HISTORICAL GEOGRAPHY OF INGHAM COUNTY, MICHIGAN

Thesis for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY

Jahan Ara Malik

1960

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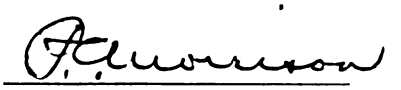
HISTORICAL GEOGRAPHY OF INGHAM COUNTY, MICHIGAN

presented by

Jahan Ara Malik

has been accepted towards fulfillment of the requirements for

Ph.D. degree in Geography



Major professor

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ABSTRACT

HISTORICAL GEOGRAPHY
OF INGHAM COUNTY, MICHIGAN

by Jahan Ara Malik

The purpose of this study is to describe and interpret the historical geography of Ingham County, Michigan. Historical geography deals with the areal differentiation of the face of the earth in the past and the changes with time. To facilitate analysis of Ingham County's transition from the original natural state, five successive time periods were selected, these ending in 1838, 1875, 1910, 1945, and 1960 respectively.

Early white settlers, the first arriving in 1834, found the future county a forested wilderness, sparcely peopled by semi-nomadic Pottawattomie Indians. Because of Pleistocene glaciation, three belts of morainic hills, separated by gently undulating till and outwash plain, crossed the area from east to west and some 25 per cent of the land was poorly drained. Density of the forests and the swampy nature of so much land were important factors delaying settlement of the county, which although surveyed by 1829, was not politically organized until 1838. The previous year there were 822 inhabitants. Entering the area from the southeast and south these pioneers instituted an economy primarily based on subsistence agriculture.

By 1874, Ingham's population reached 29,193, the forests had been largely cleared and there were nearly 3,500 farms. Meanwhile, there had been a shift to cash grain agriculture, the rectangular pattern of roads had nearly attained its ultimate development, and the railroads had been laid. The most significant event, however, was establishment of the state capital in the forests of Lansing Township in 1847. By 1874, Lansing, the city which grew up around this site had a quarter of the county's population and was the focus of its economic life. Also of great future consequence was the founding of Michigan State Agricultural College in 1855 in what is today East Lansing.

During the next period, 1875-1910, dairy farming and mixed farming superseded grain farming in importance. Additional acreages were brought into use and farm incomes expanded, but after 1880 rural population declined. There was a high rate of urban growth, however, especially after 1900 when Lansing emerged as an important automobile manufacturing center. In 1910 nearly three-fifths of the county's population of 53,310 were in Lansing. The flood tide of movement cityward has barely started, however, before the appearance of the first rural non-farm dwellers who worked in Lansing. In 1910 most of these commuters used the newly established electric interurban lines. The automobile, which was to dominate this movement in the future, was still not

widely used and agitation for good roads was just beginning.

Between 1910 and 1945 demand for manufactured goods created by two world wars and the prosperous 1920's so stimulated Lansing's industrial growth that, despite the "Great Depression", expansion of urban living was the outstanding characteristic of county life. In three decades, ending in 1940, county population increased from 53,310 to 130,616; Lansing's from 31,229 to 78,397. Thus, some 60 per cent of the increase was in Lansing. Rural farm population had continued to decrease, but there was a large gain in rural non-farm residents, especially near Lansing. East Lansing, too, had grown rapidly, partly because of rising enrollments at Michigan State University, and had a population of 5,839 in 1940. By this time nearly 80 per cent of the county's people lived in the three northwestern townships.

The areal spread of the cities and expansion of rural non-farm living had caused a decline in land in farms. There was also a fall in the number of farms, but those that remained were larger, better equipped, more productive, and more commercial than ever. Changes in industry had been more ones of degree than kind. The automobile industry retained its leadership in value of product and as the largest employer. Increased use of the automobile had caused county roads and highways to be tremendously improved.

It also resulted in abandonment of the interurban lines in 1929 and operation of street cars in Lansing in 1933.

Most of the significant trends which characterized life between 1910 and 1945 have been continued into the present post-war period. Thus, in 1960 there was less land in farms, fewer farm people, and fewer farms, but larger and much better equipped ones, than in 1945. There has been great further expansion of manufacturing, but the automobile industry still maintains its leadership, employing about the same proportion of industrial workers as before. Lansing has continued to grow rapidly. Its population reached 108,128 in 1960, but much of the gain has been the result of annexations rather than of internal increase. Population growth in East Lansing has been even more spectacular, rising to 29,745 in 1960.

Between 1940 and 1960 population of the county increased from 130,616 to 211,634. Urban population gained 62.8 per cent, but the share city people were of the county total remained practically the same. Farm population declined some 7 per cent, however, while rural non-farm population rose 95 per cent. Since most of the urban growth and a sizeable part of that of rural non-farm residents was in the three northwestern townships, these had over 87 per cent of the county's population in 1960. Even so, rural non-farm population increased in every township, except Lansing Township where there was a slight decrease because of annexa-

tions by Lansing and East Lansing. It is evident that commuters in increasing numbers have recently been traveling greater distances than ever before to reach their jobs in Lansing and East Lansing. Thus, the post-war years in Ingham County mirror especially well two trends characteristic of these same years for the nation as a whole. These are the "population explosion" and the "exploding metropolis".

Although Ingham County is a part of a much larger, physically homogeneous area, variations in its development from that of adjacent counties have been pronounced. The factors of greatest importance accounting for this have been matters of human decision, namely the location of the state capital at Lansing, of Michigan State University at East Lansing, and of the automobile industry in Lansing. In the future, as in the past, these three factors will continue to be significant.

HISTORICAL GEOGRAPHY
OF INGHAM COUNTY, MICHIGAN

By

Jahan Ara Malik

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East Lansing, Michigan — Jahan A. Malik

August, 1960

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INTRODUCTION

This study concerns Ingham County, which is situated in the south-central part of the Lower Peninsula of Michigan. The county has an area of 559 square miles and a population of 211,634.[1] It has a diversified economy based upon industry, business, government, education and agriculture. Lansing, the state capital, is its industrial and commercial core and has a population of 108,128, or nearly 51 per cent of the county total (Fig. 1).

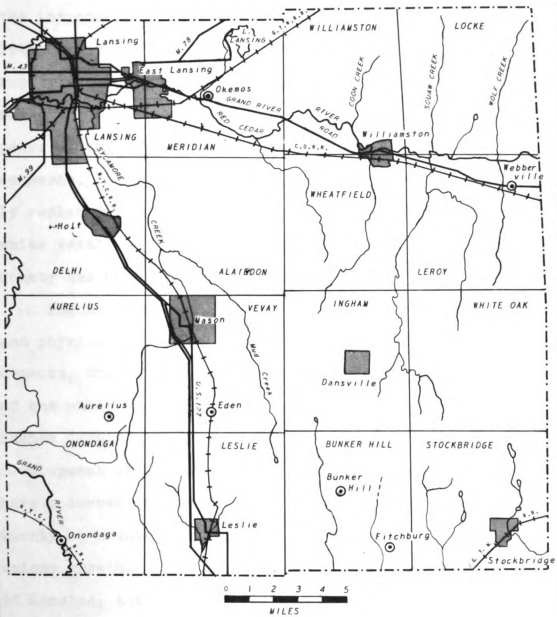
Although the area has been occupied by humans for many centuries, the greatest changes in the areal occupance of Ingham County have occurred in the last 125 years, or since the arrival of the white man. Agriculture has been an important industry since the coming of the first permanent white settler in 1835, but agricultural practices and land-use patterns have undergone notable changes over the years. At present a large proportion of the county area is devoted to moderately prosperous mixed farms and dairy farms.

Lack of good communications and an expanding internal

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1. Population figures both for Lansing and Ingham County are preliminary results of the Census of the United States, 1960.

INGHAM COUNTY
IDENTIFICATION MAP



G.T.W.R.R. Grand Trunk Western Railroad N.Y.C.R.R. New York Central Railroad

C.O.R.R. Chesapeake Ohio Railroad

J.L.R. 60

Fig.1

market encouraged the early growth of local manufacturing concerns, some of which continue to operate today. When transportation and communication improved, however, with the introduction of railroads in the third quarter of the 19th century, not only were distant markets opened to the county's surplus agricultural produce, but also impetus was given to further industrial growth. By the early years of the 20th century functional diversity based upon commerce, industry, education, and government had completely replaced the subsistence agriculture of the pioneer white settler. Thus over a period of 125 years Ingham County has undergone notable changes.

Ingham County as a unit is a part of a much larger and physiographically homogeneous area. In their broader aspects, the changes in its areal occupance were reflective of the whole state and nation, and were not peculiar to Ingham County alone. However, variations from the national development and from the development of adjacent counties have occurred within this area. The selection of Ingham County as a unit of study was therefore justified by its unique growth. This growth has resulted from the existence of Lansing, the state capital, within the county boundaries and from its educational importance as the home of Michigan State University.

Lansing was made the state capital in 1847. It was a city established in the wilderness and its early growth was

slow. By the latter part of the 19th century, however, Lansing had gained the proportions of a large urban place, not only functioning as a state capital, but as a commercial, industrial, and educational center as well. As early as 1880 the growth of Lansing had become synonymous with the growth of the whole county. Outside the city the county showed relatively little development of industry or population, other than the great increase in that of a rural non-farm character after that time.

The State Agricultural College, now called Michigan State University, was established on the outskirts of the city of Lansing in 1855. The major influence of this institution in Ingham County has been to cause a rise in the population, and to encourage local business enterprises in the city of East Lansing, besides making it possible for a larger percentage of young people of Ingham County to obtain a university education.

The population increase in Lansing and East Lansing stimulated the growth of suburban places beyond the city limits. The spread of rural non-farm homes between these places and into the countryside has resulted in the development of a sizeable urbanized area in the northwestern section of the county.

Purpose

The purpose of this dissertation is to describe and to interpret the historical geography of Ingham County.

Geography in general deals with the investigation and presentation of the areal differentiation of the face of earth. Historical geography in particular deals with what may be termed geographic change in time. A historical geographer reaches into the past for pertinent space orders and investigates the circumstances and processes by which things have changed.[2]

During the years a number of competent scholars have reported on the history of Ingham County and others have elaborated upon its achievements in the field of industry and education. To the best of the writer's knowledge, however, the kind of geographic study undertaken here has never been applied to this county. Although the findings of previous writers have furnished valuable information, they lack the concept of things associated in space which is inherent in a geographic analysis.

The broad objectives of the study may be stated as follows:

A. To examine the natural environment of Ingham County and relate this to mans' settlement and development of the area.

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2. P. E. James and C. F. Jones, American Geography Inventory and Prospect (Association of American Geographers, Syracuse University Press, 1954), pp. 21 and 71.

B. To show the sequence of occupancy, depicting stages in the transition from the county's original wooded state to its present multi-functional economy; i.e., to describe and analyse the distribution and functional organization of successive increasingly complex economies which have developed in the county.

C. To analyse the growth of Lansing in terms of its origin, functions, and influence on the overall development of Ingham County.

In addition to the introduction, this study is composed of six chapters. In order to establish an environmental background as a stage for the cultural impress the first chapter presents a description of the physical features of the area. The remainder of the study is devoted to the analysis of agents and processes of change, and the patterns which resulted. The most significant general factors of change among the host of natural, economic and cultural forces which have played a part are analyzed by means of a sequential series of geographies of Ingham County representing five successive dates.

In chapter II the aboriginal and early white settlements prior to the organization of the county in 1838 are examined. Chapter III covers the period 1838 to 1875, climaxed by an economy heavily based on commercial grain agriculture, a rural farm population nearing its maximum

size (Fig. 2), the removal of any doubt that Lansing would become a city of importance, establishment of the basic road pattern, the building of railroads, and the beginning of extractive and manufacturing industries. Chapters IV, V and VI present three successive stages, from 1875 to today, in urban development, industrial progress, and the growth of inter-connections between city and county which have resulted in the present functional diversity.

Chapter IV (1875-1910) discusses an era of transition: from grain farming to mixed and dairy farming, from a high percentage of rural to a high percentage of urban population, from small scale manufacturing practices to the mass production of mechanical goods, especially automotive, and from the use of wagons and coaches to automobile and truck on city streets and country roads. In chapter V attention is directed to the conditions existing in Ingham County during two world wars and the intervening years of prosperity followed by world wide depression. Continued urban growth, expansion of the rural non-farm population, a remarkable decrease in the number of farm people (Figs. 2 and 3), and the increasing dominance of the economy by the automobile industry, and of transportation and everyday life by its product, are characteristics of this period. Chapter VI describes the post war developments, the most significant of which has been the rapid growth of suburban and rural non-farm living by workers who commute between home and job

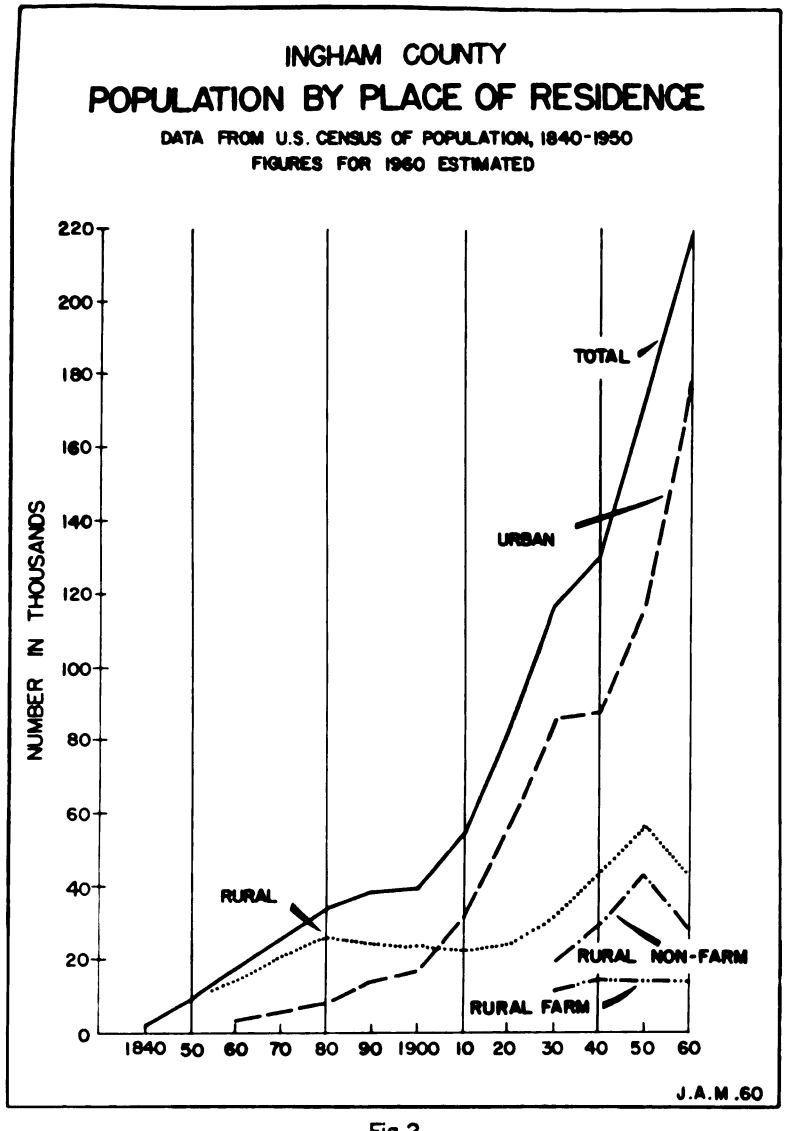

INGHAM COUNTY
POPULATION BY PLACE OF RESIDENCE
DATA FROM U.S. CENSUS OF POPULATION, 1840-1950
FIGURES FOR 1960 ESTIMATED
NUMBER IN THOUSANDS
0
20
40
60
80
100
120
140
160
180
200
220
1840 50 60 70 80 90 1900 10 20 30 40 50 60
TOTAL
URBAN
RURAL
RURAL NON-FARM
RURAL FARM
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Fig. 2

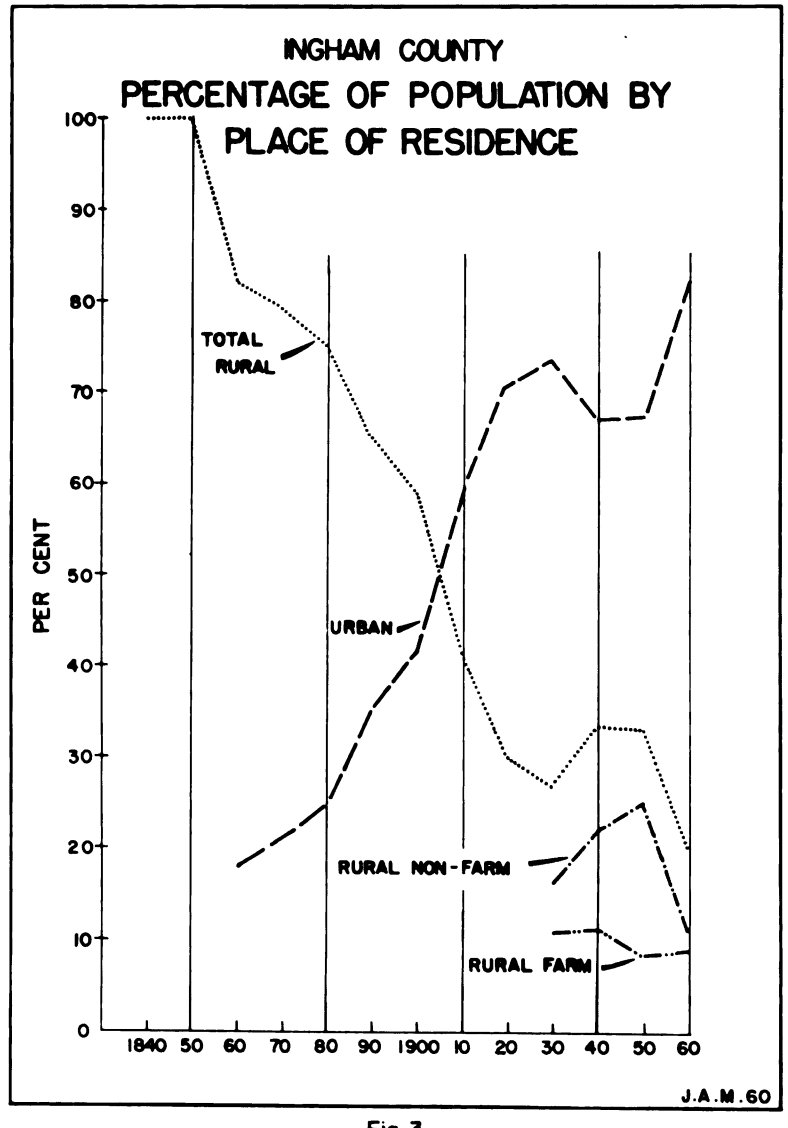

INGHAM COUNTY
PERCENTAGE OF POPULATION BY
PLACE OF RESIDENCE
PER CENT
0
10
20
30
40
50
60
70
80
90
100
1840 50 60 70 80 90 1900 10 20 30 40 50 60
TOTAL
RURAL
URBAN
RURAL NON-FARM
RURAL FARM
J.A.M.60

Fig. 3

by automobile. It also gives a summary and conclusion to the study.

The growth, distribution and occupations of the population gave a distinct character to the patterns of occupance of each period. Changes from one period to another were not sudden, and occupancy features of one period often persisted far into the following periods even when they had lost much of their original functional value. Physical changes, economic changes and sociological changes proceeded simultaneously, but not at the same rate. Each affected the other, but not necessarily equally, during the successive stages in the evolution of today's areal functional organization of Ingham County.

Sources

Information for this study was obtained from various sources. Those of primary importance fall into three catagories:

1. Unpublished papers, original records of census, manuscript maps, typed and mimeographed copies of records, and personal interviews.
2. Published sources containing statistical, cartographic and analytical information, including both United States and Michigan censuses, other statistical publications of national, state and local agencies, county plat books, atlases and maps, and reports of the State Legislature.

3. Descriptive sources such as histories of Ingham County, published pioneer accounts, magazine articles, newspaper articles, and theses.

(Note - In using official census materials no attempt has usually been made to rationalize minor discrepancies in classifications and areas between successive periods, or between reports produced by the national and state governments.)

CHAPTER I

THE NATURAL SETTING

The significance of the physical environment of Ingham County has varied with the changing attitudes, objectives and stages of economic development of the peoples occupying the area. The Indian relied heavily on the animal and floral abundance of the forested wilderness in which he lived, whereas the more advanced culture of the white pioneer enabled him to establish an occupance based on subsistence farming. Over the years that followed, technical developments and human ingenuity assisted man to clear the vegetation and drain the swamp to make room for his expanding and ever-changing settlements. The original landscape has been modified to such an extent that today little semblance of the pre-settlement conditions is visible. In order to acquire a background for interpreting the significance of the patterns of occupancy at various periods, description of the natural environment of the county follows.

Climate

Ingham County lies in a transitional zone between the Humid Continental Climate with Long Summers, and the Humid Continental Climate with Short Summers (Dfa and Dfb in the

Koppen classification).[1] In the following discussion the climatic conditions for East Lansing have been taken as representative for the whole county because climatological data for a reasonably long period is available only for this station. Within the county variations in local relief are not pronounced and there are no large bodies of water, so the climatic conditions experienced do not show remarkable difference from place to place. Thus the data for East Lansing can be taken as fairly representative of the county.

East Lansing has a mean annual temperature of 46.8°, with averages of 22.2° for the coldest and 71.0° for the warmest month.[2] As indicated by Table 1, extreme temperatures as low as -25° and as high as 102° have been recorded. Large fluctuations of temperature within short periods of time are not unusual, especially during winters, as the county is alternately exposed to colder continental winds from the north or northwest and warmer winds from a southerly direction.

---

1. Dfa climate is characterized by cold winters with the average temperature of the coldest month below 26.6°, and hot summers, with the average temperature of the warmest month over 71.6°. The winter temperatures for the Dfb climate also average below 26.6° for the coldest month, whereas the summers are cool, with the average temperature for the warmest month below 71.6° but with at least four months averaging above 50°. Both climates have no dry season. (Glen T. Trewartha, An Introduction to Weather and Climate (New York: McGraw Hill Book Co., Inc., 1943), pp. 519-520.)

2. All temperature figures are Fahrenheit.

TABLE 1

CLIMATIC SUMMARY, EAST LANSING, MICHIGAN

Fahrenheit Temperature (Degrees)	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Average[1]	22.5	22.2	32.3	44.5	56.5	66.1	71.0	68.9	61.9	50.7	37.9	26.5	46.8
Average Minimum[1]	15.6	14.2	23.8	34.3	45.4	55.0	59.5	57.6	51.0	40.5	30.3	19.9	37.3
Average Maximum[1]	29.5	30.2	40.8	54.6	67.6	77.1	82.4	80.2	72.7	60.8	45.4	33.1	56.2
Absolute Maximum[2]	63	66	82	88	93	98	102	102	97	87	76	64	102
Absolute Minimum[2]	-17	-25	-10	8	23	34	42	38	29	19	4	-18	-25
RAINFALL (Inches)													
Average	1.76	1.73	2.47	2.79	3.72	3.36	2.72	2.85	2.90	2.54	2.26	1.92	31.02
Absolute Minimum[3]	.36	.25	.43	.82	.70	.97	.09	.18	.53	.28	.04	.45	
Absolute Maximum[3]	3.97	7.47	5.21	6.39	7.97	7.47	7.55	9.21	7.76	7.33	5.10	4.19	

1. The average of 53 years, 1905-1958.
2. Absolute maximum and minimum present the highest and lowest temperatures reached during a period of 48 years, 1910-1958.
3. Absolute maximum and minimum represent the highest and the lowest rainfall recorded during a period of 51 years between 1904-1958.

Source - U. S. Dept. of Commerce, Weather Bureau, Local Climatological Data, (East Lansing, Michigan, 1958).

Average annual precipitation for East Lansing is 31.02 inches (Table 1). Though rain falls in all the months, there is a summer maximum with the largest amount usually being received during May and June. Much of the summer rain is of the thunder-shower type. Winter precipitation comes mostly in the form of snow, the yearly average snow fall being 46.9 inches. The city has an average of 143 days of rain, much cloudiness during the winter, and an abundance of sunshine during the summer.[3]

The usual length of the growing season in the county is about 150-160 days with the first freezing temperature normally occurring in early October and the last in early May.[4] Wind storms and tornadoes occasionally cause damage in the area. Hailstorms sometimes occur during the summer, but they seldom do much harm.[5] Exceptionally heavy rains, often combined with melting winter snow, result in flooding the Upper Grand Basin about one year in every three.[6]

Surface Configuration

Ingham County lies in the south-central part of the Lower Peninsula of Michigan, and was therefore covered during

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3. Local Climatological Data, U.S. Dept. of Commerce, Weather Bureau, East Lansing, Michigan, 1958, p. 1.
4. J. O. Veatch et al., Soil Survey of Ingham County, Michigan, U.S. Dept. of Agriculture cooperating with Michigan Agriculture of Experiment Station, Series 1933, No. 36. Issued March 1941.(Washington: U.S.Government Printing Office, 1941), pp. 4-5.
5. Local Climatological Data, op. cit., p. 1.
6. Ibid.

the Quaternary Period with deposits left by Pleistocene glaciation.[7] The thickness of the glacial drift over the county varies from 15 to 200 feet or more.[8] Bed rock, which belongs to the Pennsylvanian System, outcrops in only a few places in the county, and nowhere has directly influenced either the drainage pattern or the character of the soil.[9] Present surface features are due almost entirely to the depositional activities of the ice and to subsequent stream action.

In general, three belts of hills, separated by level to gently undulating surface, cross the county from west to east. The hilly areas are parts of four of the recessional moraines[10] included in the Belted Morainic Region of the Lower Peninsula of Michigan (Figs. 4 and 9).[11]

Hills in Onondaga, Leslie, Bunker Hill and Stockbridge Townships (Figs. 1 and 4) are the detached outliers of the

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7. Frank Leverett, Surface Geology and Agricultural Conditions of the Lower Peninsula of Michigan, Michigan Geol. and Bio. Survey, Pub. 9, Geol. Ser. 7 (Lansing, Michigan: Wynkoop Hallenbeck Crawford Co., 1912), p. 20.

8. Veatch, op. cit., p. 39.

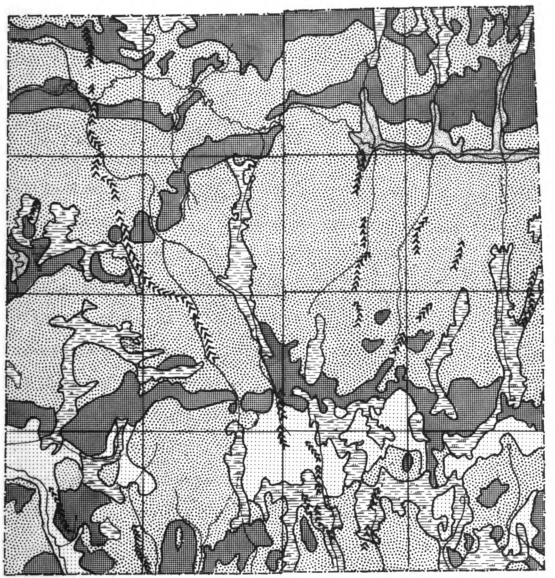
9. Ibid., p. 39.

10. A recessional moraine, usually referred to as a moraine, may be described as a hilly formation of unstratified drift which is deposited along the stationary front of an active ice sheet, the advance of the ice being counterbalanced by melting along the front.

11. Bert Hudgins, Michigan: Geographical Backgrounds in the Development of the Commonwealth, (Ann Arbor, Michigan: Edward Brothers, Inc., 1953), p. 20.

INGHAM COUNTY

SURFACE FORMS



AFTER LEVERETT

J.A.R. 60

Fig 4

Kalamazoo moraine, the main body of which lies to the south of the county. They are largely composed of a sandy drift and commonly reach elevations 30 to 50 feet above adjacent surfaces. On the north, these latter rise gently towards the Charlotte morainic system.[12]

The Charlotte moraine is much better developed than is the Kalamazoo moraine in the county, and forms the hill belt extending through Aurelius, Vevay, Ingham and White Oak Townships (Fig. 4).[13] It has irregular borders, both in the north and south. At many places, especially along its northern margin, it is indented by swamps and some of these extend nearly through the moraine.[14] The maximum relief in the Charlotte moraine is 75 to 100 feet, although few of the hills are over 50 feet high and most of them are only 25 feet, or even less. Many of the depressions among the knolls are swampy, but lakes are uncommon.[15]

In northwestern Ingham County an undulating strip enters southwestern Delhi Township, and leads northeast past Holt to the Red Cedar valley east of Okemos (Fig. 4). The knolls in this strip are low and scattered, and at places it is hard to distinguish them from the swells of

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12. Frank Leverett and F.B. Taylor, The Pleistocene of Indiana and Michigan and the History of Great Lakes, U.S. Geol. Survey, Mon. 53 (Washington: U.S. Government Printing Office, 1915), p. 190.

13. For place name location the reader is referred to the Ingham County Identification Map, Figure 2.

14. Leverett and Taylor, op. cit., p. 208.

15. Ibid., p. 206.

the surrounding plain. In Delhi and Alaiedon Townships there are bordering swamps, but lakes are uncommon. Because this poorly developed moraine joins the Charlotte moraine on the south, it has sometimes been described as a branch of that morainic system. Others have considered it part of the Lansing moraine to the north, which is similarly slender and at places ill defined.[16]

The Lansing moraine forms a portion of the third hilly belt of Ingham County, the one that crosses the northern tier of townships. It is the southernmost of the two parallel bands of surface with greater relief in the northwestern corner of the county. The northern one is part of the Grand Ledge moraine (Fig. 4).

Entering Lansing Township from Eaton County, the Lansing moraine passes east through the southern part of the city of Lansing to Okemos. It is a weakly developed moraine, broken and irregular, some three fourths of a mile wide, and with a local relief of commonly not more than 10 to 20 feet. Beyond Okemos its exact course is uncertain. It may run eastward along the Red Cedar River in a very faint form, to join the morainic area north of Williamston. A more probable course, however, is northeast from Okemos, to join with the Grand Ledge morainic system in the vicinity of Lake Lansing.[17]

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16. Leverett and Taylor, op. cit., p. 208.
17. Ibid., pp. 239-240.

The Grand Ledge moraine, entering the northwestern corner of Ingham County, passes east through the north edge of Lansing, broadening to more than a mile in width and becoming unusually high east and north-east of that city. In East Lansing, close to Michigan State University, the southern border of the moraine turns abruptly northeastward. In this area the moraine is broken by drainage ways, but within a mile or two to the northeast it reappears as a strongly defined moraine continuing towards Lake Lansing.[18]

Eastward from Okemos and Lake Lansing, in Meridian, Williamston and Locke Townships, it becomes difficult, if not impossible, to distinguish individual moraines. Here, later deposits resulting from the readvance of the ice front have apparently covered earlier ones. Till of not only the Lansing and Grand Ledge moraines, but also of the Ionia moraine seem to be involved.[19] In the region of overriding, the morainic features are extremely irregular and the relief becomes much greater, in some places even exceeding 100 feet.[20] Depressions are commonly swampy. In general, this is the roughest portion of the county, particularly northern Meridian and Williamston Townships.

Four land forms of glacial origin, namely till plains (or ground moraine), outwash plains, valley trains, and eskers occupy the areas between the three morainic belts

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18. Leverett and Taylor, op. cit., p. 240.
19. Ibid., p. 244.
20. Ibid., pp. 244-247.

indicated above. Till plains are the most extensive, with outwash plains and valley trains next in amount of surface covered. Eskers, usually a minor glacial form, are quite numerous in Ingham County and because of the sand and gravel they contain have been of considerable commercial importance.[21]

Outwash plains and large marshes cover a significant proportion, perhaps half, of the territory between the Kalamazoo and Charlotte moraines in the south of Ingham County (Fig. 4). The largest expanse of outwash in the county lies northwest and north from the village of Bunker Hill, in Bunker Hill, Leslie, Vevay, and Ingham Townships. This extends eastward, almost uninterrupted except by marshlands, through northern Stockbridge Township, to the county border. There is another large area of outwash in the southwest in Onondaga Township. In the southeastern part of this same township, a northern segment of Rives esker is notable, rising to a height of about 40 feet,

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21. Till plains are composed of the same mixture of earth and rock material as the recessional moraines, but were laid down by a receding ice front rather than a stationary one, usually in a gently rolling carpet of debris. Outwash plains are commonly composed of debris washed out from the ice by meltwater, sorted, and deposited layer on layer, to form sandy, smooth-surfaced areas sloping gently away from the glacial front. Valley trains are of similar material and origin, but were deposited along the course of well developed drainways carrying the glacial meltwaters. The exact way in which the low, narrow, sinuous ridges called eskers were formed is debatable, but it was apparently by deposition on the beds of streams, either flowing on the surface of, or in tunnels in, the glacier.

although much of it is only 10 or 15 feet high. This esker sets in at the Charlotte moraine and extends southward in disconnected sections, through Rives Junction in Jackson County, nearly to the city of Jackson.[22] There are also several eskers, leading south from the Charlotte moraine in Bunker Hill Township.

Except for valley-train deposits, mainly in the northeast along the Red Cedar River and its northern tributaries, and for eskers, several of which will be described later, the surface between the Charlotte moraine and the moraine in the northern townships is a broad till plain of low relief (Fig. 4). The till is more clayey than that in the southern part of the county, and although it is more or less stoney, few large boulders are included.[23] A considerable part of the plain is poorly drained, but the proportion of wet land to the total is not as great as between the Kalamazoo and Charlotte moraines. A notable feature of this till tract is the number of eskers. These occur both as long chains of gravel ridges and as isolated ridges, and range in length from a few rods to more than ten miles.

Known locally as the "hogback", the Mason esker is the longest in Michigan, and was among the first to

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22. Leverett and Taylor, op. cit., pp. 192-193.
23. Ibid., p. 248.

be described in North America.[24] Its length is not less than 20 miles, from the north end in Clinton County to the southern one in the Charlotte moraine southeast of Mason. For a more detailed discussion than follows, the reader is referred to Leverett's study,[25] the source used. The esker is described as it appeared before being greatly changed by extraction of sand and gravel for construction purposes.

In Lansing's Mount Hope Cemetary, near the mouth of Sycamore Creek, the esker rises 30 feet above the level on the east and 50 feet above the creek bed on the west. South of here for the first two or three miles the esker consists of short ridges interrupted by longer gaps, one of which gives passage to Sycamore Creek (Fig. 4). Farther south, it is more continuous, although its height varies considerably and in places changes abruptly, dropping off in a few yards from 40 feet to less than 10 feet, or even terminating to reappear a few rods beyond. The width of the esker is only 50 to 100 yards, even when highest, and its slopes are very steep, at places reaching 30 degrees. The ridge is particularly prominent in Sections 5 and 6 of Vevay Township, the height here being 20 to 30 feet above the bordering plain.

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24. See C. C. Douglas, "Report on Ingham and Parts of Eaton and Jackson Counties, Michigan," Second Ann. Rept. State Geologist (H. Doc. No. 13 (No. 4), 1839), pp. 66-77; also L. C. Wooster, "Kames Near Lansing, Michigan," Science, XIII (1884), p. 4.

25. Leverett and Taylor, op. cit., pp. 209-211.

After passing through the center of the city of Mason, the esker extends south for two miles in a continuous ridge whose height originally varied between 30 to 40 feet. Farther south, in Sections 21 and 22 of Vevay Township, and beyond, the ridge is lower and more interrupted. In the vicinity of the Charlotte morainic system it expands into a plexus of ridges and knolls which inclose swampy depressions, and the moraine itself is gravelly.

The next longest esker in Ingham County is the Williamston-Dansville esker. It consists of a string of ridges leading from near Williamston southwards past Dansville, a distance of about ten miles. The ridge near Williamston is about 30 to 35 feet high, but farther south, in Wheatfield Township, the esker's height is only 15 to 25 feet and it broadens into a series of knolls. Still farther south, particularly in southern Wheatfield Township, heights of 30 feet are reached in places. The esker seems to be composed almost entirely of sand and gravel.[26]

In Leroy Township there is an esker about 5 miles long which has a general height of 12 to 15 feet. In constitution it is more sandy than either the Mason or Williamston-Dansville esker.[27] Several other small eskers ranging in length from a few rods to three or more miles, are located in the eastern part of the county. The one in northeastern

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26. Leverett and Taylor, op. cit., p. 211-212.
27. Ibid., p. 212.

White Oak Township takes the form of parallel ridges separated by swampy tracts and in places is almost 40 feet high.[28]

In summary, Ingham County has an average elevation of 900 feet above sea level, with the highest point, 1021 feet, in the northwest part of Leslie Township, and the lowest point, 840 feet, in the northwest part of Lansing Township. Although the surface is crossed by belts of morainic hills, there are few really abrupt or bold features. The roughest areas are in the north-central and southwestern parts of the county. For the most part, however, slopes are short, smooth and rounded, rather than angular.[29] There are a few bluffs at points where rivers cross the moraines, or where the eskers run parallel to the rivers. The most prominent of these are in the southwest along the Grand River and in the northwest along Sycamore Creek where it flows along the side of the Mason esker. For the most part, though, the appearance of the surface is undulating, with broad, nearly flat areas between the moraines, low swales and swells of the uplands, and widely distributed swamps and lakes of varying sizes.

Drainage

Ingham County lies largely on the west side of the watershed of the Lower Peninsula of Michigan, and is a part of the Grand River drainage basin. Portage Creek,

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28. Leverett and Taylor, op. cit., p. 212.
29. Veatch et al., op. cit., p. 3.

in the southeastern corner of the county, flows east and joins the upper reaches of the Huron River. Only short stretches of the Grand River lie within the county, however, extending into the western townships in three places (Fig. 1).

The Red Cedar is the longest river. It enters the county along the eastern boundary, in northeastern Leroy Township, and follows a westerly course until its confluence with the Grand River in the city of Lansing. The Red Cedar has a very gentle gradient, as it makes a descent of only 50 feet in a distance of some 30 miles within the county.[30] There are numerous tributaries joining it, both from the north and the south. The southern ones are larger and commonly perennial, whereas most of the northern ones are seasonal. The Red Cedar and its tributaries drain most of the county, except the southern townships. The small creeks there flow south to join the Grand River in Jackson County.

In general, the streams of the county are small and sluggish, with gentle gradients and winding courses. Their valleys are usually broad, flat bottomed, and often marshy. They commonly have low, gently rising sides, exceptions occurring where an esker borders the stream bed, or where the course is through well-developed recessional moraines.

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30. Determined from Fowlerville and Mason (Michigan) Topographic Quadrangles, U.S. Geological Survey.

Although there are a number of lakes in the county, only two are of any size and importance; a part of Lake Lansing in the north, and Lowe Lake in the southeast. The total area of all lakes probably does not exceed three or four square miles. The extent of marsh and other poorly drained land, however, is much greater. It has been estimated that as much as 25 per cent of the surface of the county originally was unsuitable for agriculture, other than for pasture, because of its wet condition.[31] Distribution of major swamp areas can be determined from Figure 4. Even today, after much ditching and tiling, a large area in the aggregate is inadequately drained.

Soils

Ingham County lies in the Grey-Brown Podzolic Soil Province, which covers most of the northeastern section of the United States.[32] Grey-Brown Podsols are the typically mature soils of regions with broad-leaf deciduous forest and humid-microthermal climate. The A horizon of these soils is generally stained with brown hydroxide of iron and the admixture of this to the organic matter gives the greyish-brown color from which the group name

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31. Veatch et al., op. cit., p. 12.

32. C. F. Marbut, "Soil of the United States," Atlas of American Agriculture, Part III (Washington: Government Printing Office, 1935), Plate 2, between pages 14 and 15.

is derived.[33]

Because of the lithological heterogenity of the parent material and other factors of their origin, Ingham County soils differ widely within short distances in texture, structure, color, chemical composition, moisture content and other qualities. Generalizing, it can be said that sands and loamy sands cover about 7 per cent, sandy loams 33 per cent, loams 45 per cent, and organic soils 15 per cent of the area. Other than the organic soils, some 5 per cent of the total presents special cultivation problems because of unfavorable characteristics, such as high clay content, stoniness, and susceptibility to wind erosion. Not included in this total, are soils whose management is complicated by steepness of slope. According to standards for the southern part of Michigan, most of the soils are of medium fertility and productivity.[34]

Twenty-five different soil types in the county have been described and mapped. Their distribution pattern is very complex. For details the reader can refer to the published survey.[35] To simplify the present discussion, two or more soil types have been grouped with associated

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33. V. C. Finch and G. T. Trewartha, Physical Elements of Geography, (New York: McGraw Hill Book Company, Inc., 1949), pp. 459-460.

34. Veatch et al., op. cit., pp. 12-14.

35. Ibid.

topographic features to form broader natural land divisions. These are described below and shown in Figure 5. The classification is based on an earlier one by Schneider.[36]

Land Division 1 covers only a small proportion of the total surface of the county, as it is largely limited to eskers. The principle soils are loamy sands to sandy loams of Bellefontaine and Boyer types. Steepness of slope makes this land very susceptible to water erosion, thus limiting its use for agriculture. Some controlled grazing is possible, but the best use is for trees.

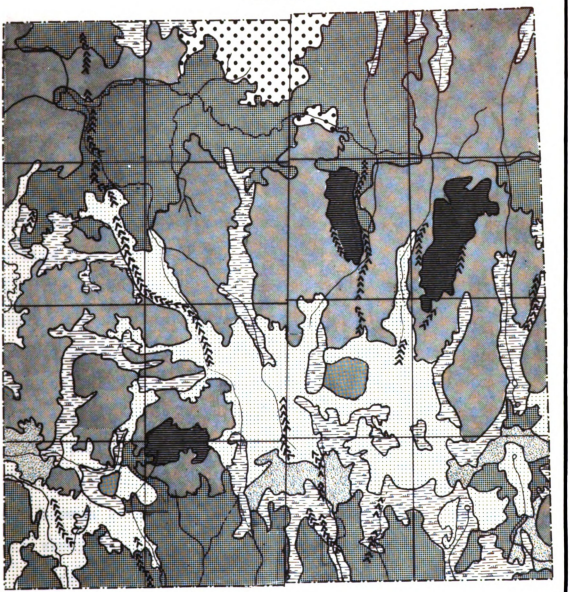
Large areas of Land Division 2 are located in both the southern and northern tiers of townships. The undulating to hilly surface of the moraines and bordering till plain included in this division is covered primarily by Hillsdale sandy loam along with some Miami loam and Bellefontaine sandy loam. Muck and poorly drained medium-textured materials are found in the depressions and drainways. Since there is a wide range in slope conditions, the areas in the north being undulating to rolling, while those in the south are rolling to hilly, water erosion is moderate to severe and some gullies have developed. Both the Hillsdale and the Miami are fairly productive and

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36. Ivan F. Schneider, "Land Division Map, Ingham County", Michigan State University Soils Department, 1953, map and 3 pages of index (mimeographed).

INGHAM COUNTY

LAND DIVISIONS



0 1 2 3 5

MILES

1. Long winding ridges(eskers) of loamy sands and sandy loam soils.
2. Undulating to hilly sandy loam land.
3. Level to gently rolling loam to clay loam land.
4. Mixed level to hilly sand to sandy loam land and swamps.
5. Peat and muck land.
6. Level sandy loam land.
7. Level loam to clay loam land.
8. Rolling to hilly sandy land and swamps.

J.A.B. 60

Fig 5

durable soils and are well adapted to general and subsistence farming. Using a scale of I to VII, to grade from best to poorest, most of the soils of this division belong in Land Use Capability Class II and III, with lesser amounts in I and VI.

Land Division 3 has the greatest extent of any of the divisions in the county and fortunately includes much of the best land for agricultural use. It is largely of Land Use Capability Class I and II. The level to gently rolling loam and clay loam soils are principally associated with the extensive till plains in the northern half of the county and they are therefore in a good position to the Lansing market. Much of the surface is nearly level, with slopesof le ss than 6 per cent in the majority. Even so, sheet erosion on steeper places is a land-use problem, as is also proper drainage of numerous low spots which are usually less than an acre in size. Miami loam is the most common soil type, along with smaller areas of Hillsdale sandy loam, Conover loam, and Brookston loam.

Large tracts of land, especially in the south central townships, are included in Land Division 4 (Fig. 5). These are areas of medium to poor fertility, being mainly of Land Use Capability Classes IV, III, and VI with some II and VII. The large variety of slope conditions, ranging from valleys to rough, hilly uplands, accounts not only for

variations in land use capability, but also for the severe to very severe water-erosion problem. Wind erosion also occurs, particularly on lighter textured soils. The soils are dominantly sands to sandy loams, but there are considerable amounts of muck and peat. Fox type soil is associated with areas of outwash plain, Bellefontaine and Boyer types with the hilly moraine, and Carlisle muck and Rifle peat with poorly-drained areas. Maintenance of the steeper slopes with permanent pasture or trees, good soil management on flatter sites, and proper utilization of the wet areas, either as pasture or by drainage for cropland, are the major land use problems.

Occupying nearly 15 per cent of the area in Ingham County, Land Division 5 is covered by organic soils. The predominant soil types are Carlisle muck, Houghton muck, and Rifle peat. Carlisle muck originally was forested and a considerable part of it still is, whereas Rifle peat is mainly under a dense growth of sedges and wild grasses. However, these soils are largely of Land Use Capability Class III when properly drained, and they are being successfully used for the production of truck crops in many places. Because they are characterized both by high water holding capacity and by a lack of surface coherence when dry, they pose related problems of drainage and wind erosion control. Frost hazards, as well as the danger of fire when the soils dry out, add further to use problems.

Land Division 6 is made up of areas of outwash plain. These are largely confined to the four southern townships (Figs. 4 and 5). Soils are mostly well-drained, light-brown sandy loams of Fox and Oshtemo types, with some muck in wet depressions. They are of medium natural fertility and as a result most of the division is of Land Use Capability Class II and III. Susceptibility of level surfaces to wind erosion, and of steeper slopes to water erosion are important land use problems.

Though limited in size, Land Division 7 is very important because it includes the best agricultural land in Ingham County. It is of Land Use Capability Class I. The soil is mostly Conover loam, with some Brookston and Miami loams, and is generally high in fertility. Due to the nearly level surface of the associated till plain, erosion is of importance only on slopes along drainage ways. Proper soil management and drainage are sometimes problems. Three areas comprise this division: (1) in LeRoy Township, (2) in Wheatfield Township, and (3) along the border of Vevay and Leslie Townships.

Land Division 8 coincides with the rougher part of the moraine in the north-central townships of the county (Figs. 4 and 5). It includes both sandy hills and swampy swales, and has primarily Coloma and Hillsdale soils, along with considerable amounts of Rifle peat. Generally low in natural fertility, organic matter, and moisture holding

capacity, or else poorly drained, the land of this division is largely of Land Use Capability Class IV and VI with some III and VII. Cultivation causes both wind and water erosion problems.

Natural Vegetation

All of Ingham County with the exception of lakes and some marshes, together comprising only two to three per cent of the total area, was originally forested. Today this is true of only about 15 per cent of the surface.[37] Study of the nature of these remnant areas, observing the various combinations in which the different species live and correlating these with soil types, or with natural land divisions, makes possible a description of the approximate condition of the forest at the time the first settlers arrived.

J. O. Veatch has used such correlations, supplemented and complemented by historical data and other information, as the basis for reconstructing and mapping the presettlement forest in Michigan.[38] Figure 6, showing the natural forest cover of Ingham County, and the discussion of it that follows are largely adopted from this study.

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37. Veatch et al., op. cit., p. 39.

38. J. O. Veatch, (Map of) Presettlement Forest In Michigan, (East Lansing: Department of Resource Development, Michigan State University, 1959), 2 map sheets.

Writing about Ingham County's forest in another source, Veatch said:

> It is evident that a single species of plant may be widely distributed and grow on a large number of individual soils, but differences exist in its relative abundance, its form, and its rate of growth. It appears that oaks were most abundant on the deeper and drier sandy soils; sugar maple and beech on the clayey soils and soils of intermediate texture, medium to high in fertility, and fairly well to well drained; elm, ash, basswood, shagbark hickory, swamp white oak, and silver maple on the heavier textured and darker colored sandy loam to clayey soils under poor drainage; aspen, tamarack, birch, and black spruce were almost entirely restricted to muck and peat soils; sycamore, cottonwood, tulip tree, hackberry, walnut, and butternut grew most abundantly on alluvial soils, but some of these species also grew on the darker more limy semiwet loams and sandy loams of the upland.[39]

As shown by the map (Fig. 6) the original forest of Ingham County can be classified into four major divisions: (1) Oaks, (2) Oaks-Hickory, (3) Oaks-Hickory-Maple, (4) Southern Deciduous and Deciduous Wet Sites. Both the Southern Deciduous and Deciduous Wet Sites division and the Oaks-Hickory-Sugar Maple division have three subdivisions. Thus, a total of eight forest types are distinguished, each determined by the kind and relative abundance of dominant and other species in the tree association.

Natural forest type 1 was comprised primarily of oaks, with black oak dominant and red and white common.

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39. J. O. Veatch et al., Soil Survey Ingham County, Michigan, U.S. Dept. of Agriculture cooperating with Michigan Agricultural Experiment Station, Series 1933, No. 36, Issued March 1941 (Washington: U.S. Government Printing Office, 1941), p. 41.

INGHAM COUNTY

NATURAL FOREST COVER

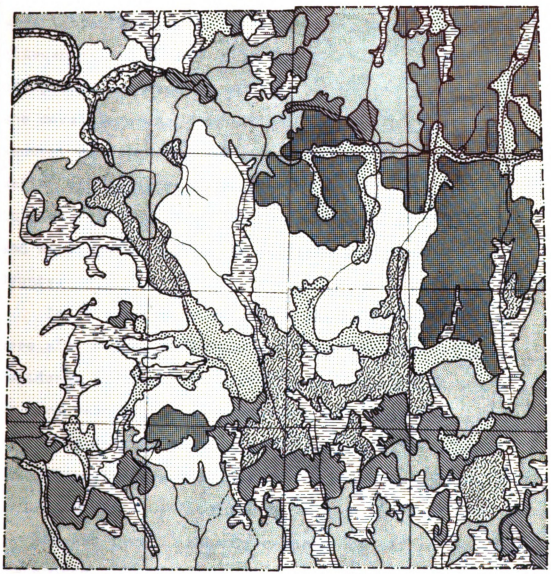


Fig.6

Small amounts of sugar maple and beech, and infrequently white pine, were also found growing with the oaks. This association abounded on the level sandy loam land of the outwash plains in the south and on the mixed level to hilly sand and sandy loam lands and swamps of certain of the morainic areas, both in the southern and north-central parts of the county. Open groves of oaks, called oak openings, were most commonly encountered in this forest type. These were usually on Fox soil and were therefore largely limited to southern Ingham County.

In forest type 2 oaks were dominant, but hickories were also common and there was a diversity of other deciduous species. The oak-hickory association appears to have been mostly confined to the southeastern quarter of Ingham County, on the mixed level to hilly sand and sandy loam lands and swamps of the moraine and till plain in Land Division 4 (compare Figs. 4, 5 and 6).

Forest type 3 probably covered the largest area of the county. In this subdivision of the Oaks-Hickory-Sugar Maple division, the hardwood forest of dense stands of medium to large trees with little undergrowth, had sugar maple, beech, white oak, and hickory as the dominant trees, along with large numbers of elm, basswood and ash. This kind of forest was common over much of Land Division 3,

the level to gently rolling loam to clay loam lands of the till plains in the central, western, and northwestern portions of the county (Figs. 5 and 6). Miami loam was most common associated soil.

Forest type 3a, a second subdivision of the Oaks-Hickory-Sugar Maple division, was almost as extensive as type 3. In this forest of medium sized trees, white, red and black oaks and hickory were dominant, with sugar maple, beech, and elm much less numerous than in forest type 3 described above. It correlated with the undulating to hilly sandy loam lands of the moraine and till plain in the northern and southern parts of the county that were included in Land Division 2. Hillsdale sandy loam is the principal related soil type.

In forest type 3b, the other subdivision of the Oaks-Hickory-Sugar Maple division, elm, ash, and basswood were more common in relation to oaks and hickory than in either of the other two subdivisions and there were only occasional sugar maple and beech. This forest was linked with level loam to clay loam soil, primarily of Conover type and was mainly associated with till plain in the northeastern quarter of the county. It covered all of Land Division 7 (Fig. 5), as well as considerable adjacent area.

Forest types 4, 5 and 6 belong to the Southern Deciduous and Deciduous Wet Sites division. Elm, silver maple, ash, swamp white oak, basswood, shagbark hickory, sycamore,

cottonwood, red and burr oak were the common association on areas occupied by forest type 4. This growth developed on wetter sites with sandy loam soils, and was most extensive on the valley train deposits in the northeast, adjacent to the Mason esker southeast of Mason, and along the inner margin of the Charlotte moraine in Ingham and White Oak Townships.

The elm, ash, red maple, swamp white oak, aspen, tamarack and infrequent white pine combination of forest type 5 was largely restricted to muck and peat soils of the major swamp areas of the county (Figs. 4 and 6).

Growing along the valleys of the Grand River, the Red Cedar River and Sycamore Creek, primarily in Lansing Township, were the elm, red maple, silver maple, ash, sycamore, cottonwood, tulip, butternut and beech trees which composed forest type 6. This association grew most abundantly on semi-wet alluvial soils.

Many kinds of shrubs and grasses no doubt formed a thick undergrowth on the more poorly drained parts of all four forest divisions. Especially was this true in forest type 5, where shrubs such as red osier, dogwood, winter berry, huckleberry, and chokeberry were common. On the wettest sites, marsh grasses and sedges were prevalent, along with various shrubs, tamarack, and willow. In strongly acid bog areas there was usually a species combination dominated by leather leaf, blueberry, and hypnum and

sphagnum mosses.

Minerals

With the exception of timber and some good soil, Ingham County was poorly endowed with natural resources. There were some deposits of coal beneath the surface, and a little coal has been mined near Williamston and elsewhere, but because of the poor quality and quantity of the resource operations soon terminated. Sand and gravel for road building and construction purposes, and shale for making brick and tile have also been quarried in the area. The production of large amounts of sand and gravel from numerous and widely scattered pits has been by far the most important mineral industry. The Mason esker, because of its location in reference to the Lansing market, has been particularly productive of these materials. Other than this, however, mineral production has been of no consequence in Ingham County.

In summary, when man came into what is today Ingham County, he entered an area characterized by cold winters, warm summers, and no dry season. It was a land of gently rolling surface formed by morainic hills, esker ridges, and outwash and till plains. Because of low relief, large areas were poorly drained. Elsewhere, a variety of soils were covered by unbroken stands of hardwood forest. The thick vegetation and the extensive swamps made the county

hard of access and in places unhealthy. The abundance of timber, the variety of soils, the presence of game and fish, and the availability of water power sites, however, were assets which sooner or later contributed to man's occupying the area. Different groups of men at different times interpreted the value of these resources differently. Before the pioneer white settlers, there were the Indians.

CHAPTER II

THE PIONEER YEARS AND BEFORE

White men are only the few most recent of many generations of humans who have occupied Ingham County. Archeological records, for example, indicate that the county was once occupied by the Mound Builders, as at least five mounds, resembling those found in other parts of Michigan, have been discovered (Fig. 7). They are believed to represent either burial places or structures built for military defense. Two of the mounds, one in Aurelius Township (SE¼ Sec. 25) and the other in Leslie Township (NE¼ Sec. 17), were opened and were found to contain human bones and arrow heads, and in the case of the Leslie mound a wooden construction meant to shield human bodies was also discovered.[1]

The once widely accepted view that the Mound Builders were a race who preceeded the Indian by hundreds of years, is no longer accepted by archeologists.[2] It is considered

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1. F. L. Adams, Pioneer History of Ingham County (Lansing, Michigan: Wynkoop Hallenbeck Crawford Co., 1924), pp. 31-32.

2. J. R. Swanton, "The Interpretation of Aboriginal Mounds by Means of Creek Indian Customs," Annual Report of the Smithsonian Institution, (Washington: U.S. Government Printing Office, 1927), pp. 495-496.

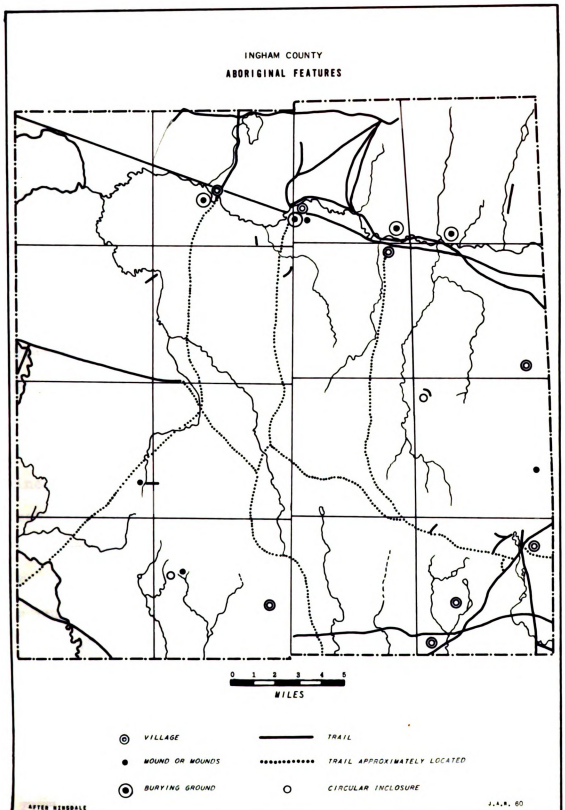

INGHAM COUNTY
ABORIGINAL FEATURES
0 1 2 3 4 5
MILES
VILLAGE
MOUND OR MOUNDS
BURYING GROUND
TRAIL
TRAIL APPROXIMATELY LOCATED
CIRCULAR INCLOSURE
AFTER RINGDALE
J.A.B. 80

Fig. 7

more probable that the mounds are the work of early red men with a mound culture. The greater concentration of mounds close to the sites later occupied by the Indian, strengthens the belief that the mounds of Ingham County are the work of a people akin to Pottawattomies. Whatever their race, the Mound Builders neither left much trace on the landscape, nor made any lasting impact on the economic development of the county.

Indian Occupancy

The south-central part of the Lower Peninsula of Michigan was peopled by Chippewas, Pottawattomies, and Ottawas, collectively known as Saginaw tribes. These Indian tribes were more or less intermingled and at one time or another all of them occupied the land later included in Ingham County.[3] When the first white settlers came, however, they found bands of migratory Pottawattomies in possession of the area (Fig. 8).[4] For the most part the county seems to have been used as a summer resort, and a battle ground, rather than as a place of permanent abode. However, pioneer accounts speak of two kinds of settlements: villages and camping grounds.

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3. S. W. Durant, History of Ingham and Eaton Counties, (Philadelphia: D. W. Ensign and Co., 1880), p. 62.

4. Bert Darling, City in the Forest, (New York: Stratford House, 1950), p. 5.

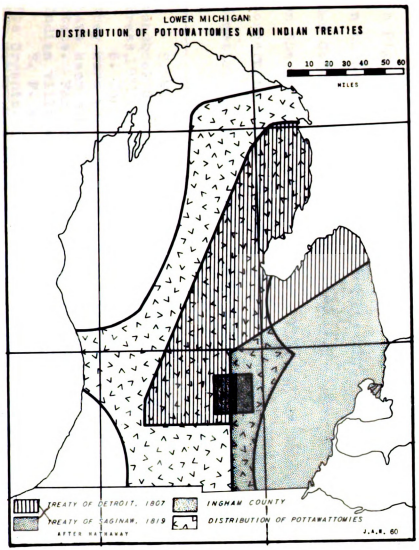

LOWER MICHIGAN
DISTRIBUTION OF POTTAWATTOMIES AND INDIAN TREATIES
0 10 20 30 40 50 60
MILES
TREATY OF DETROIT, 1807
TREATY OF SAGINAW, 1819
AFTER HATHAWAY
INGHAM COUNTY
DISTRIBUTION OF POTTAWATTOMIES
J.A.R. 60

Fig. 8

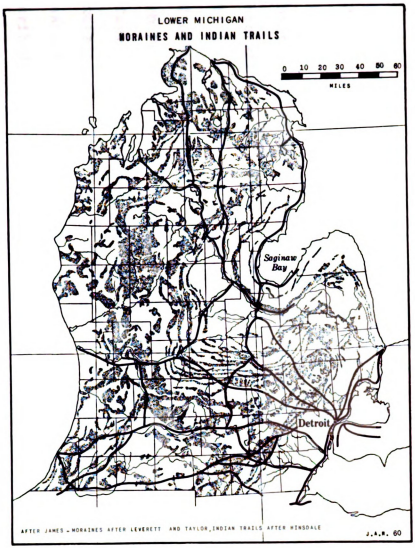

LOWER MICHIGAN
MORAINES AND INDIAN TRAILS
0 10 20 30 40 50 60
MILES
Saginaw Bay
Detroit
AFTER JAMES - MORAINES AFTER LEVERETT AND TAYLOR, INDIAN TRAILS AFTER WINSDALE
J.A.R. 60

Fig. 9

Eight villages have been identified within Ingham County (Fig. 7), but the names and exact location of these have not been accurately determined.[5] Among the best known and the most often mentioned by the pioneers are villages on, or near, the present sites of Okemos, Williamston and Leslie, and on Otter and Low Lakes in Stockbridge Township. The village near Okemos, shown on Farmer's map of 1832,[6] was adjacent to the favorite farm of Chief Okemos, and because of this was the Indian metropolis of the county when the first white settlers came here. The village close to Low Lake has been described as at best, "a miserable little affair."[7]

The distribution of the Indian villages, as shown in Figure 7, suggests that the red man concentrated most in three of the northern townships along the valley of the Red Cedar River, and in the southeast corner of the county on the shores of several lakes. Very little is known concerning the exact number of the Indians. Pioneer accounts sometimes give the idea of many hundreds, but these are

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5. W. B. Hinsdale, Archeological Atlas of Michigan, Handbook Series, No. 4 (Ann Arbor: University of Michigan Press, 1931), p. 22.

6. John Farmer maps appeared in a long series and, as they were published in The Michigan Manual, they seem to have been semiofficial maps documenting the growth of the State. Farmer's map of 1832, cited above, shows only the Indian village close to present day Okemos.

7. F. N. Turner, An Account of Ingham County from Its Organization, Vol. III of Historic Michigan, ed. G.N. Fuller (3 vols. [Lansing, Michigan]: National Historical Association, Inc., 1924), p. 21.

very likely exaggeration because of the danger associated with the Indian's presence. Logically the number could not have been large, as even a tribe of fifty persons, dependent upon the natural produce from land and water required a territory of 100 square miles for subsistence.[8]

The Indian had a primitive economy, living by hunting, trapping and fishing, supplemented by some agriculture. Game fish and wild fruits were usually abundant, so food could be easily obtained from nature. It is improbable that the Indian cultivated much land, although some was cleared near Okemos, Williamston, and no doubt elsewhere, for growing Indian corn, pumpkins and beans. Work in the field was done chiefly by the women with the help of crude digging sticks and hoes. Hunting and fishing were jobs for the men.

Caves used by the Indians for granaries have been found in the high sandy banks of the Red Cedar River between the present villages of Williamston and Okemos.[9] These were apparently dug near the planting grounds, and during the fall season dried venison, corn, nuts and other food was stored in them to last through the winter. The existence of these depositories suggests the possibility that at an earlier date

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8. Hinsdale, op. cit., p. 22.
9. Turner, op. cit., p. 45.

Ingham County had been a place of permanent residence which necessitated the storing of food, but that by the white time/man came only migratory tribes inhabited the area. Pioneer accounts indicate that the villages were only commonly frequented summer sites with adjacent cultivated land.

At the camping grounds the Indians made maple sugar during spring. There were two such camps in Vevay Township, one on Sycamore Creek and another in Mason, where the court house now stands.[10] In Aurelius Township, besides making sugar, the Indian came in considerable numbers to pick huckleberries in a marsh in its northeastern part.[11] In addition to the above mentioned places, other popular camps were located in Leslie, Onondaga and Stockbridge Townships. Since maple sugar was used as a medium of exchange with the whites, it is probable that the camps increased in number and gained in importance after the whites came into the county.

The Indians traveled both by land and water. Water transportation was fastest and more popular, if not the most common, as it involved the least effort. The light,

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10. Rev. Dr.Hartzag, "Early History of Mason," Ingham County News (Mason, Michigan), 1938, a series appearing once a month through the year. This camp is not mentioned in Hinsdale's Archeological Atlas of Michigan but is based on the account of an eye witness, Lewis Lacy, the first settler of Vevay Township.

11. Durant, op. cit., p. 220.

shallow draft canoes could be used on all but the smallest streams. Land travel was by foot, aided sometimes by use of the dog, the only draft animal known to the North American Indian before the arrival of the whites. Indian trails usually were narrow and locally winding to avoid swampy ground and other obstacles, but in a larger sense they tended to follow direct routes between important places (Fig. 9). Numerous trails focused on present day prominent places like Detroit, Saginaw and St. Joseph, but there never seems to have been any such converging point in Ingham County.

Although it touched only the southeastern, southwestern, and northwestern corners of the county, one water route much used by the Indians should be mentioned. This is the Huron-Grand Waterway, which provided a trans-peninsula route between Lake Erie and Lake Michigan. From the Huron River, the Portage Lakes were entered via a stream which lies on the boundary between Washtenaw and Livingston Counties. The canoes then were paddled up the Portage River from Little Portage Lake to the vicinity of Stockbridge in Ingham County. From here the carry-over was but three miles to Otter Creek, a north branch of the Grand River, which in turn could be followed to Lake Michigan.[12]

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12. Hinsdale, op. cit., p. 8.

Among the land routes there were two east-west trails worthy of mention. The northern one, called the Grand River Trail, was the most significant. It linked Detroit River to the mouth of the Grand River on Lake Michigan and passed through Ingham County along the valley of Red Cedar River (Figs. 7 and 9). The route followed was somewhat analogous to that of present U.S. Highway 16.

The other east-west route crossed from Stockbridge Township, through the present city of Mason, to Delhi Township (Fig. 7). It had mostly local importance, although it connected with trails at its eastern end which lead to the Detroit River and Lake Erie.

There were three north-south routes, among which the most important was a segment of the great through trail, often termed "The Mackinac Trail". Starting from a junction with the east-west Pottawottami Trail on the site of the present city of Jackson, it extended north through Bunker Hill, Leslie, Vevay, and Alaiedon Townships, then crossed the Red Cedar River and passed through Williamston Township into Shiawassee County, and continuing north eventually reached Mackinac (Figs. 7 and 9). This trail furnished a direct line of communication from Mackinac, passed Saginaw Bay, to southern Michigan and the trails of the Maumee River district in northern Ohio and Indiana. It was the principal route of travel in Ingham County, where the terrain traversed was largely free of wet

lands and involved few stream crossings.[13]

The importance of the other north-south trails was of a more local character, although they too joined the villages along the Red Cedar River with the major trails outside of the county (Figs. 7 and 9). Although no trace of any of these trails is left today, they played an important role in opening the county for white settlement, as will be discussed later.

The Indians mode of occupance was a good adjustment to the environment. Because of limited technical abilities, they were forced to rely directly upon nature to provide a livelihood. Proximity to water was sought of necessity, but low swampy sections were avoided. At the same time, only large areas of open ground, which could accomodate the whole tribe, were suitable for camp grounds. Therefore, in the usual heavily wooded, and often poorly drained, lands of Ingham County only a very small proportion of the total area ever came under the full impact of Indian occupancy.

White Occupancy

The United States acquired sovereignty over the area now known as the State of Michigan at the end of the Revolutionary War (1783).[14] Clear title to much of the land, however, had to be obtained subsequently from the Indians through a series of treaties. Two of these are

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13. E. A. Kalkins, Old Indian Trails of Ingham County (A type written paper prepared in 1929, available at the State Library, Lansing, Michigan).

14. L. A. Chase, Rural Michigan (New York: The MacMillan Co., 1922), p. 128.

notable for this study: the "Detroit Treaty of 1807," and the "Saginaw Treaty of 1819" (Fig. 8). Through these treaties a large region in the south-central part of the State, including the area of Ingham County, was ceded to the Federal Government.

Surveying of the newly acquired territory was planned according to the Congressional Survey System (Ordinance of 1785), and work began around 1815.[15] The Principal Meridian selected for Michigan bisected Ingham County, while the Base Line chosen formed the county's southern boundary. The Lower Peninsula was divided into five surveyor's districts, Ingham County being a part of both the Detroit Land District on the east and the Ionia Land District on the west of the Principal Meridian (Fig. 10).

Although surveyed and laid out by 1829,[16] Ingham County was not organized as a separate county until 1838. Between 1829 and 1832 it was attached to Washtenaw County for judicial and other purposes (Fig. 11).[17] In 1832 its

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15. The date of the commencement of Michigan Survey is highly debatable. The one used is based upon a letter titled, "Early Surveys of Michigan," written by Mr. W. R. Bates, of Philadelphia, on Dec. 29, 1882, to the Editor of the Post and Tribune. To this letter was attached a copy of the Tiffin's letter, the original of which is on file at the General Land Office In Washington. Tiffin's letter indicates that the Survey was commenced in 1815.

16. Sketch of the Public Survey of Michigan, (Published in Detroit, Oct. 1856). The original of this sketch is preserved at the Archives of the Historical Commission, Lansing, Michigan.

17. National Archives, Record Group No. 29. (Record of the Bureau of Census), Fifth Census of the United States, 1830, Population Schedule, Michigan Sheet. Consulted at Archives Building, Lansing, Michigan.

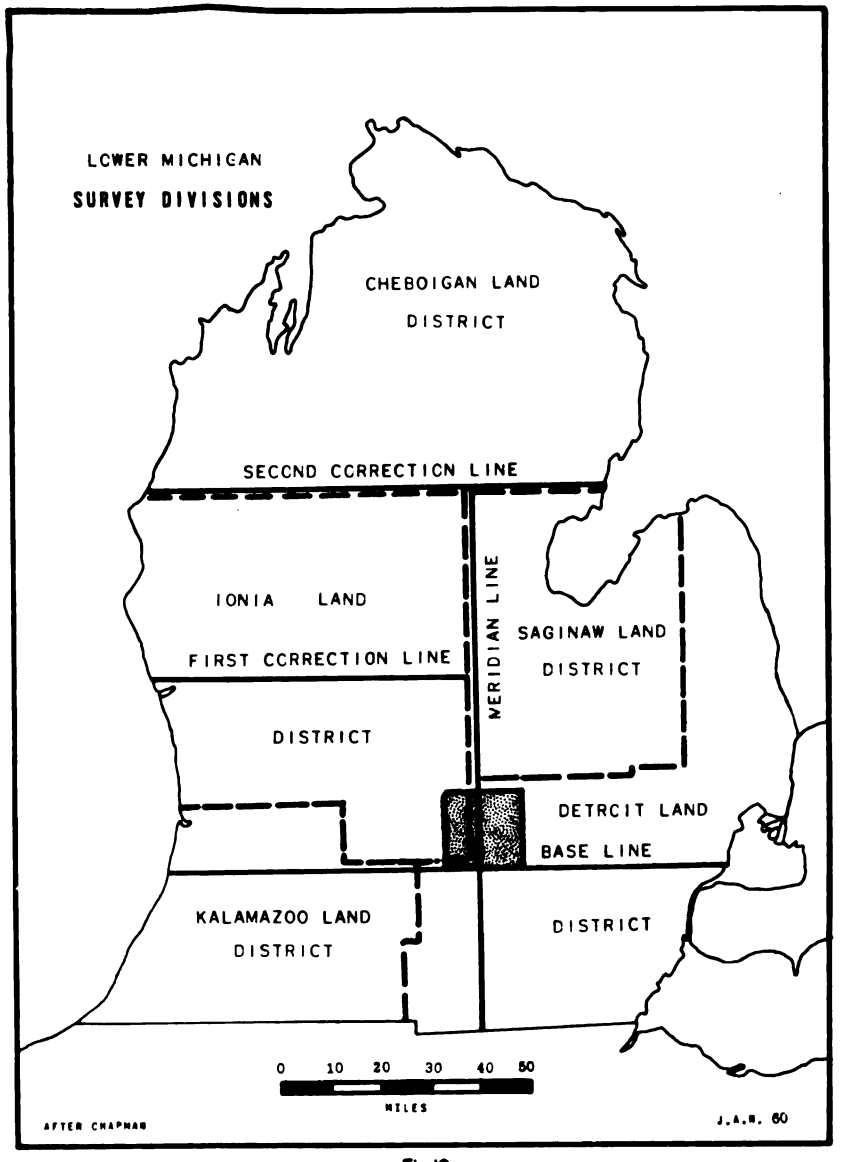

LOWER MICHIGAN
SURVEY DIVISIONS
CHEBOIGAN LAND
DISTRICT
SECOND CORRECTION LINE
IONIA LAND
DISTRICT
FIRST CORRECTION LINE
DISTRICT
MERIDIAN LINE
SAGINAW LAND
DISTRICT
DETROIT LAND
DISTRICT
BASE LINE
KALAMAZOO LAND
DISTRICT
DISTRICT
0 10 20 30 40 50
MILES
AFTER CHAPMAN
J.A.B. 60

Fig.10

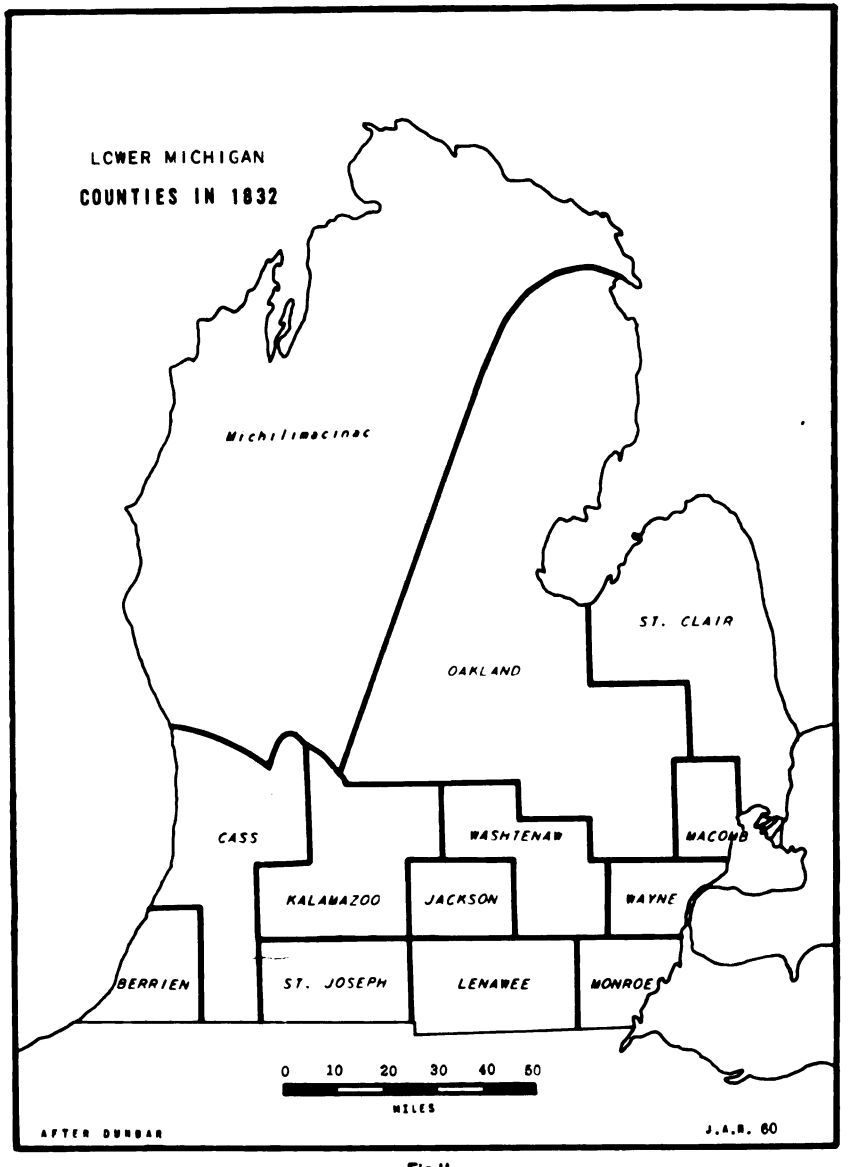

LOWER MICHIGAN
COUNTIES IN 1832
Michilimacinac
OAKLAND
ST. CLAIR
CASS
WASHTENAW
MACOMB
KALAMAZOO
JACKSON
WAYNE
BERRIEN
ST. JOSEPH
LENAWEE
MONROE
0 10 20 30 40 50
MILES
AFTER DUNBAR
J.A.B. 60

Fig.11

western half was joined to Jackson county. Around 1836, a county seat, named Ingham Center, was established for the county which was to be organized soon. This place was at the quarter section post, between Sections 1 and 12, Vevay Township.[18] Some official business was transacted in the houses nearest to Ingham Center for a period of four years, at the end of which, in 1840, the county seat was permanently moved to Mason.

Pioneer Settlement

In spite of its having been surveyed at an early date, there was no recorded attempt at permanent settlement in Ingham County until 1834. Among factors contributing to this delay, perhaps the greatest were the dense forests and the swampy nature of much of the surface. These made the area unattractive for agriculture and travel by land difficult.

Settlers in substantial numbers started moving into Michigan Territory around 1831.[19] This movement was greatly stimulated by the admission of Michigan to the Union in 1837. The influx of settlers was so great that Michigan showed a larger percentage increase in population than did any other State between 1830 and 1840.[20] The increase was

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18. Adams, op. cit., pp. 35-36.
19. Turner, op. cit., p. 28.
20. W. F. Dunbar, Michigan Through the Centuries (New York: Lewis Historical Publishing Co., Inc., 1955), Vol. I, p. 200.

almost sevenfold, most of this growth being in the southern counties of which Ingham County was one.

The first area to be settled in southern Michigan was along the eastern shores from St. Clair to Monroe Counties. Settlement then moved into the interior along the valleys of the Saginaw, Grand and Kalamazoo Rivers, and also filled in the southern counties bordering the already inhabited States of Indiana and Ohio. When the population started extending towards the interior, the counties with extensive plains and open lands proved more attractive to the settlers than did heavily wooded ones. This probably is the reason why Clinton and Eaton Counties, north and west of Ingham received settlers in advance of Ingham County.[21]

Although the first purchase of land in what is now Ingham County was made in 1832 (in SE¼ Sec. 2, Meridian Township),[22] actual settlement started in 1834 (in Sec. 36, Stockbridge Township).[23] Increase after that was slow, but steady, until Michigan received its statehood in January, 1837, after which the wagons of the pioneer arrived in rapidly increasing numbers. In 1837 the total number of inhabitants was 822.[24]

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21. G. N. Fuller, "An Introduction to the Settlement of Southern Michigan from 1815," Michigan Pioneer and Historical Collections (Lansing, 1912), Vol. XXXVIII, p.549.
22. Adams, op. cit., p. 33.
23. Ibid., p. 34.
24. J. T. Blois, Gazetteer of the State of Michigan (Detroit: Sydney L. Road and Co., 1838), p. 152.

The exact population for 1838 is not known, but it is very probable that the gain within the year was appreciable. The election for choosing short term officers of the newly organized county was held on the first Monday of June, 1838. A total of 159 votes was cast.[25] This election was only preliminary to the general election of November, 1838, in which long term officers were elected. The number of voters had increased so greatly in the interim that 260 votes were cast.[26] Since only adult males, usually family heads, voted and pioneer families were generally large, it is probable that the total number of inhabitants exceeded 1,000 late in 1838. According to available information the county had at least 200 families in 1838, not counting some residing in the villages (Fig. 12 and Appendix I).[27] The rapidity of population gain can somewhat be estimated from the 1840 census which enumerated 2,498 people and 495 families.[28]

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25. The original record of this election, held in Hiram Parker's house, the closest to Ingham Center in 1838, can be consulted at the Court House, in the County Clerk's office, Mason.

26. Turner, op. cit., pp. 41 and 66.

27. Names of the families were gathered from the Adams, Cowles (Pioneer History of Ingham County (Lansing: Hallenbeck Crawford Co., 1924), Vol. 1.), Durant and Turner histories and were then checked with the records of the 1840 census and the 1844 tax roll. They were further checked against the plat map of 1859, referred to in the next chapter, to help determine the location of the farmsteads within the county.

28. Sixth Census of the United States, 1840, (pages not numbered). Microfilm copy of the original census enumeration was consulted at the State Library, Lansing, Michigan.

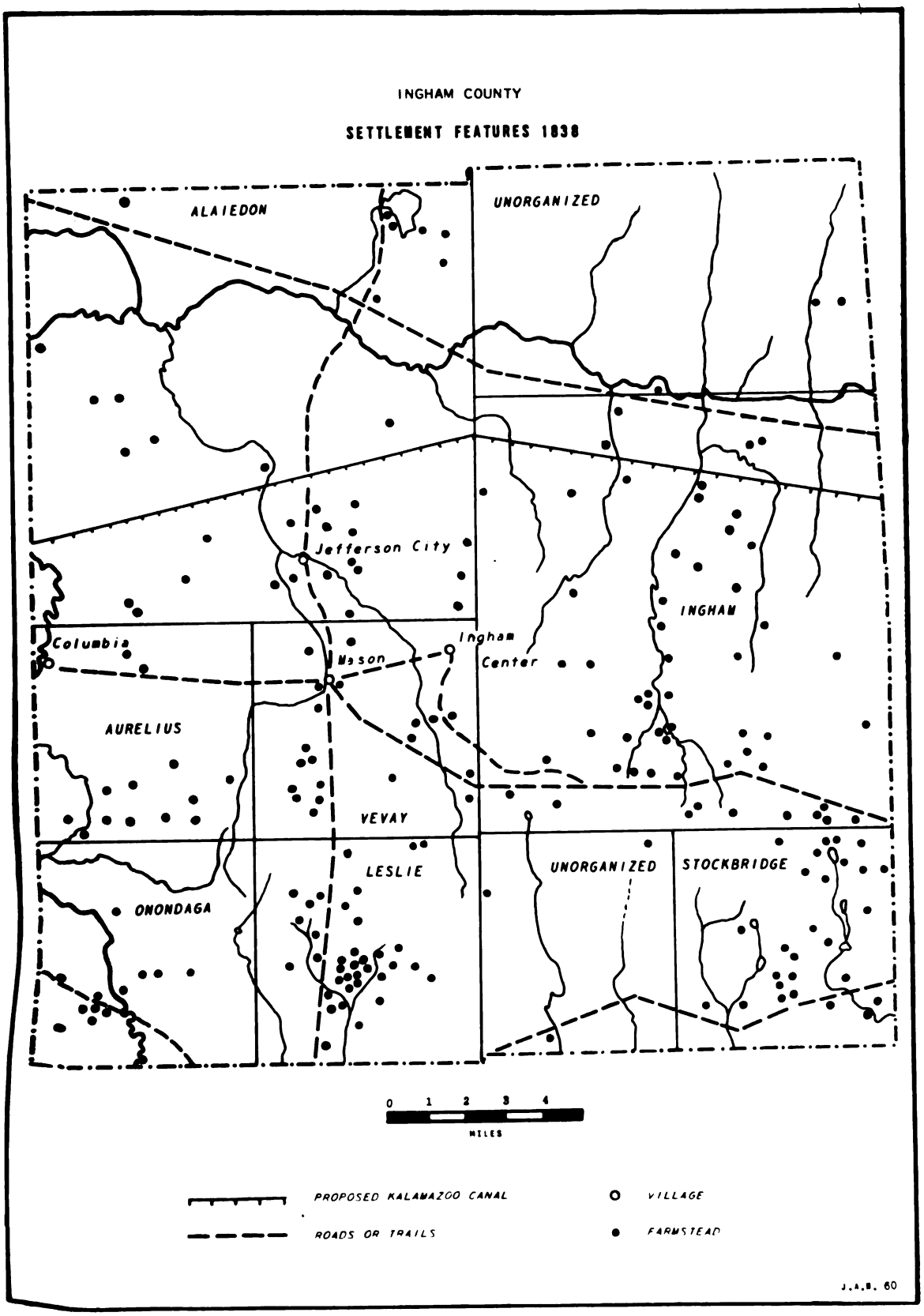

INGHAM COUNTY
SETTLEMENT FEATURES 1838
ALAIEDON
UNORGANIZED
Jefferson City
INGHAM
Columbia
Mason
Ingham Center
AURELIUS
VEVAY
LESLIE
UNORGANIZED
STOCKBRIDGE
ONONDAGA
0 1 2 3 4
MILES
PROPOSED KALAMAZOO CANAL
VILLAGE
ROADS OR TRAILS
FARMSTEAD
J.A.B. 60

Fig. 12

Nearly 70 per cent of these settlers had come from the New England States and New York. Most of the others were from Ohio, Indiana, Pennsylvania and New Jersey.[29] Only a few were of foreign extraction, coming straight from England, Ireland, Scotland, or Germany. Thus, the settlers were of a relatively homogeneous stock and brought west with them a high tradition, including a belief in the values of personal liberty, democratic government, and public education.

Routes Followed By The Settlers

The opening of the Erie Canal in 1825, along with the improvements introduced on the boats using the canal and the Great Lakes, made water transportation to the interior of the United States more attractive than land travel. Thus, pioneers from New York and New England States most commonly reached Michigan by ship, with a change from the canal to lake transportation occurring at Buffalo.[30] Those coming by land took a route along the south shore of Lake Erie, through Cleveland to Toledo,

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29. Portrait and Biographical Album of Ingham and Livingston Counties, Michigan (Chicago: Chapman Brothers, 1891), along with a perusal of the Adams, Cowles, Durant, and Turner histories of Ingham County and Sixth Census of the United States, 1840, op. cit.

30. Howell Taylor, "Michigan Pioneer Architecture," Michigan History Magazine, Vol. 37, No. 1 (March, 1953), p. 19.

Ohio, and then into southern Michigan. The immigrants from the southeast found this route at Toledo, Ohio.

Within southern Michigan the existing routes were very influential in opening Ingham County for settlement. Three stage lines relevant to this study were operating on Michigan Territory roads in 1835.[31] One line ran from Detroit, through Ypsilanti, Saline, Jonesville and Coldwater, to Chicago. A second operated three times a week from Detroit, through Monroe to Toledo, Ohio, and on to Sandusky, Ohio; a third, twice a week between Monroe and Tecumseh, via Adrian. The first and second of these stage lines ran over Territorial Roads, that is, roads built in Michigan Territory as a consequence of acts passed by the Congress of the United States.

Only one Territorial Road was ever projected to pass through what was later Ingham County and it was probably not opened to traffic in the county until several years after Michigan became a state. This road, later known as "Grand River Road", was authorized by Congress in 1832, to be built from Detroit, through Shiawassee County, to the mouth of the Grand River.

In 1833-34 some $2,500 were spent on the first ten mile stretch out of Detroit. An additional $25,000 was

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31. L. A. Chase, "Michigan's Share in the Establishment of improved Transportation Between the East and West," Michigan Pioneer and Historical Collections (Lansing, 1912), Vol. 38, p. 526.

appropriated in March, 1835 and was spent that year and the next clearing the roadway and building bridges. According to one writer,"the road was cleared to a width of 100 feet, and probably as far as the site of North Lansing,"[32] It is apparent, however, that the road was not suitable for travel this far, for the same source states that, "as late as 1840 there had been very little work done west of Brighton in Livingston County."[33] Blois, writing in 1838, indicated that the road was only in part completed, starting at Detroit and passing through Redford, Farmington, and Howell, "to some point on the Grand River not yet determined."[34] An appropriation of $5000 by the Michigan State Legislature in 1841 was largely spent on the length between Fowlerville and Lansing, and about the same time passenger and mail stage-coach service was established between Detroit and the Grand River.[35]

It is obvious that the Grand River Road was of little consequence in the settlement of Ingham County before 1840. This conclusion is supported by the sparcity of settlement in the northern part of the county in 1838 (Fig. 12). The Grand River Road was, however, to become

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32. Durant, op. cit., p. 92.
33. Ibid.
34. Blois, op. cit., p. 96.
35. Durant, op. cit., p. 92-93.

extremely important a few years later, and today it is the principal travel artery in the county.

There were sixty-eight different Mail Routes in Michigan in 1838 over which mail was carried at specified intervals. Although the location of only forty-two of these is now known, it is improbable that any of them passed through Ingham County. Several should be mentioned, however, as they served to direct travel and communication close to the eastern and southern borders of the county, and thus influenced the direction from which the county was settled. These were the routes between Detroit and Howell, Saline and Grass Lake, Plymouth and Dexter, Clinton and Kent (Grand Rapids) by way of Napoleon, Jacksonopolis and Eaton Court House post offices, and Ann Arbor and Ionia via Dexter, Sterling, North Lake and Unadilla post offices.[36]

Pioneers came into Ingham County from three directions: south, southeast and east. Generally, those coming overland through Ohio followed the stage route from Sandusky, through Toledo and Monroe, to Tecumseh. From there they followed a northwesterly route to Jackson, then called Jacksonopolis. From Jackson, the Grand River valley was followed north, possibly using the Indian's Mackinac Trail part of the way, into Leslie and Onondaga Townships.

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36. Blois, op. cit., pp. 97-100.

Settlers coming from Detroit, almost invariably the first stop for those traveling on Lake Erie, commonly followed either of two paths. One was over the stage route from Detroit through Ypsilanti to Saline, then over the mail route to Grass Lake, and from there to Jackson and north into Ingham's southwestern townships. The second and more popular route from Detroit was through Plymouth to Dexter, then to Unadilla and into the southeastern part of Ingham County following the old Indian trails. This route, commonly termed "Dexter Trail," was the one used by most of the early settlers of Stockbridge, White Oak and other eastern townships.

The choice between the two routes was dictated by the fact that Ingham County lay in two Government Land Districts. Land entries for eastern townships had to be made in Detroit; those for western townships in Kalamazoo before 1836 and in Ionia after that date. The settler heading towards the western half of Ingham County, irrespective of his place of entry to the State, went to Jackson. In some cases he even left his family and belongings there temporarily, while he looked for land and journeyed to Kalamazoo or Ionia to register it.

Possibly, a few settlers entering from the east before 1838 came from Detroit, through Plymouth, to Howell over the territorial road, and then found their way into northeastern Ingham County over the uncompleted road, or through

the forest. The Dexter Trail was the one most used, however, as it provided the easiest way between the Land Office in Detroit and the half of Ingham County in the Detroit Land District.

Within the county, as well as outside of it, the Indian trails were important in guiding the early lines of travel. Along these trails, and from them to the settlers destination, passage-ways were cut or bushed out through the forest. The earliest access roads were often opened without regard to township or section lines. Avoiding the heaviest timber and poorly drained places as much as possible, the underbrush and trees were cleared away just sufficiently to permit the passage of the settler's ox team and wagon. Thus, the condition of the early roads was very poor. They were rutted and uneven, and because of mud almost impassable during spring and autumn, and during winter thaws. In many places the wagon had to zig-zag between the stumps of trees. Regardless of their poor condition, however, these early trails served to advance the frontier of settlement into the county.

Factors Leading To The Settlement Of Ingham County

The settlement of Ingham County was a part of the larger movement of people from the east to the interior, and as such was influenced by the same factors. Among these were the pioneering spirit, the possibility of monetary gain through the purchase of cheap public land, and the rural

depression in the east resulting from falling prices for agricultural products.[37]

The opening of the Erie Canal linked the Great Lakes to the Hudson River and provided cheap water transportation which brought the produce of the rich western land into competition with the agricultural products of the eastern states. This competition proved disastrous to many of the small farmers in the east. Since industry was unable to provide them jobs and cultivating their land was no longer profitable, many of them sold out and moved to the poorman's heritage, the public land of the west which could be obtained for only $1.25 an acre.

Adding to the attraction of cheap land available in Michigan were the promised benefits of a program of public works initiated by the Legislature of the newly organized state in 1837.[38] The projects planned aimed at improving both communications and commerce. They included the construction of three trans-peninsular railroads and two canals, and the improving of parts of the St. Joseph, Kalamazoo and Grand Rivers to provide better navigation facilities.[39] Settlers sought to occupy land along the

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37. T. Cooley, "The Semi-centennial of the Admission of the State of Michigan.Into the Union", Michigan Pioneer and Historical Collections (Lansing, 1886), Vol. IX , p. 87.
38. Blois, op. cit., pp. 78-79.
39. Ibid., pp. 82-83.

proposed routes before the improvements were actually accomplished, in the hope that all the facilities of modern life would soon be available and this would be reflected by a rapid rise in the value of the land they had purchased.

That this was a factor motivating some settlers to come to Ingham County is clear from accounts which they wrote. It should also be remembered that at that time, Ingham County, because of its position, heavy forest cover, and extensive poorly-drained tracts was less densely occupied than most other counties in southern Michigan, and might therefore seem to offer greater opportunity for the late comers.

One of the proposed trans-peninsula canals, the Clinton and Kalamazoo Canal, was to pass through Ingham County, starting up the Clinton River from Lake St.Clair and ending at the mouth of the Kalamazoo River on Lake Michigan. Appropriations for its construction amounted to $245,000 by 1838.[40] Among the other projects the Central Railroad, or the Detroit and St. Joseph Railroad, promised to benefit Ingham County settlers most. It was to commence at Detroit and pass through or near the villages

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40. Blois, op. cit., pp. 82-83.

of Dearbornville, Wayne, Ypsilanti, Ann Arbor, Dexter, Leoni, Michigan Center, Jackson, Battle Creek and Kalamazoo, to St. Joseph. A private company, chartered in 1831, had commenced construction of this road, but the first thirty mile stretch between Detroit and Ypsilanti was not completed and opened for traffic until January 1838, after the State took over the project. Between January 10 and May 24, 1838, there were 4,500 persons, mostly imigrants, transported from Detroit to Ypsilanti.[41] The early completion of this railroad would have brought southern Ingham County close to a through line from Detroit to the shores of Lake Michigan.

Overly ambitious planning and lack of sufficient financial resources soon led the new State into serious fiscal problems, however, with the result that construction of the canal became impossible and extension of the railroad was suspended for sometime. Never-the-less, the proposed public works had served to stimulate settlement in Ingham County, as elsewhere in Southern Michigan; the settlers had the hope that good communications would soon break the isolation of this wooded frontier, open distant markets for surplus goods, and inflate lands values.

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41. Blois, op. cit., pp. 8-81.

Distribution of the White Settlers

The distribution of farmsteads of white settlers known to be in Ingham County in 1838 is shown by Figure 12.[42] As previously discussed, occupation of the land before this date had advanced primarily from south to north in the western half of the county, and from southeast to northwest and north in the eastern half of the county. The first settler came to Stockbridge[43] and Onondaga Townships in 1834, to Bunker Hill Township in 1835, and to Leslie, Ingham, Aurelius, Vevay and White Oak Townships in 1836.[44] By the end of 1838 all of the present townships of Ingham County had at least one resident white family, with settlement sparcest in the northern tier of townships and in Bunker Hill Township in the south.

The pioneer tried to choose land which could best provide for his basic needs of food, clothing, and shelter. Natural drainage, water supply and choice timber were site considerations of primary importance. Proximity to neighbors, routes of travel, already established trade and service centers such as Dexter and Jackson, and to the lines

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42. These are farmsteads of permanent settlers. The names of temporary residents and of speculators who entered land which they never occupied are not included. See Appendix I.

43. In Stockbridge the first white settler came in 1833, but left and did not return to reside in the county until late 1834.

44. Turner, op. cit., pp. 33-35.

along which future improvements were planned were other considerations. Variation in productivity of the different types of soil was as yet largely unknown, so was of only limited influence in shaping the pattern of early settlement.

Oak openings, which were often considered preferable settlement sites elsewhere in southern Michigan, were largely lacking in Ingham County, and therefore had little affect. The most extensive of these thinly timbered lands, having little underbrush and a ground cover of grass, were in northern Stockbridge Township and in southwestern Aurelius Township and the adjoining part of Onondaga Township. The latter area was named "Montgomery's Plains" after the earliest owner of a considerable part of it, Col. Robert Montgomery, who came here in 1835 with his wife and five sons and obtained a large tract of government land. It is probable that much of the land with oak openings in both Aurelius and Stockbridge Townships had been entered by 1838, even though relatively few farmsteads had been established on it by then. It is reasonable to suppose that land speculators would seek out such areas for purchase and resale.

Since most of Ingham County was densely forested, the majority of the pioneers had no choice except to settle on heavily timbered land. Consequently, most of those who came before 1838, and even later arrivals, literally cut

their way into the forest to reach sites they considered desirable. Mr. John A. Barnes, for example, in an address to a meeting of the Pioneer Society of Ingham County in 1887, gave the following account of his arrival in the county:

> I came to the state with my parents, leaving Cayuga County, N. Y. on the 7th day of May, 1837, father having been here in '36 and purchased his land so we had a fixed point in view (in Aurelius Township). - Quarters having been secured for our family at the hotel in Mason for a few weeks, father and my brothers Zaccheus and O.M. at once set at work to cut a road over the "Hogs Back" and through the woods to the Fifield place now known as the Childs farm. From there the road had been opened through the Rolfe settlement to within one and one-half miles of our land, thus making three miles of road that had to be cut before we could reach our land.[45]

A comparative study of Figures 3, 4, 5 and 11, indicates no well defined relationships between the location of early settlement and the surface forms, land divisions, and natural vegetation of the county. It can be said only that wet sites and those with hilly topography were generally avoided. The settlers had little scientific knowledge about the qualities of the soil in this new land. Some roughly judged soil fertility by the kind and abundance of the vegetation it supported, but this was usually only one of the considerations in selecting a piece of land to occupy. It is of interest that

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45. Adams, op. cit., p. 76.

before 1838 many areas of inferior sandy soil, as well as slopes highly susceptible to erosion, were settled. This was because they were well drained, easier to clear and cultivate, and more accessible, being in the southern part of the county. On the other hand, the best soils of the county as known today, those in Land Divisions 3 and 7 (Fig. 4), were not occupied much during this period because of their more northern position.

Proximity to routes of travel, markets, and neighbors have been mentioned as situation factors which influenced the location of the pioneer's homestead. A comparative study of Figures 7 and 12 indicates that almost all of the homes in Ingham County in 1838 were within three miles of an Indian trail. Many pioneer accounts mention the importance of these trails for travel during the first years of settlement. For a time Jackson and Dexter provided the closest milling and market facilities and locations on routes leading to these places were the most desirable ones. After 1836, when milling activities were commenced within the county, access to Jackson and Dexter became of less significance. Another factor that often influenced the decision to locate in a particular place was the existence of friends and relatives in the vicinity. Some of the more speculative minded kept future prospects in view and selected sites with the best promise of future development,

even though they were then inaccessible.[46] A few, no doubt, sought isolated places because they preferred such a life.

Pioneer Agriculture

The first white settlers established an economy primarily based on subsistence agriculture. Although the newcomers had affected only a relatively small part of Ingham County's surface by 1838, they had set into motion important changes in the land-use pattern. Agriculture which had been a subordinate activity of the Indians, now became the dominant way of life. New crops, domestic animals, and improved tools and techniques were introduced. Larger and larger acreages were cleared and either brought under the plow to grow crops, or were turned into pasture to support the domestic animals which the settlers brought with them.

Cultivated plots of the first settlers were small of necessity; in the absence of mechanization, one family could clear and take care of only a limited amount of land. Hired labor was expensive, while money was not only hard to come by, but in many cases it proved to be of a wild-cat type with no real value. The cost of clearing timbered land, between $10 and $12 an acre, made it almost prohibitive for the farmer without capital to think of clearing more land to start with than the minimum necessary to provide mere

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46. A. H. Beebe, "A Trip from Utica, New York, to Ingham County, Michigan" Reports of the Pioneer Collections of the State of Michigan (Lansing, 1877), Vol. I, pp. 187-192.

subsistence.

There is no record of the actual acreage cultivated in 1838, but it certainly was not large. If each of the 200 families had an average of 10 acres in use, for example, the tilled land would total only 2000 acres. Taking into consideration the 1839 valuation of property in the county at $867,702, a county tax of $2600 and a state tax of $2072, it may be that a somewhat larger acreage had been improved by 1838 than estimated above.[47]

Returns from a State census at the end of 1837, while admittedly incomplete, also provide some information concerning the conditions. These show a production in Ingham County during 1837 of 2,593 bushels of wheat, 1,811 of corn, 1,720 of oats, 471 of buckwheat, and 100 pounds of flax. Livestock numbering 520 neat cattle, 30 horses, 17 sheep and 406 hogs were also recorded.[48] Regardless of the extent of cultivated lands and the production from this, the important fact was that a new way of life had been introduced into Ingham County by 1838.

Generally either of two methods was employed by the new settlers to bring land under cultivation. In the oak openings of the southern part of the county, larger trees

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47. U.S. Census, 1840, op. cit., (pages not numbered).
48. Blois, op. cit., pp. 390-391.

were girdled to kill their growth and smaller trees and brush were cut and burned. Then the sod was broken and the tree roots that were plowed up were gathered and burned. Finally the soil was harrowed and planted. The plow used was a strong, heavy one. It commonly had a beam and handles of oak and a mole board of cast iron on which was bolted a cutting point, or share, of wrought iron faced with steel. Usually, a vertical cutting bar extended from the plow point to the beam and could cut through green roots three or four inches in diameter. A small adjustable iron wheel at the front end of the beam regulated the depth of plowing.[49] To break the thick sod and tree roots the first time, such a plow had to be pulled by three or four yoke of oxen. The cost of the plow and the number of oxen required made this method of clearing land more expensive than most settlers could at first afford.

Because of this, and because oak openings were not very extensive in Ingham County, a second way of clearing the land was much more common. Man power and axes were the main instruments. Five or six months after chopping down the trees around his newly constructed shelter, the farmer

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49. Turner, op. cit., p. 77. An example of the kind of plow described is on display in the Museum of Michigan State University.

burnt the brush and small logs, and rolled the large logs to the edge of the clearing. The ground was then dug up with hoe or a sharp stick, or was scratched with a home-made triangular harrow, and corn, potatoes, turnips and other crops were planted among the tree roots and stumps.

Felling of the trees was done generally in February and March, often with the help of the neighbors, or with the aid of hired choppers. Log rollings, or logging bees, in which neighbors helped clear land, were turned into social affairs as well as work parties and thus performed a dual function. The same was true of house raisings, husking bees and other similar cooperative activities. Some idea of what could be accomplished by skill and hard work is indicated by the fact that two brothers from Wheatfield Township cut and windrowed thirty acres of heavy timber in twenty-two days in the Spring of 1836. For this they received $180, which was a large amount of money at that time. Crude as these methods and tools may seem today, they were a tremendous improvement upon those used by the Indians, and were the first steps in the evolution of the present land use patterns in Ingham County.

Of the livestock kept by the pioneers, the oxen were the most important. They were used as work animals both in the field and on the road. Their greater strength and their slow steady pull made them superior to horses for work in wet, heavy soil, thick sod, or root laden newly cleared

ground. Milk cows were few as there was little market for dairy products. Hogs, being scavengers, were an important source of meat, while the sheep provided wool for homespun garments.

Farmsteads were commonly dispersed rather than being established in village groups. Sometimes the pioneers lived in their wagons for the first year, or when farms were established close to already settled areas small frame shelters were built there and then carted to the new location.[50] In other cases crude, temporary shelters were made out of small logs and brush, and roofed with bark, or any other material that would shed rain. In time, when enough help was available, more substantial log houses were usually built to replace the first habitations. But even in these, lumber from some packing case might be used for the doors and a piece of stout cloth or canvas be nailed over the window opening in place of sash and glass.

These log houses provided very few of the amenities of life. Often the cold winds penetrated through the cracks between uneven logs and the roof leaked during rainy weather. Commonly, there was only one room which was used

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50. Adams, op. cit., p. 34.

as a store house, kitchen, living and bedroom for the whole family, and therefore provided very little privacy. In spite of their drawbacks these structures were an improvement over those used by the Indian, however, and evidenced the arrival of a people with more advanced technical abilities.

Civil Organization, The First Villages, And The Start Of Manufacturing

Almost as soon as they arrived in Ingham County the first settlers embarked on a program of providing the organization and facilities for performing governmental, educational, and religious functions. Some of the more enterprising sought to establish villages and towns to act as markets and service centers for the growing communities; others established saw mills, grist mills, and other industries to process the local raw materials.

By 1838 the county had seven organized townships (Fig. 12). These were Stockbridge, Aurelius, Vevay, Onondaga, Leslie, Ingham (which included the present townships of Wheatfield, White Oak, Leroy and Ingham), and Alaiedon (which included the present townships of Meridian, Lansing, Delhi and Aliedon).[51] The Congressional townships, now named as Williamston, Locke and Bunker Hill were as yet unorganized because they did not

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51. Turner, op. cit., p. 31.

have enough population.

Although many land seekers tried to popularize and profit from the sites they had acquired by advertising them as promising places for the establishment of towns and cities, most of such early efforts came to naught. Establishment of the county seat at Ingham Center and the fact that only one building was ever erected there has already been noted.[52] Other plans and attempts to found central places before 1838 that should be mentioned are those for Jefferson City, Columbia and Mason. Only Mason became permanently established (Fig. 12). As for the other two, no official record or town plat remains to bear testimony to their once pretentious existence.

Because the pioneer accounts are at variance, little can be said concerning the early population and extent of these villages. Only Mason is listed in the Gazateer of 1838, where it is described as, "a village of recent origin, situated on Sycamore Creek, near the centre of the County of Ingham. It has a store, tavern, and several dwellings."[53] The first entry of land on the site of Mason was in 1836. That same year a small saw mill was built on an adjoining plot and this served to attract other settlers, it being the first saw mill in the county.[54]

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52. Turner, op. cit., p. 269, and Durant, op. cit., pp. 98-99.
53. Blois, op. cit., p. 320.
54. Turner, op. cit., p. 65; Adams, op. cit. 768.

Jefferson City was located north of Mason on the bank of Mud Creek in Section 29 of Alaiedon Township. Clearing of land was begun in September 1837 and by January five or six log houses and a school had been built.[55] Soon, a saw mill was erected, and some pioneer accounts indicate as many as thirteen houses were built before 1840. According to one writer, however, "Those (houses) must have been counted that were one to two miles away, in the Childs, Pierce, Strickland and Main neighborhoods."[56] In February, 1838, a visitor noted only five or six log houses peopled, and a school house. He also described Mason, although he didn't see it, by writing, "Three and one-half miles south of this is a place of about equal claims, called Mason. A saw mill (frozen up), a few houses, and surrounding forest are all it can boast of."[57] Some who settled in Jefferson City hoped that one day it would become the county seat,[58] but Mason was destined to receive this distinction and Jefferson City to pass into oblivion.

The village of Columbia was located on the banks of the Grand River in Aurelius Township. Nearly eighty acres

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55. Beebe, op. cit., pp. 187-192.

56. Adams, op. cit., pp. 28-29, 253, 258-259.

57. Ibid., p. 260. See also, A.E.Cowles, Past and Present of Lansing and Ingham County (Lansing, Michigan: Michigan Historical Publishing Association, 1905), p. 26.

58. P. Liderman, "Ingham County", Ingham County News Mason, Michigan), May, 1874; and Adams, op. cit., p. 28 and 120.

were cleared and some thirteen families are said to have built their cabins here in 1838 and 1839, but within a few years all had moved elsewhere and Columbia became a "ghost town."[59]

Prior to the establishment of saw and grist mills in the country, a few settlers who could afford the time and money used mills at Jackson, Dexter, and Grand Rapids. But most of the pioneers sawed the logs by hand and ground their grain with home made mortars and pestles. By 1838 at least two saw and two grist mills, one of each at Mason and at Jefferson City, were in operation.[60] The mills were run by bull wheels or by water power and worked to order. Although a humble beginning, these mills were the first manufacturing establishments in the county. Other than the mills, the store at Mason, and a tavern or two, there were no markets or business establishments in 1838 to provide everyday necessities of life. The pioneer was forced to depend on his own resourcefulness. He became his own mason, carpenter and blacksmith, and he washed, carded, spun and wove his flax and wool to make cloth. Each farm was essentially a self-sufficient unit; small-scale manufactures in the home for family use the rule.

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59. Turner, op. cit., p. 301; and Adams, op. cit., p. 320.

60. Adams, op. cit., p. 19.

Summary -- Ingham County, 1838

Although the landscape of Ingham County had not been greatly altered by 1838, as a result of the arrival of the first white settlers, the changes were very important in their implications. Only 200 permanent farmsteads had been established and several thousand acres of land cleared, but these contrasted significantly with temporary habitations and gardens of the Indian, while the population of a thousand, or more, whites was no doubt several times the number of Indians who ever lived here. Although land was surveyed and was being sold in rectangular blocks, this pattern for fields and roads did not become a remarkable part of the landscape until a later date. The few roads and trails which broke the monotony of the forest as yet departed little from the Indian trails. Settlement was dispersed, except for the hamlets at Mason, Jefferson City and Columbia, and families were largely self sufficient. Only the several mills and taverns represented commerce and industry in an elementary stage. Even though small as compared to the changes to come, these visible alterations of the landscape evidenced the introduction of a new culture, one which included belief in permanent residence at one place, agriculture as a basis of livelihood, land as private property, and the

establishment of commerce, industry and urban places. All this was in sharp contrast to the culture of the Indians who had previously occupied the area.

CHAPTER III

THE EARLY YEARS, 1838-1875

Developments in the economic and social organization of Ingham County between 1838 and 1875 produced radical alteration in the landscape. Settlement of the county proceeded at a remarkable rate. Most of the forest was cleared and farms were established where once had been a seemingly endless stand of trees. A significant change was the shift to commercial agriculture from the subsistence farming of the pioneer years. This was accompanied by a rise and then a decline in forest products as an important source of cash income.

With substantial addition in total mileage, the road system assumed a rectangular pattern and faster horse drawn vehicles largely replaced the ox cart of pioneer days. A growing net of railroads not only helped provide improved means of communication within the county, but decreased the time and cost of reaching external markets.

The most significant event, however, especially when viewed against the backdrop of the future, was the establishment of the state capital in the forest of Lansing Township. This shifted the administrative center and the political orientation of Michigan from Detroit

to Ingham County. A second event of great future consequence was the establishment of the State Agricultural College in Meridian Township. This institution made the county the hub of agricultural education in the state.

The city of Lansing which grew around the site of the new capital quickly surpassed the county seat town of Mason as the largest urban place in the county. In addition to its political function, Lansing was soon operating as the primary market and service center for an expanding area. Manufacturing started; local raw materials were processed and goods were produced not only for nearby markets, but for the more distant ones made available by the improved transportation.

All of these changes gave Ingham County an internal cohesiveness and an external importance previously unknown. Nevertheless, at the end of the period agriculture still played the dominant role in the economy of the county, and the great majority of the people still were living on dispersed farmsteads.

Establishment of the State Capitol at Lansing

The Michigan constitution of 1835 temporarily placed the capital of the state at Detroit.[1] By the end of 1847 it was to be permanently located by the Legislature. As

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1. Durant, op. cit., p. 71.

Detroit was the largest city and the commercial metropolis of the state, and was linked by good lines of communication and transportation with other major places, both inside and outside of Michigan, there was little objection to its remaining the capital for the period specified by the constitution. In the spring of 1846, however, agitation for removal of the seat of government was begun by parties discontented with the power of the Detroit press. Adding to the sentiment for a change was jealousy on the part of out-of-Detroit political groups for the enhanced power enjoyed by the Detroit politicians.

The following remarks by Governor Felch throw light on the events leading to the selection of the new site:

> In the Legislature of 1847 the question of removing the State capital from Detroit was agitated early in the session. Several towns on the Central Railroad were talked of for its future location. When it was first suggested that a location should be selected farther north, and in a portion of the State then little more than a wilderness, the proposition struck most persons as almost ridiculous. But, as the question continued to be agitated, this proposition continually gained strength. Some imprudent remarks of one or more of the representatives from Wayne County added to the zeal of those who desired to remove the seat of government from Detroit, and ended in effecting it.
>
> At length Lansing was spoken of as a central and proper place for the location. Nobody knew anything of Lansing, Everybody asked, 'What and where is Lansing?' The answer told little more than it boasted of one or two dwelling-houses in the midst of a forest region, and one saw-mill, propelled by the waters of Grand River. The proprietor of the little hamlet, it was said, was

there urging the claims of his obscure,"moline" location to the dignity of the State Capitol.[2]

In accordance with Session Law No. 60 of 1847, the seat of government of the State of Michigan was finally located in the Township of Lansing in Ingham County.[3] The whole of the township at that time had a white population of only eighty-eight and very few roads penetrated to this remote area.[4]

The reasons for establishing the capital in this wilderness were several. Among those most often quoted by the members of the Legislature were: (1) the central location relative to the important towns of the state (Detroit, Grand Rapids, Jackson, Saginaw and Kalamazoo), (2) availability of a large area of land for the future growth of a city, (3) water power provided by the Grand River, and (4) a desire to induce more rapid settlement of the unoccupied lands in the central part of Michigan. The determining factor, however, seems to have been the political influence of persons who owned land in Lansing Township.

The site selected was in Section 16 west of the Grand River. About 30 acres were reserved for the use of the state and around these the town of Michigan was laid out.[6]

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2. Lansing Republican, September 26, 1873. Also quoted in Durant, op. cit., p. 74,re "We presume the Governor derives this word from Latin molina, a mill."
3. Durant, op. cit., p. 73.
4. J. P. Edmonds, Early Lansing History, (Lansing: Franklin DeKleine Co., 1944), p. 13.
5. Durant, op. cit., pp. 72-76.
6. Edmonds, op. cit., p. 13.

The name was changed to Lansing at the next meeting of the Legislature (1848), and lots were opened for sale to the public. Early progress was slow, because of the many inconveniences and the serious problems resulting from the removal of the seat of government from a well established city to a wilderness. For some time, many people predicted that the capital would eventually be removed to a more suitable place, but after 1859, when Lansing received its city charter, headway was such as to leave little doubt about the future. Construction of the present capital building started in 1872 and it was formally occupied January 1, 1879.

By 1874 the economic life of the Ingham county had become almost completely oriented towards Lansing which had gained the proportions of an influential city. The capital then had a quarter of the county's population, diversified manufacturing concerns (Table 12), and a growing importance as a market and business center. Population of the city had more than doubled in the decade, 1864-1874 (Table 3), and had spread out in every direction around the original core, covering parts of Sections 8, 9, 10, 15, 20, 21 and 22, as well as Section 16.[7]

Although information concerning the occupations of

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7. F. W. Beers, County Atlas of Ingham, Michigan (New York: W. S. Beers and Co., 1873), p. 17.

the city's inhabitants was not provided by the census of 1874, study of Tables 2, 12 and 13 gives a good idea about this and leaves little doubt that a large proportion of all those engaged in business, manufacturing, government, education and the professions in the county resided in Lansing. The Gazeteer of 1875 describes the city as one having 15 churches of various denominations, an admirable school system, several fine blocks of stores, a good opera house, paved streets, gas lights, and six bridges, one of them an iron structure erected in 1873, across the Grand River.[8]

Among the 31 manufacturing plants of the city, three were outstanding for the quality of their speciality products. The Lansing Carriage Works (A. Clark & Co.) had gained interstate renown for the carriages they made. The plant of E. Bement and Sons which manufactured farm implements of the latest design ranked among the most important in the state in this business. The products of the Lansing Planning Mill (Allen and Wise Co.) were distributed beyond the state borders, into Ohio and Indiana, and were to be exhibited at the Philadelphia Centennial Exposition in 1876.[9]

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8. Michigan State Gazeteer and Business Directory for 1875, (Detroit: The Tribune Printing Co., 1875), p. 495.
9. Durant, op. cit., pp. 134-135.

TABLE 2
BUSINESS ESTABLISHMENTS AND PROFESSIONAL PEOPLE
LANSING, MICHIGAN, 1874

Banks	4	Hardware and Tinware Stores	6
Law Firms	10	Sewing Machine Shops	2
Real Estate & Insurance Firms	28	Soap & Potash Dealers	1
Doctors & Dentists	12	Sporting Goods Dealers	1
Druggists	6	Publishers & Printers	2
Builders, Carpenters & Masons	11	Book & Stationary Stores	3
Photographers & Painters	5	Carriage & Sleigh Manufacturer & Dealers	2
Groceries, Meat Markets & Bakeries	11	Harness & Leather Goods Shops	3
Cigar & Tobacco Dealers	2	Lumber & Wood Products Dealers	3
Clothiers & Gents' Furnishers	3	Sash, Door, Blind & Planing Establishments	3
Dry Goods & General Merchandise Stores	14	Cooperage Shops	3
Hotel	8	Pump & Drive Well Manufacturers	2
Brewers	3	Iron Works	1
Boot & Shoe Manufacturers	5	Agricultural Implements & Machine Shops	3
Jewelers	4	Millers & Grain Produce Dealers	8
Liveries	3	Woolen Manufacturers	1
Blacksmiths	1	Marble, Stone & Sewage Pipe Dealers	4
		Gas Fixtures & Bracket Manufacturers	2

Source: F. W. Beers, County Atlas of Ingham, Michigan (New York: W. S. Beers & Co., 1873), p. 101.

Lansing was served by six railroads which linked it to such places as Detroit, Toledo, Saginaw, Port Huron, Grand Rapids, Grand Haven, Jackson and Chicago. A well maintained gravel road, also joined it to Detroit while a growing network of dirt roads connected it to other communities of the state and county.

State Agricultural College

A second notable event during this period was the 1857 opening in Meridian Township of the first Land Grant Agricultural College of the nation. The 1850 State Constitution provided for the establishment of such a school which was to be supported by the sale of 240,000 acres of land given the state by the national government for the propagation of education in agriculture and the mechanic arts.[10] Pursuant to the provisions of Act No. 130 of the Legislature of 1855, a site for the Agricultural College was located upon a farm of nearly 700 acres situated three miles east of Lansing on the plank road leading to Detroit.[11] Central location in an important farming section of Michigan was probably the main reason for the acceptance of the offer of this land in Section 13, Lansing Township, and Sections 18 and 19, Meridian Township, made by Mr. Burr of Lansing.[12]

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10. W. J. Beal, History of Michigan Agricultural College (East Lansing, Michigan: Agricultural College 1915), p. 7.

11. Joint Documents of the State of Michigan, 1856 (Lansing: Hosmer and Fitch, 1857), Document No. 7, p. 12.

12. Beal, op. cit., p. 14.

By 1857 two brick buildings (Old College Hall and a boarding hall) were completed at an expense of about thirty thousand dollars.[13] After the employment of six men for faculty, the college was opened to students on May 11, 1857.[14] Enrollment the first year totaled 73. By 1874, seventeen years later, there were fourteen faculty members and 121 students.[15] The State Agricultural College centralized in Ingham County research and education in agriculture, the most important industry of the day. Therefore the founding of this institution had an important bearing on the future development of Ingham County and the education of its young people.

Population

A notable feature of this period was the rapid population growth in Ingham County. This increased from 2,498 to 29,193 persons between 1840 and 1874. Except for an apparent loss of 372 people between 1860 and 1864, the number of inhabitants increased steadily (Fig. 2 and Table 3). The loss during the Civil War years was common to the whole state, as soldiers in active military service were not enumerated in the census of 1864.[16]

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13. Joint Documents of the State of Michigan, 1856, op. cit., p. 12.

14. Beal, op. cit., p. 15.

15. Manual for the use of the Legislature of the State of Michigan, 1874-76, (W.S.George & Co., 1875), p. 405.

16. It is also probable that the census of 1864, being a Michigan State Census, was not as complete as the one in 1860, which was a United States Census.

Between 1864 and 1874, however, Ingham County recorded a population increase of 70.5 per cent against the state average increase of 66 per cent.[17] As a consequence, the county rose in population among the counties of Michigan from 22nd rank in 1864 to 17th in 1874.[18]

The flood of people coming to the county between 1838 and 1875 were mainly of domestic origin. The greatest number were from eastern states, where many were forced to move out because of continuing depression in the farming areas.[19] Some settlers, however, came from midwestern states, especially Ohio and Indiana. Smaller numbers were immigrants from England, Scotland, Germany and other countries of western Europe. In 1870 foreign born totaled only 2,590, or 10.3 per cent of the population of the county. Of these 835,or nearly one third, lived in Lansing.

Between 1838 and 1875 the major part of the population increase was in the rural sections. The population growth

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17. Michigan Dept. of State, Census of the State of Michigan, 1874, (Lansing: W. S. George and Co., 1875), p. 26.

18. Ibid., p. 21.

19. Study of the Census of Michigan, 1840 (microfilm copy of the original); of the original records of the 1850 and 1860 Census of Ingham County available at the County Clerk's Office in Mason; and perusal through Durant's History of Ingham and Eaton Counties, op. cit., Turner's History of Ingham County, op. cit.; George L. Hammell, Pioneer Families of Ingham County, (Lansing, Michigan, 1938), pp. 1-34; and the pioneer accounts in Adams' Pioneer History of Ingham County, op. cit.

TABLE 3

POPULATION, INGHAM COUNTY, 1840 - 1874

Townships	1840	1850	1854	1860	1864	1870	1874
Alaiedon	220	377	518	898	806	1,296	1,293
Aurelius	148	501	773	1,169	949	1,506	1,330
Bunker Hill	93	374	457	672	657	957	925
Delhi		402	646	928	919	1,259	1,357
Ingham	273	744	861	1,217[b]	1,141	1,393	1,338
Lansing		1,229	1,556	497	471	823	871
LANSING CITY	-	-	-	3,112	3,573	5,244	7,445
Leroy	110	254	415	621	647	859	1,205
Leslie	281	673	820	1,248	1,169	1,996	2,615
Locke	-	321	499	864	827	1,115	1,384
Meridian	-	367	582	900[b]	915	1,374	1,407
Onondaga	276	819	920	1,136	1,006	1,227	1,252
Stockbridge	385	657	769	881	715	892	872
Vevay	223	781	919	1,315[b]	1,197	2,331[b]	2,597
Wheatfield	98	231	359	573	630	781	942
White Oak	270	508	618	778	732	978	955
Williamston	121	393	510	693	774	1,237	1,405
County Total	2,498	8,631	11,222	17,500	17,128[a]	25,268	29,193

a. The census of 1864 gives 17,123 as total.

b. In 1860, Kinneyville in Ingham Township had 64 people, Okemos in Meridian Township had 75, and Mason in Vevay Township had 365. In 1870 Mason had 1,212 people. All are included in township totals.

Sources: U.S., Dept. of State, Census of the State of Michigan: 1840, (Microfilmed Copy), Vol. II, pages not numbered; Seventh Census of the United States: 1850, p. 890 Michigan, Dept. of State, Census of the State of Michigan: 1854, pp. 137-139; Ibid., 1860, p. 109; Ibid., 1864, pp. 197-201; Ibid., 1870, pp. 38-40; Ibid., 1874, pp. 18-10.

between 1860, the first year Lansing was enumerated as a separate city, and 1874 was 66.8 per cent for the whole county. Almost two thirds of this gain, however, was reported from the rural areas. By 1874, there was a density of 37 people per square mile outside the city of Lansing. Some 74.5 per cent of the population of the county were living on dispersed farmsteads, in hamlets, or in villages. The rest were in Lansing, which had received its city charter in 1859.

Not only was there a high percentage of rural farm population in 1875, but this group was numerically near its maximum size which was reached about 1880 (Fig. 2). A factor of major importance in the growth of the farm population, had been the availability of cheap land. By 1875, however, most of the county's rural land had been occupied and soon thereafter a slow decline in farm population began as the attractions of urban life and mechanization of agriculture became effective.

One factor in the distribution of rural farm population was the availability of railroad transportation, a vital link in an economy which increasingly emphasized commercial agriculture. By 1875, the major part of the county's railroads had been completed. Generally, the townships served by these railroads gained inhabitants more rapidly than did others without this impetus to growth.

In keeping with the county's overall population gain,

TABLE 4 - NUMBER OF DWELLINGS, FAMILIES AND INHABITANTS, INGHAM COUNTY, MICHIGAN, 1840-1870

	1840			1850			1860			1870		
Township	Dwell.	Fam.	Inhab.	Dwell.	Fam.	Inhab.	Dwell.	Fam.	Inhab.	Dwell.	Fam.	Inhab.
Alaiedon	48	48	220	73	73	377	178	176	896	269	268	1296
Aurelius	?	?	148	93	94	501	225	229	1169	310	313	1506
Bunker Hill	18	18	93	71	71	374	133	134	672	190	192	957
Delhi	(In Ingham)			78	78	402	176	175	928	268	269	1259
Ingham	66	66	273	130	130	744	245*	247	1217	332	322	1393
Lansing	(In Alaiedon)			241	241	1229	101	92	497	163	160	823
Lansing City							607	610	3112	1065	1091	5244
Ward 1							235	230	1085	216	221	1331
Ward 11							195	196	1099	252	253	1156
Ward 111							177	184	928	341	346	1592
Ward IV										256	271	1165
Leroy	20	20	110	41	41	254	119	120	621	194	193	859
Leslie	62	62	281	129	129	673	252	254	1248	455	450	1996
Locke	(In Williamston)			62	62	321	165	165	864	264	258	1115
Meridian	(In Alaiedon)			65	67	367	179*	173	900	264	266	1374
Onondaga	51	51	276	147	144	819	219	219	1136	268	264	1227
Stockbridge	72	72	385	122	122	657	166	175	881	197	200	892
Vevay	44	44	223	140	140	781	268*	266	1315	530	533	2331
Wheatfield			98	45	45	231	112	112	573	181	171	781
White Oak	56	56	270	89	89	508	166	168	778	211	209	978
Williamston	24	24	121	71	72	393	143	143	693	260	260	1237
INGHAM COUNTY	461	461	2498	1597	1603	8631	3454	3458	17 500	5421	5419	25268

* In 1860, Mason in Vevay Township had 79 dwellings, 77 families and 881 people; Okemos in Meridian Township, 18 dwellings, 17 families and 75 people; Kinneyville in Ingham Township, 11 dwellings and families and 54 people.

Source: U. S. Dept. of State, Census of the State of Michigan: 1840, (Microfilmed Copy), Vol. II, pages not numbered; Original Records of the Census of Ingham County, 1850 (At County Clerk's Office in Mason); Census and Statistics of the State of Michigan: 1860, p. 109; Census and Statistics of the State of Michigan: 1870, p. 40.

TABLE 5

NUMBER OF RURAL HOMESTEADS, INGHAM COUNTY, MICHIGAN, 1838-1950

	1838	1859	1874	1895	1910	1940			1950		
						Rural Farm	Rural non-Farm	Total	Rural Farm	Rural non-Farm	Total
Ingham County	200	2,508	3,496	3,952	4,229	3,113	299	3,412	3,114	901	4,015
Alaiedon	16	170	244	280	287	262	23	285	269	98	367
Aurelius	13	226	284	297	362	288	56	344	311	111	422
Bunker Hill	3	111	204	193	193*	180	24	204	185	50	235
Delhi	6	158	220	265	331	170	28	198	163	88	251
Ingham	19	190	213	216	233	185	8	193	172	41	213
Lansing	4	93	189	231	299						
Leroy	10	189	197	255	250	241	14	255	226	51	277
Leslie	36	198	291	306	306*	243	15	258	265	43	308
Locke	2	168	224	312	321	234	14	248	218	42	260
Meridian	6	142	228	268	266	111	31	142	134	73	207
Onondaga	12	203	216	243	243*	220	8	228	214	35	249
Stockbridge	27	141	170	168	168*	166	12	178	157	50	207
Vevay	21	160	239	244	257	207	18	225	213	70	283
Wheatfield	6	124	180	223	231	202	16	218	193	39	232
White Oak	18	163	212	241	260	211	13	224	195	38	233
Williamston	1	114	185	210	222	193	19	212	199	72	271

* 1895 number.

Sources: Compiled by counts of homesteads shown on maps, Figures 12 to 20, of this study.

the number of dwellings increased more than eleven times between 1840 and 1870. The total number of dwellings in the county for decennial census years is shown in Table 4. The number of rural dwellings in 1838, 1859, and 1874 is given in Table 5. The distribution of these in the county can be determined from Figures 12, 13 and 14. The total of 3,454 dwellings of all kinds in 1860 (Table 4) was 946 more than the number of rural dwellings in 1850 (Fig. 13 and Table 5). Since the 1860 figure includes 607 houses in the city of Lansing, there was apparently a gain of 339 rural dwellings in a year. This figure is indicative of the rapidity of settlement at that time.

Except for Lansing Township, which included the city of Lansing, Vevay Township had the largest population (2331) and the most dwellings (530) in 1870. The numbers were almost as big in Leslie Township (Table 4). The greater size of population and housing in these two townships reflected the growth of the villages of Mason and Leslie, and the influence of location along the main road and railroad between Lansing and Jackson.

The townships having the least number of people and residence units in 1870 were Bunker Hill, Stockbridge, Leroy, White Oak and Wheatfield. Each had less than 1000 inhabitants and all but White Oak Township had fewer than 200 dwellings. Wheatfield was smallest with 781 people and 181 houses (Table 4).

INGHAM COUNTY

RURAL DWELLINGS AND ROAD PATTERN, 1859

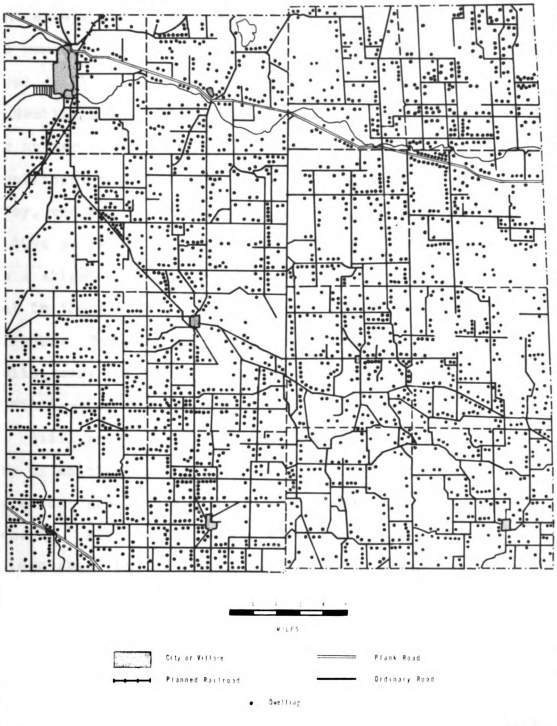


Fig. 13

A partial answer to why these five townships lagged behind the others in growth was that none had a railroad by 1870. More significant, perhaps was the fact that none except Stockbridge had a village of any size within its boundaries (Fig. 14). Subtraction of the number of rural dwellings in 1874 (Table 5) from the total number of dwellings in 1870 (Table 4), gives some indication of the number of village residences in each township. It is significant that the numbers of dwellings in Wheatfield, Leroy, and White Oak Townships were practically the same in 1874 as in 1870, rather than being less, and that there was a slight increase in Bunker Hill Township. This suggests that in these townships there were few, if any, houses in villages. The largest villages, other than Mason and Leslie, were Dansville in Ingham Township and Williamston in Williamston Township.

Still another very important factor influencing the rate of settlement and the distribution of farmsteads was the amount and location of poorly drained land in each township. Blank spots on the map showing rural dwellings in 1859 (Fig. 13) correlate closely with major swamp areas of the county (Fig. 4). This is particularly true in Bunker Hill, Stockbridge, Leroy and White Oak Townships, but is also notable in Vevay, Leslie, and Delhi Townships. Subsequent to 1860 the State of Michigan followed a policy of encouraging the conversion of swamp lands to agricultural use and as a result of this and other factors, considerable

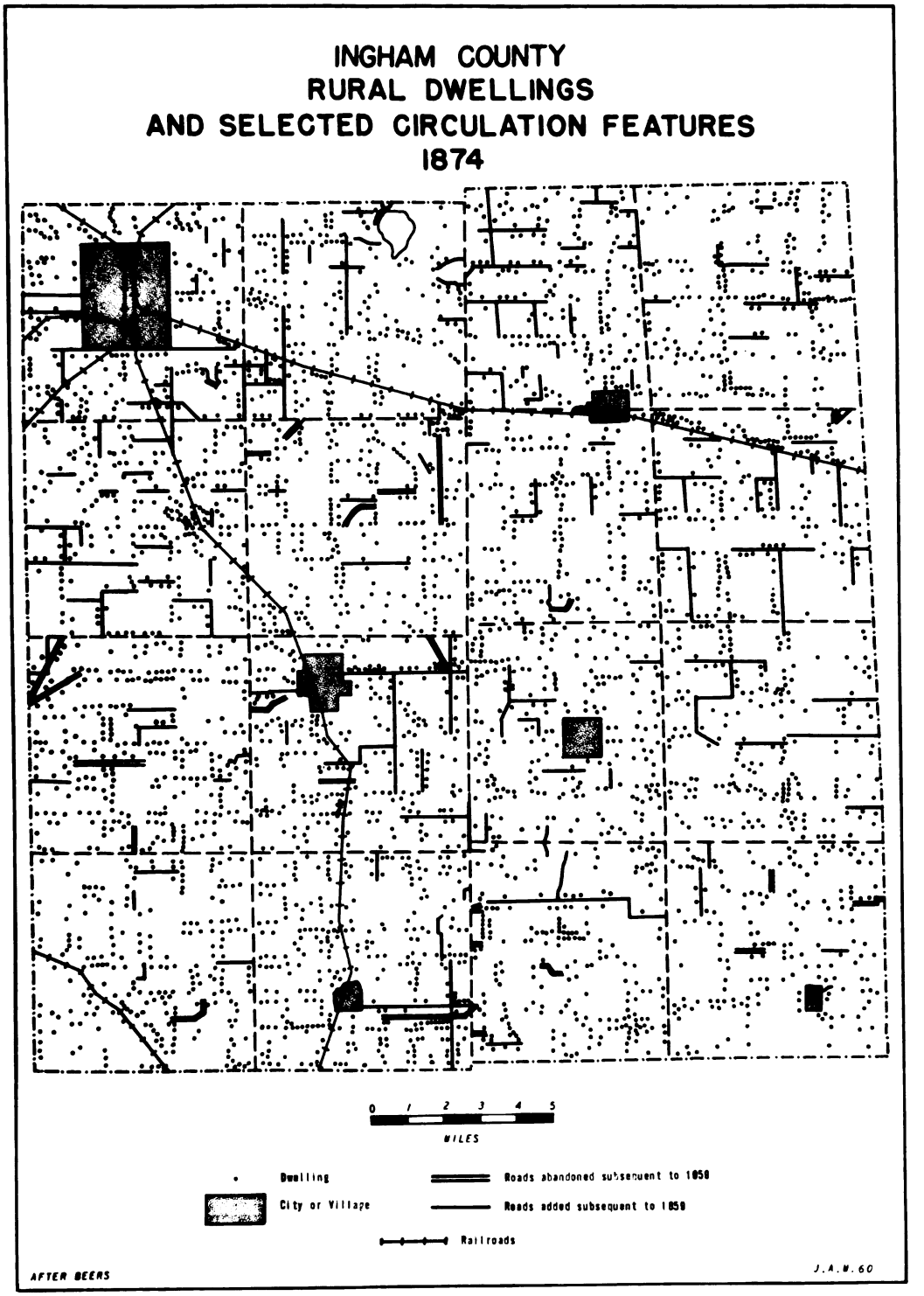

INGHAM COUNTY
RURAL DWELLINGS
AND SELECTED CIRCULATION FEATURES
1874
0 1 2 3 4 5
MILES
Dwelling
City or Village
Roads abandoned subsequent to 1858
Roads added subsequent to 1858
Railroads
AFTER BEERS
J.A.W.60

Fig. 14

wet land in Ingham County that was vacant in 1859 had been occupied by 1874.

The map of rural dwelling distribution in 1874 (Fig. 14), however, shows that there were still large areas in Bunker Hill, Stockbridge, White Oak and Leroy Townships that were bare of settlement because they were poorly drained. It can be concluded, therefore, that the existence of extensive swamps in these four townships was a major factor in retarding their growth before 1874. The fact that Wheatfield had the smallest 1874 population of any township in the county is hard to explain in the same way, however, for it had much smaller amounts of wet land than did the other four, and was an area with level surface and excellent soils, at least by present-day standards.

Other than with the swamp lands, correlations of the distribution of population and rural dwellings with the natural environment are difficult to make from a study of maps. One that can be readily seen, however, is the lack of dwellings in 1874 (Fig. 14) in the area of rolling to hilly sandy land and swamps around Lake Lansing in the north-central part of the county (Land Division 8, Fig. 5). Settlers probably tended to avoid areas of steep slope, especially those with sandy soils which were droughty and susceptible to erosion, as for example along esker ridges, and to favor the level to gently rolling loam to clay loam

lands of Land Division 3 (Fig. 5), but this is not easy to determine from the maps used.

The settlement pattern of 1859 and 1874 (Figs. 13 and 14) was remarkably different from the haphazard distribution of 1838 (Fig. 12). With few exceptions, the pattern in 1874 had assumed a rectangular shape. This was because houses were built along the county roads which had been constructed along section lines, except where swamps, marshes, and rivers, or rough topography interferred. The continuity of the rectangular pattern was often also broken near urban centers and along the state roads. Radial development resulted from the tendency to string homesteads along the routes converging on urban centers. This was particularly true near Mason and Lansing.

Transportation

Between 1840 and 1875 there was a remarkable change, both in the modes of travel and in the mileage of travel routes in Ingham County. As horse drawn vehicles replaced those pulled by oxen, more new roads were opened than during any other comparable period in county history. A similar growth was true of railroads. Establishment of the State Capital in the northwestern part of Ingham County was a large factor in bringing about this rapid improvement of transportation since the railroads and main highways focused on it.

Roads

The attention of the State, County and Township Governments was directed to the vital need for road building early in the history of the county. In 1845 the State authorized the construction of a plank road[20] from Howell to Lansing which became known as the Detroit and Grand River Turnpike.[21] The charter for construction was granted to the Detroit and Grand River Plank Road Company which had recently completed a plank road between Detroit and Howell. Specifications were that the road was to be made of three-inch-thick oak planks not less than 8 feet in length, and that the bed was to be wide enough for two tracks.[22] This plank road followed the Old Territorial Road for the entire distance and passed through Fowlerville, Webberville, Williamston, and Okemos to Lansing. It was opened for traffic as a toll road, probably by the end of 1852.[23] There were two toll gates, one at Howell and the other at Lansing, with half-toll gates at five intermediate points. It is interesting

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20. Plank roads were constructed by laying planks, preferably of oak, eight to sixteen feet long and three to four inches thick across "sleepers" or "stringers" which were placed parallel to the direction of the road. They were a refinement of "corduroy" roads built in swampy areas by placing logs twelve feet or more long, as close together as possible across the roadway so as to provide a solid base.

21. R. M. Hodges, Reclamation of the State Turnpike Line No. 16, Near Williamston. Thesis submitted for the degree of B.S. at Michigan Agricultural College, 1923, pages not numbered.

22. Turner, op. cit., p. 103.

23. Durant, op. cit., p. 95.

that Sunday traffic and trips for other religious purposes were free.

The Lansing-Howell plank road provided a through route to Detroit and thus brought business advantages to the central part of the state. A constant stream of traffic passed over it until 1858 when the completion of the Detroit and Milwaukee Railroad attracted away a large portion of its business. After the first few years of use the planks became warped by the heat, loosened and decayed, and the road began to need constant costly repair. Plans for improvement were soon put into operation and about 1870 the entire road from Lansing to Detroit became a gravel turnpike.[24]

Another main road traversed Ingham County from Lansing through Delhi, Mason, and Leslie. This was the principal route used by south-bound traffic, since it extended on through Jackson, Washtenaw and Monroe Counties, to Lake Erie. For the convenience of stage coaches and other vehicles serving Lansing and Jackson, this road was planked, or else corduroyed, but only through the swamps.[25]

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24. Durant, op. cit., p. 95.

25. According to some pioneer accounts the entire route between Lansing and Jackson was planked (Adams, op. cit., p. 735), but from official documents it seems that Grand River Road was the only complete plank road ever built to Lansing (Durant, op. cit., p. 94).

A third plank road passing through part of Ingham County was the one built from Jackson, through Onondaga, to Eaton Rapids sometime during the fifties.[26] Essentially this road followed the Indian trail which had been used by early settlers to reach Onondaga Township (Fig. 12). It was a narrow toll road, built of planks eight feet long. A parallel dirt road was added along its entire length for the use of slow, heavy vehicles. Stage coaches, running at regular intervals, used this route until 1870, when most of the business was taken over by the newly built Grand River Valley Railroad.

As shown by Figure 13, a very large road mileage had been built in the county by 1859. In fact, the road pattern had assumed much of its present day form by that date. Special care was taken to lay the county roads on survey lines (township lines, range lines, section lines, etc.) of the Ordinance Survey. Existing roads not following these lines were eliminated. Roads abandoned between 1859 and 1874, as well as those added during the same period, are indicated in Figure 14. A glance through the successive series of maps (Figs. 14 to 19) indicates that the largest mileage addition of roads after 1859 was made between then and 1874. The years 1838 to 1874 can truly

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26. Adams, op. cit., p. 713.

be called the period of road building in Ingham County.

Although a rectangular pattern of roads had been established, some exceptions to the rule are notable (Figs. 13 and 14). Major departures from this layout were in the poorly drained sections of the county, especially in Stockbridge and Bunker Hill Townships, where the roads either bypassed the swamps or were not built until a later date. Examples where rugged surface retarded the building of roads, or caused their construction to depart from the rectangular pattern, can be noted in the southeastern quarter of the county and in its north-central part. Other exceptions were routes converging on Lansing and Mason, which assumed a radial pattern, and main intercounty roads, which followed more direct courses between important villages and towns than were afforded by roads built along survey lines.

Except for the main roads already mentioned, all roads in the county were dirt covered. Travel was very inconvenient as these became quagmires in spring and were dusty and often badly rutted during dry weather. However, their very existence was a tremendous improvement over the travel facilities of 1838 and an indication of the quickening life of the county.

Railroad Building Period, 1861-1873

Transportation conditions in the county in 1859 have been described as follows:

> ...there were no railroads in Ingham County in 1859, not even the old "Ramshorn" being in operation. This was a serious drawback to the prosperity of the county, to say nothing of the inconvenience. All products of the county (maple sugar and black salts) had to be carted to Jackson, a distance of twenty-five miles. The road was through a dense swamp for a long distance, and this was bridged with logs, forming what pioneers knew as corduroy road....it took two days with a good team to make the trip, and often the third day saw them still on the road.[27]

The first railroad in the county was the Amboy, Lansing and Traverse Bay Railroad which followed in part the planned route shown in Figure 13. It was completed in 1861 from North Lansing to Owosso, where it joined the Detroit and Milwaukee Railroad, and thus provided rail connections with Detroit, St. Johns, Ionia, Grand Rapids and Grand Haven.[28] The line was extended from North Lansing to Lansing, a distance of one mile, in 1863. Construction south of Lansing along the planned route (Fig. 13) was never accomplished. In 1866 the northern portion of the railroad was incorporated into the Jackson, Lansing and Saginaw Railroad.

Construction of the Jackson, Lansing and Saginaw Railroad was begun in 1863. This line was to run from Jackson through Leslie, Mason, Delhi, and Lansing, to North Lansing

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27. D. B. Harrington, "Pioneer News Papers of Ingham County," written for Ingham County News in 1874 and reprinted in Adams, op. cit., p. 154.

28. Manual for the use of the Legislature of the State of Michigan, 1875-76 (Lansing: W. S. George & Co., 1875), Map between pp. 196 and 197.

a distance of 38 miles. It was opened as a single-track line in June 1866.[29]

The Detroit, Lansing and Lake Michigan Railroad began operation between Lansing and Ionia in December, 1869, and between Lansing and Detroit in August, 1871.[30] After completion it had a length of 160.6 miles of single track from Detroit, through Lansing, to Ionia, where it joined the Detroit and Milwaukee Railroad.

The Peninsular Division of the Chicago and Lake Huron Railroad was completed as a single-track line and put into operation by 1869. It joined Lansing, through Battle Creek, Cassopolis and Niles, to Chicago, and by a branch to South Bend.

The Grand River Valley Railroad was a single track line opened for traffic in 1870 between Jackson and Grand Rapids. It passed through Onondaga, Charlotte and Hastings,[31] and had important bearing on the development of commercial agriculture in Onondaga Township.

Southwest of Lansing a short stretch of the Northern Central Michigan Railroad was built in Lansing Township. This railroad extended from Jonesville, through Albion and Eaton Rapids, to Lansing and was completed in 1873. It

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29. For further details see: Joint Documents of the State of Michigan, 1875 (Lansing: W. S. George and Co., 1876) Vol. 1 Document, No. 6, and Durant, op. cit., p. 96.

30. Durant, op. cit., p. 97.

31. Manual of the Legislature of the State of Michigan, 1875-1876, op. cit., pp. 198-208 and the map of railroads, between pp. 196-197.

followed a slightly different route in Ingham County than had been planned for the previously mentioned Amboy, Lansing and Traverse Bay Line south of Lansing (Figs. 13 and 14).

Thus, by 1875 the county had nearly 75 miles of single-track iron rails, all with a standard gauge of 4'8½", and 547 acres of railroad right of way. As most of the railroads either passed through Lansing, or terminated there, the capital city became an important railroad center, next only to Detroit and Grand Rapids in Michigan.[32] Except for subsequent name changes, the double tracking of some stretches, the extension of the Chicago and Lake Huron Railroad northeast of Lansing, and the addition of short spurs, the Ingham County railroad pattern of 1875 was essentially the same as it is today. No new railroads were built in the county after 1873.[33]

The earliest railroads lacked the speed and most of the comforts of modern trains. The name of the Amboy,

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32. Beers, op. cit., p. 10.

33. H. F. Walling, Atlas of the State of Michigan (Detroit: R. M. & S. T. Tackabury, 1873), contains a discussion of "The Railroads of Michigan", by Ray Haddock, Esq., pp. 29-35; a map of Michigan railroads, pp. 26-27; and a map of Ingham County showing railroads, p. 99. Beer's Atlas of 1874 shows the Chicago and Lake Huron Railroad completed only to Lansing by 1873. The stretch between Lansing and Flint was completed in 1879. Therefore the remaining portion of the railroad appears on the 1895 map (Fig. 15).

Lansing, and Traverse Bay Railroad, abbreviated to A.L. & T. B., was jokingly interpreted as meaning "Awfully Long and Terribly Bumpy".[34] Regardless of jests the building of the railroads tremendously stimulated and changed the economic organization of the county in a few years time.

Breaking the isolation of the area, the railroads hastened the development of commercial agriculture and manufacturing industries. Trains carried agricultural products as outgoing freight and brought back all kinds of minerals and needed raw materials, as well as manufactured goods. Production of grain, pork, butter and cheese in the rural areas of the county increased substantially, as now perishable farm products could quickly be hauled by train to the Lansing, Detroit and Grand Rapids markets and less perishable goods could be transported to points much more distant than before.

Away from the railroads communication was still slow and tedious, however. Ox Carts were often used for hauling heavy freight such as timber and wheat. For passenger travel and mail transportation, horse-drawn coaches were used. These coaches, traveling an average of 8½ miles an hour, were in some cases commodious enough to carry as many as twenty passengers.[35]

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34. Darling, op. cit., p. 53.
35. Durant, op. cit., p. 95.

Agriculture

The settlers soon realized that the greatest natural asset of Ingham County was its soil. As population increased and transportation improved, every effort was made to increase the income from this resource. Not only was a larger and larger acreage brought under the plow, but improved farm implements were put into use. The production of cash grain crops and livestock rapidly replaced the pioneer subsistence type of agriculture, and early attempts at fruit growing, vegetable gardening, and poultry farming were made.

Although much of the public land in Ingham County had passed into private ownership prior to 1838, it went largely into the hands of land speculators, so that actual cultivation and development of a major part of it was not made until later. Between 1838 and 1859 a flood of settlers occupied the land. The number of farmsteads increased from 200 to 2,508. By 1874 the total had grown further to 3,496 (Table 5). Consideration of these statistics becomes even more interesting when we note that at no time in history have there been many more than 4,229 farmsteads.[36] This fact makes it evident that occupation of much of the agricultural land of Ingham County was accomplished by 1859

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36. The number in 1910.

and most of it by 1874.

The pioneers settled on all kinds of soils except those of swamps and marshes, the breeding places of malaria-conveying mosquitos. The "Shakes", or malaria, which slowly sapped the vitality of persons who contracted it, was an affliction common in the vicinity of poorly drained areas of Michigan. Since uniform settlement of land was desirable both for the development of good communications and for enhancing land values, efforts to encourage and speed development of the poorly drained lands were made early in the history of the state.

Prior to 1851 the National Congress had conferred 5,794,308.57[37] acres of swamp land on the State of Michigan with a view of securing a more certain and speedy sale of these remaining portions of the public domain.[38] The act of Congress making the grant provided for the control of swamp lands as state property, and the creation of a separate fund from the proceeds of their sale. This fund was to be used, "for the specific purpose of the drainage and improvement of lands so that they may be fit for cultivation."[39]

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37. Joint Documents of the State of Michigan, 1870, (Lansing: W. S. George & Co.) Vol. 2, p. 38.

38. Documents Accompanying the Journal of the State of Michigan, 1859, (Lansing: Hosmer & Kerr, 1859), Document No. 5, p. 1.

39. Joint Documents of the State of Michigan, 1856, (Lansing: Hosmer & Fitch, 1857), Document No. 5, pp. 13-14.

In Ingham County the total grant of swamp lands amounted to 16,699.02 acres,[40] and by 1875 some 16,139.02 acres had been sold at prices varying between $1.25 and $2.00 per acre.[41]

The Ordinance of 1787, passed by the government of the Northwest Territory, provided that Section 16 in every township be withheld from sale and set apart for the support of public schools.[42] School lands were opened for sale only after the townships had gained enough population to warrant the establishment of schools. A law of 1827 required that the citizens of any township having fifty householders should provide themselves with a school teacher. Since few townships in Ingham County had fifty householders prior to 1838, and because of a general absence of land entries in Section 16 of the different townships by this date, it can safely be concluded that much of the county school lands were not sold for homesteading until after 1838.[43] However, by the end of 1875,

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40. Joint Documents of the State of Michigan, 1870, op. cit., Vol. 2, p. 37.

41. Joint Documents of the State of Michigan, 1875, "Annual Report of the Commissioner of the State Land Office," (Lansing: W. S. George & Co., 1876,) Vol. 1, pp. 2, 4 and 33.

42. Thomas McIntyre Cooley, Michigan: A History of Governments, (Boston and New York: Houghton Mifflin Co., The Riverside Press, Cambridge, 1905), p. 308.

43. According to a list of original land entries, Sec. 16 of Alaiedon, Delhi, Lansing, Leroy, Locke, Meridian, Wheatfield, White Oak and Williamston Townships had not been sold before 1838. Information concerning the dates of disposal of Sec. 16 in the remaining townships is not available.

except for 200 acres of primary school lands, all school lands had passed into private hands.[44] They were sold at prices varying from $1.25 to $4.00 an acre.

Both the number of farms and the total acreage in farms had increased remarkably by 1874. Between 1850 and 1874 the number of farms in Ingham County grew from 991 to 2,980 and the land included from 117,989 to 262,145 acres (Table 6). Since the increase was proportionally greater in the number of farms, average size of the farms decreased from approximately 120 acres in 1850, to 111 in 1860 and to 88 in 1874. Leslie Township with 279 farms, had the greatest number in 1874 and was followed in order by Alaiedon, Aurelius, and Onondaga Townships, each with more than 230 farms. Of the other townships, Lansing, with 133 farms, had the smallest number and Williamston Township was next with 145 farms. The number of farms in the different townships indicates the degree to which the rural area of each had been occupied by 1874. Out of a total of 340,277 taxable acres of land in Ingham County that year, 262,145, or 77 per cent, was land in farms. Acres included in farms varied from 21,727 in Onondaga Township to 11,197 in Lansing Township where the city covered a sizeable area.[45]

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44. Joint Documents of the State of Michigan, 1875," Annual Report of the Commissioner of the State Land Office," op. cit., p. 31.

45. Census of the State of Michigan, 1874, op. cit., pp. 163 and 128.

TABLE 6
NUMBER OF FARMS & ACRES IN FARMS, 1850 - 1874
Ingham County, Michigan

	1850		1860		1874	
	Farms	Acres in Farms	Farms	Acres in Farms	Farms	Acres in Farms
Ingham County	991	117,989	1,576	174,446	2,980	262,145
Townships						
Alaiedon			78	7,806	259	18,559
Aurelius			117	11,187	248	20,002
Bunker Hill			101	14,344	Not given	
Delhi			70	7,271	203	20,909
Ingham			150	14,873	209	19,806
Lansing			89	7,690	133	11,197
Lansing City			14	1,462		
Leroy			73	7,336	176	20,275
Leslie			128	12,948	279	17,638
Locke			71	6,606	203	14,257
Meridian			90	10,732	183	18,733
Onondaga			124	15,803	234	21,727
Stockbridge			131	16,542	173	16,146
Vevay			102	12,762	212	18,056
Wheatfield			50	5,061	148	14,680
White Oak			102	12,454	175	15,064
Williamston			86	9,569	145	15,096

Sources: Seventh Census of the United States: 1850, p. 897; Census and Statistics of the State of Michigan: 1860, p. 110; Census of the State of Michigan: 1874, p. 163.

Comparison of the rate of increase in farm totals and land in farms in the different townships for uniform periods of years would be interesting, but statistics available permit this only for the years 1860 to 1874 (Table 6). During this time the greatest increase in number of farms was in Alaiedon Township where 181 were added. The next most attractive townships for settlement and the number of farms added in each were: Leslie, 151; Delhi, 133; Locke, 132; and Aurelius, 131. The gain in acres in farms was greatest in Delhi, 13,638; Leroy, 12,929; Alaiedon, 10,753; Wheatfield, 8,815; and Aurelius, 8,815. A glance at Figure 5 reveals considerable correlation of settlement activity with townships having large areas of level to gently rolling loam to clay loam land. This was probably due to the growing recognition of the value of this kind of land for cash grain and livestock agriculture which was replacing the earlier subsistence farming. It is interesting that Stockbridge Township, one of the first to receive pioneer settlers, but one with much sandy soil and poorly drained land, had the smallest increase in land in farms between 1860 and 1874.

As a consequence of the shift to commercial agriculture, wheat became the most important cash crop in Ingham County. Land devoted to it increased to 11,094 acres in 1853, to

18,684 acres in 1863, and to 34,944 acres in 1874.[46] Wheat output increased more than twenty times between 1840 and 1874, when 478,922 bushels were harvested (Table 7).

Corn was planted on 15,318 acres in 1873 which was almost double the 8,993 acres devoted to this crop in 1863.[47] The yield of 621,723 bushels in 1874 was more than three times as great as in 1864, the result not only of increased acreage planted, but of the introduction of high-yielding seed strains. Production in 1840 had been only 18,923 bushels. The great increase is an indication of the degree of expansion of the livestock industry, since most of the corn was used as animal food and was marketed in the form of pork and other animal products rather than as grain.

Combined output of oats, rye, barley and buckwheat was 372,438 bushels in 1874.[48] Oats formed a major part of this total because of its increasing use to feed the growing number of horses. The production of barley had also risen, whereas that of the pioneer crops, buckwheat and rye, had declined (Table 7).

The trend in the growth of potatoes was up, as the population consuming them increased, even though the yield fell more than 50 per cent between 1870 and 1874.[49] This fall

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46. Census of the State of Michigan, 1874, op. cit., pp. 184 and lxxi.
47. Census of the State of Michigan, 1874, op. cit., pp. lxxiv and 184.
48. Ibid., p. lxvii.
49. Ibid., p. lxvii.

TABLE 7

AGRICULTURAL PRODUCE, INGHAM COUNTY, MICHIGAN, 1840-1874

Year	Bush. of Wheat	Bush. Rye	Bush. Oats	Bush. of Indian Corn	Bush. Irish and Sweet Potatoes	Bush. Barley	Bush. Buck-Wheat	Bush. of all other Grain
1840	23,127		10,947	18,923	24,951	48		
1850	88,577	63,854		94,721	60,652	277	13,937	
1854	145,609			104,964	55,444			36,377
1860	140,043	7,683	103,757	233,426	85,607	4,657	9,472	
1864	181,302			193,893	52,621			110,053
1870	474,701	654	232,502	391,676	238,655	15,890	9,191	
1874	478,922			621,723	122,383			372,438

Year	Bush.Peas Beans	Tons of Hay	Lbs.of Hops	Lbs. of Flax	Lbs. of Maple Sugar	Gallons of Molasses	Lbs. of Bee Wax & Honey	Tons Clover, other Grass
1840		563						
1850	1,032	8,837	296	380	166,304	1,991	16,964	569
1854		13,003			93,611			
1860		19,485	1,854		190,514	3,230	1,438	492
1864		25,925			141,799			
1870	4,889	36,694	9,090		43,301	344	599	2,257
1874		33,400			83,116			

Sources: Seventh Census of the United States: 1850, p. 904; Census of the State of Michigan: 1854, p. 141; Census and Statistics of the State of Michigan: 1860, pp. 112-113; Census and Statistics of the State of Michigan: 1864, pp. 660-661 (These pages also give statistics for 1840 census.) and pp. 201-203; Census and Statistics of the State of Michigan: 1870, pp. 291-292; Census of the State of Michigan: 1874, pp. 184-187.

was less, however, than that in the state as a whole during the same period. It may be explained either by a bad crop year in 1874, or by a less thorough census that year than was taken in 1870.

In general, hay and clover production had also steadily gained and reflected the increasing importance of cattle and horses in the farm economy. A decrease in hay production between 1870 and 1873, like that in potato production, was less than the state's average decrease and is no doubt explainable in the same way as in the case of potatoes.[50]

The production of flax grown for homespun had completely ceased by 1875, as textiles could now be easily imported. Likewise, the importance of maple sugar, molasses, honey and bees wax had diminished as shipped in sugar became cheaper and easier to obtain (Table 7). The local production of sweetening materials was no longer profitable.

As might be expected, fruit growing and gardening developed as the population of Ingham County grew. The products were for local and home consumption, however, as the first recorded shipments of fruit out of the county was not made until 1873.[51] Facts concerning the status of horticultural activities in the county in 1874 are given

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50. Census of the State ofMichigan, 1874, op. cit., p. lxviii.

51. Adams, op. cit., p. 106.

in Table 8. Apple trees occupied the largest orchard acreage and yielded 182,361 bushels of fruit in 1874. Much of each apple crop was used for making cider, 6,831 barrels being pressed in 1873.[52] Leslie, the township with the largest rural population, had the largest acreage of orchards and harvest of apples in 1874 (Table 8).

The change in number of domesticated animals in Ingham County up until 1874 can be determined from Table 9. Horses and mules, which were used on the road as well as in the fields, increased from 112 to 7,679 between 1840 and 1874, Their number became greater than that of oxen, the most important work animal up to that time, about 1860, After 1864 the number of oxen decreased rapidly, dropping from 2,148 in 1864 to 939 in 1874, as they were replaced by horses.

The count of milk cows more than trebled between 1850 and 1874, when there were 8,697, reflecting the tendency towards dairy farming. Because of the lack of refrigeration, however, sale of fresh milk was limited. Surpluses over farm needs were made into less perishable butter and cheese and marketed in that form (Table 10). Thus, butter production increased from 218,652 pounds in 1854 to 1,025,039 in 1874 (368 per cent) and cheese output

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52. Census of the State of Michigan, 1874, op. cit., p. lxxv.

TABLE 8

HORTICULTURE, INGHAM COUNTY, MICHIGAN, 1874

	Apple, Pear, Plum & Cherry Trees Acres	Vineyard & Berry Bushes Acres	Melons & Vegetable Acres	Bushels of Fruits Produced				
				Apples	Pears	Peaches and Plums	Cherries	All Other Fruits
Ingham County	6419	44.88	247	182,361	538	91	1,737	31,679
Alaiedon	476	1.50	3	9,564	72	7	161	1,583
Aurelius	516			11,785				
Bunker Hill	351	0.50	3	12,829	42	19	119	622
Delhi	390		100	8,540	26			7
Ingham	413	2.00		17,405	36		271	1,448
Lansing	391	14.50	49	7,329	60	2	196	9,331
Lansing City	52	4.00	27	535				1,442
Leroy	156	3.75		6,165	14	5	9	97
Leslie	559			19,267			38	
Locke	292			9,546	126			25
Meridian	393	16.13	13	9,475		12	149	12,995
Onondaga	482			14,542			128	1,825
Stockbridge	366	2.50	40	15,074	80	31	322	1,423
Vevay	445		8	13,102	5		8	720
Wheatfield	353		4	2,960	42			
White Oak	413			13,732	35	15	200	153
Williamston	371			10,511			136	8

Source: Census of the State of Michigan: 1874, p. 224.

TABLE 9

LIVESTOCK ON FARMS IN INGHAM COUNTY, MICHIGAN, 1840-1874

Year	Horses, Asses and Mules	Cattle Other Than Oxen and Cows[c]	Work Oxen	Milk Cows	Sheep	Swine
1840	112	2,516			172	4,358
1850	811	2,504[a]	1,916	2,458	10,545	4,132
1854	1,574[c]	3,559	2,219	3,804	13,472	6,088[b]
1860	2,732	5,691[a]	1,858	4,323	33,240	7,446
1864	3,793[c]	6,364	2,148	5,676	63,734[b]	8,338[b]
1870	5,972	8,095[a]	1,200	6,524	63,539	10,584[b]
1874	7,679[c]	8,930	939	8,697	54,545[b]	11,588[b]

a. These were labeled as other cattle; those for other years as neat cattle.
b. Shows only six months old and over.
c. Shows animals one year old and over.

Sources: Seventh Census of the United States: 1850, p. 256; Statistics of the State of Michigan: 1854, pp. 142-143; Census and Statistics of the State of Michigan: 1860, p. 111; Census and Statistics of the State of Michigan: 1864, p. 659 (for 1840 figures) and pp. 203-204; Census and Statistics of the State of Michigan: 1870, pp. 339-340; Census of the State of Michigan, 1874, p. 256.

from 12,945 pounds to 114,203 (780 per cent) over the same period (Table 10).

TABLE 10

DAIRY PRODUCE AND WOOL, INGHAM COUNTY, MICHIGAN, 1850-1874

Year	Dairy Produce				Wool
	Butter lbs.	Cheese lbs.	Cream	Milk gallons	lbs.
1850	155,281	- -			28,447
1854	218,652	12,945			32,947
1860	400,055	37,788			89,803
1864	320,670	31,380			206,540
1870	780,056	17,985		13,138	279,069
1874	1,025,039	114,203			237,169

Sources: Seventh Census of United States: 1850, p.905; Statistics of the State of Michigan: 1854, pp. 142-143; Census and Statistics of the State of Michigan: 1860, p. 113; Census and Statistics of the State of Michigan: 1864, pp.202-203; Census and Statistics of the State of Michigan: 1870, pp. 339-340; Census of the State of Michigan: 1874, pp. 184-185.

Hog raising gained popularity as is shown by the increase from 4,358 head in 1840 to 11,588 in 1874 (Table 9), and the 1,208,072 pounds of pork marketed in the latter year, as against 442,273 pounds sold in 1863.[53] A tremendous stimulus to pork production between 1863 and 1873

53. Census of the State of Michigan; 1874, op. cit., p. lxxvi.

was given by the opening of the railroads which could quickly haul this commodity to city markets.

Although the sheep industry had been rapidly gaining importance, as elsewhere in the state, the number of sheep in Ingham County appears to have temporarily decreased from 63,659 to 54,545 between 1870 and 1874. The decline is unaccountable as the woolen mills at Lansing and in other parts of Michigan provided a ready market for wool. This may be still another illustration that the results of censuses conducted by the national government and by the state government are not strictly comparable. The next census in 1880 recorded 76,498 sheep and goats in the county (Table 21).

A glance through 1854 to 1875 issues of the Farmer's Companion and the Horticultural Gazette, both published in Detroit, indicates the growing interest in poultry raising. Information on better breeds of chickens and cures for poultry diseases were published regularly. From the pioneer accounts it is evident that there were no special poultry farms at that time, but that chickens were reared as side items on every farm to produce eggs and meat for home consumption and for sale to make some extra money.

Although the average size of the farms decreased during the years considered in this chapter, the amount of

land per farm that was cropped and in pasture no doubt increased. In 1870, farms in Ingham County averaged 87.85 acres in size, of which 47.66 acres were improved land and 40.19 acres were woodland.[54] Since labor was expensive, improved implements became a necessity as the amount of cultivated land per farm increased. Better plows, feed mills, stump pullers, reapers, mowers, harrows, seeders, and other farm machines were perfected and came into common use.[55] Oxen were replaced by horses as motive power in the fields.

From the beginning land in Ingham County had been sold in rectangular plots. By 1875 the county was a checker board of fields, delineated either by stump, brush and dead wood fences, or by rail fences. The dead wood fence was a natural product of the forest clearing process. It was composed of stumps pulled from the ground and windrowed along the edges of the field. If there was an inadequate supply of stumps, the fence was filled out with brush and limbs that would otherwise have to be burned. After the number of cattle,

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54. Michigan, Department of State, Statistics of the State of Michigan, 1870, (Lansing, W. S. George and Co. 1873), p. cxviii.

55. An interesting account of the fraud that was inflicted on the farmers as a consequence of their great interest in new machines and techniques is, W. Hayter, "Mechanical Humbugry Among the Western Farmer, 1860-70," Michigan History Magazine, Vol. 34, (March, 1950), p. 13.

hogs and sheep increased, and more of the forest was cleared, an improved type of fence called the Virginia rail, or rail, fence became popular. These zig-zag fences were simply constructed, used only farm produced wooden rails, and required little or no metal and no post hole digging.[56] As the height of the zig-zag fence was 4 to 5 rails, they were visible from a distance and became a remarkable part of the landscape. They were no doubt the most common kind of fence in Ingham County in 1875.

The farmsteads of 1875 looked very different from those of 1839. Large barns to shelter cattle and horses and store their winter food, pig pens, chicken coops, and wind mills became usual features associated with the farmstead. The farm homes often resembled those of New York and the New England States, reflecting the origin of the folk who lived in them. They were usually roomy and well constructed of finished lumber and had large fireplaces and brick chimneys (Plate 3). The commodious barns with high gabled roofs were also built of sawed lumber but the planks were not planned and finished as was the case with the lumber used in homes (Plate 4).

Plates 1 and 2 show a log cabin built in the 1840s with

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56. John Fraser, Hart and Eugene Cotton Mather, "The American Fence", **Landscape** (Santa Fe, New Mexico, 1957), Vol. 6, No. 3, p. 6.



Plate 1 Log cabin on Shaftsburg Road, Williamston Township. The cabin was built in 1840; the roof was replaced about 1910.



Plate 2 Log Cabin built in 1840 with an annex added in the middle 1870's. The two structures indicate the improved use of lumber accomplished within thirty five years.



Plate 3 Farmhouse built in 1875, on Zimmer Road, Section 10, Williamston Township.



Plate 4 Barn on Haslett Road, Williamston Township, dating from 1875.

an annex that was built around 1875. Plates 3 and 4 show a house and a barn built between 1874 and 1880. These buildings, were all still in existence on three different centennial farms in Williamston Township visited by the writer in 1960. The contrast between Plates 1, 3 and 5 is indicative of the vast improvement in materials used, and in the size and utility of buildings which was achieved in Ingham County between 1838 and 1875. In short, the buildings constructed during the latter years of this period were infinitely better than the rude shelters for men and beast raised by the pioneer before 1838.

Rural Service Centers

Between 1838 and 1875 the rapid expansion of the rural population stimulated the growth of agricultural service centers. The more important of these developed around saw mills erected on the banks of creeks where enough water power to run the machinery could be obtained. Usually a grist mill was also established, and in some cases planing, matching and moulding departments were added to the saw mill, thus laying the foundations of nucleated settlements around which villages were platted at later dates.

By 1875 Ingham County had five such places which had grown into sizeable villages: Mason, the county seat after 1840, Stockbridge platted around 1840, Williamston platted in 1845, Dansville platted in 1859, Leslie platted in 1866,

and Webberville platted in 1871 (Fig. 1).[57] Although manufacturing activities of these villages varied, each had at least one saw mill, one grist mill, and one establishment that made harness and farm implements. Manufacturing was often combined with repair services, as in blacksmith shops, which fabricated as well as repaired farm implements and carriages. Butter and cheese factories and fruit drying activities were to be found in some of the villages also.

Village commercial enterprises generally included one or more bars, a hotel or two, and several grocery stores, drug stores and general merchandise stores, one of which usually housed the post office. The number and nature of stores varied from village to village, those with railroad service usually having more establishments and a greater variety. Between 1863 and 1871 Mason, Leslie, Williamston and Webberville all became railroad stops and this increased their size and importance. Near the railroad depot grain elevators, and other storage facilities were erected, and grain, livestock, fruit, pork and other farm products were brought here to be shipped out.[58]

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57. The information about the villages was obtained from Durant, op. cit., pp. 221, 228, 248-249, 255, 265-267, 283-285, 301, 338 and 342.

58. Michigan Gazetteer, 1875, op. cit., pp. 496-541.

Skilled, as well as unskilled, labor resided in the villages, and professional services of doctors and lawyer could be obtained. The civic life of the surrounding farming neighborhood centered around the school, the church, or the tavern in the village.

In addition to the city of Lansing and the five larger villages a number of hamlets were also established during this period.[59] These smaller settlements developed primarily because they performed either, or both, of two functions: they were post offices or they were railway stops. Hamlets such as Aurelius Center, Bunker Hill, and Fitchburg became post offices and grew because of this and because of their locational advantages at major road crossings.

Along the tracks of the Detroit, Lansing and Lake Michigan and the Lansing, Jackson and Saginaw railroads, stops were made and depot facilities were erected at approximately six miles intervals. Chapins Station, (now called Eden), Delhi Station (now called Holt), and Okemos are good examples (Fig. 1). Although these stations served as post offices too, they gained importance mainly as railroad stops and functioned primarily in the storage and shipment of agricultural goods brought from nearby farms. A grain elevator, warehouses, and a stock loading pen were

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59. Information about the hamlets was gathered from Beers, Atlas of Ingham County, 1874, op. cit., and Adams, op. cit.

usually constructed along the tracks adjacent to the depot. Sometimes a few homes were built and a store or two was established to cater to the farmer patrons of the station. Occasionally a school was also located in such places.

Extractive Industries

Forest Products

The first white settlers saw the forest as an obstacle to be removed as rapidly as possible so as to get on with the job of tilling the soil. Soon mans' attitude began to change, however, but not before large areas of the forest had been felled and burned without putting the trees to any good use. Then for a few years before the development of commercial agriculture, a major part of the settlers cash income came from the sale of forest products. Good money could be obtained for black walnut and other quality woods when they were carted by the farmers to Jackson or Dexter, the nearest markets. Black salts, or potash, was obtained from wood ashes on almost every pioneer farm. This product brought good prices because the lye leached from the ashes was used in soap making. As the population increased commercial lumbering activities did likewise, although the larger absolute value of the forest products declined relative to the expanding income from sale of agricultural products. Soon the forests of the southern townships were largely cleared. Lumbering activities then moved to the northern townships, from whence lumber was delivered as

far as Grand Rapids and Chicago, but here too the best stands of trees were rapidly removed. The amount of lumber sawed in the mills of Ingham County rose from 1,600,000 feet in 1850, to 11,418,000 feet in 1860, and to 13,297,000 feet in 1874. Thus, by 1875 the lumber industry in the county was near its peak of activity with some 30 saw mills operating and employing 126 men (Table 12). The availability of cheap German potash had, however, made the manufacture of black salts for sale unprofitable. Charcoal, obtained by charring wood in an earth covered kiln, continued to be a forest product of some importance, this "coal" being used by blacksmiths, tinners, and other metal workers.

Coal

Although coal underlies parts of Ingham County, the only mine ever of any consequence was in Section 16, Williamston Township. Mining of a small amount for blacksmithing purposes was started in 1846-47.[60] Encouraged by the opening of the plank road, mining for a wider market began in 1852. In 1853 some 60 tons, valued at $180.00, were dug.[61] In 1870 there were eight persons employed at an average wage of $36.00 per month.[62] The mine was given new life in 1873 when two men from Ohio made an investment

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60. Adams, op. cit., p. 825.
61. Michigan, Dept. of State, Census of the State of Michigan, 1854 (Lansing: Geo. W. Peck), p. 147.
62. Census and Statistics of the State of Michigan, 1870, op. cit., p. 551

in it of $43,000. The labor force was raised to 30 men and 9,000,000 pounds of coal were unearthed that year.[63] The lower stratum of coal in this locality was said to be two to three feet thick and of a very good quality for ordinary purposes.[64] The mine was in full production at the end of the period under discussion, the tonnage extracted in 1874 being worth $18,000.

Quarries and Mineral Wells

In 1875 there were at least two gravel quarries in operation: one on Section 16, Vevay Township and the other at Lansing. In 1874 there was a production of nearly 79,800 cubic feet of stone at Lansing.[65] A stone crusher had been installed near Mason at an earlier date and this provided farmers in the vicinity with a ready market for stones gathered from their land. After being crushed the stone was used for road building. Perhaps the first use of any considerable amount of gravel from the Mason esker was by the Jackson, Lansing, and Saginaw Railroad who apparently opened a pit two miles south of Mason to obtain ballast either about 1866, when the roadbed was being built, or a few years later.[66] No doubt there were other gravel quarries opened before 1875, but no record of these was found.

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63. Census of the State of Michigan, 1874, op. cit., pp. 387.
64. Durant, op. cit., p. 342.
65. Census of the State of Michigan, 1874, op. cit., p. 388.
66. Census of the State of Michigan, 1874, op. cit., p. 132.

The use of mineral wells whose waters could supposedly cure skin diseases because of their medicinal qualities also became a source of income during this period.[67] One of the most popular of these was in Lansing at the confluence of Grand and Red Cedar Rivers. It was 1,400 feet deep and discharged 1,500 gallons of water per day. Another spring frequented by a large number of resorters was at Leslie.[68] Hotel accomodations and bath houses were provided at both places. Smaller wells of more local importance were located in Onondaga and Mason.

Manufacturing Industries

Manufacturing concerns of Ingham County increased at least 800 per cent in number between 1850 and 1874, and much more in value of product and number of people employed, as is indicated by the figures in Tables 11 and 12. In 1850 there were only 11 mills processing locally produced grain and lumber in the county. These were small one or two man establishments using either man or water power.[69]

By 1860 the number of mills had increased and they were distributed over a wider area. Employment had grown but the kind of manufacturing activity remained much the

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67. Michigan State Gazetteer and Business Directory, 1875, op. cit., p. 541.

68. D. R. Tuttle, General History of the State of Michigan, (Detroit: Tyler and Co., 1873), pp. 658-659.

69. Records of the Original Census of 1850, op. cit., pages not numbered.

TABLE 11

MANUFACTURES, INGHAM COUNTY, MICHIGAN, 1850 & 1860

1850 Townships	Saw Mills				Flour Mills				Asheries			
	No.of Mills	Hands Empl.	Power Used	Feet of Lumber Produced	No.of Mills	Hands Empl.	Power Used	Bush. of Flour	No.of Mills	Hands Empl.	Power Used	Potash Produce Tons
Ingham County	6	7	W	1,600,000	2	2	W	- - -	3	3	-	27
Alaiedon									1	1	-	7
Leslie	2	2	W	500,000					2	2		20
Meridian	1	2	W	300,000								
Onondaga	1	1	W	250,000	1	1	W	300.00				
Wheatfield	1	1	W	150,000								
Williamston	1	1	W	400,000	1	1	W	- - -				

continued on next page

TABLE 11 (continued)

MANUFACTURES, INGHAM COUNTY, MICHIGAN, 1850 & 1860

1860 Townships	Saw Mills				Flour Mills				Hands Employed in all Manufactures
	No. of Mills	Power S	Power W	Feet of Lumber Prod.	No. of Mills	Power S	Power W	Bush. of Flour Made	
Ingham County	25	21	4	11,418,000	8	3	5	31,324	415
Alaiedon	1	1		875,000					3
Aurelius	2	2		600,000					8
Bunker Hill	1	1		240,000					3
Delhi	2	2		768,000					5
Ingham	1	1		500,000	1		1	6,100	10
Lansing	1	1		400,000					3
Lansing City	3	1	2	2,000,000	2		2	5,900	259
Leroy	1	1		250,000					3
Leslie	3	1		500,000	1	1		1,224	21
Locke	1	3		1,250,000					4
Meridian	Not Reported								
Okemos Village	1	1		1,000,000	1	1		6,000	9
Onondaga	3	2	1	515,000	1		1	1,500	18
Stockbridge									8
Vevay	1	1		520,000					4
Mason Village	1	1	1	600,000	1	1		4,500	35
Wheatfield	2	1		400,000					5
White Oak	1	1		500,000					8
Williamston	-	-		- - - -	1		1	6,100	8

Sources: Original Record of the Census of Ingham County; 1850, at Mason, and Census and Statistics of the State of Michigan: 1860, op. cit., pp. 114-115.

TABLE 12
MANUFACTURES OF INGHAM COUNTY, MICHIGAN, 1874

	Flour Mills					Saw Mills					Stave, Heading & Hoop Fact.				
	No.	Power S	Power W	Hands Empl.	Barrels of Flour	No.	Power S	Power W	Hands Empl.	Feet of Lumber	No.	Power S	Power W	Hands Empl.	Value of Product
Ingham Co.	11	6	5	36	50,271	30	26	4	126	13,297,000	10	10		257	102,003
Alaiedon						1	1		3	400,000					
Aurelius						2	2		7	710,000					
Bunker Hill						1	1		2	150,000					
Delhi						3	3		10	1,645,000					
Ingham	1	1		3	300	1	1		5	300,000					
Lansing City	3	1	2	12	17,500	2	1	1	11	1,600,000	1	1		75	4,000
Leroy	1	1		2	500	3	3		15	1,150,000	1	1		10	10,000
Leslie	1	1		4	5,000	3	3		13	1,162,000	2	2		65	23,003
Locke						1	1		10	1,000,000	1	1		9	12,500
Meridian	1		1	2	3,500	2	2		8	800,000	2	2		9	3,000
Onondaga	1		1	4	10,000	1	1		3	200,000	1	1		80	13,000
Vevay	2	2		6	19,000	5	4	1	21	1,400,000	2	2		9	1,500
Wheatfield						1	1		4	600,000					
White Oak						2	2		8	580,000					
Williamston	1		1	3	5,471	2	1	1	6	1,600,000					

	Agricultural Implements					Carriage Factories					Foundaries & Machine Shops				
	No.	Power S	Power W	Hands Empl.	Value of Product	No.	Power S	Power W	Hands Empl.	Value of Product	No.	Power S	Power W	Hands Empl.	Value of Product
Ingham Co.	4	4		32	19,700	4	4		25	19,400	5	5	1	32	29,000
Ingham	1	1		4	1,500										
Lansing City	1	1		21	15,000	3	3		24	19,000	2	2		23	15,000
Meridian	1	1		4	200										
Stockbridge						1			1	400					
Vevay											1	1		5	6,000
Williamston	1	1		3	3,000						2	2		4	8,000

continued on next page

TABLE 12 continued

MANUFACTURES OF INGHAM COUNTY, MICHIGAN, 1874

	Breweries			Brick & Tile Fact.				Shingle Mills				Saddle & Harness		
	No.	Hands Empl.	Value of Product	No.	Power S	Power W	Hands Empl.	Amt. of Product	No.	Power S	Power W	Hands Empl.	Value of Product	No.	Hands Empl.	Value of Product
Ingham Co.	4	8	14,200	3	3		130	81,000	1	1		2	600	1	1	600
Lansing				2	2		45	11,000								
Lansing City	3	8	14,200	1	1		85	70,000								
Onondaga									1	1		2	600			
Stockbridge														1	1	600
Vevay	1															

	Furniture and chair factories				Planing and Turning Mills, & Sash, Door & Blind Factories				Woolen Factories				Miscellaneous			
	No.	Power S	Power W	Hands Empl.	Value of Product	No.	Power S	Power W	Hands Empl.	Value of Prod.	No.	Power S	Power W	Hands Empl.	Value of Prod.	No.	Power S	Power W	Hands Empl.	Value of Prod.
Lansing City	4	4		43	22,000	3	3		76	119,000	1	Both		14	25,000	7		4	182	Not Reported

Source: Census of the State of Michigan, 1874: pp. 270-389

same, except for the asheries which had completely gone out of business (Table 11). In 1874, however, there were 88 manufacturing plants in Ingham County; 65 operated by steam and the rest either by water power or by hand. They employed 964 people and manufactured more than $1,011,943 worth of goods.[70] Still more significant, the nature of manufactures had changed and had become more diversified. Besides the saw-mill and flour-mill products, specialized goods such as furniture, carriages, agricultural implements and woolens were now being produced in the county.(Table 12).

Thirty-one of all the manufacturing establishments, or almost 34 per cent, were in the city of Lansing. These plants employed 574 hands or more than half the total employed in the whole county, and produced more than $500,000 worth of goods.[71] Generally, industries requir- more skilled workers and larger capital were centered in Lansing (Table 12). Some industries such as the breweries, were characteristic of urban centers. In 1874 there was a total of 2,346 barrels of liquor brewed in the county of which 2,260 were produced in Lansing and the rest at Mason.

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70. Census of the State of Michigan, 1874, op. cit., p. 367. The number of men employed does not include the number for one establishment and the value of goods was not reported for three establishments.

71. Ibid., pp. 304, 320, 327,344.

Although manufacturers still catered largely to local markets, a start had been made in producing goods for more distant places, as witnessed by the sale of lumber, carriages, and agricultural implements outside the county. Industrial activity, including number of establishments, amount of employment, and diversity and value of product was much greater in Ingham County than in any of the immediately adjacent counties.[72] At the hub of this activity was the city of Lansing, which was on the threshold of becoming one of the better known industrial centers of the state and nation.

Occupations and Life

Table 13 provides a list of the occupations of 7,801 people gainfully employed in 1874. Of these only five were women, as in those days the females were generally busy in household work. Nearly 55 per cent of the total labor force was engaged in agriculture, but this was much less proportionately than in earlier years, a fact indicative of the growing employment in commercial, manufactural, and service occupations.

Stemming from the overall development of the county, expanding opportunities were available for enterprising and ambitious individuals. Erection of new buildings, the

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72. Census of the State of Michigan, 1874, op. cit., pp. 270-392.

construction of the roads and railroads, and other activities provided jobs other than farm labor for the uneducated (Table 13). Positions in the government, at the Agricultural College, in public schools, and to fill the growing need for the professions opened new vistas for the educated. Expanding wealth and the growth of urban living were also conducive to the development of other vocations such as fine arts, and therefore the artist, the photographer, and the musician, for example, found increasing opportunity for work in the county, especially in the City of Lansing.

Ingham County, 1875

The county was a land of farms by 1875. Most of the forest had been cleared and in its place were fenced rectangular fields and pastures. Cash grain production was the major activity. There was a greatly expanded interest in the animal industries, however, with significant income from sales of pork, wool, and animals for meat. A start had been made on the sale of dairy products, a trend which was to as completely change the agricultural economy of the county in the future as had the shift from the subsistence farming in the past. By this time, the basic network of roads had been established, and most of the railroads built, breaking the isolation of the county's rural areas and opening distant markets for surplus farm products.

TABLE 13

OCCUPATIONS OF THE MALES 21 AND OVER

INGHAM COUNTY, MICHIGAN

1840 - 1874

Occupation	1840	1874
Farmers	742	3,644
Farm Laborers		623
Laborers other than Farm		730
Book Agents, Binders, etc.		18
Blacksmiths		117
Brewers		10
Boot and Shoe Dealers		13
Brick Manufacturers & Handlers		35
Butchers		50
Builders & Building Movers		20
Cabinet and Chair Makers		44
Carpenters		323
Wagon & Carriage Makers		49
Clerks		155
Learned Professions (Lawyers, Physicians, Clergymen, Engineers, College Professors	16	150
Coopers and Stave Dealers		95
Dairymen		6
Druggists		29
Dry Goods Dealers		17
Grocers		62
Hardware Merchants		12
Harness Makers		24
Hotel Keepers		34
Lumbermen		32
Students		32
Manufacturers	15	26
Masons and Marble Cutters		103
Merchants	9	89
Millers		35
Painters		79
Miscellaneous (including Gov't officials		1,145
Total	782	7,801

Sources: Fifth Census of the United States: 1840, p. 18; Census of the State of Michigan: 1874, p. 406.

Lansing, the State Capitol, was the hub of economic and social life of the county and an industrial and commercial center for an ever widening area as well. Political and educational functions preformed were of state-wide scope.

By 1875 life in Ingham County was much fuller and more comfortable by comparison to the rigors of pioneer days. With the development of commercial agriculture and industry the county developed an expanding economy. Residents were no longer dependent on places such as Jackson, in neighboring counties for elementary needs. Money was now less scarce. Farm incomes increased, industries were prosperous, ample educational facilities were present and railroads, and roads had provided improved means of communications. Many were the luxuries not available in 1838. In 1875 the life and economy of Ingham County had a complexity unknown in pioneer days, but great as this was, it was but a portend of the remarkable changes and growth yet to come.

CHAPTER IV

THE MIDDLE YEARS

A revolution occurred in the economic organization of Ingham County between 1875 and 1910. The factors leading to this were introduced between 1875 and 1890, but the transformation was most fully developed after 1890 and particularly after the turn of the century. Nearly every phase of life was affected. The changes were not only important for the period under discussion, but had far reaching results in the years to come.

Continuing earlier trends, dairy farming and mixed farming increased and superseded grain farming in importance. Large acreages were brought under the plow and farm incomes increased, but a decrease that was both relative and absolute took place in the size of the farming population. The period is characterized by a high rate of urban growth and a decrease in the rural population.

The industries of the county were fundamentally altered. Larger manufacturing establishments supplanted smaller ones, and the manufacture of simple items was replaced by the production of highly complex machine goods,

which gained national and international recognition. Lansing became the permanent home of an important segment of Michigan's burgeoning automobile industry, and this has been the leading industry of the county ever since.

Lansing thus acquired greatly expanded importance as an industrial town as well as being the state capital and a service center for the surrounding area. Its growing population became larger than that of the rest of the county soon after the turn of the century. The new city of East Lansing was incorporated, a result of its becoming a residential suburb for Lansing and the home of persons who were being employed by Michigan Agricultural College in increasing numbers.

Although a few extensions in road and railroad mileage were made, the total additions were relatively insignificant. Of much greater consequence was the improvement of roads already in existence and the better methods of maintenance which were initiated as a result of the demand for better highways to carry the increasing flow of automobile traffic. Also significant was the fact that electric interurban lines became an important means of travel during the latter part of the period being discussed.

Lansing

The years between 1875 and 1910 mark the start of the modern industrial history of Lansing. During this time the automobile industry was established in the city and notable improvements were brought about in other manufacturing fields as well. These developments lead to the rapid growth of Lansing, which by 1910 had become a truely multi-functional city.

Between 1874 and 1910 a population gain of 319.5 per cent was recorded in Lansing as compared to an increase of 82.6 per cent for the whole county. The number of people in the city increased by 23,784 (to 31,229) and in the county by 24,117 (to 53,310) (Tables 3 and 15). Thus, all but 333 of the gain in the county was accounted for by that in Lansing. Between 1900 and 1910 growth of the city was particularly rapid, inhabitants increasing nearly 15,000 in that decade. This growth of 89.4 per cent[1] coincided with the rapid expansion of the automobile industry. By 1910 Lansing spread over roughly nine square miles of territory, mostly in sections 8, 9, 10, 15, 16, 17, 20, 21, of Lansing Township (Fig. 16).[2]

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1. U. S., Bureau of Census, Thirteenth Census of the United States, 1910, Vol. II, p. 938.
2. U. S. Geological Survey, Lansing Quadrangle, surveyed 1909-1910.

Within its borders lived 58.6 per cent of the county's population. The city population had surpassed that of the rest of the county about 1906.

By 1910 Lansing had 169 different manufacturing plants employing 6,152 people.[3] Products manufactured were of a great variety, ranging from automobiles and engines, to bricks, flour and other simple processed goods for every day use. Three state roads, four major railroads and four electric interurban lines converged in the capital city, linking it with other parts of Michigan and the nation.

Growth of manufacturing and good communications lent occupational diversity to the city. According to the census of 1910, there was in Lansing a total employed labor force of 13,991 (Table 14). These included 8,028 people, comprising 57.4 per cent of the labor force, in manufacturing and mechanical occupations; 1,646 people in trade, such as groceries, general merchandise stores, clothiers, etc; 1,271 in domestic and personal services; 1,256 in clerical occupations; 770 professional people; 660 in transportation; 238 in public service, 111 in agriculture, forestry, and animal husbandry, and 11 in mining and other extractive industries.

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3. U. S., Bureau of Census, Thirteenth Census of the United States, 1910, Manufactures, Vol. X, p. 577.

TABLE 14

POPULATION TEN YEARS AND OVER ENGAGED IN SELECTED OCCUPATIONS
LANSING, MICHIGAN, 1910

Total Population	14,433	12,061			
Total Employed	11,460	2,531			
AGRICULTURE, FORESTRY AND ANIMAL HUSBANDRY	105	6	Dressmakers, Seamstresses, etc.	1	251
Farmers	17		Electricians & Electrical Engineers	84	
Farm Laborers	52	2	Engineers	98	
Foresters & Lumbermen	8		Fillers & Grinders	64	
Others	28	4	Firemen, Overseers and Furnacemen	141	
MINERAL EXTRACTION	11		Laborers	2,021	66
Coal Mine Operators	3		Iron & Steel Workers	705	4
Quarry Operators	8		Lumber & Furniture	14	1
MANUFACTURERS & MECHANICAL INDUSTRY	7,496	532	Milliners & Millinary Dealers		72
			Textile Industry	2	7
			Paper, Printing & Allied Industry	189	
Blacksmiths, Foremen and Hammermen	130		Other Industry	3,086	131
Brick & Stone Masons	106		TRANSPORTATION	612	48
Builders & Building Contractors	137		TRADE	1,410	236
Cabinet Makers	40		PROFESSIONAL	434	336
Carpenters	562		PUBLIC SERVICE	235	3
Compositers & Type Setters	116		CLERICAL OCCUPATIONS	707	549
			DOMESTIC & PERSONAL SERVICES	450	821

Source: U.S., Bureau of Census, Thirteenth Census of the United States: 1910, (Washington; Government Printing Office, 1911), Vol. IV, pp. 239-243.

Functional complexity had become characteristic of Lansing. The capital city offered the best professional and personal services in the county. Ample educational opportunities for children, including the blind and juvenile delinquents, were available in the city.[4] Instructions in other vocations such as fine arts, dancing and sewing were also provided. Recreation was offered regularly through the hotels, theatres and art societies, and by festivities associated with various state affairs. In short, by 1910 the capital city had also become an industrial and market center, and the cultural hub not only for Ingham County, but also for Eaton County and Clinton County as well. By virtue of its location in the northwest corner of Ingham County, Lansing was equally accessible to the people of Eaton, Clinton and Ingham Counties. It offered economic, social and cultural opportunities non-existent in the other towns and villages of the tri-county area.

Population

Between 1874 and 1910, Ingham County was characterized not only by a population increase that was largely

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4. Chilson McKinley & Co., Lansing City Directory, 1911, Lansing: Wynkoop Hallenbeck Crawford Co., 1911), Vol. XI, p. 7.

in the city of Lansing, but also by the beginning of growth of a rural non-farm population and by a decline in the number of people living on farms.

During this period the county grew from 29,193 to 53,310 in population (Tables 3 and 15). Actually, between 1874 and 1900 the rate of growth was somewhat less than it had been before 1874, but after the turn of the century a more rapid increase was resumed (Fig. 2). This coincided, as has already been indicated, with the development of the automobile industry in Lansing. From 1900 to 1910 Ingham County showed a population gain of 33.8 per cent. This was far in excess of that experienced in most counties of the state. Among the southern tier of Michigan counties, the rate of growth in Ingham County was exceeded only by that of Wayne County, which because it included Detroit, recorded a gain of over 50 per cent during the same period.[5] Ingham County had a gross density of 96.4 people per square mile in 1910, but there were only 39.9 people per square mile in the rural areas.

The population increase between 1875 and 1910 evidently resulted primarily from a high natural increase within the county. Only a relatively small number of

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5. U.S., Bureau of Census, Statistical Atlas of the United States, 1914, (Washington: Government Printing Office, 1914), Plate No. 38.

persons migrated here from elsewhere in the United States. As was true during previous periods, most of the newcomers were from the eastern states, with others mainly from Ohio, Indiana, and Illinois. A small number of Negroes lived in Ingham County during this period, but their total did not change much and they remained below one per cent of the entire population. Only a few Negroes owned or rented farms; most of them resided in Lansing where they worked, usually as unskilled labor (Table 16).

Among the foreign born, 1,804 Germans and 1,572 Canadians formed the two largest groups. Next in numbers were 531 people from the British Isles, 232 from Russia and 155 from Turkey. Smaller groups came from other parts of Europe and 27 people were from non-European countries.[6] In 1910, persons of foreign extraction in the county comprised 10.2 per cent of the total. Seventy-three per cent of these lived in Lansing (Table 16).[7]

The growth of Lansing's population has already been discussed. The population of the county outside of Lansing reached a peak of 25,357 in 1880 and thereafter slowly declined to 22,081 in 1910 (Fig. 2). Thus,

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6. U. S., Bureau of Census, Abstract of the Thirteenth Census of the United States, 1910 (With Supplement for Michigan), p. 602.

7. U.S., Bureau of Census, Thirteenth Census of the United States: 1910, Population, Vol. II, p. 938.

TABLE 15

POPULATION, INGHAM COUNTY, MICHIGAN, 1880-1910

	1880	1884	1890	1894	1900	1904	1910
Ingham County	33,676	34,939	37,666	39,689	39,818	43,607	53,310
Alaiedon	1,474	1,359	1,287	1,266	1,172	1,095	955
Aurelius	1,478	1,513	1,489	1,505	1,387	1,273	1,163
Bunker Hill	1,099	1,068	1,012	924	920	902	881
Delhi	1,538	1,507	1,504	1,576	1,467	1,433	1,412
Ingham	1,411	1,410	1,232	1,219	1,155	1,032	1,002
Dansville*	(440)	(430)	(366)	(362)	(374)	(317)	(349)
Lansing	1,209	1,265	1,422	1,378	1,353	1,844	1,760
Lansing City	8,319	9,774	13,102	15,847	16,485	20,276	31,229
Leroy	1,911	1,723	1,572	1,436	1,441	1,377	1,297
Webberville*			(404)	(335)	(345)	(345)	(349)
Leslie	2,501	2,505	2,337	2,115	2,220	2,139	2,014
Leslie Village*	(1,113)	(1,150)	(1,058)	(988)	(1,114)	(1,096)	(1,032)
Locke	1,494	1,485	1,265	1,282	1,248	1,107	1,045
Meridian	1,530	1,682	1,720	1,730	1,625	2,027	1,392
East Lansing							802
Onondaga	1,453	1,383	1,392	1,421	1,264	1,156	1,031
Stockbridge	1,003	1,143	1,276	1,296	1,389	1,351	1,294
Vevay	1,207	1,118	1,131	955	923	917	817
Mason	1,809	1,884	1,875	1,761	1,828	1,955	1,742
Wheatfield	1,207	1,162	929	908	882	844	724
White Oak	1,181	1,077	1,070	967	1,026	899	841
Williamston	1,852	1,881	2,051	2,103	2,033	2,980	1,909
Williamston*	(982)	(1,080)	(1,139)	(1,120)	(1,113)	(1,106)	(1,042)

*Included in township totals.

Sources: U.S., Department of State, Tenth Census of the United States: 1880, Population, Vol. I, pp. 215-216; Michigan, Department of State, Census of the State of Michigan: 1884, Vol. I, pp. 58-59; U.S., Department of State, Eleventh Census of the United States: 1890, Vol. I, pp. 186-384; Michigan, Department of State, Census of the State of Michigan: 1894, Vol. I, pp. 162-164 and 632; U. S., Dept. of State, Twelveth Census of the United States: 1900, Population, Vol. I, pp. 124-126 and 186; Michigan, Department of State, Census of the State of Michigan: 1904, Vol. I,p. 26; U. S., Bureau of the Census, Thirteenth Census of the United States: 1910, Vol. II, p. 909.

TABLE 16

RACE AND NATIVITY OF THE POPULATION, LANSING AND INGHAM COUNTY

1880-1910

	Ingham County				Lansing			
	1880	1890	1900	1910	1880	1890	1900	1910
Total Pop.	33,676	37,666	39,818	53,310	8,319	13,102	16,485	31,229
Foreign Born	3,631	4,476	4,134	5,440	1,286		2,360	3,973
White	33,268	37,203	39,402	52,899		12,756	16,156	30,868
Negro	404	452	410	404		341	323	354
Others	4	11	8	7			6	7

Sources: U.S., Bureau of Census, Eleventh Census of the United States: 1890, Population, Part I, pp. 416, 435 and 514; Thirteenth Census of the United States: 1910, Vol. II, pp. 498 and 949.

it is obvious that a net 3,276 people left the rural parts of the county for the city during the period 1880 to 1910. Lansing's gain in population during these years was 275 per cent while the loss of the rural parts of the county was almost 13 per cent. In contrast to 1874 conditions when only 25.5 per cent of the county's population lived in Lansing, 58.6 per cent were in the city in 1910. In addition, a growing number of people living in the country were commuting to jobs in Lansing on the electric interurbans.

By 1910 all townships except Lansing had lost in number of population from peaks reached between 1880 and 1910. The largest decrease, 40 per cent, was experienced in Wheatfield Township, followed by 35.2 per cent in Alaiedon, 32.2 per cent in Vevay, and 30.1 per cent in Locke. Townships with no town or large village generally recorded a higher percentage of decline than did those that had such a place. In 1910, however, the population of every one of the larger centers except Lansing and East Lansing was below its former peak. The decreases in Lansing (without city) and Meridian Township between 1904 and 1910 resulted largely from the separate enumeration of East Lansing in 1910, it having been separated from these two townships and incorporated in 1907.

In accordance with population trends the increase in the number of urban dwellings between 1875 and 1910 was far in excess of that of rural dwellings (Table 17). Between 1870 and 1910 the number of dwellings in Lansing increased more than five fold reaching a total of 6,849 in 1910 (Tables 4 and 17). This was nearly 53 per cent of the 12,930 dwellings in the whole county in 1910, whereas the city's share had been only 19.6 per cent in 1870. The major part of the new building in the whole county had been in Lansing, especially after 1900. Out of 3,125 houses added to the county total between 1900 and 1910, all but 80 were in Lansing.

The distribution of 3,952 rural dwellings in 1895 is shown by Figure 15 and Table 5. In 1894, according to the census, there were 5,821 houses outside of Lansing (Table 17). The difference between these two figures gives an indication of the number of houses in villages of the county. The same holds true for the difference between the 6,082 houses outside of Lansing in 1910 and the 4,229 rural dwellings in 1910 whose distribution is shown in Figure 16 and Table 5.

An accurate comparison of the number of rural dwellings in each township in 1895 and 1910 is not possible because 1910 figures are not available for several of the townships. It is probable, however, that in most townships

TABLE 17

NUMBER OF DWELLINGS AND FAMILIES, LANSING AND INGHAM COUNTY

1884-1910

	Ingham County				Lansing			
	No. of Dwell.	No. of Families	Average Persons to a Dwell.	Average Persons to a Family	No. of Dwell.	No. of Families	Average Persons to a Dwell.	Average Persons to a Family
1910	12,930	13,530		3.09	6,849	7,328		
1904	10,731	11,032	4.06	3.95	4,665	4,910	4.34	4.13
1900	9,905	10,085			3,804	3,972		
1894	9,375	9,801	4.23	4.05	3,454	3,655	4.59	4.34
1890	8,602	8,784	4.38	2.29	2,817	2,941	4.65	4.45
1884	6,952[a]	8,048	4.8	4.2	1,987	2,100	4.8	4.6

a. Exclusive of Mason City and White Oak Township.

Sources: Census of the State of Michigan: 1884, Vol. I, pp. 58-61; Eleventh Census of the United States: 1890, Population, Part I, pp. 921, 938; Census of the State of Michigan: 1894, Vol. I, pp. 644; Twelveth Census of the United States: 1900, Vol. II, Population, Part 2, pp. 449 and 629-647; Census of the State of Michigan, 1904, Vol. II, p. 740; Thirteenth Census of the United States: 1910, Vol. II, pp.938-939.

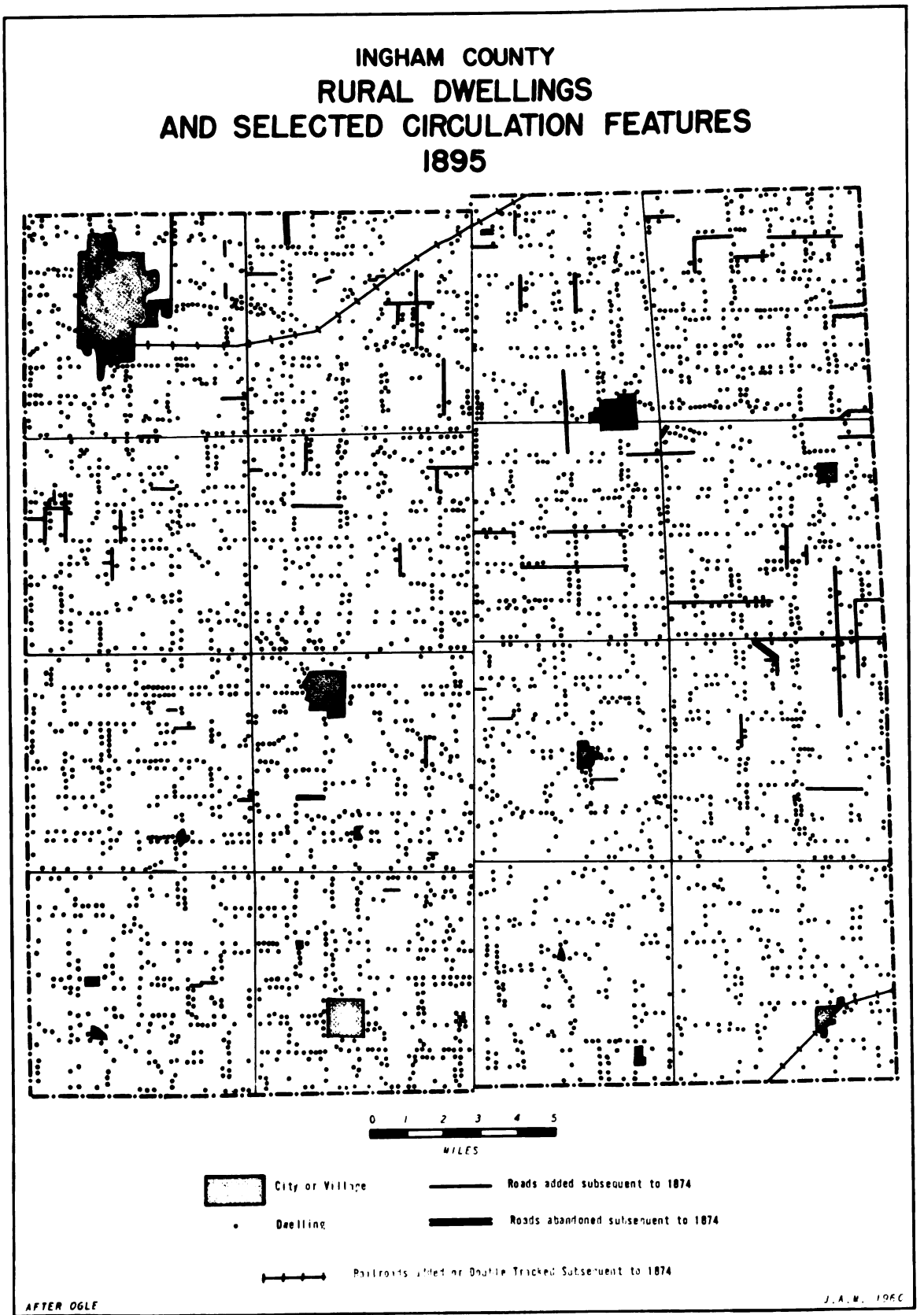

INGHAM COUNTY
RURAL DWELLINGS
AND SELECTED CIRCULATION FEATURES
1895
0 1 2 3 4 5
MILES
City or Village
Dwelling
Roads added subsequent to 1874
Roads abandoned subsequent to 1874
Railroads Added or Double Tracked Subsequent to 1874
AFTER OGLE
J.A.M. 1965

Fig. 15

there was only a small increase, if any, in the number of rural homes during this period. In some townships there was a loss, but in no case was this more than a few houses. Lansing Township with 68 additions, Delhi Township with 66 and Aurelius Township with 65 had the largest gains in number of residences (Table 5). In the case of Aurelius Township the gain may have been somewhat more apparent than real because the 1910 count included some dwellings in Aurelius Center which were not included in the 1895 tabulation because the map did not show houses in the village.

The townships with the largest gains for the whole period, 1874 to 1910, and the approximate number of rural dwellings added in each were: Delhi, 111; Lansing, 110; Locke, 97; Leroy, 53; and Wheatfield, 51 (Table 5). All of these townships were in the northern half of the county which was settled last. Bunker Hill and Stockbridge apparently had small loses of rural dwellings during the same years.

Except for the larger swampy areas in Bunker Hill and Stockbridge Townships, and small patches of poorly drained land elsewhere, dwellings in 1910 were found on all kinds of soil. Areas especially notable for additional settlement between 1874 and 1910 were the swamp lands of Leroy and White Oak Townships. These were

drained and roads built through them by 1895 (Fig. 15 shows roads added, 1874 to 1895). Bare of settlement in 1874, they were well settled by 1910 (Figs. 14 and 16).

In addition to the problem of poor drainage, the quality of communication remained a major factor in determining the settlement pattern between 1874 and 1910. Homesteads were established more often along the improved highways, causing the development of a string type of distribution in some parts of the county. This was particularly true along Grand River Road (U.S. 16), the Lansing to Jackson road (U.S. 127) and along the county road between Mason, Dansville and Stockbridge (Fig. 16).

The number of rural dwellings in 1910, however, unlike the numbers given for previous years, does not represent only rural farm dwellings. It also includes an unknown number of rural non-farm homes, especially in Lansing, Meridian, and Delhi townships (Fig. 16). Many of these were established between 1895 and 1910 along the electric interurban lines in the vicinity of Lansing. The greatest development, as can be seen in Figure 16, was apparently between Lansing and East Lansing, between Lansing and Waverly Park, and along the Lansing and Jackson interurban line to the south of Lansing. Thus, the first significant impetus to rural non-farm settlement was given by the electric cars which provided fast and regular commuting service to and from Lansing. It

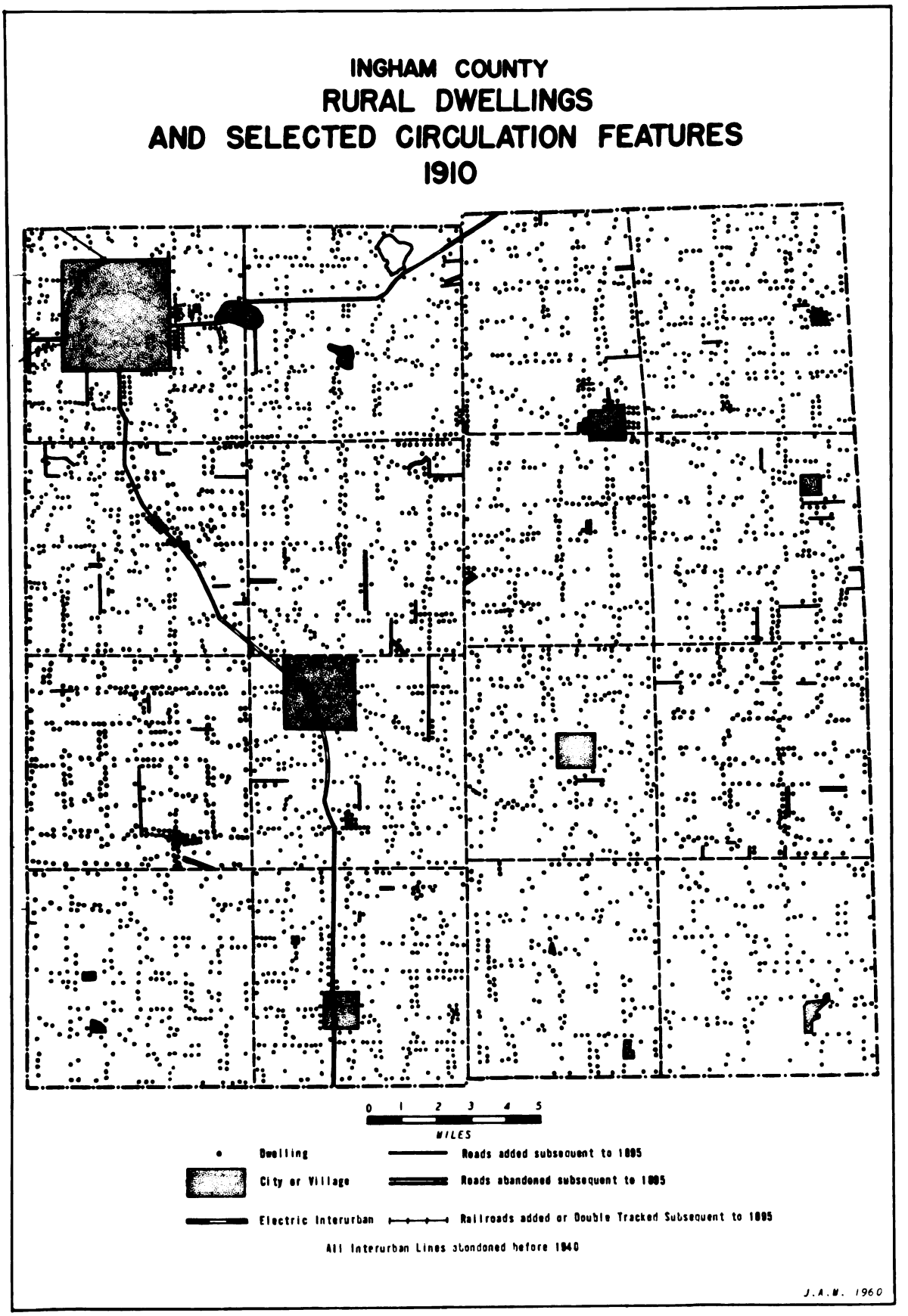

INGHAM COUNTY
RURAL DWELLINGS
AND SELECTED CIRCULATION FEATURES
1910
0 1 2 3 4 5
MILES
Dwelling
City or Village
Electric Interurban
Roads added subsequent to 1895
Roads abandoned subsequent to 1895
Railroads added or Double Tracked Subsequent to 1895
All Interurban Lines abandoned before 1940
J.A.W. 1960

Fig. 16

can be concluded, nevertheless, that the number of rural farm dwellings reached its maximum about 1910 and was nearly 4,229, as shown in Figure 16 and Table 5.(Plate 5).

Several factors in the nature of the county's growth had by 1910 become effective in limiting further rural settlement. By 1900 all public lands available at nominal costs had passed into private hands (Table 18). Thus

TABLE 18

NUMBER OF ACRES OF LAND SUBJECT TO ENTRY

1879-1900

Date	Swamp	School	Total
1879	436	120	556
1881[a]	760	40	800
1889	200	80	280
1900	000	40[b]	40

a. The increase results from tax deliquencies and the failure of purchasers to homestead in the given time.

b. Primary school land withdrawn from market to be appraised.

Sources: Michigan Dept. of State, The Red Book for the Thirteenth Legislature and Manual for the State of Michigan, 1879-1880 (Lansing: W.S.George and Co., 1879), pp. 118-312; Legislative Manual of the State of Michigan, 1881 (Lansing: W.S. George and Co., 1881), p. 279; Official Directory and Legislative Manual of the State of Michigan, 1880-1900 (Lansing: D. D. Thorp and Co., 1889), pp. 482-483; Michigan Official Directory and Legislative Manual, 1901-1902 (Lansing: Wynkoop, Hallenbeck Co., 1901), p. 333.

ended the great attraction for the farmer to settle in the county. Added to this was the increasing use of machinery on the farms, making it possible for fewer hands

to take care of the land. The size of farms began to increase as a consequence. The factor of major importance, however, was the opportunity of more remunerative work in the expanding industries of Lansing and the other attractions of life in the city over that in the county.

Agriculture

During the period 1875 to 1910 farm output and farm acreage increased appreciably and the nature of farm economy changed again. There was a shift from grain farming to dairy and poultry farming, from a high per cent of owner operated farms towards farm tenancy, and from the use of horse-drawn farm implements to the use of gasoline powered machinery. The average size of farms increased, as did also the amount of improved land used for crops and pasture on each farm.

Until the year 1900 wheat remained the most important cash crop of the farmer, but between 1900 and 1910 there was a drop of 86 per cent in wheat acreage and nearly the same decrease in the crop harvested (Table 19). Paralleling this was increased cultivation and production of corn, oats, barley and other forage crops and grasses. Corn production, for example, more than doubled between 1874 and 1910, when it reached 1,323,432 bushels. Oat yield increased from 416,011 bushels in 1880 to 979,048 bushels in 1910, and barley from 17,917 bushels to

67,914 during the same period. Hay cut rose from 33,400 in 1874 to 82,275 tons in 1910 (Tables 7 and 19). These production trends are indicative of the increasing emphasis on the animal industries, particularly dairying, on Ingham County farms.

Rye, bean, and potato acreage and yields fluctuated considerably from one census year to another, but in general it can be said that during the period 1875 to 1910 these three crops, typical of the dairy region of the United States, became firmly fixed in the agricultural economy of the county. Between 1870 and 1910 rye production increased from 654 bushels to 134,534; bean production from 4,889 bushels to 224,123; and potato production from 238,655 bushels to 357,638 (Tables 7 and 19). All three crops had gained increased importance as sources of cash income, but this was especially true of rye and beans which were primarily grown as cash crops.

It is of interest that the making of maple sugar declined still further during this period, the output amounting to only 8,562 pounds in 1910 as compared to 83,116 in 1874. The production of molasses, on the other hand, increased somewhat, while the harvest of buckwheat remained about the same in amount.

Statistics concerning fruit trees and their production are shown in Table 20. In general, it can be

TABLE 19 - AGRICULTURAL PRODUCE, INGHAM COUNTY, MICHIGAN - 1880-1910

	1880	1884	1890	1894	1900	1904	1910
Wheat							
Acres	49,257	45,417	37,248	38,907	56,846	13,255	7,925
Bushels	922,864	748,868	655,780	673,514	767,680	241,607	175,946
Indian Corn							
Acres	22,969	22,731	26,750	21,695	32,711	32,609	33,812
Bushels	776,777	366,896	788,535	941,239	913,830	1,202,171	1,323,432
Oats							
Acres	11,245	14,417	23,364	20,261	21,562	29,398	29,991
Bushels	416,011	529,767	881,043	654,023	769,220	1,086,381	979,048
Rye							
Acres	97	177	2,565	3,295	910	4,795	8,634
Bushels	1,645	2,798	50,391	44,448	14,440	70,066	134,534
Barley							
Acres	748	702	3,295	810	816	1,341	3,064
Bushels	17,917	16,125	97,235	18,550	19,070	33,246	67,914
Buchwheat							
Acres	803	315	1,171	875	375	539	730
Bushels	8,866	1,994	14,054	7,694	4,870	7,280	8,936
Beans							
Acres		928		12,232	9,370	19,611	6,000
Bushels		4,243		94,971	86,695	324,083	224,123
Potatoes							
Acres	2,413	2,644	3,130	2,765	3,069	2,708	3,165
Bushels	209,750	168,796	239,037	159,376	219,087	223,245	357,638
Peas							
Acres		145		75	70	64	48
Bushels		1,829		762	1,347	1,308	815
Maple Sugar Pounds		23,460	23,521	13,802	5,880	8,226	8,562
Molasses Gallons		2,679	4,635	4,774	3,150	4,887	10,428
Hay For Forage Acres			42,638		41,608		57,058
" " " Tons			53,554		50,551		82,275

Sources: Tenth Census of the United States: 1880, Agriculture, pp. 193-284; Census of the State of Michigan: 1884, Vol. II, pp. 139, 170-171; Eleventh Census of the United States: 1890, p. 370; Census of the State of Michigan: 1894, Vol. II, pp. 268-270; Twelvth Census of the United States: 1900, Vol. VI, Part 2, pp. 169,375; Census of the State of Michigan: 1904, Vol. II, pp. 204, 205, 258, 314, 315; Abstract of the Thirteenth Census of the United States: 1910 (With Supplement for Michigan), p. 661.

TABLE 20

FRUIT AND VEGETABLE PRODUCE, INGHAM COUNTY, MICHIGAN

1884-1910

	1884	1890	1894	1900*	1904	1910
Apple Orchards						
Bearing Trees	252,086	225,204		275,528	195,075	143,632
Bushels Produced	193,503	479,865	45,707	282,440	477,080	275,822
Peach Orchards						
Bearing Trees	9,821	6,598	15,643	262,524	22,257	16,352
Bushels Produced	2,470	1,737	4,698	1,056	2,601	1,078
Pears						
Bearing Trees		6,153	7,270	20,741	9,374	8,415
Bushels Produced		5,225	2,996	2,381	4,298	5,042
Plums and Prunes						
Bearing Trees			2,724	26,158	7,469	5,916
Bushels Produced			1,442	1,859	2,445	325
Cherries						
Bearing Trees		18,270		175,535	3,880	8,545
Bushels Produced		7,298		4,524	559	2,056
Vineyards						
Bearing Vines						4,604
Pounds of Grapes Produced	2,900		27,750			53,089
Small Fruits						
Acres						122
Bushels Produced						178,004
Nut Trees						1,485
Vegetables - Acres				1,015		1,283

Sources: Census of the State of Michigan: 1884, Vol. II, p. 231; Eleventh Census of the United States: 1890, Vol. II, p. 515; Census of the State of Michigan: 1894, Vol. II, pp. 402-405; Twelvth Census of the United States: 1900, Vol. VI, Part 2, p. 652; Census of the State of Michigan: 1904, Vol. II, pp. 418-419; Abstract of the Thirteenth Census of the United States: 1910 (with supplement for Michigan), p. 661

concluded that the largest acreage was used for fruit production around the turn of the century. After that the number of fruit trees and the production of fruit declined as specialized fruit areas, located where growing conditions were near optimum, developed elsewhere in Michigan and in other parts of the United States. Except for consumption on the farm where it was produced, the Ingham County fruit encountered increasingly stiff competition with fruit shipped in from the specialized producing regions. Apples remained the most important fruit crop in Ingham County in 1910 (Table 20).

The shift of the farm economy of the county to dairying is indicated by the increase in milk cows from 8,687 in 1874 to 13,489 in 1910 (Tables 9 and 21). This addition of 4,792 head compares with one of 9,972 cattle of all kinds, including milk cows, during the same period. Thus, 48 per cent of the rise in number of cattle was accounted for by milk cows. Cattle rearing for meat also gained importance, but more largely as an adjunct to the dairy industry, rather than as a primary activity. Some 15,177 cattle were sold or slaughtered in 1910 (Table 22). Most of these animals were probably either male calves, or over-age milk cows, and were thus a by-product of the dairy industry.

Faster transportation, the growth of a ready market in Lansing, and the perfection of refrigeration making

TABLE 21

DOMESTIC ANIMALS, INGHAM COUNTY, MICHIGAN

1880-1910

	1880	1884	1890	1894	1900	1910
Total Cattle	21,876	21,355	22,351	22,261	29,788	28,538
Milk Cows	9,218	9,480	10,920	10,601	11,714[b]	13,489
Other Cattle[a]	11,804	11,606	11,278	11,614	18,074	15,049
Work Oxen	854	280	153	46		
Horses, mules & asses	10,218	12,191	13,500	15,640	13,011	12,537
Goat & Sheep	76,498	107,518[d]	84,867	125,727[c]	106,094	107,741
Swine	29,101	26,919	26,351	23,544	24,991	30,132
Poultry						195,347
Colonies of Bees						2,425

a. Generally includes steers, bulls, calves, and yearling heifers
b. Only cows two years and over in age
c. All sheep included
d. Excludes spring lambs

Source: Tenth Census of the United States: 1880, General Statistics, pp. 156-157; Census of the State of Michigan: 1884, Vol. II, p. 69; Eleventh Census of the United States: 1890, Agriculture, Vol. V, pp. 252-333; Census of the State of Michigan: 1894, Vol. II, pp. 74-75; Twelveth Census of the United States: 1900, Vol. V, Part 1, pp. 448-449; Abstract of the Thirteenth Census of the United States: 1910 (with Supplement for Michigan), p. 645.

TABLE 22

DAIRY PRODUCE, INGHAM COUNTY, MICHIGAN

1880-1910

		1880	1890	1900	1904	1910*
Milk Produced	(Gal)		5,733,143	7,114,137	8,057,763	5,579,746
Milk Sold	(Gal)	121,130		1,663,713	2,329,876	2,056,246
Cream Sold	(Gal)			3,808	9,175	21,743
Butterfat Sold	(Lbs)					64,337
Butter Produced	(Lbs)	904,721	1,090,796	1,250,561	1,475,035	1,073,706
Butter Sold	(Lbs)			615,375	961,823	698,894
Cheese Produced	(Lbs)	3,157	2,050	112	610	6,676
Cheese Sold	(Lbs)				598	6,676
Poultry Raised	(No.)					224,803
Poultry Sold	(No.)					111,187
Eggs Sold	(No.)					752,543
Honey Produced	(Lbs)			25,290		47,368
Wax Produced	(Lbs)			470		668
Fleece Shorn	(No.)			67,635	58,370	67,666

*Also in 1910, there were 6,192 calves, 8,925 other cattle, 33,012 swine, and 39,273 sheep or goats sold or slaughtered and receipts from the sale of animals was $1,035,371.

Sources: Tenth Census of the State of Michigan: 1880, Vol. II, pp. 157-285; Eleventh Census of the United States: 1890, Agriculture Vol. II, p. 292; Twelveth Census of the United States: 1900, Vol. V, Part 2, p. 653; Census of the State of Michigan:1904, Vol. II, pp. 418-419, 542; Abstract of the Thirteenth Census of the United States: 1910 (With Supplement for Michigan), p. 653.

longer storage of perishable products possible were all factors contributing to an expanding sale of dairy products. The combined sale of all dairy products by farmers was no doubt greater in 1910 than at any previous time, although the amount of milk produced and the amount of butter made and sold by the farmers was larger in 1904, according to the census of that year (Table 22). The decrease in amount of butter sold off the farm between 1904 and 1910 was at least partly offset by increased sales of cream and butterfat. Since 1904 the amount of butter made on farms has decreased to almost nothing, as the manufacture of creamery butter expanded. The decrease in production and sale of milk between 1904 and 1910 (Table 22) is difficult to explain except on the basis of an overstatement in the census of 1904, this being a state census rather than a national one. The increase between 1904 and 1910 in the amount of cheese made and sold by the farmer is still another aspect of the expanding dairy industry.

No oxen were recorded by the census after 1894, when 46 were counted (Table 21). This number compared with 939 in 1874 (Table 9). The number of horses, mules and asses, however, increased from 7,679 in 1874 to 15,640 in 1894. The all time peak in number of these animals in the county was reached around 1894; at about the same time the use of oxen as work animals ceased.

After this, a decline in the number of horses set in. They were replaced by automobile passenger car and truck transportation in both the city and the country and by increasing use of tractors and gasoline engines on the farm. There were 12,537 horses in Ingham County in 1910 (Table 21).

Although the numbers of swine and of sheep and goats in Ingham County fluctuated from one census year to another between 1874 and 1910, there were many more of both kinds of animals at the end of the period than at the beginning (Tables 9 and 21). The count of swine jumped from 11,588 in 1874 to 29,101 in 1880, a figure that was not exceeded in any subsequent census until 1910 when there were 30,132 head. Strict comparison of the numbers of sheep and goats at different times is difficult because in some census years lambs were included and in others they were excluded. The 54,545 head recorded in 1874 had increased to 107,741 in 1910. The increase was most rapid between 1874 and 1884 when there were 107,518 animals excluding spring lambs. Possibly, the total number of sheep reached a peak in 1894 when 125,727 were tabulated.

The importance to the farmers of Ingham County of the sale of animals and animal products is apparent from the statistics of 1910. That year 6,192 calves, 8,925 other cattle, 33,012 swine, and 39,273 sheep were

sold or slaughtered and receipts from the sale of these animals totaled $1,035,371. There were also 67,666 fleeces shorn and 11,187 poultry and 752,543 eggs sold (Table 22). Comparative statistics for earlier years are not available.

The largest number of farms and the largest acreage in farms ever recorded in Ingham County was by the census of 1900. At that time there were 3,815 farms and 346,444 acres in farms, or an average of nearly 91 acres per farm (Table 23). A reduction in number of farms subsequent to 1900 was paralleled by an increase in average size of farms. In 1910 there were 3,508 farms. These averaged almost 95 acres in size and 71 acres of improved land each. Because of increasing use of mechanized equipment the farmer was now able to take care of a larger acreage with less work and more profit than had previously been possible.

This was probably one reason why the number of tenant operated farms increased from 414 in 1880 to 739 in 1910, while owner operated farms decreased from 3,059 to 2,736 in the same period (Table 23). The greater productivity of the farm in 1910 made it possible for it to support both an owner and a tenant. Also, by 1910 many of the original owners had retired and were living in Lansing or one of the villages of the county. In still other

TABLE 23

OPERATOR STATUS AND NUMBER AND SIZE OF FARMS, INGHAM COUNTY, MICHIGAN

1880-1910

	1880	1884	1890	1894	1900	1904	1910
Land in Farms Acres		325,499	316,603	317,217	346,444	322,419	333,095
Unimproved Land in Farms Acres		105,144	91,810	42,235		86,813	50,363
Woodland in Farms Acres		64,699*		42,662			36,654
Percentage of Land in Farms							94.1
No. of Farms	3,473	3,463	3,509	3,493	3,815	3,329	3,508
Owner Operated	3,059	3,029	2,977	2,816	2,724	2,644	2,736
Tenant Operated	414	434	532	677	672	677	739
Manager Operated					36		33
Percentage of Owner Operated Farms	89.6	85.7	82.8	76.0	81.4	73.3	78.0

*Included in unimproved land

Sources: Tenth Census of the United States: 1880, Vol. III, pp. 62-63; Census of the State of Michigan: 1884, Vol. II, p. 24; Eleventh Census of the United States: 1890, Agriculture, Vol. II, pp. 152-153 and 213; Census of the State of Michigan: 1894, Vol. II, p. 30; Twelvth Census of the United States: 1900, Vol. V, Part 1, pp. 92-93 and 282, 448; Census of the State of Michigan: 1904, Vol. II, pp. 26-27; Thirteenth Census of the United States: 1910 (with Supplement for Michigan), pp. 653 and 645.

cases ownership of the land had passed into the hands of bankers and other investors.

By 1910 farming practices on the whole had greatly improved. The size of the fields and the type of soil were being given greater attention than ever before so that the crops were better suited to the land on which they were grown. Farm layout varied with the nature of the farming engaged in. Farming was becoming more scientific in these and other ways with the result that crop yields per unit of land used were increasing.

The rural landscape was going through a period of transition. Rail fences were being replaced by better wire fences. More commodious barns, machinery storage sheds, and silos were being added to the farmsteads. The amount of farm woodland was decreasing; that of cropped land and pasture increasing. The earlier isolation of the rural dweller was being lessened by automobiles and telephones. Even electricity had reached many farms by 1910. Ingham County farmers were well on their way to the practice of the type of scientific agriculture which is characteristic today.

Transportation

Industrial, agricultural, and population growth of the county necessitated improvements in the means of communication. Although some addition to road and railroad mileages were made, the real achievements in trans-

portation during the years 1874 to 1910 were the betterment of the facilities already available and the building of electric interurban lines.

Roads

The condition of roads in general remained poor prior to 1883. In that year the State Legislature took the first step towards organized road maintenance.[8] After that, upkeep of the roads slowly improved until 1905 when formation of a State Highway Department was authorized. This set the stage for the vast improvement of roads and highways that has occurred in more recent times. Pressures brought on government by the public for better roads were created primarily by the increasing use of the automobile.

The Legislative Act of 1883 imposed a one day per year road labor requirement upon all able bodied males between the ages of 21 and 50.[9] It further required the construction and maintenance of side walks four feet wide along both sides of public highways.[10] In 1885 additional legislation provided for the improvement of existing roads by leveling, graveling, and turnpiking and by providing adequate drainage facilities.[11]

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8. Stockman, op. cit, pages not numbered.
9. Michigan, Dept. of State, Michigan Public Acts, 1883, No. 12, Sec. 10, p. 8.
10. Ibid., No. 60, Sec. 1, p. .
11. Michigan, Dept. of State, Public Acts of Michigan, 1885, p. 215.

In 1895 a township system of road maintenance was created under which an elected township road commissioner and his deputy were charged with building and keeping the township roads in repair. Any money necessary to finance the improvements was to be raised through town meetings. Later on a road district system was developed for the township.[12] According to this plan, the township commissioner divided his township into as many districts as necessary and each district elected an overseer whose duty it was to see that the men of the district worked out their road tax. These regulations left much to be desired, however, for the poorly paid job of district overseer was often handled badly and the workers who had elected the overseer were sometimes permitted to evade their responsibilities or to turn working hours into a social gathering. Consequently, the condition of most roads did not show much improvement before the turn of the century.

The year 1896-1897 can be used as the one that really marks the beginning of the good roads movement.[13] It was at this time that the State Government, in response to public agitation for better roads, appointed a committee

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12. Stockman, op. cit., pages not numbered.

13. Frank, F. Rogers, History of the Michigan State Highway Department, 1905-1933 (Lansing, Franklin DeKleine Co., 1933), pp. 9-16.

to investigate the matter. After some time had passed this committee formulated a plan and presented it to the State Legislature. Then it was found that the State Constitution would have to be changed before the plan could be adopted.[14] Consequently, a constitutional amendment was presented to the people of Michigan, and was passed in 1905, which gave the Legislature the right to form a State Highway Department. Following this, the first State Award Law was passed by the Legislature.[15] According to this law, the State of Michigan would contribute funds for township road construction provided specifications set by the State Highway Department were fulfilled.

Certain other efforts to improve the already existing road regulations were also made. The township road district system, having proved unsatisfactory, was abolished in 1907. After that date the payment of road taxes had to be made in money rather than in labor. In 1909 the width of the public highway from edge to edge was fixed at four rods, thus making them wide enough for efficient service.[16]

By 1910 many roads were surfaced either with a clay-gravel mixture, or by gravel and broken stone. (Plate 6). The County had some 68 miles of graveled road in 1897[17] and

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14. Ibid., p. 14.
15. Ibid., pp. 19-28.
16. Michigan, Dept. of State, Public Acts of Michigan, 1909, p. 512.
17. J. F. Nellist, Map of the Roads of Michigan, 1897.



Plate 5 Farm home in Alaiedon Township, built about 1910.



Plate 6 Abandoned gravel pit in the Mason esker. Through the years so much gravel has been removed from the esker for ballast and construction purposes that this classic example of a type of glacial deposition has been largely destroyed.

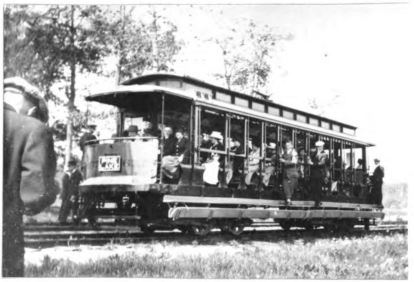


Plate 7 Open car on the Lansing and Pine Lake Electric Line used during the summer to carry resorters to and from the amusement park and cottage area which developed on the shores of Pine Lake (now called Lake Lansing).



Plate 8 Reo Motor Co. buildings, constructed during the early part of the century, appear antiquated today.

nearly all roads along section lines were termed "good" in 1910.[18] The number of State Reward Roads built in the county before 1910 was small, however, amounting to only 5.16 miles built at a cost of $5,730. Of this, three miles were in Lansing Township and the rest in Meridian, Alaiedon, and White Oak Townships.

Equipment for road work in 1910, though simple by present day standards, was considerably better than had been available earlier. An example was a road drag adopted for use about 1907. This was made of a couple of planks bolted edgewise to a frame in such a manner that when dragged along the road it threw the sand, gravel and other surface material towards the center of the road. This piece of equipment made it possible to keep the roads in high crown condition at a cost of $5 a mile per year; formerly a per mile expenditure of $25 to $30 a year had been necessary for the same results.[19]

The location of roads added or abandoned between 1874 and 1895 is shown in Figure 15, and the same information for the period 1895 to 1910 in Figure 16. Additions before 1895 were greatest, and were mostly in the later settled northern townships, especially in Leroy, Locke, and Wheatfield Townships. The smaller amount of new road

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18. U. S. Geological Survey, Lansing, Mason and Fowlerville Quadrangles, 1908-1910.

19. Stockman, op. cit., pages not numbered.

mileage added between 1895 and 1910 was distributed in all parts of the county except there was none in the southern tier of townships. Most of the roads were developed along section lines; very few along quarter sections.[20] Only a few short stretches of road was abandoned between 1874 and 1910. The major contribution made during this period was the great improvement of heavily traveled roads, especially those between the urban centers. This does not show on the maps.

Railroads

In 1879 the Chicago and Lake Huron Railroad was extended from Lansing to Flint.[21] This provided a direct route from Lansing to Flint and thence to Port Huron, and completed the railroad system converging on the Capital City. Some 15 miles of double track line were in the county, passing through Lansing, Meridian, and Williamston Townships (Fig. 15).

Another piece of new railroad in the county was a branch of the Grand Trunk Railroad which was built through Stockbridge township prior to 1895 (Fig. 15). Although it was a single track stretch of less than six miles length in Ingham County, it proved important to the prosperity of

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20. U. S. Geological Survey, Lansing, Mason and Fowlerville Quadrangles, Surveyed between 1908-1911.
21. Durant, op. cit., pp. 96-97.

the southeastern corner of the county. Prior to the opening of this line farm products from Stockbridge, White Oak and the eastern part of Bunker Hill Townships had to be hauled by wagon a half dozen miles, or more, to Leslie, Webberville, Unadilla, or some other nearby railroad station for shipment. The new railroad station in the village of Stockbridge was closer and provided direct connections by rail with Detroit in the east and Jackson to the southwest.

A by-pass line built on the western edge of the city of Lansing was the third addition of track between 1874 and 1910 that should be mentioned. A single track was extended from the Grand Trunk Railroad in Section 20 of Lansing Township, north, avoiding the thickly populated part of the city, to join the Pere Marquette line in Section 5 (Fig. 16). With this addition the railroads pattern of Ingham County were completed as it stands today.

A notable difference between a railroad map of 1875 and one of 1910 would be the change in names of the railroads shown.[22] The changes of names resulted primarily

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22. The Peninsular Railroad extending west of Lansing was changed to the Grand Trunk; The Northern Central Michigan to the Lakeshore and Michigan Southern; the Lansing, Jackson and Saginaw to the Michigan Central Railroad (Saginaw Division); the Detroit, Lansing and Lake Michigan to the Pere Marquette; and the Grand River Valley Railroad, passing through Onondaga, to the Michigan Central.

from efforts to consolidate smaller companies in order to obtain more economical operation.[23] Both the condition and the freight carrying capacity of the railroads was improved over the years. By 1910 the trains were carrying automobile and other manufactured goods, as well as farm products such as livestock, poultry, wool, hides and grain, out of Ingham County, and their return cargo included fruit and vegetables, liquor, game, fish, iron, coke, coal, stone, sand, household goods and furniture.[24]

Electric Interurban Lines

An important development near the end of the period was the construction of electric interurban lines, which supplemented the steam railroads. The Lansing and Jackson Electric Line started operation in 1909. Its 37 miles of track through Leslie, Vevay, Delhi and Lansing Townships made it the longest and most important interurban line in Ingham County. Some 181 cars carried both passenger and freight over this line in 1910.[25]

Next in length and importance was the Lansing and Pine Lake Electric Line. It linked Lansing to Haslett and

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23. C. S. Duncan, Getting Railroad Facts Straight, (New York: The Association of Rail Executives, 861 Broadway, Circa 1920-22), p. 2.

24. Michigan Railroad Commission, The Thirteenth Annual Report, 1909 (Lansing: Wynkoop Hallenbeck Crawford Co., 1910), pp. 544-735.

25. Michigan Railroad Commission, The Fourteenth Annual Report, 1910 (Lansing: Wynkoop Hallenbeck Crawford Co., 1911), p. 62.

carried milk and other freight, as well as passengers. It passed through a developing residential area and had a significant part in the establishment of rural non-farm homes in Lansing and Meridian Townships(Plate 7).

The interurban lines running north from Lansing to St. Johns and west from Lansing to Waverly Park had little mileage in the county and were important mainly to the people of Lansing and Lansing Township.

In 1910 the steam and electric railroads provided the most economical, fast and comfortable transportation available. Although the roads were somewhat improved, travel on them was still slow and costly since horse-drawn vehicles were usually used. The automobile and the truck were just coming into use and they were still so expensive that most people could not afford to buy them. The railroads, therefore, were the most significant means of transportation available in 1910.

Towns, Villages and Hamlets

The agglomerated settlements of this period other than Lansing, fall into three catagories: towns with a population between 1,000 to 2,000,villages with 50 to 800 inhabitants, and hamlets with less than 50 people.

As discussed earlier, Lansing was the only city of any size and the only center of significant industrial and commercial importance in the county. East Lansing,

incorporated as a city in 1907, had a resident population of 802 people in 1910 and over 1,000 students at the college who were not enumerated in the census of that year. Thus East Lansing was actually a town of over 1,800 people. It was unique among the centers of the county at that time in that its primary function was education. A drug store, one or two general stores and a repair shop catered to the needs of the faculty and students. The lack here of business activities usually found in other towns of the same size resulted from the close proximity to Lansing which it was connected with by an electric line.

Leslie, Mason and Williamston were other places that could be classified as towns in 1910. None of these centers grew much during the years 1880 to 1910. All three had smaller populations at the end of the period than at some time during it, and both Mason and Leslie had fewer people in 1910 than they had in 1880 (Table 15). The size of the hinterland served tended to limit the growth of these places, as well as that of most villages and hamlets in the county. Then too, easier access from the country to the major center of Lansing made it possible for establishments in that city to offer growing competition to the business places in other places in the county. Most of the smaller villages, as for example, Dansville and Webberville, lost population because the farming

communities they served were also losing people to Lansing and to other urban centers in the state. For the most part, life and activities in the towns, villages, and hamlets of the county did not change significantly between 1880 and 1910, so further discussion is not warranted.

Manufactures

Between 1875 and 1910 the change of greatest significance in Ingham County was the revolution in the manufacturing industry. Actually, until 1884 the nature of goods produced remained about the same as in the previous period. The years between 1884 and 1900 were ones of experimentation and competition in which the industrial future of the county was in the balance, but by the turn of the century,or soon thereafter,Lansing had become a home of mechanical industries in general, and the automobile industry in particular.

Michigan had for many years been one of the leading manufacturing states in the Union. The early development of industry in the state was primarily due to its extensive forest and mineral resources, its location in relation to the Great Lakes, and the market supplied by its rapidly expanding population. Prior to 1884, however, Ingham County had not shared too much in this activity and had only a few industries of more than local significance. The manufactures of the county were processed food, agricultural implements,

wagons and carriages, bricks, wooden products and other items mainly of a consumer goods nature needed for every day life (Table 23). But after 1884 large scale manufacturing activities of national importance did develop in the county, primarily because of the inventive mind and business acumen of Ransom E. Olds, a citizen of Lansing.

One of the four engine and machine shops that had been added to Lansing manufacturing plants by 1894 was the Olds' Gasoline Co. These engine works provided laboratories for the development of the automobile engine and other power machinery and soon Lansing had developed importance for the manufacture of gas engines and other mechanized farm implements. The outstanding contribution to this activity was made in 1892 when the Olds' Gasoline Co. first marketed a stationary internal combustion engine using gasoline direct in the cylinders. This engine, the first to use gasoline in this way,[26] quickly became very popular. Soon improved models of gasoline engines were being manufactured by the Olds' Gasoline Co., the Bates and Edmonds Gas Engine Co., the New Way Motor Co., the Hildreth Manufacturing Co., the Ideal Air Cooled Engine Co., and many others.[27] The early extent and importance of the engine industry can be estimated from the fact that 2,000 engines

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26. J. P. Edmonds, The Gasoline Age, (Lansing: Franklin DeKeline Co., 1942), p. 4

27. Ibid., p. 143.

were sold in 1904 by the Olds' firm alone. By 1910 Lansing had become one of the leading engine manufacturing centers in the World.

The earliest Lansing experiments in the production of an automobile were made in the River Street shop of Pliny Olds, father of Ransom E. Olds. The first horseless carriage produced here was made in 1885. It was a three-wheeled vehicle with a steam engine, fired with gasoline, boxed inside the body of the carriage. The whole thing operated by a series of crude gears and levers.[28] This vehicle was the forerunner of the mass production of automobiles in Ingham County.

Although experiments for making horseless buggies were going on in other parts of the United States, the distinction of being the first successful seller of an automobile belongs to Ransom E. Olds.[29] In 1891 he produced a four wheeled steam-driven carriage with a float boiler of his own designing. This machine ran at a speed of ten miles an hour and attracted attention by being described in the "Scientific American". The car was sold for $300 to the

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28. J. W. Scoville, Behavior of the Automobile Industry in Depression, Address delivered at the meeting of the Economic Society, Roosevelt Hotel, New York, Dec. 30, 1935.

29. J. B. Rae, American Automobile Manufacturers (New York: Clinton Co., 1959), p. 3.

Francis Thomas Co., of England and was shipped to their office in Bombay, India.[30] Thus the first recorded sale of an American manufactured self-propelled vehicle was this one made from Lansing.

In 1897 the Olds Motor Vehicle Co. was incorporated. It employed 165 people and produced four cars of the above description.[31] One of these cars was sold in California, another in Chattanooga, Tennessee, the third in Grand Rapids, Michigan and the fourth was kept by Mr. Olds for personal use.[32] The Olds Motor Vehicle Co. did not, however, prove to be a success. At that time enough capital could not be raised within the county and the city of Lansing was considered to be too small either to supply enough skilled labor or to provide housing facilities for a greatly increased industrial labor force.[33]

A new company under the name of the Olds Motor Works was established in 1899. Largely because of an offer of financial backing, the new plant was located in Detroit and it was there that the famous curved-dash runabout was first produced and marketed. In March, 1901, the Detroit plant was burned and the company moved back to Lansing

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30. Arthur Pounds, The Turning Wheel (Garden City, New York; Doubleday, Doran & Co., 1934), p. 35.

31. D. Yarnell, Auto Pioneering (Lansing: Franklin DeKleine Co., 1949), p. 65.

32. R. E. Olds, "Olds Blazed Trail to Fame with Car", Old Timers News (New York, 1946), Vol. 3, No. 4, pp. 10-11.

33. Rae, op. cit., p. 30, and Pounds, op. cit., p. 51.

when the City Chamber of Commerce offered 52 acres of land free of cost on the Agricultural Society's Fair grounds.[34] The plant at Detroit was also rebuilt.

The Olds Company produced 600 cars during the remaining months in 1901; 2,500 in 1902; 4,000 in 1903; 5,000 in 1904; and 6,500 in 1905.[35] Thus, the curved-dash Oldsmobile was the first low-priced car to be produced in quantity. In 1902 when the Olds plant at Lansing was building 2,000 units, there was a total of less than 1,000 cars registered in New York, the richest state in the Union. Oldsmobile production of 4000 units in 1903 (the year Ford Motor Co. was organized) was by far the largest for any American manufacturer.[36]

Ransom E. Olds left the Olds Motor Works in 1904 and accepted an offer made by the business men of Lansing to pay $170,000 in cash and $130,000 in property to establish the Reo Motor Co., named after Olds' initials. At the end of 1905 Reo boasted of sales worth $1,374,000, having sold nearly 5,000 Reo Runabouts.[37] Reo was the first large and successful automobile company with its quarters exclusively at Lansing (Plate 8).

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34. Yarnell, op. cit., p. 89.
35. Pounds, op. cit., p. 54.
36. Ibid., p. 56.
37. Rae, op. cit., p. 32, and Yarnell, op. cit. pp. 166-167.

In 1905 the chief seat of activity for the Olds Company was moved to Lansing, where it has remained ever since.[38] Therefore, the combined output of Olds and Reo made Lansing the leading center of production of automobiles in the nation in 1905. Both companies were catering to foreign markets as well as to domestic ones. Olds were shipped to England, France and Russia,[39] and Reos to England, Wales and many other European destinations.[40]

The fever for making horseless buggies was so great that around the turn of the century there were 965 auto factories incorporated in the United States.[41] Several companies besides the two mentioned above started the manufacture of automobiles in Lansing. The Bates Company, organized in 1902, the Clark Power Wagon Co., organized in 1905, and the New Way Motor Co., organized in 1907, were three of the more notable ones. Since the auto-making activities of these firms were short lived, statistics about their actual output are not available.

With the growth of the automobile industry many subsidiary firms and machine shops specializing in the manufacture of parts came into existence. The Michigan

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38. Pounds, op. cit., p. 63.
39. Harnell, op. cit., p. 177.
40. Pounds, op. cit., p. 64.
41. Edmonds, The Gasoline Age, op. cit., p. 5.

Screw Co. and the Atlas Forge Co. are two outstanding examples. They were patronized by Reo Motor Co., and so gained in importance with the growth of that company.[42]

In 1905 the Olds plant turned to the production of large luxury cars. The change of policy brought financial problems and by 1908 the output of the company was reduced to 1,055 cars.[43] The same year the Buick, Cadillac, Oakland, and Oldsmobile plants were integrated into the General Motors Corporation.

Up to 1910, however, the two chief automobile producers of the nation, namely the Oldsmobile branch of the General Motors Corporation and the Reo Motor Co., were both in Lansing. The Oldsmobile plant was producing cars at a reduced rate and had lost its position as the leading motor car manufacturer. Reo, which was still putting out low-priced cars in large quantities, besides the Reo Speed Wagon, one of the best trucks in the market, had moved into first place.[44] Although the Henry Ford Model T had first appeared in 1908, it was not until 1910 that Ford's production was to equal that of the Reo Company.[45]

Thus, the era of Lansing's supremacy in numerical production of automobiles had come to an end by 1911.

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42. Yarnell, op. cit., p. 64.
43. Edmonds, Early Lansing History, op. cit., p. 149.
44. Ibid., p. 149.
45. Yarnell, op. cit., p. 18.

The leadership of Henry Ford and other men of Detroit, and the geographic advantages of that city had shifted the center of the automobile industry to there from Lansing. Lansing had played an important role, however, in putting the nation on wheels. It was the first American city to reach quantity production, and it had helped greatly to bring the automobile from a classification of "the rich man's toy" to one of "every man's servant."

Occupations

Although the census of 1910 does not provide separate figures for Ingham County, the occupations listed for the labor force working in Lansing indicate that manufacturing industries and commerce were without doubt the largest employers in the county as a whole. Agriculture was still important in the economy, but it had by then lost its position as the largest source of livelihood. Of the 41.1 per cent of the population tabulated as rural in 1910, approximately 10 per cent lived in villages or in rural non-farm homes and most of these were probably dependent on work other than farming. In 1910, therefore, it may be assumed that less than 32 per cent of the labor force was employed on the 3,508 farms in the county.

During the preceding years Lansing had acquired a larger and larger proportion of the non-agricultural industry of Ingham County. In 1884, for example, the

County had 126 manufacturing plants with a labor force of 1,462 people. Of these, Lansing had only 16 employing 458 persons (Table 24). In 1894, however, 178 manufacturing establishments employing 1,985 workers were reported for Ingham County, and 77 of these with 1,220 employees were in Lansing (Table 25). By 1900, out of 293 manufacturing plants reported for Ingham County, 164 were situated in Lansing and employed 77 per cent of the County's total industrial labor force.[46] In 1910, there were 169 plants employing 6,152 people in Lansing.[47] Although the census of 1910 did not provide information about the total number of manufacturing establishments in the county, in the light of previous trends, there is little doubt that Lansing had a larger proportion of these and of the industrial labor force than ever before.

Ingham County, 1910

Ingham County of 1910 was much changed from that of 1875. Agriculture, which had previously dominated the economy of the county, had by then assumed a subordinate position to manufacturing. This happened even though there had been an appreciable increase in farm acreage and value of product, and an intensification through a

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46. U.S., Bureau of Census, Thirteenth Census of the United States, 1910, Manufactures, Vol. IX, p. 577.
47. Ibid.

TABLE 24

MANUFACTURING ESTABLISHMENTS, LANSING AND INGHAM COUNTY, MICHIGAN 1884

Kind of Industry or Major Product	Ingham County			Lansing City		
	Number	Hands Employed		Number	Hands Employed	
		M	F		M	F
Agricultural Implements	4	173	4	2	171	4
Breweries	1	9				
Barrels	6	37				
Bricks	2	160				
Butter	1	126				
Broom & Brush	1	Not Reported				
Flour & Grist Mills	14	64		5	31	
Foundary & Machine Shops	3	70		3	70	
Furniture	4	18				
Marble & Stone	2	4				
Sash, Door & Blind	4	71				
Saw Mills	25	122		1	3	
Shingle & Lath	1	8				
Staves, Heading & Hoops	4	31				
Tanneries	3	40				
Wagons & Carriages	11	175		2	97	
Wood Working Shops	3	80		3	80	
Other Industries	37	270				
Total	126	1,458	4	16	452	4

Sources: Census of the State of Michigan: 1884, Vol. 11, pp. 312-391.

TABLE 25
MANUFACTURING ESTABLISHMENTS, LANSING AND INGHAM COUNTY
1894

Kind of Industry or Major Product	Ingham County Number	Ingham County Hands Employed M	Ingham County Hands Employed F	Lansing City Number	Lansing City Hands Employed M	Lansing City Hands Employed F
Bakery & Confectionary	15	59	19	11	51	18
Barrel & Cooperage	5	59		2	53	
Blacksmith, Wagon & Carriage	27	302	1	12	264	1
Breweries	1	4		1	4	
Broom & Brush	1	12		1	12	
Brick & Tile	4	70	1	1	42	1
Butter & Cheese	2	10		3	76	15
Cigar	5	81	15	1	13	
Clothing	1	13				
Cider, Pickle & Vinegar	3	12		1	7	
Engine & Machine Shops	4	110		4	110	
Flour, Grist & Feed Mills	14	54	2	5	34	1
Foundaries & Machine Shops	3	6				
Furniture Factories	2	42		2	42	
Fruit & Vegetable Canning	10	69	83			
Gas	1	8		1	8	
Harness including Repair	13	22		5	11	
Launderies	6	14	24	4	11	
Marble & Stone	2	10		2	10	
Photographic Galleries	5	7		3	4	
Printing & Publishing	11	164	44	7	138	
Sash, Door, Blind & Planing	10	462		4	204	
Saw Mills	8	39				
Stave, Heading & Hoops	4	31				
Stove, Heating & Furnace	2	11		2	11	
Others	19	75	50	5	41	47
Total	178	1,746	239	77	1,146	83

Sources: Census of the State of Michigan: 1894, Vol. II, pp. 510-868.

shift from cash grain farming to mixed farming and dairying. Contrary to what might be expected, however, in view of this changed emphasis, farms in the county were fewer in number and of larger average size in 1910 than they had been in 1900 when the all-time peak number was reached. This is explained by the increased mechanization of farming operations that had taken place, which factor also helps to account for the slow decline in rural population which occurred in the county between 1880 and 1910.

In 1910 the total population of each township in the county, except Lansing, was less than its highest previous number. During the period 1880 to 1910, however, the population of the entire county had increased by 19,634; that of the city of Lansing alone by 22,910 (Table 15). The movement from country to city was well underway. Lansing in 1910 had nearly three-fifths the people of the county, as compared to only a quarter of those in 1880. Growth of the city had been especially rapid between 1900 and 1910, a decade during which Lansing had emerged as an important, and for several years the leading, automobile manufacturing center in the United States. As a consequence, most of the economic activity in Ingham County, other than agriculture, had come to be concentrated in Lansing, where, because of sale of motor cars abroad, business and cultural horizons had been raised beyond national

borders. This was the city that only seventy-five years earlier had been established in a wilderness.

For some rural dwellers in 1910, Lansing represented an expanding market for milk, meat, eggs and other agricultural produce, and they adjusted their farming operations to supply the products in demand. Others, particularly the young and ambitious, were attracted to Lansing because life in the city promised excitement, more opportunity for education, recreation, and other social advantages, and above all, greater financial reward than did that "down on the farm."

The flood tide of movement to the city had barely set in, however, before the beginnings of a counter flow caused by the appearance of a new way of life. This involved residing in the country, working in the city, and commuting between. In 1910 most of the rural non-farm dwellers employed in Lansing no doubt traveled between home and job on the newly established electric interurban lines. The automobile which was to dominate this movement in the future was still not numerous and the pressure which its use was to generate for better roads was just beginning. The roads, though much improved over earlier ones, were still inadequate for motor car traffic. The "automobile age" had dawned, however, and the automobile was to be a major factor in subsequent tremendous economic and social changes.

CHAPTER V

TWO WORLD WARS AND THE YEARS BETWEEN

The years, 1910 to 1945, began with one World War and ended with another. Between these there was an era of prosperity and development, which culminated about 1929, followed by the stagnating effects of the "Great Depression" of the 1930's. The demand created by the two wars and the more prosperous times for goods manufactured in Lansing so tremendously stimulated its industrial growth that, despite the long depression, the great expansion of urban living is the outstanding fact of life in Ingham County during these years.

Changes in industry from the previous period were more ones of degree than of kind. The automobile industry retained its position of leadership in value of product and as the largest employer. Never-the-less, production of such things as airplane parts, sundry metal goods, drugs, and various speciality items for both war and peace-time uses added diversity to the products manufactured.

Because of the increased employment possibilities in Lansing, that city absorbed most of the large population growth of the county. The size of the rural farm

population continued to decrease, even though there was a considerable gain in the total number of people living in the rural areas. This was particularly true in the northwestern part of the county, and resulted from a large increase in rural non-farm inhabitants whose support was largely provided by employment of the family heads in Lansing. Because of its location near Lansing and because of enlargement of Michigan State University, East Lansing also grew rapidly. Population gain in other towns and villages of the county, however, was generally small, if at all.

With the areal spread of Lansing and East Lansing which accompanied their population growth, and with the expansion of rural non-farm living, land in residential and recreational uses increased, leaving a smaller proportion of land devoted to agriculture. Because of better farming techniques and greater farm mechanization, crop yields increased appreciably, however, and this was reflected in a larger income from agriculture in the county.

From the standpoint of transportation, the landscape of Ingham County was altered by the complete disappearance of the electric interurban lines and the further development of an efficient system of improved roads and highways. Both were results of the ever larger use of automobiles and trucks. With the completion of the Capital City Air-

port commercial air transportation to other parts of the state and nation was made available to the people of the county.

Lansing

In 1914, the year World War I started, there were 180 manufacturing establishments in Lansing, employing 6,231 people. During the war years Lansing industry was called on to provide a variety of goods, but particularly increased numbers of automobiles and trucks. As a consequence, although the labor force employed in the city's industries doubled by 1919, the number of manufacturing establishments declined to 147. These trends toward increased employment and a smaller number of plants, but ones of larger capacity, continued through the next decade. In 1930 there were 18,877 wage earners in 130 factories in Lansing (Table 26).

During the next few years, the severe depression caused a sharp drop in industrial employment and a further decrease in the number of manufacturing establishments in the capital city. Employment totaled 14,735 and 17,735 in 1935 and 1937 respectively, while 104 and 101 factories operated during the same years. Recovery from the depression began, and was soon followed by burgeoning demands for industrial goods to fight World War II. Employment in Lansing again expanded rapidly, while the

declining trend in number of industrial establishments which had characterized the period thus far was reversed. In 1947, soon after the end of World War II, Lansing had 140 industrial establishments employing 24,898 workers.

Trends in the county as a whole were closely similar to those in Lansing. This might be expected, considering the concentration of most of the industry of the county in that city (Table 26). The number of factories in the county outside of Lansing increased from 33 in 1919 to 44 in 1947, however, and the number of workers they employed rose from 92 to 954. These statistics indicate a tendency towards industrial dispersion and a small relative loss of Lansing's industrial importance despite it's tremendous absolute gain.

Population growth in Lansing followed much the same trends as did the growth of industrial employment in the city, except that it remained almost stationary rather than sharply declining during the depression years. Between 1910 and 1930 Lansing's population increased from 31,229 to 78,397, a gain of 151 per cent (Table 27). The next decade, between 1930 and 1940, however, was marked by the smallest gain ever recorded in a like number of years. This amounted to only 356 people. It reflects the decline in employment possibilities in the city during

TABLE 26

MANUFACTURING ESTABLISHMENTS

LANSING AND INGHAM COUNTY, MICHIGAN

1914-1947

	1914	1919	1930	1935	1937	1947
INGHAM COUNTY						
No. of estab.		180	158	122	120	181
Wage earners		12,441	19,132	15,128	17,874	25,852
LANSING						
No. of estab.	180	147	130	104	101	140
Wage earners	6,231	12,349	18,877	14,735	17,735	24,898

Sources: United States Census of Manufactures: 1914, Vol. 1, (Washington: 1918), pp. 701 and 716; Abstract of the Census of Manufactures: 1919 (Washington: 1923), p. 608: Census of Manufactures: 1930, (Washington: 1933) pp. 650-651, 684; Biennial Census of Manufactures: 1937, Part II (Washington: 1939), pp. 1477-1478; U. S. Bureau of the Census, County and City Data Book: 1949, (Washington: 1952), pp. 178, 358.

the depression years. This caused the return of some people to rural areas and a fall in birth rates. Soon after 1940, however, the population resumed it's pre-depression trend of rapid growth, as is indicated by the counting of, 92,122 people in the city in 1950, as compared with 78,753 in 1940. To accomodate the growing population, some 14,902 new dwelling units were constructed in the city between 1910 and 1940 (Table 29) and another 1,460 were added by 1945 (Table 30).

In 1940 Lansing had 60 per cent of the county population and spread over parts of Sections 3,4,5,14, 19,23,27,28, and 29 and all of Sections 8,9,10,15,16, 17,20,21 and 22, a total area of over 11 square miles.[1] After 1910 the city had expanded both it's territory and it's population by annexations on all sides. Much of the area that separated Lansing and East Lansing was added in 1916 and 1925, land to the south in 1917, some to the west in 1917 and 1920, and that to the north in 1928 (Fig. 19).

Apart from the expansion of the city limits, new rural non-farm settlements developed along the roads radiating out of Lansing and East Lansing. As a consequence, the actual living space of people supported by Lansing's economy extended far beyond the corporate bounds of the city; in the northwest it spilled over into Eaton and Clinton Counties, and in the east and south it spread into Meridian and Delhi Townships.

The commercial activities of the city also expanded notably over the thirty-five years following 1910. Although statistics for 1945 are not available, some

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1. Michigan State Highway Department, General Highway Map of Ingham County, 1940, Sheet No. 1 of 1 map sheet.

idea about the extent of activity at the time can be had from the fact that 975 retail stores, 160 wholesale establishments, 311 personal businesses and repair shops, 8 hotels, and 18 amusement places were reported three years later in 1948.[2]

By 1945, Lansing had come to play such an overwhelmingly important role in various phases of county life that the United States Bureau of Census included the whole of Ingham County in the Lansing Metropolitan area. In the city were centered a large proportion of the industries and commercial establishments of the county and much of the labor force engaged in these activities. A well developed road and railroad system and regular air service now linked Lansing to various distant points of importance and helped to make it the fifth largest city in Michigan. Only Detroit, Grand Rapids, Flint, and Saginaw were larger.

Population

There was a much larger population increase in Ingham County between 1910 and 1945 than during any previous period of comparable length (Fig. 2). Most of this growth was in urban and rural non-farm populations. The number of persons on farms continued to decline until 1930. After that, it temporarily increas-

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2. U.S. Department of Commerce, County and City Data Book, 1949, (Washington: Govt. Printing Office, 1952), pp. 357-359.

ed during the depression years, but with the onset of economic recovery and World War II, a slow drop was resumed.

The increase in county population between 1910 and 1940 was nearly 145 per cent, the number rising from 53,310 to 130,616 (Table 27). Growth, however, was not steady throughout the period (Fig. 2). The number of people more than doubled during the first twenty years, 53,310 to 116,587, but during the next decade only 14,029 were added. This slowing of growth was no doubt caused primarily by the fall of birth rates and to some extent by out-migration from Lansing to other parts of the state and nation, both of which accompanied the depression. During the war years, 1940 to 1945, and those which followed, population again increased at a more rapid rate, as is evidenced by 172,941 people being recorded in the 1950 census.

A major portion of the population growth between 1910 and 1945 resulted from natural increase within the county. Most of the rest was from in-migration from other states. The rate of foreign immigration during this period was very small. Foreign born accounted for 9 per cent of the total population in 1920, 7.2 per cent in 1930, and only 5.5 per cent in 1940.[3] Of the

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3. Fourteenth Census of the United States: 1920, Vol. III, pp. 494-495; Sixteenth Census of the United States: 1940, Vol. II, Part 3, p. 817.

TABLE 27

POPULATION, INGHAM COUNTY, MICHIGAN

1920 - 1960

	1920	1930	1940	1950	1960
Alaiedon	896	1,011	1,132	1,486	2,071
Aurelius	1,101	1,109	1,316	1,482	1,640
Bunker Hill	749	736	858	1,066	1,289
Delhi	1,729	4,512	6,723	10,077	16,505
Ingham	958	995	1,095	1,203	1,329
Dansville	(299)	(315)	(351)	(433)	(452)
Lansing	2,815	5,815	14,274	17,627	14,243
Lansing City	57,327	78,397	78,753	92,129	108,128
LeRoy	1,375	1,361	1,489	1,618	1,787
Webberville	(465)	(488)	(508)	(600)	(665)
Leslie	1,963	2,050	2,234	2,642	3,028
Village	(1,089)	(1,105)	(1,281)	(1,543)	(1,808)
Locke	893	921	980	1,023	1,490
Meridian	1,513	2,878	4,767	9,108	14,378
E. Lansing	1,889	4,389	5,839	20,325	29,745
Onondaga	1,004	1,070	1,293	1,450	1,635
Stockbridge	1,242	1,252	1,615	2,142	2,442
Village				(1,098)	(1,097)
Vevay	827	938	1,035	1,114	1,392
Mason	1,879	2,575	2,867	3,514	4,490
Wheatfield	716	776	821	761	896
White Oak	846	808	843	948	1,000
Williamston	1,832	2,291	2,682	3,226	4,146
Village	(1,060)	(1,458)	(1,704)	(2,051)	(2,188)
Ingham County Summary					
Total	81,554	116,587	130,616	172,941	211,634
Urban	57,327	85,361	87,459	116,058	142,363
Total Rural	24,227	31,226	43,157	56,883	69,271
Rural Non-Farm	?	18,843	28,469	42,933	55,521*
Rural Farm	?	12,383	14,688	13,950	13,750*

*Estimated

Sources: Fifteenth Census of the United States: 1930, Population, Vol. 1, (Washington: 1931), p. 522; Sixteenth Census of the United States: 1940, Population. Vol. 1 (Washington: 1942), p. 587; Seventeenth Census of the United States: 1950, Vol. IV, Part 22 (Washington: 1952) pp. 13, 43, 46; The State Journal, Lansing, Michigan, Wednesday, May 18, 1960, p. 2.

7,085 foreign born enumerated in 1940, 1,838 were from Canada, 1,119 from the British Isles, 1,023 from Germany, and 585 from Poland. The rest were in smaller groups from other parts of western Europe, Russia, South America, and Asia. Most of these immigrants had been attracted by the opportunities of industrial work in Lansing. Consequently, the largest proportion resided in the urban and rural non-farm areas of the county (5,184 in Lansing and 557 in rural non-farm residences in 1940).

The proportion of the Negroes remained low; 1.5 per cent of the total population in 1940. Only seven Negroes resided on farms that year. The rest, 2,078, lived mainly in Lansing, with some in rural non-farm sections of the county, and provided labor in the industries of the city.[4]

As previously indicated, the major population increases during the period were in the number of urban and rural non-farm residents. Between 1910 and 1930, for example, urban population climbed more steeply than ever before (Fig. 2). In 1930, some 73.2 per cent of the county's total inhabitants resided in Lansing and East Lansing. Of the remaining 26.8 per cent, 16.1 per cent lived in rural non-farm homes and only 10.7 per cent dwelt on farms.

Between 1930 and 1940, the trend from urban to rural non-farm gained so much momentum that out of the county

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4. Sixteenth Census of the United States: 1940, Population, Vol. 2, Part 3, pp. 824, 829, 874.

gain of 14,029 people recorded during the decade, 9,628 were in the rural non-farm category (Table 27). Another 2,305 were those added to the farm population because of some city people returning to their former homes in the country to ride out the depression. As a consequence, the proportion of urban population in 1940 was reduced to 67 per cent, while rural non-farm population increased to 21.7 per cent and rural farm population to 11.3 per cent of the total (Figs. 2 and 3).

During the war years, Lansing's population resumed its rapid growth and the farm population its slow decline, while the rural non-farm population continued to increase about as before. Wage earners in the latter group were handicapped in commuting to their jobs in Lansing by rationing of gasoline, but this was solved by the formation of car pools and special allotments of gasoline where such were warranted.

Although the population increased between 1910 and 1945 in all townships except Locke, and possibly Bunker Hill, the least gain was recorded in the purely agricultural townships farthest away from the larger cities and towns (Tables 15 and 27). Most of the gain in rural areas resulted from the increase in rural non-farm residents. As indicated by Table 5 and Fig. 18, each township had some rural non-farm population in 1940. The largest growth during the previous three decades, however, had been in Lansing Township where

12,514 people had been added to the rural population. This resulted from the concentration of rural non-farm dwellers which developed along the roads on all sides of Lansing proper. The townships with the next largest gains were Delhi and Meridian and these also resulted from additions to the rural non-farm population, especially between Holt and Lansing, and between Haslett, Okemos and East Lansing.

This expansion in the rural non-farm population was made possible by the extensive use of automobiles and the excellent road system which enabled the workers to commute to Lansing and also made the facilities of the city markets available to retired people and others residing out in the country. The growth of urban and rural non-farm population in Ingham County was far in excess of that in Eaton, Clinton, Shiawassee, or Jackson counties.[5] This greater urban-oriented development was the result of Lansing having been chosen the State Capital and subsequently becoming a center of the automobile industry, and because of the establishment and growth of Michigan State Agricultural College in East Lansing.

As a consequence, an unusual pattern of population distribution emerged. Nearly 80 per cent of the people

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5. U. S. Bureau of the Census, County and City Data Book: 1949, (Washington: Govt. Printing Office, 1952), pp. 5-9.

of the county in 1940 were in the three northwestern townships (Meridian, Lansing and Delhi), in and around Lansing and East Lansing, giving that area a very high population density. The other 20 per cent resided in the villages and rural areas of the remaining eleven townships, but especially in Vevay, Williamston, and Leslie Townships which contained the towns of Mason, Williamston and Leslie respectively.

The number of dwelling units in Ingham County more than doubled between 1910 and 1940 (Table 28). In 1940 there was a total of 38,491 dwelling units in the county, of which 26,059 were urban, 8,336 rural non-farm, and 4,096 rural farm homes. In keeping with the population trends the largest gains had been made in the numbers of urban and rural non-farm living units. It is significant that 23,097 of the total 24,761 dwelling units constructed between 1910 and 1939 were located in the three northwestern townships (Table 29). In addition, of the 3,440 new dwelling units added between 1940 and 1944, over 2,630 were in the same area (Table 30).

Figures 17 and 18 respectively show the distribution in 1940 of 3,113 rural farm and 299 rural non-farm dwellings (see also Table 5). Discrepancies between these totals and the 4,096 rural farm and 8,336 rural non-farm dwelling units given in the 1940 census are largely due to the lack of detailed knowledge concerning all of Lansing Town-

TABLE 28

DWELLING UNITS, INGHAM COUNTY, MICHIGAN

1920-1950

Location	1950	1940	1930	1920
Total	50,953	38,491	27,874	18,528
Urban				
Lansing	28,887	23,269	17,949	
East Lansing	3,883	1,908	1,114	
Mason	1,151	882	681	
Other Urbanized Area	5,743(a)			
Urban Farm	(91)b			
Rural Non-Farm	7,293	8,336		
Stockbridge	(329)c			
Leslie	(508)c	407 (c)		
Williamston	(697)c	550 (c)		
Rural Farm	3,996	4,096		

(a) Units in closely built up areas adjacent to Lansing and East Lansing, but outside their corporate boundaries. In the 1940 census these were included in Rural non-farm category. In addition, there were 683 dwelling units in Clinton County that were included in the Census total (39,196 units) for the Lansing urbanized area in 1950.

(b)Farm dwellings in Urban areas. These were distributed approximately: 11 in East Lansing; 20 in Lansing; 24 in Mason and 36 in Other Urbanized Area.

(c) Included in Rural Non-Farm total.

Sources: Fourteenth Census of the United States: 1920, Vol. III, p. 483; Sixteenth Census of the United States: 1940, Vol. I, Part 1, pp. 674 and 704, and Vol. II, Part 3, pp. 575, 576, 609; Seventeenth Census of the United States: 1950, Housing, Vol. I, Part 4 (Michigan-New York), Section 22, pp. 3-4, 16, 18, 29-32, 43, 49, 55-56, 63, 78, 91.

TABLE 29

CONSTRUCTION TIME OF DWELLING UNITS EXISTING IN 1940

INGHAM COUNTY, MICHIGAN

	Total 1910-39	1935-1939	1930-1934	1925-1929	1920-1924	1910-1919	1880-1909	1860-1879	Before 1860	Date not Reported
Ingham County	24,761	3,959	2,608	5,776	5,119	7,299	10,767	1,662	414	887
Lansing	14,902	732	1,055	3,422	3,689	6,004	7,240	485	121	521
East Lansing	1,775	563	195	471	288	258	114	5	3	11
Mason	392	78	33	65	70	146	355	90	15	30
Rural Non-Farm	6,448	2,246	1,129	1,613	918	542	1,185	409	105	189
Rural Farm	1,244	340	196	205	154	349	1,873	673	170	136
Lansing District*	23,097	3,533	2,422	5,544	4,898	6,700	8,006	646	162	641

*The Lansing Metropolitan District composed of Lansing, Meridian, and Delhi Townships. It is significant that 23,097 out of the total 24,761 dwelling units in the county constructed between 1910 and 1939 were in these three northwestern townships.

Source: U.S. Bureau of the Census, Fifteenth Census of the United States: 1940, Housing, Vol. II, Part 3 (Washington: 1942), pp. 579 and 604.

TABLE 30

CONSTRUCTION TIME OF DWELLING UNITS EXISTING IN 1950

INGHAM COUNTY, MICHIGAN

	Total Units	Units Reporting	After 1945	1940-1944	1930-1939	1920-1929	Before 1920
Ingham County	50,953	45,255	6,970	3,440	6,590	11,955	16,300
Lansing	28,887	25,475	1,910	1,460	2,840	8,570	10,695
East Lansing	3,883	3,505	1,465	325	705	635	375
Other Urbanized Area (a)	5,743	5,060	1,585	845	1,400	910	320
Mason	1,151	1,005	140	35	90	175	565
Rural Non-Farm	7,293	6,585	1,645	635	1,180	1,220	1,905
Rural Farm	3,996	3,625	225	140	375	445	2,440
Lansing Urbanized (b) Area in Clinton County	683	495	130	45	240	35	45
Lansing Urbanized Area (c)	39,196	34,535	5,090	2,675	5,185	10,150	11,435

a) Dwelling units in closely built-up areas adjacent to Lansing and East Lansing, but outside their corporate boundaries.

b) Dwelling units in Clinton County which are part of the closely built-up Lansing Urbanized Area, but are not included in Ingham County totals.

c) Lansing Urbanized Area includes units in Lansing, East Lansing, Other Urbanized Area, and Clinton County Urbanized Area, but not Mason.

Sources: Seventeenth Census of the United States, 1950: Housing, Vol. I, Part 4 (Michigan-New York), Section 22, pp. 29-32, 49, 63, 78, and 91, plus calculations.

ship and a large part of Meridian and Delhi Townships. This is the area included within the dotted lines on Figures 17 and 18. The differences are also due in part to the numbers in one case being dwelling structures and in the other being dwelling units of which more than one may be in a single structure. In any event, the size of the variance in the number of rural non-farm homes (8,037) indicates the great concentration of these in the area around Lansing and East Lansing where exact information was lacking.

As shown by Table 5, the total number of dwellings in rural parts of the county, excluding Lansing, Meridian, and Delhi Townships for which comparable data was not available, declined 261 from approximately 3,333 in 1910 to 3,072 in 1940. The decline in number of rural farm dwellings was even greater, since the 232 rural non-farm dwellings included in the 1940 total was without doubt larger than their number in 1910. It can be concluded that every township had a decrease in number of farm homes between 1910 and 1940. If Lansing, Meridian, and Delhi Townships are excluded, the largest losses appear to have been in Locke, Aurelius, Leslie, Vevay, White Oak, and Ingham Townships in order. Each of these apparently lost some 50 or more farm dwellings. In fact, all of the townships except Lansing, Meridian, Delhi, Leroy, and possibly Stockbridge, had fewer rural dwellings of all kinds (both farm and non-farm) at the end of the period than at the

beginning.

The construction time of dwelling units existing in 1940 is shown in Table 29. The fact that most of the units built between 1910 and 1940 were located in the three northwestern townships has already been mentioned. Of the 24,761 units added during this span of time, some 17,069 were urban, being in Lansing, East Lansing, and Mason, 6,448 were rural non-farm and only 1,244 were rural farm in character. The five year period of greatest construction activity during the three decades was 1925 to 1929, when 5,776 new dwelling units were added, while the five year period of least activity was 1935 to 1939, during the depression, when only 2,608 new units were built.

Trends in construction of the various categories of housing, in general followed that for all dwelling units, but there were some differences (Table 29). Perhaps the most significant, was that the number of units added during any five year period in Lansing was least 1935 to 1939, rather than 1930 to 1934. Building of rural non-farm units, on the other hand, during this same five years was greater than ever before in a comparable length of time. This, and the fact that East Lansing gained more new residences during this period than in any of the others between 1910 and 1940,

illustrates the shift toward suburban and rural non-farm living.

During the war years, 1940 to 1944, construction of living units was almost as great in the whole county as during the previous five years, in spite of the great difficulty of getting most building materials because they had been diverted to war-time uses. This was only because of a large increase in the number of units added in Lansing, however, for there were fewer homes completed in East Lansing, Mason, and the rural areas, both farm and non-farm, than during the preceding five years (compare Table 29 and 30). More housing in Lansing was necessary to accomodate the expanding labor force in factories producing goods to support the war effort. Because of gasoline and tire rationing, and other difficulties, a house in the city was more desirable, temporarily at least, than one farther removed from place of employment.

In conclusion, it can be said that the gross pattern of population distribution in most of Ingham County was little different in 1945 from what it had been in 1910. In Delhi, Meridian and Lansing Townships, however, the changes had been tremendous, for it was here that most of the increase in urban and in rural non-farm population had taken place. The largest concentrations of rural non-farm people in 1945 were between Okemos and East Lansing,

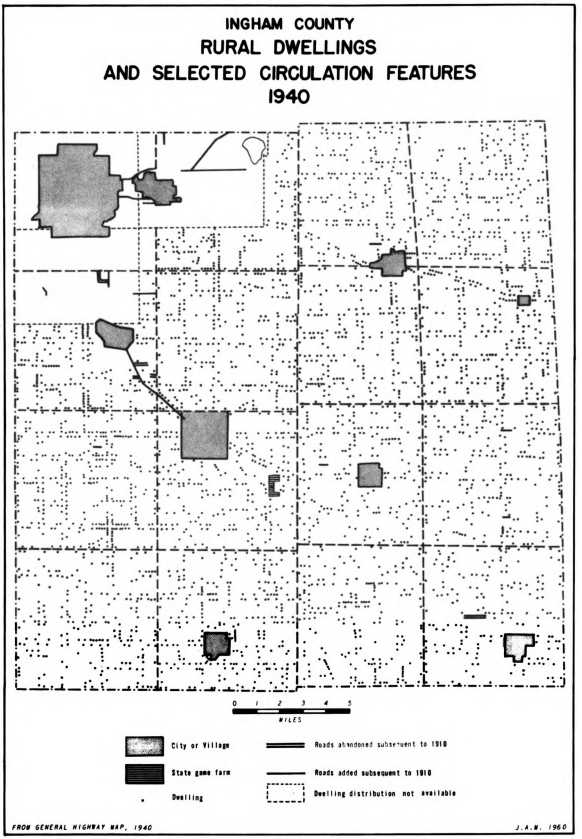

INGHAM COUNTY
RURAL DWELLINGS
AND SELECTED CIRCULATION FEATURES
1940
0 1 2 3 4 5
MILES
City or Village
State game farm
Dwelling
Roads abandoned subsequent to 1910
Roads added subsequent to 1910
Dwelling distribution not available
FROM GENERAL HIGHWAY MAP, 1940
J.A.W. 1960

Fig. 17

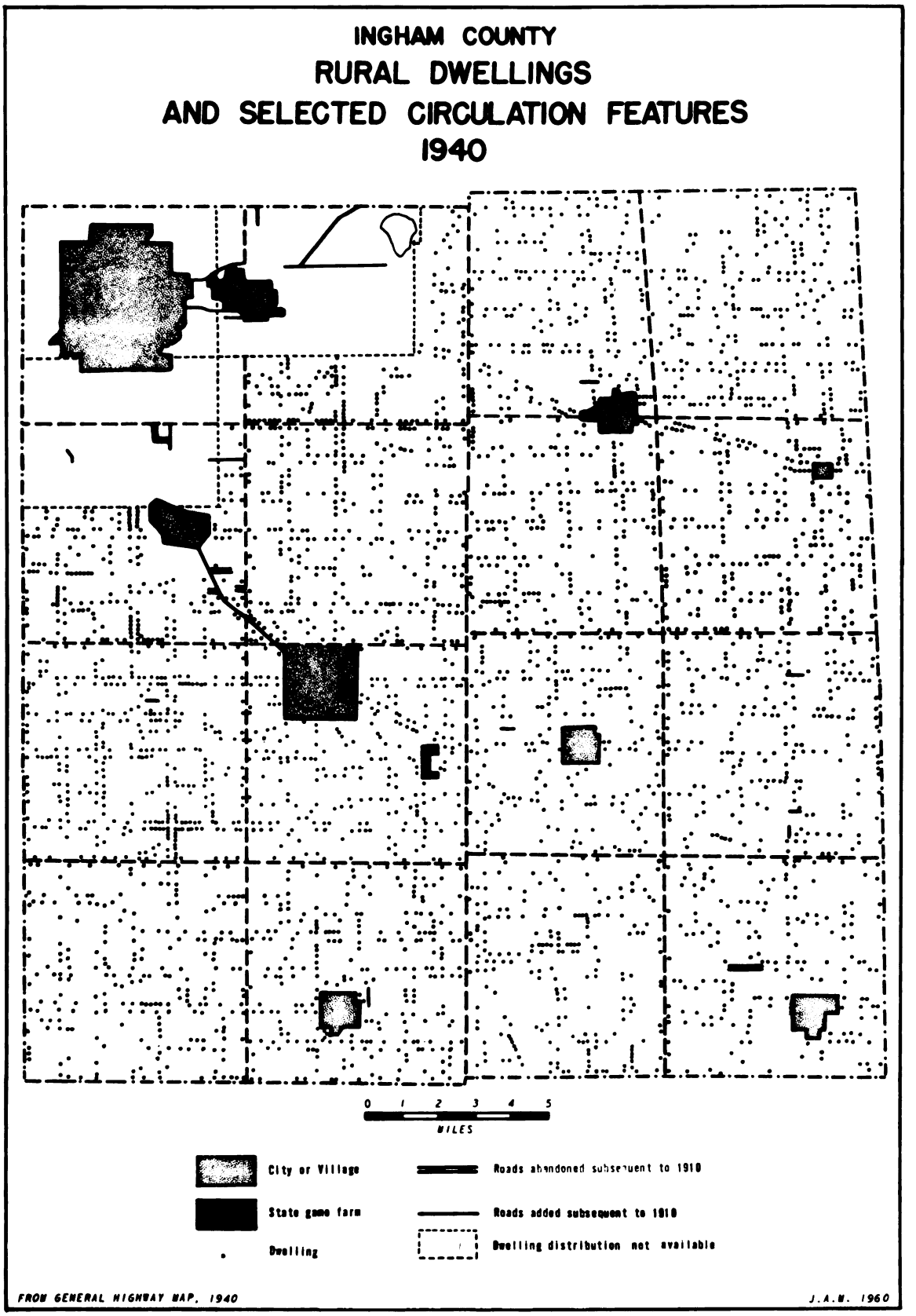

INGHAM COUNTY
RURAL DWELLINGS
AND SELECTED CIRCULATION FEATURES
1940
0 1 2 3 4 5
MILES
City or Village
State game farm
Dwelling
Roads abandoned subsequent to 1918
Roads added subsequent to 1918
Dwelling distribution not available
FROM GENERAL HIGHWAY MAP, 1940
J.A.M. 1960

Fig. 17

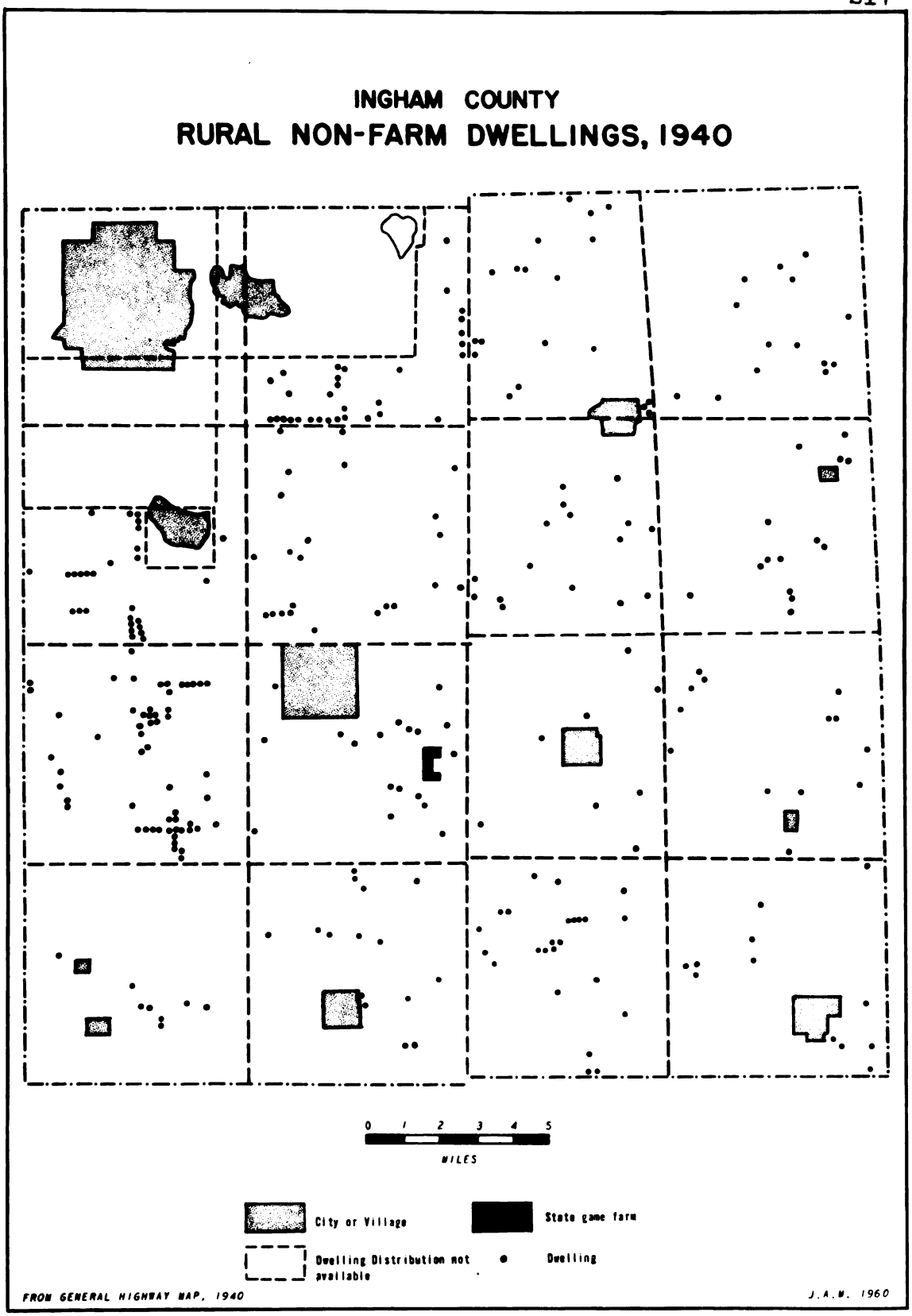

INGHAM COUNTY
RURAL NON-FARM DWELLINGS, 1940
0 1 2 3 4 5
MILES
City or Village
State game farm
Dwelling Distribution not available
Dwelling
FROM GENERAL HIGHWAY MAP, 1940
J.A.M. 1960

Fig. 18

between East Lansing and Lansing, on the western edge of Lansing, especially in Section 18, south of Lansing in Sections 27-34 of Lansing Township and Sections 3-6, 8 and 9 of Delhi Township, and north of Lansing to the county line. Settlement was usually heavier along the main highways, but subdivisions off of these highways with good road connections to them had already become conspicious features of the county landscape.

Agriculture

The years between 1910 and 1945 can rightly be called the era of industrial development in Ingham County, but agriculture was by no means neglected. It, never-the-less, suffered a declining relative importance in the total economy of the county and in the process its characteristics were considerably altered. Most of the changes were those that might be expected, however, in view of the expansion of the industrial sector of the economy, the increase of urban and rural non-farm living, and the shifts occurring in agriculture elsewhere in Michigan and in the nation as a whole. Most of the changes also reflected trends that had started in the previous period of county development and were continued, often becoming more pronounced, into the subsequent one.

The loss in importance of agriculture was relative rather than absolute. Actually, the value of production

on Ingham County farms, and the total quantity of output for human use as well, was without doubt greater at the end of the period than it had been at the beginning. Although this statement is difficult to demonstrate with statistics readily available, because of changes over the years in the value of the dollar and in the crops and animals emphasized, some indication of its validity can be obtained from a study of Table 31.

Agricultural productivity was maintained despite a decrease of some 26,838 acres of land in farms during the period. The proportion of county land in farms dropped from about 94 per cent in 1910 to 85 per cent in 1945 (Table 32). Between 1924 and 1944, cropland harvested and land used for pasture decreased 4,886 and 13,946 acres respectively (Table 33). The areal expansion of urban centers, the increase in rural non-farm living, and the widening of roads and highways all diverted land previously in farms. The application of improved knowledge about crops, livestock and soils, however, along with greater efficiency obtained through mechanization, enabled the farmers to get better yields from the smaller acreage.

The progress of agricultural mechanization is best illustrated by the increase in number of tractors and the decline in number of horses on the farms of the county. There were 462 tractors in 1925 when there were 3,447 farms. By 1945 the number of tractors had increased to 2,213 and

these were on 1,826 of the total 2,966 farms (Table 34). Meanwhile, the number of horses had declined from 12,537 in 1910, to 9,642 in 1925, and then to 3,248 in 1945 (Table 36). The release for other uses of land formerly devoted to raising feed for horses was a significant factor in the ability of the farmers to maintain output with less land in farms.

The horses were displaced not only by the tractor, but also by the motor truck and the automobile. In 1945, of the 2,966 farms in Ingham County, 518 had motor trucks and 2,596 had automobiles. The actual number of motor trucks and automobiles was 581 and 3,051 respectively, indicating that some farms had more than one vehicle (Table 33). Other evidence of more mechanization and the improvement of living conditions occurring in the rural areas was the increase in number of farms with radios, from 289 in 1925, to 2,687 in 1945; in those with electricity, from 753 to 2,713 between 1930 and 1945; and in those with piped running water in the home, from 848 to 1,882 during the same time (Table 34).

The rise in the number of farms with electricity no doubt reflects the great stress put on rural electrification by the national government during the depression years. It is noteworthy that the number of farms with telephones and with automobiles was almost as large in 1930, before

TABLE 31

DOLLAR VALUE OF FARM PRODUCTS SOLD

INGHAM COUNTY, MICHIGAN

1909 - 1944

	1909	1919	1929	1939	1944
All Farm Products	?	?	?	3,314,837	6,634,566
All Crops	2,462,958 a	5,486,853 a	2,197,437 a	951,276	1,470,538
Field Crops	2,139,241 a	4,704,346 a	1,801,314 a	582,305	824,247
Vegetables	198,687 a	646,266 a	290,251 a	148,363	447,967
Fruits & Nuts	125,030 a	136,241 a	105,872 a	66,345	71,086
Hort.Specialities	--	--	--	154,263	127,238
All Livestock and Livestock Produce	1,647,347	?	?	2,352,976	5,142,244
Dairy Produce	402,431	1,100,637	1,568,517	1,045,859	2,707,600
Poultry & Poultry Produce	209,545	379,391	444,671	281,428	573,390
Other	1,035,371	?	?	1,025,189	1,861,254
Forest Products	?	?	?	10,585	21,814

a) Value of production rather than value of products sold, and in an effort to make figures more comparable with those for 1939 and 1944, the values of the hay and forage crops produced and of garden crops for home use were not included.

Sources: Thirteenth Census of the United States: 1910, Agriculture, Vol. VI, pp. 791, 798; Fourteenth Census of the United States: 1920, Agriculture, Vol. VI, Part 1, pp. 438, 441; Fifteenth Census of the United States: 1930, Agriculture, Vol. II, Part 1, p. 717; United States Census of Agriculture: 1945, Vol. I, Part 6, pp. 98, 113.

TABLE 32

FARMS, INGHAM COUNTY, MICHIGAN

1910-1954

Year	Number of Farms	County Land In Farms* (Per Cent)	Land In Farms (Acres)	Average Size of Farms (Acres)
1910	3,508	94.1	333,095	95.0
1920	3,224	91.4	323,196	100.2
1925	3,447	90.2	319,316	92.6
1930	2,961	86.0	304,243	102.8
1935	3,218	88.7	313,892	97.5
1940	2,999	84.7	303,076	101.1
1945	2,966	85.6	306,157	103.2
1950	2,531	81.4	291,041	115.0
1954	2,328	79.5	284,440	122.2

*County area was considered to be 353,920 acres before a new calculation in 1940, which determined it to be 357,760 acres.

Sources: Thirteenth Census of the United States: 1910, Agriculture, Vol. VI, p. 783; Fifteenth Census of the United States: 1930, Agriculture, Vol. II, Part 1, p. 662; United States Census of Agriculture: 1935, Vol. I, p. 174; United States Census of Agriculture: 1945, Vol. I, Part 6, p. 24; United States Census of Agriculture: 1954, Vol. I, Part 6, p. 46.

TABLE 33

FARM LAND USE, INGHAM COUNTY, MICHIGAN

1925 - 1954

(acres)

	Cropland Harvested	Cropland Used Only For Pasture	Cropland Not Harvested Or Pastured	Total Cropland	Woodland Pastured	Woodland Not Pastured	Total Woodland	Other Pasture Not Cropland Nor Woodland	Total Pasture
1954	152,386	28,856	19,617	200,859	17,900	15,221	33,121	22,199	68,955
1949	149,586	34,403	23,600	207,589	23,829	13,822	37,651	20,572	78,804
1944	157,621	25,614	15,648	198,883	20,140	7,720	27,860	45,152	90,906
1939	148,743	42,389	16,556	207,688	--	---	24,395	---	---
1934	156,808	37,512	19,731	214,051	24,645	8,170	32,815	44,335	106,492
1929	149,016	33,571	25,901	208,488	25,020	7,332	32,352	42,300	100,891
1924	162,507	29,030	17,934	209,271	24,574	8,363	32,937	51,248	104,852

Sources: United States Census of Agriculture: 1925, Part I (The Northern States), p. 592; Fifteenth Census of the United States: 1930, Agriculture, Vol. II, Part 1, p. 662; United States Census of Agriculture: 1935, Vol. I, p. 175; Sixteenth Census of the United States: 1940, Agriculture, Vol. I, Part 1, p. 789; United States Census of Agriculture: 1945, Vol. I, Part 6, p. 24; United States Census of Agriculture: 1954, Vol. I, Part 6, p. 46.

TABLE 34

FARM EQUIPMENT

INGHAM COUNTY, MICHIGAN

1930-1954

	1930	1940	1945	1950	1954	
Number of farms	2,961	2,999	2,966	2,531	2,380	
With tractor	821	1,395	1,826	1,979	2,015	a
Number of tractors	852b	1,511	2,213	2,923	3,691	
With Motor Truck	577	425	518	759	1,085	
Number of Trucks	615	489	581	879	1,304	
With automobiles	2,425	2,596	2,577	2,143	2,085	
Number of automobiles	2,788	3,230	3,051	2,974	2,764	
With telephones	1,709	1,292	1,768	1,789	2,074	
With piped running water	848	----	1,882	----	2,195	
With electricity	753	2,669	2,713	2,384	2,375	
With home freezer	-----	----	-----	373	1,133	
With milking machine	-----	----	-----	918	1,008	
With grain combine	-----	----	-----	728	1,014	
With corn picker	----	----	-----	248	749	
With pickup hay bailer	----	----	-----	168	404	c

a) Of these, 1,779 farms had tractors but no horses and/or mules and 236 had both tractors and/or horses and mules. There were also 30 farms with no tractor, but two or more horses and/or mules, and 335 farms without any tractor, horses and/or mules.

b) There were 462 tractors on farms in 1925.

c) Other equipment facts available indicate that 289 farms had radios in 1925 and 2,687 in 1945; in 1954 there were 1,724 farms with television, 177 with electric pig brooders, 493 with power feed grinders, and 244 with field forage harvesters; between 1930 and 1940 farms having electric motors for farm work increased from 273 to 1,326.

Sources: United States Census of Agriculture: 1925, Vol. I, p. 603; Fifteenth Census of the United States: 1930, Agriculture, Vol. II, p. 727; United States Census of Agriculture: 1945, Vol. I, Part 6, p. 40; United States Census of Agriculture: 1954, Vol. I, Part 6, p. 71.

the depression, as it was in 1945, and that the number of farms with motor trucks was larger in the earlier year. Thus, progress did not proceed uniformily in its various aspects throughout the period, but it can be concluded that in 1945 there was a larger proportion of the farms with better equipment than ever before, and this in spite of the depression and wartime shortages (Plates 9 and 10).

Farm mechanization enabled fewer hands to take care of more land. Thus, general trends between 1910 and 1945 were decreases in farm population, farm employment, and number of farms, along with an increase in the size of farms. In 1910 there were 3,508 farms with an average size of 95 acres; in 1945 there were 2,966 farms with an average size of 103.2 acres (Table 32). There was also a decline in the proportion of tenant farmers from 21.1 per cent of all farm operators in 1910, to 13.6 per cent in 1945 (Table 35).

It should be noted, however, that development of these longer term trends was not uniform and not without interruption, since they were affected by the fluctuations between prosperity and depression and between wartime and peacetime conditions. During the "Great Depression", for example, many of the trends were reversed. The number of farms, the amount of land in farms, and the proportion of tenant farmers all increased between 1930 and 1935, while



Plate 9 Farmstead in Alaiedon Township, with most of buildings constructed around 1920.



Plate 10 Barn in Ingham Township, built about 1940. The one-story metal addition was made later.

the average size of the farms decreased (Tables 32 and 35). The temporary return of many people to the land after they lost their jobs in the city has already been discussed.

Fluctuating economic conditions were likewise reflected in intermediate changes in the relative importance of the different crops and animals produced, but certain long term trends are easily discernable here too. Under the impact of expanding urban markets, dairy farming in particular gained greatly in importance between 1910 and 1945. The total number of cattle increased from 28,538 to 34,824 during this period; the number of milk cows from 13,489 to 16,462. The amount of milk produced more than doubled, however, from 5,579,746 gallons in 1909 to 11,583,707 gallons in 1944, ample evidence of the great improvement in the productive capacity per cow (Table 36).

Moreover, the proportion of the milk that was sold off the farm as fluid milk rose from 37 per cent to 85 per cent, the respective amounts being 2,056,246 gallons in 1909 and 9,910,411 gallons in 1944. The pounds of butter fat sold also increased, from 64,337 to 220,765 during the same years. Sale of butter made on the farm decreased, on the other hand, dropping from 698,894 pounds to 15,059 pounds. It is significant that the sale of butter fat increased rapidly for a time, as the sale of farm-made butter declined. This apparently reached a peak in the middle 1920's, after

which it too declined in the face of the growing demand for fluid milk (Table 36). As a consequence, more and more butter fat, butter, or butter substitutes must have been shipped into Lansing from outside the county.

Other than cattle, and excluding chickens, farm animals all declined substantially in numbers between 1910 and 1945. Sheep and lambs dropped from 107,453 to 30,878; hogs and pigs from 30,132 to 15,736; and horses and mules from 12,534 to 3,248. Sheep shorn were only half as numerous at the end of the period as at the beginning and wool production was accordingly less. Numbers of chickens kept on the farms apparently declined slightly, but at the same time the number of chickens produced and sold increased somewhat, and the improved egg-laying qualities of the chickens resulted in a considerable increase in eggs sold (Table 36). Income on Ingham County farms from the sale of livestock and livestock products was some $3,494,897 larger in 1944 than it had been in 1909. The increased relative importance of dairy farming is indicated by the fact that $2,305,169, or almost 70 per cent of the larger income was from the sale of dairy products (Table 31).

It seems apparent, therefore, that the decrease in the amount of land used for pasture--it dropped from almost 14,000 acres between 1924 and 1944--was largely

TABLE 35

TENURE OF THE FARM OPERATORS

INGHAM COUNTY, MICHIGAN

1920-1954

	Full Owners	Part Owners	Managers	All Tenants	Proportion of Tenancy
1910	2,736	?	33	739	21.1
1920	2,090	410	32	692	21.5
1925	2,410	373	30	644	18.7
1930	2,030	443	30	458	15.8
1935	1,891	607	22	698	21.7
1940	1,882	454	26	637	21.2
1945	1,934	603	27	402	13.6
1950	1,774	449	13	295	11.7
1954	1,608	506	16	198	8.5

Sources: United States Census of Agriculture: 1925, Part 1 (The Northern States), p. 592; Fifteenth Census of the United States: 1930, Vol. II, Part 1, p. 662; United States Census of Agriculture: 1935, Vol. I, Part 1, p. 175; United States Census of Agriculture: 1945, Vol. I, Part 6, p. 118; United States Census of Agriculture: 1954, Vol. I, Part 6, p. 53.

accounted for by the decline in numbers of sheep and horses, for the number of cattle increased. There was also a decrease in the acres of hay cut, from 51,216 acres in 1919 to 43,858 acres in 1944, but this was more than offset by an increase in the tonnage of hay cut (Table 37). The greater yield per acre was obtained by shifting to the growing of heavier yielding alfalfa and alfalfa mixed hays, from the production of clover, timothy, mixed grasses and wild hay. Acreage of alfalfa and alfalfa mixes increased from 1,016 in 1919 to 19,969 in 1944 and hay cut from these

from 1,899 tons to 33,344 tons. Total production of all hay the same years was approximately 64,775 tons and 67,477 tons respectively (Table 37). Thus, the part that alfalfa played in getting more hay from less land is readily evident.

Among the grain crops, corn was the most important. The acreage of corn grown for all purposes increased from about 34,000 in 1909 to 43,778 in 1944. The increase was in corn cut for silage, since the acreage and production of that grown for grain was slightly lower at the end of the period than at its start. Out of 43,778 acres devoted to corn in 1944, those harvested for grain totaled 33,549 and produced 1,087,045 bushels. This compares with 33,812 acres and 1,323,432 bushels of corn harvested in 1909 (Tables 19 and 38). There must have been, therefore, a considerable increase in the production of silage and this might be expected because of the rise in number of dairy cattle.

Oats, the next most extensively grown grain crop, also changed but little in acreage and production during the period. Acreage dropped slightly, from 29,991 in 1909 to 25,489 in 1944, but bushels produced rose a little, from 979,048 to 1,009,644 for the same years. The demand for oats remained even though horses had decreased in number,

because this was compensated by more head of cattle.

Of the other grains, wheat roughly trebled in acreage and production between 1909 and 1944, but it never regained the great importance it had before 1900 (Tables 19 and 38). Wheat acreage harvested was 20,531 and wheat threshed was 563,531 bushels in 1944. Both barley and rye acreages and production, on the other hand, suffered large decreases after reaching all-time peaks about 1919 (Table 38). Prohibition of the manufacture of alcholic beaverages without doubt was a factor in starting the decline, but this continued after such restrictions were recinded. Buckwheat, a pioneer crop, continued to decrease in amount, following a trend established before the turn of the century.

The potato was another crop that lost greatly in interest to the Ingham County farmer during the period. From peak acreages and production around 1910, in which year there were 357,638 bushels dug from 3,165 acres, there was a steady decline to 1944 when 81,659 bushels were harvested from 1,014 acres.

At the end of the period also, the growing of sugar beets, soybean, and other bean crops were all less important than they had been at some previous time (Table 19 and 38). Because of a greater possibility of profit as compared with other crop production, the cultivation of sugar beets rose to new highs during the depression years of

the 1930's. In 1939 the 1,463 acres grown yielded 11,728 tons of beets, but by 1944 the harvest had declined to 3,397 tons taken from 378 acres.

More significant than the reduction of acres devoted to soybeans was the change in purpose for which this crop was grown. This was from use as a forage crop to bean production. Of the 1,309 acres harvested in 1944, almost half were for 7,683 bushels of beans, whereas only 49 bushels of beans were taken from the 2,178 acres grown in 1919. Both the acreage and yield of other dry bean crops in 1944 were less than half previous highs (Tables 19 and 38).

Other farm products were various fruits, vegetables and horticultural specialities. In 1944, $447,967 was earned from the sale of vegetables (Table 31). This was probably the largest income ever obtained from this source and no doubt in part reflects the stress on locally grown foods during the World War II years. The 1945 income from the sale of fruits was $71,086 and from horticultural specialities $127,223. Both amounts were less than previous highs (Table 31).

Between 1910 and 1945 land use was primarily for crops, this being followed in amounts by land in pasture and woodland. Woodland in farms in 1910 amounted to 36,654 acres, but by 1939 this had declined to 24,395 acres. During the next five years, some marginal land brought under cultivation

TABLE 36
LIVESTOCK AND LIVESTOCK PRODUCTS
INGHAM COUNTY, Michigan

1919-1945*

	1910	1920	1930	1935	1940	1945
Total Cattle	28,538	29,301	21,824	26,276	27,221	34,824
Milk Cows	13,489	19,975	13,055*	15,353*	15,764*	16,462*
Sheep & Lambs	107,453	53,331	72,202	59,492	42,382	30,878
Hogs & Pigs	30,132	28,199	10,735	10,565	13,997	15,736
Farms With Horses	?	?	2,358	2,426	2,042	1,321
Horses & Mules	12,534	11,796	6,981	6,996	a 5,848	3,248
Milk Produced gal.*	5,579,746	6,237,810	8,299,095	8,967,479	10,014,429	11,583,707
Milk Sold (gal)*	2,056,246	2,974,925	5,971,558	?	7,470,490	9,910,411
Butter Sold (lbs)*	698,894	127,899	82,107	?	39,564	15,059
Butter Fat Sold (lbs)*	64,337	426,970	316,320	?	405,671	220,765
Chickens On Hand	?	209,538	174,446	190,267	159,291	188,454
Chickens Sold*	111,187	98,644	161,339	?	129,008	?
Eggs Produced (doz)*	1,053,596	b1,091,312	b 1,297,503	1,327,600	1,274,380	1,367,330
Sheep Shorn	67,666	43,291	55,746	50,901	41,390	30,878
Wool Shorn (lbs)*	?	361,302	468,526	438,136	331,926	218,397

*Statistics for year previous to that indicated in headings.
a) Of all ages rather than those over 3 months old as in other years
b) 752,543 dozen sold in 1909; 664,047 dozen in 1919; and 913,974 dozen in 1929

Sources: Thirteenth Census of the United States: 1910, Agriculture, Vol. VI, pp. 782, 791. Fourteenth Census of the United States: 1920, Agriculture, Vol. I, p. 433; United States Census of Agriculture: 1925, Part 1, p. 610. Fifteenth Census of the United States: 1930, Agriculture, Vol. II, Part 1, pp. 679, 712; Sixteenth Census of the United States: 1940, Agriculture, Vol. I, Part 1, pp. 813, 819; United States Census of Agriculture: 1945, Vol. I, Part 6, pp. 86, 93.

TABLE 37

HAY CROPS
INGHAM COUNTY, MICHIGAN
1919-1954

	1919	1929	1939	1944	1949	1954
Hay Cut-Acres	51,216	45,095	42,302	43,858	34,560	39,340
Alfalfa and Alfalfa Mixes						
acres	1,016	10,744	21,655	19,969	19,257	22,615
tons	1,899	20,945	34,042	33,344	33,967	46,206
Clover,Timothy & Mixed Grasses						
acres	46,319	31,799	15,671	20,679	14,080	14,664
tons	58,224	40,921	17,869	29,669	17,597	23,842
Small Grain Hay						
acres	164	178a	383a	56a	230	67
tons	166	273	429	76	245	64
Wild Hay						
acres	2,307	1,713	1,157	650	?	193
tons	2,994	2,102	1,327	746	?	247
Annual Legumes including Soy Beans						
acres	217	174	1,501	436	78	38
tons	281	187	2,279	683	119	90
Other Hay b						
acres	1,148	487	1,935	2,068	1,262	279
tons	1,211	524	2,434	2,959	1,684	410

a) In these (and probably in other) years does not include oats cut for feeding unthrashed, this amounting to 287 acres in 1929, to 124 acres in 1939, and to 217 acres in 1944.

b) Probably excludes grass cut for silage which, for example, totaled 116 acres and 505 tons (green weight) in 1949, and 1522 acres and 9,164 tons in 1954.

Sources: Fourteenth Census of the United States: 1920, Agriculture, Vol. VI, Part 1, p. 441; Fifteenth Census of the United States: 1930, Agriculture, Vol. II, Part 1, p. 687; Sixteenth Census of the United States: 1940, Agriculture, Vol. I, Part 1, p. ; United States Census of Agriculture: 1945, Vol. I, Part 6, p. 64; United States Census of Agriculture: 1954, Vol. I, Part 6, pp. 117, 121.

TABLE 38

SMALL GRAINS THRESHED OR COMBINED
CORN, SUGAR BEETS, POTATOES, AND BEANS HARVESTED
INGHAM COUNTY, MICHIGAN
1919-1954

	1919	1929	1939	1944	1949	1954
Grain Grown Together						
Acres			2,690	788	752	497
Bushels			107,021	22,185	25,921	17,265
Winter Wheat						
Acres	13,548	19,243	14,505	20,453	28,175	23,257
Bushels	298,166	409,052	334,050	561,616	764,409	705,453
Spring Wheat						
Acres	a	168	227	78	82	67
Bushels	a	3,424	5,636	1,915	1,661	1,615
Oats						
Acres	29,635	22,158	24,939	28,085	29,219	25,489
Bushels	882,166	660,951	980,251	1,031,200	1,057,906	1,009,644
Barley						
Acres	8,902	5,206	1,301	561	480	1,047
Bushels	159,497	92,891	31,387	12,355	10,670	35,765
Rye						
Acres	22,678	1,356	1,517	544	359	657
Bushels	367,125	16,331	20,386	8,215	5,778	13,296
Buckwheat						
Acres	763	290	198	?	376	133
Bushels	11,621	2,813	2,080	?	6,065	1,576
Corn for Grain						
Acres	28,682	7,938 b	28,192	33,549	33,542	43,248
Bushels	1,299,316	271,756 b	1,131,003	1,087,045	1,915,412	2,063,806
Corn All Purposes						
Acres	35,918	24,701 b	38,979	43,778	42,893	52,427

TABLE 38 (continued)

	1919	1929	1939	1944	1949	1954
Corn for Silage						
Acres	7,236 c	6,894 c	?	?	7,344 c	7,800 c
Soybeans All Purposes						
Acres	2,178	248	2,631	1,309	337	973
Soybeans for Beans						
Acres	?	?	774	644	233	834
Bushels	49	322	12,299	7,683	5,047	13,869
Other Dry Beans						
Acres	6,491	18,112	9,485	9,196	3,417	1,283
Bushels	76,366	147,691	139,723	76,033	32,464 d	11,873 d
Sugar Beets						
Acres	790	443	1,463	378	861	477
Tons		3,088	11,728	3,397	7,634	4,855
Potatoes						
Acres	2,198	2,090	1,631	1,014	676	325
Bushels	18,862	102,452	133,991	81,659	138,993	74,836

a) Included in winter wheat.

b) Five years later, in 1934, when there were 32,274 acres of corn harvested for all purposes, the 14,044 acres harvested for grain produced 367,521 bushels.

c) 13,193 tons of corn silage were cut in 1919; 38,172 tons in 1929; 67,885 tons in 1949; 67,625 tons in 1954.

d) 100 pound bags rather than bushels

Sources: Fourteen Census of the United States: 1920, Agriculture, Vol. VI, Part 1, p. 441; Fifteenth Census of the United States: 1930, Agriculture, Vol. II, Part 1, pp. 687, 700; United States Census of Agriculture: 1945, Vol. I, Part 6, pp. 53, 64; United States Census of Agriculture: 1954, Vol. I, Part 6, pp. 106, 110, 117, 128.

during the depression years reverted back to woodland, which as a consequence increased to 27,860 acres in 1944 (Table 33). Around 1940 some land was also absorbed as a State Game Farm in Vevay Township.

Thus, in 1945 life on Ingham County farms was full of many modern comforts, while the farm economy was considerably changed from that of 1910. Electricity, telephones, radios, automobiles, trucks, tractors, and other such equipment had broken the isolation and hardships of the farmer's life. Agricultural extension services and other educational activities of Michigan State Agricultural College for the benefit of the farmer had made him a much better informed individual in his field. He had also become integrated into the life of the state and nation more than ever before by the increased commercialization of agriculture.

Transportation

The most notable changes in the transportation pattern of Ingham County between 1910 and 1945 were the abandonment of the interurban electric lines and the street car lines of Lansing, the establishment of a public airport at Lansing and of commercial air flights to other parts of the nation, and the great improvement of roads and highways. Railroad and total road mileage in the county did not change materially. The rapidly increas-

ing use of automobiles and trucks and their advantages over railroads and airplanes for short-distance transportation, however, made this an era of highway building and road improvement.

Roads

The phenomenal growth in the number of automobiles in Michigan (only 60,000 were registered in 1913)[6] and the increasing popularity of trucks provided an acute demand for good roads early during the period under discussion. This demand resulted in a series of acts passed by the State Legislature which were aimed at improving road conditions in the State.

In 1913 the State Legislature set up a 3,000 mile trunk line system and offered double rewards to the townships for building better roads. To finance improved highway construction both a "Horsepower Tax" and a weight tax were imposed on motor vehicles. Half the proceeds of the new taxes were allocated to the State and the other half to the counties and townships to be used for road improvement.[7]

In 1915 the Covert Act was passed. This authorized property owners to initiate road construction by petition, provided the land owners were willing to pay at least

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6. Highway Needs in Michigan (Michigan State Highway Department, 1948), pp. 37-46.

7. Ibid., p. 37.

half of the cost through special assessments. The Covert Act proved very important as it resulted in the building of more good secondary roads than ever could have been built under all the highway laws which preceded it.[8]

In 1916 the National Road Act was passed. This act, providing for grants-in-aid up to fifty per cent of the cost of State rural roads by Federal Government, signified the national interest in the construction of good roads. The U.S. law was followed in 1917 by the Michigan Federal Aid Act, which approved of the U.S. National Road Act and made certain an appropriation of $225,000 every year for the following biennium to be used for the construction of improved highways.

By 1921 nearly 4,000 miles of trunk lines had been constructed and improved in Michigan.[9] In 1922 snow removal from roads was inaugurated thus enhancing the efficiency of road travel. In 1931 the township road system was abolished and consolidated under the county road system by the McGill Law. By this law $4,000,000 of gasoline tax revenue, from a tax imposed in 1927, was allocated annually to the counties for the improvement and upkeep of their roads.[10]

When the depression of the thirties brought financial

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9. Highway Needs in Michigan, op. cit., p. 39.
10. Miracle of the Highway Transportation in Michigan (The Automobile Jubilee, 1946), pp. 16-17.

panic to the people, necessary highway construction could no longer be carried on through the taxes already in force. As a result, contribution from the national government was increased to $48,000,000 in 1936.[11] Back in 1910, nearly 98 per cent of Michigan roads were being built by local revenue returns, one and a half per cent by general revenue, and half of a per cent by motor vehicle revenue. In 1936 only 13.6 per cent were built by local funds, 18 per cent by Federal aid, 26.4 per cent by relief funds, and 42.1 per cent by State aid.[12]

Highway improvement in Michigan continued during the World War II years in spite of a curtailment of use of passenger automobiles. This was because no other state was so completely devoted to the production of war goods as was Michigan, and goods roads were necessary to deliver raw materials, finished goods, and workers to their destinations.[13] Lansing automobile plants, for example, were being fed via highway transportation with radiators from Adrian, steering gears from Saginaw, castings from Muskegon, wheels from Jackson, valves from Battle Creek, piston rings from Hastings, and with other parts from Ohio and from South

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11. Michigan State Highway Department, Highway Planning, Feb. 15-17, 1938, p. 12.
12. Ibid., p. 13.
13. Brown, Vernon, Highways and Byways (County Road Commission Association of Michigan), Vol. 1, No. 7, July 1945, p. 2.

Bend, Muncie, and Fort Wayne, Indiana.[14] Thus Michigan's stake in good roads was increased by the fact that highway transportation was a vital element in the automobile production process. Good highways, by 1945, had become as much a part of the automotive assembly line as any other useful machinery.

Naturally, Ingham County profited along with other parts of Michigan from all this stress on good roads. As mentioned before the additions to the total road mileage of Ingham County between 1910 and 1945 were small, being mostly in Meridian and Lansing Townships, although an addition of major importance was the double tracking of U. S. 127 between Holt and Mason (Fig. 17). The extent of road improvement in the county, however, was quite a different story. A good idea of its magnitude can be obtained from an examination of the kind of roads serving the farms of the county in 1925 and by comparing these facilities with thoseavailable in 1940.

In 1925 some 4 per cent of all the farms of the county were on concrete roads, 1 per cent on asphalt roads, 41.5 per cent on gravel roads, 24.0 per cent on improved dirt roads, nearly 25 per cent on unimproved roads, and the rest on undescribed roads. By 1940 the percentage of farms on

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14. Highway Needs in Michigan, op. cit., p. 16.

concrete or asphalt roads had increased to 47. Another 42.9 per cent were on gravel roads and 6.9 per cent were on improved dirt roads, leaving less than 3.2 per cent that were on unimproved roads.

By 1944 Ingham County had a total of 1,235 miles of roads, of which 599 were hard surfaced. Out of the total, 116 miles were state trunk lines, with 80 miles of these hard surfaced. There were 1,119 miles of county roads, of which 519 miles were hard surfaced and the remaining 600 miles roads of other types.[15] U. S. Highways 16, 27, and 127 were the most heavily travelled roads in the county, each having an average daily traffic flow of approximately 8,000 vehicles, including over 800 commercial ones.

Trucks and automobiles had truly revolutionized the transportation system of Ingham County. Livestock, grain perishable dairy goods, poultry products, and other farm produce were hauled by truck to markets or railroad sidings. As highway transportation became faster, cheaper and more efficient, the relative importance of the railroads declined accordingly, this being especially true of short-haul freight and of passenger traffic.

Electric Interurban Lines and Railroads

The interurban lines of Ingham County, as in Michigan as a whole, had their greatest importance during the early

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15. These figures were provided by the State Highway Department, Lansing, Michigan, through the help of Mr. John Tackass.

years of the period being discussed. In 1910 the line running from Lansing, through East Lansing, to Haslett was extended to Owosso, and thus enlarged the area tributary to Lansing by this mode of transport. The further extension of this same line to Flint that was originally planned was never accomplished.[16]

Meanwhile, all the interurban mileage of the county, and the street car lines of Lansing as well, had become part of the Michigan United Railway Company. Formed in 1906, this company eventually operated either directly or through a subsidiary, the Michigan Railway, not only considerable interurban mileage, but also city lines in Lansing, Jackson, Kalamazoo, and Battle Creek. It was reorganized as the Michigan Electric Railway in 1923 because of financial troubles which resulted in large part from the rapid rise in automobile and motor truck transportation. Deficits from operation continued, however, so the lines from Jackson north to Lansing, St. Johns, and Owosso were abandoned in 1929.[17]

The street cars in Lansing ran a few years longer but finally ceased operation April 15, 1933, soon after

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16. Electric Railways of Michigan (Bull. 103, Central Electric Railfans Association, P. O. Box 503, Chicago 90, Illinois: 1959), Sec. III, p. 1.

17. George W. Hilton and John F. Due, The Electric Interurban Railways in America (Stanford: Stanford University Press, 1960), pp. 288-289.

settlement of a two-month long strike in the fall of 1932. This ended service started late in 1886 when two horse cars began running on two routes in the city. The cars were electrified in 1890 and a little later the line to the Agricultural College in East Lansing was built.[18]

The line to Waverly Park was opened in 1904. That same year the line to St. Johns, which had begun operations with steam locomotives in November, 1901, was electrified. Finally, as indicated in the previous chapter, the Lansing and Jackson Railway Company began running cars over its newly laid track in 1909. Completion of the extension to Owosso the following year brought the mileage of electric car line in Ingham County to a peak. This was just twenty years after the operation of the first car in Lansing. Twenty-three years later the last electric car was run, again in Lansing.[19]

The expansion of highway transportation also adversely affected the railroads. Passenger traffic declined, except for a brief partial recovery during World War II when gasoline was rationed, and much short-haul freight business, as well as some freight destined for more distant places, was diverted to motor truck transportation. As a consequence, there was no significant addition to

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18. Electric Railways of Michigan, op. cit., Sec. III, p. 5.
19. Ibid., Sec. III, pp. 1-5.

Ingham County railroad mileage after 1910, but neither was there any great abandonment of track. By 1945, however, the railroads had greatly curtailed passenger services and were able to compete effectively only in the movement of heavy, bulky freight over longer distances.

Air Travel

Before the beginning of the World War II, Michigan had 125 airports, over a thousand privately owned airplanes and some 4,000 pilots.[20] With the impetus given after 1941 by the war demands for the manufacture of aircraft and component parts, aviation became a vital part of Michigans' economic system.

By 1945 Ingham County had three airports: Jewett Airport in Sections 15 and 16, Vevay Township; Areo Manor Airport in Section 31, Lansing Township; and the Capital City Airport in Section 31, Dewitt Township, Clinton County.[21] The first two were private airports, Jewett Airport in Mason covering an area of 3,300 by 2,600 feet and Areo Manor one 7,640 by 1,590.5 feet. Their use was confined to the luxury flying of a few individuals.

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20. Michigan Airport and Aereonautical Facilities, 1944 (Michigan Department of Aereonautics, Lansing, Michigan), p. 14.

21. Michigan Airports, Airfields and Lansing Area, (Michigan Department of Aereonautics, 1946), p. 44.

Capital City Airport, however, was a licensed public airport, serving the cities of Lansing, Portland, Charlotte, Grand Ledge, Williamston, Eaton Rapids, Mason, Fowlerville and Laingsburg, a total population of some 113,691.[22] This airport extended over an area measuring 5,685 by nearly 4,000 feet. By 1945 one regular passenger line used the facilities, joining Buffalo with Lansing, Grand Rapids and points further west, and also linking Lansing with Chicago. Although planes were not much used until later, aviation had by then introduced a new land use in the form of airports, besides bringing the most modern travel facilities to the people of the county.

Manufacturing Industries

Between 1910 and 1945 the most notable change of all the aspects of Ingham County development came in the field of manufacturing. The industrial plants grew in size and employed an increasingly larger share of the labor force in the county. The expansion of manufacturing activities stimulated urban development and the growth of commercial and banking activities both in Lansing and elsewhere in Ingham County.

Expansion of industrial activity was especially

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22. Michigan Airport and Aereonautical Facilities, 1944, op. cit., Map on the title page.

great during the First World War. The number of wage earners had increased by 17.9 per cent between 1909 and 1914,[23] but grew by 100 per cent between 1914 and 1919 (Table 25). Although the total number of industrial plants was reduced by 11.1 per cent the following decade, 1919 to 1930, there was an increase of 6,691 workers employed. The reduction in number of plants resulted from smaller establishments going out of business. This was an inevitable outcome of modern industrial specialization and the attempt to gain the advantages of large scale operation. In order to keep up with out-of-county competition all kinds of improvements had to be made in the manufactured products and the processes by which they were produced. This could be done best by larger firms with substantial financial backing. The reduction in the number of Ingham County industrial plants between 1930 and 1935, however, reflects primarily the influence of the depression which forced many plants either to close or to reduce their labor force (Table 25).

The industries of Michigan as a whole suffered greatly because of the depression. In 1929 there were 6,500 manufacturing establishments in the state. Within the next two years 1,000 plants had been forced out of

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23. U. S. Bureau of the Census, Census of Manufactures: 1920 (Washington: Govt. Printing Office, 1921), Vol. 1, p. 675.

business and by 1933 only slightly more than 4,500 plants remained in operation.[24] The influence of the depression was greatest in the fourteen most industrial counties--Bay, Calhoun, Ingham, Kent, Macomb, Muskegon, Saginaw, Wayne, Jackson, Berrien, Kalamazoo, Oakland, St. Clair, and Washtenaw--which contained 70 per cent of the population and 75 per cent of the manufacturing of the state. Between 1929 and 1933, Oakland County with a 64 per cent loss was the only county showing a larger decline in industrial employment than did Ingham County which recorded 55 per cent drop.[25]

Industrial activities of the county began to improve as early as 1937, as is indicated by the increased labor force of 17,874 people employed that year (Table 25). However, the industries of the county did not fully recover until after 1940 when the war demands created a large market for their manufactured products.

The manufacturing establishments of this period fell into two categories. One type was engaged in the production of basic goods such as automobiles, refrigerators, and furnaces. Included were some industries which started

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24. J. K. Pollock and W. G. Eldersveld, Michigan Politics in Transition, (Ann Arbor: University of Michigan Press, 1942), pp. 47-49.

25. Ibid., p. 48.

as parasites to Lansing's automobile industry, but had over the years developed enough to gain national recognition. The second class of industrial plants produced general goods such as food and other consumers non-durables. In spite of this diversification, the automobile industry continued dominant and remained the largest employer in the county.

The Automobile Industry

In 1914 Michigan ranked first in the automobile industry, contributing 62.9 per cent of the national production. Approximately 16 per cent of all establishments and 53 per cent of the average number of wage earners employed producing automobiles were also reported from Michigan.[26] Two of the leading motor car plants and three nationally known parts plants were in Lansing. Therefore, in the absence of the exact figures, it can safely be assumed that the share of Ingham County in the total state output was substantial.

United States' participation in the First World War in 1917 increased the demand for the products of the automobile plants and caused a sharp rise in the number of workers they employed. During the war years the Lansing

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26. U. S. Bureau of Commerce: U. S. Census of Manufactures, 1914, (Washington: Govt. Printing Office, 1918), Vol. 1, p. 671.

Oldsmobile plant turned to the production of field kitchen trailers for the use of the army, and the Reo plant made trucks for military purposes.[27] After the war both plants resumed the production of automobiles and trucks for civilian use.

Later on, financial troubles due to dwindling profits during the depression years greatly impaired the industry. The output of Oldsmobile in 1935, for example, was only 183,153 vehicles. The Reo plant abandoned the production of passenger cars in 1936 and thereafter devoted its resources to the production of school buses, plows, lawn mowers and trucks. In 1940 the name of Reo plant was changed to Reo Motors, Inc.

During World War II this plant produced trucks of all types for military use and thereby contributed much to the war effort. The conversion of the Oldsmobile plant to provide various war goods was so complete that it produced only 3,498 cars for private use in 1945.[28] Although comprehensive statistics for the output of the automobile plants for the war years were never released, there is no doubt that because of military contracts the labor force and production of both companies was great-

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27. Arthur Pounds, The Turning Wheel (Garden City, New York: Doubleday, Doran & Co., 1934), p. 169.

28. Wards Automotive Yearbook: 1949-1950 (Detroit: Wards Report Inc., 506 West Lafayette Boulevard), p. 51.

ly increased by 1945. Immediately after the war Oldsmobile shifted back solely to the manufacture of automobiles.

As mentioned before, a large proportion of Ingham County's plants were located in Lansing. In 1944 the city had 100 manufacturing plants producing a large quantity of diversified goods ranging from aerial photographs, furnaces, air washers, automobiles, and aircraft and automobile parts, to drugs, jewelry and stone monuments.[29] In 1945, notable for the manufacture of heavy machinery, automobiles, auto bodies and parts, trucks, tractors, and other machinery were plants of Burton Dixie Corporation, Centrefugal Fusing Co., Duplex Truck Co., Fisher Body Division of General Motors Corporation, Lansing Company, Luce Manufacturing Co., Nash-Kelvinator Corporation, Oldsmobile Division of General Motors Corporation, and Reo Motors, Incorporated. Centrefugal Fusing Co., Luce Manufacturing Co., and Nash-Kelvinator Corporation were also engaged in making airplane propellors and parts.[30] Motor Wheel Corporation and John Bean, producers of auto parts, became nationally known for their speciality goods.[31] Four forging plants: Atlas Drop Forge Co.,

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29. Directory of Michigan Manufacturers: 1944, (Detroit: Manufacturers Publishing Co., 1944), pp. 357-359.

30. Ibid.

31. Wards Automotive Yearbook, 1949-1950, op. cit., pp. 107-146.

Federal Drop Forge Co., J. and S. Tool and Die Co., and Lansing Drop Forge Co., produced both for Lansing, in-state and out-of-state markets. Three casting companies, two welding plants, fourteen plants engaged in manufacture of consumer durables, two stamping metal plants, two structural steel, and ten tool and die plants were also included in the roster of leading Lansing manufacturing plants at this time. By 1945 nearly half of the Lansing manufacturing plants were engaged in processing metal and more than 30 per cent were directly related to the automobile industry. Among the remaining plants were those manufacturing chewing gum, flour, food products such as biscuits and crackers, sausages, and beverages. Agricultural implements, bricks and grave stones were also manufactured in the city.

Statistics for 1947 show only 41 manufacturing establishments in the county outside of Lansing. These plants were generally small, with a total labor force of 954 (Table 26). They were primarily engaged in activities such as food processing and brick and cement block manufacturing.

Occupations In 1940

The occupational structure of the population of Ingham County towards the end of the period under consideration can be determined from the Sixteenth Census of the

United States: 1940. Of the county population of 130,616 in 1940, there were 52,579 in the labor force. Among these, 4,249 were seeking work and 2,608 others were working or Public Emergency Work projects initiated earlier during the depression years. The remaining 45,722 were gainfully employed persons.

Only 3,379 workers, or 7.4 per cent of the total, were engaged in agriculture. This compared to 14,687 or 32.1 per cent, working in manufacturing industry, and 27,656 or 60.5 per cent, occupied in other ways. The fact that only 27 persons were employed in forestry and fishing and 41 in mining and quarrying indicates the unimportance of these industries in the county.

The automobile industry employed 10,491 persons or 71.4 per cent of all of those working in manufacturing plants. It was the largest single source of livelihood in the county, providing jobs for 23 per cent of the gainfully employed. Although all the automobile and automotive equipment factories were located in Lansing, only 69.9 per cent of the Ingham County residents employed in them lived in the city. The rest were commuters (Table 39). The making of metal products and machinery were other leading durable goods manufacturing activities. These engaged some 1,180 and 684 workers respectively.

Among the non-durable goods manufacturing industries, which as a group were relatively unimportant, the processing

TABLE 39

LABOR FORCE AND EMPLOYMENT

INGHAM COUNTY AND LANSING, MICHIGAN, 1940

	Male	Female	County Total	Per Cent	Lansing Total	Per Cent County
Total Population	64,930	65,686	130,616	100.0	78,753	60.3
In Labor Force	39,444	13,135	52,579	40.2	33,957	64.6
A) Employed	33,874	11,848	45,722	35.0	29,667	64.9
B) On Public Emergency Work	2,077	531	2,608	2.0	1,513	58.0
C) Seeking Work	3,493	756	4,249	3.2	2,777	65.3
Employed-By Industry	33,874	11,848	45,722	100.0	29,667	64.9
Forestry & Fishing	26	1	27	0.1	16	59.2
Agriculture	3,316	63	3,379	7.4	124	3.7
Mining & Quarrying	40	1	41	0.1	25	61.0
Total Manufacturing	13,487	1,200	14,687	32.1	10,283	70.0
A) Durable goods	11,795	900	12,695	27.8	8,851	69.7
1. Automobiles & Parts	9,731	760	10,491	23.0	7,331	69.9
2. Other Transport Equipment	69	4	73	0.2	56	76.7
3. Machinery	637	47	684	1.5	505	73.8
4. Metal Products	1,118	62	1,180	2.6	820	69.5
5. Lumber & Wood	62	0	62	0.1	19	30.6
6. Furniture, Fixture, etc.	84	22	106	0.2	74	69.8
7. Stone, clay, & glass	94	5	99	0.2	46	46.5
B) Non-Durable Goods	1,263	247	1,510	3.3	1,041	68.9
1. Food & Kindred Products	583	86	669	1.4	429	64.1
2. Textile & Apparel	35	13	48	0.1	30	62.5
3. Paper & Allied Products	16	3	19	0.1	15	78.9
4. Printing, Publishing	503	127	630	1.4	490	77.8
5. Chemicals, Petroleum, Coal	126	18	144	0.3	77	53.5
C) Other & not Specified	429	53	482	1.0	391	81.1

TABLE 39 (continued)

	Male	Female	County Total	Per Cent	Lansing Total	Per Cent County
Non-Manufacturing						
A) Construction	1,973	56	2,029	4.4	1,182	58.2
B) Transport & Utilities	1,830	291	2,121	4.6	1,584	74.7
1. Railroads	261	6	267	0.6	184	68.9
2. Trucking Service	504	16	520	1.1	362	69.6
3. Other Transportation	215	24	239	0.5	189	79.1
4. Communications	188	161	349	0.8	260	74.5
5. Utilities	662	84	746	1.6	589	78.9
C) Wholesale Trade	855	139	994	2.2	678	68.2
D) Retail Trade	4,919	2,513	7,432	16.3	5,312	71.5
1. Food & Dairy Products	1,156	302	1,458	3.2	1,015	69.6
2. Eating & Drinking Places	554	729	1,283	2.8	956	74.5
3. Automobiles & Supplies	1,017	81	1,098	2.4	700	63.7
4. Other Retail Trade	2,192	1,401	3,593	7.9	2,641	73.5
E) Finance, Insurance, Real Estate	1,084	640	1,724	3.8	1,330	77.1
F) Business & Repair Services	751	83	834	1.8	578	69.3
G) Domestic Service	59	1,785	1,844	4.0	1,167	63.3
H) Professional & Related	1,965	2,275	4,240	9.3	2,438	57.5
I) Government	2,278	1,702	3,980	8.7	3,192	80.2
J) Other Services *	1,018	943	1,961	4.3	1,479	75.4
Industry not reported	273	156	429	0.9	279	65.0

* Includes Hotels and Lodging Places; Laundry, Cleaning & Dying; Amusement, Recreation and Related; and Miscellaneous Personal Services.

Source: Sixteenth Census of the United States: 1940, Vol. II, Part 3, pp. 810 and 886.

TABLE 40

LABOR FORCE AND EMPLOYMENT

INGHAM COUNTY AND LANSING, MICHIGAN, 1950

	Male	Female	County Total	Per Cent	Lansing Total	Per Cent County
Total Population	86,680	86,261	172,941	100.0	92,129	53.3
In Labor Force	48,638	20,546	69,184	40.0	41,230	59.6
A) Employed	46,035	19,580	65,615	37.9	39,189	59.7
B) On Public Emergency Work	163*	13*	176*	0.1*	83*	47.1*
C) Seeking Work	2,440	953	3,393	2.0	1,958	57.7
Employed-By Industry	46,035	19,580	65,615	100.0	39,189	59.7
Forestry & Fishing	39	5	44	0.1	26	59.1
Agriculture	2,585	187	2,772	4.2	128	04.6
Mining & Quarrying	34	3	37	0.1	15	40.5
Total Manufacturing	17,791	2,395	20,186	30.8	13,253	65.6
A) Durable Goods	16,326	1,955	18,281	27.9	12,068	66.0
1. Automobiles & Parts	13,262	1,668	14,930	22.8	9,935	66.5
2. Other Transport Equipment	73	9	82	0.1	56	68.3
3. Machinery	841	116	957	1.5	629	65.7
4. Metal Products	1,749	116	1,865	2.8	1,206	64.7
5. Lumber & Wood)	117	8	125	0.2	62	49.6
6. Furniture, Fixtures,etc.)						
7. Stone, clay, glass, & other	284	38	322	0.5	180	55.9
B) Non-Durable Goods	1,379	420	1,799	2.7	1,131	62.9
1. Food & Kindred Products	544	112	656	1.0	349	53.2
2. Textile & Apparel	33	26	59	0.1	27	45.8
3. Paper & Allied Products)	655	259	914	1.4	658	71.6
4. Printing, Publishing &allied)						
5. Chemicals, Petroleum & Coal	147	23	170	0.2	97	57.0
C) Other & not Specified Mfg.	86	20	106	0.2	54	50.9
Non-Manufacturing						
A) Construction	3,309	331	3,640	5.5	2,052	56.4

TABLE 40 (continued)

	Male	Female	County Total	Per Cent	Lansing Total	Per Cent County
B) Transport & Utilities	2,580	606	3,186	4.9	2,178	68.4
1. Railroads	334	17	351	0.6	210	59.8
2. Trucking Service	791	70	861	1.3	482	56.0
3. Other Transportation	354	37	391	0.6	267	68.3
4. Communications	304	361	665	1.0	476	71.6
5. Utilities	797	121	918	1.4	743	80.9
C) Wholesale Trade	1,446	246	1,692	2.5	1,086	64.2
D) Retail Trade	6,710	4,408	11,118	16.9	7,099	63.8
1. Food & Dairy Products	1,404	620	2,024	3.1	1,303	64.4
2. Eating & Drinking Places	912	1,146	2,058	3.1	1,344	65.3
3. Automobiles & Supplies	-	-	-	-	-	-
4. Other Retail Trade	4,394	2,642	7,036	10.7	4,452	63.3
E) Finance, Insurance, Real Estate	1,377	1,179	2,556	3.9	1,800	70.4
F) Business & Repair Services	1,279	213	1,492	2.3	936	62.7
G) Domestic Service	66	830	896	1.4	546	60.9
H) Professional & Related	4,198	4,883	9,081 x	13.8	4,422 x	48.7
I) Government	2,442	2,163	4,605	7.0	3,395	73.7
J) Other Services **	1,355	1,195	2,550	3.9	1,616	63.4
Industry Not Reported	824	936	1,760	2.7	637	36.2

* Armed Services personnel

** Includes Hotels and Lodging Places; Laundry, Cleaning & Dying; Amusement, Recreation and Related; and Miscellaneous Personal Services.

x County Total includes 2,334 in Medicine and Health, 5,217 in Public Education, 474 in Private Education, and 1,056 in Other. Lansing Total includes 1,683 in Medicine and Health, 1,771 in Public Education, 286 in Private Education and 682 in Other.

Source: Seventeenth Census of United States: 1950, Vol. II, Part 22, pp. 91 and 140.

of food and kindred products lead, but employed only 669 individuals.

As to be expected, the largest proportion of those employed in non-manufacturing activities were occupied in retail trade. They numbered 7,432 persons, or 16.3 per cent of the county's workers. Some 5,312, or 71.5 per cent of those were employed in Lansing. At the time, there were 1,576 retail establishments in the county; 1,112 in Lansing, 57 in East Lansing, 62 in Mason, and 345 scattered elsewhere in the county.[32]

The number of workers and the percentage of total county employment in each of the other non-manufacturing occupations can be determined from Table 39. The disproportionally large numbers engaged in government and in professional and related services were due to the state capital being in Lansing and Michigan State College in East Lansing. Of the 3,980 people employed in government, 2,596, or 80.2 per cent resided in Lansing and many of the others commuted there to work. Of the 4,240 employed in professional and related services, on the other hand, only 2,438, or 57.5 per cent lived in Lansing, and some of these worked at the college in East Lansing, the largest single employer of this category of labor.

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32. Sixteenth Census of the United States: 1940, Retail Trade, Vol. 1, Part 3, p. 527.

Enrollment at Michigan State College reached 2,314 students by 1925 and then grew to 6,967 in 1940, a peak up to that time.[33] During the war years which followed, civilian enrollment dropped greatly because most of the young men were in the armed services. This decrease was largely balanced, however, by the stationing of military personnel on the campus for academic training. Civilian enrollment totaled 3,833 in 1943. Later, in 1945, there were 5,329 students and 901 staff members, including extension workers.[34]

The same year approximately 34,765 children and young people between 5 and 19 years of age were being educated in other schools of the county. These consisted of 92 one-room, 7 two-room, and 56 three-or-more-room public schools and three non-public schools.[35]

The war years were ones of full employment because of the emergency demands for manufactured goods. Although many of the men were called into the armed services, their jobs were filled at home to an increasing extent by women. That the employment of women was not uncommon before this is shown by the 11,848 women among the 45,722 gainfully

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33. Financial Report, 1959-1960, Michigan State University Publication, Vol. 55, No. 8 (Jan., 1961), p. 3.

34. Data provided by the Registrar's Office, Michigan State University.

35. The Summary Annual Statistics and Financial Report for the Year Ending June, 1945, compiled by the Commissioner of Schools. Now at Record Center, Dewitt Road, Lansing.

employed persons in Ingham County in 1940. That year 2,513 women were employed in retail trade, 2,275 in professional and related services, 1,785 in domestic service and 1,702 in government, but only 1,200 in all manufacturing industry combined (Table 39). Because of the war, the kinds of work done by women became more varied. Their employment in manufacturing establishments in particular increased. As a consequence, total employment in these plants was considerably greater in 1945 than in 1940 (Table 26), in spite of the shortage of male workers.

Ingham County, 1945

Most of the significant trends which characterized life in Ingham County between 1910 and 1945 were initiated in the latter years of the previous period and have continued in the present one. The two World Wars and the Great Depression for the most part caused only fluctuations in these trends, rather than permanent changes in their direction, or their termination.

In 1945, total population, city population, and rural non-farm population of the county were all much larger than in 1910, but farm population had declined greatly. Farms were larger, better equipped, more productive and more commercial than ever before, although they were fewer in number and contained less total acreage; the latter because of increases in the size of the cities, in rural non-farm

living, and in the area used for other non-agricultural purposes.

Urbanization and industrialization had expanded hand in hand. Trade and industry had grown phenomenonly. Road and highway transportation had continued to improve, tremendously so. In other aspects of transportation, however, there had been some notable changes in trends. One was the rapid decline and termination of use of electric interurbans and street cars. Another, was the rise in use of the airplane.

In 1945, Ingham County stood on the threshold of the post-war period with a greater productive capacity in the form of people, capital, factory, farm, and transportation than at any previous time. The pent-up demand for goods and services for peace-time living was enormous. The rapid adjustment of the economy from a war-time basis so as to satisfy these demands greatly strengthened many major trends of the previous period, but these are matters to be discussed in the next chapter.

CHAPTER VI

POST-WAR YEARS AND CONCLUSION

Close to the end of World War II it was predicted by some that the termination of war demands would lead to reduced output of industry. They thought that unemployment and depression would result.[1] Contrary to these fears, the post-war years in Ingham County have, in general, been prosperous ones, characterized by greatly increased production, a growing gainfully occupied labor force, and profitable business activity. These trends have been interrupted mainly during the years 1948-1949, 1953-1954, and 1957-1958, when there were slight nationally-felt recessions, and currently (1961), when a more severe restriction of economic activity is being experienced.

Perhaps in the future, however, these first fifteen post-war years will be remembered as much, if not more, as ones of "population explosion" and of "the exploding metropolis", than as ones of great economic development and "good times". In all of these regards, Ingham County has mirrored especially well conditions in the nation as a whole, mainly

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1. V. C. Brown, Highways and Byways of Michigan, July, 1945, p. 2, and the feelings generally expressed by the writings of government officials and city planners around 1944.

because it contained the already large city of Lansing within its borders.

Lansing

The population of Lansing, which was 78,753 in 1940, grew to 92,129 in 1950 and to 108,128 in 1960, a gain of 37.3 per cent in twenty years (Table 27). Most of this growth came after the end of World War II. While it was partly due to the higher rate of natural increase (excess of births over deaths) which characterized the nation as a whole during the post-war period, it was largely the result of the areal growth of the city through annexations of suburbs.

Annexations occurred in 1949, 1950, 1955, 1957, and 1958, the largest ones being made to the south of the city in 1949 and to the southwest and the northwest in 1958 (Fig. 19). These extended the city limits in their northwestern and southwestern corners as far as the Clinton and Eaton County boundaries. Absorbtion of pockets of settlement between Lansing and East Lansing on the east gave the two cities a common boundary.

Thus, in January 1960 Lansing included more than 20.6 square miles of the territory of Lansing Township and touched township boundaries on three of its sides.[2] Lansing and

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2. Data, Greater Lansing, Michigan, 1959, (Chamber of Commerce, Greater Lansing Area.)

East Lansing together covered most of Lansing Township and East Lansing extended into adjoining Meridian Township (Fig. 20). The built-up area associated with the two cities spread well beyond their incorporated limits, however, covering considerable parts of Meridian and Delhi Townships in Ingham County, Delta Township in Eaton County, and DeWitt Township in Clinton County.

In 1955, Lansing had 347 manufacturing establishments according to the Directory of Michigan Manufacturers.[3] This was over three times the number reported by the same source in 1944. The proportion of the city's labor force employed by industry, however, has changed but little. In 1940 and 1950 it was a little under 30 per cent and in 1959 just over 30 per cent.[4] In 1940 there were 10,283 Lansing residents engaged in manufacturing out of the employed labor force of 29,667; in 1950 it was 13,253 out of 39,189. The automobile and automobile equipment industries hired the most workers--7,331 in 1940 and 9,935 in 1950. The numbers of persons living in Lansing employed in other kinds of manufacturing and in other occupations, as well as the percentages these were of total county employment of the same categories, can be deter-

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3. Directory of Michigan Manufacturers, 1955 (Detroit: Manufacturing Publishing Co.), pp. 219-225.

4. 1959 information received personally from the Lansing Chamber of Commerce.

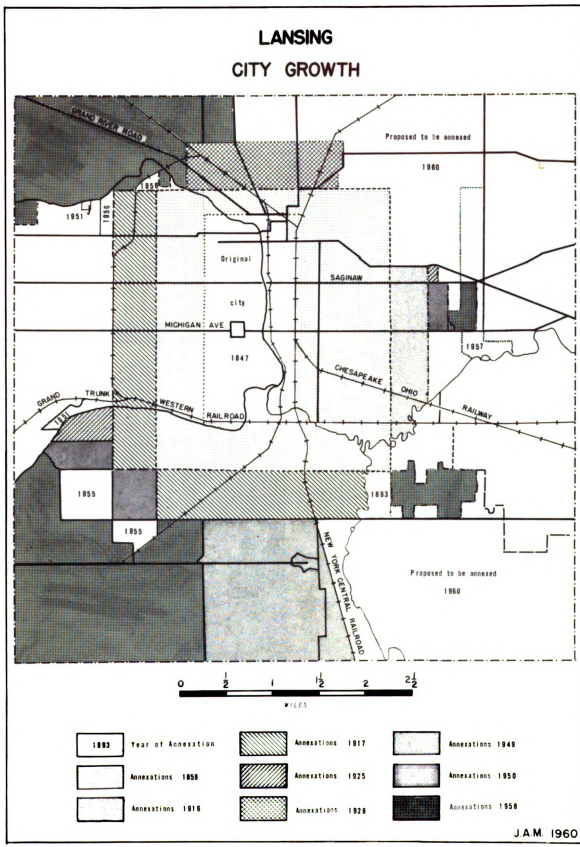

LANSING
CITY GROWTH
GRAND RIVER ROAD
Proposed to be annexed
1960
1951
1955
Original
city
SAGINAW
MICHIGAN AVE.
1847
1957
CHESAPEAKE
OHIO
RAILWAY
GRAND
TRUNK
WESTERN
RAILROAD
1955
1955
1893
NEW YORK CENTRAL RAILROAD
Proposed to be annexed
1960
0
1/2
1
1 1/2
2
2 1/2
MILES
1893 Year of Annexation
Annexations 1859
Annexations 1916
Annexations 1917
Annexations 1925
Annexations 1928
Annexations 1948
Annexations 1950
Annexations 1958
J.A.M. 1960

Fig. 19

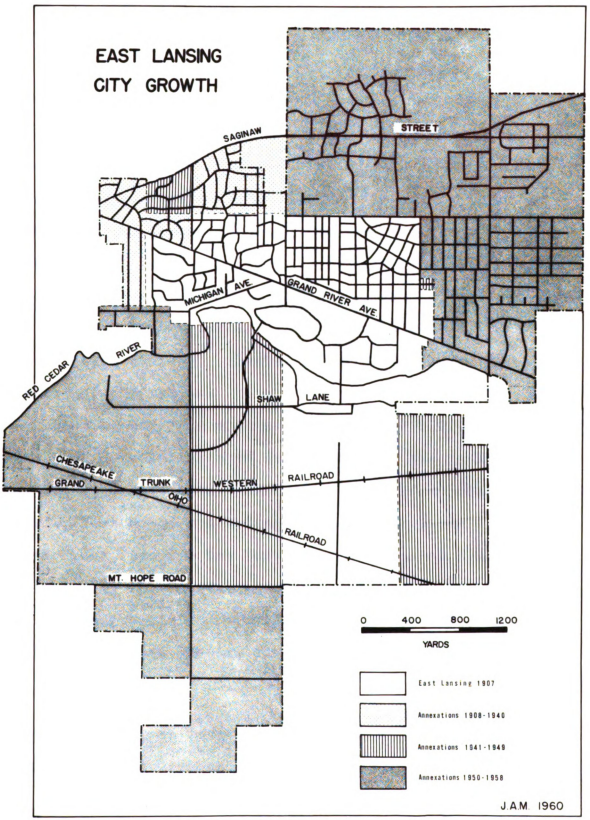

EAST LANSING
CITY GROWTH
SAGINAW
STREET
MICHIGAN AVE.
GRAND RIVER AVE.
RED CEDAR
RIVER
SHAW
LANE
CHESAPEAKE
GRAND
TRUNK
WESTERN
RAILROAD
OHIO
RAILROAD
MT. HOPE ROAD
0 400 800 1200
YARDS
East Lansing 1907
Annexations 1908-1940
Annexations 1941-1949
Annexations 1950-1958
J.A.M. 1960

Fig. 20

mined for 1940 from Table 39 and for 1950 from Table 40. Census data for 1960 of like character is not yet available.

The commercial activities of the city have also expanded remarkably during the post-war years. Although figures for 1960 have not yet been released some estimate of the increase can be made from the 1954 report. During that year Lansing business establishments included 1,094 retail stores with 8,975 employees, 524 business places offering other services with 2,214 employers, and 231 wholesale houses with 2,630 employees.[5] An idea about the amount of business done can be had from the estimated income of $342,617,000 from retail sales in 1959,[6] placing the city among the top eighty markets of the nation.

Lansing today is entered by seven major highways, which have been greatly improved to accommodate the rapidly growing traffic since 1945. The city is linked to Detroit, Grand Rapids, Port Huron and Chicago by the Chesapeake & Ohio, the Grand Trunk, and the New York Central Railroad systems. It is served by the Capital and the North Central Air Lines. A new terminal building, erected at the Capital City Airport in 1958, provided Lansing with one of the finest terminals

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5. U.S. Bureau of Census, County and City Data Book, 1956, (Washington: Govt. Printing Office, 1957), p. 142.

6. Data collected from the files of the Chamber of Commerce of the Greater Lansing Area, dated Oct. 3, 1959.

in a city of similar size in the United States.[7]

Educational facilities present in the city in 1958 included forty public schools with an enrollment of 22,751 pupils, eleven parochial schools with one of 4,240, and a new community college with 413 students.[8] In addition, some 270 children attended the School for the Blind and 375 youths were on the roll at the Boys' Vocational School.[9]

The economy of Lansing is based upon a variety of activities: industrial, commercial and administrative. Its industrial importance largely originated with the establishment here of the automobile industry, and to it is tied a considerable proportion of the city's present prosperity. The future fortunes of Lansing likewise depends largely upon the trends in the automobile industry. Since much of the commercial activity in the city has been stimulated by the industrial growth in the past, its well-being has fluctuated with the depression or prosperity encountered by the manufacturing plants. Because of this relationship, industry and commerce will tend to follow parallel trends in

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7. Annual Report, 1955-56, (Lansing: Michigan Aeronautic Commission), p. 18.

8. Statistics obtained from the Department of Public Instruction, Lansing, Michigan. The figures are for 1958.

9. Data, Greater Lansing, Michigan, 1959, op. cit., p.3.

the future. The correlation between the two is less close than in most industrial cities, however, because Lansing is the state capital. Administrative activities have been and probably will continue to be the most stable ones in the city, thereby lessening the effect on business in general of oscillations in the industrial sectors of the economy.

Population

Population of Ingham County increased at an even more rapid rate during the post-war years than did that of Lansing. Between 1940 and 1960 it grew 81,018, rising from 130,616 to 211,634. This was an increase of 62 per cent, as compared to one of 37.3 per cent in Lansing. The number of persons added was 165 per cent more than in the previous twenty-year period of greatest growth, 1920-1940, and was almost equal to the total population of the county in 1920 (Tables 27 and 41). The increase in number was a little greater between 1940 and 1950 than between 1950 and 1960, but the rate of growth was considerably greater during the first decade (Table 41).

Most of the growth resulted from the natural increase within the county. Although in-migration expanded with the larger demand for labor during the booming auto-building years of 1953-1955, this contributed relatively little to the permanent rise of county population.[10] When employment

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10. The State Journal, Lansing, Michigan, Wednesday May 18, 1960, p. 2.

TABLE 41

NUMBER AND PER CENT OF POPULATION GROWTH

INGHAM COUNTY, MICHIGAN, 1940 - 1960

	1940-1960 Gain Number	1940-1960 Gain %	1940-1950 Gain Number	1940-1950 Gain %	1950-1960 Gain Number	1950-1960 Gain %
Alaiedon	939	83.0	354	31.3	585	39.4
Aurelius	324	24.6	166	12.6	158	10.7
Bunker Hill	431	33.4	208	24.2	223	20.9
Delhi	9,782	145.5	3,354	49.9	6,428	63.8
Ingham	234	21.4	108	9.9	126	10.5
Danville	(101)	(28.8)	(82)	(23.4)	19)	(4.4)
Lansing	-31	-0.2	3,353	23.5	-3,384	-19.2
Lansing City	29,375	37.3	13,376	17.0	15,999	17.4
LeRoy	298	20.0	129	8.7	169	10.4
Webberville	(157)	(30.9)	(92)	(18.1)	(65)	(10.8)
Leslie	794	35.5	408	18.3	386	14.6
Village	(527)	(41.2)	(262)	(20.5)	(265)	(17.2)
Locke	510	52.0	43	4.4	467	45.7
Meridian	9,611	201.6	4,341	91.1	5,270	57.9
E.Lansing	23,906	409.4	14,487	248.1	9,420	46.3
Onondaga	342	26.5	157	12.1	185	12.4
Stockbridge	827	51.2	527	32.6	300	28.8
Village	?	?	?	?	(-1)	(00.0)
VeVay	357	34.5	79	7.6	278	25.0)
Mason	1,623	56.6	647	22.6	976	27.8
Wheatfield	75	9.1	-60	-7.9	135	17.7
White Oak	157	18.6	105	12.5	52	5.5
Williamston	1,464	54.6	544	20.3	920	28.5
Village	(484)	(28.4)	(347)	(20.4)	(137)	(6.7)
Ingham County Summary						
Total	81,018	62.0	42,325	32.4	38,693	22.4
Urban	54,904	62.8	28,599	32.7	26,305	22.7
Total Rural	26,114	60.5	13,726	31.8	12,388	21.8
Rural Non-Farm	27,052	95.0*	14,464	50.8	12,588*	29.3*
Rural Farm	-938	-6.8*	-738	-5.3	-200*	-1.4*

*Estimate

Source: Calculated from data given in Table 27, page 205.

dropped during the recession and steel strike in 1957-58, emigration increased and tended to balance somewhat the earlier movement in from other states.

The proportion of foreign born in the county by now is very low. It was less than 4 per cent in 1950. Out of the total 7,044 foreign born enumerated that year, the largest groups were 1,634 Canadians and 1,084 from the British Isles. The other foreign born came mostly from West European countries and Russia, with only 91 from Latin American and 398 from Asia.[11]

Although the gain in Lansing residents was only 37.3 per cent between 1940 and 1960, the urban population of the county increased 62.8 per cent. The number of city dwellers added was 54,904. Obviously, the other three cities of Ingham County together grew at a faster rate than did Lansing. This was particularly true of East Lansing where the population increase was 409.4 per cent and of Mason where it was 56.6 per cent, but in Williamston the growth was only 28.4 per cent (Table 41).

In the rural areas, there is little question that the farm population declined considerably after 1940. The number and per cent of decrease shown in Table 41 is only

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11. U.S. Bureau of the Census, Seventeenth Census of the United States, 1950 (Washington: Govt. Printing Office, 1952), Vol. VI, Part 22, pp. 97-134.

an approximation, however, since farm population statistics for 1960 have not yet been released. In view of the decrease in farm population and an increase of 26,114 in total rural population, it can be concluded that the rural non-farm population increased 95 to 100 per cent between 1940 and 1960, or at a materially higher rate than the increase in the county as a whole.

If the proportion of total county population of each class in 1940, 1950, and 1960 is considered, the trend away from the farm and towards rural non-farm living is quite apparent. Interestingly, the share of urban population of the total has changed very little during the last twenty years. In 1940 it was 67.0 per cent; in 1950 it was 67.1 per cent; and in 1960 it was 67.3 per cent. Percentages of farm population the same years were respectively 11.3, 8.1, and an estimated 6.4; for the rural non-farm population they were 21.7, 24.8, and an estimated 26.3.[12]

Because of the growth of Lansing and East Lansing and of the rural non-farm population close to these cities, the three northwestern townships (Meridian, Lansing, and Delhi) which had nearly 80 per cent of the people of the county in

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12. The numbers of people and percentages given for 1960 differ from those shown in Figures 2 and 3 which were based completely on estimated, rather than in part on census data for 1960 recently made available.

1940, had over 87 per cent of them in 1960. In 1960 these three townships also had the greatest rural non-farm population, the numbers being 16,505 in Delhi, 14,373 in Meridian, and 14,243 in Lansing (Table 27).

Between 1940 and 1960 the rural non-farm population increased in every township except Lansing Township where there was a decrease of 31 persons. The loss here was due to the great areal expansion of Lansing and East Lansing during the period, this taking in many people who in 1940 were classed as rural non-farm. Other than in Delhi and Meridian Townships, which had a gain of 9,782 and 9,611 persons respectively, the largest increases in rural non-farm residents were 1,464 in Williamston Township (including 484 in Williamston Village) and 939 in Alaiedon Township (Table 41). This is as might be expected, since these are townships that are most accessible for commuting to Lansing and East Lansing. Vevay Township, which also has high accessibility to the two cities, likewise had a large population increase. This totaled 1,980, but 1,623 of these people were in Mason rather than in the rural area.

Table 41 shows that there was considerable variation in numerical growth and rate of growth in different parts of the county between 1940 and 1950 as compared to that between 1950 and 1960. The population of the county as a whole had a slightly larger increase during the first

decade, than it did during the following one. This was mainly due to less rapid numerical growth during the latter period in Lansing Township (including the city of Lansing), and in Meridian Township (including East Lansing), but also in Aurelius, Leslie, Stockbridge and White Oak Townships. All other townships had greater gains in population between 1950 and 1960 than during the previous ten years (Table 41). Since their increases were largely in rural non-farm population and most of these people were supported by jobs in Lansing, this is evidence of the "exploding metropolis."

The approximate location in 1950 of all rural dwellings outside the principle villages and the immediate environs of Lansing and East Lansing is shown in Figure 21; that of rural non-farm dwellings in Figure 22. Comparison of Figures 18 and 22 is instructive, since it indicates the extent and distribution of the increase in rural non-farm dwellings between 1940 and 1950. In 1940 there were only 299 of these in the county, excluding those in the rural sections of Lansing, Delhi and Meridian Townships for which no count could be made, and in the villages (Fig. 18). By 1950 the number had risen to 901, with the largest increases being 111 in Aurelius Township, 98 in Alaiedon Township, 88 and 73 respectively in the parts of Delhi and Meridian Townships for which information was available, and 72 in Williamston Township (Fig. 22 and Table 5). It is apparent that the

greatest increases were in the townships most accessible to the cities in the northwestern corner of the county.

Between 1940 and 1950 there was a gain of 12,462 dwelling units in the county (Table 28). Of these, 5,618 units were added in Lansing, 1,975 in East Lansing and 269 in Mason, or a total 7,862 in the cities. Since farm residences, including those in urban areas, decreased only 9 in number, there was an increase of approximately 4,600 new rural non-farm homes. Many of these were in the urbanized area around Lansing and East Lansing, so are not shown in Figure 22. The total number of dwelling units in this area in 1940 is not known, but in 1950 there were approximately 91 farm and 5,743 non-farm units here (Table 28).

As indicated by Table 30, nearly half of the new dwelling units in Lansing were built between 1940 and 1945 and the rest after 1945. Elsewhere, in East Lansing, Mason, the urbanized area, and rural non-farm areas, the proportion of construction occurring after 1945 was much greater. For the county as a whole residential construction during the last half of the decade, 1940-1950, was two times that during the first half.

Judging from the population increase between 1950 and 1960, about as many new homes must have been built during these years as during the previous decade. Most of the construction was outside of Lansing and East Lansing, however, and more of it occurred before 1955 than after. The number of houses in Lansing and East Lansing increased much more

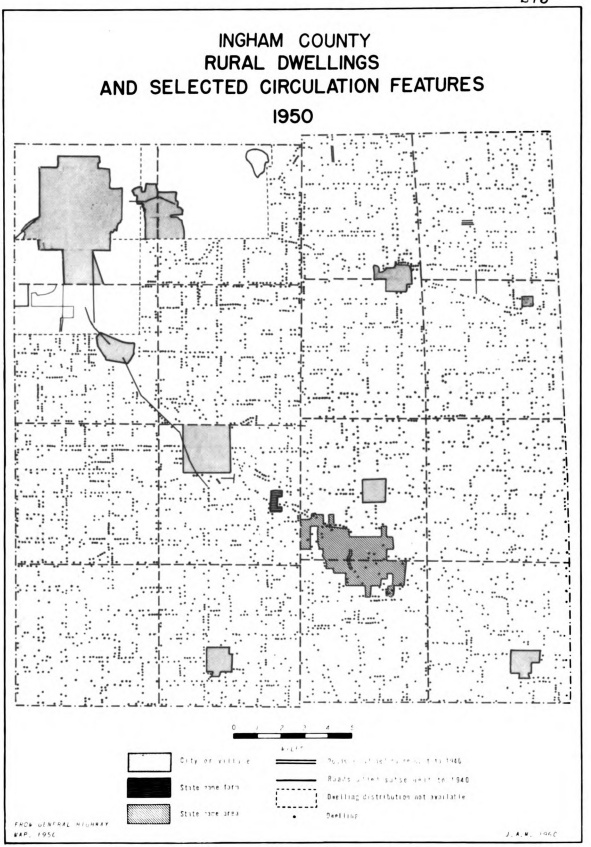

INGHAM COUNTY
RURAL DWELLINGS
AND SELECTED CIRCULATION FEATURES
1950
0 1 2 3 4 5
MILES
City or village
State zone farm
State zone area
Roads other paved used in 1940
Dwelling distribution not available
Dwellings
FROM CENTRAL HIGHWAY
MAP, 1950
J.A.M. 1960

Fig. 21

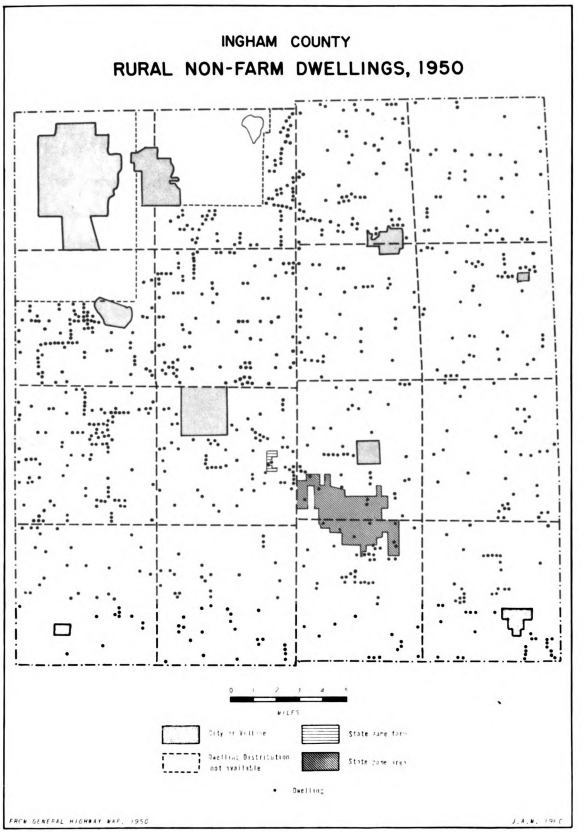

INGHAM COUNTY
RURAL NON-FARM DWELLINGS, 1950
0 1 2 3 4 5
MILES
City or Village
State Game Farm
Dwelling Distribution not available
State Game Area
Dwelling
FROM GENERAL HIGHWAY MAP, 1950
J.A.W. 1951

Fig. 22

through annexations of previously built-up territory, than it did through new construction. Immediately beyond the expanding limits of the cities, however, there was great activity, not only in Ingham County, but also in the parts of Clinton County and Eaton County adjacent to Lansing.

The establishment of new subdivisions and of rural non-farms homes has been greatest along the main highways leading into Lansing and East Lansing, and in areas tributary to these highways. In Ingham County, as a consequence, growth has been most significant to the east towards Williamston and south towards Mason (Plate 11). Construction of all these new homes, along with that of other buildings and of highways, has not only provided much employment (Table 40), but also a market for sand and gravel, the only natural resource in the county other than soil that is of any consequence (Plate 12).

Transportation

Highway transportation gained unprecedented popularity in the post-war years. Inside Ingham County commuters in increasing numbers were traveling greater distances than ever before to reach their jobs in Lansing or East Lansing, while use of the highways by those from outside the county also expanded greatly. Never-the-less only 57 miles of road were constructed in the county between 1940 and 1958. Most of this was due to the multi-laning and relocation of main

highways, especially US-127 to the south, but the condition of many more miles of road was improved. By 1958 there were 1,290 miles of roads of all classes in the county, with 700 miles of these hard surfaced.[13]

The popularity of road travel can be estimated by the amount of traffic on the major arteries. In 1958 over 16,000 vehicles used US-16 (Grand River Road) daily and nearly 12,000 used US-127. The daily average on US-27 was 10,000, on Route 43 the same, and on Routes 78, 99, and 36 it was 6,900, 4,000 and 1,000 respectively.[14] Because of new divided highways in Ingham and adjoining counties it had become possible by early 1961 to travel from Jackson to Lansing in 30 minutes, Ithaca to Lansing in 40 minutes, Charlotte to Lansing in 20 minutes, and Ionia to Lansing in 35 minutes. Inside Lansing traffic is speeded via one-way streets. A recent survey completed for the Tri-County Planning Commission indicates that a perimeter joining the far points from which Lansing can be reached by automobile in 30 minutes now encompasses 627 square miles of territory.[15] Travel time to Lansing from more distant points will be further lessened when divided highways now under construction are completed.

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13. Mileage figures obtained from the State Highway Department, Lansing, Michigan, on Oct. 6, 1959.

14. Michigan State Highway Department, Map of Average 24 Hour Traffic Flow on the Trunkline System for 1958.

15. Lansing State Journal, April 5, 1961, p. 54.

Railroad facilities in 1960 remained about the same as in 1945, except there was less passenger service available because of a great decline in demand for it. Air travel had become increasingly common on the other hand, as had also the transportation of mail and other freight by air. In 1956, for example, there were 71,849 passengers, 246,397 pounds of mail, and 828,055 pounds of other freight moved into or out of the county by airplanes.[16]

Agriculture

After 1945 there was impressive change in agriculture in Ingham County, although much of this was the continuation of trends set into motion during the previous period. The dollar value of farm products sold increased from $6,634,566 in 1944, to $11,442,730 in 1954 (Table 42). Much of this growth was due to monetary inflation, but there was a considerable increase in quantity production of some products.

In 1955 there were 586 less farms in the county than in 1945 and there were 21,717 fewer acres included in farms. The farms were, never-the-less, larger than ever before, averaging 122.2 acres in size, while farm tenancy was down to 8.5 per cent (Tables 32 and 35). The farms were also better equipped than at any previous time, as can be determined from Table 34.

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16. Lansing and Ingham County Economic Data, 1956, p.3.

The percentage of land of the county that was in farms had dropped from 85.6 to 79.5 in a decade (Table 32). This was the result of the diversion of farm land to other uses such as sites for housing to shelter the rapidly growing population and right-of-way for the new divided highways. Some land in Ingham and Bunker Hill Townships was also taken out of farm use and converted into State game area (Fig. 21).

The 284,440 acres remaining in farms in 1954, were comprised of 200,859 acres of cropland, 33,121 acres of woodland, and 22,199 acres of pasture (Table 33). Since this was 1,976 acres more cropland and 5,261 acres more woodland than there had been in 1944, the ten-year loss in agricultural land to other uses was largely accounted for by a decline of the amount of pasture land. If only true pasture, exeluding cropland and woodland used for pasture, is considered there was a loss of 22,953 acres; if all land used for pasture is included there was a loss of 21,951 acres (Table 33).

This decline of pasture acreage was compensated for in part by the continued decrease in the number of horses, from 3,248 in 1945 to 706 in 1954, and in the number of sheep and lambs, from 30,878 to 17,012 during the same period (Table 43). The raising of cattle and the dairy industry, however, became more important than ever. Head of cattle of all kinds increased 4,255 between 1945 and 1954. Although there was a

TABLE 42

VALUE OF FARM PRODUCTS SOLD

INGHAM COUNTY, MICHIGAN

1944-1954

	1944	1949	1954
All Farm Products	6,634,566	9,006,455	11,442,730
All Crops	1,470,538	2,593,865	4,104,507
Field Crops	824,247	2,057,588	3,373,326
Vegetables	447,967	251,648	364,845
Fruits & Nuts	71,086	83,603	113,462
Hort. Specialities	127,238	201,026	252,874
All Livestock and Livestock Produce	5,142,244	6,386,468	7,295,835
Dairy Produce	2,707,600	3,262,643	3,914,741
Poultry and Poultry Produce	573,390	698,853	705,384
Other	1,861,254	2,424,972	2,675,710
Forest Products	21,814	26,122	42,388

Sources: United States Census of Agriculture: 1945, Vol. I, Part 6, pp. 98, 113; United States Census of Agriculture: 1954, Vol. I, Part 6, p. 67.

decrease of some 728 milk cows during these same years, the output of dairy products rose significantly; an indication of the better care being given better cows.

Milk sold increased from 9,910,411 gallons in 1944 to 13,154,383 gallons in 1954. Sale of farm made butter was now a thing of the past, however, and pounds of butter fat sold had dropped from 220,765 to 78,654 during the same decade (Table 43). Thus, fluid milk accounted for most of the value of dairy products sold in 1954. Dairy products

in turn were the most important of all the livestock and livestock products marketed, and these accounted for much of the value of all farm products. The value of dairy products was $3,914,741 in 1954; that of all livestock and livestock products was $7,295,835; that of all farm products was 11,442,730 (Table 42).

The previously mentioned loss in pasture land was also compensated by an increased cutting of hay. This was accomplished, even though there was a reduction of 4,513 acres of hay land harvested between 1944 and 1954, by shifting from the production of clover, timothy, and mixed grass hays, to heavier yielding alfalfa and alfalfa mixed hays (Table 37).

There is little indication, however, that there was much increase in acreage of corn cut for silage, although the amount of land planted to corn for grain increased materially, rising from 33,549 to 43,248 acres during the post-war years ending in 1954. Production rose even more. The yield of 2,063,806 bushels in 1954 was nearly twice that of 1944, reflecting the much greater productivity of new corns now being cultivated (Table 38). No doubt the greater harvest of corn is reflected in the increase in number of cattle and the production of milk, and both help to account the expansion in the number of swine raised in the county (Table 43). Corn remains the leading field crop of the county in terms of acres devoted to its growth.

TABLE 43

LIVESTOCK AND LIVESTOCK PRODUCTS

INGHAM COUNTY, MICHIGAN

1944-1954

	1945	1950	1954
Total Cattle	34,824	32,208	39,079
Milk Cows	16,462*	14,896a	15,734a
Sheep & Lambs	30,878	16,558	17,012
Hogs & Pigs	15,736	18,587	26,747
Farms with Horses	1,321	601	307
Horses & Mules	3,248	1,561	706
Milk Produced (Gal.)	11,583,707*	?	?
Milk Sold (Gal.)	9,910,411*	9,595,486*	13,154,383
Butter Fat Sold(lbs.)	220,765*	153,963*	78,654
Chickens On Hand	188,454	135,065	182,473
Chickens Sold	?	149,940*	203,942
(Doz.) Eggs Sold	1,367,330*b	1,044,214*	1,199,650
Sheep Shorn	30,878*	12,624*	11,469
Wool Shorn (lbs.)	218,397*	102,422*	97,752

*Statistics for year previous to that indicated in the heading.

a) Not strictly comparable with figure in 1945 column which includes all cows milked during any part of 1944, whereas numbers in 1950 and 1954 are for milk cows including dry milk cows and milk heifers that have calved.

b) Dozens of eggs produced in 1944 rather than those sold.

Sources: United States Census of Agriculture: 1945, Vol. I, Part 6, pp. 98, 113; United States Census of Agriculture: 1954, Vol. I, Part 6, pp. 86, 93.

Next in importance is oats, followed by winter wheat. These were grown on 25,489 acres and 23,257 acres respectively in 1954, the acreage of oats being down 2,596 and that of winter wheat up 2,803 as compared to that in 1944. Barley is the most important of the other grain crops, but only

1,047 acres of it were grown in 1954. Harvests of potatoes and sugar beets are now small as compared to past peaks, and have not changed significantly during the post-war years. Attention should be directed, however, both to the great decrease in acreage of dry beans without a corresponding drop in their production, and to the small increase in soybean acreage with a large gain in bushels harvested, for these provide examples of the greater operating efficiency and the use of higher yielding varieties which characterizes modern agriculture.

In 1940 agriculture employed 3,379 people in the county (Table 39). By 1950 the number had dropped to 2,772 (Table 40). Today there are even fewer persons working the farms. Mechanization has progressively enabled fewer hands to take care of larger acreages with less effort. Life on the farm has become much easier. By 1954 approximately 99.8 per cent of Ingham County farms had electricity, 87 per cent had telephones, 92 per cent had running water, 72 per cent had television, 86 per cent were cultivated with tractors, and nearly 88 per cent had automobiles. In addition, there had been by then, and since continued, a phenomenal increase in the number of grain combines, corn pickers, hay bailers, milking machines, and other labor saving equipment on the farms (Table 34).

Since dairying is so important and corn is the leading crop, large barns, machinery sheds, silos, and corn cribs are usual features of Ingham County's rural landscape. Out of a total of 2,328 farms enumerated in the 1954 census, 654 were classed as dairy farms, 446 as cash grain farms, and 456 as field crop farms. The rest were mostly non-specialized farms.[17]

For the most part, the layout of the farmsteads has changed only little in recent years, but there has been considerable addition to, and replacement of, old buildings. New barns built have often been larger, a response to the increased size of the farms and the greater interest in cattle and the dairy industry (Plate 13). Additions of machinery sheds and feeding pens to old barns are more and more commonly being made in the form of one-story, metal-roofed and sided structures (Plate 10). These, as well as the newer style silos being erected (Plate 13), have added some variety to the farmstead's appearance during the modern period.

Manufacturing and Other Occupations

In 1954 there were 209 manufacturing establishments employing 29,394 people in Ingham County. This was an increase of twenty-eight concerns, and 3,542 employees

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17. United States, Census of Agriculture: 1954, Michigan (Washington: Government Printing Office, 1956), Vol. I, Part 6, pp. 122-135.

over the number in 1947 (Table 26). Among the industrial plants thirty-eight were engaged in making various machines, thirty-eight in processing food and kindred products, thirty-five in turning out fabricated products and the remaining ones in the production of diversified goods ranging from the manufacture of primary metal goods to stone, clay, and glass products.[18] The great majority of the establishments were small. Only 33 employed more than 100 persons.

Tables 39 and 40 show that in 1950 manufacturing employed 20,186 workers, or 30.8 per cent of the employed labor force of the county, as compared to 14,687, or 32.1 per cent of the employed labor force in 1940. Since there has been no great change in the occupational structure it is likely that manufacturing engages about 30 per cent of the gainfully employed today. Significantly, durable goods manufacturing occupied the great majority of those working in the manufacturing, this being 27.8 per cent of all employment in 1940 and 27.9 per cent of that in 1950. It probably accounts for an almost equally large share of total employment at present.

A better industrial balance is desirable. In the words of a recently published study, "Further relative increases in its durable goods manufacturing sector would only make the local economy more susceptible to wide fluctuations in

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18. U.S. Department of Commerce, County and City Data Book, 1956 (Washington: Govt. Printing Office, 1957), p. 142.



Plate 11 Rural non-farm home built in 1950, Williamston Township.



Plate 12 Large gravel pit currently operating on the Mason Esker in Delhi Township.



Plate 13 Large, modern barn built in 1960, Williamston Township. Note new-style silos.



Plate 14 One of Oldsmobile's Lansing plants. Constructed during World War II for production of military goods; it is now used in making automobiles.

income and employment. While this is not a suggestion that the area would or should discourage growth in durables, it does suggest that every effort be made to encourage the entry and growth of other types of establishments for whose products or services demand is growing and not subject to wide variation.[19]

Automobile manufacturing is the largest single employer in the county, normally engaging some 20 per cent of the working labor force. This being true, and since most of the other divisions of durable goods manufacturing in the area are largely dependent on this industry, the economic health of Ingham County varies with the fluctuating demand for cars and trucks. In 1956 Oldsmobile held fifth place among the various makes of cars produced, the company contributing some 7.5 per cent of the automobiles built in the nation (Plate 14). In 1955, the peak year of motor vehicle manufacture in America, Oldsmobile turned out 643,459 units and had 14,000 workers on the payroll.[20] Reo Company the same year produced 5,190 buses and trucks and had 1,566 employees. The next year, however, Reo's output was only 3,789 units, providing an example of the changeable fortunes

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19. Bureau of Business and Economic Research, Michigan State University, Economic and Population Base Study of the Lansing Tri-County Area (East Lansing: 1960), p. 58. This interindustry relations analysis summarizes the character of the present economy of the Tri-County Area and makes projections and recommendations for the future.

20. Wards Automotive Year Book, 1955 (Detroit: 1956), 18th edition, p. 83.

of the industry.

Employment in manufacturing in Ingham County apparently reached its highest point just before the 1953-54 recession, and has not exceeded this since, even during the peak automobile building year of 1955. This has in part been due to increased automation, especially of the automobile industry, and in part the result of changes in American consumption patterns. Because of the relative increase of children and old people in the total population, there has been a rise in the share of money spent that goes for the purchase of such things as medical care, education, and recreation.[21] A low point after 1950 was reached during the 1958 recession when 23,535 wage and salary workers were engaged in manufacturing in Ingham County and Oldsmobile built only 310,795 automobiles.

Other than automobile manufacturing, the durable goods industries of significance are those producing non-electrical machinery and fabricated and primary metals. The non-electrical machinery production is mostly farm machinery, and metal working machines. Most of the primary metal products of the drop forge companies go into automobile manufacturing. The establishments making fabricated metal products are quite small and they turn out a variety of items.

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21. Bureau of Business and Economic Research, Michigan State University, op. cit., pp. 65-70.

Some of the better known durable goods producers, other than Oldsmobile and Reo, are Motor Wheel Corporation, Lansing Drop Forge Company, and Lansing Stamping Company.

The non-durable goods manufacturing industries primarily serves the local market. Meat packing, bakery and beverage industries are probably most important as a group, but may still be surpassed today in employment by the printing, publishing and allied industries, just as they were in 1950 (Table 40). Printing and publishing has prospered because of the increasing demands of Michigan State University and of the state government.

Particularly noteworthy among facts concerning the non-manufacturing occupations is the importance of employment in government and in professional and related services (Table 40). This is, of course, due in considerable part to those working for the state government in Lansing and at Michigan State University in East Lansing. The post-war growth of the university to one of the largest educational institutions in the nation is discussed below.

Urban Centers

In addition to Lansing, with its population of 108,128 in 1960, three other centers in Ingham County should be mentioned. These and the number of people living in them in 1960 were East Lansing, 29,745; Mason, 4,490; and Williamston, 2,188.

East Lansing between 1940 and 1960 showed a dramatic growth, both in population and areal expanse. The population increased from 5,839 to 29,745 (Table 27). Some 14,487 persons were added during the decade preceding 1950 and 9,420 following that (Table 41). Before 1950 the growth was largely internal, but by that year most of the available building sites inside the city had been occupied and external expansion became the more important factor. There were two territorial annexations, however, which materially aided population increase before 1950. One was to the southwest; the other was a newly created subdivision in the high-class residential section to the northwest (Fig. 20). The addition to the southeast was of non-residential property owned by the University. Between 1950 and 1958 annexation of residential land to the east and northeast of the city accounted for most of the additional population, although the expansion to the southwest also played a part, particularly since it brought in new married housing areas that had been established by Michigan State University (Fig. 20).

In 1940 East Lansing was not only a college town, but an important high-class residential suburb for Lansing. By 1960 it has assumed more the character of a twin city to Lansing, although many of its employed worked in Lansing. This was because of the growth of Michigan State University.

After the end of World War II, enrollment quickly expanded to 16,253 in 1949. The next two years the number of students was smaller, dropping to 13,593 in 1951, but subsequently there has been an increase every year to an enrollment of over 21,000 in the fall of 1961. University authorities forecast continued climb to 30,000 or more students in the not distant future. The name was changed from Michigan State College to Michigan State University in 1955.

Today, the university ranks as the eighth largest in the nation. While remaining one of the world's outstanding institutions in teaching and research of agriculture and related sciences, this is only one of a number of areas of interest at present, and is overshadowed by instruction and research in science and arts and in business and public service. In 1959 approximately 20 per cent of the total enrollment of 20,355 students was in the graduate school.[22]

That same year operating expenses totaled $61,540,906. Of this, $29,673,199 was paid out for general university operation. Some $17,182,865, largely in staff salaries, went for student instruction, this being 57.9 per cent of general university expense. There was a teaching faculty

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22. Financial Report, 1959-1960, Michigan State University Publication, Vol. 55, No. 8 (Jan., 1961), pp. 4-5.

of over 1,400 and a large non-teaching staff.[23] Obviously, much of the money outlay was in Ingham County. If some $25,000,000 to $35,000,000 personal expenditures by the students enrolled is added to this, the great impact of the university upon the economic life of Ingham County bacomes clearer. Dollars spent by the university in 1959 were twice the amount ten years earlier and the same was no doubt true of those spent by the students.

The recent growth of East Lansing then, is primarily a reflection of the growth of Michigan State University. The city now spans an area of some 7 square miles. There are no manufacturing plants in the city, but commercial establishments have increased in number and amount of business done as the population rose. In 1956, there were 95 retail stores with a total of 668 employees. Included among these, were 18 food stores and eating places and 21 general merchandise, apparel and furniture stores. Some 42 business places, with 182 employees, offered personal services.[24]

The population of Mason, the third city in size in the county, increased 56.6 per cent between 1940 and 1960, with the gain being somewhat greater during the second decade than in the first (Table 41). The major function

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23. Ibid., p. 7.
24. Lansing and Ingham County Economic Data, 1956, pp. 2-4.

of the city is administration since it is the county seat, but its stores and shops service not only the local population, but the nearby rural population. Most of the recent population increase, however, has been because of the city becoming a living place for persons who commute to their jobs in Lansing or East Lansing.

The town of Williamston likewise owes its population growth largely to the same reason. Here the post-war increase was 28.4 per cent. The expansion of the surrounding rural non-farm population was even larger, since the population of the township as a whole gained 54.6 per cent (Table 41).

Conclusion

White men are only the most recent of many generations of humans who have occupied Ingham County. When they first arrived they found bands of semi-migratory Pottawattomie Indians in the area, living by hunting and fishing, supplemented by some agriculture. The number of Indians was small. The distribution of their villages indicates they were concentrated mainly along the Red Cedar River in the north and on the shores of several lakes in the southeast corner of the county. The Indian mode of occupance disturbed the natural landscape but little. They did clear small areas for gardens, however, and established trails through the forest. Both were important, the trails particularly so, in opening the

county for white settlement.

Although Ingham County was surveyed and laid out by 1829, it was not organized politically until 1838. The first permanent white settler arrived in 1834. By 1837, the year Michigan became a state, the population of the area had grown to 822, some 200 farmsteads had been established, and several thousand acres of land cleared. Nearly 70 per cent of the newcomers were from the New England states and New York. They entered the county from the southeast over the "Dexter Trail" and from the south, traveling north from Jackson along the Grand River valley. Approaching the county, as well as within it, Indian trails were important in guiding the early lines of travel. The Grand River Road that was later to become so significant as a travel artery was of no consequence in settlement of Ingham County before 1840.

By the end of 1838 all of the present townships of Ingham County had at least one resident white family, with settlement being least in the northern tier of townships and in Bunker Hill Township in the south. An economy primarily based on subsistence agriculture was established. Farmsteads were dispersed. Since variation in productivity of soil was then largely unknown, it was natural drainage, water supply, choice timber, and proximity to neighbors, to routes of travel, and to already established service centers such as Dexter and Jackson, that were the important considera-

tions in locating places to live. The rectangular land survey was not yet apparent from field and road patterns, since only small areas of land had been cleared and the few roads and trails departed little from those established by the Indians. Several mills and taverns were the only representatives of commerce and industry. Limited as they were, however, the visible alterations of the landscape evidenced the introduction of a more advanced stage of culture, which was in sharp contrast to that of the Indians who previously occupied the area.

Using conditions in 1838 as a starting point, it might be more enlightening in conclusion to briefly trace subsequent changes in individual aspects of occupance through time to the present, rather than summarizing the previous text discussion of changes which occurred during each period.

Population of the county, for example, increased steadily, each successive decade having a greater numerical gain than the previous one up until 1880 when a slowing occurred. During the 1880's, 3,990 persons were added, and during the 1890's only 2,152. After 1900, however, the climb in population became steeper than ever, except during the 1930's when there was a gain of 14,029 as compared to 35,033 the previous decade. The gain of 38,693 during the 1950's was also less than that of 42,325 during the 1940's.

Farm population reached a peak around 1880. Up to that time the major part of the county's population increase had been in the rural areas. Since then it has been in urban and in rural non-farm inhabitants. There is little question but that farm population after 1880 slowly decreased, decade by decade, except during the 1930's when there was a temporary increase due to some city dwellers returning to the country during the depression. Urban population became greater than that in rural areas of the county between 1900 and 1910. People living on farms in 1960 were estimated to number about 13,750, as compared to some 21,000 in 1880.

Lansing was established as a result of the location here of the state capital in 1847. By 1874 the city had become the focus of economic life of the county, as well as the seat of state government, and was home for a quarter of the county's people. By 1900 it had a population of 16,485, or nearly 44 per cent of that of the county. Between 1900 and 1910 growth was particularly rapid, inhabitants increasing 14,744, or nearly 90 per cent in a decade. This growth coincided with the rapid expansion of the automobile industry in the city and gave it 58.6 per cent of the county's population. In 1940 Lansing had about 60 per cent of the county's people, but in 1960 only 51 per cent. Thus, although the city added 29,375 people between 1940 and 1960, giving a population of

180,128 in 1960, the gain was even greater outside of Lansing. Most of this was in East Lansing and in rural non-farm population, with the rest in Mason and the several villages; the farm population declined.

Michigan State University, or Michigan Agricultural College as it was then known, was established in what was later to become East Lansing in 1855. Growth of the college was such that by 1910 there were over a thousand students and East Lansing had some 800 permanent residents. Already some people living here were commuting to jobs in Lansing. During subsequent years this number increased rapidly. East Lansing had a population of 5,839 in 1940. Over the next twenty years growth was spectacular, especially during the 1940's, so that by 1960 there was a population of 29,745. Part of the increase was due to greater employment at Michigan State University, where enrollment had grown to over 21,000, and part of it was due to expansion of East Lansing's function as a residential suburb of Lansing.

During the post-war period a sizeable part of the gain in population of both Lansing and East Lansing has been due to annexations of built-up areas whose inhabitants were previously classified as rural non-farm people. Rural non-farm dwellers in the county increased rapidly after 1910, as more and more people who worked in Lansing established homes outside the city. The rural non-farm population has always been greatest in the northwestern corner of the county,

but as ease of commuting increased it has spread farther and farther away from Lansing and East Lansing, especially along the main highways leading into the two cities. This growth and spread has been especially pronounced during the post-war years. There has been an increase of some 27,000 in the rural non-farm population, not counting the large number of rural non-farm dwellers who were taken into the cities by annexation, during this time. Because of the growth of Lansing and East Lansing and of the rural non-farm population around the two cities, the three northwestern townships had 87 per cent of the county's people in 1960, as compared to about 80 per cent in 1940, and less than 53 per cent in 1900.

Changes in number and distribution of dwelling places has followed these changes in population. About 1880 when farm population was at its peak, house distribution outside of Lansing and the villages had essentially a rectangular pattern, this being determined by the dispersed location of the farmsteads, the use of the Congressional System of land survey, and the fact that the major part of the road mileage had already been built. Subsequently, most of the new residence construction was in the northwestern corner of the county in and around Lansing and East Lansing, with more recent activity occurring farther and farther out from there along the main highways and in the close-in interstaces between these highways.

Although farm population reached a peak about 1880, the number of farms and the amount of land in farms were not highest until around 1900. In that year there were 3,815 farms and 346,444 acres of land in farms. In 1954, the most recent year for which statistics are available, the figures were 2,328 farms and 284,440 acres. The loss in acreage has been caused primarily by the increase in city size and in rural non-farm living, but also by conversion of some land to wild life and recreation areas, highway right-of-way, and other uses. As the farms became less numerous, they became larger, averaging 122.2 acres in size in 1954. More important, they became much better equipped, especially after 1940, so that today fewer farmers, produce more, with less labor, on fewer acres than at any time in history. Meanwhile, there has also been a change in the nature of agriculture in Ingham County. This shifted from the subsistence farming of the pioneer, to cash grain farming of wheat which remained the dominant crop up to 1900, and then more and more to the mixed farming and dairy farming of today.

In the transportation sector, the first remarkable changes, both in the modes of travel and in the mileage of travel routes in Ingham County came between 1838 and 1875. Horse drawn vehicles soon largely replaced those pulled by oxen, and more new roads were opened than during any com-

parable period in county history. The road pattern had assumed much of its present day form by 1859, and the largest part of the mileage added after this was built before 1874. With the exception of a few main inter-county routes, especially those converging on Lansing, the roads were laid on the rectangular pattern of the land survey lines. As in the case of roads, the present pattern of railroads had also been fixed in the county's landscape by 1875. The first track was put into use in 1861, and except for double-tracking, the addition of spurs, and the extension of one line northeast of Lansing, no new railroad was built in the county after 1873. The opening of the railroads, in particular, hastened the change to commercial grain agriculture already mentioned.

Improvement of the roads built before 1874 was slow in coming. Although the year 1896-1897 can be used to mark the beginning of the good roads movement, because it was then that the State Government established a committee to consider public agitation for better roads, rapid progress was not made until about 1910. After that mounting pressure, as a result of ever increasing use of the automobile, brought continuous betterment of road conditions. This took the form of paving, widening, rebuilding with better engineering, and more recently relocation of some main arteries as divided, limited-access highways, rather than much addition to total mileage. All of this has greatly increased the efficiency

of automobile travel and therefore the distance that rural non-farm dwellers can travel to their jobs.

Meanwhile, the first means of transport largely used by these commuters has disappeared from the scene. This was the electric interurban car, which began operation in 1909. For a few years use of this mode of travel increased rapidly and then almost as quickly declined. The last interurban line in the county was abandoned in 1929 and street car service in Lansing, which had started in 1886, ceased in 1933. Both were victims of increased use of the automobile. This, along with the airplane which has become important in the post-war period, has also caused a large reduction in railroad travel.

The factories of Lansing played a leading part in the dawn of "the automobile age" and the tremendous economic and social changes which followed. In 1891 Ransom E. Olds made the first recorded sale of an American-manufactured motor car, one built in Lansing. This had been preceded by experiments in his father's machine shop which resulted in production of a horseless carriage as early as 1885. Primarily because of Old's activities Lansing became the first American city to reach quantity production of the automobile. The two chief automobile producers of the nation before 1910, namely the Oldsmobile Company and the Reo Motor Company, were both located at Lansing.

This was the period Lansing began more rapid growth and launched its reputation as an industrial center. Before 1885, it is true, the city had gained some renown outside the county for the making of carriages and agricultural implements, but otherwise the manufacturers still catered to the local market, providing goods for everyday living from locally produced raw materials. By 1894, however, at least four engine and machine shops had been established, one of these being the Old's Gasoline Co. These works not only provided laboratories for the development of the automobile engine and other power machinery, but soon made Lansing one of the World's leading gasoline engine manufacturing centers. The city's importance in this regard is today largely in the past, but its reputation as an automobile center continues, even though leadership in the number of cars produced has long since been lost.

During the present century Lansing's automobile industry has steadily grown in size and has come to be the largest single source of livelihood in the county. In 1940 it employed 10,491 persons or 71.4 per cent of all those working in manufacturing and 23 per cent of the gainfully employed in the county. In 1950 there were some 14,930 automobile workers and the percentage these were of total county employment was 22.8. In the future it is probable that the percentage of total gainfully employed working in the industry, and in other manufacturing as well, will continue to decline even

though the output of products and number of employees increases. This is because of rapid automation, causing an increasing proportion of new jobs to be in the service occupations. The automobile industry, however, promises to continue as the backbone of Ingham County's industrial consequence and the largest single source of its livelihood.

In concluding, it can be said that nature restricted and directed man's activities most the earlier the stage of settlement. As his technology and knowledge improved he was more and more able to escape these restrictions and to adjust his activities to them. Even so, the course of settlement and the occupance patterns which have evolved in Ingham County since the arrival of white man have been quite different from that in neighboring counties where the natural environment is similar and the techniques and knowledge available the same. The differences are largely the result of three human decisions which have tremendously influenced the past, and will the future, of the county. These were the decision to locate the state capital at Lansing, Michigan Agricultural College at East Lansing, and the automobile industry in Lansing.

APPENDIX I

LIST OF SETTLERS IN INGHAM COUNTY

BEFORE 1839

Sources:

Adams, F. L., Pioneer History of Ingham County. Lansing, Michigan: Wynkoop Hallenbeck Crawford Co., 1924, Vol. 1.

Cowles, A. E., Past and Present of the City of Lansing and Ingham County, Michigan. Lansing, Michigan: The Michigan Historical Publishing Association, 1905.

Durant, S. W., History of Ingham and Eaton Counties, Michigan. Philadelphia: D. W. Ensign & Co., 1880.

Hammell, G. L., Pioneer Families of Ingham County, Michigan (a type written paper which includes a copy of the original 1840 census, the list of resident tax-payers in 1844 and the original 1850 census. This was available at the Michigan State Library, Lansing, Michigan).

Turner, F. N., An Account of Ingham County from Its Organization, Vol. III of Historic Michigan, ed. G. N. Fuller (3 Vols.). Lansing, Michigan: National Historical Association, Inc., 1924.

Procedure:

Names of the settlers were collected from Adams, Cowles, Durant, and Turner and were then checked against 1840 census, and the 1844 list of the resident tax payers. For determining the exact location of the homesteads the Cevil, Harley and Siverd, Topographic Map of the Counties of Ingham and Livingston, Philadelphia, 1859, proved very useful. However, where settlers had moved to other locations and their names were not mentioned on the 1859 map, homesteads were located at the most probable location as determined from the pioneer accounts.

Alaiedon Township

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In 1840 Census	Tax Payer 1844
1. Bentley, Major M.	Not known	1838		x	x
2. Blain, N. (W½, SE¼)	Sec. 17	1838	No date	x	x
3. Carl, S.	Not known	1837		x	x
4. Chandler, E.	SE¼ Sec. 24	1837		x	x
5. Child, W.	Sec. 30	1837	1837		x
6. Dubois, J. (W½, SE¼)	Sec. 36	1838		x	x
7. Dubois, M. (W½, SE¼)	Sec. 25	1838	1836	x	x
8. Havens, H.	Sec. 21	1838	1838	x	x
9. Hudson, J. (SW½, SW¼)	Sec. 7	1838		x	x
10. Lewis, L. (W.)	Sec. 29	1837		x	x
11. Leek, W. C. (W½, SE¼)	Sec. 3	1837	1837	x	x
12. Overacker, A.	Sec. 28	1837	1836		
13. Pattison, E.W. (S½, NE¼)	Sec. 28	1837	1836	x	x
14. Phillips, J.	Sec. 30	1836	1836	x	
15. Strickland, J. (SE¼, NE¼)	Sec. 20	1838	1836	x	x
16. Strickland, J.B.	Sec. 19	1837	1836	x	x

Aurelius Township

1. Barnes, J.	Sec. 26	1837	1836	x	x
2. Bullen, R.R.	Sec. 4	1838	1836	x	x
3. Freeman, J.	Sec. 35	1836	1836	x	x
4. French, J.M.	Sec. 31	1838		x	x
5. Hayward, R. G.	Sec. 33	1837	1837	x	x
6. Huntington, J.L.	Not known	1837		x	x
7. Isham, W.	Sec. 22	1836	1836	x	x
8. Morse, S.D.	Sec. 29,32	1838	1836	x	

Aurelius Township Cont.

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1844
9. Olmstead, A.D.	Sec. 28	1838	1836	x	
10. Ranney, E.	Sec. 32	1838	1837	x	x
11. Robinson, O.C.	Sec. 25	1838	No date		x
12. Webb, G. B.($E\frac{1}{2}$,$NE\frac{1}{4}$)	Sec. 9	1836	1837	x	x
13. Wilcox, E. ($SE\frac{1}{4}$,$NE\frac{1}{4}$)	Sec. 29	1838	1836	x	x
Bunker Hill Township					
1. Fuller, D.	Sec. 7	1837		x	x
2. Vickary, W.	Sec. 33	1838	1843	x	x
3. Wood, Henry	Sec. 1	1838	1836	x	x
Delhi Township					
1. Luther, F.R.($W\frac{1}{2}$,$NE\frac{1}{4}$)	Sec.9	1838	1837	x	
2. Morton, P.	Sec. 23	1838	1838	x	x
3. North, H.H.	Sec. 3	1838	1839	x	x
4. Norris, J.($E\frac{1}{2}$,$SE\frac{1}{4}$,)	Sec.33	1837	1837	x	
5. Wait, D.	Not known	1837			x
6. Wilson, J.	Sec. 33	1837	1837	x	x
Ingham Township					
1. Atwood,Z. ($W\frac{1}{2}$,$NE\frac{1}{4}$)	Sec. 24	1837	1836	x	x
2. Avery, B.	Sec. 23	1838	1836	x	x
3. Beers, M.($W\frac{1}{2}$,$NW\frac{1}{4}$)	Sec. 13	1836	1836	x	x
4. Bennet, J.	Sec. 24	1836	1836	x	x
5. Brown, J.W($NE\frac{1}{4}$)	Sec. 13	1836	1836	x	x
6. Carr, C.	Sec. 1	1836	1836	x	x

Ingham Township

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1844
7. Carr, W.	Sec.12	1836	1836	x	x
8. Dakin, John	Sec.26	1838	1836	x	x
9. Dakin,Jacob	Sec.25	1838	1836	x	x
10. Davidson	Not known	1836		x	x
11. Doan, J.(E½,NW¼)	Sec. 13	1836	1836	x	x
12. Ferguson,H.	Not known	1838		x	x
13. Greer, M. (N½)	Sec. 24	1837	1836	x	x
14. Hendee, J.L.	Sec. 33	1838	1836		x
15. Lobdell, J.B.	Not known	1838		x	x
16. Searl, N. (W½)	Sec. 10	1836			
17. Waldo, S.(N½,NE¼)	Sec. 24	1836		x	x
18. Winchell, A.(S½,NW¼)	Sec. 13	1836	1836	x	x
19. Whipple, R.	Sec. 9	1836	1836	x	x

Lansing Township

1. Cooley, J.(SE¼,SW¼)	Sec. 30	1837	1837	x	x
2. Jones, C.G.(N½, NW¼)	Sec. 4	1838	1837	x	x
3. North, J.E.(W½, NW¼)	Sec. 32	1838		x	x
4. North (Father of J. E. North)	Sec. 33			x	x

LeRoy Township

1. Alchin, E.	Sec. 33, 32	1838 Adams, p. 608, says he settled in the 40's.			
2. Carmer, Mrs.	Sec. 28	1837			
3. Dana, O. NW¼	Sec. 9	1838	1836	x	x

LeRoy Township Cont.

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1844
4. Huffman	Sec.30	1838	1836	x	x
5. Lee, H. (NE½,NE¼)	Sec. 20	1838		x	x
6. Meech, E.	Sec.18	1838	1836	x	x
7. Putnam, R.	Sec.30	1838	1836	x	x
8. Rosencranse,J.	Sec.20	1838		x	x
9. Wilcox, W. (NE¼)	Sec.18	1838			
10. Wilcox, D. B.	Sec.9		1836	x	x

Leslie Township

1. Ackley, D.	Not known	1838		x	x
2. Armstrong, J.(W½,SW¼)	Sec.9	1837		x	x
3. Backus, N.	Sec. 16	1837	No date	x	x
4. Butler, F.J.	Leslie Village	1838		x	x
5. Calvin, E.	Leslie Village	1838		x	
6. Clark, Th.	Sec.32	1838	1836	x	x
7. Convert, M.	Leslie Village	1838			
8. Critchett, E.	Sec.21	1838 *	1836	x	
9. Davis, B. (S½)	Sec.20	1836 *	1836	x	x
10. Dewey, W.W.	Sec.2	1838	1836	x	x
11. Doty, W.	Lot 4	1838	1836	x	x
12. Dwight, W.F.	Sec.21,22	1838 *	1836		
13. Elmer, F.	Leslie Village	1838		x	
14. Fiske, H.	Leslie Village	1838		x	
15. Gardner, C.	Not known	1838		x	
16. Godfrey, E. (or Godfrey, J)	Not known	1836		x	

* What was later called Leslie Village

Leslie Township

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1844
17. Graves, C.	Not known	1838		x	x
18. Grout, E.K.	Not known	1838		x	x
19. King, H.	Not known	1836			x
20. Kirby, S.	Sec.2	1837	1837	x	x
21. Loomis, J.	Sec.9	1838	1837	x	
22. Meeker, H.B.	Sec.28	1838		x	x
23. Miner, L. (or Miner,J.)	Sec.23	1838	1836		x
24. Nims, J.	Not known	1838		x	x
25. Norton, N.($E\frac{1}{2}$,$SE\frac{1}{4}$)	Sec.23	1838		x	x
26. Powell, V.H.	Not known	1838		x	x
27. Rice, D.P.($SE\frac{1}{4}$,$NE\frac{1}{4}$)	Sec.29	1836	1836	x	x
28. Royston, J.	Sec.8	1838	1836	x	x
29. Russell, S.O.	Sec.19	1838	1836	x	x
30. Sanders, W.	Not known	1838		x	x
31. Sanders, G.	Not known	1838		x	x
32. Squires, T.	Sec.8	1837	1836		
33. Tuttle, J.J.	Sec.7	1838		x	x
34. Walcott, J.	Not known	1837			
35. Woodworth, E.	Sec.17	1837	1836	x	x
36. Wortman, A.	Sec.21	1836	1836		

Locke Township

1. Phelps, O. ($SE\frac{1}{4}$)	Sec.23	1838	1836		
2. Pitts, R. Mrs.	Sec.24	1838	1837		

Meridian Township

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1844
1. Bayard, L.	Sec.11	1837	1837	x	x
2. Marshall (SE¼) (2brothers)	Sec.3	1838	No date		
3. Moe, S.	Sec.12	1838	1837	x	
4. Mathews, G.	Not known	1837		x	x
5. Mathews, D.	Sec.13	1837	1837	x	x
6. Hiram, Ira	Not known	1838			

Onondaga Township

1. Allen, H. (W½SE¼)	Sec.29	1834		x	x
2. Baldwin, M.	Not known	1838		x	x
3. Baldwin, T.P.	Not known	1838		x	x
4. Booth, O.	Sec.29	1834		x	
5. Cranson, P.(SW¼SW¼)	Sec.21	1834	1836	x	x
6. French, G.(S½,NW¼)	Sec.29	1837		x	x
7. Frye, J. (E½,SW¼)	Sec.29	1834		x	x
8. Lane, David	Sec.22	1838	1836	x	x
9. Rossman, B.(S¼)	Sec.30	1837		x	x
10. Sibley,Martin	Not known	1838		x	x
11. Steel, Amos	Not known	1838		x	
12. Tuttle, J.	Sec.23	1838	1836	x	x

Stockbridge Township

1. Bowdish, J.R.	Sec.19,30	1837	1837	x	x
2. Dublis, C.M.(W½,NE¼)	Sec.2	1835	1835	x	x
3. Felton, A.D.	Not known	1837			
4. Forbes, H.N.	Sec.26	1837		x	x

Stockbridge Township cont.

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1844
5. Force, O.	Sec.29	1837	1836	x	x
6. Gillespie, C.	Sec.21	1836	1836	x	x
7. Gregory, O.	Sec.2 & 11	1836	1836	x	x
8. Lowe, H.	Sec.2 & 3	1835	1835	x	x
9. Lowe, P.	Not known	1836	1836		
10. Mathewson,J.(W½NW¼)	Sec.22	1836	1836	x	
11. Petrie, L	Sec.22	1836	1836	x	
12. Proctor,S.C.(NW¼)	Sec.1	1836	1835	x	x
13. Seek, J.	Not known	1836			
14. Sill, G.	Sec.36	1836	1834		
15. Smith, W.	Sec.30	1836	1836	x	x
16. Soules, J. (NE¼)	Sec.12	1836		x	x
17. Steffy, J. (NW¼NW¼)	Sec.23	1836	1837	x	x
18. Standish,A.K. (SE¼)	Sec.15	1836	1836	x	x
19. Stevens, R. (W½)	Sec.11	1836	1836	x	x
20. Stocking,S.H.(SE¼)	Sec.3&10	1836	1835	x	x
21. Reason,G. (W½SE¼)	Sec.17	1836	1836	x	x
22. Rice, O.F.	Sec.27	1836	1836	x	x
23. Rogers, David (N½)	Sec.36	1834	1837*	x	x
24. Towner, A.(NE¼NE¼)	Sec.28	1836		x	x
25. Townsend, M.	Sec.13	1837	1837	x	x
26. Webster, E.B.	Sec.26,N	1836		x	x
27. Wheaton, H.	Sec.9&4	1837	1835-37	x	x
28. Wood, I.	Sec.27	1836	1836	x	x

*The land entry in Sec. 36 is under a Mary Ann Rogers in June 1837.

Vevey Township

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1844
1. Austin, H.	Sec.29	1837	1836	x	In Leslie
2. Bartlett, A.	Sec.27	1837	1837	x	x
3. Converse,H.	Not known-a county officer				
4. Dogget, J.	Not known			x	
5. Danforth, E.B.	In Mason	1836		x	x
6.Fifield, H.E.	Sec.17	1838	1836	x	x
7.Grey, C. ($W\frac{1}{2}SE\frac{1}{4}$)	Sec.14	1837	1836	x	x
8.Hawley, H.A.($NW\frac{1}{4}$)	Sec.23	1836	1836	x	x
9.Howe,E.	Sec.29	1836	1836	x	x
10.Hurd, H.($S\frac{1}{2}SE\frac{1}{4}$)	Sec.25	Not known		x	
11.Horton, W.H. ($NE\frac{1}{4}$)	Sec.5	1835		x	x
12.Jackson, A.	School teacher	1838			
13.Lacy, L.	In Mason	1836			
14.Linderman, P.	Sec.4	1836	1836	x	x
15.McRobert, M.	Sec.8	1838	1839	*	
16.Parker, H. ($E\frac{1}{2}SW\frac{1}{4}$)	Sec.13	1836	1836	x	x
17.Rolfe, E.		1836	1836	x	x
18.Rolfe, B. (Secs. 29, 30, 32)		1836	1836	x	x
19.Rolfe, N.		1836	1836	x	x
20.Rolfe, I.		1836	1836	x	x
21. Smith, H. H.	Not known	1836		x	

* Mr. McRobert is mentioned in the census of 1850. In 1844 he was a tax payer in Aurelius Township.

Wheatfield Township

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1844
1. Countryman, J.	Sec.18	1837	1836	x	
2. Countryman, D.	Not known	Not known			
3. Drown, W.	Not known	1837		x	x
4. Gorsline, D.	Sec.34	1836	1836	x	x
5. Hammond, W.	Sec.2	1838		x	x
6. Jubb, E.H.	Not known	1837		x	
7. William, O.B.	Sec.11	1838	1836		x
8. William, J.M.	Not known	1838		x	

White Oak Township

1. Clements, J.		1836		x	x
2. Clements, H.	Secs.28,29	1836	1836	x	x
3. Dagget, E. (SE¼)	Sec.32	1837	1836	x	
4. Dryer, W.	Sec.35	1838	1836	x	x
5. Dryer, D.	Sec.21	1838	1836	x	
6. Dubois, J.(E½W½)	Sec.35	1837		x	x
7. Dutcher, D.	Sec.35	1835	1835	x	x
8. Howard, A.	Sec.4	1836	1836	x	x
9. Hynes, J.	Sec.36	1836	1835	x	x
10. Post, Cyrus	Not known	1836		x	
11. Post, W.	Not known	Not known			x
12. Phelps, H.(NE¼)	Sec.29	1834		x	x
13. Rathbun, J.	Sec.11	1838		x	x
14. Stevens, S.		1838		x	
15. Van Buren, A.(SW¼)	Sec.34	1837		x	x
16. Smith, E.	Sec.24	1836		x	x

White Oak Cont.

Settler's Name	Farmstead Location	Settlement Year	Land Entry Year	In Census 1840	Tax Payer 1944
17. Thomas, Jonathan	Sec.30	1836	1836	x	x
18. Wilson, L.		1838		x	x
19. Wilson, J.B.	Sec.32	1838			

Williamston Township

1. Putnam, Joseph	Sec.35,36	1835			
2. Putnam, Hiram	Sec.35,36	1835			

Notes Regarding Other Early Settlers

Individuals listed below were named as early settlers in the source books consulted. For some the date of arrival was found to be after 1838 and is indicated; for others the date of arrival is uncertain, except that it was supposedly before 1841; also some who arrived did not become permanent residents of Ingham County. It is probably that most of those for whom the date of arrival is not clear came after 1838, rather than before.

Alaiedon Township

1. Ketchum, William. Took up land in Sec. 21 in 1837, but is not mentioned in 1840 Census, 1850 Census, or listed as taxpayer in 1844. Supposedly established a lumber business. A. L. Ketchum born in 1835, moved to Alaiedon when he was eight years old, and went to work for an uncle who had located there earlier.

Aurelius Township

1. Butler, Lewis. Moved to Jefferson City in 1837 but there is no land entry in Sec. 29 under this name.

2. Dunn, John. Settled first in Delhi; not mentioned in 1840 Census, but a tax payer in 1844.

3. Dunn, Samuel. Settled first in Delhi; not mentioned in 1840 Census, but a tax payer in 1844.

4. Dunn, Simeon. Settled first in Onondaga; taxpayer in 1844.

5. Markham, S. Settled in Sec. 32; did not come until late in 1840; not in 1840 Census or 1844 tax payers list.

6. Norris, J. Settled in Sec. 33 in 1840.

7. Turner, W. Not mentioned in 1840 Census, but tax payer in 1844 and listed in 1850 Census.

8. Turner, R. and Turner, James. Neither one is mentioned in 1840 Census or afterwards. William Turner and Melzer Turner are listed as tax payers in 1844 in Meridian Township, but are not in the 1840 Census.

9. Waggoner, Alexander. Not mentioned in 1840 Census, but appears as the resident tax payer in 1844.

10. Willoughby, L. Resident tax payer in 1844, but not in the 1840 Census.

11. Witter, W. Settled in White Oak after 1840; he is not mentioned in the Census of 1840, but listed as a resident tax payer in 1844.

12. Wright, J. Entered land in Sec. 34, in 1841; listed as resident tax payer in 1844; not mentioned in 1840 Census.

Bunker Hill Township

1. Archer, Job. Claims to have been in Bunker Hill Township as early as 1837 and that her father's house was the first one built in the township, it being finished before the organization of the township in March, 1839. There is no land entry under that name in Sections close to Bunker Hill Center where the house was located. Most of the land in these sections was taken in 1836 and 1837. Mr. Archer is not in the Census of 1840, but a Bezaleel Archer was a resident tax payer in 1844. It is probably that arrival date was after 1840.

2. & 3. Bunker, Joab and Jonathan. It has been said that these two came to Bunker Hill Township in 1837 with the Mr. Archer mentioned above and that Mr. Bunker helped to build the first house in the township. He, along with J. Harkness, D. Hodges, and William Vickory, was hired for the job by Mr. Noah Clerk, and the house was built in the NE¼ Sec. 33 on land entered by Mr. Clerk in 1836 (see Adams, pp. 334-335). The house was not occupied by the owner, but acted as a resting place for passers by. Mr. Bunker is not mentioned in 1840 Census, but was a resident tax payer in 1844.

4. Eaton, C. Has been mentioned as an early settler, but did not come until 1842.

5. Earl, J. Entered land in Sec. 25 in 1836; was a resident of Bunker Hill in 1840 and later, but he is not mentioned among the pre-1838 settlers.

6. Dean B. Settled 1844.

7. Harness, James. Although he helped Mr. Bunker build the house, he resided in Leslie in 1840 and later.

8. Hodges, D. Not mentioned as an early settler anywhere; no land entry under this name; not in the Census of 1840. A Hiram Hodges is listed as a resident tax payer of Leslie in 1844.

9. O'Brien, J. Entered land in Sec. 10 in 1839. According to Adams he entered in Sec. 25. O'Brien is mentioned as a resident of LeRoy Township in 1840 and 1844. He moved to Bunker Hill in 1850.

10. Markey, J. In township by 1840.

11. Moore, P. In township by 1840.

12. Case, Lewis. In township by 1840.

13. In early 1839 when the township was first organized there were not enough people to fill all of the offices, so some individuals were chosen for more than one position. The officers selected were 1) David Fuller, 2) U. C. Taylor, 3) Henry Wood, 4) T. Smith, 5) G. Taylor, 6) H. Taylor, 7) E. Whittemore, 8) B. Hoyt, and 9) Job Earl. Only David Fuller and Henry Wood are definitely known to have been in township before 1839, and possibly also Job Earl. B. Hoyt, H. Taylor, and E. Whittemore are listed in Census of 1940, but U. C. Taylor, G. Taylor, and T. Smith are not included.

Ingham Township

1. In 1838 Ingham Township also included the territory of the present townships of White Oak, LeRoy, and Wheatfield. A town meeting was held in the house of Caleb Carr in the spring of 1838. There were about 25 men who claimed the right to vote (Adams, p. 397).

2. The names of those elected to office in 1838, their residence place in terms of present township divisions and other facts follow (Durant, p. 347).
   1. Atwood, Zenas (Ingham)
   2. Beers, M. (Ingham)
   3. Carr, Caleb (Ingham)
   4. Clements, John (White Oak)
   5. Countryman, Daniel (Wheatfield)
   6. Dakin, John (Ingham)
   7. Dakin, Jacob (Ingham)

8. Dryer, W. (White Oak)
9. Gorsline, David (Wheatfield)
10. Ferguson, H. (Ingham)
11. Hendee, J. L. (Ingham)
12. Huffman, James. No land entry, but in 1840 Census
13. Jubb, E. H. (Wheatfielf)
14. Lee, H. (LeRoy)
15. Lobdell, J. B. (Ingham)
16. Meech, Epharium (LeRoy)
17. Post, J. (C?) (White Oak)
18. Post, W. (White Oak)
19. Rathbun, James (White Oak)
20. Smith, H. H. Not in 1840 Census, but mentioned as resident tax payer in 1844. Same name appears as pre-1838 settler in Vevay Township.
21. Stevens, Andrew, and Stevens, Thomas. Both are listed as resident tax payers in 1844, but a S. Stevens only is listed above as early settler in White Oak Township.
22. Wilson, Lucius (White Oak)
23. Winchell, Amaziah (Ingham)
24. Thomas, Jonathan (White Oak)

3. Both J. Post and W. Post are mentioned as early residents of White Oak Township, but no land entries were found under their names. Land was entered by Clerk Post in Sec. 23 and by E. Post in Sec. 25 in 1836.

4. Crossman, John and Ebenezer are mentioned in 1840 Census, but there are no land entries under these names. Samuel Crossman located on Sec. 14 and he is said to have located in Dansville in 1836. It is even said that Dansville was named after his son, but Durant on p. 248 says that S. Crossman came in 1839.

Lansing Township

1. More than one member of the North family located land in Lansing Township prior to 1838, but when they visited they stayed with the one North who was in the township already. The others established their homesteads here later on.

Meridian Township

1. Davis, Chauncey. Settled in 1837, according to Adams, p. 673, but not mentioned in the 1840 Census although appears as a resident tax payer in 1844. It seems he did not settle until after 1840 since ~~much~~ land was entered in Sec. 11 in 1840.

Onondaga Township

1. Allen, H. No land purchase but mentioned in 1840 Census.
2. Abbey, Frederick. Land entry Sec. 30 in 1836 and in the

Census of 1840.

3. Darling, John. In the Census of 1840, land entry on Sec. 5 in 1836.

4. Day, Chauncey. No land entry and not in the Census of 1840.

5. Hunt, Adney. Land entered in Sec. 22, but the Census of 1840 does not mention, although a Almer D. Hunt is mentioned.

6. Frye, Hiram. Came in 1838, but lived with his brother until 1839.

7. Johnston, Barney. The meeting of 1838 was held at the home of this man, but he is not mentioned in the Census of 1840 although he is in the list of 1844 tax payers and in the Census of 1850.

8. Montgomerys. They were never residents of Onondaga Township, but lived in Eaton County where they had a major part of their property.

9. Lane, Marcus. Entered land in Sec. 22 in 1836, but according to the history of Lane Cemetary that land was owned by David Lane, who is mentioned in the Census of 1840.

10. Sherman, Lowing. Not mentioned in the Census of 1840, but as a resident tax payer in 1844.

Stockbridge Township

1. Beebe, Silas. Not mentioned in the 1840 Census. He came in Ingham County in January 1838 and located in the township in the same year, according to the report given by his son. He is supposed to have purchased land by the end of 1838 from a Elijah Smith.

2. Force, Peter. In township in 1840 according to Census and a tax payer in 1844. No land entry.

3. Force, John. Not mentioned in 1840 Census or as tax payer in 1844, but supposed to have been in township.

SELECTED BIBLIOGRAPHY

Adams, F. L. Pioneer History of Ingham County. Lansing: Wynkoop Hallenbeck Crawford Co., 1924.

Beal, W. J. History of Michigan Agricultural College. East Lansing: Agricultural College, 1915.

Beers, F. W. County Atlas of Ingham County, Michigan. New York: F. W. Beers and Co., 36 Vesey Street, 1874.

Blois, J. T. Gazeteer of the State of Michigan. Detroit: Sydney L. Rood and Co., 1838.

Calkins, E. A. Old Trails of Ingham County. Lansing: Michigan State Library, 1929.

Chamber of Commerce of Greater Lansing Area, Industrial Directory of Metropolitan Lansing. Lansing: circa 1957.

Chase, A. Rural Michigan. New York: The Macmillan Co., 1922.

Cooley, J. M. Michigan: A History of Governments. New York: Houghton Mifflin Co., 1905.

County and City Data Book. Washington: U.S. Govt. Printing Office, 1952.

Cowls, A. E. Past and Present of Ingham County and the City of Lansing. Lansing: Michigan Historical Publishing Association, 1905.

Darling, B. City in the Forest. New York: Stratford House, 1950.

Decker, K. M. "Early Pioneer Homesteads in Michigan," Papers of the Michigan Academy of Science, Arts and Letters, Vol. XLIV, 1959.

Directory of the Centennial Farm Owners in Michigan. Lansing: Michigan Historical Commission, Series No. 98, 1958.

Directory of Michigan Manufacturers, 1955. Detroit: Michigan Manufacturers and Financial Record Co., 1956.

Dunbar, W. F. Michigan Through the Centuries. 3 vols. New York: Lewis Historical Publishing Co., Inc., 1955.

Durant, S. W. History of Ingham and Eaton Counties. Philadelphia: D. W. Ensign and Co., 1880.

Edmond, J. P. The Gasoline Age. Lansing: Franklin DeKleine Co., 1942.

_____. Early Lansing History. Lansing: Franklin DeKleine Co., 1944.

Economic and Population Base Study of Lansing Tri-County Area. East Lansing: Bureau of Business and Economic Research, College of Business and Public Service, Michigan State University, 1960.

Farm Plat Book, Ingham County, Michigan. Rockford, Illinois: Rockford Map Publishers, 4525 Forest View Ave., 1957.

Farmer, J. Maps of the Surveyed Parts of Michigan. New York: from 1832 to 1840.

Fuller, G. N. Economic and Social Beginnings of Michigan: A Study of the Settlement of the Lower Peninsula During the Territorial Period, 1805-1857. Lansing, Michigan: Wynkoop Hallenbeck Crawford Co., 1916.

Hammell, G. L. Federal Census of 1850, Ingham County, Michigan. Typewritten Paper, Lansing, Michigan State Library (copied from the original at the county clerk's office, Mason, Michigan).

Highway Needs in Michigan, Michigan Good Roads Federation.

Hinsdale, W. B. Archeological Atlas of Michigan. Handbook Series No. 4. Ann Arbor: University of Michigan Press, 1931.

Historical Collections Made by the Michigan Pioneer and Historical Society. Vol. XXXVIII. Lansing: Wynkoop Hallenbeck Crawford Co., 1912.

History of the Early Life and Business Interests of the Village and Township of Leslie, Ingham County, Michigan. Elijah Grout Chapter, Daughters of the American Revolution, 1914.

Hodges, R. M. Reclamation of the State Turnpike Line No. 16 Near Williamston. Thesis submitted for the degree of B.S. at Michigan State College, 1923.

Hudgins, B. Michigan Geographic Background in the Development of the Commonwealth. Ann Arbor, Michigan: Edward Brothers, Inc., 1953.

James, P. E. A Geography of Man. New York: Ginn & Co., 1951.

James, P. E., and Jones, C. F. American Geography Inventory and Prospect. Syracuse University Press, 1954.

Joint Documents of the State of Michigan, 1856. Lansing: Hosmer and Fitch, State Printers, 1857.

Joint Documents of the State of Michigan, 1870. 2 vols. Lansing: W. S. George and Co., 1871.

Joint Documents of the State of Michigan, 1875. 2 vols. Lansing: W. S. George and Co., 1876.

Lansing City Directory, 1911. Wynkoop Hallenbeck Crawford Co., 1911.

Lansing Quadrangle. U.S. Geological Survey, 1909-1910.

Leverett, F. Surface Geology and Agricultural Conditions of the Lower Peninsula of Michigan, Michigan Geological and Biological Survey, Pub. 9, Geological Series 7, Lansing: Wynkoop Hallenbeck Crawford Co., 1912.

Leverette, F., and Taylor, P. B. The Pleistocene of Indiana and Michigan and the History of Great Lakes. Washington: U.S. Government Printing Office, 1915.

Local Climatological Data, 1958. East Lansing: U.S. Department of Commerce, Weather Bureau.

McGaugh, Maurice E. The Settlement of the Saginaw Basin. The University of Chicago, Department of Geography, Research Paper No. 16. Chicago: December, 1950.

Manual for the Use of the Legislature for the State of Michigan, 1875-1876. Lansing: George and Co., 1875.

Marbut, C. F. Atlas of American Agriculture. Washington: Government Printing Office, 1935.

Michigan Economic Report. Vol. 1, No. 2. Bureau of Economic Research, College of Business and Public Service, Michigan State University, 1959.

Michigan Guide to the Wolverine State. Oxford University Press, 1941.

Michigan History. Lansing: Michigan Historical Commission, Sept., 1959.

Michigan History Magazine. Vol. IV. Lansing: Michigan Historical Commission, 1920.

Michigan State Gazetteer and Business Directory for 1875. Detroit: The Tribune Printing Co., 1875.

Michigan Postwar Highway Needs. State Highway Department, Michigan. (no date of publication).

Modern Highways of Michigan. A Report of the Michigan Legislative Highway Study Committee. Lansing: Automobile Safety Foundation, 1955.

Old Timers News. 3 vols. New York: The Old Timers, Inc., January, 1946.

Pound, A. The Turning Wheel. Garden City, New York: Doubleday Doran and Co., 1934.

Rae, J. P. American Automobile Manufacturers. New York: Chilton Co., 1959.

Raphael, E. H. History of Haslett-Lake Lansing Area, Meridian Township, Ingham County. Ann Arbor: Edward Brothers, Inc., circa 1959.

Rogers, F. F. History of the Michigan State Highway Department, 1905-1933. Lansing, Michigan; 1933.

Soil Map, Ingham County. U.S. Department of Agriculture, Bureau of Chemistry and Soils. Surveyed 1933 and issued 1941.

Stockman, L. History of Road Construction in Michigan. A thesis submitted at Michigan Agricultural College for the degree of B.S., 1915.

Standard Atlas of Ingham County, Michigan. Chicago: Geo. A. Ogle & Co., 134 Van Buren Street, 1895.

Thaden, J. F. The Lansing Region and Its Tributary Town-Country Communities. Mich. State Agricultural College, Agricultural Experiment Station, East Lansing. Spec. Bull. 302, March, 1940.

Turner, F. N. An Account of Ingham County from Its Organization. 3 vols. Lansing: National Historical Association, Inc., 1924.

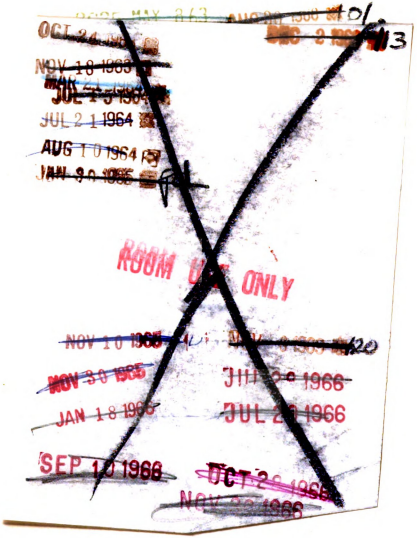
Tuttle, C. R. General History of the State of Michigan. Detroit: Tyler and Co., 1873.

Veatch, J. O., et al. Soil Survey of Ingham County, Michigan. Washington: U.S. Government Printing Office, 1941.

Walling, H. F. Atlas of the State of Michigan. Detroit: R. M. and S. T. Tackabury, 1873.

Wright, W. J. History of Stockbridge Township and Stockbridge Village (Manuscript used at the Archives of the Historical Commission).

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