources, also discussed at the same meeting of agriculture ministers at Halifax.

The New Brunswick paper begins by reviewing Global 2000 predictions that world food production will increase by 90 per cent between 1970 and 2000, that real food prices will double, but that arable farm land will increase by only four per cent.

More oil will be needed to produce those higher yields, said the Global 2000 report for the U.S. president.

The same report warned of "serious world-wide deterioration of agricultural soils with the spread of desert-like conditions." The New Brunswick report says "there will likely be increasing pressures on Canada for ever greater supplies to the rest of the world for basic resources such as food."

"This will place increasing stress on land and water resources in this country."

In this context the paper draws attention to the lack of a concerted and co-ordinated effort to conserve Canada's farm land.

Less than eight per cent of Canada's land can be cultivated and "only slightly over half of that is above marginal capability for agriculture," the report says.

Only half of one per cent, or 4.2 million hectares, is Class 1 farm land. Only 45 million hectares, or five per cent of Canada's land, is suitable for agricultural production.

The Alberta report notes that 60 per cent of that is within 160 kilometres of Canada's 23 largest cities and that "the loss of agricultural land (to urban development) is also a national problem" because 57,000 hectares of good farm land were lost between 1966 and 1976, with 45 per cent of that loss in Ontario.

Both reports note that there is more land that could be broken for agriculture, but it's not nearly as productive as the best land being taken by urban development.

For example, much of the unbroken land could produce forages for livestock "but they are highly susceptible to failure when used for food crop agriculture," the New Brunswick report says.

The Alberta report notes that some of our existing farm land is deteriorating through erosion, salinization, acidification and the loss of organic matter.

"Accurate information on erosion and degradation is largely unavailable, however," the Alberta report says.

(Other studies indicate that as Ontario agriculture has tended towards more corn and soybean production, soil erosion has become a major problem. It's estimated that for every bushel of corn harvested, a bushel of top soil is lost to erosion.)

The New Brunswick report says that even though statistics indicate more land is being cropped now, most of the land lost was highly productive and most of the land added produces less so "the over-all productive capacity has declined."

"Urbanization and its associated effects, such as transportation and speculation, has been the primary cause of land loss," the report says.

ACTIVITY 4.8

Presenting the Facts

TEACHER SUMMARY

Objective:

To prepare a fact sheet on the loss of prime agricultural land to urbanization.

Time Required:

30 min class discussion
homework assignment

Materials:

- student handouts
- handout "Preparing Graphs"
- graph paper
- unlined paper
- coloured pencils
- ruler
- fine tipped markers

(see pages 4.15 to 4.18, Lesson 1)

Preparation:

In this activity, students will prepare fact sheets on the loss of prime agricultural land to urbanization.

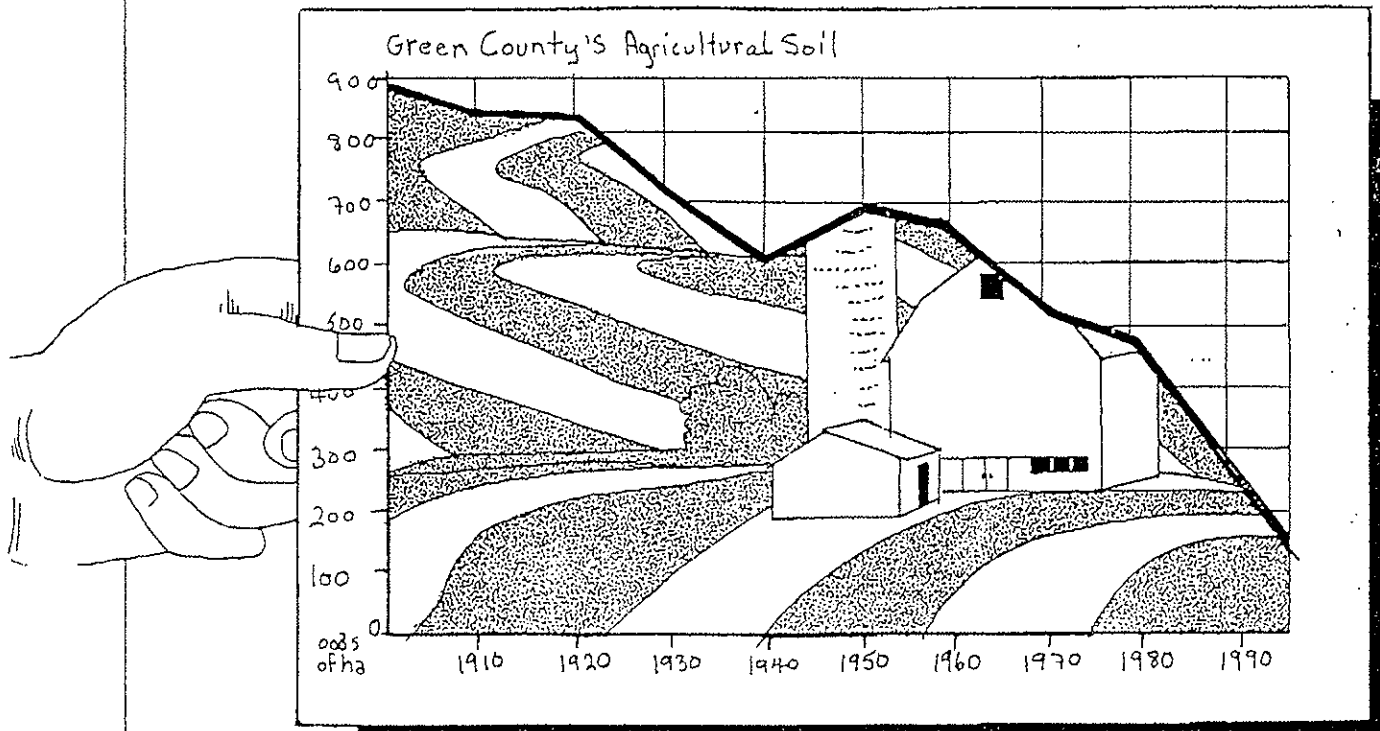
First introduce and discuss the background information in section 4.8 pages 4.80 to 4.86 of this unit in a way which will be relevant to your students. Make transparencies of maps 1 to 4 in the background information. You can overlay the maps to illustrate how urbanization is affecting prime agricultural land.

Second, provide each student with a handout for the activity. The handout includes tables of information and directions on how to draw pie charts, line graphs, pictographs and bar graphs. Students should use at least three of these graphic techniques to visually present the facts.

Variations:

If students have access to a computer and a good spread sheet program, they could try a variety of things with the information in the tables.

Have the students prepare the fact sheets on bristol boards. Use them in an awareness day on soil.



ACTIVITY 4.8

Presenting the Facts

STUDENT HANDOUT

Purpose:

To put together a fact sheet on the loss of prime agricultural soils to urbanization.

Materials:

- tables
- handout "Preparing Graphs"
- graph paper
- unlined paper
- coloured pencils
- protractor
- ruler
- fine tipped markers

Procedure:

Using the information presented by your teacher and the attached tables, design and prepare a fact sheet on the loss of prime agricultural soils to urbanization. A fact sheet, is used to clearly and concisely outline an issue and present the facts. It is normally one page in length (double sided if necessary).

Diagrams and pictures can be used to break up writing, and make a fact sheet more enjoyable to read.

Use the handout "Preparing Graphs" to construct bar graphs, pie charts or any other visual tools for your fact sheet. Use at least three visual diagrams on your fact sheet.

Before you begin, decide what age group your fact sheet will be aimed at. (i.e. adults, 8 year olds.). Your "target group" or audience will influence the level of writing you choose to use.

Table 1

**Hectares of Class 1
Agricultural Soil by Province/Territory**

Province	Class 1
Newfoundland	0
Pr. Edward Is.	0
Nova Scotia	0
New Brunswick	0
Quebec	19 556
Ontario	2 156 752
Manitoba	162 501
Saskatchewan	99 691
Alberta	786 927
British Columbia	21 057
NWT and Yukon	n/a

Adapted from: Lands Directorate, Agricultural Land Use Change in Canada: Processes and Consequences. p. 4.

Table 2

Direct and Indirect Consumption of Land in Axis for Urban Purposes (000s of ha)

	1971	1981	2001
Direct	364	438	532
Indirect	1 864	2 218	2 792
Total	2 228	2 656	3 324

Adapted from: Lands Directorate, Land In Canada's Urban Heartland, p. 80.

SOIL CONSERVATION KIT

SOIL AT RISK

Table 3

Percent of Axis Population and Area Defined as Urban:
1921, 1951, 1971, and 1981

Date	Area %	Population %
1921	4.2	50.8
1951	7.7	67.7
1971	12.7	78.4
1981	16.1	81.1
2001 (Forecast)	18.9	84.3

Adapted From: Lands Directorate, Land in Canada's Urban Heartland, p. 44.

Table 4

Axis Population (000s) and Area (km²) Defined as Urban,
Semi-urban, Rural, and Sparsely Populated 1921, 1951, 1971, 1981,
and Forecast for 2001

Year	Sparse 0-10	Rural 10-25	Semi-Urban 25-60	Urban 60+
1921				
Area: Axis	71 794	76 900	19 516	7 280
Pop.: Number	394	1 205	657	2 330
Percent	8.6	26.3	14.3	50.8
1951				
Area: Axis	71 001	65 246	25 712	13 531
Pop.: Number	388	1 029	932	4 917
Percent	5.3	14.2	12.8	67.7
1971				
Area: Axis	84 249	58 890	30 066	22 285
Pop.: Number	316	998	1 256	9 350
Percent	2.7	8.4	10.5	78.4
1981				
Area: Axis	60 470	54 798	33 659	26 563
Pop.: Number	302	930	1 259	10 703
Percent	2.3	7.0	9.6	81.1
2001				
Area: Axis	56 762	53 484	31 995	33 249
Pop.: Number	292	915	1 146	12 637
Percent	2.0	6.1	7.6	84.3

Adapted From: Lands Directorate, Land in Canada's Urban Heartland, p. 78.

ACTIVITY 4.9

Meeting at the Townhall

TEACHER SUMMARY

Objectives:

- To simulate a town hall hearing on a local land use conflict/issue.
- To realize the complexity of land use conflicts and the difficulty of coming to a decision.

Materials:

- role cards
- flip chart paper or blackboard
- name tags

Time Required:

1.5 hr in class debate

Preparation:

In this activity you will be setting up your classroom as a town hall where members of the public and various organizations have come to a hearing about a local land use conflict. You are the Group Leader or Facilitator for the activity. Your role before the debate is to provide students with their role cards and any other background material they will need to develop their respective positions as politicians, farmers, government representatives, etc. Glue the role cards to cardboard and laminate them for repeat use.

During the debate, you are responsible for setting a format and ensuring students keep within time limitations. A tight format is necessary to keep the proceedings under control. The pressure of a limited amount of time to be heard is also realistic of most hearings.

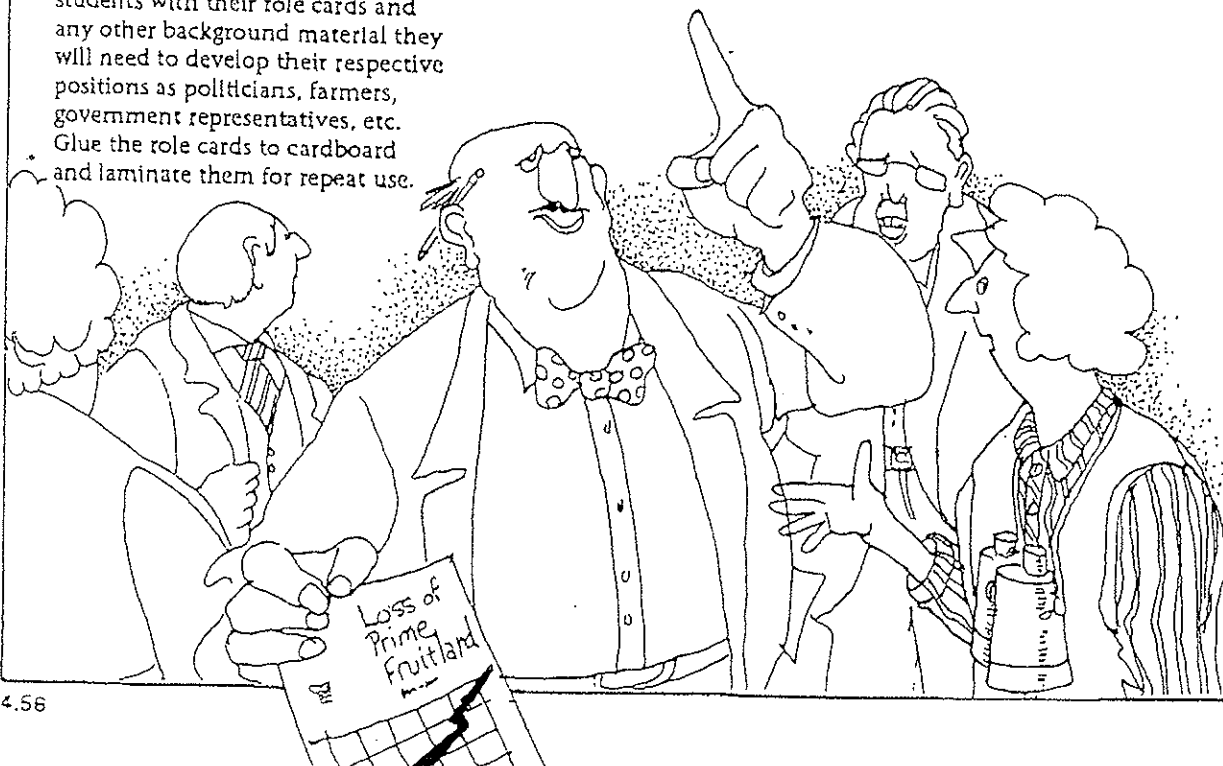
Set up your classroom so groups can sit in small circles during the debate, and everyone can sit in a large circle for the follow-up discussion. This will encourage more participation.

Try to encourage students to dress according to their roles. Also provide name tags for each student. The more props you use, the more realistic the atmosphere will be; and the easier it will be for students to dramatize their roles.

Following the debate, ask all the students to drop their roles and sit back. Lead a discussion as outlined in the suggested format.

The Issue

A developer has approached a peach farmer in the Niagara Fruit Belt region of Southern Ontario to buy his or her land and build a subdivision on the outskirts of the city. The parcel of the land is 67 hectares in size. The soil is rated class 1 for agriculture which means it is the highest quality of land in Canada for agriculture. It is deep, well drained and lightly textured. These three qualities, along with the moderate climate make the land and other land in the region ideal for the production of tender fruits. But, between 1951 and 1971, 17 percent of the land in the fruit belt was lost to urban activities. This situation continues to threaten the productivity of the farmland which is collectively responsible for the production of over 67 percent of Canada's tender fruit.



The peach farmer is willing to sell. The developer is offering her \$1,670,000. This is an attractive offer. Financial security is a feeling that she has never had in all her years of family farming. Besides, the city has been growing up around the property. Land regulations and other urban pressures are beginning to restrict operations in terms of when she can spray, and where she can drive her equipment.

Local politicians support the subdivision since there is a shortage of housing in the city. Some of the townspeople are also in favour of the development since it will mean more economic prosperity for the community and their local businesses. Other townspeople side with some university professors and a government representative from the Ministry of Agriculture and Food. The group of university professors who have been studying the loss of fruitland to urban pressures are against the proposal. Another subdivision will add to the continuing problem of a diminishing agricultural resource base. The representative from OMAF is against the proposal for the same reasons. The objections of some townspeople as well as these two groups has brought the issue of the subdivision to a public hearing. You are about to become part of this hearing.

Suggested Roles:

- Developers
- Local Politicians
- Government Representative from Ontario Ministry of Agriculture and Food
- Journalist
- Townspeople A (for)
- Townspeople B. (Against)
- Owner of the Land
- University Professors

5. Each group is given time to ask their 2 questions. Responses to the questions are limited to two minutes. Rebuttals to the responses are limited to one minute.

6. Ten minutes is provided for each group to formulate a closing statement of 2 min in length.

7. Facilitator Wrap-up. No one wins! Everyone drops their role and facilitator leads a discussion:

- How did you feel in your respective roles?
- What did you learn?
- How realistic was this debate? How could we make it more realistic?
- How easy is it to reach a decision?
- What do you think the final decision should be?

Suggested Format and Procedure

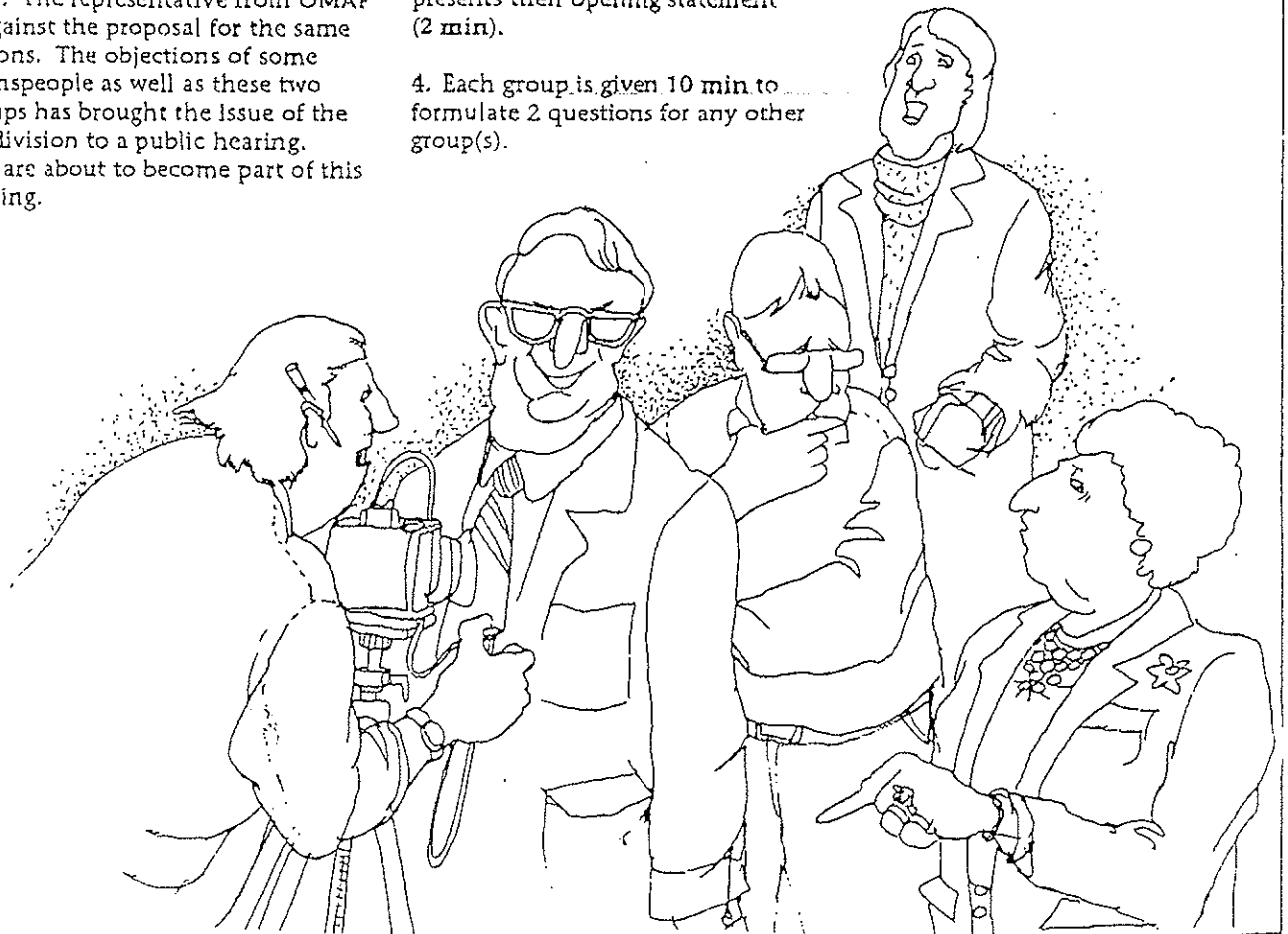
1. Several days before the debate, break the class into seven groups and assign each group to one of the suggested roles. Their assignment is to study their position using their role card and any other information they can gather. They must then prepare a 2 min opening statement for the debate.

Day of the debate

2. Introduction by the Facilitator including welcome, explanation of facilitator role, procedure and acceptable behaviour.

3. One person from each group presents their opening statement (2 min).

4. Each group is given 10 min to formulate 2 questions for any other group(s).



ROLE CARDS

Developer

- You are in the business of building houses.
- You have made a proposal to buy 67 hectares of farm land to build a subdivision.
- You will cut down the peach trees and other trees on the property and complete the building in three phases, over a three year period.
- Houses are in big demand so they should sell very well.
- The farmer is willing to sell.
- You have offered the farmer \$1,670,000.

Landowner

- You are operating a family peach farm. You have farmed all your life, but a developer has offered you \$1,670,000 for your 67 hectares of land.
- If you sell, you could buy a country lot, build a new home, and still have enough money to retire or open a small business on the side.
- Farming has become harder and harder over the last 10 years. Your money is always tied up and invested in the farm. You've never really had any financial security.
- There are a lot of pressures: increasing taxes, regulations limiting when you can spray or where you can take your large farm machinery.

Townpeople A

- You are the citizens who support the development of a subdivision.
- The housing will attract more business to your businesses.
- Construction workers want the development because it will provide them with three years of guaranteed work. Their families often experience hardship during the months when it is impossible to find work.
- Some of you are living in the city centre and you would like to sell and move to a suburban area.

Local Politician

- Houses are needed so you support the development of a subdivision.
- More houses will attract more people to the city and provide more business for store owners.
- Urban growth is essential; we have housing requirements.
- Construction jobs will be created.
- This subdivision will improve services (water, shopping) to the farmers.
- The benefits of this proposal outweigh the drawbacks.
- An election is coming up next year so you want to please the townspeople.

Townpeople B

- You are the townspeople who are against the proposal for a subdivision.
- You love the rural farmland around the city. You enjoy the peach blossoms every spring and always take your kids to the Blossom Festival.
- Others of you realize that if you continue to lose the rural fruit farms, eventually you will be spending a lot more money for your food.
- Some of you are birdwatchers and naturalists. You like ambling along this country road in the evening to do some birdwatching.
- Agricultural land is habitat for wildlife and is scenic open space.

University Professor/Government Agricultural Rep

- You are aware of the decreasing amount of prime fruitland in the region as a result of urban development.
- Although the amount of farmland in Niagara is small on a provincial and national scale, it is significant. Only the Okanagan Valley in B.C. and here can support the growth of tender fruits.
- 67 percent of our fruit comes from the Niagara region.
- Between 1961 and 1976 there was a 22 percent decline in the number of tree fruit farms and a 42 percent decline in the total number of hectares planted in tree fruits.
- 84 percent of the land lost was class 1, 2 and 3.
- Eventually, if the trend of land loss continues, we will be spending more money for our fruit.
- The climate and soils are what makes the area ideal for fruit trees.

Journalist

- You are trying to get all the facts to write a news story.
- Your role is to ask questions of as many groups as possible to try to write an unbiased story for the local newspaper.
- However, you are aware that there is a regional plan in place which is supposed to protect high quality fruitland. Two years ago the "Smith" property got through the zoning restrictions of the plan and was bought and developed for urban activities.
- You may use the blackboard at designated times during the hearing to write headlines out in bold.

ACTIVITY 4.9

Meeting at Townhall

STUDENT HANDOUT

Purpose:

To role play an individual attending a public hearing for a proposal to build a subdivision.

Background/Procedure

A developer has approached a peach farmer in the Niagara Fruit Belt region of Southern Ontario to buy her land and build a subdivision on the outskirts of the city. The parcel of the land is 67 hectares in size. The soil is rated class 1 for agriculture which means it is some of the highest quality of land in Canada for agriculture. It is deep, well drained and lightly textured. These three qualities, along with the moderate climate make the land and other land in the region ideal for the production of tender fruits. But, between 1951 and 1971, 17 percent of the land in the fruit belt was lost to urban activities. This situation continues to threaten the productivity of the farmland which is collectively responsible for the production of over 67 percent of Canada's tender fruit.

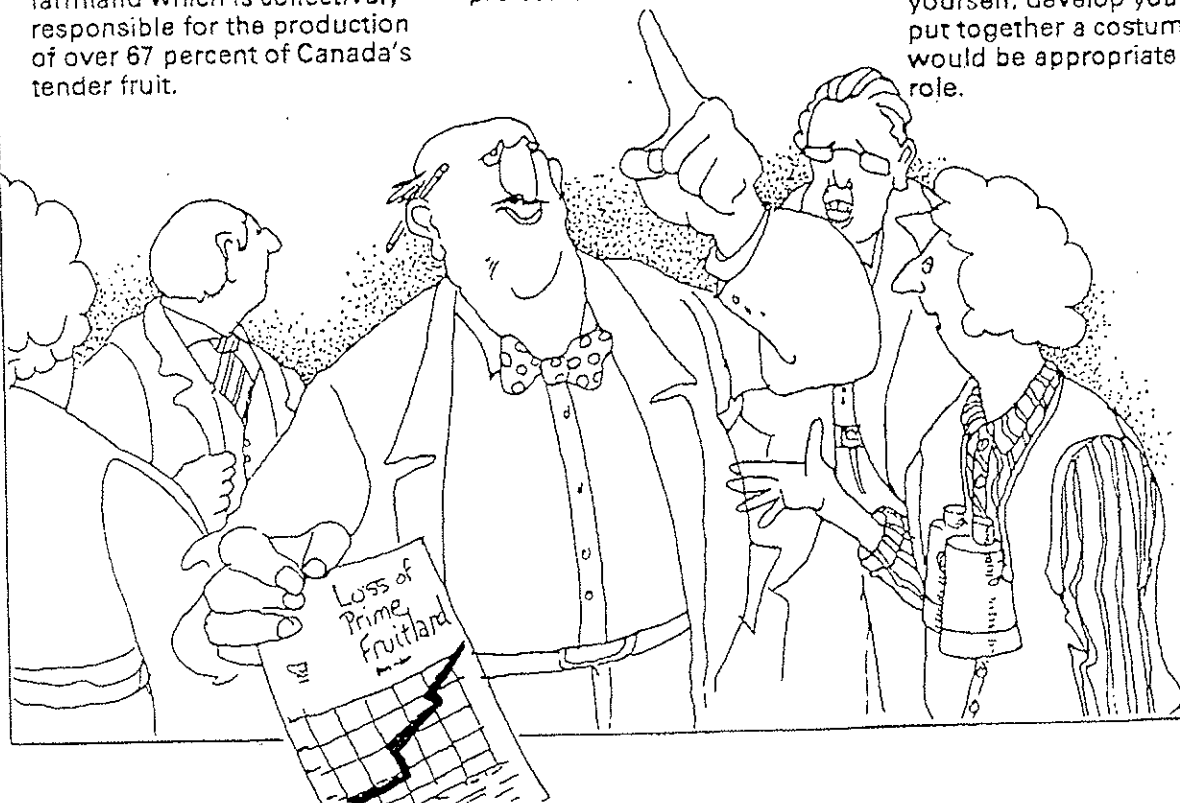
The peach farmer is willing to sell. The developer is offering her \$1,670,000. This is an attractive offer. Financial security is a feeling that she has never had in all her years of family farming. Besides, the city has been growing up around the property and regulations and other urban pressures are beginning to restrict operations in terms of when she can spray, and where she can drive her equipment.

Local politicians support the subdivision since there is a shortage of housing in the city. Some of the townspeople are also in favour of the development since it will mean more economic prosperity for the community and their local businesses. Other townspeople side with the some university professors and a government representative from the Ministry of Agriculture and Food. The group of university professors who have been

studying the loss of fruitland to urban pressures are against the proposal. Another subdivision will add to the continuing problem of a diminishing agricultural resource base. The representative from OMAF is against the proposal for the same reasons. The objections of some townspeople as well as these two groups has brought the issue of the subdivision to a public hearing. You are about to become part of this hearing.

Your teacher will assign everyone a role for the meeting. There will be several people representing each role, and your group will receive a role card which outlines some points to use to develop an opening statement for the beginning of the meeting of two minutes in length.

You will be given a few days to develop your position. Take this time to think about your role. Choose a name for yourself; develop your character; put together a costume that would be appropriate for your role.



ACTIVITY 4.10

Changing Land Use

TEACHER SUMMARY

Objectives:

To compare the amount of urbanized land for two different years for the same area.

Time Required:

40 min

Setting:

Classroom or homework assignment

Materials:

- Student Handouts
- 2 pieces tracing paper
- Graph paper (10 squares per 2.5 cm)
- Markers and pencils
- Coloured pencils

Preparation:

In this activity, students will compare two aerial photographs of the same area of land, from two different years. They will trace out the area that can be compared on the two photos, then estimate the percentage of urbanized land for each photo (see student handout).

Finally, they will examine the photographs for evidence of changes in land use, and evaluate whether the changes pose any problems.

Variations:

Order aerial photos for your own community and use them for comparison. Air photos for Ontario can be obtained from the following sources:

Surveys, Mapping and Remote Sensing Section
National Air Photo Library
Room 180
615 Booth Street
Ottawa, Ontario
K1A 0E9
(613) 995-4560

OR

Ontario Ministry of Natural Resources
Public Information Centre
99 Wellesley Street West
Toronto, Ontario
M7A 1W3
(416) 965-1123

Discussion Questions:

1. Which year has more urban area?

1971

2. Look closely at the two photos. What kind of land has become urbanized? How can you tell?

Farmland. The land is cleared and row patterns can be seen.

3. Will the new urban land ever go back to its original use? Why or why not?

No. Once houses are built, it is unlikely they will ever be torn down to create farmland again.

4. Do you think land lost to urbanization is a problem? If you answer yes, why? If you answer no, what would have to happen to make it a problem?

5. What other information would help you answer question #4?

6. Who should be responsible for making sure the land lost to urbanization does not become a problem? Why?



(A)

Thornhill, Ont. 1954

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(B)

Thornhill, Ont. 1971

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ACTIVITY 4.10

Changing Land Use

STUDENT HANDOUT

Purpose:

To compare the amount of urbanized land on two aerial photos from different years.

Materials:

- 2 pieces tracing paper
- graph paper (10 squares per 2.5cm)
- markers, pencils
- coloured pencils

Procedure:

1. Using a wide tipped black marker, trace the area on air photo A that can also be seen on air photo B. Do the same for air photo B. The areas you have outlined on each photograph should be the same size and shape. This area is called the study area.

2. Trace the area onto two separate pieces of tracing paper. Label one piece A, and the other B.

3. Overlay the traced study area onto the piece of graph paper. Count the number of squares covered by the area traced. (HINT: Make a check mark in each square as it is counted to avoid recounting. Try to estimate the size of part squares and add them together.) Record the number of squares.

4. Place tracing paper A over air photograph A. Using a different colour of pencil, outline the area that is urbanized.

5. Repeat step #4 for air photo B.

6. Overlay a piece of graph paper with the tracing paper for air photo A. Count the number of squares that are covered by the urbanized area and record your result.

7. Repeat step #6 for air photo B.

8. Now calculate the percent of area urbanized for each photograph using the following equation.

$$\frac{\text{\# squares covered by urban area A or B}}{\text{total \# squares for study area}} = \frac{x}{100}$$

where x = percent area urbanized for photo (A) or (B).

NOTE: You will need to do two calculations, one for each photo.

Discussion Questions:

1. Which year has more urban area?

2. Look closely at the two photos. What kind of land has become urbanized? How can you tell?

3. Will the new urban land ever go back to its original use? Why or why not?

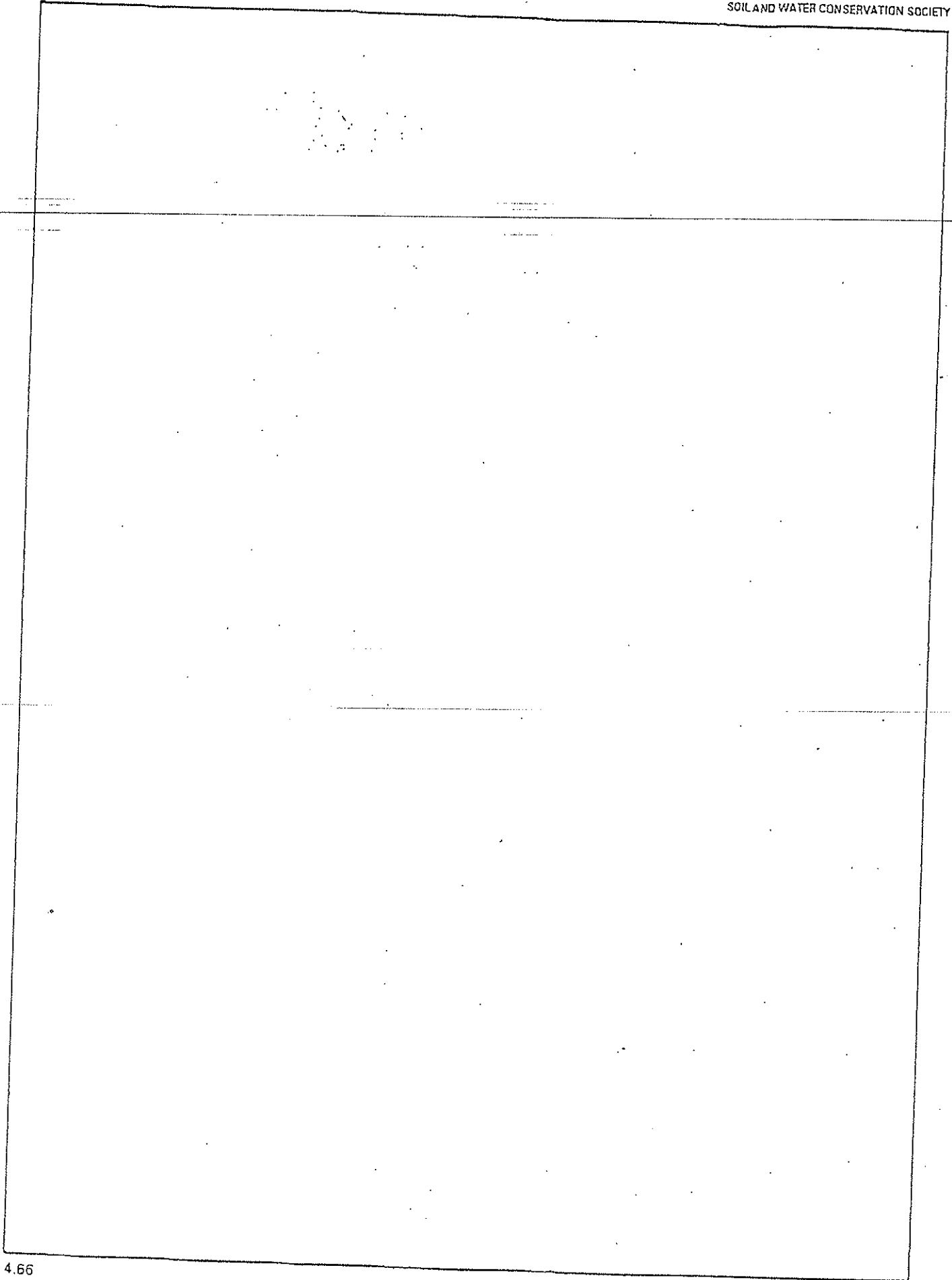
4. Do you think land lost to urbanization is a problem? If you answer yes, why? If you answer no, what would have to happen to make it a problem?

5. What other information would help you answer question #4?

6. Who should be responsible for making sure that land lost to urbanization does not become a problem? Why?

FEDERATION OF ONTARIO NATURALISTS

SOIL AND WATER CONSERVATION SOCIETY



4.8

Urbanization

CONCEPT

The loss of prime agricultural land to urban expansion is permanent. It is a serious problem in Southern Ontario and Quebec where over 50 percent of Canada's best farm land is found.

KEY WORDS

demographic, megalopolis, metropolitan, Quebec/Windsor axis, tender fruits, urban fringe, urban heartland.



South Lake Simcoe Region Conservation Authority

What is the problem?

Another threat to our soil resources is the loss of productive farm land to urban expansion and development. This is especially true in Southern Ontario and Quebec, known as Canada's urban heartland. (see map 1). This region of Canada which is our centre of economic activity, contains 54 percent of Canada's total population. It also contains over 50 percent of the best farm land as a result of favourable soil and climate conditions.

The rate of farmland loss has been greater in the urban heartland than anywhere else in the country. Between 1966 and 1981 almost 2 000 000 ha or 11 percent of the land disappeared from farming. Much of the loss occurred as a result of the abandonment of poor soils; however, a considerable amount was lost to urban growth.

The problem with prime agricultural soils being lost due to urban pressure is that once changed to an urban use, it is gone forever from agricultural production. The agricultural land base in Canada is limited. Only 8 percent or 74 760 000 ha are suitable for continual arable agriculture. This is already being farmed, and most of the remaining land has poorer soil and climatic conditions than that already in use.

In some regions of Southern Ontario such as the Niagara Fruit Belt which is hard hit with the pressures of urbanization, there is little possibility that the tender fruits could be produced on any other land in Canada.

Causes

To understand why so much productive land has been lost to urban development in the urban heartland or Quebec/Windsor axis, it helps to understand the pattern of settlement there. The axis is a typical megalopolis, or a group of cities and larger metropolitan areas that are highly connected to one another by transportation and communication networks. (see maps 2a) and b))

A noted feature of megalopolis development is extensive areas of mixed use between cities: agriculture, recreation, transportation, gravel pits, landfill or waste disposal sites, country homes and vacant land waiting to be developed. Main roads are often scattered with highway

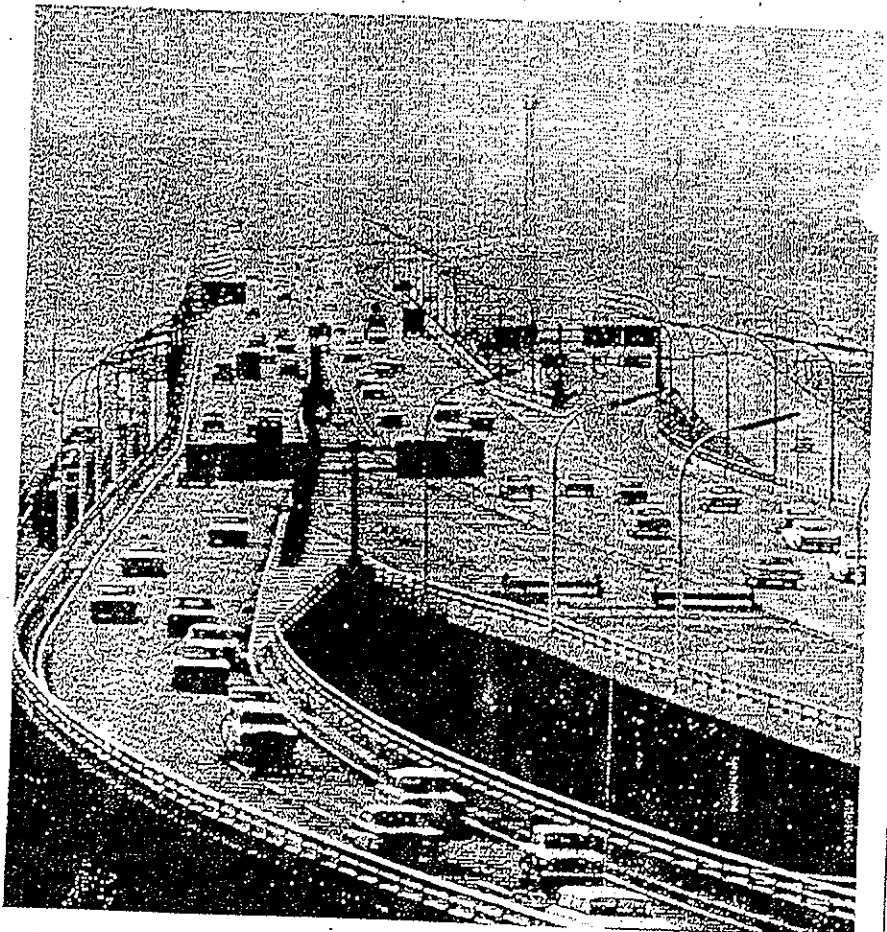
developments such as restaurants, gas stations and garden centres. Agricultural and vacant land in the urban fringes is under constant pressure to become urbanized.

The competition to use urban fringe land for a variety of uses leads to conflict and causes land values to rise sharply. Farmers approached to sell their land, are tempted by the immediate profit they can make. Other factors which lead urban fringe farmers to sell their land are: high taxes, increased trespassing and vandalism, and regulations which restrict the movement of farm equipment on major highways, the use of sprays, and the spread of manure.

Two demographic factors in Southern Ontario have also encouraged the process of land conversion to urban use. From 1971 to 1981, the population continued to concentrate in Toronto and South-Western Ontario where the best quality agricultural land exists (see maps 3 and 4). Second, more people have been leaving the cities and moving to country lots for "rural" lifestyles.

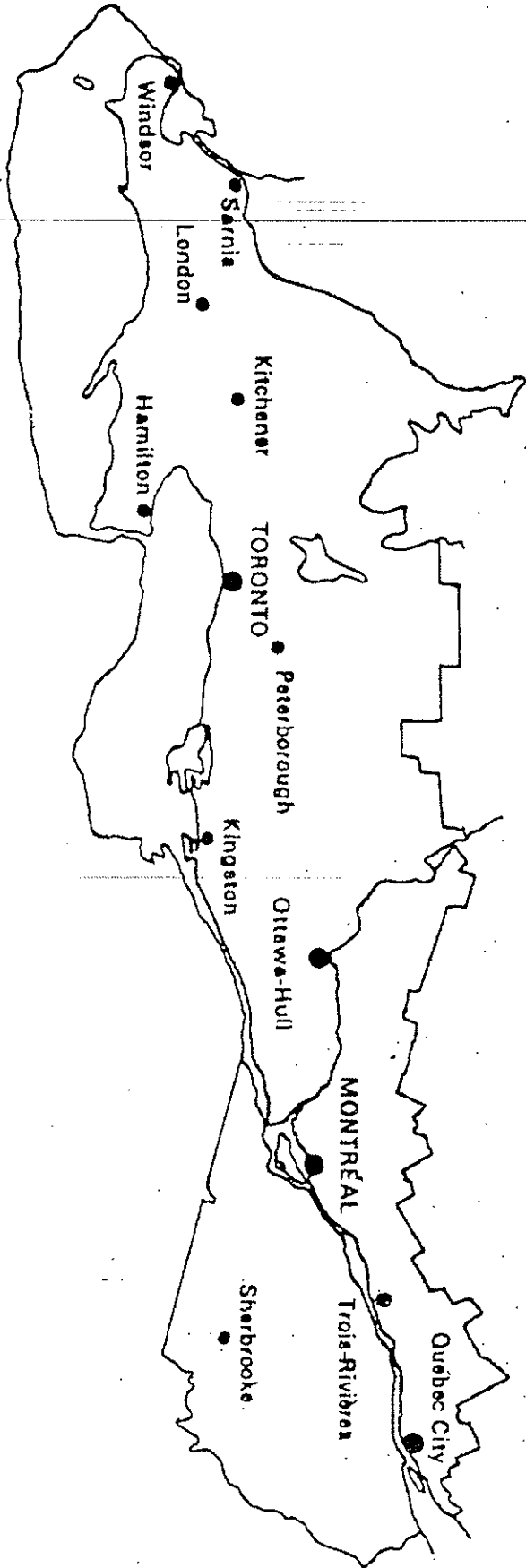
Urban development on our best agricultural soils brings short-term gains at the expense of future generations who may face the problem of less secure food supplies and a disappearing resource base.

Productive soil lost to urban development is - gone forever!



FOH Archives

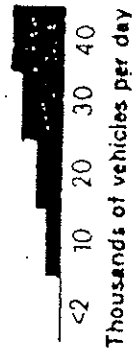
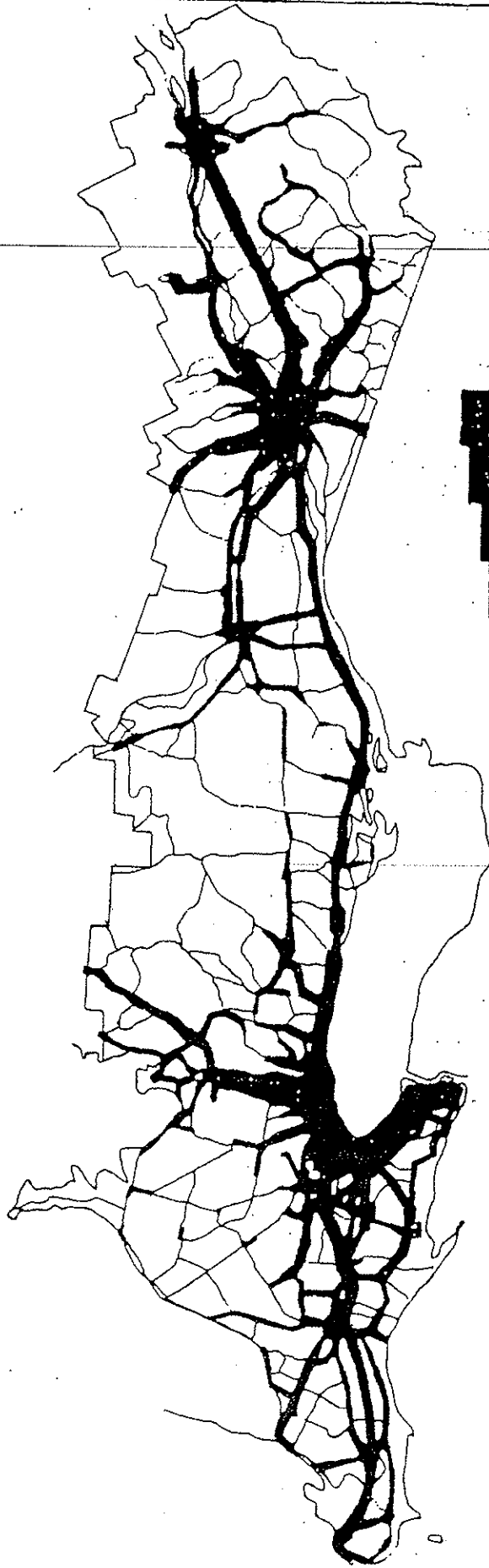
Map 1 Canada's Urban Heartland or the Quebec-Windsor Axis

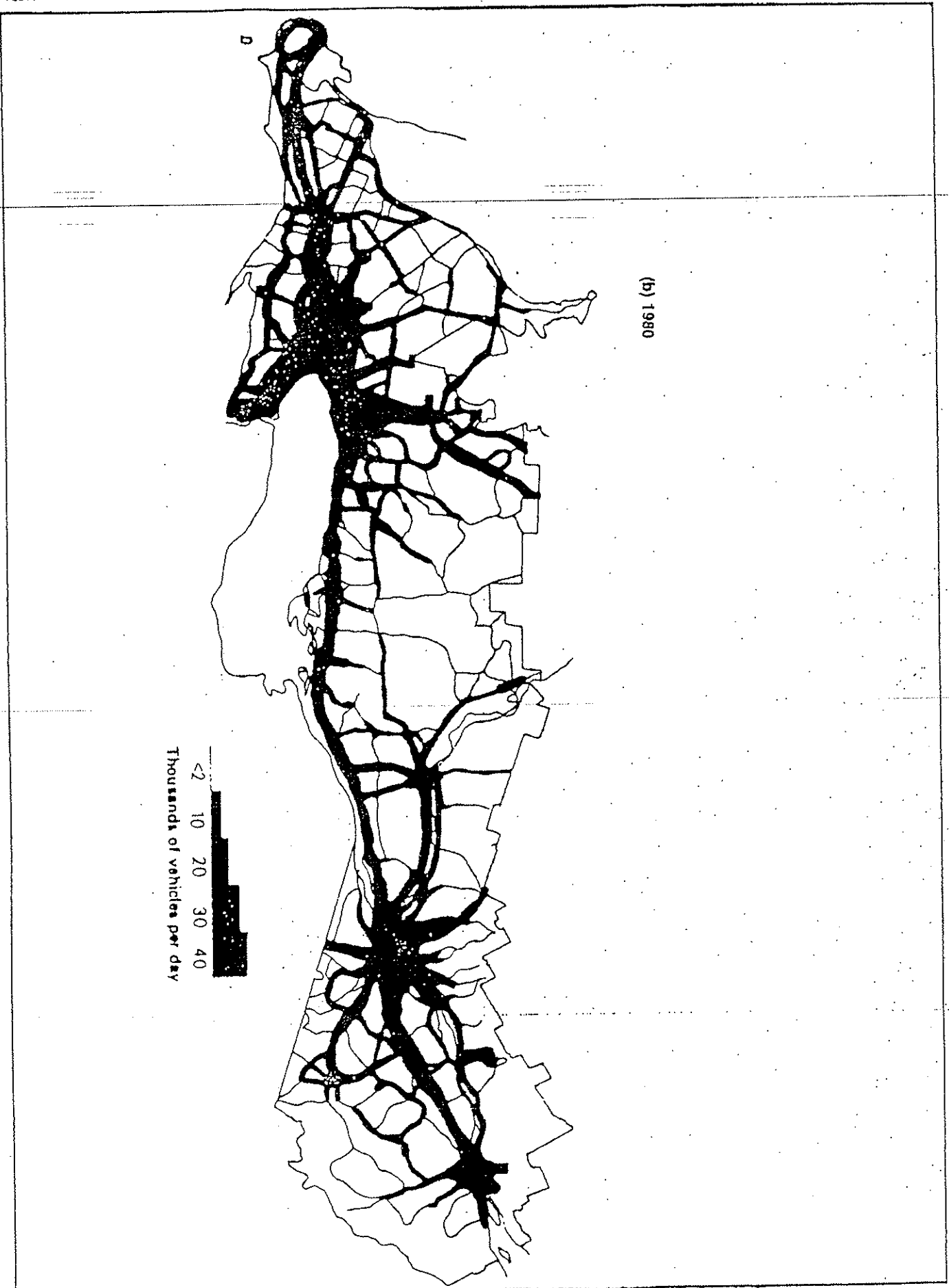


Source: Yeates, Maurice. Land
in Canada's Urban
Heartland, No. 27.
Ottawa: Environment
Canada Lands
Directorate, 1985.

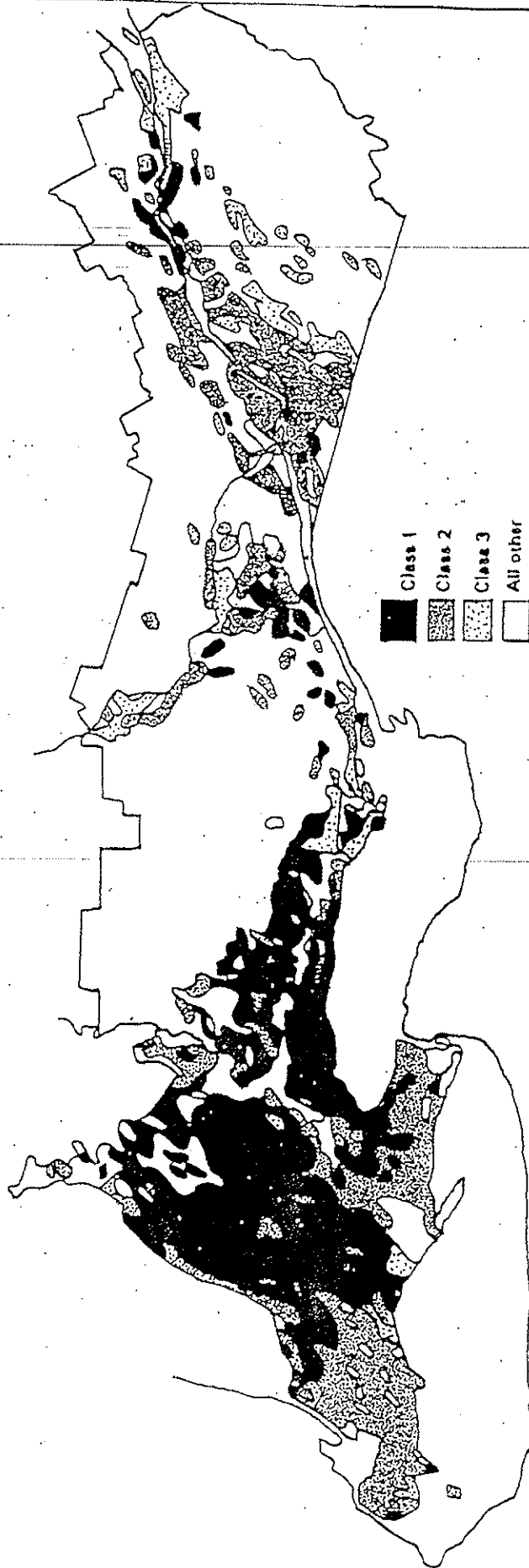
Map 2 Traffic Volumes Along the Main Roads in the Axis

(a) 1970



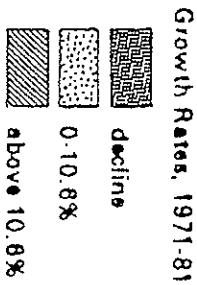
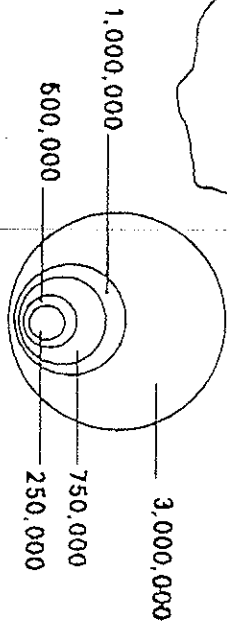


Map 3 Soil Capability for Agriculture (*Class 1 has the highest capability)



Source: Yeates, Maurice. Land in
 Canada's Urban
 Heartland, No. 27.
 Ottawa: Environment
 Canada Lands
 Directorate, 1985.

Map 4 Concentration of Population in Metropolitan Areas, 1981



Source: Yeates, Maurice. Land in
Canada's Urban
Heartland, No. 27.
Ottawa: Environment
Canada Lands
Directorate, 1985.

