CHAPTER V

WHEAT FARMING

"In the rapidity of the rise and decline of the wheat industry, and in the extent of that decline, Wisconsin is unique among the states of the United States that have been important in wheat culture." This statement epitomizes the story we have to tell, more in detail, in the present chapter.

When the new prairie settler of Wisconsin, in 1836, cracked his ox-whip and struck the breaking plow into the sod, preparatory to raising a crop of wheat, there was not being produced in the United States an amount of that great food cereal much in excess of the reasonable requirements of our own people. The population of the country in 1840 was, in round numbers, 17,000,000. The total production of wheat the preceding year was 85,000,000 bushels, or an average of 5 bushels per capita. That is only a half-bushel per capita more than the average, for food and seed wheat, of the entire wheat eating population of the world in recent years, while it is considerably below the present average of consumption in both America and Great Britain. With an abundance of corn, which was the staple food of the slaves and made an important item also in that of a good proportion of the white population, a part of this wheat could be spared for export. However, practically the problem of the foreign market for wheat had not yet arisen in an acute form.

Moreover, that problem was not destined to arise until after the new territory of Wisconsin had entered definitely and fully upon its career as a wheat producing area, for in the ten years following 1840 the increase in the home market outran the increase in the wheat supply. That is to say, the popula-

tion in 1850 was 23,000,000, an increase of 6,000,000, or 35 per cent, while the wheat production of 1849 was only 100,000,000, or an increase over 1839 of 17.6 per cent.

We were, however, prepared to spare a goodly bulk of the annual crop for export as early as 1849; and ten years later, the crop having grown 73 per cent and the population only 30 per cent, the foreign market had become a matter of crucial concern to American farmers. With the spread of wheat growing over the vast fertile stretches of the great plains during the years following the Civil War, America entered upon the production of an enormous annual surplus of wheat which has influenced the economic history of the world.

The principal foreign market for American wheat, from the beginning of our period, was Great Britain. Fortunately for us, the demand in that country began to exceed the home supply almost at the exact moment when the supply with us began greatly to exceed the home demand. Population in Great Britain, after the close of the Napoleonic wars, under the stimulus of manufacturing and commerce went forward with mighty strides. The additions, however, were mainly in the towns and in the manufacturing counties, while the rural population grew but slowly or not at all. By the census of 1831 almost exactly two-thirds of the British population were living in towns, and the proportion thereafter tended to become more unfavorable to agriculture. In consequence the British farmers, who had customarily supplied the home demand for wheat, or nearly so, fell behind the requirements of the nation even with the stimulus of the "corn laws," which prohibited importations except in times of scarcity. Then ensued the notable and tremendous campaign against the corn laws and finally, in 1846, their repeal. The industrial classes, demanding cheap food, had triumphed over the agricultural classes

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*The production of 1849 was considerably lower than that of 1848 and 1847.
*Colonial America had shipped to Great Britain as well as to the British, French, and Spanish West Indies.
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demanding an assured market and a high price for wheat ("corn").

In addition to the disproportionate growth of the non-rural population, two other causes in Great Britain affected the home supply of wheat, in proportion to demand. These were the withdrawal of land from agriculture and an important, though gradual, change in the character of British agriculture. In the twenty years between 1851 and 1871 the total area of farm land taken into town limits and absorbed by railroads for rights of way, etc., amounted to nearly 700,000 acres. This was considerably in excess of the extent of new enclosures authorized during the same period, while the average value of the withdrawn lands, for cropping purposes, was naturally much higher than of that newly enclosed. 6 During the period under discussion improvements in farming were numerous. Yet the agricultural classes were called upon to endure several sharp and general crises, and whenever a severe depression came it was observed that the grain growing districts suffered more than those sections where livestock was the dominant interest. 7 Such practical demonstrations gave point to the exhortations for better farming, with more thorough cultivation, fertilization of the soil, proper rotation of crops, feeding of livestock, and the like. The result was a more or less uniform tendency away from the emphasis on wheat growing, which had become something of an obsession under the artificial stimulation of the corn laws. More and more attention was centered upon the production of meat and wool. This tendency ultimately became so powerful that, between 1871 and 1891, the area devoted to wheat culture declined from 3,572,000 acres to 1,889,000 acres, or 47.1 per cent, while the acreage of hay increased 20.2 per cent and of pasture 30.7 per cent. 8 Great Britain, therefore, as a predominantly industrial nation, which for industrial reasons adopted the free trade

6 Great Britain, Parliamentary Papers, Reports of Commissions, House of Commons, 1875, ii, 3.
8 Sir William Crookes, op. cit., 122.
policy, was the natural market for America’s surplus wheat, and became, during the years when that surplus grew to immense proportions, the arbiter of prices to the American wheat farmer.

At the time Wisconsin began to raise wheat as a business, the outstanding producers among the older states were Pennsylvania, New York, Virginia, and Ohio. Of the 85,000,000 bushels in the crop of 1840 (or 1839) these four states are credited with over 53,000,000. Maryland, Tennessee, Kentucky, Indiana, and Illinois yielded 22,000,000 more, while the remaining 12,000,000 was distributed, in small amounts, among the other twenty-one states. The older states made shift to hold their own for some years, but there was little expansion save during the food crisis years of the Civil War, and meantime the non-agricultural populations of these same states were increasing so rapidly as to provide in large part a home market for the wheat raised within their own borders. This left to the new western states the opportunity of providing a supply for the foreign trade, and the eagerness with which that opportunity was improved the story of Wisconsin wheat growing during half a century will show.

The New York farmers, the Pennsylvania farmers, the Ohio farmers who came to Wisconsin in the early rush of settlement were by habit and tradition primarily wheat growers. The New Englanders had been partially weaned from the business, but, like the others, they had a lively appreciation of the ease with which wealth in the form of wheat could be extracted from the limestone soils of Wisconsin’s prairies and openings. The problem was to get the soil under cultivation with the least practicable delay, and this, on the prairies at least, was accomplished with remarkable celerity. To illustrate, the farm lands of Mount Pleasant Town, Racine County, began to be claimed in 1836. In the season of 1837 some claimholders (who had not yet bought their lands) harvested 1000

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*It is not quite clear whether the figures are for the one year or for the other.

*Except a few pieces which were claimed the previous year.*
to 2000 bushels of wheat. In the summer of 1844 two young men, with ten yoke of oxen, and a couple of boys to drive, broke up in a few weeks 200 acres of Rock County prairie which they sowed to wheat. The next year they harvested their crop with a machine and secured 5000 bushels, a part of which was sold at Racine at sixty-two and one-half cents per bushel. These figures could be matched from other quarters, and they suggest that it was probably not uncommon for a farmer to break up and sow to wheat 25 to 50 acres during his first season’s operations. After that his fields expanded rapidly. The custom was to sow wheat year after year on the same ground, so that, in general, the increments of “new breaking” simply augmented the area sown to wheat, other crops like oats and potatoes occupying very minor portions of the arable, and hay being derived from the natural meadows or marshes. In case the land was openings instead of prairie—and many at first preferred this type, believing it to be better, especially for winter wheat—the timber was quickly chopped off to make rails for fencing. The ground, being soft and protected by a layer of humus, was easier to break than the prairie sod. The tree stumps interfered with the plow, but these either were left to rot away or were gradually grubbed out. Smaller trees, of which the openings had but few, and brush like the ubiquitous hazel were cleared away before starting the plow.

Thus in a brief span, almost as if by some sort of magic, were the prairies and openings of southern Wisconsin transformed into fields of billowing wheat. The study of towns from the charts and plats reveals the dynamics of the process. As early as the census of 1850, the improved lands in the farms of Mount Pleasant amounted on the average to four times the acreage of the unimproved. That was an exceptional case, for it appears that no other town at that census period showed as high a proportion of improved land. Yet,

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11 Racine Argus, Mar. 10, 1838.
four of the eight towns in Racine County had half or more than half of their farm lands improved, the four together showing 30,205 acres improved to 28,541 unimproved. The other towns, lying farther from the lake shore, were less developed. For the county as a whole the figures are 63,338 improved and 82,947 unimproved. For Kenosha, the other lake-shore prairie county, the totals are 50,987 and 79,862 respectively.

Surprising as it may seem, Rock County, whose farmers had a haul of 60 to 100 miles to the lake ports, already had in its made farms more improved land than unimproved. The figures are 143,235 and 137,111 respectively. The explanation is found in the extensive and beautiful prairie area bordered by and interspersed with timber, combined with easily cleared openings, which made that county so enticing to the early settlers; and also, in its relatively small amounts of marsh land.14 Seven other counties—Dane, Grant, Green, Lafayette, Milwaukee, Walworth, and Waukesha—each showed improvements in 1850 which exceeded a third of all lands included in their farms. All of these except Milwaukee had much prairie and openings.15 Some of the counties, especially Grant, Dane, and Green, had within their boundaries considerable areas of rough hill land, but these were not yet largely occupied for farming purposes; so that in all cases, practically, we are dealing with farms which are in process of making on the prairies or in the smooth or rolling openings. These totals indicate how rapidly such lands were being brought into requisition for the growing of wheat, and the totals of the eighth census (1860) produce a still more striking impression. By that time the ten counties listed above had

14 If the marshes which were mowed or pastured had been described as improved land, as tame grass meadows and pastures were, the unimproved in all of the southeastern counties would have shrunk appreciably.

15 Milwaukee's unusual commercial advantages account for the rapid improvement of her forested lands, which is an exceptional case. Comparison with Illinois is interesting. In 1850 the 57 Illinois counties show 11 which have a balance in favor of improved land; 47 others have less than one-half their farm lands improved; 7 have one-third. In 1860, 41 of the 62 counties in Illinois had a majority of their farm lands improved.
a combined improved area totaling 1,693,491 as against an unimproved of 1,338,750. If we eliminate the counties of Dane, Grant, and Green, where many new farms were making on rough land much of which would never be cultivated, the totals for the other seven counties would be 1,060,587 and 675,590. That is, the improved land in those counties was to the unimproved in the proportion of 10 to 6.7. This is a higher average of improved land than either Ohio or Pennsylvania, as a whole, had in 1850 in their farms.

One wonders how a farmer in 1837 harvested a crop of wheat yielding 2000 bushels. This represented at the very least 50 acres and probably more. The harvesting implements were as yet the old cradle for cutting and the wooden rake for forming the sheaves. A strong man could cradle two to three acres per day, and a few celebrated cradlers of the pioneer time had records of four acres or even more. Perhaps two and one-half acres would be a rather high average. At that rate a field of 50 acres would supply full work for one man for twenty days. Four men, however, could cut the crop in five days, and that period—or say a week—the farmer might ordinarily count on before the grain became too ripe to handle without waste. Allowing two binders to each cradler, the requisite harvest help would number at least twelve men. During the early years newly arrived American immigrants, who were looking for claims, were utilized for harvest labor, while later the immigrations from Europe supplemented the native supply. But often a scarcity of labor was experienced in given communities. The harvest was the harvest; on it depended the prosperity not alone of the farmer but of the merchant, the doctor, and everybody who had a stake in the community. So it is not surprising that every able-bodied person, male and female, was at times requisitioned to help save the wheat crop.

Wisconsin was settled precisely at the time when new inventions in harvesting machinery began to make their appearance after ages of dependence on implements little more com-
plex than the sickle with which Ruth gleaned in the fields of Boaz. Cyrus McCormick patented his reaper in 1834. The McCormick Reaper Company began to manufacture machines at Chicago in 1846, and by 1850 this and other reapers were generally used in the prairie fields of Wisconsin. George Esterly of Heart Prairie, Walworth County, invented a reaper which became very popular. The Civil War, which absorbed so large a proportion of the labor force, made the use of reapers compulsory even on comparatively small farms.

It is not usual to associate the idea of bonanza farming with Wisconsin. Yet we are given, in the newspapers, a harvesting scene of the year 1860 which suggests the Red River valley wheat industry of ten, twenty, and thirty years later. The DeForest farm in Dane County contained 2200 acres, of which 1000 was in grain. The wheat acreage was 800, bearing a crop in that golden year estimated at 25,000 bushels. In harvesting his wheat Mr. DeForest employed eight reaping machines and sixty men. The reapers were doubtless of the hand-raking variety, requiring two men to operate them. Five binders could keep up with a machine, and if four men were kept steadily at work "shocking up," the sixty hands are accounted for. The self-raking reaper, the Marsh harvester,

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17 "Up to December 31, 1864, Wisconsin furnished 75,000 men for the federal service, and by the end of the war this number had increased to 91,379 men, or one man for every nine of the inhabitants of the state." Thompson, Wheat Growing, 61–62. See Frederick Merk, Economic History of Wisconsin during the Civil War Decade (Madison, Wis., 1916), especially p. 52–56.

16 The McCormick Company maintained agencies in all counties. Their agents reported the conditions affecting sales and collections, number of machines sold, facts about competition, etc. These are still in manuscript in the McCormick Agricultural Library, Chicago. A summary of sales of machines, taken from those sources, has been supplied by Herbert A. Kellar, librarian of the McCormick Library. This shows that the McCormick Company delivered to Wisconsin agents 104 reapers in 1849, 96 in 1850, 60 in 1855, 292 in 1860, and 302 in 1861. Numerous other machines competed with the McCormick, among them the Esterly reaper, the Beloit reaper, the Manny reaper, and the Kirby reaper. Of the last named, about 200 were sold for the harvest of 1860 (see Wisconsin Farmer, xii, 389). In 1861 the Agricultural Society declared that at least 3000 reapers of different makes had been sold in Wisconsin for the harvest of 1860 (Wis. Farmer, xiii, 94).

19 Milwaukee Sentinel. Quoted in Manitowoc County Herald, Aug. 23, 1860.
and especially the self-binder, invented by a Wisconsin man, John F. Appleby, progressively reduced the amount of labor incident to harvesting grain.

Threshing with the flail was not done to any considerable extent in Wisconsin. Some of the early crops were threshed by the old Bible method of driving animals over the grain to tread out the wheat. Some use was made, also, of a little fanning-mill-like thresher mounted on a wagon-bed, the power being supplied by the moving wagon wheels. This machine distributed the straw over the field and dropped the shelled grain in the wagon box. It was not very successful. However, the invention and manufacture of threshing machinery came soon to be a Wisconsin specialty. A small, two-horse tread power machine was built and sold by J. I. Case in Racine beginning in 1849. The next year a sweep power machine began to be manufactured also in Racine. Case improved his thresher, bringing out several different models, and finally the Case machine, driven by a ten-horse sweep power, became the standard wheat thresher of the great wheat era, though other machines, like the Buffalo-Pitts and the old “Vibrator,” similarly driven, were also widely used. The season of threshing, like the harvest, was a time of heavy labor, but it was relieved by being made also a social event. “Changing works” was practised universally, at least among the smaller farmers; the household boarded the threshing crew and other hands, generally furnishing sumptuous meals with chicken, cakes, pies, and puddings for the gala occasion.

The marketing of the crop, while in some respects the most crucial of the processes connected with wheat growing, could usually be attended to with some deliberation, by the farmer aided by his regular help. It was not, in the same sense as

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20 Such a binder was invented by John F. Appleby of Wisconsin. His original “knotter” (see cut) is in the State Historical Museum.

21 Hence the ancient aphorism, quoted by St. Paul: “Muzzle not the ox when he treadeth out the grain.”

22 Such a machine was used at Whitewater in the early forties. Interview with Julius C. Birge.

23 The classic description of a Wisconsin farm threshing scene is found in Hamlin Garland’s A Son of the Middle Border (New York, 1917), 50ff.
harvesting and threshing, an emergency job. Nevertheless, during the early years it was a long, tedious, costly business to market a big crop of wheat. Forty bushels made a load weighing 2400 pounds. With a team of horses this might be hauled, at the rate of twenty to thirty miles per day, over the rough, rutty, dusty or muddy roads. The number of days consumed in marketing a load of wheat depended on the distance from market and the condition of the roads. For the farmers in the more westerly counties it is easy to see that a week or even ten days would be required. Multiply the number of days, whatever it was in a given case, by twenty-five, the number of loads in a crop measuring 1000 bushels, and see what becomes of the wheat farmer’s fall and winter. The money expense, if the teamster had always to put up at the taverns which stood invitingly at distances of four or five miles along the main roads, in many cases would have exceeded the gross returns for a load of wheat. The farmers practised economy by taking some portion of the necessary supplies with them and camping out along the route. They also planned, as far as practicable, to secure return loads either for themselves or for others, which again reduced the cost.

It must have required considerable courage to start off from Whitewater, Lima, Koshkonong, or Plymouth with a load of wheat when the price at Milwaukee was known to be 40, 50 or 60 cents per bushel. In the first ten years of Wisconsin wheat growing the price never exceeded 90 cents, and frequently it was as low as 44 to 50 cents. Such persistent low prices, combined with a succession of bad crops in 1850 and 1853 (the pink-eye years), proved all but fatal to Wisconsin farming. These conditions are reflected in the emigration to California, which reached large proportions after 1849,24 in the universal complaint of “hard times,” the equally universal mortgage

24 Two thousand persons of Wisconsin nativity were found in California in 1860, and this was only a certain proportion of those who were from Wisconsin, most of whom, no doubt, were born in other states. California had 28,659 New Yorkers, and since there were more New Yorkers than native Badgers in Wisconsin in 1850, it is reasonable to assume that several thousand of them went to California.
indebtedness among the farmers, the lack of credit, the extortionate interest rates. They are reflected likewise in the success of railroad financiers in persuading the farmers to mortgage their farms in the hope of securing transportation facilities which would reduce freights and virtually add to the price of their products.25

A new epoch opened with the harvest of 1853, which was the first reasonably good crop since 1849. By that time the Milwaukee and Mississippi Railroad had built west to Rock River valley, so that the crop could be marketed at much less cost than formerly. The crop of 1854 was even better, while the market price now took such a sharp turn upward as to give the farmer once more the coveted ‘dollar a bushel’ for his wheat. The high prices continued for about five years, railroad building meantime progressing in wholly unprecedented fashion. One line was completed to Prairie du Chien (1857), another to La Crosse (1858), and still another to Fond du Lac (1859). The air was full of other projects. During this same period southern Wisconsin experienced its most pronounced expansion of the wheat area. Many of the larger prairies, which men preferring the openings ventured into with some reluctance, were broken up during these years. The thinly wooded valleys of the Driftless Area were cleared and turned to account with surprising rapidity. The sale of the school lands on especially easy terms stimulated the purchase both by settlers and by speculators of those lands.26 Many of them —especially those belonging to the “500,000 acres”—lay outside of the limits of southern Wisconsin, and their sale stimulated the settlement of more northerly wheat lands. The enormous leap upward in production from 4,286,000 bushels in 1849 (which was more than twice the highest product for any previous year) to 9,000,000 in 1855 and 12,000,000 and 14,000,000 respectively for the next two years tells a story of

25 Among the positive effects of the bad years was the agitation for better, more scientific farming.
expansion which is fully borne out by the statistics of population increase in the wheat growing counties.

There followed, in 1858 and 1859, two bad years, the latter marked by an unusually severe drought. Everything dried up. Not only was the grain crop negligible, but grass and hay were deficient; potatoes, roots, all were failures. The winter of 1859-60 was, however, mercifully mild, open, and terminated by an unprecedentedly early spring. There had been practically no snow to relieve the drought, and when farmers began sowing wheat in March it was with but faint hope of a harvest. The sown grain, it is said, lay in the dust-dry soil for a month without sprouting. Then came the rains, steady, continuous, abundant, and the crop was made. It was such a crop as Wisconsin had not seen, even in the palmy days of the early pioneers. Many fields yielded 35, 40, even 45 bushels per acre. Hardly any gave meager returns. The average yield per acre for the entire state was 24.5 bushels, and the total amount which Wisconsin poured into the world’s trade or held over to feed the armies of the Union in the years following was between twenty-seven and thirty million bushels. The price was not up to the mark of previous years, yet neither was it excessively low, standing around 80 cents at Milwaukee. Farmers, by the thousands, paid off their debts, and the state was enabled thereby the better to meet the shock of the Civil War, in which Wisconsin took so honorable a part.

So much must be placed to the credit of the wheat crop of the ‘golden year,’ as 1860 has been called. It seemed almost as if it had been providentially designed with reference to the need in food and financial power, which the people were called to meet. The evil effect of the wonder crop was to reënkindle the gambling spirit in the Wisconsin farmers. They were obliged, of course, to push wheat culture to the limit of their

27The great crop, however, was explained on very simple scientific principles by Mr. J. W. Hoyt, editor of the Wisconsin Farmer. See vol. xiii, p. 34. He said the drought of the previous year had subsoiled “our abused and surface-exhausted land,” making available for the young wheat plants some of the earth salts absolutely necessary to their successful growth, of which continual cropping had robbed the surface soil. These salts had come up into the surface layers under the influence of capilllation and had been held by the dry upper layer.
resources during the continuance of the war. Patriotism demanded that service. But after the war high prices combined with the hope of other bumper crops to maintain and expand the wheat acreage. Then not only rust, smut, and evil harvest weather—the ancient enemies of the wheat crop—but a new adversary, the chinch bug, entered the lists against the farmer, and all together rendered success in wheat culture far more doubtful than before.

The general course of "evolution and devolution" through which the business of wheat growing passed in southern Wisconsin between 1840 and 1880 is illustrated on the local plane from our study of selected towns scattered through the older counties. Our chart for 1850 lists ten towns which were treated statistically in the census schedule of that year. In two of these the average production of wheat per farm for the year 1849 was about 370 bushels, in one other it was 340 bushels, and in three others between 100 and 200 bushels. All of the high averages were in towns having prairie and openings, the low averages in wooded towns or those newly settled. An examination of the plats shows, by individual farms, the process of breaking up the land and raising wheat. It was going on through the census periods 1850, 1860, and 1870 in all of the towns. One Norwegian settler in Pleasant Springs, Dane County, who entered his land in 1844, produced, in 1849, 300; in 1859, 600; in 1869, 2000 bushels, with 30, 75, and 200 acres out of 200 under cultivation at the intervals noted. A crop of 1000 bushels was by 1859 common among the settlers of that town, and many produced more. There were crops of 2000, 1700, 1500 in Bangor, La Crosse County, by 1859, though that settlement was less than ten years old. In Oshkosh Eli Stilson, in 1849, produced 900 bushels. He was then cultivating 80 acres. At the next census he had 280 acres and harvested 2300 bushels; and in 1869, with 1040 acres under cultivation, his wheat crop was 5000 bushels. A case from Mount Pleasant, Racine County, reverses the above. William G. Roberts produced, in 1849, 3500 bushels; in 1859, 1700; and in
1869, 300. Sugar Creek in Walworth, Empire in Fond du Lac, Lodi in Columbia, and Plymouth in Rock County all show generous individual crops. The charts show that in 1859 Pleasant Springs (Dane County) had the highest average per farm, 452 bushels, with Bangor second, 436 bushels, and with Sugar Creek, Primrose, Lodi, and Empire each producing over 300 bushels per farm. Bangor lay in the Driftless Area, but the farms occupied the level floor and adjoining slopes of a fertile valley which was lightly wooded—practically level openings. The other leading towns were all in the glaciated area, with smooth, open lands and prairies. Bangor led all in 1869, her farm average being 642 bushels. Pleasant Springs was second, with 586; while Empire, Lodi, Muscoda, New Glarus, and Primrose each had over 300 bushels to the farm. It may be significant that the last three towns were in the Driftless Area, the farms usually occupying the valley lands. Thus it appears the primacy in wheat culture was already passing from the glacial prairies of the southeast, and the change was completed ten years later. For in 1879 only one town, Bangor, produced 400 bushels per farm, the former second—Pleasant Springs—dropping to 124 and Lodi to 104. On the other hand, Empire in Fond du Lac County had 376; Highland in Iowa, in the Driftless (with a heavy Knox silt loam soil), was producing 250 bushels per farm; Pulaski, adjacent to Highland, 202; and Muscoda, another near neighbor, a bare 200. The prairie towns had dropped to almost negligible figures, but Newton, in the forest of Manitowoc County, was coming to her own with 216, while Eagle had 183 and Castle Rock 187.

It is obvious that, so far as southern Wisconsin was concerned, wheat growing was at its last gasp by 1879. The older counties had already generally abandoned it as the main crop, while in the newer settlements of the southwest, such as the dissected northern portions of Iowa and Grant counties, wheat was departing from the alluvial valley lands first broken up and was making its final stand on the ridges. The ridge
soils were a stiff clayey loam (the Knox silt); they were of pure limestone origin and portions of them had been left with their original covering of small timber until about that date. Then, in order to lengthen out the life of the wheat crop, farmers cleared the ridge lands and for a few years raised fair crops, especially by adopting a rotation in which clover, sometimes treated with gypsum, was an important element.28

A study of the rank of counties in wheat specialization shows that Rock County stood first in 1849, fifth in 1859, and thirty-first in 1869. On the other hand, Green Lake, one of the newer counties bordering on Fox River, was first in 1859, while St. Croix, on the northwestern lobe of the lower magnesian limestone, was the leader in 1869 and 1879. Buffalo County stood first in 1889 and again in 1899. By 1870 Racine, Kenosha, Walworth, and Rock counties, the great wheat counties of the pioneer days, were down near the foot of the list; while St. Croix, Buffalo, and Trempealeau, in that order, headed the roll of counties.29 In the rich virgin lands of northern Wisconsin, which by 1880 were settling up rapidly, wheat continued to be grown for some years. But the change to a different type of farming, in which the wheat crop should be only incidental, was well under way everywhere in the region we described as southern Wisconsin.

No portion of the densely forested area attained distinction in wheat production. It proved impracticable, in the heavy woods, to clear land rapidly. The best crops of wheat could be grown on the newest land, while those lands which had been longest under cultivation were relatively better for other crops. Tillable land was not so plentiful at best as to encourage gambling on a single crop, and from early times the tendency on such farms was to raise, in addition to wheat, a little of everything else. This policy prevented the forest settler

28 The author can recall when ridge land was first broken up on his father's farm, about the year 1877. A German immigrant was employed, by the month, to grub out the young oaks and hickory trees. He could clear about five acres in a summer. The following May or June this would be broken up, four horses supplying the power. The process was continued till the "ridge field" occupied some thirty acres. This later became hay land and pasture.

29 John G. Thompson, *Wheat Growing in Wisconsin*, Table iii, Appendix.
from sharing in the opportunity for making money quickly which the prairie farmer found in raising big fields of wheat. But he had his reward later in a less exhausted soil which enabled him the more readily to take advantage of the new agriculture.

SOURCES

The most important single source for this chapter was John Giffin Thompson, *Wheat Growing in Wisconsin*. It is a capitaly good study of the subject.