

# FARMING



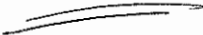
MONROE COUNTY COMPREHENSIVE PLAN



FARMING IN MONROE COUNTY

Monroe County Comprehensive Plan

Phase I



June, 1971

Monroe County Planning Council  
301 County Office Building  
Rochester, New York 14614

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ABSTRACT OF REPORT

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AUTHOR: Staff of the Monroe County Planning Council

SUBJECT: An inventory of the quality of soils for farming, the existing farm land use pattern, and the problems which urban development creates for farming

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ABSTRACT:

This report examines the quality of soils in Monroe County for farming, the existing pattern of farm land use, the level of farm output, and the problems which the rapid pace of urban expansion in the county is bringing to farmers. The final chapter of the report sets forth general directions for policies designed to encourage the continuation of farming in the county.



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## Chapter I

This report presents an inventory of farming in Monroe County. The suitability of soils for farming is evaluated, and the existing pattern of farm land use and various measures of farm output are examined. The report also considers in some detail the problems in farming associated with the rapid pace of urban expansion in Monroe County. Much of the analysis in the report centers on the issue of whether the land in Monroe County is being used as intensively and completely for farming as might be desired.

The principal purpose of the report is to provide a basis for the development of policies on farm land use in Monroe County. Although certain guidelines for such policies are set forth, no attempt is made to formulate specific policies for adoption. This task will be undertaken in subsequent phases of the Monroe County comprehensive planning program. It will rely not only on considerations outside the scope of this report, such as an analysis of the locational needs for urban expansion, but also on close cooperation by farmers and other representatives of the agricultural community.

Certain limitations of this report as a basis for developing agriculture, to the exclusion of the locational requirements for urban expansion, some of the material presented is dated. The farm land use pattern examined is that of 1968, and this pattern may be expected to have changed somewhat during the past three years. In addition, the most recent Census of Agriculture data analyzed is that of 1964.



It is expected that more recent information on farming in Monroe County will soon become available, and this information will be examined and taken into account in the development of farm land use policies. The long-overdue 1969 Census of Agriculture, which is expected to be published at the end of the summer of 1971, will provide useful information on relatively recent changes in productivity and other characteristics of farming. A survey on the viability of farming in Monroe County, which is now being conducted by Professor Howard Conklin of Cornell, will be of considerable assistance in the designation of areas of the county where farming might be maintained.

The remainder of this report is divided into four chapters. The first chapter, Chapter 2, examines the adaptability of soils in the county to farming. Here the soils are grouped into major "associations", and the quality of each association is evaluated for two categories of farming: (1) field crops and vegetables and (2) orchards. These categories include more than 90% of the farm acreage in Monroe County.

Chapter 3 gives an overview of the farm land use pattern in the County, and it examines farmland retirement and farm productivity in relation to pressures for urban development. The analysis suggests that there are significant inefficiencies in the use of the land for farming, since large areas of the county which are physiographically well suited for farming have been retired from production and have yet to be developed by alternative uses. Similarly, much of the land remaining in farming appears to be operating at a lower level of productivity than desirable.

Chapter 4 focuses more sharply on the problems which urbanization is bringing to farmers in the county and relates these problems to the inefficiencies in farming suggested in Chapter 3. The analysis is suggestive of the kinds of policies which will be effective in maintaining or improving farming in Monroe County.

Chapter 5 examines the implications of the preceeding chapters for farm land use policy, and it sets forth broad guidelines for the development of such policy in subsequent phases of the comprehensive planning program. The guidelines relate both to locational considerations in planning for farm land use and to such substantive policy issues as preferential taxation of farmland.

## Chapter 2

### THE SOIL RESOURCE BASE

Soils have become an ever more important factor in farm location. During recent decades many farms operating on poor soils have discontinued production in New York State, and an increasing share of farm output in the state has been produced by farms operating on more favorable soils.

The trend of retiring marginal soils from farming is expected to continue for some years to come. Recent projections<sup>1</sup> indicate that between 1965 and 1985, 4.4 million acres in New York State will be retired from farming. During this same period only 1.8 million acres are projected to be converted in urban uses. Even if all the acreage to be converted to urban use was in farming in 1965, this would still leave some 2.6 million acres which are to be retired from farming for reasons other than conversion to urban uses. Much of this acreage will go out of farming because its soils do not meet the minimum standards for remaining in production.

The importance of soils, therefore, must be clearly recognized in planning for farm land use. This chapter provides a basis for such recognition by interpreting the quality of soils for farming in Monroe County. Its principal purpose is to set forth information which should be taken into account in public policies affecting the allocation of land to farming and, by implication, to other land uses. Further, it develops

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<sup>1</sup>Olan D. Forker and George L. Casler, Toward the Year 1985, Summary Report: Implications, Issues and Challenges for the People of New York State, Special Cornell Series Number 14 (Ithaca, N.Y.: New York State College of Agriculture, 1970), p. 10.



Information which is taken into consideration in much of the analysis of subsequent parts of this report.

The limitations of this chapter for such purposes must be made clear. The soil information presented here is highly generalized. Only broad categories of soils, known as "associations", have been mapped and analyzed. Although the soils within a given association have similar properties, these properties still display considerable variation. Thus, within an association which has been mapped and classified as "good" for farming, one might find small areas which are not well suited for farming because of poor drainage, steep slopes, or other features.

For more complete information in the characteristics of soils in Monroe County, the reader is referred to a survey recently completed by the Monroe County Soil Conservation Service. This survey will be published by the United States Government Printing Office, Washington, D.C., before the end of this year (1971) under the title Soil Survey of Monroe County. It contains more complete information in the soil associations in Monroe County than is given in this report. In addition, it presents detailed soil series maps of Monroe County. The survey, unlike this report, gives sufficient information to interpret, with some professional guidance, the suitability of relatively small parcels of land for farming.

#### THE SOIL ASSOCIATIONS OF MONROE COUNTY

A soil association refers to a landscape within which the soils have similar properties. Ordinarily a number of different types of soils, or "soil series", will be found within a given soil association. The name of the soil association is taken from the major soil series within it.

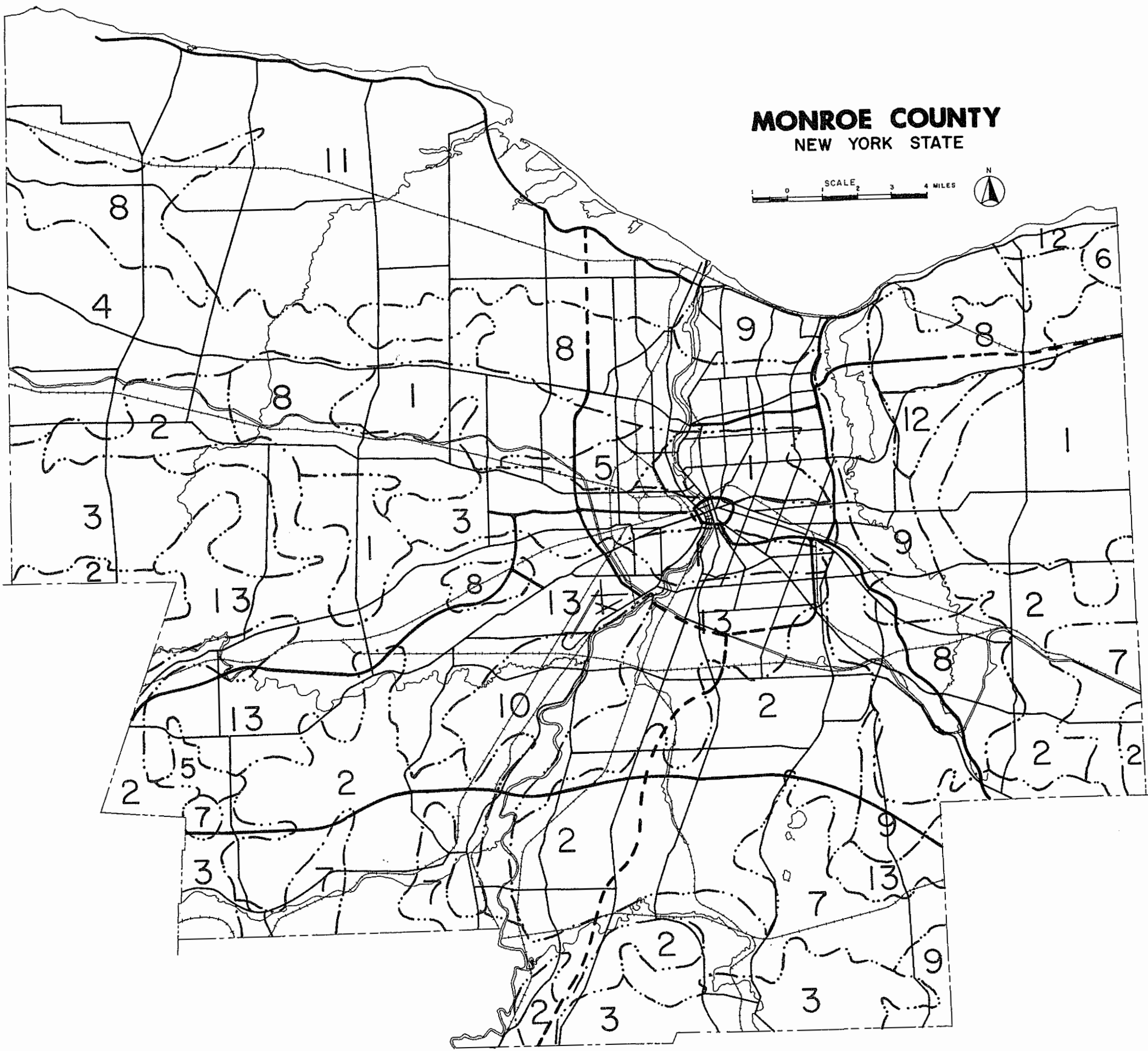
Thus, for example, the soil association Sodus-Ira-Niagara is dominated by soils in three series, principally the Socus series (the first series given in the association name) but also the Ira and Niagara series. Soils in other series will also be found in this association, but they will be less extensive.

In Monroe County there are thirteen different soils associations. The location of these associations is presented in Figure 1. The more significant properties of soils within the associations is given in Table 1.

Soils in Associations 1 through 6 in Figure 1 and Table 1 were formed primarily in glacial till and are composed predominantly of clay. These associations encompass about 45% of the area of Monroe County, mostly to the south of Ridge Road. Although the soils in these associations display some differences in their properties (see Table 1), they are generally deep and present a gently rolling topography. The principal distinctions lie in their drainage, which in some cases is poor while in others it is excellent, and in their subsoil texture, which varies from fine to moderately coarse.

The soils in Associations 7 and 8 were formed primarily in sandy gravelly glacial water deposits. These associations, which encompass about 20% of the area of the county, have slopes that are generally more level than those of the associations formed in glacial till, although in some areas steep slopes are found. The subsoil texture, although variable, is predominantly coarse, providing good drainage.

Soils in the remaining five associations were formed primarily of post-glacial lake deposits of silts and clays. These associations,



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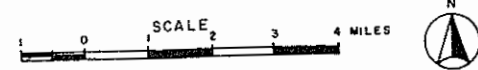


FIGURE I  
SOIL ASSOCIATIONS

- 1 MADRID-MASSENA
- 2 ONTARIO-HILTON-APPLETON
- 3 LIMA-HONEOYE-BENSON
- 4 LOCKPORT-CAZENOVIA-LAIRDSVILLE
- 5 RIGA-BROCKPORT
- 6 SODUS-IRA-NIAGARA
- 7 PALMYRA-WAMPSVILLE
- 8 COLONIE-ELNORA-MINOA
- 9 ARKPORT-COLLAMER
- 10 CANANDAIGUA-NIAGARA-GENESEE
- 11 COLLAMER-HILTON-NIAGARA
- 12 HUDSON-RHINEBECK-MADALIN
- 13 SCHOHARIE-ODESSA-LAKEMONT



TABLE 1. THE CHARACTERISTICS OF SOIL ASSOCIATIONS IN MONROE COUNTY

Association	Percent of County Land in Association	Dominant Composition	Depth to Bedrock	Subsoil Texture	Drainage	Dominant Slopes
1. Madrid-Massena	10	Glacial till	Deep	medium to moderately coarse	Somewhat poorly to well	Nearly level to steeply sloping
2. Ontario-Hilton-Appleton	18	Glacial till	Deep	medium to moderately coarse	Somewhat poorly to well	Nearly level to steeply sloping
3. Lima-Honeoye-Benson	3	Glacial till	Shallow to deep	Medium to moderately coarse	Moderately well to excessively	Nearly level to steeply sloping
4. Lockport-Cazenovia-Lairdsville	6	Glacial till	Moderately deep to deep	Fine to moderately fine	Somewhat poorly to moderately well	Nearly level to gently sloping
5. Piga-Brockport	1	Glacial till	Moderately deep	Fine to moderately fine	Somewhat poorly to moderately well	Nearly level to gently sloping
6. Sodus-Ira-Niagara	1	Glacial till	Moderately deep to deep	Moderately fine to moderately coarse	Somewhat poorly to well	Nearly level to gently sloping
7. Palmyra-Wampsville	6	Gravel or sand (outwash deposits)	Deep	Moderately fine to moderately coarse	Well to excessively	Nearly level to steeply sloping
8. Colonie-Elnora-Minoa	14	Sand (water deposits)	Deep	Moderately coarse to coarse	Somewhat poorly to excessively	Nearly level to steeply sloping

TABLE 1. THE CHARACTERISTICS OF SOIL ASSOCIATIONS IN MONROE COUNTY  
(Continued)

Association	Percent of County Land in Association	Dominant Composition	Depth to Bedrock	Subsoil Texture	Drainage	Dominant Slopes
9. Arkport Collamer	5	Lake-laid silts, very fine sands, loamy sands	Deep	Moderately fine to moderately coarse	Moderately well to well	Level to steep
10. Canandaigua- Niagara- Genesee	2	Lake-laid silts, very fine sands, loamy sands	Deep	Moderately fine to medium	Very poorly to well (floboding)	Level to nearly level
11. Collamer- Hilton- Niagara	13	Lake-laid silts, very fine sands, loamy sands, glacial till	Deep	Moderately fine to medium	Somewhat poorly to moderately well	Level to gently sloping
12. Hudson- Rhinebeck- Madalin	1	Lake-laid clays	Deep	Fine	Very poorly to moderately well	Level to gently sloping
13. Schoharie- Odessa- Lakemont	14	Lake-laid clays	Deep	Fine	Very poorly to moderately well	Level to gently sloping

which encompass some 35% of the area of the county, lie predominantly in the northern part of the county, to the north of Ridge Road. Here the associations were formed in Lake Iroquois, a post-glacial lake which receded eventually to form Lake Ontario. The alignment of Ridge Road approximates the shoreline of Lake Iroquois and serves as a significant divide in the soil formations of Monroe County. As a result of erosion by Lake Iroquois, the soils in the vicinity of Ridge Road are shallow. To the north, where the eroded silts and clays were deposited, the soils are deep and nearly level. Although most of these soils have good drainage, some areas, because of fine subsoil texture, present serious drainage problems.

Thus the geological history of Monroe County, particularly during the glacial period, has had much to do with the character and pattern of its soil associations. Whether the association was formed in glacial till, in glacial water deposits, or in post-glacial lake deposits, in turn, has had an effect on its suitability for various types of farming.

#### SUITABILITY OF THE SOIL ASSOCIATIONS FOR FARMING

A mapping of soil associations provides a useful general basis for determining the suitability of soils for farming, because soils within a given association are similar in slope, drainage, depth to bedrock, and other properties affecting their productivity. The principal limitation, as already noted, is that variability in soil characteristics within the associations may be sufficient to invalidate qualitative judgments about small tracts of land.

The suitability for farming of the soil associations in Monroe County is interpreted in Table 2 and Figures 2 and 3. Two categories

of farming have been considered: (1) field crops and vegetation and (2) orchards. Field crops in the County consist principally of corn, grains, and various kinds of hay, which may be grown as cash crops or as part of a dairy or other livestock operation. The two categories of farming encompass a large percentage, more than 90% of the farmland in Monroe County. (The distribution of various types of farming in Monroe County is given in Table 5, Part III.) For each category of farming the suitability of the soil associations has been defined in three broad classes: "good" (that is, well suited to the given category of farming), "fair", and "poor".

These evaluations were made on the basis of soil characteristics alone, independent of other factors which determine the desirability of the land for farming. The most significant of these factors is that of competing land use demands. The evaluations do not consider whether the land has been developed by urban uses or whether there is any prospect of such development.

Similarly, important economic factors in farm location have had no bearing on the evaluations. For example, proximity to markets and to production inputs, such as machinery, fertilizer, and labor, was not considered.

Less apparent are certain physiographic factors which have been outside the scope of the evaluations. Microclimate, which has a significant effect on patterns of orchard production in Monroe County, was not considered, nor was the availability of irrigation water, often an important consideration in the location of vegetable farming.

TABLE 2. SUITABILITY OF SOIL ASSOCIATIONS IN MONROE COUNTY FOR FARMING

Association	Suitability for Farming		Orchards	Problems to be overcome by	
	Vegetables and Field Crops	Field Crops		Farm Management	Farm Management
1. Madrid-Massena	Good	Good	Good	Erosion on sloping area; drainage in lower areas; droughtiness; stones and boulders may interfere with cultivation	Erosion in sloping areas; drainage in lower areas
2. Ontario-Hilton-Appleton	Good	Good	Fair	Erosion in sloping areas; drainage in lower areas; droughtiness where shallow to bedrock	Erosion in sloping areas; drainage in lower areas
3. Lima-Moneoye-Benson	Good	Good	Fair	Erosion in sloping areas; droughtiness where shallow to bedrock	Erosion in sloping areas; droughtiness where shallow to bedrock; general problem of drainage and cultivation
4. Lockport-Cazenovia-Lairdsville	Poor	Poor	Poor	Erosion in sloping areas; droughtiness where shallow to bedrock; general problem of drainage and cultivation	Erosion in sloping areas; droughtiness where shallow to bedrock; general problem of drainage and cultivation
5. Riga-Brockport	Poor	Poor	Poor	Erosion in sloping areas; droughtiness where shallow to bedrock; general problem of drainage and cultivation	Erosion in sloping areas; droughtiness where shallow to bedrock; general problem of drainage and cultivation
6. Sodus-Ira-Niagara	Fair	Fair	Good	Erosion in sloping areas; drainage in lower areas; droughtiness where shallow to bedrock; acidity, fragipans	Erosion in sloping areas; drainage in lower areas; droughtiness where shallow to bedrock; acidity, fragipans
7. Palmyra-Wampsville	Good	Good	Good	General problem of droughtiness; general problem of cultivation due to gravelly and cobbly surface textures	General problem of droughtiness; general problem of cultivation due to gravelly and cobbly surface textures
8. Colonie-Elnora-Minoa	Fair	Fair	Good	Erosion where sandy areas are exposed without protective covering; drainage in lower areas; general problem of droughtiness, low nutrients	Erosion where sandy areas are exposed without protective covering; drainage in lower areas; general problem of droughtiness, low nutrients
9. Arkport-Collamer	Fair	Fair	Good	Erosion in sloping areas; drainage in driveway areas	Erosion in sloping areas; drainage in driveway areas
10. Canandaigua-Niagara-Genecsee	Fair	Fair	Poor	General problem of drainage and flooding	General problem of drainage and flooding
11. Collamer-Hilton-Niagara	Good	Good	Good	Erosion in even gently sloping areas; drainage because of seasonal wetness in flatter areas	Erosion in even gently sloping areas; drainage because of seasonal wetness in flatter areas
12. Hudson-Phinebeck-Madalin	Poor	Poor	Poor	General problem of drainage because of seasonal wetness; general problem of timely tillage because of puddling and clodding	General problem of drainage because of seasonal wetness; general problem of timely tillage because of puddling and clodding
13. Schoharie-Odessa-Lakemont	Poor	Poor	Poor	General problem of drainage because of seasonal wetness; general problem of timely tillage because of puddling and clodding	General problem of drainage because of seasonal wetness; general problem of timely tillage because of puddling and clodding



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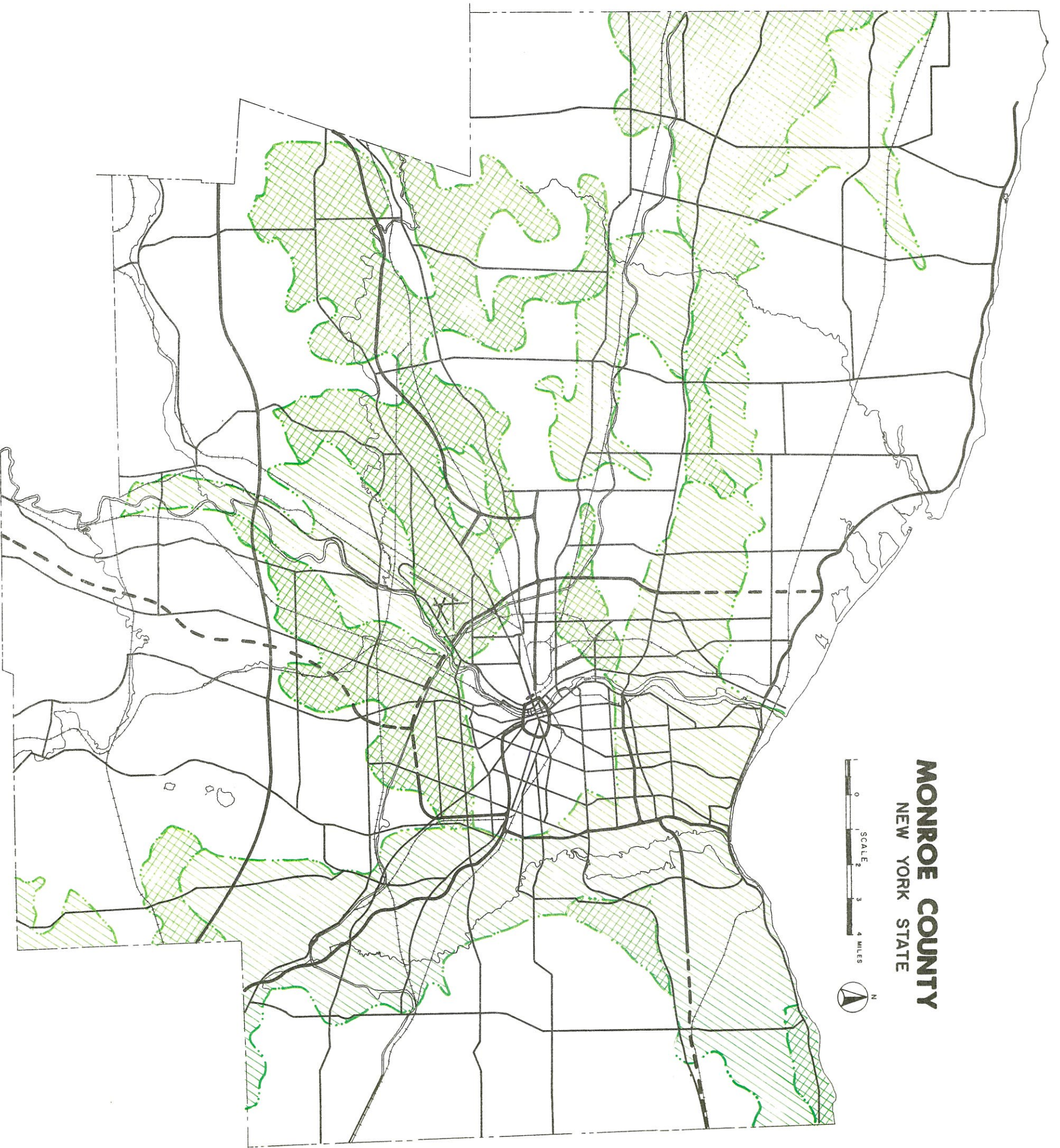
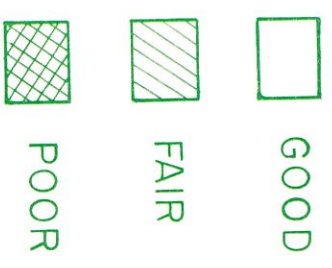
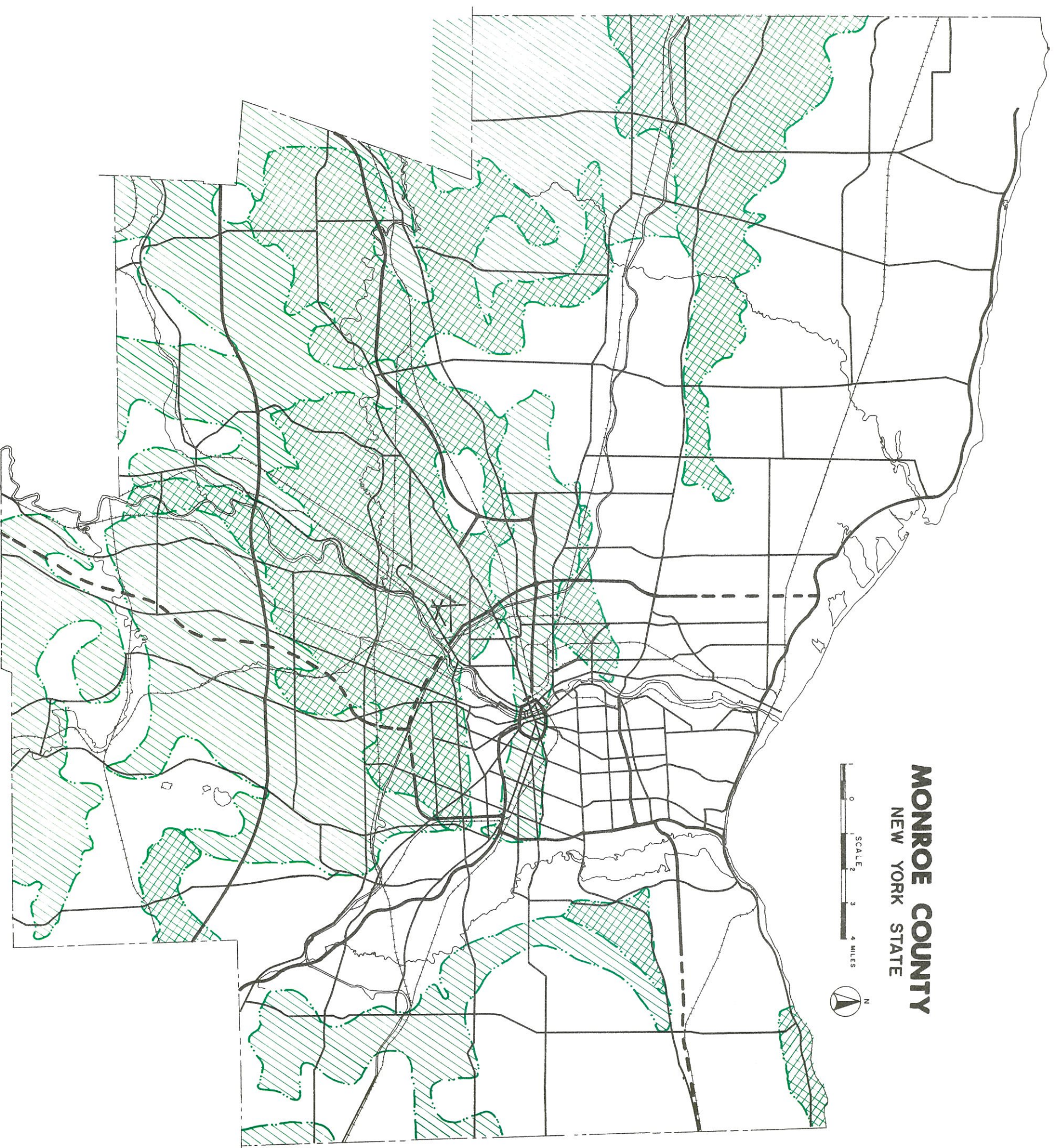


FIGURE 2

SUITABILITY OF SOIL ASSOCIATIONS  
FOR FIELD CROPS & VEGETABLES





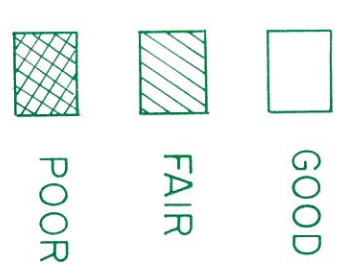


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FIGURE 3

SUITABILITY OF SOIL ASSOCIATIONS  
FOR ORCHARDS





The evaluations indicate that a large percentage of the land in Monroe County is well adapted to farming. (See Figures 2 and 3.)

Approximately 55% of the land in the county is classified as "good" for field crops and vegetables. A somewhat lower percentage, 44%, is classified as "good" for orchards. Only 22% of the county land is classified as "poor" for orchards.

In actuality these percentages overstate the availability of land for farming, since urbanization, together with its inflationary effect on the price of land, has denied much of this land to farming. Farming in Monroe County, for reasons to be set forth in subsequent parts of this report, will remain feasible only in those areas which are not subject to intensive urban pressures. Fortunately, one finds large acreages well suited for farming in such areas: in the eastern parts of Penfield and Perinton, to the south of the New York State Thruway, and to the west of the Gates-Ogden and Parma-Greece town lines.

The percentages also overstate somewhat the availability of land for orchards, which, because of their long growing season, require not only favorable soils but also a favorable microclimate. The latter requirement has led to a concentration of orchards near Lake Ontario, (See Figure 4 of Chapter 3) which has moderated the climate in its vicinity, lowering the frequency of late spring and early fall frosts. The combination of favorable soils and microclimate near Lake Ontario, particularly in the western part of Monroe County, will continue to favor highly productive orchard farming in this area.

Certain of the soil characteristics which led to disparities between the evaluations for orchards and those for dairy, field crops, and

vegetables are itemized in Table I. Orchards require deeper soils than field crops and vegetables, which may be grown satisfactorily where soils are as shallow as 12 inches (assuming that natural drainage is adequate or that artificial drainage has been provided). Thus the Lima-Honeoye-Benson association, which has been classified as "good" for field crops and vegetables, has been classified as only "fair" for orchards, partly because the soils in this association are often shallow.

In addition, because of their deep roots, fruit trees require better drainage than field crops and vegetables. Sandy and gravelly soils (those of coarse texture in Table I), which provide excellent drainage, are well suited for orchards. These soils, however, are sometimes unsuitable for field crops and vegetables because they are too well drained and may be low in nutrients. Thus, in comparing Tables 1 and 2, one observes that the Colonie-Elmora-Minoa association, because of its large sand and gravel composition, has been rated as "good" for orchards and only "fair" for field crops and vegetables. Conversely, certain associations formed in glacial till, because of their high clay content and fine texture, have been rated "good" for field crops and vegetables and only "fair" for orchards.

Some of the disparities in the classification are not apparent from the characteristics itemized in Table I. It was necessary, for example, to use considerable judgment in combining the properties listed in Table I to derive a general evaluation of the suitability of the soils for the two categories of farming. Further, certain soil characteristics which are not given in Table I were taken into account in the evaluation. The most significant of these are the pH-level (a measure of

acidity) and the organic content of the soil. In general, neutral soils, with pH-levels varying from 6 to 7, are better suited to field crops and vegetables than to orchards, which require somewhat more acidity. Similarly, for field crops and vegetables soils of high organic content are desirable, while organic content is a less significant factor in orchard production.

Despite the large percentage of county land which is designated as well suited to farming, much of this land presents problems which require special attention by farm management. (See Table 2.) Where these problems are not severe, they may be overcome by proper management practices.

Associations 1 through 6, which were formed in glacial till, display problems common to clay soils. Erosion generally presents a problem in steeply sloping areas, and partly for this reason most of the farmland in such areas has been retired. In addition, drainage problems are common in these associations, particularly in lower areas where surface drainage accumulates. Other common problems include droughtiness (that is, inadequate retention of moisture by the soils) where the soils are shallow and cultivation difficulties resulting from the significant amounts of stones and boulders in the soil.

The farm management problems in Associations 7 and 8 are related largely to the coarse texture of the soils in these associations. Droughtiness, resulting from excessive drainage, is often a significant problem, particularly for vegetable production. In addition, soils in Association 7 are often difficult to cultivate because of their coarse textures, while those in Association 8 are often low in nutrients.

In Associations 9 through 13 the most serious problem for farm management is that of poor drainage. Because of this problem all the associations except 11 are poorly adapted to orchards. The drainage problem in Associations 12 and 13 is so severe that these associations are unsuitable for farming of any kind that is feasible in Monroe County.

Most of the land in Monroe County, however, is well suited to farming, presenting only minor problems which may be overcome by proper management practices. Soils and climate have been observed to favor highly productive orchard farming in the northwestern part of the county. In other parts of the county large areas have been found to be well suited for field crops and vegetables. Many areas which are quite remote from intensive urban development are physiographically well adapted to supporting highly productive farming for many years to come.

## Chapter 3

### GENERAL PATTERN AND PRODUCTIVITY OF FARMING

The previous chapter indicated that soil resources in Monroe County are highly favorable for farming. This chapter examines the degree to which farming in the county has responded to its favorable soil resources. More specifically, it examines the level of farm output in the county and relates this output both to the quality of soils for farming and the pressures for converting the land to urban uses.

To assist in the analysis a general map has been constructed of the farm land use pattern in the county. This map in itself presents important information to be recognized in the development of policies on farm land use. When combined with the soil information presented in the previous chapter, the map will be of assistance in the designation of areas of the county which might feasibly be maintained in farming.

The central purpose of this chapter, however, has been to examine the general impact of urbanization in Monroe County on farm output. Many of the specific problems which urbanization brings to farmers will be explored in some detail in the following chapter. This chapter, by broadly examining the relation between urban pressures and farm output, provides a general setting for the detailed investigations undertaken in the next chapter.

Changes in total farm output may be attributed to two components: changes in the number of acres devoted to farming and changes in the productivity of farming, the output per acre. During recent decades the



number of acres in farming has in general declined significantly throughout the United States. Given no changes in productivity, this decline in farm acreage would have resulted in a decline in total farm output. During this period, however, farm productivity has increased disproportionately, resulting in an actual increase in total farm output.

This chapter begins by examining changes in total farm output in Monroe County. It then examines the components of these changes, first the total acreage component and then the productivity component, and relates these in a general way to urban development pressures. Finally the chapter sets forth some of the implications of past changes in farm acreage and productivity in view of projected future and requirements for urban expansion.

#### CHANGES IN TOTAL FARM OUTPUT

Changes in total farm output in Monroe County are given in Table 3. These changes are compared with those of New York State and selected rural counties.

The rural counties were selected in order to make certain inferences on the effects of urbanization in farm output in Monroe County. The counties, Cayuga, Genesee, Ontario, and Wayne, are similar to Monroe County in soil characteristics and climate, but each is much more remote from the pressures of urbanization than Monroe County. Both Monroe County and the selected rural counties lie largely in the Central Plain and the Erie-Ontario Lake Plain regions of New York State, which are

TABLE 3

Value of Farm Products, 1959 and 1964<sup>1</sup>

	Total Value of Products		Value of Products per			
	1959 (\$100,000)	1964 % Change 1959-1964	1959 (\$)	1964 (\$)	% Change 1959-1964	
Monroe County	18.3	18.8	2.8	150	168	12.0
Selected Rural Counties <sup>2</sup>	78.0	88.1	13.0	135	162	20.0
New York State	775.4	852.6	10.0	154	180	16.9

<sup>1</sup>Howard E. Conklin, et. al., Maintaining Viable Farming in Areas of Urban Expansion (Ithaca, N. Y.: Department of Agricultural Economics, New York State College of Agriculture, 1969), p. I-52.

<sup>2</sup>Cayuga, Genesee, Ontario, and Wayne Counties.

known to be highly favorable for farming.<sup>1</sup> Since the physiographic characteristics of Monroe County and the selected rural counties are similar, these counties would support similar kinds of farming if urban pressures within them were identical.

The total value of products produced by farmers in Monroe County increased by 2.8% from 1959 to 1964 (Table 3). During the same period the total value of farm products in the selected rural counties increased by 13.0%, while in New York State it increased by 10.0%. Thus, during this period farm output in Monroe County underwent a significantly lower rate of increase than in the selected rural counties or in New York State.

This relatively low rate of increase in farm output may represent an efficient adjustment by farmers to the competing demands for the land by urban uses. Conversely, it may represent an inefficient adjustment, in that the decline is greater than required for accommodating urban expansion in the county. Thus more land which is well suited for farming may have gone out of production than is needed for urban uses. Similarly, the land remaining in production may be operated at a lower level of productivity than is desirable in view of the future demands for the land by urban uses. The remainder of the chapter explores these issues.

#### CHANGES IN FARM ACREAGE

The question arises of whether the relative decline in farm output in Monroe County is due to changes in the acreage in farming or changes

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<sup>1</sup> See Kenneth C. Nobe, Ernest E. Hardy, and Howard E. Conklin, The Extent and Intensity of Farming in Western New York State, Economic Land Classification Leaflet 7 (Ithaca, N.Y.: New York State College of Agriculture, Cornell University, 1961). See also Howard E. Conklin and Robert E. Linton, The Nature and Distribution of Farming in New York State (Albany, N.Y.: New York State Office of Planning Coordination, 1969).

In the productivity of farming. It may be, for example, that Monroe County experienced a comparable rate of decline in total farm acreage to that in the selected rural counties, but also underwent a relatively low rate of increase in farm productivity.

Much of the relatively low rate of growth in farm output in Monroe County has been due to a decline in the acreage devoted to farming (See Table 4). The total acres of cropland harvested in the county declined by 8.2% from 1959 to 1964, while in the selected rural counties it declined by 5.7% and in New York State by 5.8%.

The question of motivation for the retirement of farmland must be considered in determining whether it represents an efficient or inefficient response to urban development pressures. During recent decades the total acreage needs for farming in the United States has declined dramatically. Many acres have gone out of farming because they contain poor soils which do not meet the high quality requirements for modern farm production. Other acres, where the soils are favorable for farming, have gone out of production to be converted to urban uses. Still other acres have been retired from farming, without being converted to urban uses, in response to the increasing pressures of urban expansion. Such land may be held in an unproductive state for many years before it is converted to urban use.

The concern here is that of examining farmland retirement due to the lost motivation. The excess idling of good farmland in response to urban pressure represents a highly inefficient use of the land. Not only does such a process "waste" land by taking it out of productive use for many years, but it also has detrimental effects on the quality of

TABLE 4

Number, Size, and Value of Farms, 1959 and 1964<sup>1</sup>

	Monroe County		Selected Rural Counties <sup>2</sup>		New York State	
	1959	1964	1959	1964	1959	1964
Number of Farms	1,206	970	5,388	4,417	56,760	48,376
Percentage of Farms by Value of Products sold						
50-\$ 9,999	41.9	51.2	53.2	44.1	55.1	45.8
\$10,000-\$19,999	30.0	20.6	28.9	26.6	29.5	30.1
\$20,000-\$39,999	20.3	17.1	13.3	19.3	11.9	17.3
\$40,000 or more	7.8	11.0	4.6	10.0	3.7	6.9
Total Cropland Harvested (Thousand Acres)	122.9	112	577	544	5032	4743
Average Size of Farms (Acres)	160.9	177.7	185.7	205.5	203.0	221.2
Value of Land and Buildings (Dollars)						
Average per Farm	55,110	89,493	36,470	39,100	28,004	39,007
Average per Acre	354.3	493.5	152.3	186.8	139.9	175.3
			62.4	7.2		39.3
			39.3	22.7		25.3
			-19.6	-18.0		-14.8
			-1.6 <sup>3</sup>	-32.0		-29.2
			-44.8 <sup>3</sup>	-24.6		-13.0
			-32.2 <sup>3</sup>	18.8		23.4
			13.8 <sup>3</sup>	78.1		57.2
			-8.2	-5.7		-5.8
			10.4	10.7		9.0

<sup>1</sup>Sources: U.S. Bureau of the Census, U.S. Census of Agriculture: 1959, Vol. I, Counties, Part 7, New York and U.S. Census of Agriculture: 1964, Statistics for the State and Counties, New York (Washington, D.C.); U.S. Government Printing Office, 1961 and 1966).

<sup>2</sup>Cayuga, Genesee, Ontario, and Wayne Counties

<sup>3</sup>Percentage change in the actual number of farms, not in the percentage distributions shown in previous two columns.

the visual environment. Idled farmland is frequently left to grow to unsightly brush and weeds.

The pattern of active and idled farmland in Monroe County in 1968, is shown in Figure 4 and in Table 5 and 6<sup>2</sup>. Figure 4 shows the pattern of land use for orchards, other cropland (principally field crops and vegetables), and pasture, the three major categories of farmland use in the county. In addition, the figure displays the pattern of land which has been recently (within approximately 10 years of 1968) been retired from farming and the pattern of brushland, most of which was once in farming but was returned from production from 10 to 30 years prior to 1968. The number of acres in these uses in the various towns of Monroe County is given in Tables 5 and 6. Table 6 also gives the number of acres in certain types of farming which take up less acreage than do the categories displayed in Figure 4: vineyards, horticultural and floricultural farms, and specialty farms.

Active farmland in Monroe County encompasses 63,607 acres, approximately 16% of the total land area of the county (Table 6). The largest category, "other cropland", encompasses 55,000 acres. "Other cropland", which includes largely dairy farming but also significant amounts of cash grain and vegetable production, is relatively uniformly distributed in the less urbanized areas of the county, reflecting in general the pattern of soil suitability displayed in the previous chapter (See Figure 2).

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<sup>2</sup>The figure and tables were constructed in the basis of data from the "LUNAR" system, developed by Cornell University under contract with the New York State Office of Planning Services, formerly the Office of Planning Coordination, and made available by the Genesee-Finger Lakes Regional Planning Board. See Roger A. Swanson, The Land Use and Natural Resource Inventory of New York State (Albany: New York State Office of Planning Coordination, June 1969).

FIGURE 4

1968 MONROE COUNTY  
FARM LAND USE PATTERN



LEGEND





- ORCHARDS 
- OTHER CROPLAND 
- RECENTLY RETIRED FARMLAND 
- BRUSHLAND 



TABLE 5 ACRES IN VARIOUS KINDS OF FARMING, 1968<sup>1</sup>

	Orchards	Vine yards	Horticulture and Floriculture	Specialty Farms	High Intensity Cropland	Cropland &		Permanent Pasture
						Cropland	Pasture	
Central Towns								
Brighton	0	0	4	9	0	272	48	0
Gates	0	0	71	48	0	87	0	0
Greece	232	0	46	27	39	1954	93	0
Irondequoit	0	3	70	0	0	26	0	0
Western Towns								
Clarkson	162	0	1	0	0	2988	161	0
Hamlin	749	0	10	9	0	6255	330	0
Ogden	189	0	10	12	0	3244	207	0
Parma	488	0	9	29	0	3738	230	0
Sweden	112	0	0	0	0	3128	211	0
Southwestern Towns								
Chili	9	0	2	36	57	3832	404	0
Riga	8	0	5	15	0	4799	509	0
Wheatland	0	0	0	64	0	4514	523	0
Southern Towns								
Henrietta	0	0	6	29	15	3424	267	0
Mendon	0	0	36	60	0	4619	339	0
Rush	3	0	0	0	0	4305	625	0
Eastern Towns								
Penfield	160	24	17	25	65	2673	257	0
Perinton	2	0	15	49	6	2064	476	0
Pittsford	0	0	0	77	0	1823	115	0
Webster	168	9	29	0	28	1596	123	0
TOTAL, MONROE COUNTY	2282	36	331	489	210	55,341	4918	0

<sup>1</sup>Source: Data are from the "LUNAR" system developed by Cornell University under contract with the New York State Office of Planning Services, formerly the New York State Office of Planning Coordination. See Roger A. Swanson, The Land Use and Natural Resource Inventory of New York State (Albany: New York State Office of Planning Coordination, June 1969). The table is based on computer output made available by the Genesee-Finger Lakes Regional Planning Board.

The second largest category, pasture, takes up approximately 5,000 acres, while the third largest category, orchards, takes up 2,282 acres. Orchards unlike "other cropland" and pasture, are partially concentrated in the northern parts of the county, reflecting the importance of micro-climate on their location. The remaining categories encompass relatively small percentages of the county land area.

Large areas of the county consisted in 1968 of idled farmland which had yet to be developed by urban uses. Approximately 24,500 acres is classified as recently retired farmland, having gone out of production within approximately 10 years of 1968. An additional 24,000 acres was in brushland in 1968, and most of these acres were in farmland which was retired from production from 10 to 30 years prior to 1968. The two categories encompass about 12% of the land area of the county, not much below the percentage in active farming.

The question arises of whether the large areas of idle farmland, yet to be developed by urban uses, was retired from production because of poor soils or because of the pressures on this land from urbanization. In relating the pattern of idle farmland to the soil quality patterns displayed in the previous chapter, we observe that soil quality is a significant factor in farmland retirement. Large areas in the vicinity of Ridge Road, where the soils are poor for farming, are in brushland or have been recently retired from farming. Similarly, much of the retired farmland in Chilli and Riga lies in areas where the soils have been classified as poor for farming. Much of the brushland, except where it is close to urban development, takes on a "string-like" pattern, reflecting the pattern of steep slopes and poor drainage areas.

Much of the idle farmland also lies in areas where the soils are highly favorable for farming and where it appears that a major factor behind the discontinuation of farming has been the pressures of urbanization. Most of the 9,000 acres of idle farmland in Greece and Parma lie within areas where the soils are highly favorable for farming. In the eastern part of the county, in Penfield and Webster, one also finds large expanses of retired farmland where the soils are highly favorable for farming. Large tracts of land well suited for farming have also been idled in Sweden and Ogden. The retirement of good land from farming has been less extensive, but still significant, in the remaining towns of the county.

In summary, the relatively slow rate of increase in farm output in Monroe County may be attributed in part to the extensive retirement of land from farming. Further, there is evidence that large areas of the county have been retired from farming in response to the pressures of urbanization rather than because they contain poor soils or are required for urban expansion. This is suggested by the fact that the percentage of land retired from farming in Monroe County during recent years far exceeds that in more rural counties with similar soil resources. More directly, it is indicated upon comparing the pattern of retired farmland not yet developed by urban uses with the quality of soils for farming.

#### CHANGES IN FARM PRODUCTIVITY

The relatively low rate of increase in farm output in Monroe County may result not only from the excessive retirement of farmland but also from changes in the productivity of land remaining in production. Even if there were no excessive retirement of farm acreage farm output would experience a relative decline if there were a relative decline in productivity.

In order that farming remain competitive in an urbanizing area, farm productivity, as measured by the value of farm products sold per acre, should in general be higher than in an area remote from urban expansion. Production costs in the urbanizing area will generally be higher, due largely to the increased costs of land and property taxation. To realize a commensurate return on farm investments, therefore, higher levels of productivity will be required.

In actuality the pressures of urbanization may result in a decline in the productivity of farms near the city, giving a significant competitive advantage to farming in more remote areas. The nature of these pressures are to be examined in some detail in the following chapter. Here it might simply be noted that a relative decline in the margin of profit within the urbanizing area may lead to a depreciation of fixed capital investments, such as barns and drainage facilities, which would result in a relative decline in productivity.

The productivity of farming, as indicated by the value of farm products sold per acre of cropland harvested, is given in Table 3 above for Monroe County, the selected rural counties, and New York State. In both 1959 and 1964 the values in Monroe County exceeded those in the selected rural counties but were lower than those in the state as a whole. During the five-year period, however, the values in Monroe County increased by only 12%, while in the rural counties they have increased by 20% and in New York State they have increased by 17%. Thus, the large disparity in these values between Monroe County and the rural Counties in 1959 had narrowed considerably by 1964. Changes in productivity, therefore,

account for the relatively low rate of growth in total farm output in the county, as does the retirement of farm acreage.

The changes in productivity imply a growing competitive disadvantage to farming in Monroe County. Such a disadvantage is further indicated by comparing the average value of farms, which is given in Table 4 above. Despite the relatively low growth in farm productivity in Monroe County, the average value of land and buildings in farms was far higher in the county, both in 1959 and 1964, than in either the selected rural counties or New York State. This holds whether the average is taken per farm or per acre. The average value per farm in 1965 was about \$89,000 in Monroe County and about \$39,000 in the rural counties. In 1964, the values were \$494 and \$187, respectively.

Not only were the average values higher in Monroe County in 1959 and 1964, but these values underwent a much greater rate of increase during the five-year period. In Monroe County the average value per farm increased by 62%, while it increased by only 7% in the rural counties. The increases in values per acre were 39% and 23%, respectively.

Despite the much higher value of land and buildings in farms in Monroe County, and despite the much greater increase in this value, the productivity of these farms was similar to those in the rural counties in 1964 and had undergone a much lower rate of growth. Thus, the return on invested capital in Monroe County was much lower. While it is true that most of the capital value of farms in the county lies in the land, and most farmers acquired their land some years ago when the price was relatively low, the use of the land for farming still entails an

opportunity cost. The land may be sold to speculators and developers, freeing the capital for alternative investments which yield a higher rate of return. One alternative would be to purchase a farm in an area remote from urban expansion, where similar productivity may be obtained at a much lower level of investment.

Even aside from the relatively low rate of return on invested capital, the analysis implies a relatively low profit margin to farming in Monroe County. Generally in urban areas production costs, other than those of acquiring land, exceed those in rural areas, principally because property taxation is much higher. Thus, the profit margin, ignoring the opportunity costs of maintaining the land in farming, would be lower, given similar levels of productivity.

The lower profit margin per farm unit in Monroe County is indicated further by the relatively small average size of the farms (Table 4). The average size of farms in the county was 178 acres in 1964, while in the rural counties it was 206 acres. In addition, the Monroe County farms experienced a slightly lower percentage increase in average size from 1959 to 1964 than the farms in the rural counties. The lower profits per acre of Monroe County farms, combined with the lower average acreage of these farms, would yield significantly lower gross profits.

Giving further indication of the competitive disadvantages of farming in Monroe County are changes in the distribution of farms according to their gross sales. (See Table 4). These changes show in general that compared with the rural counties Monroe County experienced a significant decline from 1959 to 1964 in the number of farms with gross sales varying from \$10,000 to \$39,999. The most significant relative decline occurred

in the \$20,000 to \$39,999 category, where the number of farms declined in Monroe County by 32.2% while it increased in the rural counties by 18.8%. Only the most productive farms, those grossing \$40,000 or more, increased in number in Monroe County, but at a lower rate than in the rural counties (13.8% as opposed to 78.1%). The data also indicates a relative shift in Monroe County into part-time farming, where gross sales are under \$10,000 probably in part because such farming affords an opportunity for off-farm income. Thus, the competitive pressures appear to have had the most serious effects on the less-productive full-time commercial farms in Monroe County which gross annually from \$10,000 to \$ 39,999.

It must finally be noted that the relative decline in farm productivity and profits noted here would conceptually underlie the excessive retirement of farm acreage observed earlier. Declining productivity implies an unwillingness to make the necessary investments in fixed capital facilities, such as barns and silos, to remain competitive. The narrowing margin of profit (resulting from declining productivity, rising production costs, or a combination of these) will eventually force farms to discontinue full-time operation unless new investments are made. Yet, where land values are rising and where there may be an opportunity for a high-priced sale of the land for urban development, farmers will frequently be unwilling to make such investments. Thus, the relatively low levels of farm productivity and profits in Monroe County imply the premature idling of many more farm acres in the future.



## FARM ACREAGE AND PRODUCTIVITY CHANGES IN RELATION TO FUTURE

### URBAN DEVELOPMENT NEEDS

We have observed that approximately 50,000 acres in Monroe County have been retired from farming and have yet to be developed by urban uses. Of these 24,000 were retired during recent years, and many of these acres were physiographically well suited for farming. The relatively low rate of increase in farm productivity in the county implies the future retirement of many additional acres from farming.

This section examines briefly the land area requirements for future urban expansion and relates these to the area of land which has been retired from farming. The question of concern here is whether the currently widespread under-utilization of land in the county, due to its premature retirement from farming, is but a temporary phenomenon, since this land might be expected to be absorbed soon by urban expansion.

Although the projected land needs for urban expansion have not yet been determined in the Monroe County comprehensive planning program, some data are available for developing a rough approximation of these needs. The approximations here are only tentative. They have been developed solely for the purpose of this analysis, and they will be modified in the course of the Monroe County comprehensive planning program.

The estimated additional acres required to accommodate the needs for urban expansion in Monroe County are as follows: 1970-1980, 16,156 acres; 1970-1985, 25,723 acres; 1970-1990, 35,767 acres; and 1970-2000, 53,017 acres. These estimates are based on population projections deve-

loped by the New York State Office of Planning Services,<sup>3</sup> as well as on coefficients relating past increases in population to the acreage which goes into urban use.<sup>4</sup> Because development in the future may be expected to assume a higher density than in the past, it is believed that the estimates overstate the acreage needs to accommodate future urban growth.

The projections indicate that there is enough acreage which has been recently retired from farming to accommodate urban expansion needs in the county for the next 15 years disregarding the locational requirements for such expansion. When one combines the recently retired farmland with brushland, which was retired from farming at an earlier date, there is sufficient idle farmland to accommodate urban expansion needs for twenty-five to thirty years in the future. When one combines this acreage with the many other acres which are not in farming and have yet to be urbanized, there is enough acreage to accommodate urban expansion needs much further into the future.

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<sup>3</sup>Formerly the New York State Office of Planning Coordination. See New York State Office of Planning Coordination, Demographic Projections for New York State Counties to 2020 A.D. (Albany, N.Y.: June 1968), pp. 72-73.

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<sup>4</sup>The coefficients were developed for use in a report by David J. Allee, et.al., Toward the Year 1985: The Conversion of Land to Urban Use in New York State, Special Cornell Series Number 8 (Ithaca, N.Y.: New York State College of Agriculture, 1970). They were based on interpretations of aerial photographs showing the development pattern in Monroe County in 1954 and 1963. The increment in urbanized land area during this period was related to estimated changes in population, and it was found that .153 acres of land are required to accommodate each additional member of the population. This coefficient includes industrial, commercial, and other urban uses, but it excludes the land which goes into rural residential estates, where these estates encompass more than about three acres.

Thus the number of acres which have gone out of farming and are in essentially unproductive use is far in excess of the land requirements for urban expansion in Monroe County for many years to come. If the previous analysis is correct, many more acres will be retired from farming in the future, contributing further to the already large supply of unproductive land.

## Chapter 4

### PROBLEMS FACING FARMERS IN MONROE COUNTY

This chapter examines certain of the problems which the relatively high level of urbanization in Monroe County is creating for farmers. Its purpose is to explore the forces which underlie the widespread underutilization of farmland observed in the previous chapter.

Most of the observations in this chapter are based on a mail questionnaire (See Appendix A) which was sent to a random sample of Monroe County farmers. Much of the analysis of the returns from this questionnaire has been delayed by computer programming difficulties. The discussion here is based on a limited amount of computer output which presents simple tabulations of the responses to selected questions. The tabulations are presented in Appendix B. Output giving cross-tabulations, means, standard deviations, and other statistical analyses will soon become available, as most of the programming obstructions have now been overcome.

Thus many of the concepts advanced here are tentative and will be elaborated or changed as additional computer output becomes available and is analyzed. An effort has been made, nevertheless, to develop a reasonable interpretation of farming problems on the basis of the limited information which is available.

#### BASIC CONCEPTS

Certain basic concepts of the problems which urbanization brings to a farm community underlie the design of the questionnaire. These concepts will be briefly noted here.

Studies have indicated that the process of urbanization creates major difficulties in maintaining land in productive farming.<sup>1</sup> As a result of these difficulties, there is a tendency for farming to decline in productivity in urbanizing areas and eventually to discontinue production, often before an opportunity for converting the land to a productive alternative use has materialized. The previous chapter has indicated that this process has been in effect in Monroe County. The purpose here is to bring out in further detail the features of the process.

Two categories of problems may cause the underutilization of farmland in an urbanizing area. The first category comprises those problems which tend to create for farmers in urbanizing area competitive disadvantages in relation to farmers in more rural areas. Some of these problems were brought out in the previous chapter.

Despite conventional land use theory, which suggests that farmers near the city are advantaged by their proximity to markets for their products,<sup>2</sup> the marketing advantages to farming in an urbanizing area are in general relatively insignificant. Most farm commodities are marketed on a regional, multi-state, or national basis.<sup>3</sup> It is true that proximity

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<sup>1</sup>See, for example, Alice Coleman, The Planning Challenge of the Ottawa Area, Geographical Paper No. 42 (Ottawa, Canada: Department of Energy, Mines, and Resources, 1969); Howard E. Conklin, et. al., Maintaining Viable Farming in Areas of Urban Expansion (Ithaca, N.Y.: New York State College of Agriculture, Department of Agricultural Economics, August 1969); and Curtis C. Harris, Jr., and David J. Allee, Urbanization and Its Effects on Agriculture in Sacramento County, California, Vols. 1 and 2, Giannini Foundation Research Report No. 270 (Berkeley: California Agricultural Experiment Station, December 1963)

<sup>2</sup>See, for example, Johann Von Thunen, Isolated State, translated by Carla M. Wartenberg (Oxford, N.Y.: Pergamon, 1966); and William Alonso, Location and Land Use, Toward a General Theory of Land Rent (Cambridge: Harvard University Press, 1964).

<sup>3</sup>Conklin, et. al., op. cit., pp. 1-65, 1-66.

to the city affords a greater opportunity for the production of fruits and vegetables for fresh markets and for horticultural or floricultural farming. Such farming, however, can absorb only a small portion of the total land in farm production within urbanizing areas.

While farming in an urbanizing area appears to give little marketing advantage, it may create major disadvantages by raising production costs. The most significant rises in production costs will likely be due to rising property taxes. Production costs in an urbanizing area may also rise, relative to those in rural areas, because of increases in the costs of obtaining land and labor (farm labor costs may be higher in the urbanizing area because it affords better opportunities for off-farm employment). Production costs may also rise in the urbanizing area because conflicts with urban uses may result in the adoption of municipal ordinances (or social pressures) which place restrictions on farming. Such ordinances would include those which prevent the spreading of manure within certain distances of property lines and which set curfew hours for the operation of farm machinery.

The second category of problems which urbanization may bring to farming is associated with rising opportunities for taking on nonfarm employment or for converting land to nonfarm uses. Both kinds of opportunities expand considerably in an urbanizing area.

Rising nonfarm employment opportunities, as already noted, may increase farm labor costs, giving a production disadvantage to farmers operating in urbanizing areas. Such opportunities will also increase for farmer the opportunity costs of remaining in production; that is, with



relatively low incomes derived from farming, compared with those derived from urban employment, urbanization gives considerable incentives to farmers to discontinue production and take on off-farm employment. If this is the case, one would expect excessive idling of farm acreage in the urbanizing area.

Presenting a potentially far more serious threat to the continuation of farming in urbanizing areas are the rising opportunities for converting land to nonfarm uses. In rural areas land may be expected to remain in farming longer than in urban areas simply because the price which the land brings for nonfarm uses is much lower.

An important factor relating the premature retirement of farmland to rising opportunities for converting this land to urban uses is speculation. The number of acres purchased for speculative reasons may far exceed the number required for conversion to urban uses over a reasonable period of time, causing directly some premature retirement of land from farming. In addition, excessive speculation will create land prices which exceed the real value of the land in urban uses and give rise to unreasonable expectations among farm operators. Some studies suggest that farmers, in response to speculative land buying, tend to overestimate the real value of their land, as determined by the actual opportunities for converting their land to urban uses.<sup>4</sup> Thus they may anticipate a greater demand for the land by urban uses than actually exists.

Such expectations may cause an irrational decline in farm productivity or excessive retirement of farmland because of their effects on

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<sup>4</sup>See, for example, Conklin, et. al., op. cit., pp. 1-48-1-51.

investments in fixed capital facilities such as barns, silos, and other farm structures. These investments contribute little to the value of the land to urban buyers, and indeed they may diminish this value by increasing the costs of preparing the land for urban uses. Furthermore, investments in fixed capital facilities take a long time to amortize (in some instances as long as twenty years). Thus, if a farmer expects a high-priced urban land market to materialize in the near future, he will often be unwilling to make the necessary investments in his farm to remain competitive.

Ultimately the process of disinvesting in farm capital results in a decline in farm productivity and in the demise of farming. The longer that such investments are deferred, the more reluctant the farmer will likely be to make them, if land prices and the opportunity for developing the land for urban uses are rising. Thus urbanization may result in a process of deterioration in a farming community which is difficult to reverse. If farm investment strategies are based on unreasonable high expectations of the demand for the land by urban uses, then the process of deterioration in farm capital will be accelerated.

These concepts underlie the design of the questionnaire and are to be explored in this chapter. Since very little computer output is yet available, the effort here will be limited to describing the data which is available and relating the information to more basic concepts where it appears reasonable. More definitive analysis of the validity of these concepts will become possible when additional computer output is available.

## SURVEY PROCEDURE

For the purpose of exploring the above issues a questionnaire was designed, pretested, and sent to a random sample of farmers in Monroe County. The sample was drawn, with the aid of a table of random numbers, from the mail list of the Monroe County Cooperative Extension Service. This list includes an estimated 90% of the full-time commercial farmers in the county.

The intent of the survey was to include only full-time commercial farmers, and Extension agents who assisted in drawing the sample were instructed to exclude those farmers whose gross annual sales were under \$10,000 in 1970. This resulted in a list of 110 farmers to whom the questionnaire was sent.

Fourteen farmers were subsequently eliminated for the sample as they had either discontinued production or grossed under \$10,000 in 1970. Of the 94 farmers remaining in the sample, 77 filled in the questionnaire.

Data are unavailable for determining precisely what percentage the sample represents of the farmers in Monroe County who grossed more than \$10,000 in 1970. Census data<sup>5</sup> indicate the number of such farmers has declined dramatically in Monroe County during recent years. In 1954, the number of farmers grossing more than \$10,000 was 1000. This number declined to 701 in 1959 and 473 in 1964. If the trends over these years were to have continued, there would have been approximately 350 farmers grossing more than \$10,000 in 1970. If this is the case, the sample represents 22% of all such farmers in the county. A more reliable

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<sup>5</sup>C. A. Bratton, 1964 Census of Agriculture, Monroe County, A. E. Ext. 475-25 (Ithaca, N.Y.: New York State College of Agriculture, Department of Agricultural Economics, October 1967), p. 2.

approximation of the proportionate size of the sample will become possible when the 1969 Census of Agriculture is published.

#### SELECTED CHARACTERISTICS OF THE SAMPLE

Certain of the characteristics of the respondents and their operations are given in Tables 1 through 4 of Appendix B.

The farm operations of most (67.5%) of the respondents were owned and managed either by individuals or families. (See Table 1, Appendix B). A sizable percentage (24.7%) of the operations were managed by partnerships, while only 7.8% were in corporate management.

The age distribution of the respondents is considerably older than that of the general labor force of Monroe County. (See Table 2). More than one-half of the respondents are over fifty years of age, while only 13% are under forty years of age. Because many of the respondents are nearing retirement age, it will be necessary that many existing farms be transferred to a new generation of farm owners to assure the continuing significance of farming in the county.

The distribution of the respondents by the major farm commodity which they produced is as follows: Dairy, 26%; fruits, 18.2%; vegetables, 23.4%; field crops, 6.5%; a combination of two or more of these products, 13%; and other products (e.g., horticultural products), 13%. Most of the respondents, then were in dairy, vegetable, and fruit production, and few were in field crop production. It must be noted that these products are the dominant commodities which the farmers produced, and many in dairy (as well as fruits and vegetables) also produced some field crops as a secondary commodity.

Most (53.3%) of the respondents were large operators, having sold in 1970, \$50,000 or more of farm products. (See Table 4). Twenty-two percent of the respondents had gross farm sales of \$30,000-\$49,999 in 1970; 18.2% had gross sales of \$10,000-\$19,999, while only 6.5% had gross sales of \$20,000-\$29,999. The relatively large percentage producing from \$20,000-\$29,999, may be an indication that the former group is supplementing its farm income with off-farm employment.

#### ALTERNATIVE LAND USE OPPORTUNITIES

Much of the data suggests that the alternative land use opportunities for farmland in Monroe County are extensive and are having an effect on farming. Table 13 in Appendix B gives a ranking of nine different prospects according to whether they would discourage the respondent from continuing to farm in his current location. Of all the respondents, only 24.7% felt that the prospect of selling their land for urban development would not discourage them from continuing to farm. Fourteen percent felt that of the nine prospects this one was the most discouraging, 9% felt that it was the second most discouraging, and 27% felt that it was the third most discouraging. In general, it appears to be the third most discouraging of the nine prospects, exceeded only by the prospect of high property taxes and of difficulty obtaining farm labor.

The significance of alternative land use opportunities is also indicated by the price which the respondents estimate their land is worth. (See Table 12, Appendix B). Almost one-half (49.4%) of the respondents felt that they could get an average of over \$1,000 per acre, if they were to sell all their land, excepting their house and lot, to the highest

bidder over a six-month period. Only 5.2% of the respondents felt that the average would be less than \$300 per acre, which is the upper limit for most farm sales in rural areas. Less than 20% felt that the average would be under \$500, an approximate upper limit of the value of the highest quality land, excepting muck, in farming. A geographical plotting of these responses indicates that the effects of urbanization on the price of land in Monroe County (or, more precisely, on the expectations of the price of land among the owners of farmland) are widespread, reaching to all areas of the county except near the western border.

Further indication of alternative land use opportunities is given by the characteristics of land owners from whom the respondents rented land from farming. (See Table 6, Appendix B). Forty-eight percent of all the respondents rented land for farming from nonfarm land owners. Of these most of the owners resided by the land which they rented, but approximately one-fourth were absentee owners. It would be difficult to determine the percentage of owners which may be classified as land speculators, as this would require determining the reasons for which the owners purchased and held the land. It is likely, however, that many of the absentee owners purchased the land for speculative reasons. It is also likely that some speculative interests underlie the purchase of the land by some of the resident owners.

#### LAND EXPANSION PROBLEMS

Of the nine prospects which might discourage farming (Table 13, Appendix B), the prospect of difficulties in expanding farm acreage appeared to be about the sixth most discouraging. Only 44% of the respondents, however, felt that prospective difficulties in obtaining



additional land to expand their farm operations would not discourage them from continuing to farm.

The reason this prospect does not rank higher, despite the high price of land observed in the previous section, is partly due to the availability of farmland for rent. Over 70% of the respondents rented from others at least some of their farmland. Although computer output is not yet available giving changes in the percentage of all the land farmed by the respondents which is rented, it is believed that this percentage is increasing.

Of those who rent land for farming all but approximately 20% payed an average annual rent of less than \$15 per acre.(See Table 7). Only 6% of the respondents payed more than \$20 per acre.

Despite the apparent availability of farmland for rent,approximately 27% of all the farmers have still had difficulties finding land for rent to expand their operations. (See Table II, Appendix B). This percentage, however, is well below that concerning the purchase of additional land for farming, where 80.5% of the respondents have encountered difficulties.

#### TAXATION PROBLEMS

Of the nine prospects which might discourage the continuation of farming, the prospect of high property taxes is causing by far the greatest concern among the respondents. (See Table 13, Appendix B). Fifty-seven percent of the respondents felt that this was the most discouraging prospect, and only 2.6% felt that it was not discouraging.

Approximately 40% of the respondents felt that current property taxes are already so high that they must consider discontinuing farming. (See Table 8, Appendix B). About 78% of the respondents anticipated that future property taxes would rise to a level which would force them to discontinue farming.

Computer output giving the taxes which the respondents have paid, both in 1960 and in 1970, will soon be available. It is believed that these taxes have increased significantly, largely because of increases in the tax rate rather than increases in assessments. Several towns (Penfield, Pittsford, and Perinton), however, have recently increased significantly their assessments on farmland. Whether the increase is due to changes in the tax rate or changes in assessments, the effects on farm production costs are the same. Apparently these effects have been severe, reducing farm profits to the extent where they are causing farmers to consider seriously discontinuing production.

#### LAND USE CONFLICTS

Land use conflicts with nonfarm neighbors ranked fifth among the nine prospects which might discourage the continuation of farming. Approximately 6.5% of the respondents felt that these would be the most discouraging prospect, while only 36% felt that they would not be discouraging.

A relatively small percentage of the respondents, however, have actually experienced land use conflicts with their nonfarm neighbors, either by the neighbor finding the respondent's activities objectionable or the respondent finding the neighbor's activities objectionable.

The former kind of conflict was experienced by about only 17% of the respondents, while the latter was experienced by about 31%. Apparently a significantly greater percentage anticipate such conflicts in the future.

All but one of the objections which the respondents received from their nonfarm neighbors related to the noises, insecticide sprays, and odors emanating from their operations. The exception is a respondent whose neighbors objected to his establishing a migrant labor camp on his operation.

The activities of nonfarm neighbors which farmers found most objectionable related to trespassing. Many objected to horseback riders, snowmobilers, and motorcyclists who trespass and cause damage to crops. Vandalism and pilferage of farm produce were other common causes of objection. A few of the respondents also objected to the undesirable effects of nearby nonfarm development on natural drainage patterns.

#### OTHER PROBLEMS

Other problems which might discourage the respondents from continuing to farm are itemized in Table 13, Appendix B. Most of these problems are related to some extent to the process of urbanization.

The most significant of these problems, other than those which have already been cited, is that of obtaining adequate farm labor. Eighteen percent of the respondents felt that of the problems listed this one would be the most discouraging to their continuing to farm. Only 15.6% felt that it would not be discouraging. As suggested previously, it is likely that the problem of obtaining adequate farm labor at a reasonable cost

is greater in an urbanizing area than in a rural area due to the effects of competition from alternative employment opportunities. Nevertheless, this problem is commonly voiced by farmers even in areas remote from urban expansion.

Next in significance, other than those already cited, is the problem of finding an adequate market, which ranks fourth of the nine prospects. It is believed that cross-tabulations, which will be forthcoming, will indicate that the marketing problem will be viewed as more serious by producers of fruit than by other farmers in the sample. Informal comments by fruit growers suggest that they are very much alarmed by the decline over the past few decades of the fruit processing industry in the region. If a processing plant of Duffy Mott Co., Inc. in Hamlin should discontinue operation, then many fruit growers in the region would find themselves without a market for their products. Thus a critical aspect of maintaining the orchards in the region is that of assuring that processing facilities continue operation.

Prospects not already cited which ranked relatively low are those of finding off-farm employment and of obtaining adequate farm supplies, and capital. Nevertheless, although few respondents designated these prospects as the most discouraging to their continuing to farm, a still significant number felt that they would be at least somewhat discouraging.

#### FUTURE PLANS

The future plans of the respondents are presented in Tables 14 through 18 of Appendix B.

Most (72.7%) of the respondents intent to continue operating their farms during the next ten years. Approximately 5% intend to discontinue farming and take on nonfarm employment during this period, while 6.5% intend to begin farming in a new location and 15.6% intend to retire.

Despite the large percentage who intend to continue farming in their current locations, during the next ten years very few of the respondents intend to invest much in fixed capital facilities before they discontinue farming. Only 13% intend to invest more than \$10,000, while 45.5% intend to make only minor investments (under \$10,000) and 41.6% intend to make no new investments at all. Investment plans, then, suggest that there will be a decline in the future productivity of farms in the county.

Similarly, few farmers intend to expand their farm acreage in the future, despite the general requirements for enlarging farm units to remain competitive. Fewer than one-fifth of the respondents intend to expand their acreage before discontinuing to farm. Most of these intend to acquire additional land by renting rather than buying.

Almost one-half (49.4%) of the respondents intend to sell their land to a nonfarmer for development after they discontinue farming. A significant percentage (35.1%) intend to give their land to a member of the family after they discontinue farming. Only 9.1% intend to sell their land to another farmer after they discontinue farming.

Thus it appears that many of the respondents have expectations of developing their land for urban uses and are depreciating their investments accordingly. Although a significant number of respondents intend to remain in farming for some years to come, major problems will arise

in the transfer of this land to a new generation of farmers. Only by such transfers will farming remain a significant use of the land in Monroe County in the long run.

#### ATTITUDES TOWARD MEASURES FOR PRESERVING FARMLAND

Despite the interests which the respondents displayed in converting their land to nonfarm uses, most of the respondents presented favorable attitudes toward planning policies for maintaining land in farming. (See Table 19, Appendix B).

Almost all (92.2%) of the respondents favored preferential tax assessment, or the assessment of farmland according to its value in farming rather than in speculative or urban uses. A considerably smaller percentage (66.2%) were in favor of agricultural easements to keep land in farming. The easements, as defined in the questionnaire, would entail the signing of contracts by farmers with local government for keeping land in farming for a given period (e.g., ten years), in which case the land would be given preferential assessment treatment. It is believed that the time restriction required by the easement may account partly for relatively low response in favor of this method of farmland preservation. It is likely, also, that many of the respondents were unfamiliar with agricultural easements and consequently were reluctant to express a favorable attitude toward them. Thus the percentage giving no response to agricultural easements exceeded that giving no response to each of the other methods for preserving farmland.

The use of agricultural zoning and public facilities planning to maintain land in farming received similar distribution of responses.



Public utilities planning, as indicated in the questionnaire, refers to planning for the location of roads, sewer and water lines, and other public facilities so that they would guide urban development away from good farmland. Approximately 68% of the respondents were in favor of this method keeping land in farming. A slightly lower percentage, 63.6%, were in favor of agricultural zoning to maintain land in farming.

The number of respondents favoring the various methods of preserving farmland appears quite large, in view of the previous analysis, which suggests that many have plans for discontinuing farming and converting their land to urban uses. Part of the inconsistency may be due to the fact that their attitudes toward farmland preservation were expressed in the abstract. Given the actual adoption of certain preservation measures, such as agricultural zoning, many who displayed a favorable attitude might show opposition, particularly if their own land is affected. In general, however, the responses show a favorable predisposition toward public policies for maintaining land in farming.

Chapter 5  
POLICY IMPLICATIONS

This chapter briefly sets forth certain of the policy implications to the previous discussion. It makes no attempt to develop definitive policy proposals, as this effort is to be undertaken in subsequent phases of the Monroe County comprehensive planning program. It attempts, rather, to set forth basic considerations which should be taken into account in the development of policies on the use of farmland.

The question arises at the outset of whether maintaining land in farming should be a matter of concern in public policy. Several arguments may be stated in defense of such policy.

First, one must consider the need for assuring an adequate resource base for the production of food for future populations, not only in the United States but throughout the world. There is no inherent reason why the land market, which would reflect only the present or short-run consumer demands for food, would assure sufficient land for serving the food production needs of future populations. Where there is a demand for converting land to urban uses, the price of this land in such uses far exceeds its value in farming, such that high-quality farmland will readily be bid out of production. Once the land is converted to urban uses, it becomes virtually irretrievable for food production, as the costs of clearing it for farming are prohibitive.

While this argument is an extremely important one, it is difficult to substantiate it to the extent of displaying a critical need for preserving farmland from urban development.

Our farm problems recently have been related more to an oversupply of farm produce than to a shortage. Further, the number of acres of farmland in New York State required to supply our own food supply needs, as well as to provide some surplus for export, has declined greatly and is expected to decline further in the future.<sup>1</sup> This has left a large number of retired farm acres in areas remote from urban expansion which may be brought back into production if the need arises. Compared this number, the number of acres of farmland converted directly to urban uses is relatively small.

A second argument for maintaining land in farming is based on the economic effects of a decline in farming. The agricultural complex in New York State, including not only farming but also the industry which purchases the output from farms (e.g., food processors) and provides the input to farms (e.g., machinery dealers), contributed an estimated nine billion dollars (in value added) to the economy of the state in the mid-1960's.<sup>2</sup> The demise of farming would bring in its wake a major decline in total employment and income in New York State, due largely to its indirect effects on the agribusiness complex.

The previous analysis has suggested for adopting public policies to maintain land in farming. This argument is based on the inefficiencies in the use of land implied by the decline in farming in a metropolitan area.

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<sup>1</sup>Oland D. Forker and George L. Casler, Toward the Year 1985, Summary Report: Implications, Issues and Challenges for the People of New York State, Special Cornell Series Number 14, (Ithaca, N.Y.: New York State College of Agriculture, 1970), p. 10.

<sup>2</sup>Ibid., p. 12.

Some of these inefficiencies were suggested in the previous analysis, while others were outside the scope of the analysis.

In general, we have observed large expanses of farmland which has been retired from farming and are in essentially unproductive use. Still more acres have remained in farming but are operated at a less than optimal level of intensity. It appears that there is a great deal of uncertainty in land market, and that unreasonable expectations of the demand for land by urban uses has had a large toll on farm productivity in the county. The result is foregone income to the farmer whose returns from the land are not as high as they might be. Further, the community at large may endure some of the costs of a decline in farm productivity because of its detrimental effects on the quality of the visual environment.

Inefficiencies in the land development process go far beyond those which have been of immediate concern in this report. Excessive speculation and urban scatteration not only have detrimental effects on farming but may bring very large costs to the community at large. The public at large bears the costs of the services required by urban expansion, such as additional schools, roads, and sewerage and water facilities. Urban sprawl may result in unnecessarily large increases in the costs of providing these services.

A large part of such inefficiencies in the use of <sup>farm</sup> land in urbanizing areas may be expected to arise from uncertainty in the land market. Many farm investments require a long period to amortize, and farmers will often be unwilling to make large investments in an urbanizing area if they have unreasonably high expectations of the demand for their land by urban uses or are uncertain of the precise nature of this demand.

Thus, public policy, if it is to maintain land in farming in Monroe County, must eliminate much of the uncertainty which now exists in the land market. If it fails to do this, then the previous analysis suggests that farming will undergo a significant decline in the future.

Further, public policy, if it is to maintain land in farming in Monroe County must give a greater production advantage to farmers in the county than they have enjoyed in the recent past. The analysis has indicated that farmers in areas relatively remote from urbanization incur considerably lower production costs (while they enjoy comparable accessibility to markets) than those in Monroe County. In the long run, land will remain in farm production in Monroe County only so long as farming remains profitable.

So far as the first requirement is concerned, that of creating conditions of greater certainty in the land market, this may be satisfied by adopting effective planning policies of a traditional nature. First there is the task of compiling and analyzing information in the prospective demand for the land by urban uses and interpreting this information for the public. This in itself would give some guidance to participants in the land market, those who are prospective buyers and sellers of land for various uses, and eliminate much of the uncertainty which exists. The previous analysis suggests that this would have a beneficial effect on farm investments and would result in more intensive utilization of the land in the county for farming.

Although collecting and disseminating information would have some beneficial effects on farming, it would not be sufficient to maintain



much of the land in farming. This would require in addition the adoption of effective policies to guide urbanization and land speculation away from productive farmlands. Thus, farmland may be encouraged by developing an effective comprehensive planning program which recognizes the desirability of maintaining land in farming. Such a program would include the adoption of appropriate land use controls (principally zoning) and public utilities and services policies (principally those which affect the location of sewerage and water facilities and roads). Such a program may not only directly affect the use of farmland but it may also indirectly lead to increased investments in farming since it would eliminate much of the uncertainty which presently exists in the land market.

It was suggested that farming will remain in Monroe County only so long as it remains profitable. Other than policies which create conditions of greater certainty in the land market, it will be necessary, therefore, to bring into effect policies which will increase farm profits in Monroe County, such that they are in line with those of areas remote from urban expansion. Two categories of policy must be considered: (1) policies which will lower the relative costs of farm production and (2) policies which will expand the opportunities for marketing farm products.

As for the first category, the previous analysis has suggested that the most significant factor behind rising production costs in Monroe County, relative to those in rural areas, is property taxation. Thus, a program of preferential taxation of high-quality farmland in certain areas of the county will do much to keep the land in farming. Due to the extensive use of rented land for farming, it may also be desirable to offer



preferential assessments to nonfarm land owners who rent thier land to operating farmers.

Increasing labor costs, which also appear to cause some disadvantage to farming in Monroe County, will be more difficult to control through local policy. The control of farm labor costs must be effectuated at a larger level of government, such as by the state or federal government. In dealing with such policy, considerations must go beyond the immediate needs of the farm manager for low-cost labor to the needs of the laborer for a satisfactory income.

It was suggested that production costs may also rise due to the adoption of municipal ordinances which restrict farming. While such ordinances have not yet had a very significant impact on farm production costs, some of the respondents in the survey indicated that they have had at least some effects. A few farmers, for example, indicated that zoning provisions have denied them the opportunity for marketing their produce on their premises. Consideration should be given, then, to preventing the adoption of ordinances which restrict farming in areas where it is considered desirable to maintain land in farming.

The second category, that of assuring an adequate market for the farm produce of Monroe County, requires careful consideration. Markets in the past have been generally satisfactory for certain kinds of farm products, notably horticultural, floricultural, and dairy products, but have been quite unstable for others. Fruit and vegetable products, in particular, are subject to significant fluctuations in the market. In order to assure the continuation of large-scale production of fruits and vegetables in Monroe

County, it will be necessary to maintain the agribusiness infrastructure which supports such production, particularly the processing plants. The local market for fresh fruits and vegetables, although it is expanding, will not be sufficient to hold in farming much of the current acreage devoted to these products, if there should be a decline in local processing plants. Policies which will encourage the continuation of processing plants in the Monroe County region, therefore, require careful consideration.

If the above policies are developed and brought into effect in Monroe County, it is believed that they will not only help maintain farming in the county but also have beneficial effects on the entire course of urban expansion. Conversely, if we fail to develop and implement public policies to encourage land to remain in farming, then we may expect to see in years ahead the demise of much of our currently productive farmland and significant inefficiencies in the use of the land. The development of appropriate policies, therefore should be a matter of urgent public concern.

APPENDICES

APPENDIX A

Farm Questionnaire

The following is a copy of the questionnaire which was sent to a sample of farmers in Monroe County.

1. Please indicate with a check mark whether your farm is an individual or family operation, a partnership, a corporation, or another kind of operation:

a.  Individual or family operation

b.  Partnership

c.  Corporation

d.  Other (specify kind): \_\_\_\_\_

PLEASE FILL OUT THE REMAINING QUESTIONS FOR YOUR ENTIRE FARM. FOR EXAMPLE, IF YOUR OPERATION IS A PARTNERSHIP OR A CORPORATION, ANSWER THE QUESTIONS FOR THE ENTIRE OPERATION, NOT JUST THAT PART WHICH YOU YOURSELF OWN OR OPERATE.

2. Indicate the total value of the farm products which you sold last year (1970):

a.  Less than \$10,000

b.  \$10,000 to \$19,999

c.  \$20,000 to \$29,999

d.  \$30,000 to \$49,999

e.  \$50,000 or more

IF YOU SOLD LESS THAN \$10,000 OF FARM PRODUCTS LAST YEAR, DISCONTINUE FILLING OUT THIS QUESTIONNAIRE AND MAIL IT IN THE RETURN ENVELOPE. IF YOU SOLD MORE THAN \$10,000, PLEASE FILL OUT THE REMAINDER OF THIS QUESTIONNAIRE BEFORE YOU MAIL IT IN THE RETURN ENVELOPE.

3. Enter your age: \_\_\_\_\_

4. Enter the total number of acres which you now own: \_\_\_\_\_

5. Of the land which you own, enter the total number of acres which you devoted to crops and pasture last year (1970): \_\_\_\_\_

6. Enter the total number of acres which you rented from other persons for farming last year: \_\_\_\_\_

7. If you operated in your current location in 1960, enter the number of acres which you rented and owned in that year:
- Acres rented from others for farming in 1960: \_\_\_\_\_
  - Acres which you owned and devoted to crops and pasture in 1960: \_\_\_\_\_
8. If you rented land for farming last year, check the kinds of land owners from whom you rented land:
- \_\_\_\_ Farmers who still operate their farms on a part-time or full-time basis
  - \_\_\_\_ Farmers who have discontinued operating their farms
  - \_\_\_\_ Nonfarm owners who reside by the land which they are renting
  - \_\_\_\_ Nonfarm absentee owners who reside away from the land which they are renting
  - \_\_\_\_ Other (specify): \_\_\_\_\_
9. If you rented land for farming last year, check the average rent that you paid per acre:
- \_\_\_\_ Less than \$5.00
  - \_\_\_\_ \$5.00 to \$9.99
  - \_\_\_\_ \$10.00 to \$14.99
  - \_\_\_\_ \$15.00 to \$19.99
  - \_\_\_\_ \$20.00 or more
10. Indicate the number of acres (both rented from others and owned) which you devoted to the following crops last year:
- Tree fruits: \_\_\_\_\_
  - Vine fruits: \_\_\_\_\_
  - Vegetables and ground fruits: \_\_\_\_\_
  - Grains (corn, wheat, alfalfa, oats, etc.): \_\_\_\_\_
  - Horticultural and floricultural products: \_\_\_\_\_
  - Pasture and range land: \_\_\_\_\_
  - Other crops (specify types of crops and number of acres devoted to their production): \_\_\_\_\_  
\_\_\_\_\_

11. If you were involved last year in poultry or livestock farming, indicate the average number of poultry or livestock in your operation:

- a. Laying hens: \_\_\_\_\_
- b. Pullets: \_\_\_\_\_
- c. Other poultry: \_\_\_\_\_
- d. Milk cows: \_\_\_\_\_
- e. Dairy helpers: \_\_\_\_\_
- f. Beef cattle: \_\_\_\_\_
- g. Other livestock (specify number and kind): \_\_\_\_\_

12. Check below the estimated total cost of new farm structures which you have added to your farm since 1960. Include in the estimate the costs of additions to or improvements in your barns, silos, machinery sheds, milking parlors, storage structures, and other fixed farm structures. Do not include the costs of additions to or improvements in your residence, land, or tractors and other movable pieces of farm machinery.

- a. \_\_\_ Less than \$5,000
- b. \_\_\_ \$5,000 to \$9,999
- c. \_\_\_ \$10,000 to \$24,999
- d. \_\_\_ \$25,000 to \$49,999
- e. \_\_\_ \$50,000 or more

13. Do you feel that your current property taxes are so high that largely because of them you must now consider discontinuing operating your farm (check either "yes" or "no")? Yes \_\_\_ No \_\_\_

14. Do you expect that property taxes during the next 10 years will become so high that largely because of them you will have to consider discontinuing operating your farm? Yes \_\_\_ No \_\_\_

15. Check the statement which better expresses your attitude toward the provision of public sewer and water lines in the vicinity of your farm:

- a. \_\_\_ I prefer to have these facilities near my farm because they will increase the value of my land by making it more desirable for urban use.
- b. \_\_\_ I prefer not to have these facilities near my farm because they will increase my property taxes.

16. Have you received from your nonfarm neighbors any objections to your farming operations, such as manure spreading, spraying, farm odors, and so forth? Yes \_\_\_ No \_\_\_
17. If the answer to 16 is "yes", specify the kinds of objections which you have received: \_\_\_\_\_  
\_\_\_\_\_
18. Have any of the activities of your nonfarm neighbors been objectionable to you or detrimental to your farming operations? Yes \_\_\_ No \_\_\_
19. If the answer to 18 is "yes", specify the ways in which their activities have been objectionable: \_\_\_\_\_  
\_\_\_\_\_
20. Do you feel that there would be in the present or near future any difficulty in renting additional land near your farm to expand your operation, if you wanted to do this? Yes \_\_\_ No \_\_\_
21. If the answer to 20 is "yes", specify the nature of the difficulty: \_\_\_\_\_  
\_\_\_\_\_
22. Do you feel that there would be in the present or near future any difficulty in buying additional land near your farm to expand your operation, if you wanted to do this? Yes \_\_\_ No \_\_\_
23. If the answer to 22 is "yes", specify the nature of the difficulty: \_\_\_\_\_  
\_\_\_\_\_
24. Check the statement which best describes your current plans for the next 10 years:
- a. \_\_\_ Continue operating your current farm
  - b. \_\_\_ Discontinue operating your current farm and begin farming in a different location
  - c. \_\_\_ Discontinue operating your current farm and begin nonfarm employment
  - d. \_\_\_ Discontinue operating your current farm and retire
  - e. \_\_\_ other (Specify): \_\_\_\_\_
25. Check the statement which better describes your current plans for the use of your land from now until you discontinue farming it:
- a. \_\_\_ Continue with the same kind of farm operation
  - b. \_\_\_ Shift to a different kind of farm operation (specify kind): \_\_\_\_\_  
\_\_\_\_\_



26. Check the statement which best describes your plans for future Investments in your farm structures:
- a.  Make no new Investments in farm structures to expand your operation
  - b.  Make only minor new investments (totaling less than \$10,000) in farm structures to expand your operation
  - c.  Make major new investments (totaling more than \$10,000) in farm structures to expand your operation
27. Do you intend to expand your farm acreage before you discontinue operating your current farm? Yes  No
28. If the answer to 27 is "yes", indicate how you intend to expand your farm acreage:
- a.  By both renting and buying additional land
  - b.  By renting, but not buying, additional land
  - c.  By buying, but not renting, additional land
29. Check the statement which best describes your plans for the use of your land after you discontinue farming it:
- a.  Hand it over to a son or other member of the family to continue to farm it
  - b.  Sell it to another farmer to continue to farm it
  - c.  Sell it to a nonfarmer for eventual development
  - d.  Other (specify):
30. Check below the average price per acre which you feel you could get if you were to put all your land, except your house lot, on the market and sell it to the highest bidder over the next six months:
- a.  Less than \$300 per acre
  - b.  \$300 to \$499 per acre
  - c.  \$500 to \$749 per acre
  - d.  \$750 to \$999 per acre
  - e.  \$1000 or more per acre

31. Assume for the moment that it is considered desirable to encourage good farm land to remain in production in Monroe County. Listed below are several methods for doing this. Please check whether you personally would favor or oppose each method.

- a. Preferential assessment (that is, assessing farm land according to its value for farming, not its value for speculation or urban uses). Favor\_\_ Oppose\_\_
- b. Agricultural zoning (that is, zoning to discourage good farm land from going into urban use before other suitable land goes into such use). Favor\_\_ Oppose\_\_
- c. Public facility planning (that is, planning for the location of roads, sewer and water lines, and other public facilities so that they would tend to guide urban development away from good farm land). Favor\_\_ Oppose\_\_
- d. Agricultural easements (that is, contracts between farmers and local government to keep farm land in production for a certain period of time in return for lower property taxes). Favor\_\_ Oppose\_\_

32. Listed below are a number of prospects which might affect your farming operation. We are interested in finding out which of these prospects would be likely to discourage you from continuing active farming in your current location. Place a "1" by the prospect which you feel would be most likely to do this, a "2" by the prospect which would be second most likely to do this, and a "3" by the prospect which would be third most likely to do this. Place an "X" by those prospects which would not be likely to discourage you from continuing active farming in your current location.

- a. \_\_\_ The prospect of high property taxes
- b. \_\_\_ The prospect of conflicts with nonfarm neighbors
- c. \_\_\_ The prospect of selling your land to a speculator, developer, or other nonfarm buyer
- d. \_\_\_ The prospect of taking on a higher paying job off your farm
- e. \_\_\_ The prospect of difficulty getting adequate land to expand your farm operation
- f. \_\_\_ The prospect of difficulty getting adequate farm labor
- g. \_\_\_ The prospect of difficulty getting adequate capital and credit for your farm operation
- h. \_\_\_ The prospect of difficulty getting adequate supplies and services for your farm operation
- i. \_\_\_ The prospect of difficulty finding an adequate market for your farm products

33. Please indicate any other factors which might discourage you from farming in your current location:

APPENDIX B

Tabulation of Responses  
to Selected Questions

The following tables are grouped into four major categories: (1) background information, (2) problems facing farmers, (3) future plans, and (4) attitudes toward measures for preserving farmland. The question numbers in the survey (See Appendix A) to which the tables pertain are noted in the table headings.

BACKGROUND INFORMATION

TABLE I  
OWNERSHIP PATTERN (QUESTION 1)

	<u>Number</u>	<u>Percent</u>
Individual or Family Ownership	52	67.5
Partnership	19	24.7
Corporation	6	7.8

TABLE 2  
AGE OF RESPONDENT (QUESTION 3)

	Number	Percent
Under 40	10	13.0
40-49	26	33.8
50-59	25	32.5
60 or more	14	18.2
No Response	2	2.6

TABLE 3  
MAJOR FARM PRODUCTS (QUESTIONS 10 AND 11)

	Number	Percent
Dairy	20	26.0
Fruits	14	18.2
Vegetables	18	23.4
Field Crops	5	6.5
Combination of Two or More of Above	10	13.0
Others	10	13.0

TABLE 4  
 VALUE OF FARM PRODUCTS SOLD, 1970 (QUESTION 2)

	Number	Percent
\$10,000-\$19,999	14	18.2
\$20,000-\$29,999	5	6.5
\$30,000-\$49,999	17	22.0
\$50,000 or More	41	53.3

TABLE 5  
 INVESTMENT IN FIXED CAPITAL FACILITIES, 1960-1970 (QUESTION 12)

	Number	Percent
Less than \$5,000	21	27.3
\$ 5,000-\$ 9,999	14	18.2
\$10,000-\$24,000	21	27.3
\$25,000-\$49,000	8	10.4
\$50,000 or More	10	13.0

TABLE 6  
 DISTRIBUTION OF FARMERS RENTING LAND FROM  
 VARIOUS TYPES OF LAND OWNERS (QUESTION 8)

	Number	Percent
Not Renting	23	29.9
Renting from Active Farmers Only	4	5.2
Renting from Inactive Farmers Only	10	13.0
Renting from Nonfarm Resident Owners Only	10	13.0
Renting from Absentee Owners Only	7	9.1
Renting from Nonfarm Residents and Other Non absentee Owners	18	23.4
Renting from Absentee Owners and Non absentee Owners	3	3.9
Renting from Other Combinations of Owners	2	2.6

TABLE 7  
 AVERAGE RENT PAID PER ACRE (QUESTION 9)

	Number	Percent
Not Renting	23	29.9
Renting for		
Less than \$ 5.00	2	2.6
\$ 5.00-\$ 9.99	17	22.1
\$10.00-\$14.99	24	31.2
\$15.00-\$19.99	5	6.5
\$20.00 or more	6	7.8



PROBLEMS FACING FARMERS

TABLE 8  
PROPERTY TAXES (QUESTIONS 13 AND 14)

	Number	Percent
Current Property Taxes Too High to Continue Farming		
Yes	30	39.0
No	47	61.0
Future Property Taxes Will Be Too High to Continue Farming		
Yes	60	77.9
No	15	19.5
No Response	2	2.6

TABLE 9  
ATTITUDES TOWARD SEWER AND WATER FACILITIES (QUESTION 15)

	Number	Percent
Prefer Facilities Near Farm Because They Will Increase Land Values	29	37.7
Prefer Facilities Not Near Farm Because They Will Increase Property Taxes	47	61.0

TABLE 10  
LAND USE CONFLICTS (QUESTIONS 16 AND 18)

	Number	Percent
Nonfarm Neighbors Have Objected To My Farm Activities		
Yes	13	16.9
No	64	83.1
I Have Objected To Nonfarm Neighbors' Activities		
Yes	24	31.2
No	53	68.8

TABLE 11  
DIFFICULTIES IN ACQUIRING LAND FOR  
FARM EXPANSION (QUESTIONS 20 AND 22)

	Number	Percent
Have Had Difficulties Buying Land for Farm Expansion		
Yes	62	80.5
No	14	18.2
No Response	1	1.3
Have Had Difficulties Renting Land for Farm Expansion		
Yes	21	27.3
No	54	70.1
No Response	2	2.6

TABLE 12  
 ESTIMATED PRICE PER ACRE WHICH FARMER'S  
 LAND WOULD BRING IN SALE (QUESTION 30)

	Number	Percent
Less than \$300	4	5.2
\$300 to \$499	10	13.0
\$500 to \$749	12	15.6
\$750 to \$999	10	13.0
\$1,000 or More	38	49.4
No Response	3	3.9

TABLE 14  
PLANS FOR NEXT TEN YEARS (QUESTION 24)

	Number	Percent
Continue Operating Current Farm	56	72.7
Begin Farming in Different Location	5	6.5
Begin Nonfarm Employment	4	5.2
Retire	12	15.6

TABLE 15  
PLANS FOR INVESTMENTS IN FIXED CAPITAL  
FACILITIES BEFORE DISCONTINUING FARMING (QUESTION 26)

	Number	Percent
No New Investment	32	41.6
Minor New Investments (under \$10,000)	35	45.5
Major New Investments (over \$10,000)	10	13.0

TABLE 16

## FARM ACREAGE EXPANSION PLANS (QUESTIONS 27 AND 28)

	Number	Percent
No Land Expansion Planned	60	77.9
Renting Additional Land Planned	8	10.4
Buying Additional Land Planned	1	1.3
Both Renting and Buying Additional Land Planned	5	6.5
No Response	3	3.9

TABLE 17

## TYPE OF FARMING PLANNED IN FUTURE (QUESTION 25)

	Number	Percent
Continue Producing Same Farm Product	68	88.3
Shift to a Different Kind of Farm Product	8	10.4

TABLE 18

## PLANS FOR THE USE OF LAND AFTER FARMING (QUESTION 29)

	Number	Percent
Give to Family Member to Continue Farming	27	35.1
Sell to Another Farmer to Continue Farming	7	9.1
Sell to Nonfarmer for Eventual Development	38	49.4
Other	3	3.9
No Response	2	2.6

TABLE 19

## ATTITUDES TOWARD MEASURES FOR PRESERVING FARMLAND (QUESTION 31)

	Number	Percent
Preferential Tax Assessment		
Favor	71	92.2
Oppose	3	3.9
No Response	3	3.9
Agricultural Zoning		
Favor	49	63.6
Oppose	23	29.9
No Response	5	6.5
Public Facility Planning		
Favor	52	67.5
Oppose	19	24.7
No Response	6	7.8
Agricultural Easements		
Favor	51	66.2
Oppose	19	24.7
No Response	7	9.1



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