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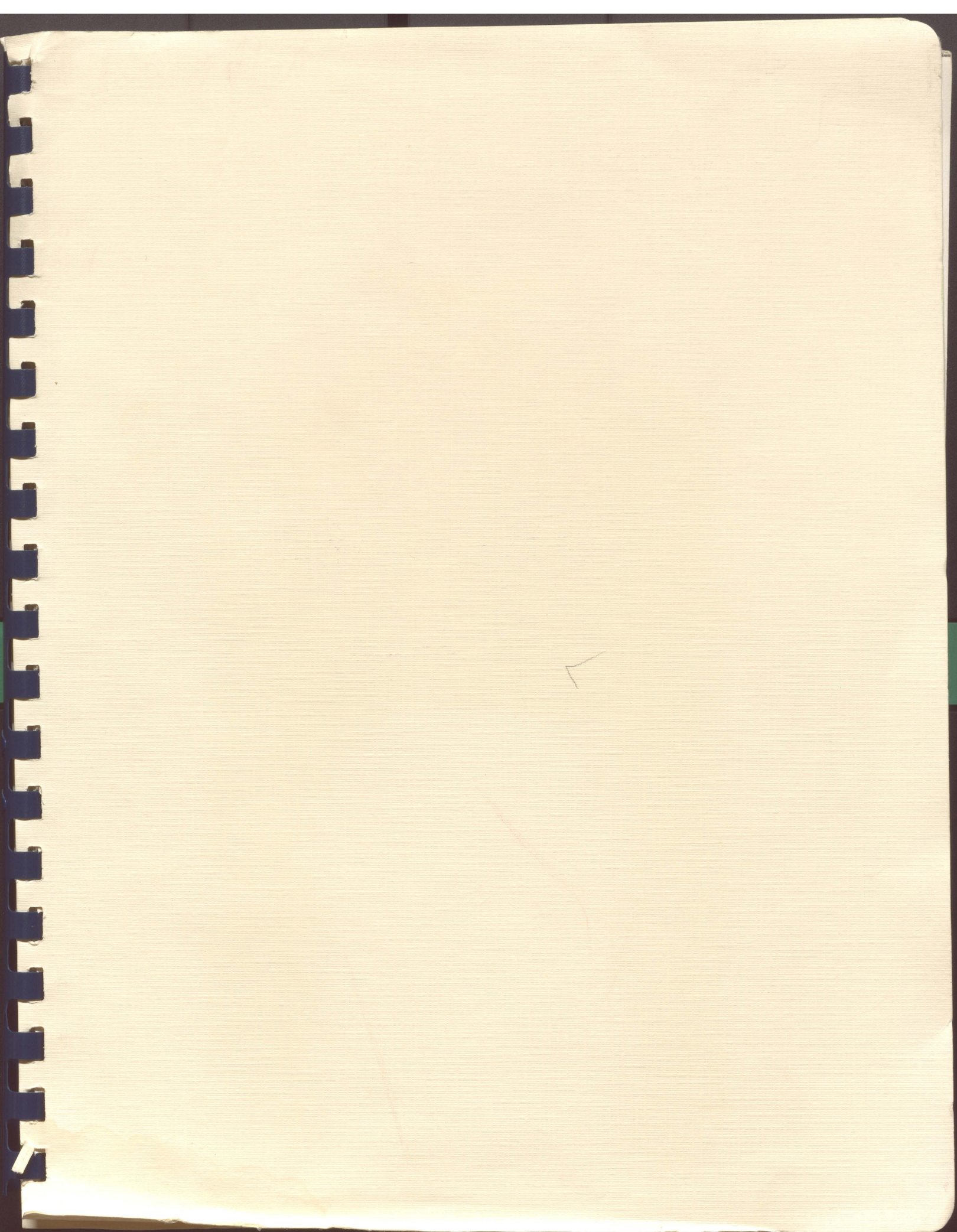
William J. Woodside

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PREFACE

Handwritten notes in the top right corner, including the name "John" and other illegible scribbles.

Being personally interested in local history, it came to my attention that during the last century and early part of this century, Pelee Island was the centre for the wine industry in Canada. Treating this subject as only

ENVIRONMENTAL CAPABILITIES OF THE COUNTIES OF
ESSEX AND KENT
FOR THE GROWTH OF THE COMMERCIAL GRAPE

WILLIAM J. WOODSIDE

GEOGRAPHY 446

SUMMER SESSION 1975

SEPTEMBER 23, 1975

It was from this point that my interest in the more than just the historical fact. Later articles appeared in the Windsor Star which dealt with new wine grapes of the French variety which were being experimented with in the Essex-Kent area. It was from this point that the idea of the environment's capability for the growth of the grape in the counties of Essex and Kent came to be the topic of my thesis.

Early in my investigation, I learned of the exciting past history of the grape industry during the 1800's, and how the decline occurred. It became evident however, that due to the previous success in the 1800's, the environment was quite suitable for the viticulture industry, yet it

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ENVIRONMENTAL CARIBBEAN OF THE COURSE OF

PEOPLE AND PLACES

FOR THE GROWTH OF THE COMMERCIAL STATE

WILLIAM J. WOODS

GEOGRAPHY 446

SUMMER SESSION 1975

SEPTEMBER 27, 1975

PREFACE

Being personally interested in local history, it came to my attention that during the last century and early part of this century, Pelee Island was the centre for the wine industry in Canada. Treating this information only as an historical fact, no attempt was made to make a follow-up investigation on the subject, until a field study course from the University of Windsor Geography Department went to the island to conduct research in the fall of 1974. Discussing the trip to the island, some of the students told me of an old stone building with steel bars on the windows, thought to be a winery. It was from this point that my interest flared into more than just the historical fact. Later articles appeared in the Windsor Star which dealt with new wine grapes of the French variety which were being experimented with in the Essex-Kent area. It was from this point that the idea of the environment's capability for the growth of the grape in the counties of Essex and Kent came to be the topic of my thesis.

Early in my investigation, I learned of the exciting past history of the grape industry during the 1800's, and how its demise occurred. It became evident however, that due to the previous success in the 1800's, the environment was quite suitable for the viticulture industry, yet it

was necessary to know what environmental qualities were most predominant in the grape's growth.

Arrangements were made to meet with Miss Helen Fisher of the Ontario Department of Agriculture, who is responsible for fruit and vegetable crops in the Essex-Kent area. Discussing the grape crop with Miss Fisher led me to some new sources of information, furthermore, she invited me to tour the farms in the area which produced grapes. Traveling in the Essex-Kent area, she pointed out all the vineyards, large and small, and gave me a description of the grape type, soil type and the problems that the farmer has encountered so far with his vineyard.

Talking with Dr. Innes of the University of Windsor, about old newspaper clippings which I had obtained from the Windsor Public Library on the subject, he suggested another information source might be the county courthouse, in the records division. However, after investigating this avenue, no records were available to me.

Studying books, pamphlets and associated literature from the fields of plant biology, soil science, hydrology, climatology, grapes and wine making, the following paper has been written to explain the resurgence of the viticulture industry in the Essex-Kent area of Southern Ontario.

W.J.W.

ACKNOWLEDGMENTS

- Miss Helen Fisher: Ontario Department of Food and
Agriculture
Harrow Research Station
Harrow, Ontario.
(Professional information)
- Dr. Frank Innes University of Windsor,
Chairman of the Geography Depart-
ment
Windsor, Ontario.
(Guidance and information)

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1. Crossman, H. J., Crossman's Guide to Wines, Spirits,
and Beers, p. 13.

2. Cary, M., and Newhoff, F. J., Life and Thought in the
Greek and Roman World, p. 95.

3. Howe, P., The Wines of Canada, p. 27.

CHAPTER I

INTRODUCTION

From the dawn of civilization man has learned the techniques involved in the production of wine. Records and artifacts from early middle, eastern, south European and American civilizations, all have alluded to the fact that wine has been made and consumed for many centuries.

The Egyptians credit Osiris and the Greeks Dionysus with the gift of wine, while the Hebrews say Noah first introduced it.¹ In Ancient Greece, the main industry was the manufacturing of pottery for the transporting of wines and grain.² Later, Greek and Phoenician traders introduced wine to the Italian colonies, and with the rise of Rome, the legionaries were able to spread the beverage throughout the entire empire.

Prior to the white man in North America, the Seneca, Tuscarora and Cayuga Indians are believed to have annually brought a gift of grape juice to the water gods who dwelt below Niagara Falls. The ceremony was called Wisachgimi.³

1 Grossman, H. J., Grossman's Guide to Wines, Spirits, and Beers, p. 15.

2 Cary, M., and Haarhoff, T. J., Life and Thought in the Greek and Roman World, p.95.

3 Rowe, P., The Wines of Canada, p. 27.

In the early 1860's, Louis Pasteur revolutionized the wine industry. Through his research he found that the basis of fermentation was due to micro organisms called "ferments". Based upon his studies, wine making became an exact science, and all guesswork was replaced by scientific knowledge.⁴

Unknown to the early agriculturalists, the North American grape, with its hardier root stock was immune to a certain pest called phylloxera vastatrix, and when some vines were shipped to Europe, the pest also went with the vines. Eventually every region of Europe where viticulture was practiced was effected by the phylloxera. In attempts to combat the pest, it was found that the only solution was to graft European vines to American roots. Thus today many of Europe's fine wine grapes have North American and European ancestry.

With this knowledge, one might expect a grape type used to produce a Burgundy in France will produce the same quality of wine in America, however this is not the case. The environment in which the vine is grown determines the

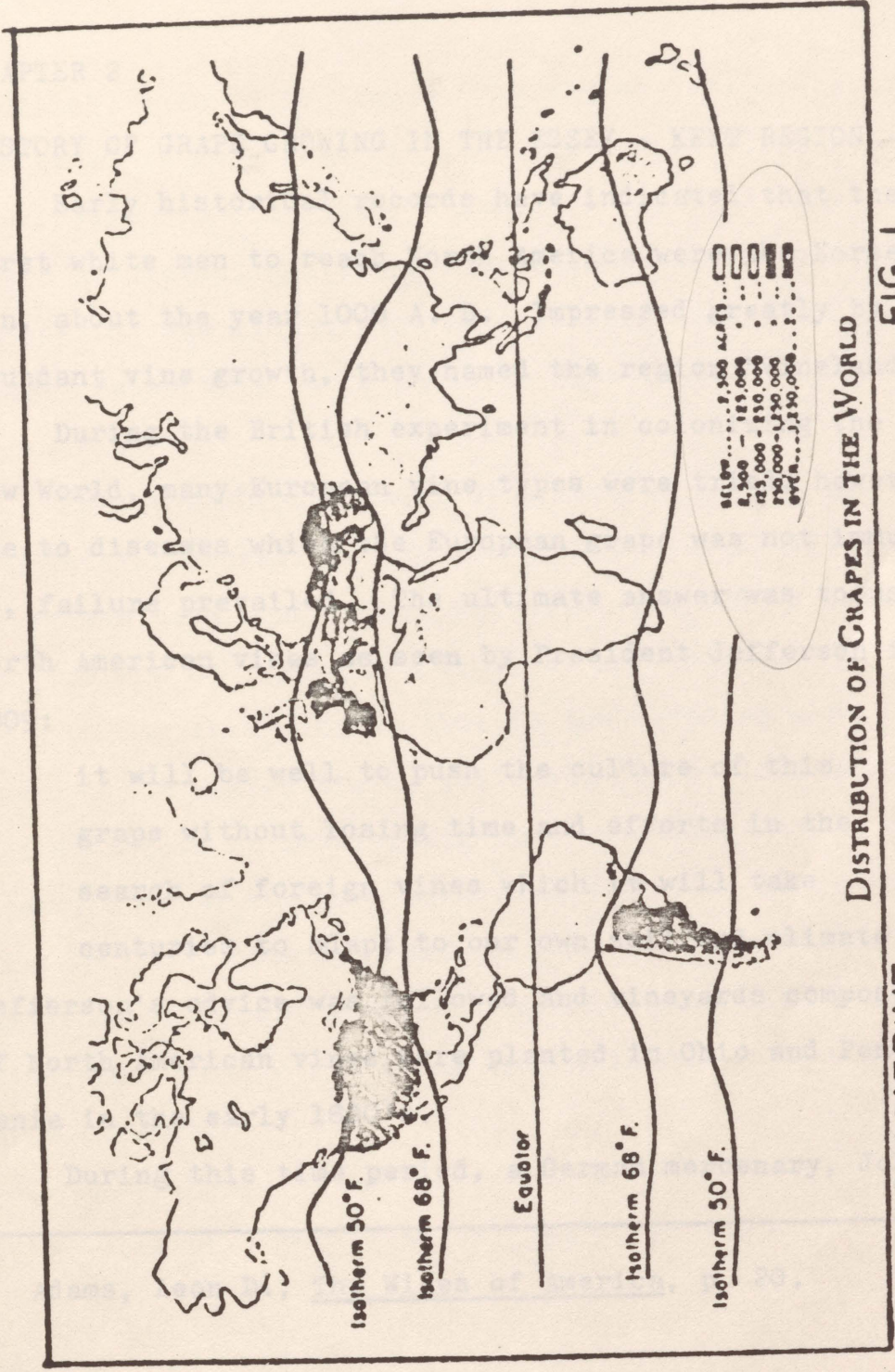
⁴ Grossman, H. J., Grossman's Guide to Wines, Spirits and Beers, p. 17.

quality of the wine. The most important environmental aspect is temperature. In cooler climates the grape has a higher acid content and a lower alcoholic content. In warmer climates there is earlier ripening, thus a higher sugar content (hence more alcohol), less colour, and lower total acidity.⁵

Due to the differences brought about by the environment certain geographical names such as Burgundy, Bordeaux, Mosel and others are considered semigeneric and apply only to the wine produced in these geographical regions.

In Canada, we are limited by the environment to the grape varieties planted. The main areas of grape production are the Niagara Peninsula in Ontario, the Okanagan Valley in British Columbia, and Essex, Kent and Lake Erie Islands area of Ontario, from which this study will be based upon.

5 Amerine, M. A., Cruess, W. V., The Technology of Wine Making, p. 108.



DISTRIBUTION OF GRAPES IN THE WORLD

FIG. 1

SOURCE: AMERINE

CHAPTER 2

HISTORY OF GRAPE GROWING IN THE ESSEX - KENT REGION

Early historical records have indicated that the first white men to reach North America were the Norsemen, about the year 1000 A. D. Impressed greatly by the abundant vine growth, they named the region "Vineland".

During the British experiment in colonizing the New World, many European vine types were tried, however, due to diseases which the European grape was not immune to, failure prevailed. The ultimate answer was to use North American vines as seen by President Jefferson in 1809:

it will be well to push the culture of this grape without losing time and efforts in the search of foreign vines which it will take centuries to adapt to our own soil and climate.⁶

Jefferson's advice was followed and vineyards composed of North American vines were planted in Ohio and Pennsylvania in the early 1800's.

During this time period, a German mercenary, Johann

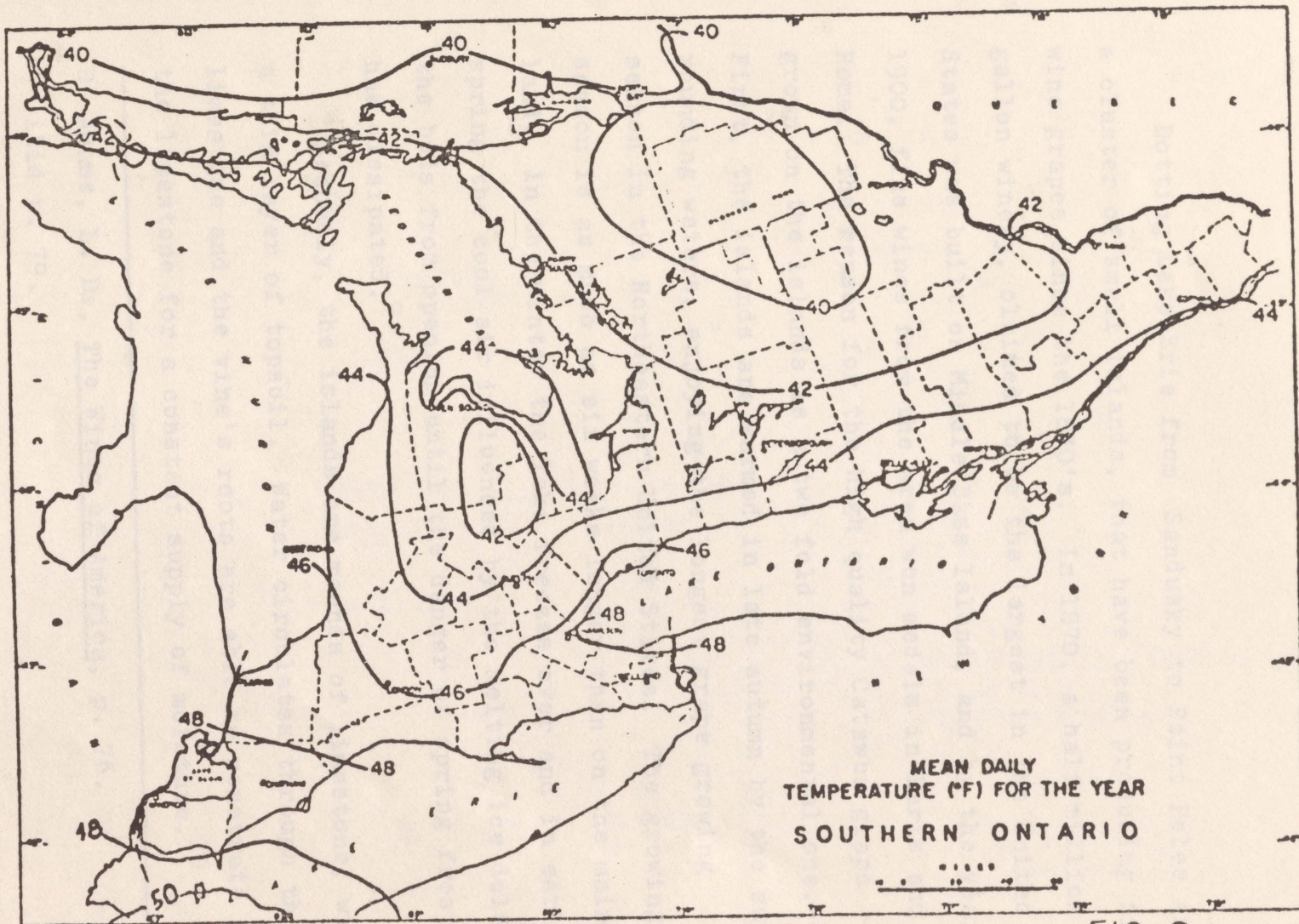
⁶ Adams, Leon D., The Wines of America, p. 20.

Schiller, escaped to Canada from the states, and with him came his knowledge of viticulture. Settling near the Credit River in Upper Canada, he ventured into the craft of winemaking, using native labrusca vines. So successful was his attempt at producing wine from the local grapes that he is known as "the father of Canadian winemaking".⁷

Market problems caused by a lack of people in Southern Ontario caused the new industry to die almost as soon as it was born, and it was not until the 1860's that viticulture was again practiced to any extent.

During this dormant time in the Canadian wine industry, the United States following Jefferson's advice, had succeeded in cultivating numerous vineyards in every state, however the most promising state for grape growing was Ohio. The best growth was concentrated in two major areas, south along the Ohio-Kentucky border near Cincinnati, and north along Lake Erie and on the Lake Erie islands.

⁷ Rowe, Percy, The Wines of Canada, p. 29.



MEAN DAILY
TEMPERATURE (°F) FOR THE YEAR
SOUTHERN ONTARIO

SOURCE: CANADA DEPARTMENT OF TRANSPORT

FIG. 2

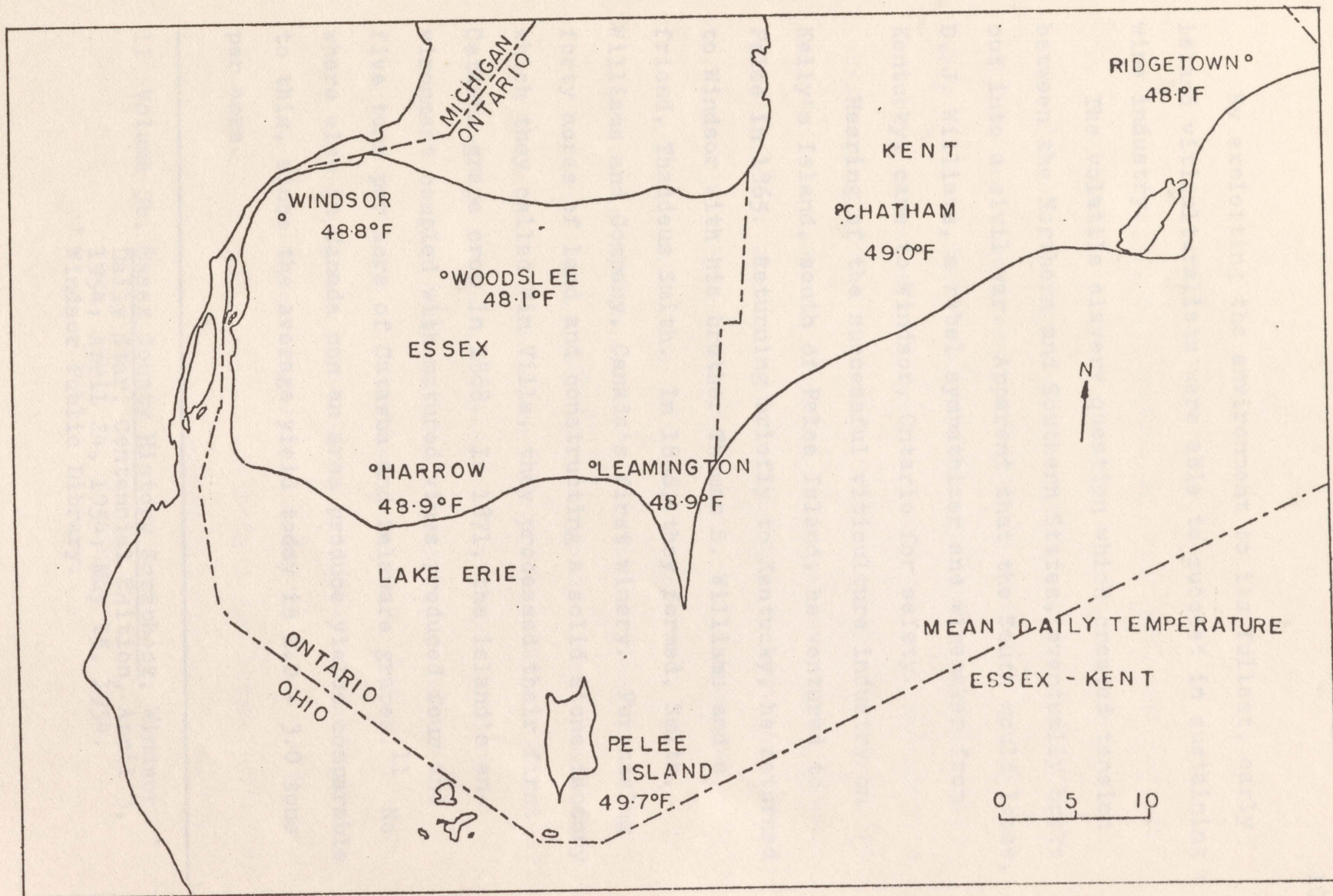
Dotting Lake Erie from Sandusky to Point Pelee are a cluster of small islands, that have been producing fine wine grapes since the 1830's. In 1870, a half million gallon winery, claimed to be the largest in the United States was built on Middle Bass Island, and by the year 1900, fine wines from the area won medals in Paris and Rome.⁸ The reason for the high quality Catawba grape grown on the islands is a two fold environmental one. First, the islands are warmed in late autumn by the surrounding waters, enjoying the longest grape growing season in the Northeastern United States. The growing season is as much as six weeks longer than on the mainland. In the winter the lake freezes over and in early spring the cool air influenced by the melting ice delays the buds from opening until the danger of spring frosts has dissipated.⁹

Secondly, the islands are mounds of limestone, with a thin layer of topsoil. Water circulates through the limestone and the vine's roots are able to penetrate into the limestone for a constant supply of moisture.¹⁰

8 Adams, L. D., The Wines of America, p. 76.

9 *ibid* p. 79.

10 *ibid* p. 81.



SOURCE: ENVIRONMENT CANADA

FIG. 3

By exploiting the environment to its fullest, early island viticulturalists were able to succeed in sustaining a wine industry. J. S. Hamilton of Bradford, was introduced

The volatile slavery question which created tension between the Northern and Southern States, eventually broke out into a civil war. Apparent that the South would loose, D. J. Williams, a rebel sympathizer and winemaker from Kentucky, came to Windsor, Ontario for safety.

Hearing of the successful viticulture industry on Kelly's Island, south of Pelee Island, he ventured to Pelee in 1865. Returning briefly to Kentucky, he returned to Windsor with his brother Thomas S. Williams and a friend, Thaddeus Smith. In 1866, they formed, Smith, Williams and Company, Canada's first winery. Purchasing forty acres of land and constructing a solid stone factory which they called Vin Villa, they processed their first Catawba grape crop in 1868. In 1871, the island's environment coupled with matured vines produced four and five tons per acre of Catawba and Delaware grapes.¹¹ No where else in Canada can an area produce yields comparable to this, since the average yield today is 2.0 - 3.0 tons per acre.

11 Volume 3b, Essex County History Scrapbook, Windsor Daily Star, Centennial Edition, April 3, 1954; April 24, 1954; May 15, 1954.
Windsor Public Library.

In 1874, J. S. Hamilton of Brantford, was introduced to Thad Smith's grapes and wine. Deciding the product was a good investment venture, he chose to market it, through his small chain of grocery stores. In 1875, he formed J. S. Hamilton and Company, however, due to the small Ontario market, he was forced to sell and promote the majority of the wine in the United States where the market was larger. In 1890, he organized a new company, Pelee Island Wine and Vineyard Company, Limited. Building new facilities, he was able to claim the most complete winemaking facilities in Canada during that time. The only drawback however was the bottling plant was located in Hamilton's home town of Brantford. High transportation costs eventually caused him to close down his Pelee Island operation, and import cheaper Californian grapes to his Brantford facility, thus ended the Pelee Island Viticulture industry, around the year 1915.¹² With a temperance government limiting Ontario's wine industry during the late teens and early twenties, many small wineries disappeared. The result was only a few large companies such as Brights, Jordan, Barnes existed to serve the

¹² Rowe, Percy, The Wines of Canada, p. 37.

CHAPTER I

relatively small Canadian market. Centered primarily in the Niagara Fruit belt region, these firms are now enjoying increased sales as Canadians discover the experience of wine. Detrimental to the revived wine industry however, is urban encroachment on prime grape environments. If present urban growth continues, pressure placed upon the Niagara region will force this area to disappear as a grape growing region. Ironically, the wine industry will once more be forced to return home to the Essex-Kent, Lake Erie Island area, in order to guarantee survival.

CHAPTER 3

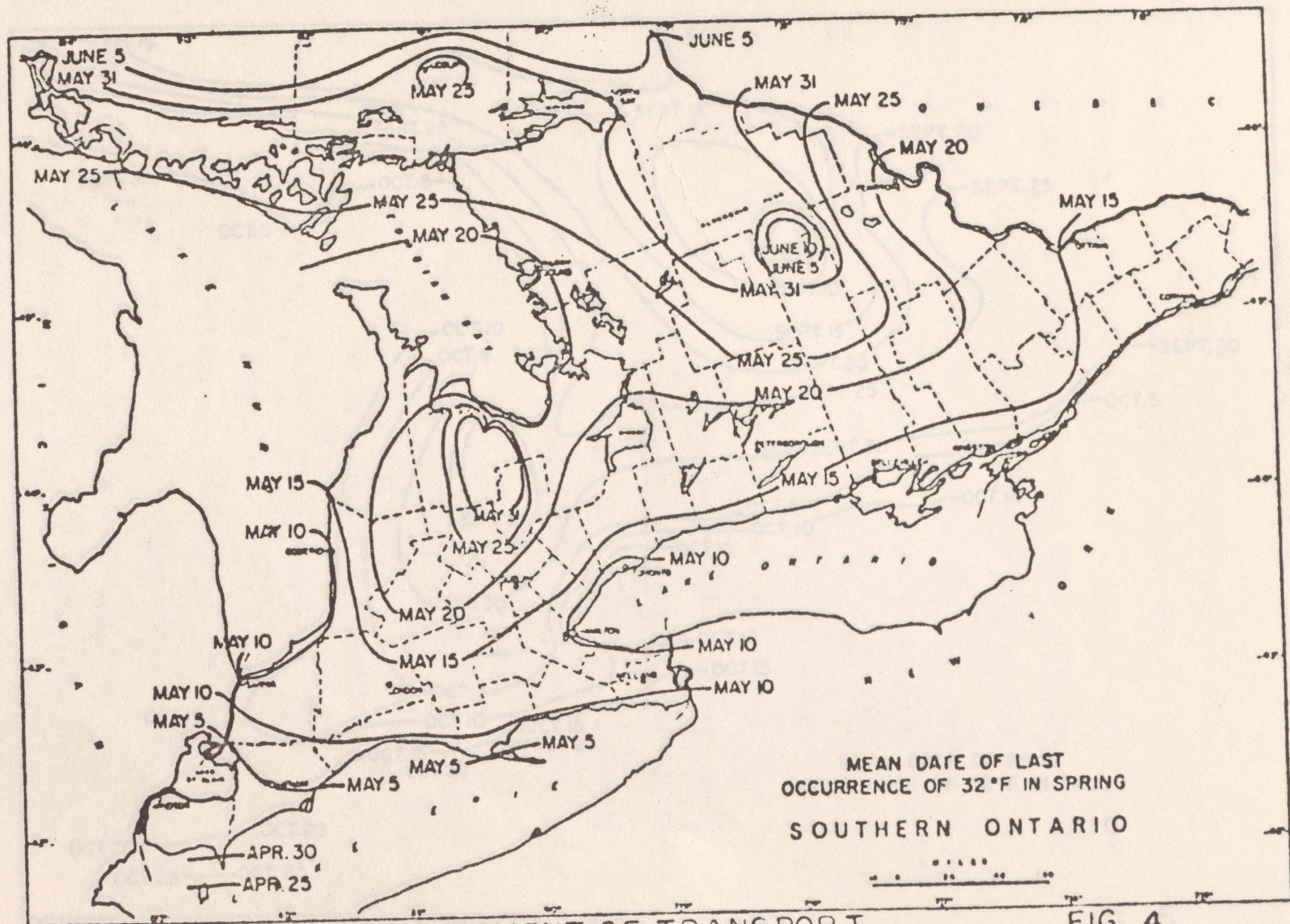
REASONS FOR PRODUCTION IN THE COUNTIES OF ESSEX-KENT

As previously stated, rapid urbanization in the Niagara region has resulted in productive farm land being transformed into urban land uses. The consequences of this transformation from an agricultural standpoint are detrimental, in that as the demand for agricultural products are increasing with the population, the proper environmental ecosystem to which the crop is related is decreasing. Owing to the unique combination of climate and soils this region is one of the major fruit producing areas for the viticulture industry in this country. In an attempt to retard the process of agricultural land transformation, Severance Laws were instituted by the Province of Ontario, restricting the purchase of agricultural land to ten acres or more. Even though this legislation was designed to prevent strip development, large development corporations still are able to purchase the required areas greater than ten acres for transformation into urban use. It is evident therefore, that tighter laws are required to prevent prime agricultural land being transformed into areas of urban sprawl. Owing to the urban sprawl and high land costs

in the Niagara Escarpment which have made farmland both scarce and precious and coupled with the increased popularity of Canadian wines, the Canadian Wine Institute in conjunction with the Federal Department of Agriculture have initiated an investigation into the lands of Essex and Kent Counties for their potential as future wine grape growing areas. According to James Grieve, chairman of the board of Chateau-Gai Wines Limited, and a director of the Canadian Wine Institute, approximately one hundred and thirty acres of experimental vines are being cultivated in the Essex and Kent county region, with the first harvest expected sometime in the fall of 1976.

The institute's main investigation lies with the Vinifera grape, which is presently grown in Europe, Australia, California, South Africa, and South America and is noted for its fine quality with respect to wine production.

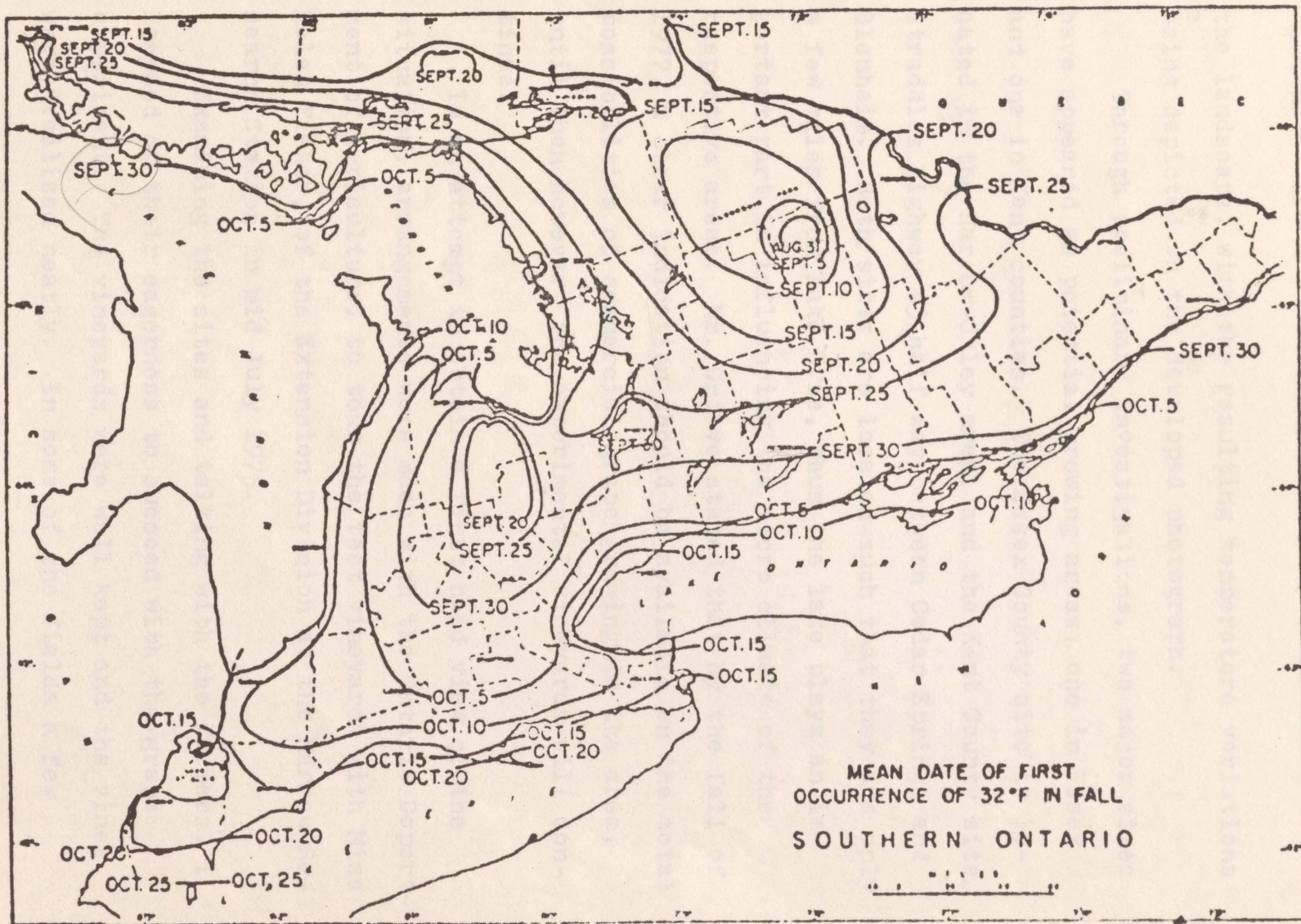
Dependant upon the length of the growing seasons and susceptibility to frost destruction, the investigation is presently being carried out to determine areas of micro climates, which are warmer and have longer growing seasons. In order to locate these areas, aircraft equipped with infra-red sensing devices are used to photograph



SOURCE: CANADA DEPARTMENT OF TRANSPORT

FIG. 4

Problem in Reduction



SOURCE: CANADA DEPARTMENT TRANSPORT

FIG. 5

the landscape, with the resulting temperature variations being depicted on the developed photograph.

Through preliminary investigations, two major sites have appeared as potential growing areas; one in Essex and one in Kent counties. The Essex County site is located in the Harrow-Oxley area, and the Kent County site straddles Highway #3 half way between Cedar Springs and Blenheim. Both sites are located such that they are only a few miles from Lake Erie, thus the lake plays an important part in influencing the micro climate of the respective areas. Mr. Grieve stated that by the fall of 1977, a clear indication should be available on the total possibilities of commercial grape growing in the area, until then however, the experimental vineyards will continue.

In an attempt to obtain a first hand view of the situation, arrangements were made with the Ontario Department of Agriculture, to tour the test vineyards with Miss Helen Fisher, of the Extension Division at the Harrow Research Station in mid July 1975.

Examining the sites and talking with the farmers, I learned of their eagerness to succeed with the grape experiment. The vineyards were well kept and the vines were trellised neatly. In some of the fields a few

stunted vines were noticed, apparently a result of atre-
zine residue in the soil. Atrezine is a compatible chemical
fertilizer for corn, but detrimental to grape growing.

With the probable success of the viticulture industry
in the area, Allan Eastman of R. R. #1, Blenheim, is under-
taking the design and construction of an extraction plant
on his farm for the purpose of processing grape juice. In
the near future he intends to build a small winery to be
supplied by local grapes.

The commercial grape industry in the Essex-Kent Region
should succeed due to the environment and the enthusiasm
shown by the Canadian Wine Institute, Department of Agri-
culture and the farmers such as Mr. Eastman.

1. Temperature

Temperature is the primary environmental factor
influencing the planting of grapes within the various
climatic regions of the temperate zone. The areas of
prime production lie between the 50° N. and 40° N. latitudes
in both the northern and southern hemispheres. Areas
outside these limits range from satisfactory to unsat-
isfactory for growth, due to the temperature ranges as-
sociated with each particular area.

1. Amerine, M. A., & Creess, W. F. The Technology of Wine-
making, p. 136.

CHAPTER 4

ENVIRONMENTAL REQUIREMENTS

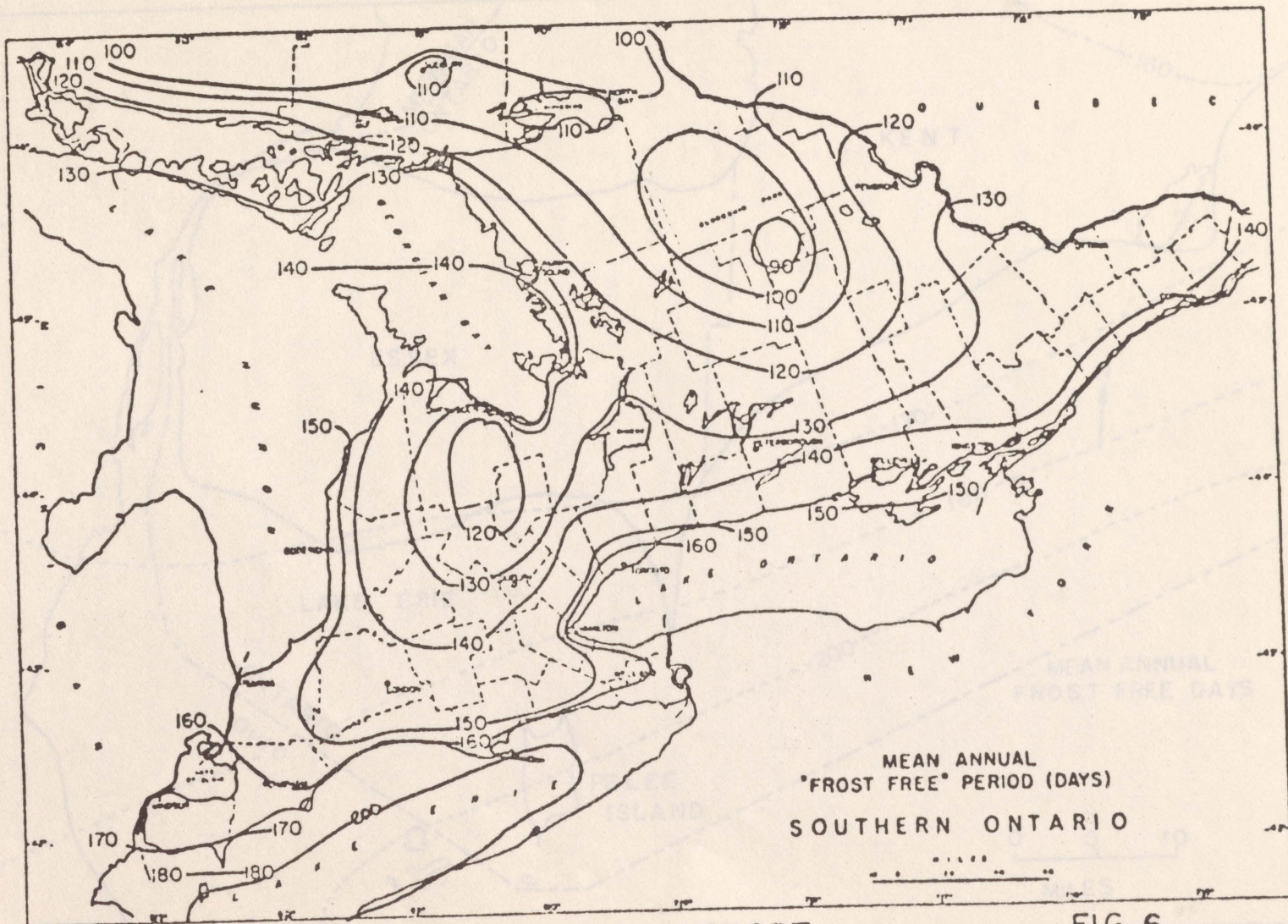
The composition of most fruit reflects the environmental conditions under which they are grown. In the case of the grape, the environment plays the largest role in determining the type and composition of fruit grown in that particular area, more so than any other type of fruit.

The environmental requirements which must be considered can be divided into two categories, climate and soil. The primary environmental factor being temperature. The secondary environmental factors being rainfall, humidity, wind, soil and combinations of these.¹³

1. Temperature

Temperature is the primary environmental factor influencing the planting of grapes within the various climatic regions of the temperate zones. The areas of prime production lie between the 50°F. and 68°F. isotherms in both the northern and southern hemispheres. Areas outside these limits range from satisfactory to unsatisfactory for growth, due to the temperature range associated with each particular area.

13 Amerine, M. A., Cruess, W. V., The Technology of Wine-Making, p. 106.



SOURCE: CANADA DEPARTMENT OF TRANSPORT

FIG. 6

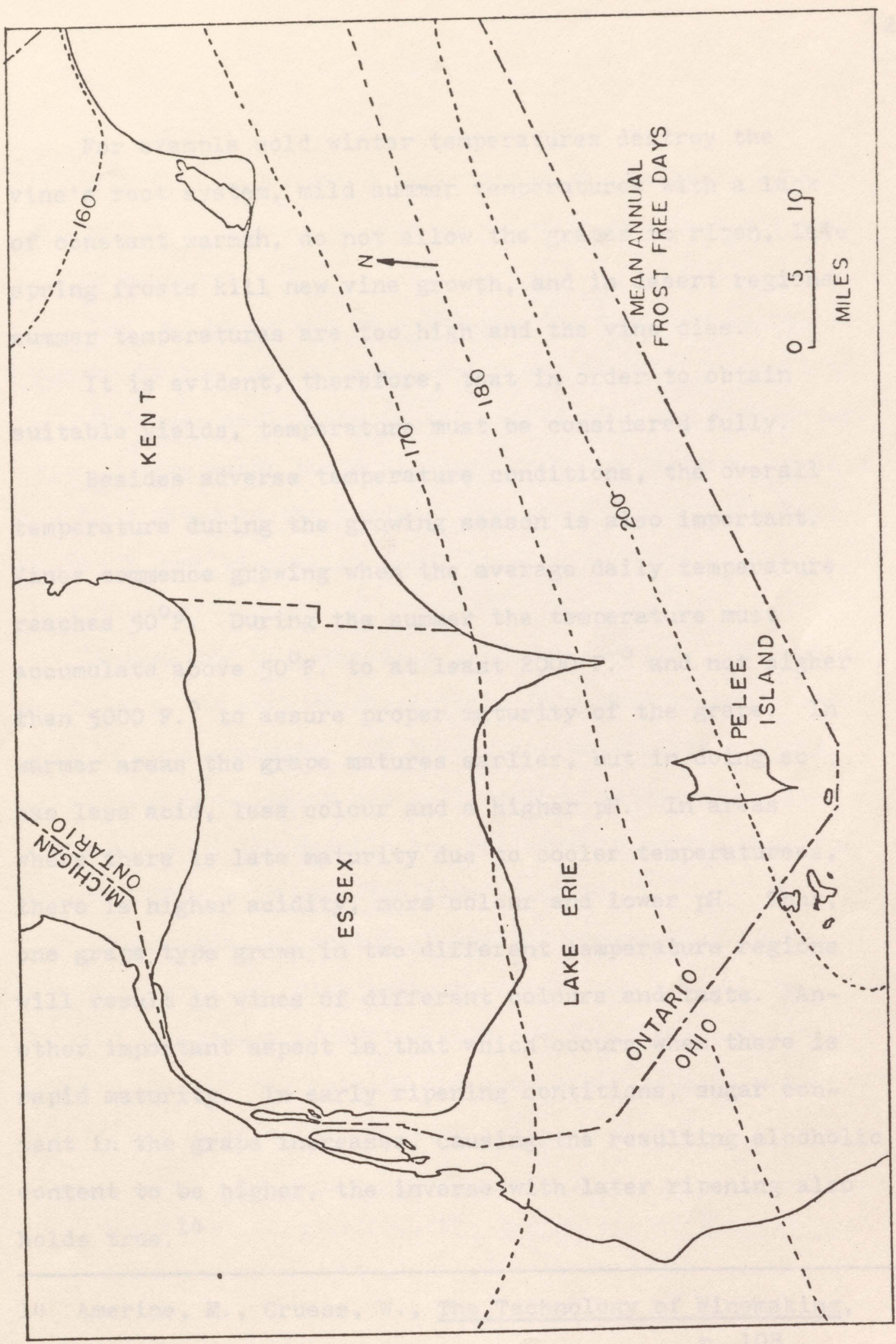


FIG. 7

SOURCE: ENVIRONMENT CANADA

For example cold winter temperatures destroy the vine's root system, mild summer temperatures with a lack of constant warmth, do not allow the grapes to ripen, late spring frosts kill new vine growth, and in desert regions summer temperatures are too high and the vine dies.

It is evident, therefore, that in order to obtain suitable yields, temperature must be considered fully.

Besides adverse temperature conditions, the overall temperature during the growing season is also important. Vines commence growing when the average daily temperature reaches 50°F. During the summer the temperature must accumulate above 50°F. to at least 2000 F.° and not higher than 5000 F.° to assure proper maturity of the grape. In warmer areas the grape matures earlier, but in doing so has less acid, less colour and a higher pH. In areas where there is late maturity due to cooler temperatures, there is higher acidity, more colour and lower pH. Thus, one grape type grown in two different temperature regions will result in wines of different colours and taste. Another important aspect is that which occurs when there is rapid maturity. In early ripening conditions, sugar content in the grape increases, causing the resulting alcoholic content to be higher, the inverse with later ripening also holds true.¹⁴

¹⁴ Amerine, M., Cruess, W., The Technology of Winemaking,
p. 108

2. Rainfall

Rainfall in moderate proportions has no harmful effect on the vine, however, a lack of rainfall or abundance does create problems.

With an abundance of moisture, the humidity increases causing fungus type diseases which are harmful to the plant.

Moisture deficiency in the soil during the late maturation causes water to be diverted from the fruit to replace the lost water in the leaves. The result is a shrivelled fruit of poor winemaking capabilities.

3. Soil

Grapes can be grown in a variety of soils. Good vineyards have one soil characteristic in common however, and that is good drainage. In Europe the best soils are the calcareous type, which are well drained and warmer. The slate soils of the Moselle are believed to retain day-time heat and thus help warm the vine at night.¹⁵

In the Niagara region of Ontario, commercial grapes are grown in clay, clay loam and sandy loam soils. The Ontario Department of Agriculture has found through testing that the French hybrids and some other special wine varieties prefer a well drained soil.

15 Amerine, M., Cruess, W., The Technology of Winemaking,
p. 109.

Moisture saturated poorly drained soil is slow to warm and delays development in the spring and maturity of the fruit in late summer and early autumn.

Testing the relationships between soil types and grapes has led the agricultural researcher to find a well drained clay loam is the most suitable for the fine wine grape. The sugar content and fruit quality are higher on clay loam when compared to grapes grown in sandy loam soils.¹⁶

16 The Grape in Ontario, Ministry of Agriculture and

Food, p. 6.

CHAPTER 5

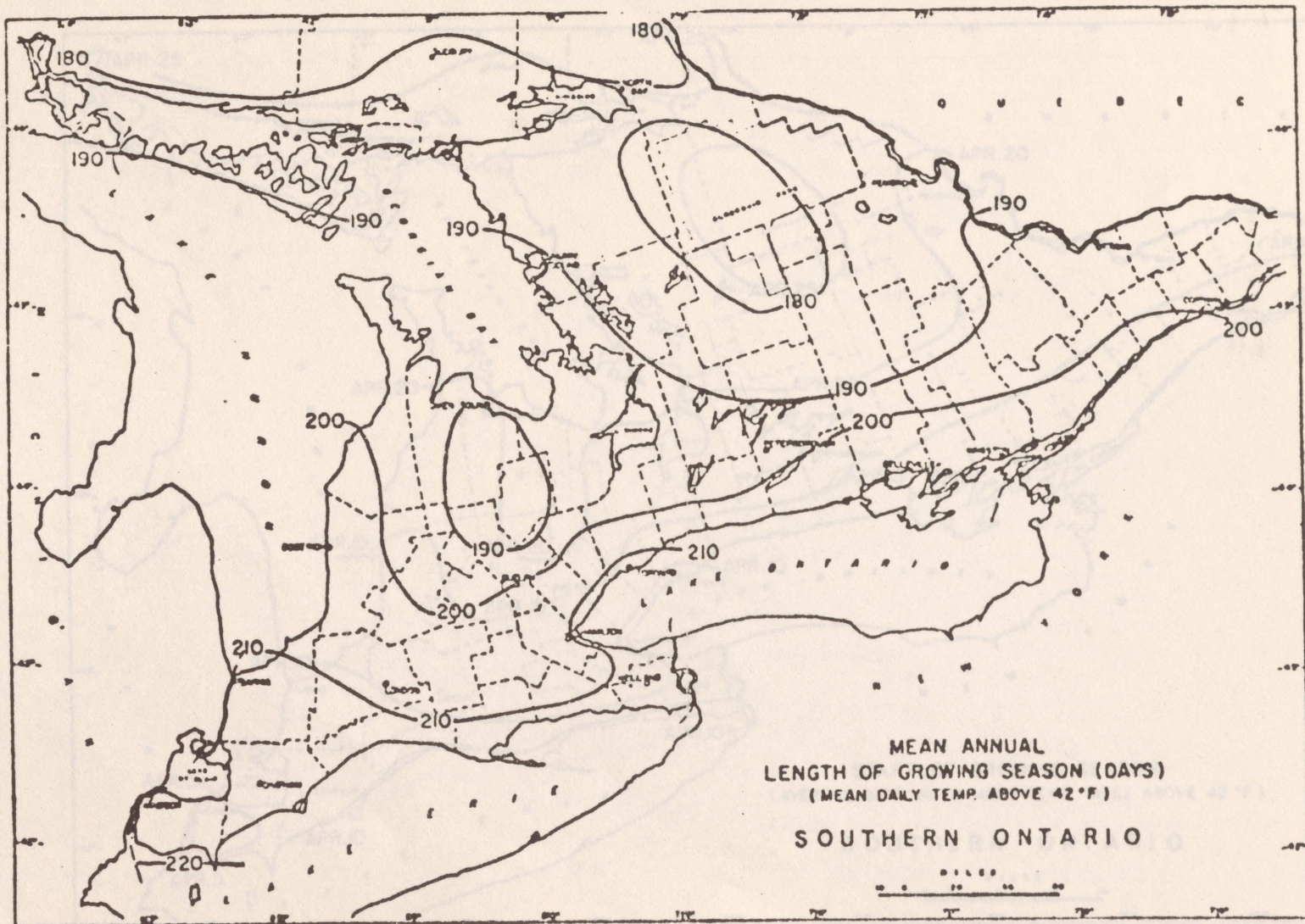
AVAILABILITY OF ENVIRONMENTAL REQUIREMENTS FOR SUCCESSFUL VITICULTURE IN THE COUNTIES OF ESSEX AND KENT

In the previous chapter environmental considerations were discussed, listing such factors as temperature, rainfall, humidity and soil as the chief environmental influences which determine the suitability of an area for grape production. It is therefore necessary to examine the Essex-Kent region to see if these environmental influences are available for the viticulture industry.

1. Temperature

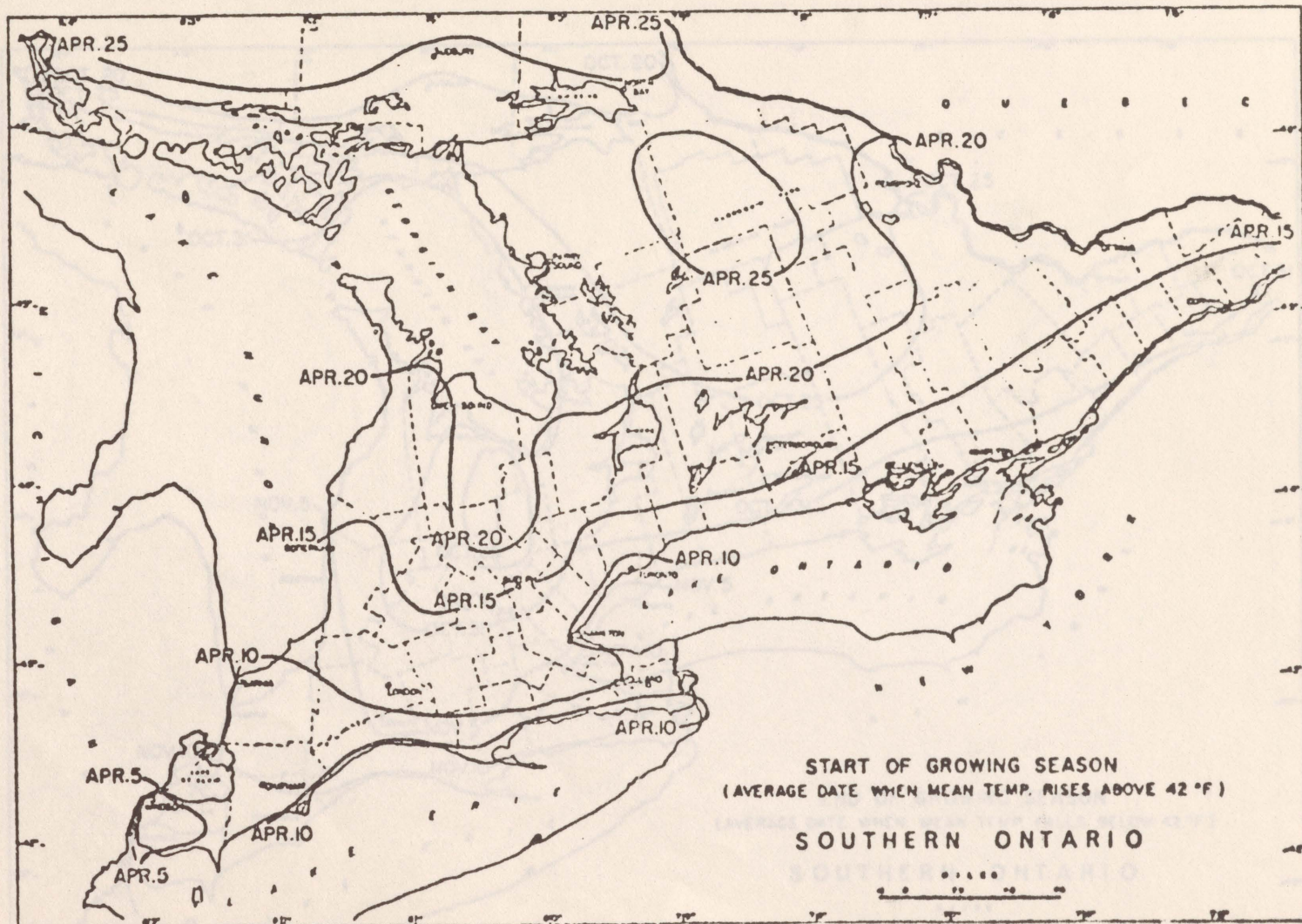
Temperature is the primary environmental factor that influences the type and planting location of grapes. As stated grapes grow best in areas between the 50°F. and 68°F. isotherm. In the Essex-Kent area, the approximate mean isotherm is 49°F., which is still quite suitable for the growing of *Vinifera* grapes, however, there is more risk involved due to frost. Statistics compiled on frost from the years 1931 to 1960 indicate that the Essex-Kent area receives 160 to 200 frost free days a year depending upon the location with respect to the lakes.¹⁷

17 Phillips, D. W., McCulloch, J.A.W., The Climate Of The Great Lakes Basin, p.13.



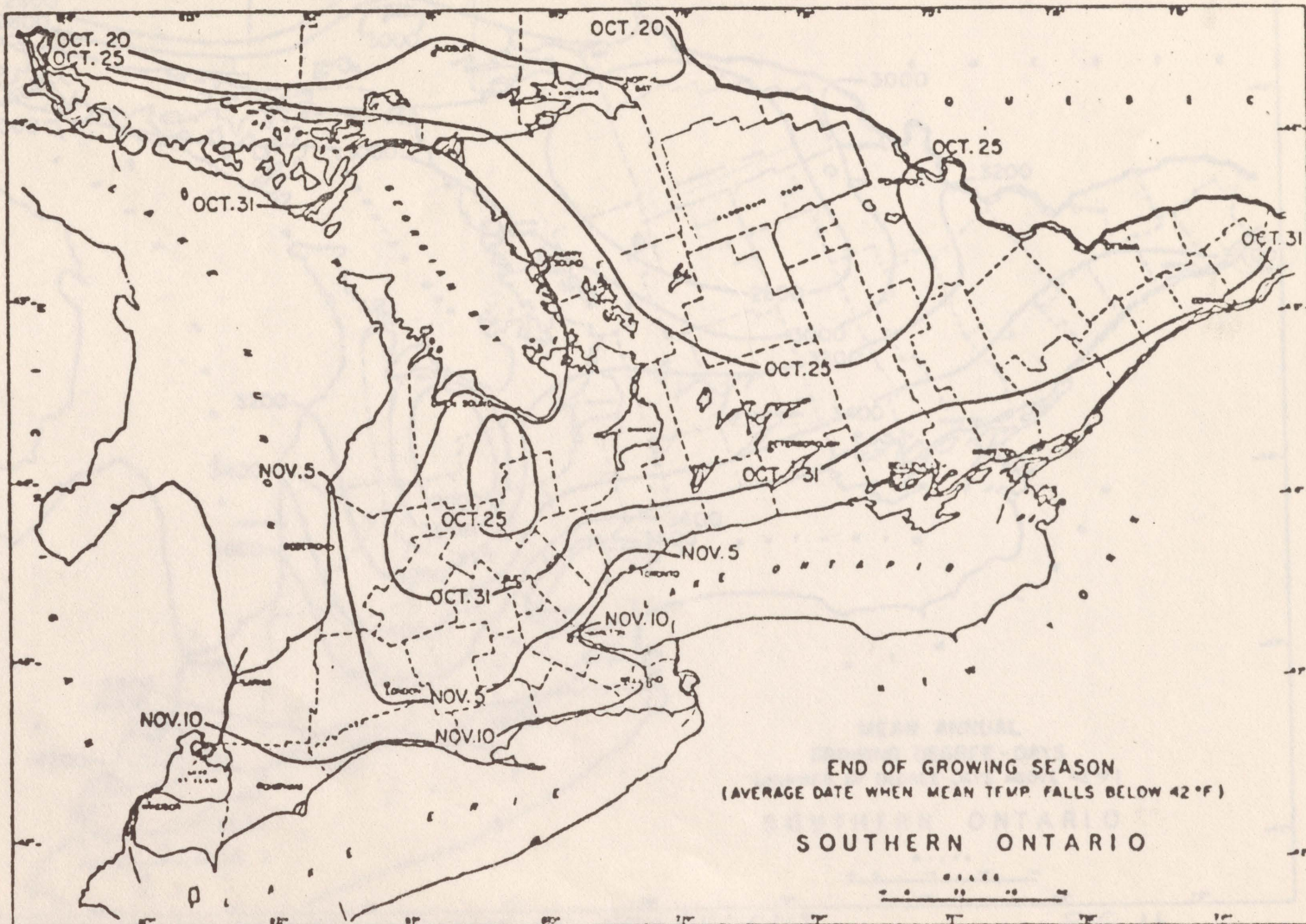
SOURCE: CANADA DEPARTMENT OF TRANSPORT

FIG. 8



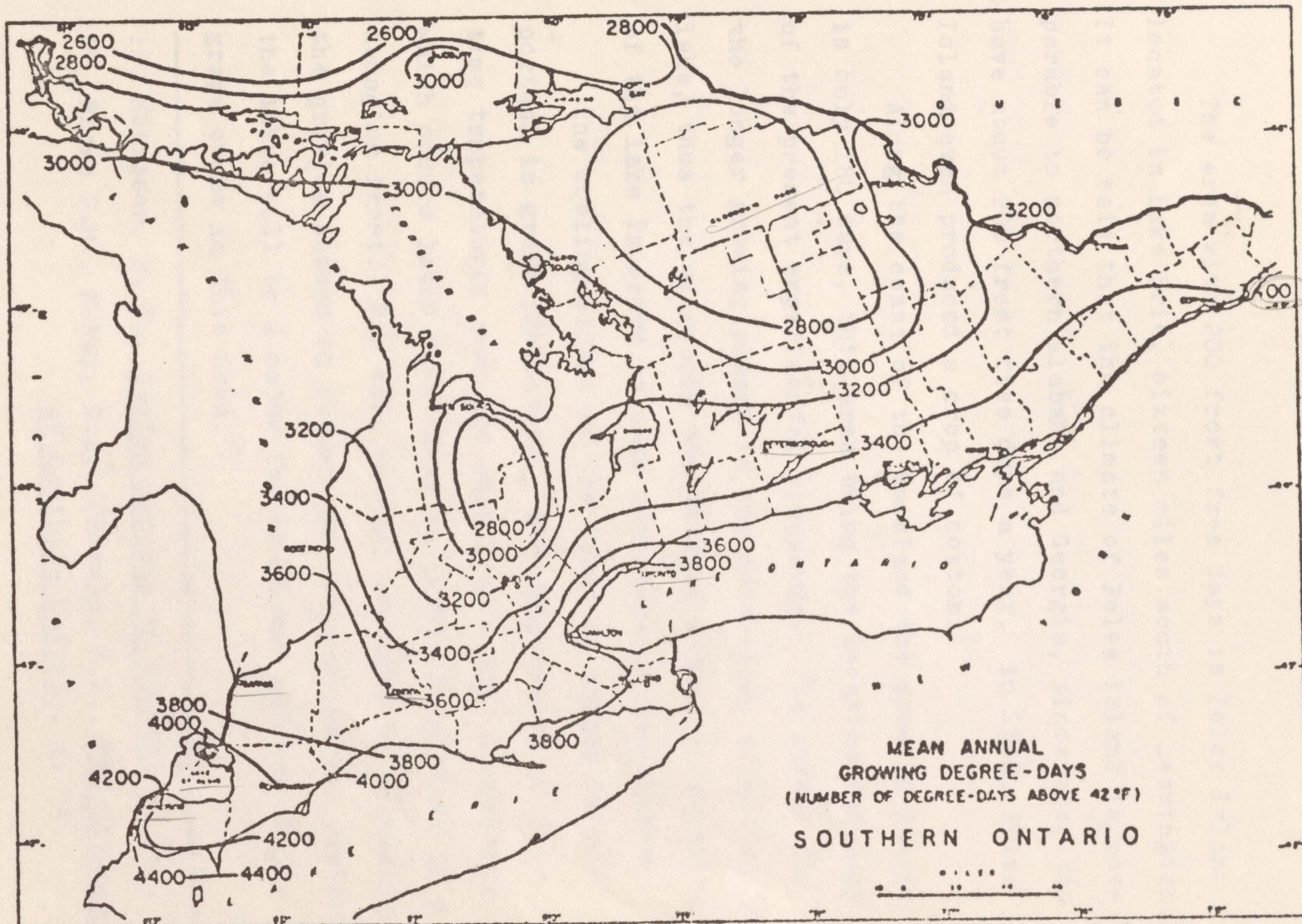
SOURCE: CANADA DEPARTMENT OF TRANSPORT

FIG. 9



SOURCE: CANADA DEPARTMENT OF TRANSPORT

FIG. 10



SOURCE: CANADA DEPARTMENT OF TRANSPORT

FIG. II

The area with 200 frost free days is Pelee Island located in Lake Erie, sixteen miles south of Leamington. It can be said that the climate of Pelee Island is comparable to northern Alabama and Georgia, since they too have about 200 frost free days a year. In 1898, Pelee Island even produced a crop of cotton.¹⁸

Along the coast of the mainland the growing season is only 180 days, this area being the location for many of the present experimental vineyards. The reason for the longer growing season is the moderating effect of the lake, thus the vineyards are planted within a few miles of the lake in order to take advantage of its climate.

The cooling effect of the lakes in spring is important in grape production. The suppression of daytime temperatures near the shoreline delays blossoming which occurs later when there is little likelihood of a damaging frost. For this reason, and also by extending the growing season in autumn and ameliorating the winter the lakes will be a major factor in the success of the grape crops in this area.¹⁹

18 Morrison, N. F., Garden Gateway to Canada, p. 151.

19 Brown D.M., McKay, G.A., Chapman, L.J., The Climate of Southern Ontario, p. 14.

According to the Horticultural Research Institute of Ontario, such grapes as the Catawba and some French Hybrids are harvested about October 13th.²⁰ Pelee Island and the southern portions of Essex and Kent counties are suitable for this grape since the first frost in the area occurs after the 20th or 25th of October depending upon location, whereas, other parts of Southern Ontario have frost much earlier.²¹

2. Rainfall

Precipitation in the Essex-Kent area is approximately 30 inches a year of which $3\frac{1}{2}$ inches are snow. Combined with the well drained soil the moisture received is adequate in that the plants receive enough moisture to prevent shrivelling of the fruit, and lack of constant heavy moisture which creates fungus diseases.²²

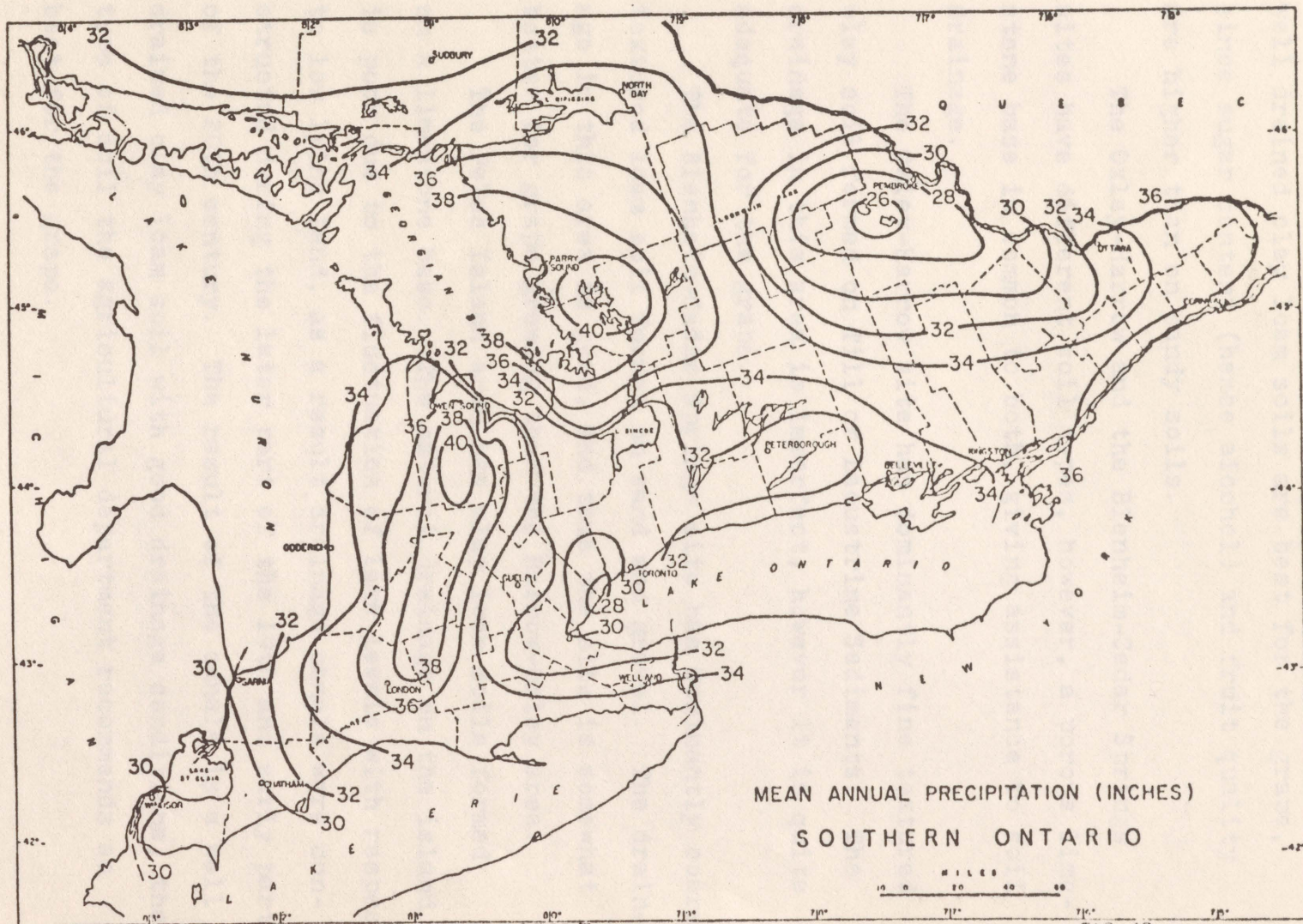
3. Soils

As stated, earlier tests conducted by the Ontario Department of Agriculture, have found that moderately

20 Bradt, O. A., The Grape in Ontario, p. 33.

21 Brown, D. M., McKay, G. A., Chapman, L. J., The Climate of Southern Ontario, p. 27.

22 ibid, p. 32.



MEAN ANNUAL PRECIPITATION (INCHES)
SOUTHERN ONTARIO

SOURCE: CANADA DEPARTMENT OF TRANSPORT

FIG. 12

well drained clay loam soils are best for the grape, since sugar content (hence alcohol) and fruit quality are higher than on sandy soils.

The Oxley-Harrow and the Blenheim-Cedar Springs sites have different soil types, however, a porous limestone base is common to both, giving assistance to soil drainage.

The Oxley-Harrow site has dominantly fine textured clay soil formed on Till or Lacustrine Sediments. The drainage in this area is imperfect, however it is quite adequate for the grape.

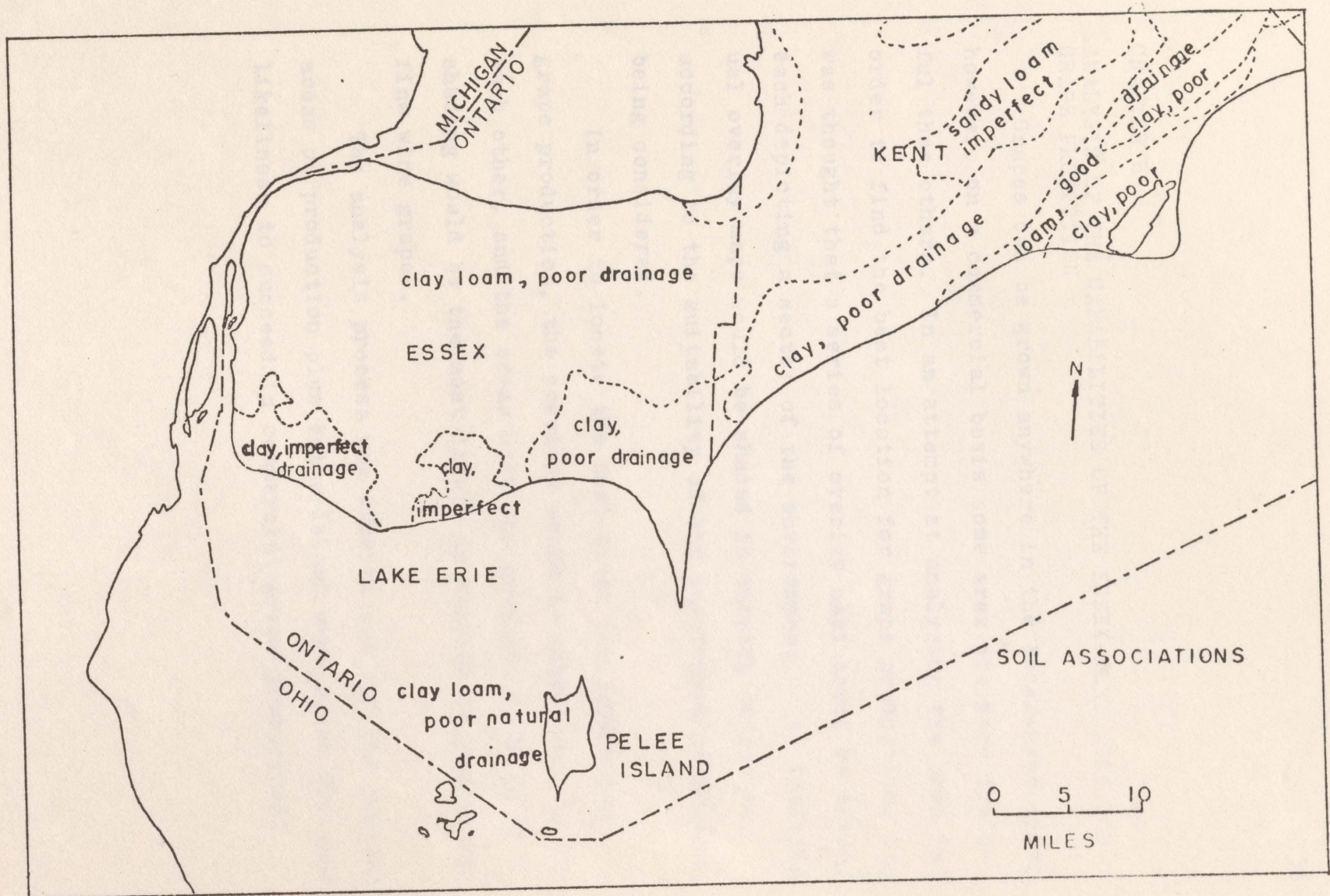
The Blenheim-Cedar Springs site has dominantly coarse textured loam soil formed on sand and gravel. The drainage in this area is good, and thus the site is somewhat better for grape growing than the Harrow-Oxley area.

The Pelee Island area has clay loam soils formed on a limestone base. The natural drainage on the island is poor due to the fluctuation of lake levels with respect to low lying land, as a result drainage canals were constructed during the later part of the 19th and early part of the 20th century. The result of the canals is a well drained clay loam soil with good drainage conditions, the type of soil the agricultural department recommends as best for the grape.

LOCATION	HARROW OXLEY	BLLENHEIM CEDAR SPRINGS	PELBE ISLAND
SOIL GROUP	Grey-brown Podzolic	Grey-brown Podzolic	Dark-grey Gleisolic
TEXTURE	Clay	Loam	Clay Loam
TOPOGRAPHY	Undulating	Undulating	Very gently undulating
DRAINAGE	Imperfect	Good	Poor
SURFACE REACTION	Medium acid	Slightly acid	Neutral
SURFACE STONINESS	Stonefree	Few stones	Stonefree

Natural soil type identification. ²³

23 Hoffman, D. W., Matthews, B.C., Wicklund, R.E.,
Soil Associations of Southern Ontario,
Insert Map.



SOURCE: CANADA DEPARTMENT OF AGRICULTURE

FIG. 13

CHAPTER 6

ANALYSIS OF THE CAPABILITIES OF THE ESSEX-KENT AREA FOR GRAPE PRODUCTION

Grapes can be grown anywhere in the Essex-Kent area, however, on a commercial basis some areas are more fruitful than others. In an attempt at analyzing the area in order to find the best location for grape production, it was thought that a series of overlay maps could be drawn, each depicting a sector of the environment. The individual overlay maps would be shaded in varying densities according to the suitability of the environmental factor being considered.

In order to locate the best sites for commercial grape production, the overlays would be placed on top of each other, and the areas with the greatest density of shading would be the most likely to succeed in producing fine wine grapes.

The analysis process was carried out and the present areas of production plus Pelee Island were noted for their likeliness to succeed in commercial grape production.

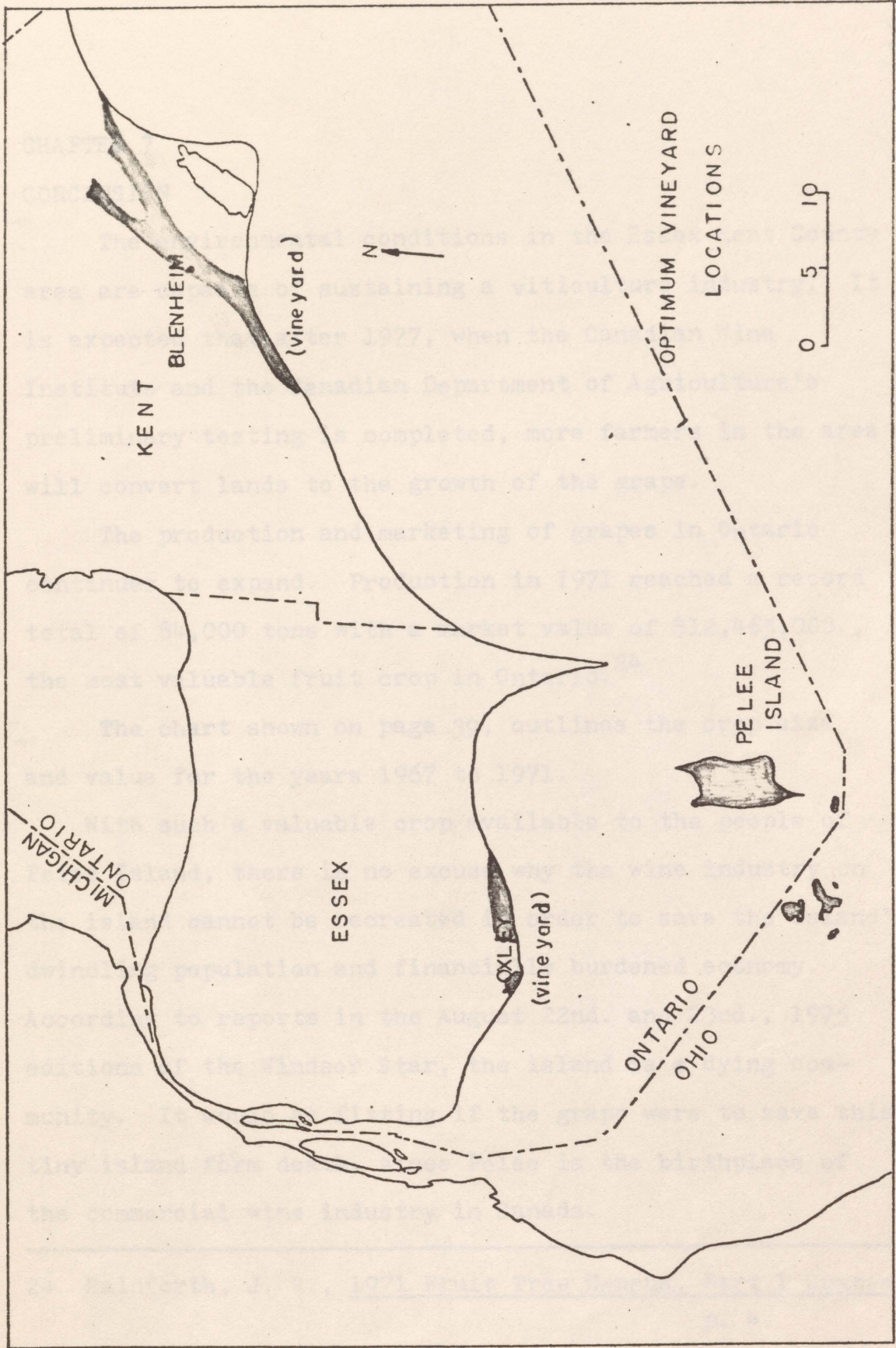


FIG. 14

CHAPTER 7

CONCLUSION

The environmental conditions in the Essex-Kent County area are capable of sustaining a viticulture industry. It is expected that after 1977, when the Canadian Wine Institute and the Canadian Department of Agriculture's preliminary testing is completed, more farmers in the area will convert lands to the growth of the grape.

The production and marketing of grapes in Ontario continues to expand. Production in 1971 reached a record total of 84,000 tons with a market value of \$12,465,000., the most valuable fruit crop in Ontario.²⁴

The chart shown on page 39, outlines the crop size and value for the years 1967 to 1971.

With such a valuable crop available to the people of Pelee Island, there is no excuse why the wine industry on the island cannot be recreated in order to save the island's dwindling population and financially burdened economy. According to reports in the August 22nd. and 23rd., 1975 editions of the Windsor Star, the island is a dying community. It would be fitting if the grape were to save this tiny island from death, since Pelee is the birthplace of the commercial wine industry in Canada.

24 Rainforth, J. R., 1971 Fruit Tree Census, Part 1 Grapes,
p. 4.

	TONS				
	1967	1968	1969	1970	1971
AMOUNT PROCESSED					
- wine	38,037	36,142	38,359	42,445	57,919
-jams and juice	5,033	6,271	8,418	8,783	8,984
-home wine making	-	-	23	72	83
SUB-TOTAL	<u>43,070</u>	<u>42,413</u>	<u>46,810</u>	<u>51,300</u>	<u>66,986</u>
EXPORT SALES	11,900	3,844	8,565	6,775	1,153
SURPLUS	2,000	nil	nil	nil	6,000
DOMESTIC) LOCAL) SALES	<u>8,365</u>	<u>8,433</u>	<u>6,062</u>	<u>5,156</u>	<u>9,861</u>
TOTAL CROP	65,335	54,700	61,437	63,231	84,000
GROSS VALUE	\$6,666,000	\$6,743,000	\$8,970,000	\$9,479,000	\$12,465,000

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25 Rainforth, J. R., 1971 Fruit Tree Census, Part 1, Grapes, p. 4

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