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## Manitowoc County agriculture. [1954]

Wisconsin Crop and Livestock Reporting Service  
Madison, Wisconsin: Wisconsin Dept. of Agriculture, [1954]

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## County History and Statistics—A Growing Need

Interest in the history and the statistics of each county is growing. To understand local conditions and to plan things for the present and the future requires knowledge of what happened up to now. Statistics of agriculture have been published and used for a long time mostly on national and state levels. But as agricultural work became organized more and more by counties, it has become important to have data available for each county. This is helpful to those who are responsible for planning and carrying out local programs as well as for teaching in schools.

In Wisconsin this work is well established. This is the third time that county agricultural statistics books are being prepared to provide up-to-date information by counties and towns. Many people have cooperated in this work, notably county agents and other agricultural workers. Likewise at the state level, the Extension Service, the Production and Marketing Administration, and the Soil Conservation Service are helpful.

With the new county books, however, we are happy to report the cooperation of the State Historical Society and members of the County Historical Societies throughout Wisconsin. The State Historical Society invited workers from local history societies to furnish material for the history of agriculture in each Wisconsin county. This provided an opportunity for local historians to assist in preparing a more detailed county history than ever before. This is important because it gives a better understanding of the forces that were influential in shaping the agriculture of each county. We are especially indebted to Dr. Clifford Lord and Dr. Wilbur Glover of the Historical Society for their help. Wm. Kirsch of the State Department of Agriculture has edited and written much of the historical material.

Continually changing conditions require constant planning by farmers, industrial managers and others engaged in producing the wealth of the nation. To do this a fuller knowledge of the resources of a region and of local trends is of great value, hence, the importance of including more of the history of the county along with the statistical and descriptive material offered in this book. Wisconsin has had a fortunate experience in this work. Suitable provisions for publication by the Wisconsin Legislature made it possible in the past to produce these books for all Wisconsin counties.

### Many Users of County Information

County books are intended to serve schools and the various groups and individuals who need this basic information. It is hoped that the new county reports following the 1950 Census will be even more useful than the earlier ones. The distribution of the books has been made locally in each county through the County Agricultural Committee and the office of the county agent. In this way they could be put into the hands of leaders who needed them most, and in libraries, including those of schools. So great has the interest in this material been that many counties exhausted their supply of books early and have since then been unable to meet requests. Also, the coming of new data from the census reports and from the Department of Agriculture makes it important to bring the material up to date.

Among the many uses of county books, that in the

schools is one of the most important. Teaching methods have changed greatly and under present day systems much more local material is taught than before. However, teaching material about counties has been lacking and these books have filled an especially important need for that purpose.

Another unusual use has been that of giving a full county picture to outside inquirers who may want to locate in a county for farming or other purposes. County agents and others have assisted these people greatly by making such county books available to them for study. Usually such inquirers find most of their basic questions about a county answered in these books.

### The Origin and Need

The history of county agricultural statistics books in Wisconsin is of more than usual interest in that this work developed first in response to demands from county agricultural workers. In the late 1920's county agents came to the state Crop Reporting Office in Madison for information on their localities which would help them in planning their work in the counties. A review of the published material showed that it was not in such form as to be readily usable or available for such purposes. In fact, much of the data that had been collected by the census, by assessors, through crop reporters, and others over a long period of years was not available for use in the counties where agricultural projects and planning were more and more being carried out. The idea grew that, if the data for each county could be brought together individually and organized into a systematic report for each county, it would meet the widespread demand.

Resources for such an undertaking were lacking at the time, but in the 1930's help became available from WPA and various other relief agencies and at the same time more agricultural work developed in the counties; this led to the organization of the existing statistical material by counties for publication. By 1939 the first county book was published; with the Census of 1940 the work was extended to other counties.

Following the 1945 Census there was a renewed demand for another set of these publications with up-to-date information, but funds for it were not available and the relief agencies of the 1930's no longer existed. The problem was brought to the Wisconsin Legislature through Dr. Ora A. Rice and provisions were made for the publication of a second set of these county books. Now that the 1950 Census has been taken, another set is needed. Wisconsin through the Cooperative Federal-State Crop Reporting Office of its State Department of Agriculture was the first state to develop this type of county service, but the idea has since spread to other states and it is believed that in time it will become increasingly important in most of the rural counties of the entire nation. Cooperation by the Bureau of Agricultural Economics of the United States Department of Agriculture has been especially helpful.

*Walter H. Ebling*  
Agricultural Statistician



## PART I

### Manitowoc County, Wisconsin

Manitowoc County, Wisconsin is located in the east-central part of the state on the shore of Lake Michigan. Manitowoc is bounded on the north by Kewaunee and Brown Counties, on the west by Calumet, and the southern border is formed by Sheboygan County. The northern border is only 14 miles from Green Bay while the western border is about 11 miles east of Lake Winnebago. The southern edge of the county is about 90 miles north of the Wisconsin-Illinois boundary.

The seat of county government is the city of Manitowoc located in the east-central part of the county on the shore of Lake Michigan. The population of the city of Manitowoc was 27,598 in 1950 according to the United States census report. By highway the city is 82 miles from Milwaukee, 126 miles from Madison, and 170 miles from Chicago, Illinois.

#### History

The history of our country is made up of the history of the states of the Union and of the counties which make up these states. It was from the work of those who labored in the fields, mines, workshops, and the factories that came the impulse which changed the wilderness into a rich and powerful country. The more knowledge we have of our past as compared with the present, the more we contribute to the life of the community in which we live.

Wisconsin counties present a considerable variety in topography, soil, climate, and length of the growing season. This variation brought about a certain diversity in the manner in which farm production developed in the different counties. This development took place against the background of the clearing of the forests which originally covered most of the region that later became Wisconsin.

Of the changes which have occurred in Wisconsin's farming, three of the most important are: (1) The changes from growing things mainly for home use to wheat production, (2) the changes from wheat growing to livestock, and (3) the growth of dairying. These changes took place in the various counties at different times depending upon when they were settled.

In general, settlement proceeded from south to north, and toward the northeast along Lake Michigan as far as and including Brown County, and toward the northwest along the Mississippi River as far as and including St. Croix County. By 1860, this area presented different degrees of agricultural devel-

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opment, the most intensively developed being the southeastern counties. The counties which are located in upper Wisconsin to which we now refer as the north, were by 1900 still mainly a region of forests with agriculture advancing in some areas. The distinctive characteristic of this northern section of the state is that its most developed agricultural counties went directly from lumbering to dairying. Counties in other Wisconsin regions went from lumbering or pioneer clearing of land to wheat growing and then to dairying.

Manitowoc County was one of several counties which were created by the Territorial Legislature on December 7, 1836. The boundaries of the county at that time included all the present territory except that portion of township 21 North, Ranges 22, 23, and 24 East which was added on February 1, 1850. The county name is an Indian word which is thought to mean "spirit of the land" or "abode of the good spirit". Indian tradition is that a being, supposedly a spirit, was observed several times at the mouth of the river which gave the name to the county.

The first white men to see Manitowoc County were probably Father Marquette and Louis Joliet as they skirted along the Wisconsin shore of Lake Michigan on their return from exploring the Mississippi in 1673, but they left no record of having stopped anywhere within the present county boundaries. Father St. Cosme, a missionary, is known to have stopped at a new Jesuit mission in 1698, presumably at the mouth of the Manitowoc River. At least one fur post was established in this region before Jacques Vieau of Mackinac Island built two posts in 1795--one in the town of Gibson and the other near the falls of the Manitowoc River.

The first actual settler was Jacob W. Conroe who established a mill at Manitowoc Rapids in 1836, the year the county was created. Up to 1847 the principal means of livelihood of the settlers was cutting trees, manufacturing lumber and catching fish for the eastern markets. The attention of incoming settlers at this time, however, was drawn toward the land with the desire to cultivate it and produce corn, wheat, oats, and other cereals.

The Germans were among the first settlers to pursue this aim. Frederick Borchardt was the first of this nationality to come to the county. Through his efforts many others were induced to leave the old world for the new and settle on land in Manitowoc County. Probably the first group of north Germans to settle in the county was a body of men from Holstein. Frederick Borchardt, who was a native of Saxony, met them in Detroit and induced them to go to Neshoto where there was a sawmill belonging to the Stringham Company and at which Mr. Borchardt was working. Some of the people located in Neshoto, others in Mishicot. This was about 1847. The next German settlers were mostly from Saxony and Rhenish Prussia. Between 1848 and 1850 a large number of Mecklenburgers and Pomeranians located in the county. It was said that the Germans selected the upper shores of Wisconsin in preference to the treeless areas of the more southern counties because they were more at home where the dense forest reminded them of their native environment in Germany.

The Norwegians were also very much in evidence as early settlers in Manitowoc County. Loren Ballensted came first, in 1843, and was followed by his brother, Allie, a few years later. The first settlement in Eaton was by O. Siverson, a Norwegian, in 1849. O. K. Gigstad, K. O. Oppen and J. Stephenson were among the early arrivals in Liberty town.



A large number of Irish came into the county and bought land in the 1840's. Maple Grove, Rockland, Cato, Meeme, Liberty, and Franklin are largely indebted to them for their agricultural development. T. Morrissey, T. Watt, and Ava Smith were among the early settlers in Maple Grove. The northern part of Meeme was almost entirely taken up by the Irish. Among the earliest of them were Peter and Henry Mulholland, P. O'Shea, and J. Dollan.

In 1848 many English families located in Rockland. About the same time a number of pioneers of English descent, including William Eatough, C. Hall, and James Robinson, cast their fortunes with the settlers in the towns of Kossuth and Manitowoc. The English also located in other parts of the county, with here and there a Scotchman. The French Canadians were also in evidence, especially in the neighborhood of Two Rivers.

The Bohemian settlements were also of considerable importance in the early history of Manitowoc County. The earliest of this nationality to come into the county was Michael Kellner, who settled in Kossuth in 1846. He built a tannery and later added a mill and a store to his holdings at the place which later became the village of Kellnersville. In 1852 fifteen Bohemian families settled there. Some years later other Bohemians came. This was the beginning of the Bohemian immigration to the county and it was not long before Gibson, Cooperstown, Manitowoc Rapids, and Two Creeks were settled by Bohemians.

By 1905, according to a census of Wisconsin taken in that year which included data on the nativity of the population, the Germans had become the largest foreign group with about 58 percent of the total foreign-born population. The Bohemians were the second largest foreign group while Poles and Norwegians ranked third and fourth respectively.

When settlement came to Manitowoc County in the middle of the 1830's the first efforts were devoted to developing the water power that existed on the Manitowoc and Twin Rivers. Lumbering was the first source of revenue since there was a wealth of pine and other trees throughout the region. The logs could be cut and shaped into shingles and boards, floated down the river to the mouth and transported by schooner to Milwaukee, Chicago or more distant markets. Mills were built at Manitowoc Rapids by the Conroe brothers, at Two Rivers by Lane, and at Shoto by Burnham.

Another enterprise--fishing--appeared soon since the waters adjacent to the county were abounding in whitefish. This industry passed largely into the hands of a Detroit entrepreneur, J. P. Clark, who maintained a couple of schooners and transported the catch packed in barrels to Detroit and Buffalo. In one haul he secured enough to fill one hundred and seventy-five barrels and this brought him twelve dollars a barrel at the eastern destination. He could handle nearly two thousand barrels in a season and employed many French-Canadians he brought to Two Rivers from far distant Quebec and Montreal.

As far as agriculture is concerned, it was confined in these early days largely to small patches of ground sufficient to raise a little grain and potatoes for domestic consumption. Hiram McCallister who came to Manitowoc County from St. Lawrence County, New York was the first real farmer. He started to cultivate the soil in 1838 on a farm which is still pointed out as one of the finest in the county. "Uncle Hi" as he was called purchased govern-



ment land, cleared it, and raised a crop of oats. When the Manitowoc County Agricultural Society was formed he was chosen as its first president. His other activities included lumbering and a dip into politics as a member of the county board in 1849. He passed away in 1886 and is buried in the little cemetery at Branch.

The four Conroe brothers sold out their holdings in Manitowoc Rapids in 1845 but lumber mills remained the chief industry for many years. In Two Rivers the industry soon turned to the manufacture of pails and tubs. Two Rivers was the center of this industry for several decades under the leadership of H. H. Smith and later of Mann Brothers.

From 1847 to 1850, and thereafter, there was considerable immigration. By 1847 the northern and eastern sections of Manitowoc County were well populated. After 1847 the interior of the county began to settle rapidly. In 1850 Ira Clark built a sawmill and a grist mill on the Manitowoc River in the town of Cato which was basis of the settlement of Clark's mills. In the same year D. Able located within the present limits of the town of Schleswig. The villages of Kiel, Rockville, and Millhome sprang up. The area now included in the town of Meeme, Rockland, Franklin, Newton, and Maple Grove had, between 1847 and 1850, received their pioneers and first settlers.

Another important region in the county had an interesting history, namely the town of Eaton. The town itself received its name from C. Eaton, who engaged in lumbering in 1849-50. Its actual development, however, dates from the time that Rev. Ambrose Oschwald organized a colony of German Catholics from Baden, Germany and settled at Eaton in 1854. A sawmill and a grist mill were built and a church and a convent erected in 1858. Later the colony became the Catholic Association of St. Nazianz.

The rapidly rising shipbuilding industry found the wealth of timber in the locality an ideal opportunity for expansion. The Clipper type of schooners built at Manitowoc and Two Rivers were the pride of the lakes even after the Goodrich Line began building its steamboats at Manitowoc in 1860. This work was first undertaken by Bates and Son and after several changes in management it became the Manitowoc Shipbuilding Company in 1902. The emphasis during all these early years was on lake transportation. There were unsuccessful efforts to build a railroad in the 1850's but the county had no rail facilities until 1872. The local port became a point of entry for the Buffalo-Chicago boats and it was on this route that most of the families from Europe reached their new home.

The history of agriculture in Manitowoc County was marked by the growing of wheat and barley and the development of dairying. The cultivation of wheat had increased in acreage from around 3,000 in the 1850's to around 60,000 in the 1870's and began to decline rapidly thereafter. The rise of the brewing industry in the state led to a larger production of barley and that crop soon assumed the lead among the grains. The greatest change, however, was the advent of dairying. Although there were only 80 cows in the county in 1840 there were over 27,000 by the turn of the century while today there are over 85,000 head. Dairy manufacturing expanded particularly in the form of cheese and condensery production. In 1952 the county produced slightly less butter than in 1895 but cheese production rose from 2,632 pounds in 1885 to nearly 23 million pounds in 1945. Total condensery products increased from 9,516,000 pounds in 1921 to over 200 million pounds in 1945. Today Manitowoc County



ranks first in the production of condensery products among the counties of the state. In total cheese production the county ranked twelfth in 1952.

That Wisconsin is such an outstanding cheese producing state is due in part to the fact that cheese industry has been in the hands of capable men experienced in their work. One of the leading pioneer cheese manufacturers of Manitowoc County was Henry H. Huhn of Manitowoc Rapids, who was born in 1866 on the old Huhn family homestead in the town of Center, Manitowoc County. At the age of 19 he located in Branch and worked in the cheese factory of Charles Bahr. Later he bought a cheese factory in Branch.

Among those who engaged in dairying at an early date should be mentioned Patrick Cahill who was born in Manitowoc in 1856. He developed a 190-acre farm and carried on general farming and marketed dairy products. Joseph Krizenesky, who was born in 1867, developed a 70-acre farm on which he conducted general farming. He also marketed dairy products, milking 12 cows and carrying grade stock; William F. Schuette, born in 1869, raised draft horses. He also built a creamery and sold butter in Manitowoc.

The county fair has been a feature of the agricultural development through the years. Founded in 1857, re-established in 1883 and again in 1900, it was held first at Washington Park in Manitowoc, then for some years at Clark's Mills and later on a thirty-seven acre plot at the county seat.

In 1822 a trail along the lakeshore of Manitowoc County was the only regular course through her borders. Later private parties cut roads through the county. In 1839 a county road was surveyed from the mouth of the river to the Rapids and Two Rivers. As the county became settled, roads were extended in all directions. The pioneers later began thinking about railroads. After several projects failed a railroad connection was finally established with Appleton in 1872 and a year later a direct connection with Milwaukee through the extension of the Milwaukee, Lake Shore and Western Line from Sheboygan.

Manitowoc County's population has shown some increase between every census date. The most rapid periods of increase were from 1850 to 1860 and from 1860 to 1870. The periods from 1910 to 1920, 1920 to 1930, and 1940 to 1950 were also years of considerable increase.

Table 1.- Population: By Years  
Manitowoc County, Wisconsin  
United States Census 1850-1950

Year	Total Number	Urban Number	Rural Number
1850	3,702		
1860	22,416		
1870	33,364		
1880	37,505		
1890	37,831		
1900	42,261	15,570	26,691
1910	44,978	17,877	27,101
1920	51,644	24,868	26,776
1930	58,674	33,046	25,628
1940	61,617	34,706	26,911
1950	67,159	37,841	29,318

During the decade between 1850 and 1860 the population growth was the largest in any 10-year period in the county's history--from less than 4,000 to over 22,000. An increase of nearly 11,000 occurred between 1860 and 1870. Thereafter the rate of population growth became much slower.

The county's 1950 population of over 67,000 gave the county a rank of fourteenth in the state. In that year the county averaged about 114 people per square mile compared with about 63 for the state as a whole.



## Topography

The present topography of Manitowoc County is largely the result of glaciation. Beneath the glacial deposits is buried the Niagara dolomite bedrock or limestone, which slopes gently eastward to Lake Michigan. The relief is not great but there is considerable difference in elevation from west to east. The depth of the glacial drift varies between 70 and 100 feet and is deepest in the southern and eastern sections of the county.

The period during which glaciation occurred is known as the Pleistocene Period or the Great Ice Age. It is believed that this period may have lasted a million or more years and that it ended some 35,000 to 50,000 years ago. The Glacial Period consisted of a succession of ice invasions each of which lasted a considerable time. These ice sheets originated in Canada near Hudson Bay and moved southward into the United States. After each invasion there was a long period of mild climate during which the ice retreated northward by melting.

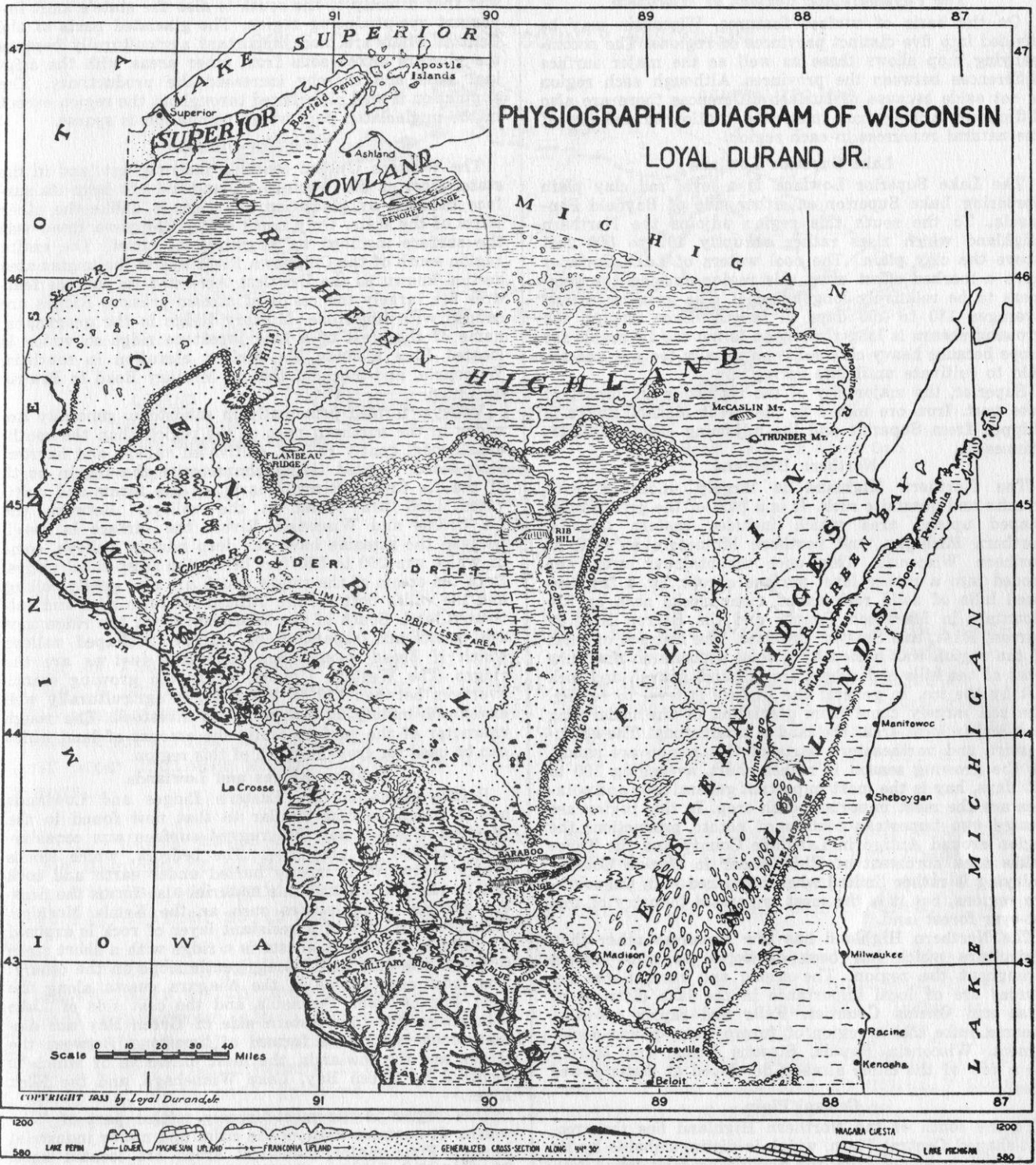
Although Manitowoc County was in all probability covered by the earlier ice sheets, it was the last major advance, known as the Wisconsin stage of glaciation, which produced the existing surface features.

Extending from the southwest corner of the county in the town of Schleswig northeastward to the town of Cooperstown, is the Kettle Moraine. This section includes the most irregular, rough land of the county. The moraine was formed of glacial drift deposited in front of and between the Green Bay and Lake Michigan lobes of the Wisconsin Ice Sheet and is composed of abrupt hills and gravelly ridges intermingled with depressions known as kettles. From these kettles (formed by the melting of ice blocks) the name Kettle Moraine was derived.

A large part of Manitowoc County is covered by glacial lake deposits of heavy red clay. As the Lake Michigan lobe melted and retreated to the north a glacial lake called Lake Chicago was formed at its southern edge partly because of the glacial meltwaters and partly because of ice blocked drainage channels. This lake occupied a much larger area than present Lake Michigan, extending into the Fox River-Lake Winnebago lowland. The heavy red clay, derived from materials farther north, was deposited in the lake. After a long period of mild climate during which the ice retreated northward and a spruce forest grew to maturity, the ice readvanced in eastern Wisconsin. The black spruce forest, buried beneath the red till, is now revealed along the shore of Lake Michigan between Manitowoc and Two Rivers.

Manitowoc is the largest of the Wisconsin counties bordering Lake Michigan. The actual land area is 380,027.98 acres or about 1.1 percent of the total area of the state. This does not include the acreage in the 79 surveyed lakes and in the streams which accounts for an additional 1,280 acres so that the total area within the county boundaries is over 381,307 acres. Although it is larger than adjoining counties, Manitowoc is one of the smaller counties in actual land area. It ranks forty-eighth in size among the 71 counties of the state.

There are 18 civil towns in Manitowoc County. The lakeshore towns are quite irregular in shape, but elsewhere they are identical with the government townships. The town of Kossuth, with an area of 25,615.97 acres, is the largest town; Two Creeks with 9,652.62 acres is the smallest.



Some of the more prominent surface features of Wisconsin are shown in this map. Great sheets of glacial ice moved down from the north over a large part of what is now Wisconsin and made much of the surface particularly in the eastern part of the state, more level than it was before.

In southwestern Wisconsin is the hilly region known as the Driftless Area which was not covered by the glaciers. Next to it on the north and southeast are more level areas which were covered by an older glaciation, and all the rest was covered by the most recent ice sheet known as the Wisconsin Glaciation. Well defined ranges of hills known as the Wisconsin Terminal Moraine mark the limits of the last glaciation which came from the north and northeast. One large lobe of the glacier came down the present bed of Lake Michigan, and another down Green Bay. Between these two lobes was formed a range of low hills shown on the map as the Kettle Moraine.

In the small diagram below the map is shown a cross section of the rocks which underlie Wisconsin at a latitude about 44½ degrees north. (Used by permission of Loyal Durand, Jr.)



### The Physiographic Regions of Wisconsin

On the basis of surface features, Wisconsin may be divided into five distinct provinces or regions. The accompanying map shows these as well as the major surface differences between the provinces. Although each region is set aside because of surface differences there are also differences arising from man's adaptation to and use of the natural resources in each region.

#### Lake Superior Lowland

The Lake Superior Lowland is a level red clay plain bordering Lake Superior on either side of Bayfield Peninsula. To the south this region adjoins the Northern Highland which rises rather abruptly 400 to 500 feet above the clay plain. The cool waters of Lake Superior have a marked effect upon this region causing the summers to be relatively long but cool. The growing season averages 130 to 150 days in length. Even though the growing season is long the region is not too favorable for crops because heavy clay soils are usually too wet and too cold to cultivate until late spring.

Superior, the major city of the region, is an important lake port. Iron ore mined in the great Mesabi Range is shipped from Superior and the adjoining city of Duluth, Minnesota.

#### Northern Highland

The Northern Highland is largely underlain with granite and quartzite rock. It is a part of the great dome-shaped upland area which includes eastern Canada, northern Michigan, and northern Minnesota as well as northern Wisconsin. This once mountainous area was eroded into a rather level surface except for a few isolated hills of solid rock called monadnocks such as Rib Mountain in Marathon County and the Barron Hills in Barron, Rusk, and Sawyer Counties. The bedrock of most of the region was buried by glacial deposits so that now most of the hills and ridges are of sand, gravel, and rock left by the ice. In general the surface is level to rolling. The soil largely came from glaciation of the underlying rock and in local areas the land is often stony. The northwestern and northeastern parts of this region are sandy. As the growing season is rather short, averaging 100 to 130 days, hay is the most important general crop and potatoes are the most important cash crop. In this region are located two important centers of potato production: the region around Antigo in Langlade County and the Three Lakes area northeast of Rhinelander in Oneida County. Dairying is rather limited when compared with the southern regions, but it is the most important industry of this cut-over forest land.

The Northern Highland has few resources other than agriculture which has been developed to some extent throughout the region. The scenic and recreational resources are of local importance in the lake districts of Vilas and Oneida Counties. Falls and rapids on most streams make this a region of future water-power development. Wisconsin Rapids, Stevens Point, and Merrill are a few of the cities already developed at water-power sites.

#### Central Plain

To the south of the Northern Highland lies the crescent-shaped Central Plain, which is distinguishable by its sandy soil developed from the underlying sandstone. Both the eastern and western ends of this lowland were glaciated. The central portion is in the unglaciated or Driftless area and was once occupied by a lake known as Glacial Lake Wisconsin, caused by ice damming the Wisconsin River. Throughout the Central Plain there are isolated hills which are remnants of rock layers which once covered this region and now are found only to the south. The unglaciated portion, which is composed of sand flats and extensive marshes, is the least productive. Its three most important cash crops are rye, potatoes, and cranberries. That portion of the glaciated central sand plain lying in Portage, Waupaca, and Waushara Counties is the state's leading commercial potato area. This same area

and that directly to the south is also the state's most important rye-producing region. The glaciated parts of the Central Plain are more important agriculturally because the glaciers mixed soils from other areas with the original sand and thereby increased the productivity. The population is well distributed throughout the region except in the unglaciated part where population is sparse.

#### Western Upland

The Western Upland contains the roughest land in the state. Most of the Western Upland did not have its surface subdued by glaciation and thus is unlike the other parts of the state. Only north of the Chippewa River was the surface modified by a glacial ice sheet. The entire region south of the Chippewa River lies in the unglaciated section known as the Driftless Area and its surface features are largely the result of stream erosion. Ridges are capped with limestone. Military Ridge is the geographic name of the crest of a long limestone ridge on which is located Blue Mounds, the highest elevation in southern Wisconsin, and much of the old Military Road to Prairie du Chien.

Valleys, formed principally in sandstone, generally are wider in the northern part of the region than the southern. Broad, gently rolling, cultivated valleys and narrow, steep-sided, wooded ridges characterize the region north of the La Crosse River. Nearly all the farms and cultivated land are found in the valleys. Between the La Crosse and Wisconsin Rivers the surface is rough because the streams have cut deep narrow valleys, some of which are 200 to 500 feet below the steep-sided ridges. Both the crests of the ridges which are also gently rolling and the valley bottoms are utilized for town sites and cultivated land. South of the Wisconsin River the ridge tops are broad and separated by narrow V-shaped valleys which if broad enough are cultivated just as are the ridges. The Western Upland, where the growing season averages between 130 to 170 days, is agriculturally well developed mainly in dairying and livestock. The rough character of the surface limits the amount of land which can be used for crops in much of this region.

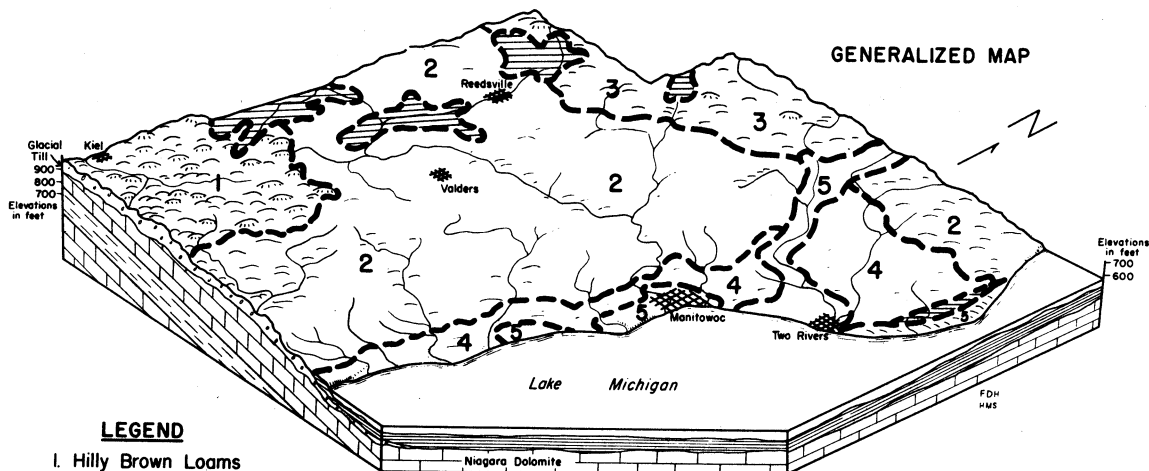
#### Eastern Ridges and Lowlands

Before glaciation the Eastern Ridges and Lowlands had a rough surface similar to that now found in the Western Upland, but this rugged surface was considerably modified by glaciation. The bedrock, which slopes gently eastward, is mostly buried under earth and rock left by the glacier, and this material also forms the present surface irregularities such as the Kettle Moraine. Wherever the edge of a resistant layer of rock is exposed a cuesta is formed (a cuesta is a ridge with a short steep slope on one side and a long, gentle slope on the other). The most conspicuous is the Niagara cuesta along the west side of Door Peninsula and the east side of Lake Winnebago. On the western side of Green Bay are discontinuous low ridges formed of limestone. Between the ridges are the lowlands, the most extensive of which is occupied by Green Bay, Lake Winnebago, and the Rock River.

This region is the most densely settled part of Wisconsin. It contains most of the cities and major industrial centers. Four major industrial areas are located here. The Milwaukee area, including Milwaukee, Racine, and Kenosha Counties, is Wisconsin's leading industrial area; its products are predominantly the heavy industry type. The Lake Winnebago-Fox River Valley is the center of paper and pulp industry. The lower Rock River area is like the Milwaukee region, primarily engaged in heavy industries. The fourth region located along the shore of Lake Michigan north of the Milwaukee area and including such cities as Sheboygan, Manitowoc, Two Rivers, and Kewaunee, manufactures chiefly aluminum wares, plumbing supplies, and furniture. Agriculturally this is primarily a dairy region whose growing season ranges from 140 to 175 days in length. Along the Lake Michigan shore the tempering influence of its cool waters is felt; summers here are relatively long but cool.

## SOILS OF MANITOWOC COUNTY, WISCONSIN

GENERALIZED MAP



## LEGEND

- |  |  |                                   |
|--|--|-----------------------------------|
| 1. Hilly Brown Loams<br>(Miami, Bellefontaine, Rodman) | 3. Rolling Brown Loams<br>(Onaway, Miami)            | 5. Beach Sands and Alluvial Soils |
| 2. Rolling Pink Silty Clay Loams<br>(Kewaunee, Poygan) | 4. Nearly Level Pink Clay Loams<br>(Oshkosh, Poygan) | ≡ Muck                            |

Soils\*

Manitowoc County soils are practically all the products of the weathering of glacial materials. Some of these materials were glacial-lacustrine deposits laid down in the bottom of glacial Lake Chicago; some were deposits dropped where the ice stopped and melted; and some were sorted and reworked by the waters from the melting ice sheet. The peat and muck soils are the result of poor drainage which allows the accumulation of grass, sedge, leaves, and moss.

Heavy soils are the most extensive and are also the most important from the standpoint of agriculture. Almost 75 percent of the area of Manitowoc County is good agricultural land. The other soils are loams, sands, and muck. Poorly drained soils comprise about 21 percent of the total county area.

Rolling pink silty clay loams and nearly level pink clay loams are the heavy soils which predominate in the county. The surface soil consists of a dark gray-brown clay loam underlain by a brown or yellow-brown silt loam, but has a distinctly reddish tinge when cultivated. The subsoil is a stiff, red clay occurring anywhere from 8 to 26 inches below the surface. Because of its texture, this soil is hard to till in wet weather and planting is usually done later in the spring compared with lighter soils in the same latitude.

The hilly brown loams are found in the southwestern corner of the county and the rolling brown loams are located in the northwestern portion of the county. The subdivision of the brown loams is based on topographic features only. The surface soil is about 8 inches deep and consists of gray-brown loam. Clay does not appear in the subsoil until between 19 and 30 inches.

Beach sands are found along the western shores of Lake Michigan in areas north of Two Rivers and south of Manitowoc. Alluvial soils are the result of steam deposits and are located principally along the Twin River.

\*The new generalized soils map was prepared by Prof. Francis D. Hole, College of Agriculture, Madison, who assisted also in the preparation of general soils material.



Forest and Marsh

Before the ring of the axe and the hum of a sawmill was heard in this county, surveyors (1834) found a heavy growth of virgin forest. Maples, beech, and basswood predominated but there were no oak woods nor prairie. White pine was found in all but five towns and white cedar and tamarack were in every swamp. Here was a lakeshore version of the forest primeval. A white cedar seven feet in diameter was found in section 16 of the town of Centerville.

White pine logging began about 1835 and ended about 1875. Long before the last mature pine fell, the plow followed the axe on many acres of former forests. This clearing of the land reduced the original woodland acreage from 95 to 17 percent (63,488 acres) of the land area by 1937. Maples and beech still predominated, covering 25,315 acres, with white pine and hemlock having only small acreages. Minor acreages of aspen, Norway pine, and oak and hickory made up the balance of the woodland. About 76 percent of the 1937 acreage was classed as merchantable timber.

In 1937 towns located in the Kettle Moraine area or west of it had the greatest woodland acreages. Swampland acreage was about two and one-half times that of marshland and constituted 30,712 acres or 8 percent of the area. Of this amount black ash and elm covered 21,192 acres, white cedar 6,710 acres, and tamarack 2,810 acres. White cedar, a northern conifer which follows the lake shore southward, was originally widely distributed but is now confined

Table 2.- Woodland, Swamp, and Marsh: Acreage by Towns 1/  
Manitowoc County, Wisconsin

Town	Woodland <u>2/</u>		Swamp	Marsh
	Acres	Percent of area	Acres	Acres
Cato	2,841	12.2	1,557	267
Centerville	1,907	11.5	542	207
Cooperstown	5,291	22.9	2,449	299
Eaton	6,914	30.2	5,391	1,535
Franklin	3,674	15.7	950	394
Gibson	3,907	17.4	1,917	584
Kossuth	3,801	14.8	625	274
Liberty	4,508	19.5	3,024	659
Manitowoc	980	10.0	604	277
Manitowoc Rapids	1,972	8.6	862	480
Maple Grove	5,009	21.8	3,037	870
Meeme	3,366	14.5	997	600
Mishicot	2,164	11.2	884	694
Newton	2,768	12.5	162	392
Rockland	4,685	20.4	4,054	2,562
Schleswig	4,021	17.7	1,446	773
Two Creeks	940	9.7	503	316
Two Rivers	4,740	19.8	1,708	1,138
County	63,488	16.7	30,712	12,321

1/ Estimated by Wisconsin Crop Reporting Service from Land Economic Inventory survey by government townships.

2/ Woodland includes wooded swamps.

largely to the towns of Gibson, Mishicot, Two Creeks, and Newton. Tamarack, a close associate of cedar, was most extensive in Cooperstown and Maple Grove. Towns along the western boundary of the county led in marshland acreage with the largest acreages in the towns of Eaton, Rockland, and Maple Grove. Only 3 percent of Manitowoc County was in marshland with the largest acreages in the towns of Rockland, Eaton, and Two Rivers. In 1952 there were 1,709 acres of state-owned forests in the town of Two Rivers and 190 acres of private forests under the Forest Crop Law.

### Climate

Warm, humid summers and cold, snowy winters are characteristic of Wisconsin climate. Mid-day temperatures of 90 degrees and over are not uncommon in July and August, while successive days with sub-zero temperatures often occur in January and February. The average annual temperature of 44 degrees Fahrenheit shows a 6-degree variation from north to south in the state, principally in the winter months. Summer months show little variation in the state but the daily range is greater and the nights are cooler in northern Wisconsin. Summers are longer in southern Wisconsin. The frost-free season in the southern part of the state is over 150 days--over 170 days in the southernmost and the southeastern lakeshore counties. In length of frost-free season and in temperature, southern Wisconsin closely resembles Illinois and Iowa. Central Wisconsin has a 120 to 130 day growing season. Northern Wisconsin exclusive of the region along Lake Superior, has a growing season of less than 110 days, but this is partially counteracted by longer summer days.

The average annual precipitation of 31 inches is distributed evenly over the state. About 60 percent of the rainfall comes in spring and summer with an average of 8 inches in March, April, and May and 11 inches in June, July, and August. June is the rainiest month. February is the driest. Most of the winter precipitation falls as snow. The average annual snowfall is less than 40 inches in the southern section of the state, 40 to 50 inches in central Wisconsin, and 50 to 60 inches in northern Wisconsin. Snow blankets the ground about 60 days in southern Wisconsin (not necessarily consecutive days), about 90 days in the central part, and 120 days in northern Wisconsin.

The climate of Manitowoc County is influenced greatly by Lake Michigan, especially in winter. Great seasonal as well as annual variations in temperature and precipitation occur. The western part of the county has a seasonal distribution of precipitation and temperature much more similar to the state than the eastern section. The annual temperature and precipitation averages for the county however, vary only slightly from the averages of the state.

The eastern section of Manitowoc County has warmer winters and cooler summers than the state as a whole. The city of Manitowoc (elevation 616 feet) located near Lake Michigan has average summer temperatures of 66 degrees and average winter temperatures of 22 degrees. Chilton (elevation 860 feet), located 24 miles west of Manitowoc County in Calumet County, has an average summer temperature of 68 degrees and a winter temperature of 18 degrees, which is the same as for the state. The average annual temperature for both stations is 45 degrees, 1 degree higher than the state average. The winters in Manitowoc County are long and relatively cold. There are four months with average temperatures below 32 degrees. The summers are warm and short with tem-



Table 3.- Temperatures and Precipitation: Manitowoc County, Wisconsin  
Monthly Averages for Wisconsin and for Area Stations

	Temperatures--Degrees Fahrenheit												Year
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Wisconsin	16	17	29	44	55	65	70	68	60	48	33	20	44
Chilton	17	17	31	45	56	66	71	68	62	49	35	21	45
Manitowoc	20	21	31	42	53	63	69	67	60	49	36	25	45
Plymouth	18	20	31	43	55	65	71	69	61	49	36	23	45
	Precipitation--Inches of Rainfall												
Wisconsin	1.2	1.2	1.8	2.5	3.6	4.2	3.5	3.3	3.6	2.4	1.9	1.3	31
Chilton	1.6	1.2	2.1	2.7	3.7	3.8	3.3	2.9	3.3	2.1	1.6	1.5	30
Manitowoc	1.6	1.6	2.1	2.6	3.0	3.6	3.2	3.1	3.4	2.5	2.2	1.7	31
Plymouth	1.4	1.6	1.8	2.5	3.3	3.4	2.4	3.2	3.7	2.7	2.3	1.3	30

perature extremes not as great as in some other counties. The highest temperature to be recorded at Manitowoc is 105 degrees. A low of 34 degrees below zero has been known at Chilton.

The length of the growing season also reflects the lake influence as it decreases to the west until the lake no longer has any effect. Manitowoc has an average growing season of 169 days and Chilton of 154 days. April 30 is the average date for the last killing frost at Manitowoc, while the average date at Plymouth and Chilton is May 6. The average dates for the first frost in autumn are October 16, 10, and 7 for Manitowoc, Plymouth, and Chilton respectively. The growing season has varied from 122 days at Plymouth to 212 days at Manitowoc. Frost has been known to occur as late in the spring as June 11 at Chilton and as early as September 13 at Manitowoc.

Precipitation of 31 inches at Manitowoc exceeds that at Plymouth and Chilton which average 30 inches annually. This increase of one inch at Manitowoc occurs during the winter months. At Manitowoc only 52 percent of the precipitation falls during the months May to September, inclusive, while Chilton and Plymouth have 60 percent during this period. In the winter the majority of the precipitation falls as snow. Manitowoc reflects the lake influence once more with 47 inches of snow while Chilton has only 39 inches.

### Population

Although there was an increase of about 9 percent in the county's total population between 1940 and 1950 there was a decrease of more than 11 percent in the county's farm population alone. The percentage decline in the farm population was smaller than in the state as a whole but was in line with the trend toward smaller farm populations. There were about 2,000 fewer farm people in the county in 1950 than in 1940.

By definition farm population includes all people living on farms without regard to occupation. The 1950 Census gives a more accurate count of actual farm people than the 1940 Census because persons living on farm land were classified as non-farm if they paid cash rent for their homes. Some people in institutions, summer camps, motels, and tourist camps were classified as farm population in the 1940 Census, also. In view of these classification differences, actual changes in farm population may not be as great as the data seem to indicate.

Table 4.- Population: Total and Farm, by Minor Civil Divisions  
Manitowoc County, Wisconsin  
United States Census, 1950 and 1940

Civil division	Total population			Farm population		
	1950	1940	1950 compared with 1940	1950	1940	1950 compared with 1940
	Number	Number	Percent change	Number	Number	Percent change
Cato, Town	1,789	1,783	+ .3	1,028	1,160	- 11.4
Centerville	1,473	1,313	+12.2	846	807	+ 4.8
Cooperstown	1,304	1,239	+ 5.2	788	860	- 8.4
Eaton	1,345	1,112	+21.0	662	749	- 11.6
Franklin	1,429	1,520	- 6.0	1,071	1,216	- 11.9
Gibson	1,177	1,156	+ 1.8	916	983	- 6.8
Kossuth	1,953	1,905	+ 2.5	1,259	1,314	- 4.2
Liberty	1,093	1,270	-13.9	771	1,044	- 26.1
Manitowoc	719	558	*	230	378	*
Manitowoc Rapids	3,007	2,433	*	929	1,423	*
Maple Grove	905	966	- 6.3	853	901	- 5.3
Meeme	1,353	1,393	- 2.9	1,092	1,131	- 3.4
Mishicot	1,746	1,473	+18.5	869	914	- 4.9
Newton	1,670	1,503	+11.1	1,013	1,339	- 24.3
Rockland	1,023	1,122	- 8.8	787	863	- 8.8
Schleswig	1,231	1,170	+ 5.2	946	895	+ 5.7
Two Creeks	488	525	- 7.0	429	488	- 12.1
Two Rivers	2,494	1,452	*	739	891	*
All unincorporated areas	26,199	23,893	+ 9.7	15,228	17,356	- 12.3
Reedsville, Village	691	729	- 5.2	21	50	- 58.0
Valders	560	580	- 3.4	24	19	+ 26.3
Kiel, City**	1,868	1,709	+ 9.3	26	26	0
Manitowoc	27,598	24,404	+13.1	118	-	
Two Rivers	10,243	10,302	- .6	6	-	
All incorporated places	40,960	37,724	+ 8.6	195	95	+105.3
County	67,159	61,617	+ 9.0	15,423	17,451	- 11.6

\*The city of Manitowoc annexed parts of the town of Manitowoc in 1947, 1948, 1949, and parts of the town of Manitowoc Rapids in 1942, 1947, 1948, 1949. Parts of the town of Two Rivers were annexed to the city of Two Rivers in 1946. Hence these data are not comparable.

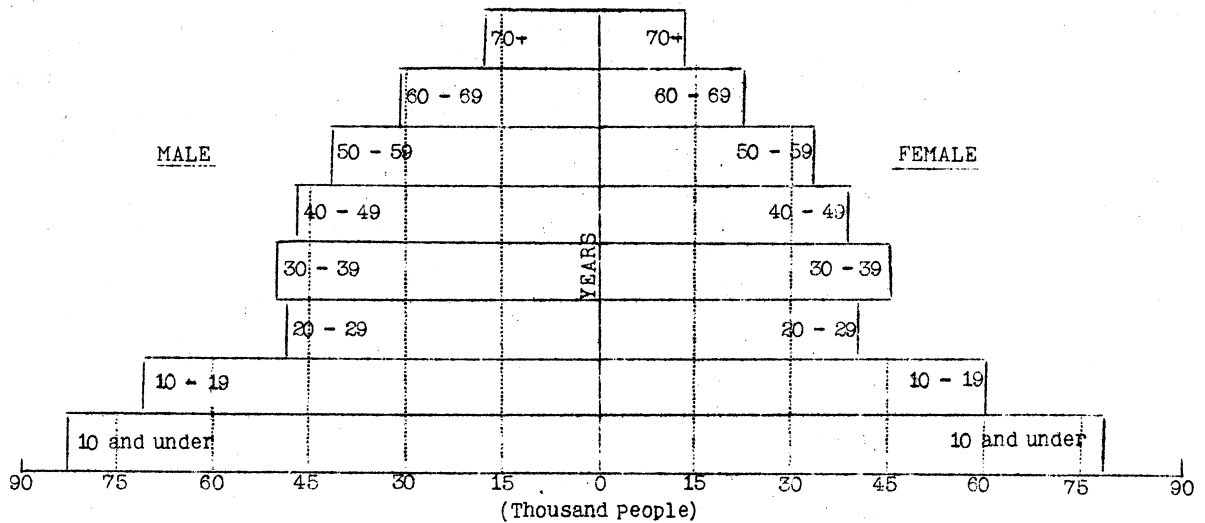
\*\*That part of the city of Kiel located in Calumet County had an additional population of 261 persons in 1950.

Important factors in the farm population decrease can be traced to developments in farm technology, the war, and a high level of industrial employment. Mechanization is at least partly responsible for the consolidation of farms. The larger farm makes the use of power machinery practical and is conducive to efficient operation with less manpower.

The effect of the war came in several ways. In many instances rural youth did not return to farming after military service. High industrial wages,



Chart 1.- Wisconsin Rural Farms Population by Age Groups  
United States Census, 1950



educational opportunities, and high capital requirements for farm operation were factors in this development. War-caused acceleration of farm mechanization also resulted in fewer farms and less demand for manpower.

Manitowoc County population data for 1950, when broken into age groups, shows many changes in composition since 1940. Among the farm population alone all groups but the under-5 showed declines. The 32.7 percent decline in the 15-25 year group was relatively the largest for any age group on farms and was more than twice that for all age groups combined. The second largest decline in farm population was in the 45-54 year group which was over one-fifth smaller in 1950 than in 1940.

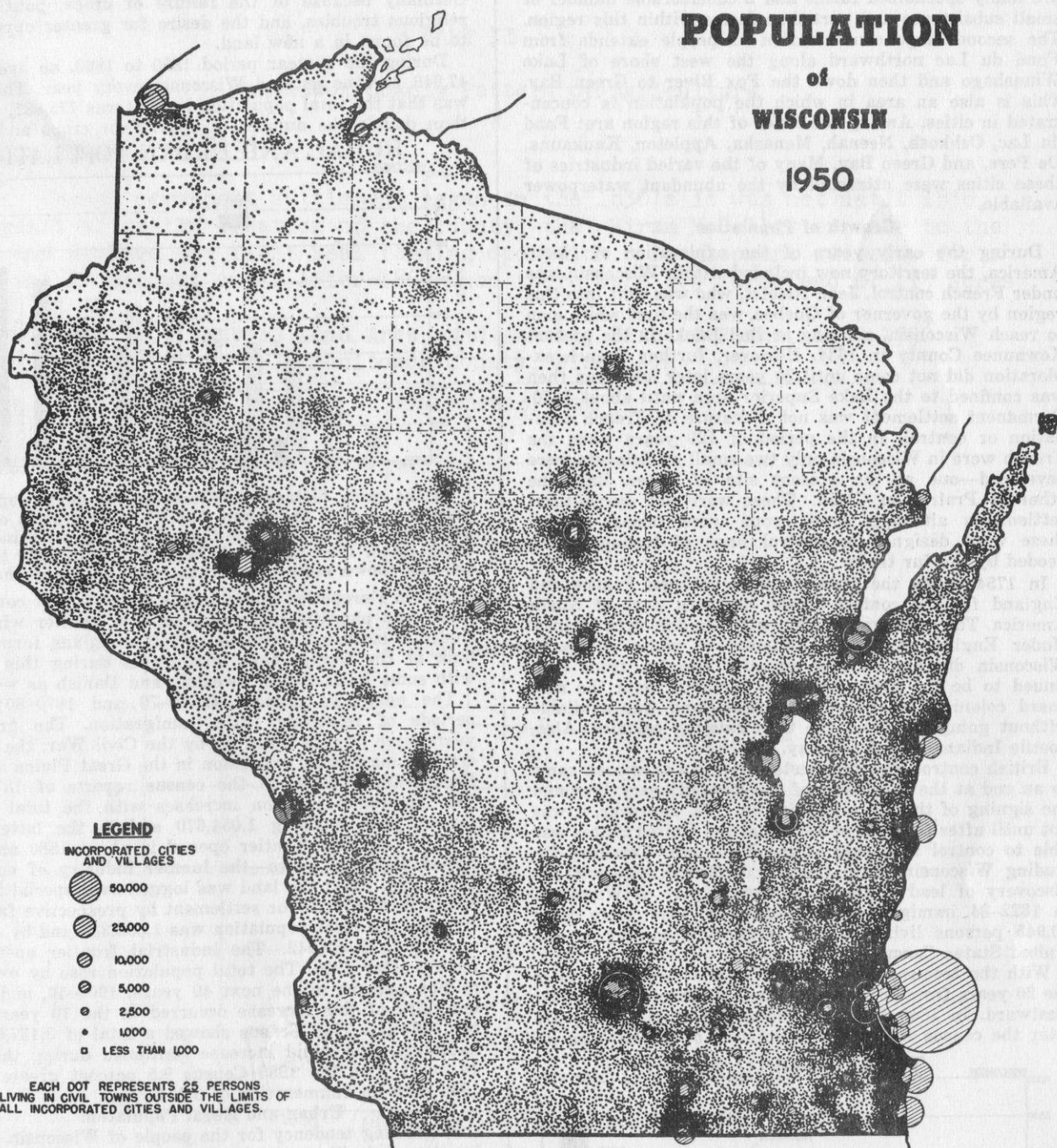
Table 5.- Population: Total and Farm by Age Groups  
Manitowoc County, Wisconsin; United States Census 1950

Age group	Total				Farm			
	Total	1950 compared with 1940	Male	Female	Total	1950 compared with 1940	Male	Female
Years	Number	Percent change	Number	Number	Number	Percent change	Number	Number
Under 5	7,522	+50.5	3,890	3,632	1,767	+23.0	908	859
5 - 14	11,158	+ 4.4	5,698	5,460	3,067	- 2.5	1,617	1,450
15 - 24	9,380	-15.0	4,671	4,709	2,296	-32.7	1,283	1,013
25 - 34	9,580	+ 1.0	4,715	4,865	1,969	-14.5	1,018	951
35 - 44	9,295	+ 6.9	4,757	4,538	2,055	- 1.2	1,122	933
45 - 54	8,148	+15.1	4,177	3,971	1,717	-22.2	940	777
55 - 64	6,229	+26.5	3,114	3,115	1,398	- 8.5	778	620
65 & over	5,847	+24.2	2,817	3,030	1,154	-13.7	655	499
Under 25	28,060	+ 5.0	14,259	13,801	7,130	-10.8	3,808	3,322
25 & over	39,099	+12.1	19,580	19,519	8,293	-12.3	4,513	3,780
All ages	67,159	+ 9.0	33,839	33,320	15,423	-11.6	8,321	7,102

# POPULATION

of  
WISCONSIN

1950



PREPARED BY WISCONSIN CROP REPORTING SERVICE FROM CENSUS DATA

The population in Wisconsin is distributed quite unevenly. In the cities and some of the areas surrounding them the population is much more dense than in the rest of the state. Most of the urban areas are in the southeastern and eastern parts of the state. The rural population is quite uniformly distributed over most of the better soils, but on the central plain and in parts of northern Wisconsin there are some large areas which are thinly populated.

### Where Wisconsin's People Live

A large part of Wisconsin's people live in the eastern and southeastern parts of the state. In the central section of the state, a relatively thinly settled area on a sandy plain stands out as an island of sparse population. Much of northern Wisconsin is also thinly populated. Small population clusters around a few cities, in some favorable agricultural regions, and along major lines of transportation are characteristic of the northern cut over country.

Western Wisconsin has a well-distributed rural population but only two cities, La Crosse and Eau Claire, which compare in size with those in eastern Wisconsin.

There are two large areas of population concentration and several smaller ones. The largest of these is in southeastern Wisconsin centering around Milwaukee and the cities and counties of Racine, Kenosha, and Waukesha. This region extends westward into Waukesha County and northward into Ozaukee County. It is the most important



industrial and commercial section of the state. A large part of the population lives in suburban areas, and there are many specialized farms and a considerable number of small subsistence and part-time farms within this region. The second large concentration of people extends from Fond du Lac northward along the west shore of Lake Winnebago and then down the Fox River to Green Bay. This is also an area in which the population is concentrated in cities. Among the cities of this region are: Fond du Lac, Oshkosh, Neenah, Menasha, Appleton, Kaukauna, De Pere, and Green Bay. Many of the varied industries of these cities were attracted by the abundant waterpower available.

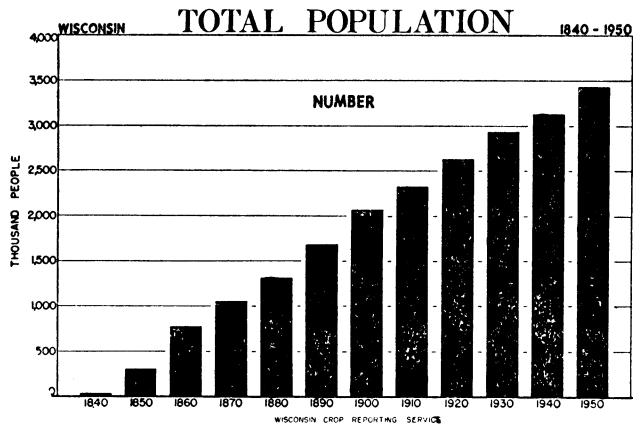
### Growth of Population

During the early years of the exploration of North America, the territory now included within Wisconsin was under French control. Jean Nicolet, who was sent into this region by the governor of Quebec, was the first white man to reach Wisconsin, arriving at Red Banks in the present Kewaunee County in 1634. However, further French exploration did not come until 20 years later and even then was confined to the Lake Superior area until about 1680. Permanent settlement was not a feature of French occupation or control. In the period of 120 years when the French were in Wisconsin only two small settlements were developed—one at the present site of Green Bay, the other at Prairie du Chien. These were not agricultural settlements although some crops were raised. Rather these were designed to control lines of transportation needed by the fur trade.

In 1754 began the final struggle between France and England for the control of the northern part of North America. The end came in 1760 with the defeat of France. Under English control the number of white people in Wisconsin did not increase greatly. The fur trade continued to be the sole attraction. Distance from the seaboard colonies was great and cheap land was available without going far from the then existing colonies. Also, hostile Indians barred the way.

British control over the western Great Lakes area came to an end at the conclusion of the Revolutionary War and the signing of the peace at Paris in 1783. However, it was not until after the War of 1812 that the United States was able to control that part of the Northwest Territory including Wisconsin. With the end of British rule and the discovery of lead in the southwestern part of Wisconsin in 1822-24 immigration increased. By 1840 there were 30,945 persons living in the Territory according to the United States Census for that year.

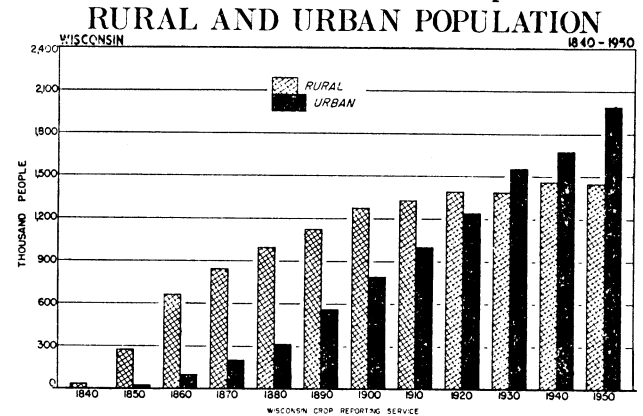
With the tremendous expansion of the United States in the 20 years from 1840 to 1860 the frontier moved rapidly westward. In 1848 Wisconsin became a state. Two years later the census reported a population of 305,391—an in-



During the 110 years from the Census of 1840 to 1950 Wisconsin's population rose steadily. In 1840 there were 30,945 people in the state and in 1950 there were 3,434,575.

crease of 887 percent over 1840. A large part of the new immigration was of German origin, many people leaving Germany because of the failure of crops, political and religious troubles, and the desire for greater opportunity to be found in a new land.

During the 10-year period 1850 to 1860, an average of 47,049 persons entered Wisconsin every year. The result was that the total population in 1860 was 775,881, or more than double the number in 1850. Poor crops and uncer-



In the early history of Wisconsin the rural population greatly exceeded the urban, but with the growth of cities both in number and in size the urban population increased much faster than the rural. Beginning with 1930 the census has shown more urban than rural people in the state.

tainty in Europe led many people to leave that continent. Land was plentiful and cheap on the frontier which included Wisconsin. Germans and Norwegians formed the bulk of the foreign-born immigrants during this period with some Irish, Swiss, Swedish, and Danish as well.

The next two decades (1860-70 and 1870-80) were periods of relatively little immigration. The first ten years were largely taken up by the Civil War, the second era was marked by expansion in the Great Plains and the Pacific Coast. Even so the census reports of 1870 and 1880 showed population increases with the total in the former year reaching 1,054,670 and in the latter year 1,315,497. A new frontier opened in about 1880 and continued about 25 years—the lumber industry of northern Wisconsin. After the land was logged over special inducements were offered for settlement by prospective farmers. By 1890 the total population was 1,693,330 and by 1900 it was up to 2,069,042. The industrial frontier opened up mostly after 1900. The total population rose by over one million persons in the next 40 years, 1900-40, and about one-third of this increase occurred in the 10 years 1920 to 1930. The 1940 Census showed a total of 3,137,587 inhabitants. The rapid increase continued during the next 10 years with the 1950 Census 9.5 percent greater than 1940 with an enumeration of 3,434,575.

### Urban and Rural Population

A growing tendency for the people of Wisconsin to live in cities and villages is shown by each census report since 1840. Both the urban population (people living in cities and villages with more than 2,500 inhabitants) and the rural (persons living on farms, in unincorporated places, and in cities and villages with less than 2,500 inhabitants) have increased, but the increase in the urban has been greater than the increase in the rural. For many years the rural exceeded the urban population of Wisconsin. In fact in 1850 there were only three cities with more than 2,500 inhabitants. It was not until 1930 that the urban residents exceeded the rural residents.

Of the 3,434,575 people in Wisconsin in 1950, 57.9 percent were classed as urban and 42.1 as rural by census definition as changed for these two terms for the 1950 enumeration. Under the old definition, 55.5 percent of the 1950 population would be classed as urban.

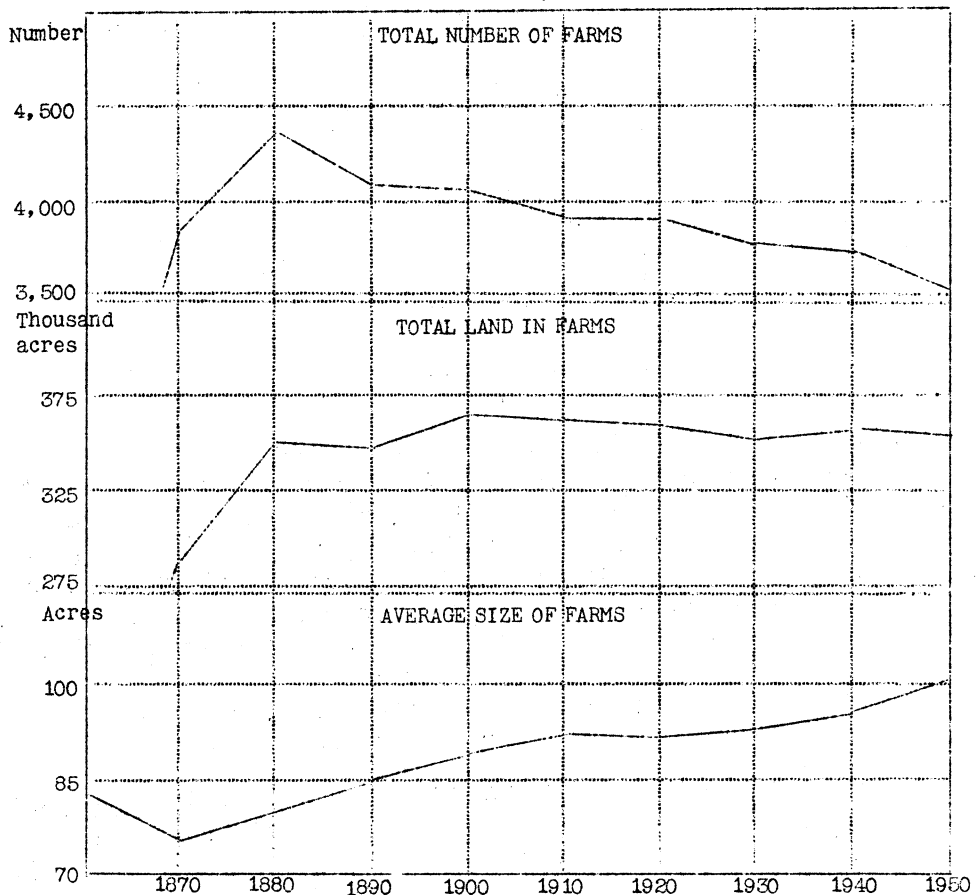
## PART II

## Manitowoc County Pattern of Agriculture

Farms: Number and Size

Though permanent settlement began in the 1830's it was not until 1838, two years after the creation of the county, that Hiram McCallister came to the area and started the first real farming operation. Development was slow for a time and it was not until after 1860 when there were 809 farms and 67,113 acres

Chart 2.- Number, Land Area, and Average Size of Farms, 1870-1950  
Manitowoc County, Wisconsin



of farm land, that agriculture became more important than lumbering on a countywide basis. Immigration of farm people accelerated at such a pace that by the end of the next ten years 3,843 farms with a total of 288,441 acres had been established in the county. By 1880 farm numbers had reached the all-time peak of 4,361 and in 1900 more of the area was in farms than at any time before or since. From 17.7 percent in 1860 the proportion of land area in farm land rose to 75.9 percent in 1870 and was 95.6 percent in 1900. These percentages have ranged from 92.1 to 94.6 percent in the succeeding census years.

Farms have always been comparatively small, for Wisconsin, in Manitowoc County. With acreage in farms relatively stable since 1900, the gradual increase in the average size has resulted in a downward trend in the number of



Chart 3.- Number and Average Size of Farms, 1950  
Manitowoc County, Wisconsin

Number of farms -  
Average size (acres) -

	COOPERSTOWN	GIBSON	MISHICOT	TWO CREEKS
	186	222	185	95
	114	97	102	96
	MAPLE GROVE	FRANKLIN	KOSSUTH	TWO RIVERS
	177	244	280	172
	122	95	89	101
	ROCKLAND	CATO	MANITOWOC RAPIDS	MANITOWOC
	170	225	237	74
	122	98	89	79
	EATON	LIBERTY	NEWTON	
	145	188	260	
	146	113	85	
	SCHLESWIG	MEEME	CENTERVILLE	
	213	216	169	
	96	103	97	

COUNTY DATA:

Number of farms - 3,519  
Average size (acres) - 100.5

farms. The 3,519 enumeration in 1950 was 222 less than in 1940. This change was more rapid than in former census periods, partly because of a slight change in census methods but principally due to the expansion of farming units. In the number and average size of its farms this county ranked tenth and sixty-fifth respectively which indicates a large proportion of relatively small farms in the county when compared with the farms of the state as a whole. This is

Table 6.- Farms: Number, Acreage, Average Size, and Percent of Area  
Manitowoc County, Wisconsin; United States Census 1850-1950

Year	Total farms	Total farm acreage	Average size of farms	Percent of land area in farms
	Number	Acres	Acres	Percent
1850	37	8,049	217.5	2.1
1860	809	67,113	83.0	17.7
1870	3,843	288,441	75.1	75.9
1880	4,361	350,225	80.3	92.2
1890	4,076	345,571	84.8	90.9
1900	4,073	363,133	89.2	95.6
1910	3,906	359,406	92.0	94.6
1920	3,904	358,511	91.8	94.3
1930	3,767	350,069	92.9	92.1
1940	3,741	356,166	95.2	93.7
1950	3,519	353,835	100.5	93.1
Rank 1950	10	29	65	10

Table 7.- Total Land Area, Data on Land in Farms,  
Value of Farm Land and Buildings: By Towns  
Manitowoc County, Wisconsin

Town	Total land area <u>1/</u>  Acres	Farms: Number, land, size 2/				Value of farm land and buildings as percent of county average 4/	
		Number of farms	Land in farms		Average size of farms Acres	Per acre	Per farm
			Total farm acreage	Percent of total area 3/			
		Number	Acres	Percent		Percent	Percent
Cato	23,264.33	225	22,033	94.7	97.9	100	95
Centerville	16,560.87	169	16,342	98.7	96.7	112	92
Cooperstown	23,140.69	186	21,123	91.3	113.6	97	96
Eaton	22,923.70	145	21,160	92.3	145.9	82	116
Franklin	23,475.04	244	23,133	98.5	94.8	97	92
Gibson	22,449.59	222	21,487	95.7	96.8	92	92
Kossuth	25,615.97	280	25,018	97.7	89.4	95	87
Liberty	23,131.25	188	21,297	92.1	113.3	89	105
Manitowoc	9,813.58	74	5,877	59.9	79.4	157	129
Manitowoc Rapids	22,859.82	237	21,050	92.1	88.8	122	103
Maple Grove	22,952.83	177	21,559	93.9	121.8	96	118
Meeme	23,173.60	216	22,278	96.1	103.1	118	123
Mishicot	19,286.29	185	18,831	97.6	101.8	83	84
Newton	22,068.23	260	22,088	5/	85.0	104	92
Rockland	22,982.23	170	20,732	90.2	122.0	88	109
Schleswig	22,689.38	213	20,331	89.6	95.5	96	100
Two Creeks	9,652.62	95	9,163	94.9	96.5	100	104
Two Rivers	23,987.96	172	17,446	72.7	101.4	96	92
Inc. cities and villages		61	2,887		47.3	266	127
County	380,027.98	3,519	353,835	93.1	100.5	\$99.61	\$9,632

1/ Computed by Crop Reporting Service and published in Wisconsin Blue Bk., 1935.

2/ From 1950 United States Census of Agriculture.

3/ Percentage of total land area in farms is not exact for towns in which there are incorporated cities or villages because the acreage of farm land within these cities and villages is not included in the town totals--see "Incorporated cities and villages".

4/ From 1945 United States Census of Agriculture.

5/ Includes land in adjoining towns.

accented by the rank of forty-eighth held by the county in total land area.

With the average size of farms 100.5 acres in 1950, two-thirds of the total were from 70 to 179 acres. Twenty-four percent were under 70 acres and 8 percent were over 179 acres in size. Since 1945 the percentage of the smaller farms has declined and of the larger farms has increased somewhat. The most popular sizes appear to be those of 70 to 99 acres. In the state as a whole farms averaged 137.8 acres in 1950. Nineteen percent of the farms were under 70 acres, 39 percent were under 100 acres, 21 percent were 100-139 acres, 37 percent were 100-180 acres, and about 23 percent of the farms were over 180 acres in size in 1950.

Table 8.- Farms: Percentage by Size Groups  
Manitowoc County, Wisconsin  
United States Census 1950

Acreage size group	1945	1950	1950
	Manitowoc County Percent	Manitowoc County Percent	State Average Percent
Under 10 acres	3.3	3.3	3.5
10 to 29 acres	4.5	4.3	4.1
20 to 49 acres	7.9	7.2	6.6
50 to 69 acres	9.3	9.1	4.7
70 to 99 acres	32.5	31.8	20.3
100 to 139 acres	25.3	25.5	20.8
140 to 179 acres	10.6	10.6	16.7
180 to 219 acres	3.7	4.3	9.0
220 to 259 acres	1.6	2.1	5.5
260 to 499 acres	1.3	1.8	7.8
500 to 999 acres	.0	.0	.9
1,000 and over acres	.0	.0	.1
Total	100.0	100.0	100.0

Chart 4.- Percentage of Farm Land in Harvested Cropland and in Pasture  
Manitowoc County, Wisconsin; United States Census 1950

Percent of farm land in:	COOPERSTOWN		GIBSON		MISHICOT		TWO CREEKS	
	Cropland harvested -	Pasture land -	Cropland harvested -	Pasture land -	Cropland harvested -	Pasture land -	Cropland harvested -	Pasture land -
	51	34	55	36	61	25	66	24
	MAPLE GROVE		FRANKLIN		KOSSUTH		TWO RIVERS	
	51	34	56	31	59	29	56	24
	ROCKLAND		CATO		MANITOWOC RAPIDS		MANITOWOC	
	47	33	60	27	61	26	68	18
	EATON		LIBERTY		NEWTON			
	47	30	54	28	62	23		
	SCHLESWIG		MEEME		CENTERVILLE			
	54	26	62	24	67	20		

COUNTY AVERAGES:

Cropland harvested --- 56.6%

Total land pastured --- 28.1%

Cropland pastured --- 16.6%

Woodland pastured --- 8.7%

Other land pastured --- 2.8%

#### Utilization of Farm Land

Ninety-three percent of the land area of Manitowoc County was in farms and 75 percent of this land was available cropland in 1949. This compares with 55.6 percent in cropland for the state as a whole. Crops were harvested from 57 percent of the farm land compared with 44 percent for the state. With



Table 9.- Utilization of Farm Land: Percentage by Towns  
Manitowoc County, Wisconsin  
United States Census 1950

Town	Cropland harvested 1/ Percent	Crop-land pastured Percent	Other crop- land Percent	Wood- land pasture Percent	Wood- land not pastured Percent	Other pas- ture Percent	Other farm. land 2/ Percent
Cato	59.6	18.3	1.3	6.3	5.4	2.2	6.9
Centerville	67.0	15.1	.3	2.9	5.5	1.6	7.6
Cooperstown	51.1	20.2	2.5	11.7	6.5	2.4	5.6
Eaton	46.6	12.6	1.4	12.3	12.7	4.8	9.6
Franklin	56.3	18.8	1.8	10.5	3.8	1.3	7.5
Gibson	54.7	18.5	.8	14.2	3.4	3.0	5.4
Kossuth	58.9	17.2	1.6	10.3	3.9	1.9	6.2
Liberty	53.9	14.4	1.1	9.7	10.5	4.0	6.4
Manitowoc	68.5	13.6	2.2	4.1	4.5	.3	6.8
Manitowoc Rapids	61.3	16.3	.5	6.3	6.4	3.1	6.1
Maple Grove	51.0	16.6	1.4	13.4	9.1	3.5	5.0
Meeme	61.9	15.7	.4	6.3	7.1	1.7	6.9
Mishicot	60.9	15.4	1.2	8.0	6.3	1.7	6.5
Newton	62.2	16.7	1.5	4.3	6.8	2.0	6.5
Rockland	47.4	16.1	7.7	12.3	7.6	4.6	4.3
Schleswig	53.7	16.6	.8	7.2	10.7	2.6	8.4
Two Creeks	66.4	20.8	.7	2.9	3.9	.5	4.8
Two Rivers	56.5	14.9	2.3	6.8	10.1	2.6	6.8
Inc. cities and villages	38.4	16.3	1.1	3.6	10.2	24.6	5.8
County	56.6	16.6	1.7	8.7	7.1	2.8	6.5

1/ Includes all land from which crops were harvested, hay cut, or in orchards.

2/ Wasteland, house yards, barnyards, roads, ditches, etc.

this percentage the county ranked fourteenth in proportion of farm land in harvested cropland. An additional 17 percent of the cropland was used for pasture and 2 percent was idle.

While 28 percent of the county's farm land was used for pasture in 1949, by towns this percentage ranged from 18 percent in Manitowoc to 36 percent in Gibson. Although the grazing of woodland usually provides little forage, about 55 percent of the total woodland was used for such purpose. Other lands used for pasture are usually permanent pasture on lands which cannot be cultivated. For the state a total of 39 percent of the farm land was pasture in 1949.

### Farm Values

Based on census values of over 95 percent of the farm land and of farms, the value of all farm land and buildings in Manitowoc County has been estimated at \$53,060,626 for 1950. This is higher than at any census year of record, even exceeding the high set in 1920. The average value of land and buildings per acre was estimated to be \$148.49 in 1950, which was half again the estimate of ten years earlier as well as above the 1920 high. The state average was \$88.58 per acre in 1950.

Table 10.- Land and Buildings: Value and Rank in State  
Manitowoc County, Wisconsin  
United States Census, 1910-50

Year	Value of land excluding buildings		Value of land and buildings					
			Total value		Value per acre		Value per farm	
	Dollars	Rank	Dollars	Rank	Dollars	Rank	Dollars	Rank
1910	21,103,709	14	29,015,795	13	80.73	17	7,429	21
1920	34,801,075	13	49,688,933	12	138.60	14	12,728	22
1925	24,167,893	15	42,016,528	9	119.14	11	10,810	25
1930	18,821,922	18	39,820,575	8	113.75	11	10,571	22
1935	(not available)		33,548,714	5	94.26	6	8,739	10
1940	16,958,105	5	34,744,232	4	97.55	7	9,287	11
1945	(not available)		35,551,633	8	99.61	12	9,632	21
1950 <sup>1/</sup>	(not available)		53,060,626	8	148.49	11	15,226	2

<sup>1/</sup> Value per acre and value per farm from census sample. Total value estimated from value per farm and value per acre.

Both size and value per acre determine the value of a farm. With the increase in average size of farms and the rise in value per acre in late years in Manitowoc County, there was a sharp gain in the average value per farm. The \$15,226 estimated for 1950 was 64 percent above 1940 and exceeded all previous averages. As indicated in Table 7, the average value of farm land and buildings per acre and per farm varies greatly among the towns of the county, with the property values of large urban centers reflected in the values of adjacent rural areas.

#### Farm Tenancy

Though land values are relatively high in this region of the state, the farms are generally below the state average in size and the percentage of tenant-operated farms is low. The 9.2 percent reached in 1945 is the all-time high for tenant-operated farms in the county.

Restrictions on loans were eased in the early 1940's and with the improved position of agriculture the percentage of owner-operators increased and the percentage of tenants decreased considerably by 1950. In that year only 6.6 percent of the farms were operated by tenants compared with 15.6 percent for the state and Manitowoc County ranked forty-ninth in the state.

Table 11.- Farms by Tenure of Operator, Manitowoc County, Wisconsin  
United States Census 1900-50

Year	Farms	Full owners		Part owners		Managers		Tenants	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1900	4,073	3,738	91.8	165	4.0	16	.4	154	3.8
1910	3,906	3,644	93.3	97	2.5	25	.6	140	3.6
1920	3,904	3,561	91.2	127	3.3	47	1.2	169	4.3
1925	3,887	3,596	92.5	120	3.1	10	.3	161	4.1
1930	3,767	3,382	89.8	132	3.5	31	.8	222	5.9
1935	3,839	3,392	88.4	186	4.8	13	.3	248	6.5
1940	3,741	3,171	84.8	227	6.1	19	.5	324	8.6
1945	3,691	3,054	82.7	277	7.5	20	.6	340	9.2
1950	3,519	2,934	83.4	342	9.7	11	.3	232	6.6

## Rank of Manitowoc County Compared With All Wisconsin Counties

<u>General census data</u>	<u>Rank</u>			<u>Year</u>
Land area - acres	48	380,027.98	acres	
Number of farms	10	3,519	farms	1950
Land in farms - acres	29	353,835	acres	"
Land in farms - percent	10*	93.1	percent	"
Average size of farms	65	100.5	acres	"
Cropland harvested - acres	14	200,408	acres	1949
Percent of tenancy	49	6.6	percent	1950
Population - total	14	67,159	people	"
<u>Cash farm income</u>		<u>Dollars or percent</u>		
Total cash farm income	17	19,258,000	dollars	1949
Per farm	29	5,473	dollars	"
Per acre land in farms	18	54.43	dollars	"
From crops	12	2,815,000	dollars	"
From livestock & lvst. products	20	16,443,000	dollars	"
Percent from crops	20*	14.6	percent	"
Percent from livestock & products	51*	85.4	percent	"
From dairy products	23	54.3	percent	"
From livestock other than dairy	46	31.1	percent	"
<u>Livestock</u>		<u>Number on farms</u>		
All cattle and calves	16	85,800	head	Jan. 1, 1953
Cows & heifers 2 years and over	12	57,400	head	"
Hogs	31	17,800	head	"
Horses and mules	15*	3,000	head	"
Stock sheep	54*	900	head	"
Chickens	18	264,300	birds	"
Egg production	19	40,050,000	eggs	1952
<u>Dairy products</u>		<u>Production</u>		
Milk production	11	352,160,000	pounds	1952
Creamery butter	37	1,065,000	pounds	"
Cheese (excluding cottage, pot, and bakers')	15	13,677,592	pounds	"
Condensed and powdered products	1	128,115,582	pounds	"
<u>Crops</u>		<u>Acreage</u>		
All corn	47	18,110	acres	1952
Corn for grain	58	850	acres	"
Corn for silage	21	17,050	acres	"
Barley	3	7,610	acres	"
Oats	7	78,230	acres	"
Rye	36	210	acres	"
All wheat	13	1,720	acres	"
Buckwheat	21	410	acres	"
All tame hay	11	85,110	acres	"
Alfalfa hay	6	57,160	acres	"
Clover and timothy hay	38	21,730	acres	"
Wild hay	29	510	acres	"
Flaxseed	4	600	acres	"
Corn for canning	14	2,100	acres	"
Peas for canning	9	4,010	acres	"
Potatoes	13*	790	acres	"
Soybeans	44*	100	acres	"

\*Tied with one or more counties.



## Wisconsin's Rank Compared With Other States

<u>Livestock</u>	<u>Rank</u>	<u>Number on farms</u>	<u>Year</u>
All cattle and calves	5	4,152,000 head	Jan. 1, 1953
Cows & heifers 2 years & over	1	2,504,000 head	"
Horses and colts	5	148,000 head	"
All sheep and lambs	28	273,000 head	"
Stock sheep	28	227,000 head	"
All hogs	8	1,835,000 head	"
Chickens	12	13,774,000 birds	"
Egg production	12	2,139,000,000 eggs	1952
<u>Dairy products</u>		<u>Production</u>	
Milk production	1	15,361,000,000 pounds	1952
Creamery butter	3	143,730,000 pounds	1951
American cheddar	1	432,066,000 pounds	"
Brick and Munster	1	24,974,000 pounds	"
Swiss (drum and block)	1	40,848,000 pounds	"
Cheese: Cream	2	17,076,000 pounds	"
Italian	1	24,973,000 pounds	"
All other	1	11,616,000 pounds	"
Total (excluding cottage, pot, & bakers')	1	551,553,000 pounds	"
Condensed and evaporated whole milk (unsweetened)	1	752,923,000 pounds	"
Powdered skim and whole milk	1	271,926,000 pounds	"
Total condensed and powdered products	1	1,268,116,000 pounds	"
Ice Cream	11	16,464,000 gallons	"
Dried casein	3	4,870,000 pounds	"
<u>Crops</u>		<u>Acreage</u>	
All corn	11	2,413,000 acres	1952
Corn for grain	17	1,514,000 acres	"
Corn for silage	1	867,000 acres	"
All wheat	33	75,000 acres	"
Oats	5	2,953,000 acres	"
Barley	14	97,000 acres	"
Rye	6	58,000 acres	"
All hay	3	4,056,000 acres	"
All tame hay	1	4,011,000 acres	"
Wild hay	20	45,000 acres	"
Alfalfa hay	1	1,910,000 acres	"
Clover and timothy hay	3	1,971,000 acres	"
Tobacco	12	16,100 acres	"
Potatoes	7*	56,000 acres	"
Green peas for processing	1	124,000 acres	"
Green lima beans for processing	4	7,300 acres	"
Snap beans for processing	2	12,800 acres	"
Beets for canning	1	7,100 acres	"
Cabbage for kraut	2	3,900 acres	"
Sweet corn for processing	1	108,300 acres	"
Soybeans for grain	22	48,000 acres	"
<u>Value of all farm products sold</u>	<u>8</u>	<u>1,142,643,000 dollars</u>	<u>"</u>

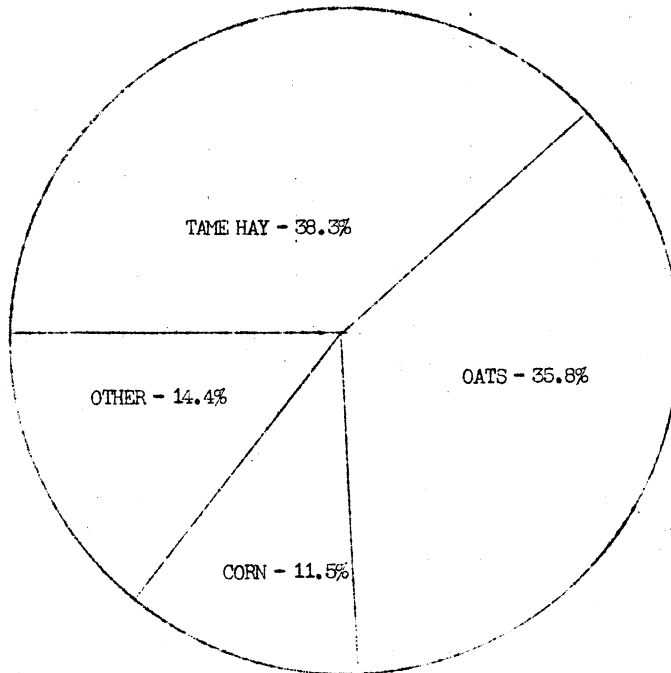
\*Tied with Michigan.

## PART III

## Manitowoc County Crops

More of the agriculture enterprise in Manitowoc County is turning to the production of feed crops as the livestock industry continues to expand. The fact that crops contributed 14.6 percent of the cash farm income in 1949 is not a full indication of their importance to the general agricultural economy. With pastures, crops provide the basis for the livestock and dairy industry. Farmers find it relatively more profitable to feed their crops to cattle, hogs, sheep, and poultry, and to market the livestock and livestock products than to sell the crops as such. Hay, oats, and corn are the three main crops now grown in the county. According to the 1950 Census these three occupied 85.6 percent of the land from which crops were harvested.

Chart 5.- Percentage of Cropland in Leading Crops, 1949  
Manitowoc County, Wisconsin  
From 1950 United States Census



Pasture is an important part of the grassland farming now being emphasized. The 1950 Census figures show that 28 percent of the farm land in Manitowoc County was in pasture. While pastures supply feed mainly during the growing season, the livestock industry also requires feed during the rest of the year. Manitowoc County had almost twice as much acreage in the three main feed crops as it had in pasture in 1950.

Yearly information on crop acreage is obtained largely from the reports of Wisconsin assessors who collect these acreages each year for the Crop Reporting Service of the Department of Agriculture. Information on crop yields is obtained mainly from farmer crop reporters who supply monthly data during the growing season on crop conditions and yields. Acreage and yield data for the various crops in Manitowoc County and area data for the individual towns are shown in the following pages.

### Crop Trends

Hay, oats, and corn are the three main crops in the county. Acreages of other field and canning crops are of much less importance from the standpoint of individual crop acreages although the county ranks relatively high in the state in harvested acreage of several so-called minor crops.

Tame hay has historically been the leading crop in Manitowoc County. In 1952 over 85,000 acres were harvested and the county ranked eleventh in the state. The highest acreages were harvested in the years 1944 through 1948 when from 92,000 to 94,500 acres were harvested each year. Clover and timothy acreage has been declining from the 50,000 plus average levels in the mid-1940's and the 1952 acreage was the lowest since before 1924. Alfalfa acreage is in-

Table 12.- Crop Acreages Since 1860\*: Manitowoc County, Wisconsin

Year	Corn	Oats	Barley	Rye	Wheat	Potatoes	Tame hay
1860	72	1,948	190	1,727	3,110	524	2,711
1870	85	12,278	1,193	4,914	37,205	1,243	21,379
1880	668	23,732	5,290	5,396	60,894	2,088	31,969
1890	929	31,945	9,880	11,414	38,675	2,838	46,975
1900	2,827	44,196	19,788	14,700	30,238	2,982	49,220
1910	3,126	39,197	26,652	13,243	4,264	2,644	70,403
1920	22,830	47,880	16,130	11,620	8,965	2,400	73,650
1930	18,760	47,950	20,410	3,600	3,160	1,810	69,580
1940	20,390	48,350	42,550	1,070	1,350	1,760	81,390
1950	23,430	72,780	17,980	450	2,100	710	75,560

\*Based on data taken at 10-year intervals and shows general trends but does not account for variations occurring in intervening years. For more detailed information, other crop tables are given elsewhere in this section.

creasing and reached a record high of over 57,000 acres in 1952, the sixth highest alfalfa acreage in any Wisconsin county. During the last decade the average yield was 1.7 tons per acre for clover and timothy and 2.1 tons per acre for alfalfa. Wild hay acreage harvested was 4,210 in 1920 but has been under 1,000 acres each year since 1938.

Oats is the second leading crop in the county. In 1952 Manitowoc County had one of the largest acreages in the state with a record 78,480 acres and ranked seventh. Yields have varied from 20 to 60 bushels per acre and the 1942-51 average was 52 bushels. Corn is the county's third leading crop. In 1952 over 18,000 acres were harvested. This was well below the record acreage of 24,400 in 1934 and the lowest since 1917. Yields have varied from 30 to 58 bushels per acre and the 1942-51 average was 44 bushels. During the last two decades over four-fifths of the corn acreage has been used for silage.

Manitowoc County is one of the leading barley producing counties in the state. Although barley was harvested from over 50,000 acres in 1935 and 1937 only 7,610 acres were harvested in 1952 but the county ranked third in the state. Barley yields in the last decade averaged higher than in any previous 10-year period. All wheat acreage has declined from 11,630 acres in 1919 to 1,720 acres in 1952. This small acreage however, gave the county a rank of thirteenth. In the last ten years more spring wheat than winter wheat was grown.



As in many other Wisconsin counties considerable acreages are devoted to canning crops. Both peas and sweet corn have been on relatively high levels in recent years. In 1952 peas accounted for just over 4,000 acres and sweet corn was harvested from 2,100 acres. These crops ranked ninth and thirteenth in the state respectively.

Potatoes were once grown on much larger acreages than today and acreage now is less than one-third of the highest acreage in the county. As recently as 1934 nearly 3,000 acres were grown but by 1952 the acreage had declined to 790. Despite this low acreage this county ranked thirteenth in the state. Rye and soybeans are other minor crops of which the acreage has recently declined. In 1952 only 210 acres of rye were harvested compared with nearly 14,000 in 1922. The 100 acres of soybeans harvested in 1952 represent the smallest acreage of that crop since 1938.

Of the minor crops buckwheat is the only one currently being harvested from near the highest recorded acreages. From 410 to 480 acres have been harvested each year since 1946 compared with less than 160 acres in most years before that. In 1952 this county harvested 600 acres of flax, the fourth leading acreage in the state.

Chart 6.- Corn, Oats, Barley and Tame Hay Acreage, 1930-52  
Manitowoc County, Wisconsin

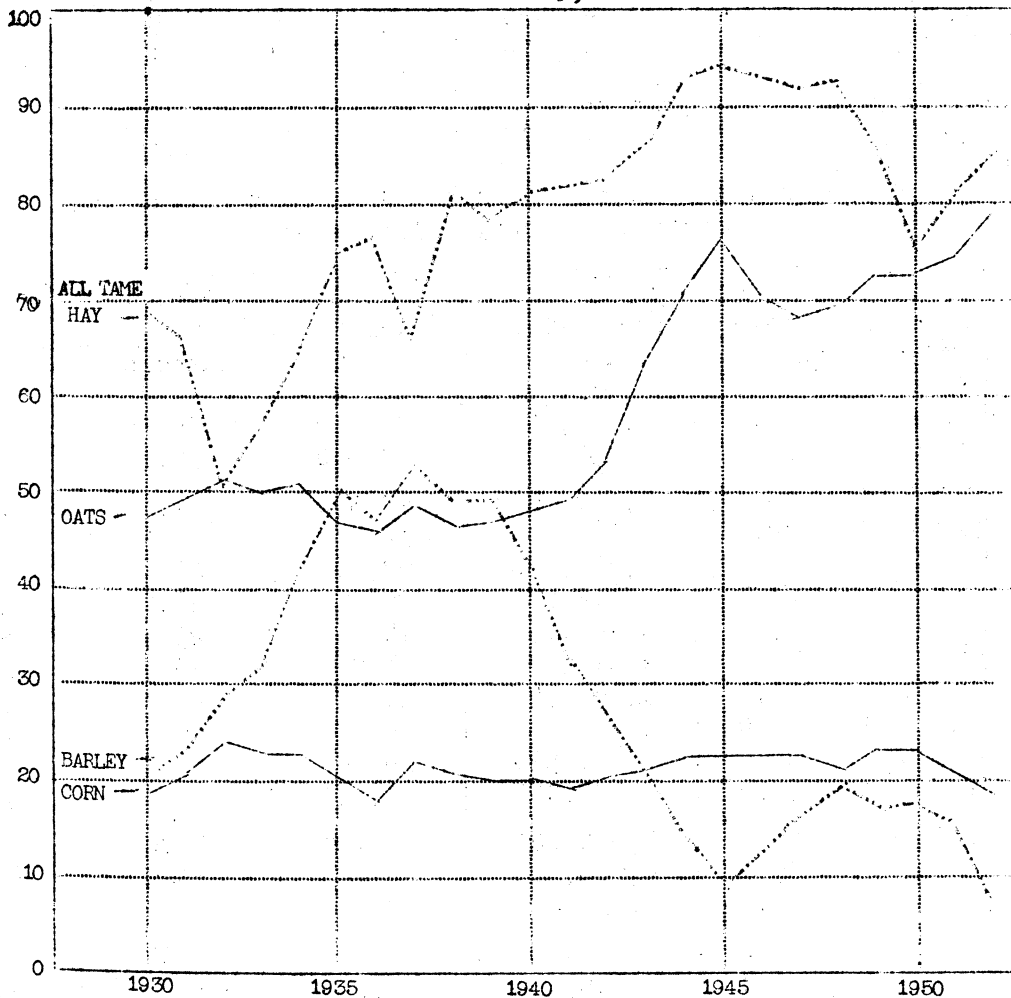


Table 13.- Corn: Total, for Grain, Utilization, and Corn and Small Grains  
Manitowoc County, Wisconsin

Year	All corn acreage Acres	Corn for grain		Utilization of total corn acreage			Corn, oats, barley, rye and wheat Acres
		Yield Bushels	Production Bushels	Grain Pct.	Silage Pct.	Other Pct.	
1920	22,830						107,425
1925	22,310						101,810
1930	18,760	37	20,720	3	91	6	93,880
1935	20,900	31	77,810	12	85	3	123,380
1940	20,390	44	98,560	11	87	2	113,710
1941	19,570	44	103,400	12	86	2	103,630
1942	20,880	46	115,000	12	85	3	105,200
1943	21,640	44	95,040	10	86	4	108,660
1944	22,390	46	74,980	7	91	2	110,820
1945	22,950	38	71,820	8	91	1	112,210
1946	22,560	46	108,810	10	89	1	109,720
1947	22,920	45	81,450	8	90	2	111,130
1948	21,620	44	93,960	10	89	1	114,450
1949	23,130	58	103,500	8	89	3	115,880
1950	23,430	40	147,335	16	83	1	116,740
1951	20,860	43	43,430	5	90	5	113,250
1952	18,110	56	47,175	5	94	1	
Averages							
1942-51	22,238	44	93,532	9.4	88.3	2.3	111,806

Table 14.- Oats and Barley: Acreage, Yield, and Production  
Manitowoc County, Wisconsin

Year	Oats			Barley		
	Acreage Acres	Yield Bushels	Production Bushels	Acreage Acres	Yield Bushels	Production Bushels
1920	47,880	40.0	1,916,930	16,130	28.7	463,470
1930	47,950	42.0	2,013,900	20,410	34.0	693,940
1935	47,260	35.0	1,654,100	50,480	30.0	1,514,400
1940	48,350	50.0	2,417,500	42,550	39.0	1,659,450
1941	49,540	40.0	1,981,600	32,500	34.0	1,105,000
1942	53,830	45.0	2,422,350	27,300	26.0	709,800
1943	63,800	44.0	2,807,200	20,870	28.0	584,360
1944	71,210	49.0	3,489,290	14,030	29.0	406,870
1945	76,330	60.0	4,579,800	9,970	43.0	428,710
1946	70,540	55.0	3,879,700	12,980	45.0	584,100
1947	68,060	51.0	3,471,060	16,640	40.0	665,600
1948	69,880	54.0	3,773,520	19,960	44.0	878,240
1949	72,540	50.0	3,627,000	17,050	34.0	579,700
1950	72,780	54.0	3,930,120	17,980	43.0	773,140
1951	74,300	55.0	4,086,500	15,560	35.0	544,600
1952	78,480	50.0	3,924,000	7,610	36.0	273,960
Averages						
1942-51	69,327	52.0	3,606,654	17,234	35.7	615,512

Table 15.- All Wheat and Rye: Acreage, Yield, and Production  
Manitowoc County, Wisconsin

Year	All wheat			Rye		
	Acreage	Yield	Production	Acreage	Yield	Production
	Acres	Bushels	Bushels	Acres	Bushels	Bushels
1920	8,965	16.7	149,980	11,620	18.1	210,700
1930	3,160	21.1	66,720	3,600	19.2	69,120
1935	2,330	17.3	40,390	2,410	17.0	40,970
1940	1,350	22.0	29,700	1,070	16.0	17,120
1941	1,550	18.0	27,920	470	14.0	6,580
1942	2,260	21.5	48,580	930	16.0	14,880
1943	1,920	21.6	41,460	430	13.0	5,590
1944	2,810	22.0	61,820	380	17.5	6,650
1945	2,640	27.6	72,765	320	18.5	5,920
1946	3,240	25.9	83,820	400	18.5	7,400
1947	3,010	27.6	83,040	500	18.5	9,250
1948	2,460	26.8	65,910	530	18.5	9,805
1949	2,650	25.4	67,270	510	19.5	9,945
1950	2,100	26.6	55,835	450	18.0	8,100
1951	1,970	25.2	49,670	560	17.0	9,520
1952	1,720	25.9	44,480	210	17.0	3,570
Averages 1942-51	2,506	25.1	63,017	501	17.4	8,706

Table 16.- Winter Wheat and Spring Wheat: Acreage, Yield, and Production  
Manitowoc County, Wisconsin

Year	Winter wheat			Spring wheat		
	Acreage	Yield	Production	Acreage	Yield	Production
	Acres	Bushels	Bushels	Acres	Bushels	Bushels
1920	5,565	19.1	106,430	3,400	12.8	43,550
1930	1,760	22.0	38,720	1,400	20.0	28,000
1935	260	20.0	5,200	2,070	17.0	35,190
1940	760	22.0	16,720	590	22.0	12,980
1941	770	16.0	12,320	780	20.0	15,600
1942	1,120	22.0	24,640	1,140	21.0	23,940
1943	770	18.0	13,860	1,150	24.0	27,600
1944	1,420	22.0	31,240	1,390	22.0	30,580
1945	1,470	30.0	44,100	1,170	24.5	28,665
1946	1,360	25.0	34,000	1,880	26.5	49,820
1947	1,240	27.0	33,480	1,770	28.0	49,560
1948	510	26.0	13,260	1,950	27.0	52,650
1949	510	27.0	13,770	2,140	25.0	53,500
1950	370	27.0	9,990	1,730	26.5	45,845
1951	210	27.0	5,670	1,760	25.0	44,000
1952	440	24.0	10,560	1,280	26.5	33,920
Averages 1942-51	898	24.9	22,401	1,608	25.3	40,616



Table 17.- Buckwheat and Flax: Acreage, Yield, and Production  
Manitowoc County, Wisconsin

Year	Buckwheat			Flax		
	Acreage	Yield	Production	Acreage	Yield	Production
	Acres	Bushels	Bushels	Acres	Bushels	Bushels
1920	60	14.0	840			
1930	330	12.0	3,960	240	13.0	3,120
1935	20	12.0	240	470	10.0	4,700
1940	110	16.0	1,760	880	12.0	10,560
1941	160	15.0	2,400	800	12.0	9,600
1942	60	16.0	960	170	12.0	2,040
1943	150	17.0	2,550	400	11.5	4,600
1944	160	20.0	3,200	240	11.0	2,640
1945	310	15.5	4,805	110	11.0	1,210
1946	440	14.5	6,380	120	12.5	1,500
1947	480	14.5	6,960	720	11.5	8,280
1948	440	16.0	7,040	1,040	14.0	14,560
1949	420	16.0	6,720	810	14.5	11,745
1950	420	18.0	7,560	530	14.5	7,685
1951	420	15.0	6,300	690	11.5	7,935
1952	410	19.5	7,995	600	14.0	8,400
Averages						
1942-51	330	15.9	5,248	483	12.9	6,220

Table 18.- Soybeans: Acreage, and Utilization for Hay and Grain  
Manitowoc County, Wisconsin

Year	Total acreage	Utilization of acreage						
		For grain			For hay			For other purposes
		Acreage	Yield	Production	Acreage	Yield	Production	
Acres	Acres	Bushels	Bushels	Acres	Tons	Tons	Acres	
1938	150	10	15	150				
1939	680	40	15	600	540	1.8	972	100
1940	970	100	15	1,500	730	1.7	1,241	140
1941	840	170	13	2,210	500	1.7	850	170
1942	770	320	11	3,520	180	1.6	288	270
1943	800	420	17	7,140	330	1.8	594	50
1944	690	220	15	3,300	410	2.1	861	60
1945	500	180	12	2,160	280	2.1	588	40
1946	310	160	12	1,920	120	1.8	216	30
1947	200	130	9	1,170	50	2.0	100	20
1948	230	100	14	1,400	110	1.5	165	20
1949	170	60	16	960	80	1.8	144	30
1950	400	270	11	2,970	70	1.9	133	60
1951	320	250	14	3,500	20	1.9	38	50
1952	100	20	13	260	40	1.7	68	40
Averages								
1942-51	439	211	13.3	2,804	165	1.9	313	63



Table 21.- Tame and Wild Hay: Acreage, Yield, and Production  
Manitowoc County, Wisconsin

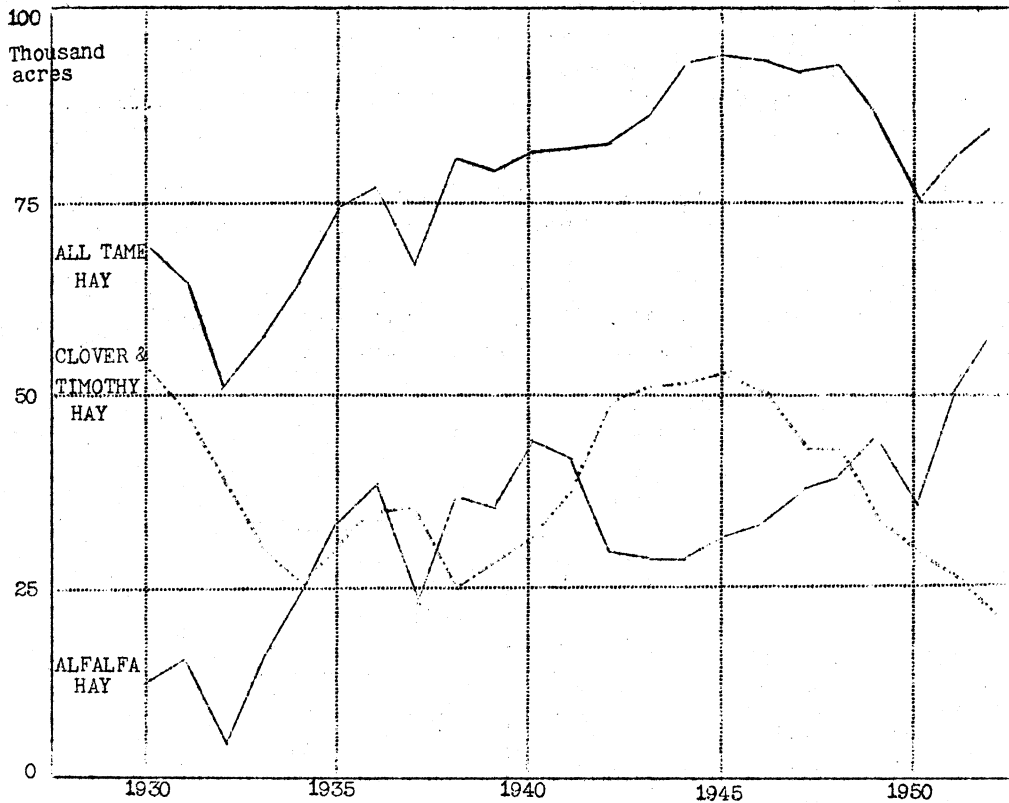
Year	Tame hay			Wild hay		
	Acreage	Yield	Production	Acreage	Yield	Production
	Acres	Tons	Tons	Acres	Tons	Tons
1920	73,650	1.6	119,600	4,210	.9	3,930
1930	69,580	1.4	100,690	1,310	1.0	1,370
1935	74,990	2.2	164,978	920	1.2	1,104
1940	81,390	2.2	180,944	310	1.4	434
1941	82,230	1.7	140,231	790	1.3	1,027
1942	82,530	2.1	170,240	70	1.5	105
1943	86,330	2.0	169,950	110	1.7	187
1944	93,290	1.9	175,151	660	1.7	1,122
1945	94,510	2.1	194,369	410	1.5	615
1946	93,860	1.8	166,174	950	1.4	1,330
1947	92,030	1.8	167,878	910	1.6	1,456
1948	92,800	1.5	136,023	710	.9	639
1949	86,730	1.6	138,609	730	1.4	1,022
1950	75,560	1.3	99,164	710	1.5	1,065
1951	81,680	2.1	169,752	670	1.5	1,005
1952	85,110	2.1	180,530	510	1.6	816
Averages						
1942-51	87,932	1.8	158,731	593	1.4	855

Table 22.- Clover and Timothy and Alfalfa Hay: Acreage, Yield, and Production  
Manitowoc County, Wisconsin

Year	Clover and timothy hay			Alfalfa hay		
	Acreage	Yield	Production	Acreage	Yield	Production
	Acres	Tons	Tons	Acres	Tons	Tons
1930	53,500	1.3	72,210	12,640	1.9	24,140
1935	30,110	1.8	54,198	33,470	2.7	90,369
1940	31,550	1.9	61,845	44,370	2.5	110,925
1941	37,040	1.4	51,716	42,150	2.0	84,300
1942	48,990	1.9	88,426	29,650	2.4	71,160
1943	51,180	1.8	92,124	28,310	2.4	67,944
1944	51,190	1.9	97,261	28,890	2.2	63,558
1945	52,350	2.1	109,935	31,080	2.3	71,484
1946	50,660	1.7	86,122	33,330	2.1	69,993
1947	43,870	1.7	74,579	37,560	2.2	82,632
1948	43,250	1.4	60,550	39,190	1.7	66,623
1949	33,050	1.3	42,965	44,570	1.9	84,683
1950	29,050	1.2	34,860	35,420	1.5	53,130
1951	26,630	1.8	47,934	50,530	2.3	116,219
1952	21,730	1.8	39,114	57,160	2.3	131,468
Averages						
1942-51	43,022	1.7	73,476	35,853	2.0	74,743



Chart 7.- Hay: All Tame, Clover and Timothy, and Alfalfa Acreage, 1930-52  
Manitowoc County, Wisconsin



### Crop Areas

Over a period of years the relative importance of certain crops in a given area, as measured by the acreage of the crop, may increase or diminish depending on (1) the relative adaptability of the crop to the soil, topographic and climatic conditions and (2) the demand for the crop in the pattern of agriculture. In the state as a whole the three main crops are hay, corn, and oats. Usually, these are the major crops in each of the counties of the state although the percentage of farm land from which each crop is harvested varies greatly in the 71 counties in Wisconsin. This variation also exists in the several towns within the county.

To get a picture of the distribution of crops in the towns of the county the total acreage of cropland from which nine principal crops was harvested was divided percentagewise among those crops according to the acreage in each. Because of conditions which may influence certain years and make them non-representative, an average of five years was computed. A series of 5-year averages of these percentages was used to determine the trends in acreages in the nine crops in the years 1935-49. Small acreages of crops other than these nine were harvested and while they were important to certain producers, none of them utilized a significant amount of the total cropland acreage in each town or for the county as a whole.

The three main feed crops--tame hay, oats, and corn--accounted for an average of 71.0 percent of the land from which the nine major crops were harvested in the 1935-39 period. In 1940-44, this percentage increased to 81.2

and increased further to nearly 89 percent in the years 1945-49. Oats accounted for about seven-tenths of the increased proportion of crop acreage accounted for by the nine crops. The increase in the percentage of land in oats was made possible by the great reduction in barley acreage. All towns had steadily increasing acreages of oats as barley declined. With the exception of a few areas oats are fairly well distributed throughout the county with 15 of the county's 18 towns averaging from 35 to 42 percent of the cropland in oats in the 1945-49 period.

The percentage of cropland in corn increased very little over the 15-year period 1935-49. Similarly changes in the relative acreage in individual

Chart 8.- Percent of the Harvested Acreage in Nine Principal Crops that was in Corn, Oats, and Tame Hay in 1945-49  
Manitowoc County, Wisconsin

PERCENT OF HARVESTED ACREAGE IN:		COOPERSTOWN	GIBSON	MISHICOT	TWO CREEKS
Corn -		6	8	9	9
Oats -		37	42	39	9
Tame hay -		41	40	42	44
Total -		84	90	90	41 94
		MAPLE GROVE	FRANKLIN	KOSSUTH	TWO RIVERS
		9	7	5	7
		35	37	29	42
		39	39	55	40
		83	83	89	89
		ROCKLAND	CATO	MANITOWOC RAPIDS	MANITOWOC
		9	10	4	4
		36	27	11	22
		41	49	39	62
		86	86	90	88
		EATON	LIBERTY	NEWTON	
		14	14	13	
		37	37	40	
		39	39	38	
		90	90	91	
		SCHLESWIG	MEEME	CENTERVILLE	
		18	19	19	
		38	39	35	
		35	35	36	
		91	93	90	

AVERAGES FOR THE COUNTY:

Corn - - - - - 10.8 percent  
Oats - - - - - 35.9 percent  
Tame hay - - - - - 42.1 percent  
Total - - - - - 88.8 percent

RANGE FOR THE COUNTY BY TOWNS:

Corn - - - - - 4 to 19 percent  
Oats - - - - - 22 to 44 percent  
Tame hay - - - 35 to 55 percent  
Total - - - - - 61 to 118 percent

towns in the county were small. There is a definite geographical difference in the relative importance of corn in this county. Acreage becomes relatively smaller from south to north in the county with the top two tiers of towns averaging from 5 to 9 percent of their acreage in corn compared with 13 to 19 percent for the southern two tiers of towns in the 1945-49 period.

The relative acreage of hay increased somewhat during the years considered, apparently taking up some of the acreage previously in barley. Although the increase in the percentage of land in hay was small over the 15 years, it was county-wide with the exception of the town of Two Rivers. For the most part hay acreage is quite evenly distributed in the county with 14 of the 18 towns averaging about 35 to 41 percent of their cropland in tame hay. The southern tier of towns are at the lowest end of that range and have historically had relatively less hay acreage than the other towns in the county due to the favorable corn growing conditions in that area of the county.

Table 23.- Cropland in Principal Crops  
as Percent of Total Cropland in Those Crops, by Towns  
Averages for 1935-39, 1940-44, 1945-49  
Manitowoc County, Wisconsin

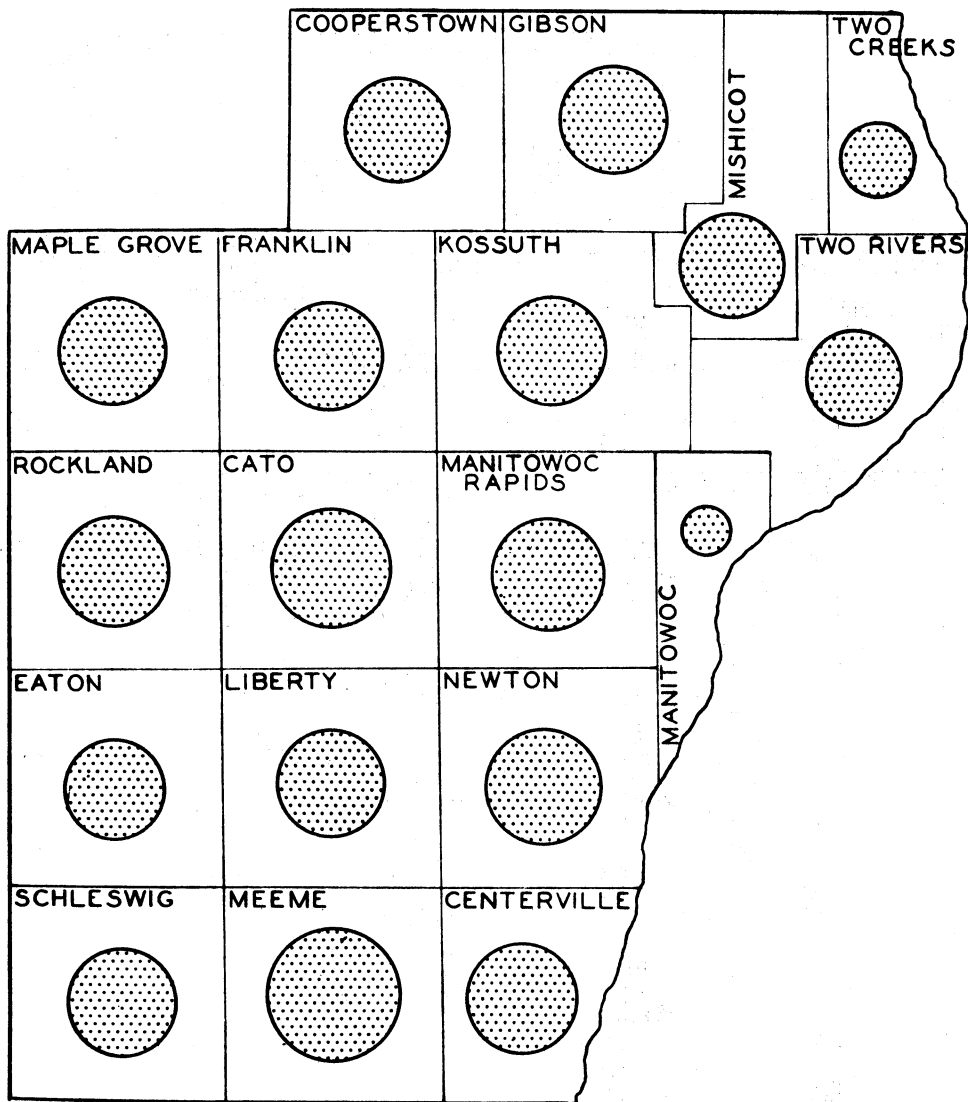
Town	Corn	Oats	Barley	Rye	All wheat	Tame hay	Pota- toes	Soy- beans	Canning peas
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
<b>Cato</b>									
1935-39	9.5	16.7	28.3	.3	.6	42.0	.6	.3	1.7
1940-44	9.1	21.4	16.3	-	.6	50.1	.5	.2	1.8
1945-49	10.0	26.8	11.0	.1	.6	49.4	.3	--	1.8
<b>Cooperstown</b>									
1935-39	5.2	26.3	26.0	2.7	1.4	37.7	.6	-	.1
1940-44	5.5	31.3	18.4	.3	1.8	41.7	.6	.2	.2
1945-49	6.3	36.8	13.4	.2	1.6	40.9	.4	--	.4
<b>Centerville</b>									
1935-39	17.1	23.4	22.7	.3	.8	32.5	2.0	.4	.8
1940-44	18.1	28.5	15.0	.1	.5	34.0	1.6	.6	1.6
1945-49	19.2	35.0	5.6	--	1.0	35.5	1.4	.1	2.2
<b>Eaton</b>									
1935-39	12.3	20.1	25.4	1.0	2.0	37.5	.6	.3	.8
1940-44	13.8	29.0	11.7	.2	1.9	40.3	.5	1.3	1.3
1945-49	14.5	36.8	5.8	.3	2.0	39.4	.4	.5	.3
<b>Franklin</b>									
1935-39	5.5	23.5	30.1	1.2	.7	37.9	.5	--	.6
1940-44	6.0	28.5	21.9	.3	1.1	40.8	.8	.1	.5
1945-49	7.4	36.8	14.2	.2	1.2	38.9	.6	--	.7
<b>Gibson</b>									
1935-39	7.6	28.3	19.0	2.8	.5	40.6	.9	.1	.2
1940-44	7.5	35.0	12.7	.7	.9	41.5	.8	.3	.6
1945-49	8.4	41.9	5.1	.4	2.5	39.8	.6	--	1.3
<b>Kossuth</b>									
1935-39	6.8	23.1	21.6	1.7	.8	43.8	.4	.1	1.7
1940-44	5.8	23.3	12.2	.4	.8	55.3	.5	.1	1.6
1945-49	5.3	28.8	7.2	.2	1.0	55.3	.4	--	1.8
<b>Liberty</b>									
1935-39	11.5	20.4	25.2	.5	1.0	38.3	.7	.4	2.0
1940-44	13.9	27.9	13.3	.1	.7	40.2	.7	.9	2.3
1945-49	14.5	37.3	5.3	.1	1.4	38.9	.3	.3	1.9
<b>Manitowoc</b>									
1935-39	6.5	19.9	21.1	1.2	.1	46.8	2.9	--	1.5
1940-44	5.6	21.4	10.6	.3	.7	56.9	2.9	.1	1.5
1945-49	3.9	22.5	4.9	.2	1.7	62.1	2.5	--	2.2
<b>Manitowoc Rpd</b>									
1935-39	9.0	22.8	25.4	.4	.6	39.0	.8	.3	1.7
1940-44	10.4	30.3	15.2	.2	.8	40.3	.7	.6	1.5
1945-49	10.8	39.4	5.9	.1	1.8	40.3	.4	--	1.3

Table 23 (continued).- Cropland in Principal Crops as  
Percent of Total Cropland in those Crops, by Towns  
Averages for 1935-39, 1940-44, 1945-49  
Manitowoc County, Wisconsin

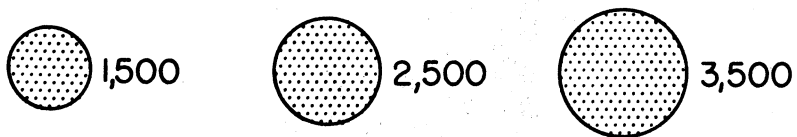
Town	Corn	Oats	Barley	Rye	All wheat	Tame hay	Pota- toes	Soy- beans	Canning peas
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Maple Grove									
1935-39	7.5	21.6	34.6	.4	1.0	33.6	.3	--	1.0
1940-44	7.9	27.2	20.9	.2	1.7	39.6	.6	.1	1.8
1945-49	8.7	34.8	13.0	--	1.7	38.7	.8	--	2.3
Meeme									
1935-39	15.6	25.1	21.8	.4	1.4	33.6	.9	.1	1.1
1940-44	17.3	31.6	11.8	.1	.7	35.3	.7	.4	2.1
1945-49	19.1	39.0	3.8	-	1.0	35.4	.4	.1	1.2
Mishicot									
1935-39	9.6	25.5	21.7	1.0	.5	40.1	1.1	--	.5
1940-44	9.7	32.9	11.1	.4	.6	41.9	.8	.1	2.5
1945-49	8.8	39.3	3.7	.4	1.2	42.3	.4	.1	3.8
Newton									
1935-39	10.8	24.4	25.0	.8	.4	34.8	1.8	.1	1.9
1940-44	12.5	32.3	13.0	.5	.4	35.8	1.4	.3	3.8
1945-49	12.9	39.9	5.0	.2	1.0	37.6	.7	--	2.7
Rockland									
1935-39	7.5	22.4	31.2	.2	.9	35.1	.4	.2	2.1
1940-44	8.3	30.1	17.5	.2	1.0	39.6	.4	.5	2.4
1945-49	9.4	35.5	10.3	.1	1.1	41.3	.3	.2	1.8
Schleswig									
1935-39	16.2	24.6	22.2	1.3	1.6	32.3	.7	.2	.9
1940-44	16.9	30.6	12.5	.2	1.9	34.8	.7	.6	1.8
1945-49	18.4	37.5	5.2	.3	1.5	35.4	.5	.3	.9
Two Creeks									
1935-39	8.6	26.0	26.1	.1	.3	38.1	.7	--	.1
1940-44	8.8	36.0	14.7	--	.6	38.7	.4	.2	.6
1945-49	8.9	44.3	3.6	.1	.9	40.8	.2	--	1.2
Two Rivers									
1935-39	7.8	24.8	21.4	2.9	.3	40.6	1.0	.1	1.1
1940-44	7.4	34.6	10.1	1.3	.4	40.4	1.2	.4	4.2
1945-49	7.2	42.0	4.7	1.3	1.0	40.0	.4	--	3.4
County									
1935-39	9.8	23.2	24.9	1.1	.9	38.0	.8	.2	1.1
1940-44	10.3	29.3	14.5	.3	1.0	41.6	.8	.4	1.8
1945-49	10.8	35.9	7.3	.2	1.3	42.1	.6	.1	1.7



# MANITOWOC

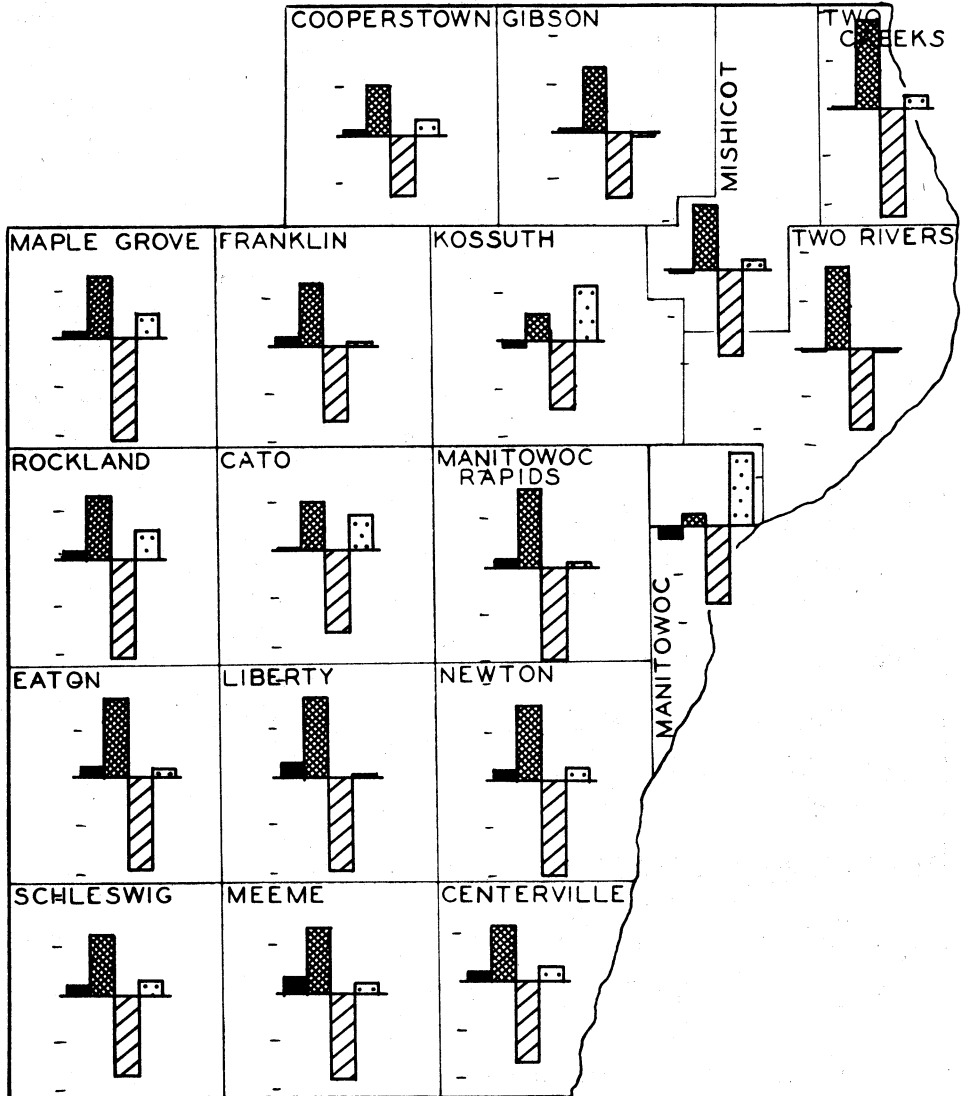


## MILK COWS , 1952 NUMBER



DATA FROM COUNTY ASSESSORS

# MANITOWOC



## PERCENTAGE CHANGE IN ACRES 1935-39 TO 1945-49



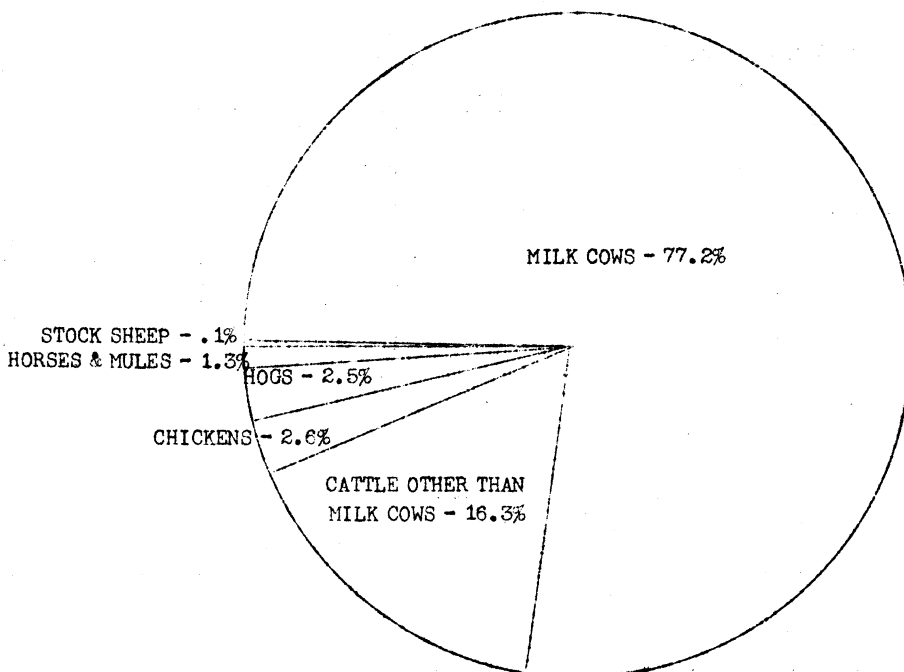
DATA FROM COUNTY ASSESSORS

## PART IV

## Manitowoc County Livestock and Dairying

Expansion of livestock farming continues to be an important feature of Manitowoc County agriculture. The value of livestock on farms was about 18 million dollars on January 1, 1953. General trends in livestock numbers have paralleled the over-all pattern in the state and in adjacent counties with declines following the record-high estimates of the mid-1940's. Cattle numbers are again at record highs for the county and hogs and sheep are above the 1950 low. The rapid increase in the use of tractors has resulted in a steady decline in the number of horses. Chicken numbers are below any year since 1929 after reaching an all-time high in 1944.

Chart 9.- Value of Livestock on Farms, January 1953  
Manitowoc County, Wisconsin



Production of livestock products has increased since the war despite decreases in some livestock numbers. Improvement in quality and more efficient husbandry practices have been important factors. Dairying continues to dominate the livestock enterprise. Milk cows on farms made up three-fourths of the value of livestock and along with other cattle comprised 94 percent of the total value of livestock on January 1, 1953.

High livestock and dairy investments of farms produce a large part of the farm income. In Manitowoc County 85 percent of the cash farm income in 1949 came from livestock and livestock products. More attention is being given to pastures as farmers are becoming more aware of the value of grassland improvement and many are using it advantageously to keep livestock production costs down. With dairying as the base, the development of the livestock industry in Manitowoc County is an important key to its agricultural future.

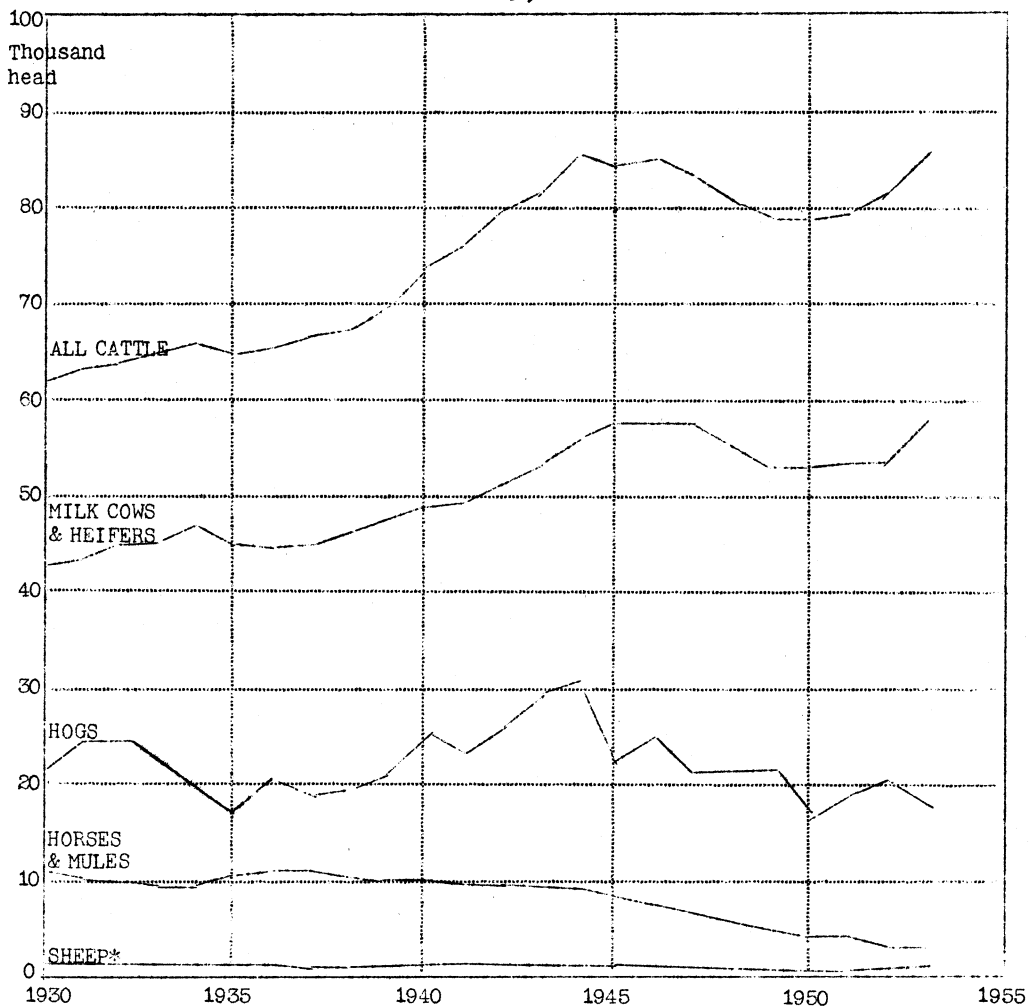
### Livestock on Farms

The dominant position of dairying in the livestock operations in Manitowoc County is indicated by 1953 data showing that cattle outnumber by nearly five times the number of hogs and by nearly 100 times the number of sheep in the county. Cattle numbers reached a peak of nearly 86,000 head on January 1, 1953, after a slight decline which followed several years around the 85,000 level in the mid-1940's. In the 10-year period, 1943-52, the number of all cattle ranged from 78,700 to 85,800 head. It was not until 1940 that the number of all cattle on Manitowoc County farms exceeded 70,000 head.

About two-thirds of all cattle on farms in the last several years were milk cows and heifers two years old or older being kept for milk production. A decline in the percentage of all cattle in this classification usually means either (1) an increase in the number of non-dairy (beef type) cattle or (2) an increase in young dairy stock being raised for future milk production.

Because hog herds can be expanded more quickly than cattle herds, the numbers of hogs on farms tend to fluctuate more than cattle numbers. In this

Chart 10.- Livestock on Farms on January 1, 1930-53  
Manitowoc County, Wisconsin



\*All sheep through 1938, stock sheep thereafter.



Table 24.- Livestock: Number on Farms, on January 1  
Manitowoc County, Wisconsin

Year 1/	All cattle	Milk cows and heifers	Hogs	Horses and mules	Sheep 2/
	Number	Number	Number	Number	Number
1860	2,883		2,306	559	693
1870	16,273		11,200	4,501	16,403
1880	28,225		12,576	9,375	15,486
1890	42,966		15,611	11,226	10,309
1900	62,028		14,724	12,428	17,553
1910	62,154		21,026	13,547	9,220
1915	58,920			15,530	
1920	57,540		25,300	13,800	1,800
1925	64,400	42,600	20,900	11,100	1,200
1930	61,600	42,600	21,800	10,700	1,300
1935	64,400	45,200	16,900	10,400	1,100
1940	73,700	49,200	25,000	10,100	1,000
1941	75,900	49,700	23,200	9,900	1,000
1942	79,700	51,200	25,500	9,600	1,100
1943	81,300	53,800	28,600	9,400	1,100
1944	85,400	56,000	30,800	9,000	1,000
1945	84,200	57,500	22,200	8,100	900
1946	85,000	57,500	24,600	7,300	800
1947	83,300	57,500	21,400	6,400	700
1948	80,000	55,200	21,200	5,800	600
1949	79,200	53,000	21,600	4,800	600
1950	78,700	53,100	16,300	4,200	600
1951	79,300	53,100	18,500	4,000	700
1952	81,800	53,600	20,000	3,400	800
1953	85,800	57,400	17,800	3,000	900
Averages					
1943-52	81,820	55,030	22,520	6,240	780

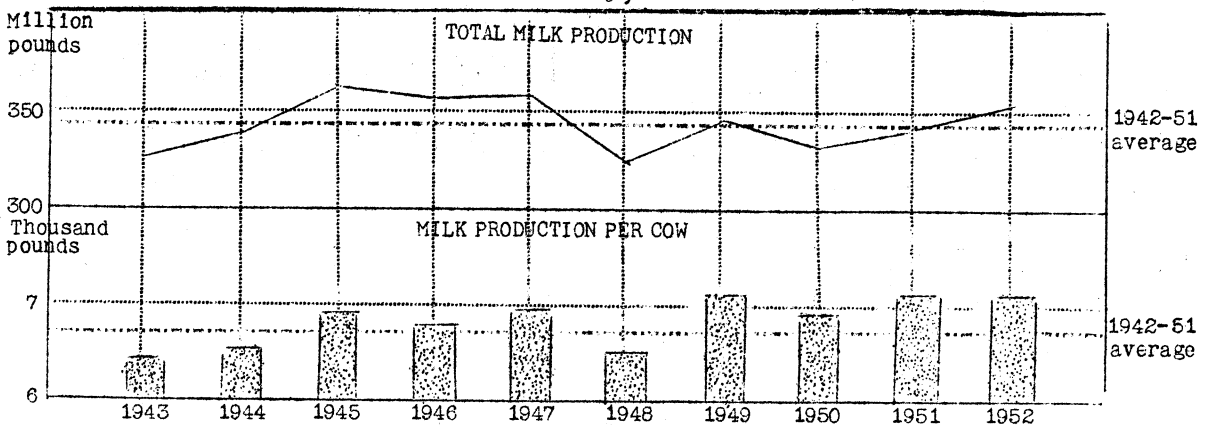
1/ United States census data 1860-1910, inclusive.

2/ Stock sheep only, since 1939.

county, however, hog numbers have been relatively stable. Hogs reached a peak of 30,800 head in 1944 after a fluctuating build-up in numbers from a low point of 16,900 head in 1935. In 1945 the number dropped sharply and January 1 estimates since 1946 have ranged from 16,300 to 24,600 head. The 1953 estimate of 17,800 head is the third lowest in the 35-year history of hog estimates for the county.

Horses and mules, once the principal source of motive power, have declined rapidly in number as cars, trucks, and tractors have come into use. In the 15-year period 1915-30 the number of horses and mules declined about one-third--from over 15,000 head to around 10,000 head. The number was rather stable around 10,000 head until 1941 when a steady decline began and the 1953 estimate shows only 3,000 head of horses and mules on Manitowoc County farms. Sheep, although never kept in very great numbers in this county, have declined slightly over the years, reaching their low point in 1949 and 1950.

Chart 11.- Total Milk Production and Production per Cow, 1943-52  
Manitowoc County, Wisconsin



### Milk Production and Dairy Manufactures

Manitowoc is one of the state's important dairy counties and ranked eleventh in milk production and twelfth in number of producing cows in 1952. The 362,250,000 pounds of milk produced in 1945 was a record and compares with the 342,843,000 pound annual average for 1942-51. Record high production per cow of 7,100 pounds was attained in 1949 and equaled in 1951 and 1952. Since 1948 milk cow numbers have been below the 1942-51 average of 50,520. The 1952 number of 49,600 head was above the three previous years but below the 1945-46 record of 52,500 head.

Table 25.- Producing Cows, Milk Production: Chickens and Egg Production.  
Manitowoc County, Wisconsin

Year	Producing cows Number	Production per cow Pounds	Total milk production Pounds	Chickens on farms, Jan. 1 Number	Egg production Number
1925	41,100	6,100	250,710,000		22,419,000
1935	42,600	6,300	268,380,000	342,300	37,839,000
1940	47,200	6,600	311,520,000	296,700	34,120,000
1941	48,200	6,700	322,940,000	290,800	36,641,000
1942	50,100	6,800	340,680,000	325,700	41,364,000
1943	51,300	6,400	328,320,000	374,600	46,825,000
1944	52,200	6,500	339,300,000	393,300	48,376,000
1945	52,500	6,900	362,250,000	364,600	46,669,000
1946	52,500	6,800	357,000,000	372,900	47,731,000
1947	52,100	6,900	359,490,000	335,700	47,334,000
1948	49,900	6,500	324,350,000	318,200	45,503,000
1949	48,500	7,100	344,350,000	298,300	43,850,000
1950	48,100	6,900	331,890,000	298,400	42,970,000
1951	48,000	7,100	340,800,000	283,500	41,356,000
1952	49,600	7,100	352,160,000	267,000	40,050,000
1953				264,300	
Averages					
1942-51	50,520	6,786	342,843,000	330,650*	45,066,000*

\*1943-52 averages.

This was the leading county in total condensery products in 1952 due largely to the fact that 108,255,000 pounds of unsweetened evaporated whole milk were processed in that year. The record production of evaporated whole milk was in 1941 when it reached 217,732,000 pounds. There is considerable manufacturing of powdered products, the county ranking fifth with 3,517,000 pounds of powdered whole milk in 1952.

There has been a decline in cheese production since the 22,980,000 pound high in 1949 and the 1952 production of 13,678,000 pounds was well below the 18,532,000 pound average for 1942-51. The county ranked fifteenth in the state in 1952. Almost all the cheese is of the American type.

Ice cream production reached a high of 401,000 gallons in 1950 but was only 351,000 gallons in 1952. However, even with this lower production the county ranked eleventh in ice cream compared with thirty-seventh in butter manufacturing. The 1942-51 average butter production was 1,198,000 pounds.

Table 26.- Dairy manufactures: Major products  
Manitowoc County, Wisconsin

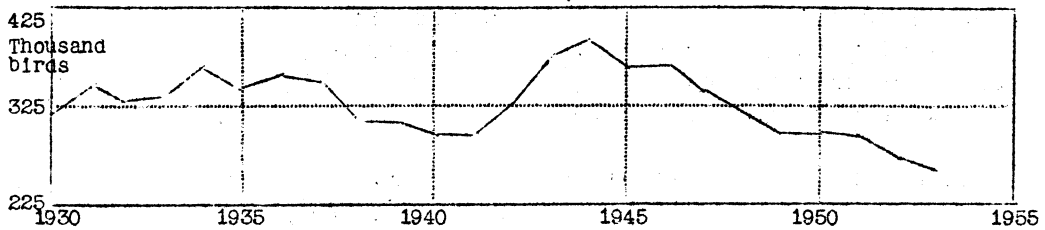
Year	Cream- ery butter	American cheese	Total cheese 1/	Evaporated whole milk (unsweet.)	Total condensed and powdered products	Ice cream
	Thous. pounds	Thous. pounds	Thous. pounds	Thous. pounds	Thous. pounds	Thous. gallons
1925	880	19,488	19,488		13,004	156
1930	302	14,011	14,011	100,914	100,914	82
1935	868	13,921	13,937	146,148	146,148	45
1940	1,284	16,776	17,117	179,707	179,707	134
1941	1,300	17,722	18,208	217,732	217,732	164
1942	1,364	18,552	19,015	197,820	197,820	180
1943	1,348	18,497	19,089	162,683	162,683	182
1944	1,318	19,007	19,461	152,366	170,693	200
1945	1,102	19,694	20,485	181,301	201,889	184
1946	1,207	17,591	19,284	149,684	168,301	209
1947	1,220	18,776	18,976	134,798	157,399	289
1948	1,018	16,789	17,226	126,779	154,622	275
1949	1,589	22,663	22,980	109,276	143,009	282
1950	885	14,923	15,200	106,434	130,709	401
1951	926	13,456	13,604	101,704	123,181	340
1952	1,065	13,641	13,678	108,255	128,116	351
Averages						
1942-51	1,198	17,995	18,532	142,284	161,031	254

1/ Excludes cottage, pot, and bakers' cheese.

#### Poultry on Farms

Chicken numbers reached all-time highs on the farms in most counties of Wisconsin in the middle 1940's when war-caused demands increased the value of poultry as a source of cash income. Chicken numbers declined from the 393,000 birds estimated to be on Manitowoc County farms on January 1, 1944 to 264,300

Chart 12.- Chickens on Farms on January 1, 1930-53  
Manitowoc County, Wisconsin



birds by 1953, a drop of 33 percent. That this trend was general throughout the state is indicated by a comparable decrease of 30 percent for the state as a whole for the same years. Both the number of farms having chickens and the average size of flocks were smaller in 1950 than in 1945 in Manitowoc County. Turkey production followed the state trend. Though fewer farms reported raising turkeys, the number raised was much larger in 1950 than in 1945.

Egg production in Manitowoc County followed the trend in the state in recent years. Increases in the number of eggs laid continued in the county during the war years and reached a record high in 1944 when 48,376,000 eggs were produced. For the state production declined 11 percent from 1944 to 1952, but for Manitowoc County the decrease was over 17 percent to 40,050,000 eggs.

#### Milk Cow Herds\*

Most of the dairy herds of Manitowoc County were made up of 11 to 20 milk cows two years old or older in 1952 according to reports of the assessors. Thirty-one percent of the herds had 11-15 cows and 25 percent had 16-20 milk cows. One-fourth of the herds had less than 11 cows and 18.5 percent had over 20 cows. This distribution resulted in 56 percent of the cows being in the 11-20 cow herds, 12 percent in the less than 11 cow herds, and 32 percent in the dairy herds of over 20 milk cows. For the state, 13 percent of the cows were in the under-11 cow herds, 38 percent in the over-20 sizes, and 49 percent in those of 11-20 milk cows.

Chart 13.- Percentage of Milk Cows in Selected Herd Sizes, 1952\*  
Manitowoc County, Wisconsin

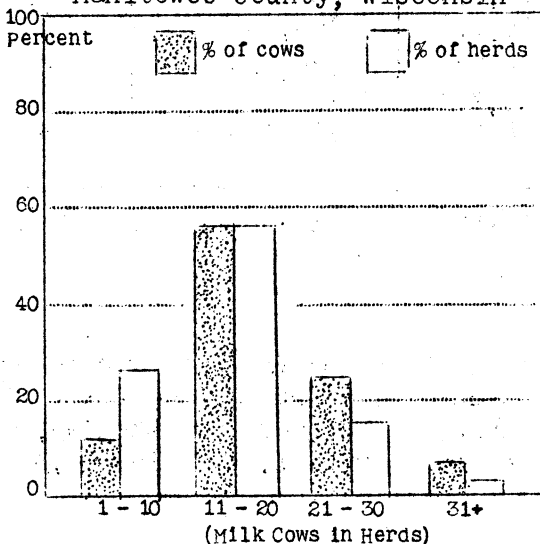


Table 27.- Distribution of Milk Cows by Size of Herds, 1952\*  
Manitowoc County, Wisconsin

Size of herd	Percent of all cows	Percent of all herds
For the county:		
10 or less	11.8	25.7
11 - 15	26.4	30.6
16 - 20	29.5	25.2
21 - 30	25.0	15.6
31 or more	7.3	2.9
For the state:		
10 or less	13.0	30.6
11 - 15	22.4	25.8
16 - 20	26.9	22.7
21 - 30	27.2	16.8
31 or more	10.5	4.1

\*As reported by Wisconsin Assessors, 1952.

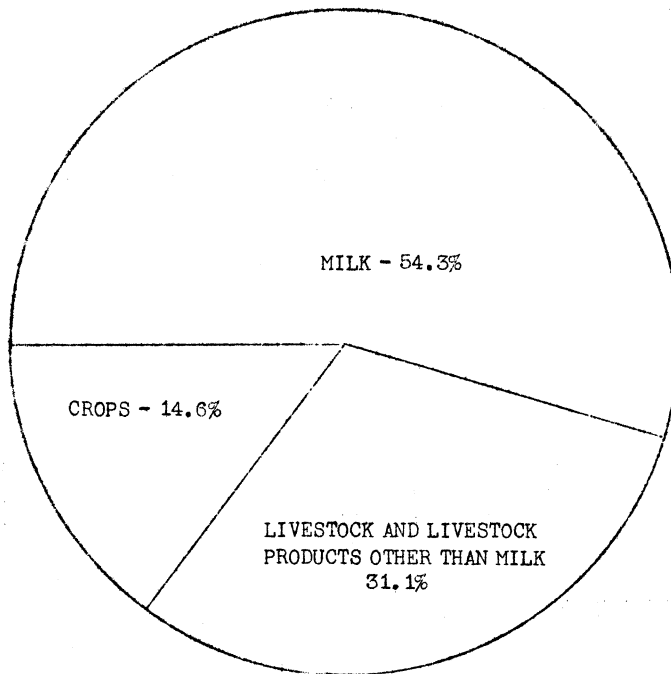


## PART V

Manitowoc County Farm Income, Level of Living  
Marketing\*, and Miscellaneous Items

The value of all products sold from farms in Manitowoc County showed a somewhat smaller percentage increase than in the state as a whole between 1944 and 1949. Both income and land value per acre were higher than the state averages in 1949. Sales of all livestock and livestock products, including poultry, returned more dollars to farmers in 1949 than in 1944. Crops also accounted for more dollar income in 1949 than in 1944.

Chart 14.- Sources of Cash Farm Income, 1949  
Manitowoc County, Wisconsin  
Estimated from 1950 United States Census



The volume of cream sold from farms was much larger and that of whole milk was slightly smaller in 1949 than in 1944 in Manitowoc County. The rise in prices resulted in an increase of about one-tenth in the cash income from dairy products in 1949 over 1944. In nearly one-third of the counties in the state a larger proportion of the income came from dairy products in 1949; only one-eighth had more dollar income from dairy products.

Expansion of other livestock enterprises was relatively greater than that of dairying in those years as evidenced by an increase of over one-half in income from livestock and livestock products other than poultry or dairy items. The value of poultry and poultry products was about one-tenth higher in 1949 than in 1944. However, the 1949 cash returns from dairying alone were three-fifths higher than the combined income from all other livestock and poultry operations. All income from livestock, livestock products, and poultry accounted for about 85 percent of the total cash farm income in the county in 1949  
\*Marketing data for Manitowoc County were developed under the Research and Marketing Act of 1946.

Although less than one-sixth of the farm income in Manitowoc County came from the sale of crops in 1949 the dollar value of crop sales was about 2.8 million dollars and placed the county twelfth in the state in that respect. Less than 1 percent of the farms were classified as fruit and vegetable farms, and about 1 percent were classified as cash grain farms by the 1950 Census.

About two-thirds of the income from cash crops is made up by the sale of various field crops. While field crops are important to the agriculture of the county, they are used primarily as feed for dairy and livestock operations. Vegetables made up about one-fifth of the crop income and the balance was fruit and nuts and horticultural specialties.

The average cash income per acre of land in farms in 1949 for Manitowoc County was \$54.43. This compares with a range in adjoining counties from \$46.31 in Kewaunee County to \$66.87 in Sheboygan County. For the state as a whole the average income per acre was \$40.43 in 1949.

The average value of land and buildings per acre in Manitowoc County in 1949 was \$148.49, the eleventh highest in the state. Thus the average income per acre of farm land was 37 percent of the average per acre value of land and buildings. This compares with 46 percent for the state as a whole and gave the county a rank of fifty-seven in the ratio of income to value in the state. It should be noted that these data for 1949 do not take into consideration farm expenses and therefore do not show the relationship of net farm income to the value of farm land and buildings.

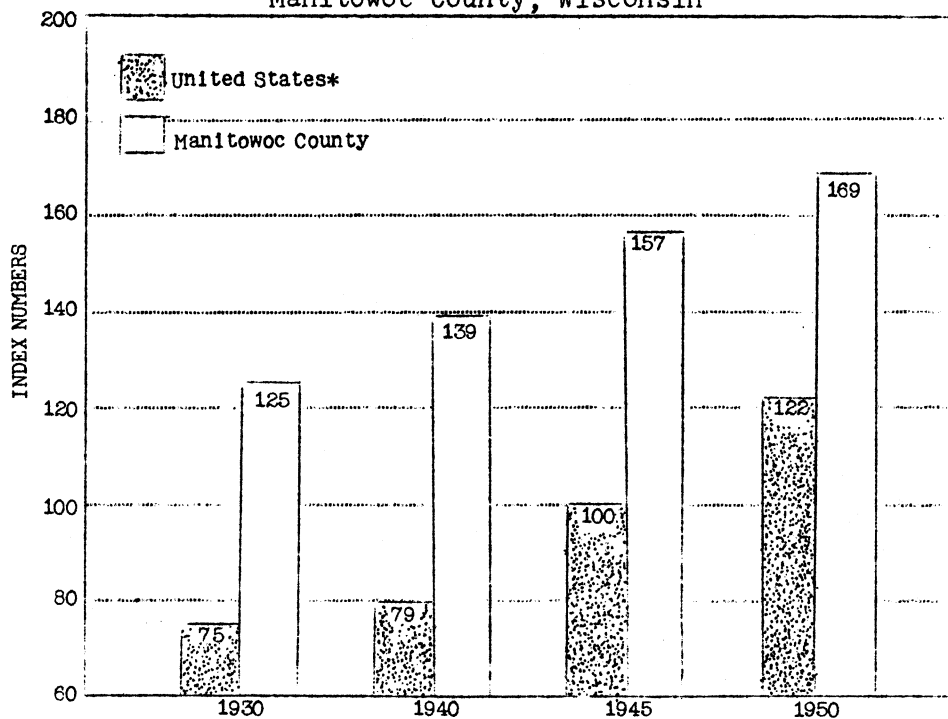
Table 28.- Gross Farm Income: Manitowoc County, Wisconsin  
Estimated for Selected Years

Year	Total	Livestock and livestock products		Crops		Averages	
		Dollars	Percent of total	Dollars	Percent of total	Per farm	Per acre land in farms
1927	9,814,100	8,249,600	84	1,564,500	16	2,525	27.83
1931	5,380,400	4,801,800	89	578,600	11	1,428	15.37
1933	5,034,144	3,787,553	75	1,246,591	25	1,336	14.38
1936	7,510,484	6,218,561	83	1,291,923	17	2,017	21.53
1942	12,217,904	11,066,702	91	1,151,202	9	3,266	34.30
1944	14,881,789	13,006,407	87	1,875,382	13	4,032	41.86
1949 <sup>1/</sup>	19,258,000	16,443,000	85	2,815,000	15	5,473	54.43
Rank of county in state							
1927	8	11	39*	7	31*	24	12
1931	14	15	17*	24	51*	30	16
1933	7	13	51*	4	17*	17	11
1936	14	15	33*	12	34*	23	15
1942	19	19	27	17	45	36	19
1944	21	23	31	17	41	38	19
1949 <sup>1/</sup>	17	20	51*	12	20*	29	18

\*Tied with one or more counties.

<sup>1/</sup> Data for 1949 are for 1949 data only.

Chart 15.- Level of Living of Farm Operator Families\*  
Manitowoc County, Wisconsin



\*The average county in the United States in 1945 was taken as 100.

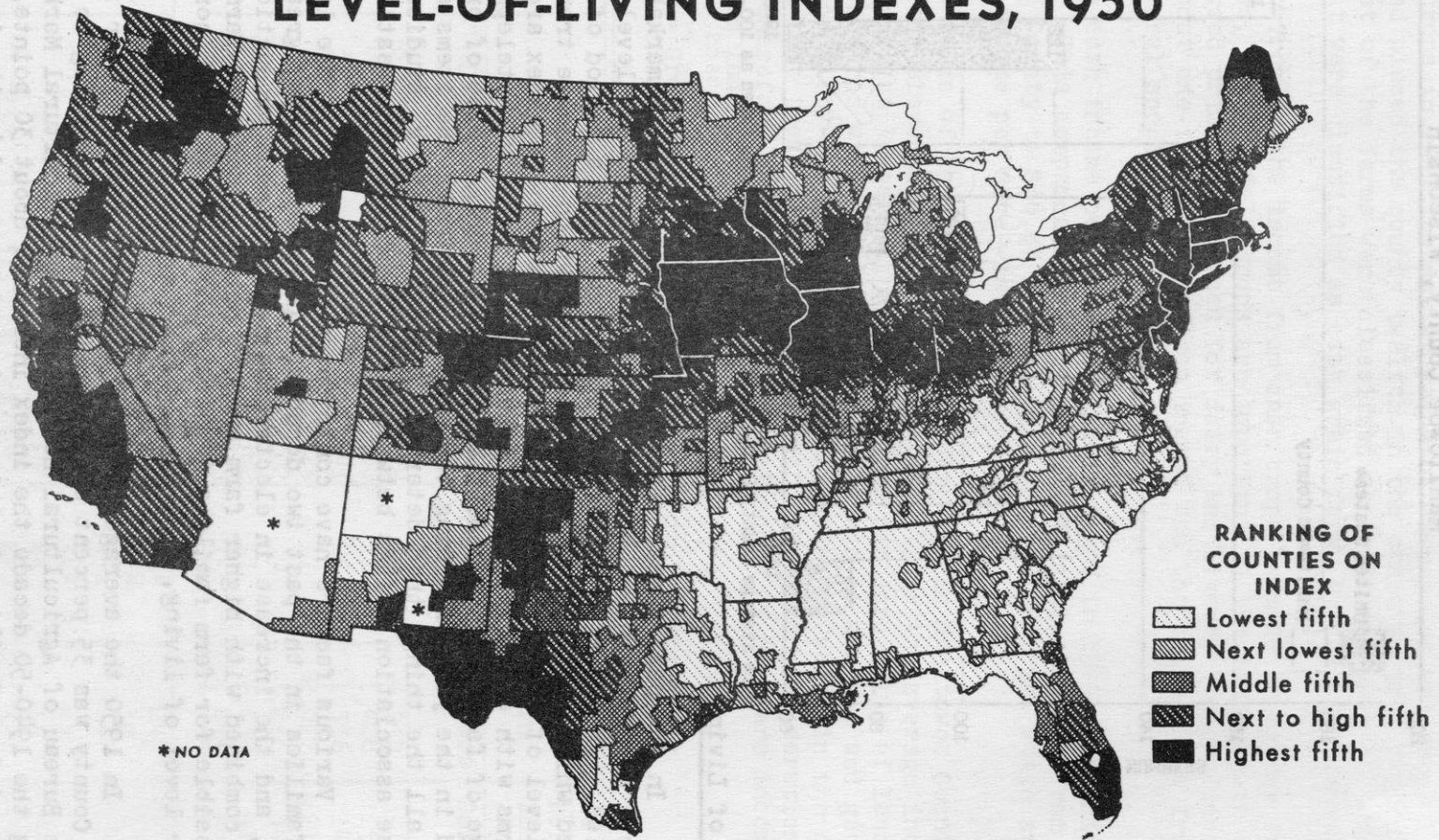
### Level of Living

In the past twenty years there have been many remarkable changes in American agriculture and some of them have affected the level of living of farm families. In order to measure this progress over a period of time an index was devised which contained a few of the items which indicate trends in the general farm level of living. Items selected to make up the index are: (1) Percentage of farms with electricity, (2) percentage of farms with telephones, (3) percentage of farms with automobiles, and (4) average value of products sold or traded in the year preceding the census. Although the items selected do not cover all the things that determine a level of living, studies have shown that a close association exists between those items and other satisfactions.

Various factors have contributed to the rise in the level of living of farm families in the past two decades. Improved methods, greater use of machinery, and the increase in electrification have made production more efficient. This, combined with higher farm product prices, increased farm income and made it possible for farm families to obtain those things which contribute to a higher level of living.

In 1950 the average level of living of farm operator families in Manitowoc County was 35 percent above the 1930 level according to indexes compiled by the Bureau of Agricultural Economics (now Agricultural Marketing Service). During the 1940-50 decade the index increased about 30 points. The level of living of farm families in this county, as measured by the index, is above the nation's average. For 1950 the index indicates a level of 169 for the area compared with 122 for the average county in the United States.

# FARM-OPERATOR FAMILY LEVEL-OF-LIVING INDEXES, 1950



\* NO DATA

## RANKING OF COUNTIES ON INDEX

- Lowest fifth
- Next lowest fifth
- Middle fifth
- Next to high fifth
- Highest fifth

## MARKETING

Although milk is the major single source of farm income in nearly all counties, farmers produce and market a variety of other agricultural products. Many different methods of selling are used in the marketing of such products. The methods available vary with the product and farmers usually have a choice of method and a choice of markets for most agricultural products they sell. Some farmers deliver and sell certain products to local stores, buyers, and shippers. Other products are picked up with buyers' trucks which stop at the farm at the time of the purchase. Livestock is frequently delivered to a local stockyard but not actually sold until it reaches a distant market. Whatever the product or the method, the farmer's marketing is guided by timely reports over the radio, in the newspapers, and by periodicals and bulletins.

Roads

Highways play a very important part in the farm to market movement of farm products. Marketing of agricultural products, many of which are highly perishable, requires good all-weather roads. This need has been recognized in the development of Wisconsin's public highway system. In turn, the expansion and improvement of the roads has greatly broadened market area and marketing opportunities. Regular school and church attendance, mail deliver, accessibility to medical services, and numerous activities of a farm business or social nature are also dependent upon good roads.

Manitowoc County had about 1,457 miles of public roads including town, county, state, and federal roads in 1950. Included in this figure are such city and village streets as are part of these highway systems. The highway mileage in each system in 1950 as a percentage of the total follows:

Town roads	67.0 percent	State and federal roads	12.1 percent
County roads	12.5 percent	City and village streets	8.4 percent

The percentage of the total mileage of roads and highways in the county with each of the different kinds of surfacing in 1950 was as follows:

Gravel surfaced	72.1 percent	Concrete surface	10.1 percent
Bituminous (blacktop)	16.7 percent	Dirt and other surfaces	1.1 percent

Farm Roads and Trading Centers

According to the 1950 United States Census, almost two-fifths (38 percent) of the farms in Manitowoc County were located on or near concrete or blacktop roads. Over one-half (53 percent) were situated on or near gravel or shale surfaced roads. Only 9 percent were on dirt or unimproved roads at that time and the distance to better roads was usually short.

The 1950 Census also obtained information on the distances from farm homes to the trading centers most frequently visited by farmers and their families. About nine-tenths of the farms of Manitowoc County were found to be located less than 10 miles from their usual trading centers. Three-fifths (60 percent) were 5 miles or less. This was also the average distance for all farms reporting on this question in the county and in the state as a whole.



Table 29.- Farms by Type: Manitowoc County, Wisconsin  
United States Census 1950

Type of farm	Number of farms	Percent of farms
Field crop farms	40	1.1
Vegetable farms	20	.6
Fruit and nut farms	--	--
Dairy farms	2,895	82.3
Poultry farms	84	2.4
Livestock other than dairy or poultry	54	1.5
General farms	128	3.6
Miscellaneous and unclassified farms	298	8.5
Total	3,519	100.0

### Types of Farms

From data based on the major source of income, the 1950 Census classed 82 percent of Manitowoc County's farms as dairy farms in 1949. Livestock farms--other than dairy or poultry--made up only 1.5 percent of the total, and general farms where crops and livestock were about equal as sources of income comprised 3.6 percent. Except for unusual farms, such as part-time or residential, no other type made up as much as 3 percent of all farms in the county.

### The Marketing of Milk

About 95 percent of the milk produced on farms in the Manitowoc County area was delivered to dairy plants in 1950. The remainder was used largely in farm households or fed to livestock. Only a very small amount of milk was sold by farmer producer-distributors directly to consumers in villages and cities.

Perhaps one of the most important features about the marketing of milk is that it must move each day from farm to market, if top quality is to be maintained. Long, cold, and snowy winters, sometimes make this daily delivery of milk to dairy plants difficult. Thus good rural highways are essential to the economical and efficient transportation of milk. The average distance between the farmer and the dairy plant to which his milk was delivered in 1950 was about 10 miles in this nine-county eastern section of the state which includes Brown, Calumet, Door, Fond du Lac, Kewaunee, Manitowoc, Outagamie, Sheboygan, and Winnebago Counties.

In this area in 1950 about one-half of all the milk produced was delivered to dairy plants by truckers under contract to dairy plants or groups of farmers to provide daily pickup and delivery service. Over one-third of the milk was picked up by trucks operated by dairy plants while only a little over one-tenth of the milk was delivered to dairy plants by farmers in their own equipment.

The contract trucker hauling milk from farms to dairy plants in this area traveled an average of about 43 miles during the months in which just one trip per day was made. On this trip the trucker picked up milk from about 22 farmers. This means that on the average there was less than 2 miles between the farmer and the dairy plant to which his milk was delivered.

In 1950 farmers in this area paid an average of 12 cents per hundred-weight for contract trucking of their milk. This compares with the 18 cent average in the northwest and western sections of the state and is the lowest rate reported in any area in Wisconsin.

Farmers who delivered their own milk to plants averaged about 5 miles one-way to the plant. Routes traveled by plant-owned trucks were much shorter than those of contract haulers. In 1950 the average single trip distance in the area was 18 miles and milk from about 13 farmers was picked up for an average distance of only 1.4 miles between the farmer and the dairy plant.

### The Marketing of Cattle and Calves

According to the United States Census of 1950, about 90 percent of the farms of Manitowoc County sold cattle and calves. This compares with the state average of 84 percent. With 3,174 farms of the county selling 37,931 cattle and calves in 1949, the average was about 12 per farm. Between 1944 and 1949 both the number of farms selling cattle and calves and the number sold decreased by about 6 percentage points. Thus, while both sales and sellers decreased the number sold per farm remained about the same.

Veal calf sales in this area fluctuate by months somewhat more than the state average. According to a study made for 1950 only 12 percent of the calves were marketed during July, August, and September when veal prices are highest and 71 percent were sold from October through March. Methods of marketing differ widely throughout the state. Proximity to packers, the number of animals ready at any given time, and transportation facilities are some of the determining factors in choice of method of sale. In Manitowoc County about two-fifths of the veal calf sales were through cooperative marketing associations according to the 1950 study. About one-fifth were sold at local concentration yards, and one-eighth each direct to packers or packer-buyers and to dealers or truck buyers. Approximate sales methods figures for the state show three-tenths through cooperatives, one-fifth each to local yards and to dealers, and one-eighth each to stockyards and to packers.

### The Marketing of Hogs

About 45 percent of the farms reported selling some hogs according to the 1950 Census. This is below the state average of 47 percent. With 1,584 farms of Manitowoc County selling 22,516 hogs in 1949, the average was 14 per farm. Between 1944 and 1949 both total sales and the number of farms selling hogs decreased by about 30 percent. Thus, the number of hogs sold per farm in 1949 was about the same as in 1944 but a big drop in the number of farms selling hogs resulted in a drop of the same percentage in total sales.

The number of hogs marketed in the Manitowoc County area varies considerably from month to month according to a study made for 1947. In this region about 57 percent of the hogs were marketed in the first half of the year and about 43 percent in the last half. This was a smaller seasonal difference than for the state as a whole. As with calves, and for much the same reasons, methods of marketing hogs differ in the various counties in the state. According to the 1947 study about two-fifths of all Manitowoc County hogs were sold to cooperatives, another two-fifths were about equally divided between sales direct to packers or slaughterhouses and to dealers or truck buyers, and the

balance were consigned to terminal public markets or yards. For the state about two-fifths were sold direct to packers, one-fourth to dealers, one-fifth to cooperatives, and one-eighth to public markets.

### The Marketing of Sheep and Lambs

Of all the livestock sold from the farms of the state, sheep showed the greatest decrease in recent years. According to the 1950 Census, sheep and lamb sales in Manitowoc County in 1949 were about four-fifths of those reported by the 1945 Census. State figures indicated a drop of about one-half in sheep and lamb sales in those years. In Manitowoc County the number of sheep sold per farm was larger in 1949 than in 1944, but the drop in the number of farms selling sheep was large enough to reduce total sales by one-fifth.

Lambings in the spring in the Manitowoc County area were earlier than the average for the state according to a study made for 1949. About 52 percent of the lambings were during February and March while 48 percent were during April and May. As a result some lamb marketings were earlier in the fall than the state average. Factors influencing choice of marketing method for other livestock prevail. According to the study, two-fifths of all Manitowoc County sales of sheep and lambs were to cooperative sales associations, one-fourth were to terminal public markets or stockyards, one-eighth were sold direct to packers, and the balance went to farmers and others including a few to dealers. For the state over one-third went to public markets or yards, one-fourth each to packers and cooperatives, and an eighth to dealers or truck buyers.

Table 30.- Livestock Sales and Farm Slaughter: Manitowoc County, Wisconsin  
United States Census, 1945 and 1950

Type of livestock	Farms in county	Livestock sales			Farms selling livestock as a percent of all farms
		Farms reporting	Total sold	Average per farm	
	Number	Number	Number	Number	Percent
1944					
Cattle and calves	3,691	3,369	40,423	12.0	91.3
Hogs	3,691	2,302	31,984	13.9	62.4
Sheep and lambs	3,691	107	479	4.5	2.9
1949					
Cattle and calves	3,519	3,174	37,931	12.0	90.2
Hogs	3,519	1,584	22,516	14.2	45.0
Sheep and lambs	3,519	66	378	5.7	1.9

Type of livestock	Farms in county	Farm slaughter			Farms slaughtering as a percent of all farms
		Farms reporting	Total slaughtered	Average per farm	
	Number	Number	Number	Number	Percent
1944					
Cattle	3,691	882	1,048	1.2	23.9
Calves	3,691	1,172	2,001	1.7	31.8
Hogs	3,691	2,976	10,116	3.4	80.6
1949					
Cattle	3,519	712	810	1.1	20.2
Calves	3,519	832	1,301	1.6	23.6
Hogs	3,519	2,192	5,966	2.7	62.3

## The Marketing of Chickens and Eggs

A survey of state crop reporters was made in 1948 to obtain basic data on the marketing of chickens by farmers in the state. Data for egg marketing were obtained from questions included in the 1948 Wisconsin annual assessors' enumeration. The results from both of these sources have already been published but not in detail on a county level.

From the survey it was determined that 60 to 89 percent of all the chickens marketed from Manitowoc County farms in 1947 were sold alive while the remainder were sold dressed. It has long been the practice of farmers to sell chickens alive for convenience since many farmers do not have the proper facilities or the time to dress birds for market. For the state as a whole about four-fifths of the chickens were sold alive.

The most common method of marketing chickens in 1947 in Manitowoc County in terms of percentage of birds sold was through stores or local dealers. This method accounted for 40 to 59 percent of all the chickens sold. Since farmers make trips to town at fairly regular intervals for various purposes, chickens are easily marketed as trade at the grocery store or for cash to the local poultry dealers. Sales direct to consumers and wholesale shipments ranked next among the four methods studied, while sales to truckers at farms were of least importance for Manitowoc County farmers. According to the United States Census of 1950, 86 percent of the income from chicken and egg sales in 1949 in the county was derived from egg sales while 14 percent was from the sale of chickens.

From the 1948 assessors' enumeration it was found that eggs delivered to stores and dealers accounted for 40 to 59 percent of all the eggs sold from Manitowoc County farms. Deliveries to stores and dealers has long been a practice of selling eggs. Eggs sold to truckers at farms ranked next, while other sales (shipped wholesale and hatchery sales) were much less important as methods of selling eggs. Over one-half (57 percent) of the eggs sold were marketed through stores and local dealers in the state whereas eggs sold to truckers at farms accounted for one-third of the egg sales.

## Specified Facilities and Equipment

From the 1950 Census it was estimated that about 73 percent of all Manitowoc County farm homes were equipped with a telephone in 1950 compared with the 60 percent average for the state as a whole. Very few of the farm homes were without commercial electric service. With this convenient source of power there has been a great increase in the use of electrical household appliances and other small power equipment on the farm. Ninety-four percent of the farms had washing machines, 80 percent had water pumps, and 40 percent had hot water heaters. About 18 percent of the farm homes had deepfreezing units.

That very few farmers of Manitowoc County grind their own feed is indicated by the small number of electric power feed grinders estimated to be on the farms of the county by the 1950 Census. Milking machines have reduced the labor involved in milking on about 71 percent of the farms. Seventy-three percent had upright silos; corn pickers were almost non-existent. Pickup hay balers were owned by only 3 percent of the farm units of the county.

Table 31.- Facilities and Equipment on Farms: Manitowoc County, Wisconsin  
United States Census 1950

Equipment or facility	Number of farms reporting	Number on farms	Farms report- ing as percent of all farms
	Number	Number	Percent
Telephone	2,566	xxx	72.9
Electricity	3,466	xxx	98.5
From a power line	3,460	xxx	98.3
Electric water pump	2,820	xxx	80.1
Electric hot water heater	1,395	xxx	39.6
Home freezer	635	xxx	18.0
Electric washing machine	3,315	xxx	94.2
Electric chick brooder	915	xxx	26.0
Electric power feed grinder	70	xxx	2.0
Milking machine	2,490	xxx	70.8
Grain combine	541	561	15.4
Corn picker	5	10	.1
Pickup hay baler	106	106	3.0
Upright silo	2,581	3,246	73.3
Pit or trench silo	45	45	1.3
Motor trucks	1,480	1,657	42.1
Tractors	3,160	4,585	89.8
Automobiles	3,325	4,300	94.5

Tractors are one of the most essential items of equipment on the modern farm. Almost 3,200 of them were estimated for Manitowoc County with an average of three tractors for every two of the 90 percent of the farms in the county with at least one tractor. Forty-two percent of the farms had one or more motor trucks, of various sizes. Many farmers in the county owned more than one car as there were 4,300 on the 3,325 farms reporting that item. The trend toward increased use of labor and time saving equipment is permitting more efficient operation of increasing acreages and allowing greater opportunity for social life for farm families.

Table 32.- Specified Farm Expenditures in 1949: Manitowoc County, Wisconsin  
United States Census 1950

Type of expenditure	Farms reporting as percent of total	Amount spent	Expense per farm reporting
	Percent	Dollars	Dollars
Machine hire	75.4	339,815	127.99
Hired labor	67.8	977,849	409.83
Feed	96.6	2,864,647	842.30
Livestock and poultry purchased	73.8	698,005	268.88
Seeds, bulbs, plants and trees purchased	87.0	485,415	158.58
Gasoline and other petroleum fuel and oil	96.1	1,029,974	304.64
Tractor repairs	76.9	295,397	109.16
Other farm machinery repairs	88.8	495,755	158.64

Specified Farm Expenditures

Livestock feed has been the largest single item of expense on Manitowoc County farms. In 1949 when 97 percent of the farms reported an average outlay of \$842 for livestock and poultry feeds, the total spent was larger than in all but eleven counties in the state. Livestock and poultry were purchased by 74 percent of the farms at an average cost of \$269. Ranking above livestock purchases but below feed costs was the expenditure made for seasonal and full-time labor which averaged \$410 for 68 percent of the farms.

Gasoline and other fuels, a major expense, cost 96 percent of the farms an average of \$305 each. Repairs and parts for tractors and for other machinery averaged \$109 and \$159 respectively including such items as labor, tires, and tubes, plowshares and blacksmithing but excluding motor truck and car repairs. Seventy-five percent of the farms hired custom machine work for which they paid an average of \$128. Seeds, bulbs, plants, or trees essential to their farming practices cost 87 percent of the farms an average of \$159 each. Except for machine hire, labor, and livestock purchases the average cost of operating a farm in Manitowoc County was above that in the state as a whole.

Table 33.- Farms Classified by Value of Products Sold  
Manitowoc County, Wisconsin: United States Census 1950

Value of Products Sold	Manitowoc County	Wisconsin
	Percent of farms	Percent of farms
No sales	.8	2.1
\$1 to \$249	2.0	4.6
\$250 to \$399	2.2	2.3
\$400 to \$599	1.2	2.7
\$600 to \$999	4.1	4.9
\$1,000 to \$1,499	4.6	6.0
\$1,500 to \$2,499	12.6	12.6
\$2,500 to \$3,999	23.3	19.6
\$4,000 to \$5,999	26.3	20.4
\$6,000 to \$9,999	16.7	17.2
\$10,000 and over	6.2	7.6
Total	100.0	100.0

Value of Products Sold.

Unusual sources of income were not enumerated by the 1950 Census of Agriculture and certain sales were excluded. Sales of baby chicks, government payments for soil conservation, income from off-farm work or custom work, land rentals, and investments were some items not included.

In 1949 about 72 percent of all Manitowoc County farms sold products valued at \$2,500 or more. About 26 percent sold products with values between \$4,000 and \$6,000, while sales by 17 percent of the farms were from \$6,000 to \$10,000. With the value of products sold from about one-half of the farms being in excess of \$4,000, a relatively high degree of agricultural prosperity is indicated. In total value of products sold from farms Manitowoc County ranked seventeenth among the 71 counties of the state in 1949 according to the 1950 United States Census.



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## Leading Crops, 1951

Crop	Wisconsin					United States					Unit
	Acreage (000 omitted)	Yield per acre	Production (000 omitted)	Farm price Dollars	Value of production (000 omitted) Dollars	Acreage (000 omitted)	Yield per acre	Production (000 omitted)	Farm price Dollars	Value of production (000 omitted) Dollars	
Corn.....	2,413	43.0	103,759	1.70	176,390	81,306	36.2	2,941,423	1.69	4,981,156	Bu.
Oats.....	2,895	49.5	143,302	.83	118,941	36,454	36.1	1,316,396	.832	1,099,202	Bu.
Barley.....	201	33.0	6,633	1.28	8,490	9,391	27.1	254,668	1.27	318,157	Bu.
Rye.....	97	11.5	1,116	1.54	1,719	1,718	12.5	21,395	1.54	32,857	Bu.
Spring wheat.....	52	22.5	1,170	2.15	2,516	21,662	15.8	342,005	2.08	710,519	Bu.
Winter wheat.....	28	24.5	686	2.15	1,475	39,762	16.2	645,469	2.14	1,380,463	Bu.
Buckwheat.....	22	14.5	319	1.30	415	201	16.6	3,340	1.39	4,705	Bu.
Soybeans for grain.....	44	14.5	638	2.65	1,691	13,211	21.2	280,512	2.70	757,613	Bu.
All tame hay.....	3,977	2.21	8,797	16.70	148,346	59,945	1.60	95,788	22.50	2,432,894	Ton
Alfalfa hay.....	1,969	2.55	5,021			18,969	2.26	42,937			Ton
Clover and timothy hay.....	1,877	1.90	3,565			21,457	1.49	32,035			Ton
Other tame hay.....	131	1.60	210			19,519	1.07	20,816			Ton
Wild hay.....	64	1.35	86			14,663	.86	12,563			Ton
Red clover seed.....	143	.90	129	19.40	2,503	1,628	1.10	1,789.9	19.40	34,747	Bu.
Alsike clover seed.....	11	2.50	28	19.50	546	93.6	3.31	309.6	21.10	6,527	Bu.
Potatoes.....	53	185	9,805	1.67	16,374	1,353.1	240.7	325,708	1.61	525,304	Bu.
Tobacco.....	15.5	1,477	22,889	.287	6,577	1,781.4	1,307	2,328,226	.512	1,190,920	Lb.
Cabbage.....	13.1	10.8	141.3	18.15	2,564	155.95	8.8	1,366.8	37.92	51,835	Ton
Onions, commercial.....	2.0	200	400	2.40	960	101.8	192	19,516.5	2.82	54,072	Cwt.
Sugar beets.....	9.5	10.0	95	9.90	950	702	15.1	10,584	11.40	120,658	Ton
Cucumbers for pickles.....	25.9	52	1,347	1.85	2,492	140.34	80	11,234	1.54	17,340	Bu.
Peas for canning.....	129.3	2,480	320,660	.0425	13,628	445.86	2,284	1,018,600	.0445	45,308	Lb.
Corn for canning.....	92.2	2.6	239.7	21.80	5,225	430.03	2.83	1,217.0	23.50	28,574	Ton
Snap beans for canning.....	12	1.6	19.2	115.80	2,223	125.31	2.18	273.1	110.50	30,182	Ton
Beets for canning.....	6.9	8.6	59.3	19.60	1,162	16.09	9.09	146.2	20.80	3,035	Ton

## Livestock Inventory, January 1, 1952

Class of livestock	Wisconsin			United States		
	Number (000 omitted)	Farm price per head Dollars	Farm value (000 omitted) Dollars	Number (000 omitted)	Farm price per head <sup>2</sup> Dollars	Farm value (000 omitted) Dollars
Cows and heifers 2 years old and over kept for milk.....	2,407	296.00	712,472 <sup>1</sup>	23,407	250.00	5,854,600 <sup>1</sup>
Heifers 1 to 2 years old kept for milk cows.....	540			5,726		
Heifer calves being saved for milk cows.....	596			6,737		
All other cattle.....	373			52,192		
All cattle.....	3,916	232.00	908,512	88,062	179.00	15,733,051
Horses.....	172	69.00	11,868	4,370	45.80	199,958
Mules.....	2	66.00	132	1,923	72.30	139,008
All swine.....	2,039	35.20	71,773	63,903	29.90	1,910,126
All sheep and lambs.....	283	30.10	8,527	31,725	27.80	882,524
Chickens over 3 months old.....	14,848	1.60	23,757	453,498	1.53	694,391
Turkeys.....	57	7.80	445	5,835	7.00	40,838

## Dairy Manufactures, 1950

Item	Unit	Wisconsin	United States <sup>3</sup>
Butter.....	Lb.	161,644,000	1,386,290,000
American cheese.....	Lb.	418,289,000	892,929,000
Swiss cheese.....	Lb.	52,260,000	99,483,000
Brick cheese.....	Lb.	17,422,000	19,597,000
Italian cheese.....	Lb.	31,334,000	61,845,000
All other cheese.....	Lb.	38,646,000	118,703,000
Total cheese.....	Lb.	557,951,000	1,192,557,000
Evaporated and condensed whole milk (unsweetened).....	Lb.	648,959,000	3,104,199,000
Total condensed and powdered products <sup>4</sup> .....	Lb.	1,232,575,000	5,433,384,000
Ice cream.....	Gal.	16,145,000	555,984,000

## Other Agricultural Data

Item	Unit	Wisconsin	United States
Number of farms 1950 Census.....	No.	168,561	5,384,000
Land in farms 1950 Census.....	Acre	23,221,095	1,133,418,000
Average size of farm 1950 Census.....	Acre	137.8	210.5
Total population 1950 Census.....	No.	3,434,575	150,697,361
Cash farm income 1951.....	Dollar	1,185,932,000 <sup>5</sup>	32,791,129,000 <sup>5</sup>
Milk production 1951.....	Lb.	15,212,000,000	115,591,000,000
Egg production 1951.....	No.	2,228,000,000	59,356,000,000

<sup>1</sup>Included in value of all cattle. <sup>2</sup>Farm price per head of all cattle, horses, mules, swine, and sheep derived by dividing total value by total numbers. <sup>3</sup>Preliminary. <sup>4</sup>Not including dry milk partly skimmed or concentrated whey. <sup>5</sup>Not including government payments.

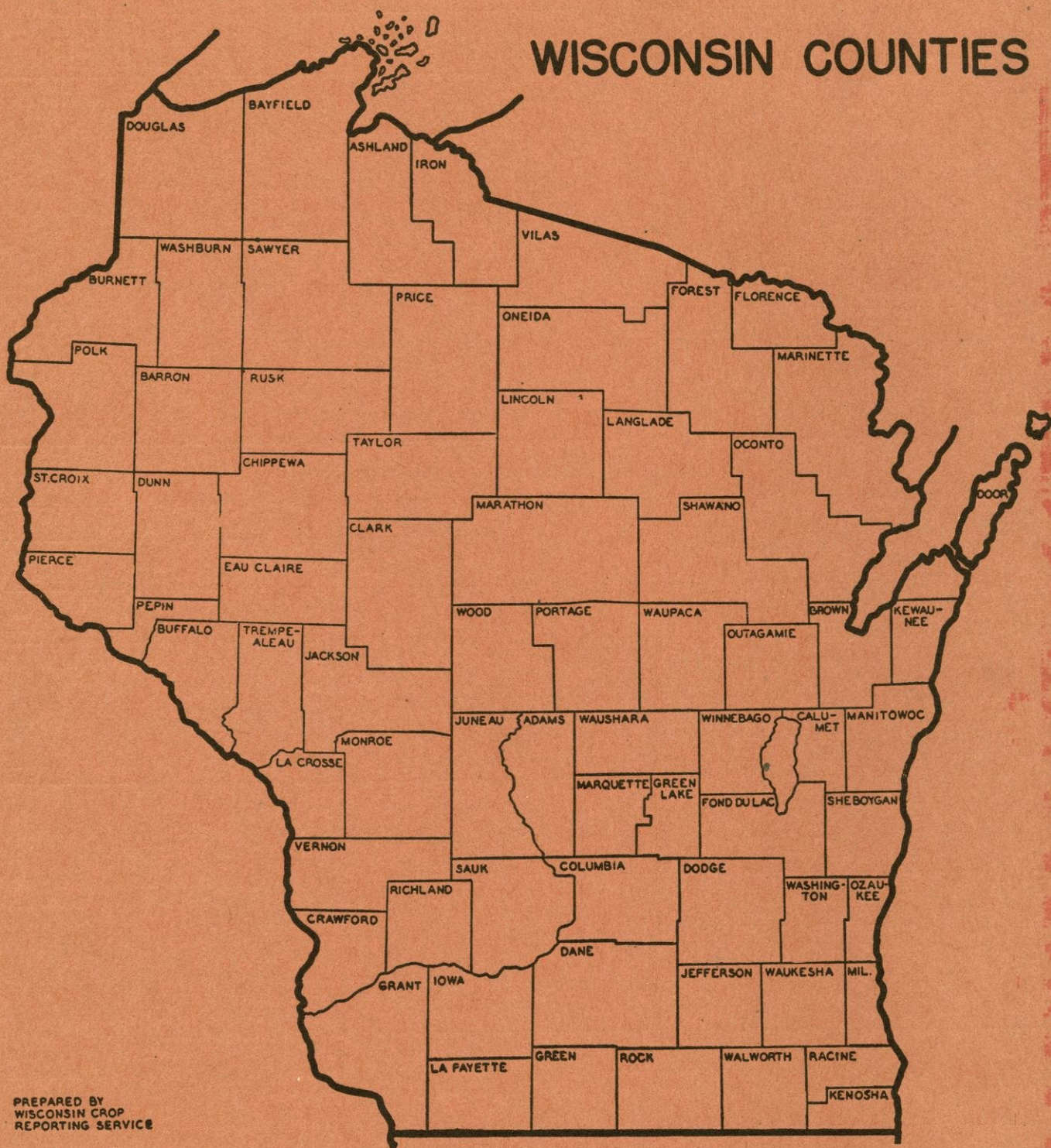
## Agricultural Statistics for Wisconsin and the United States

In addition to the county data published in this bulletin and the state and national figures shown on this page, much other information is available in printed form. For detailed figures on Wisconsin crops and livestock, see bulletins on agriculture published by the State Department of Agriculture, Capitol, Madison. Monthly information is published in the monthly "Wisconsin Crop and Livestock Reporter" from the same source.

For the United States extensive statistical tables are available in the "Agricultural Statistics Yearbook" and in the monthly crop reports and the annual "Crops and Markets". These can be obtained from the Government Printing Office or through members of Congress or directly from the Department of Agriculture in Washington.



# WISCONSIN COUNTIES



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