The PALIMPSEST

Corn—a major source of Iowa land value.

Iowa Land Values—1803-1967

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The Meaning of Palimpsest

In early times a palimpsest was a parchment or other material from which one or more writings had been erased to give room for later records. But the erasures were not always complete; and so it became the fascinating task of scholars not only to translate the later records but also to reconstruct the original writings by deciphering the dim fragments of letters partly erased and partly covered by subsequent texts.

The history of Iowa may be likened to a palimpsest which holds the record of successive generations. To decipher these records of the past, reconstruct them, and tell the stories which they contain is the task of those who write history.

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WILLIAM G. MURRAY

Illustrations

Color photographs on front and back covers furnished by Pioneer Hi-Bred Corn Co., Iowa State Highway Commission, and the Iowa Development Commission. Graphs and charts used were collected or prepared by Dr. William G. Murray.

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THE PALIMPSEST

EDITED BY WILLIAM J. PETERSEN

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Louisiana Purchase to 1838

In 1803 the United States bought from France the land that is now Iowa in the historic Louisiana Purchase. The price paid—including principal, interest, and private claims—totaled $27.3 million, or an average of 3.6 cents an acre. Using this average price, the United States purchased the 35,-700,000 acres now comprising the State of Iowa for $1.3 million.

The Louisiana Purchase gave the United States sovereignty, or the right to rule the land, not own it. This country recognized the rights of the French and Spanish people living in the area and agreed to make treaties with the Indians, who, it was recognized, actually owned the title. A series of treaties negotiated between 1830 and 1851 extinguished Indian title to the lands in Iowa. The tribes affected included the Sauk and Fox, the Iowa, Winnebago, Sioux, and the Potawatomi. The price paid in Iowa ranged from one cent to 75 cents per acre, and the average for the entire state was about ten cents an acre.

A century later, in 1947, Congress enacted legislation allowing the Indians to sue the United States on any grievance they might have. All of the tribes in Iowa sued, their most important claim being that the Federal Government had not paid them a fair price for their lands when they sold them between 1830 and 1851.

Some of these Indian cases are still in the courts while others have been settled. An example of a settled case involves the Potawatomi tribe which by treaty obtained 5,000,000 acres in western Iowa in 1833 and sold it to the United States in the Treaty of 1846. The Potawatomi were paid 19 cents an acre for their 5,000,000 acres in the Treaty of 1846. After a long drawn-out legal suit over the 1846 valuation, including extensive appraisal evidence and exhibits, the Indian Claims Commission handed down a decision awarding the Potawatomi 75 cents an acre, or almost four times what they originally received for the land.

In the Indian treaties affecting Iowa lands, beginning with 1832, the major objective was to make the land available for settlement. Accordingly, the first task after treaty ratification was the official Government survey. This was the Rectangular Survey. It was based on township boundary and township subdivision surveys which divided the land into townships six miles square, into sections one mile square, and into quarter sections of approximately 160 acres. As a part of the Rectangular Survey, the surveyors who did the field work were required to make notes as they traveled the township and section boundaries, and when they finished a township they usually wrote a summary description of the township covering the quality of the soil, the lay of the land, kinds and amount of timber, minerals if any, water courses and springs, and any other features of interest including any fields and farmsteads.

In addition to the above, the surveyors were required to prepare and submit a township plat showing important township features including timber, streams, ponds, marsh, roads and trails, location of fields and farmsteads, and the like. As a result of these original surveys, starting in the Black Hawk Purchase in 1836 and ending for the most part in northwest Iowa in 1859, a rich heritage of maps and descriptive notes are available for inspection. There are two sets—one in the National Archives in Washington, D.C. and the other in the office of the Secretary of State in Des Moines, Iowa.

When the survey of a township was completed, and the land in the township was ready for sale to settlers and others by the Federal Government, all was ready for the first public land sales in Iowa in 1838.

Public Land Sales, 1838-1860

The major portion of the State of Iowa was sold as public land either at auction or later through private entry during the period 1838-1860. The first public land sales in Iowa were held in the fall of 1838—at Dubuque on November 5 and at Burlington on November 19. A total of 48 full and fractional townships were offered, 23 at Dubuque and 25 at Burlington. In 1839 at Burlington seven more townships were offered for sale. In all, 1,177,000 acres of public land were offered before 1840 and eventually sold.

Only a relatively small portion of the land was sold at auction; most of it was sold later through private entry. By the end of 1840, a total of 509,000 acres or 44 per cent of the original acreage offered in 1838 and 1839 had been sold according to a survey of the sales recorded in the courthouses of the area.

The law called for the auction of the land on the day of the sale. The land went to the highest bidder but at a price no lower than $1.25 an acre. Land that was not sold at the auction was placed on the market two weeks later at private entry. Private entry meant that the land was available to anyone who paid the minimum price of $1.25 an acre or presented a military land warrant in place of money.

One of the features at some of the early land auctions was the claim association, which, by threat or by force if necessary, prevented bidding by outsiders above the $1.25 an acre minimum price for lands on which settlers had made a claim.

The reason for the claim association is easy to see. Many of the public land sales did not occur until several years after settlers had staked out their claims in desirable locations. In many cases the settlers had developed their farms with buildings, fences, and land broken for cultivation. If the settlers had been forced to pay for the value of the land they had improved, they would have been paying twice for the improvements—once when they invested their time, effort, and cash in the improvements and again when they had to bid against outsiders to buy the same land at the public sale.

Actually the situation was created in part by the settlers who were interested in having the public sales delayed because they did not always have the money or could not borrow it at reasonable rates to purchase the land they wanted. Some of the public sales were delayed and some were postponed for a short time. This was true in the Black Hawk Purchase, where settlers had entered after June 1, 1833, before a law had been passed allowing such entry. There were no sales in the Black Hawk Purchase until 1838. In this interval, settlers staked out their claims to the land they wanted to develop into a farm and eventually buy from the Government.

The main objective of the claim association was to assist these settlers in protecting their rights to the lands they had improved. There had been various Federal preemption laws enacted to protect settlers in cases like this but until the General Preemption Act of 1841 such laws had not been fully effective. With the 1841 law in effect, the claim association declined in importance. The important point regarding the claim association and the preemption laws was that the settler needed some protection at the public auction in cases where he had invested his own resources in improving the land he was buying. In short, he did not have title or any legal right to the improvements he had made in the land even though he had made these improvements in good faith expecting to buy the land at the minimum price.

The most valuable land in Iowa through the 1850's were tracts combining timber, dry prairie, water (especially a spring), and nearness to a navigable river. The first settlers in any township naturally had their choice of all the land in the township. What they chose was what they considered the best because the Federal Government placed the same minimum price of $1.25 an acre on all land regardless of the quality. A check on the location of the first settlers in each township shows conclusively that they staked out claims and purchased tracts which had the desired combination of timber, prairie, and water.

Settlers wanted timber on their farm because it was an essential in the period before 1860. Timber provided fuel to keep the settler and his family warm in the winter; it provided building materials for the house and the other service buildings including fences; and it provided protection from winter winds and shade around the farmstead in the summer. Some settlers preferred timber land for their crop land but most of the Iowa settlers preferred the prairie near the timber or what was called oak openings—open spaces among the trees. It did not take the settlers long to find out that crops grew as well or better in the treeless areas than in the timbered areas which had to be cleared not only of trees but of stumps also.

Water was important too because deep wells were out of the question. Both humans and livestock needed access to running water if possible. A flowing stream which provided water power for a gristmill or sawmill was also considered a decided advantage in those early years prior to 1860.

Finally, transportation before 1860 was primarily by water. Settlements in the early years followed the rivers. Most of the cities of Iowa, for example, were located on rivers or streams—not on the open prairie. In 1846 Congress granted lands to the State of Iowa which could be sold and the proceeds used exclusively for improving navigation on the Des Moines River. Location near a navigable river in those days increased the value of the farm.

Thus, the open prairie distant from timber, especially if it was wet and marshy, was avoided by the settlers prior to 1860. Today's choice lands in northern Henry County, western Scott County, and most of Grundy County, which were far from timber and frequently wet, went begging at $1.25 an acre. There were few buyers when these lands were placed on the market in the 1838-1850 period. Rough lands, combining timber and prairie such as those in southern Henry County and along the Mississippi River in Scott County, were snapped up by the settlers almost as soon as they came on the market.

The first settlers, as can be seen now, took what they considered the best land, and actually it was the best land for them at the time. But they got a poor bargain in today's land market because the wet lands and prairies, far from timber in the early years, are now the best lands. By a strange quirk of fate those who blazed the first trails and developed the first farms in Iowa found, or their descendants found, that their timber-prairie farms near the rivers were often less valuable than the farms developed by those who came much later and took up the land they had avoided. To be sure, the wet lands required considerable drainage expense but even so these wet lands were eventually a better bargain.

Another feature of the early land market was the difference between the value of raw, virgin land on the one hand and the value of land in an improved farm on the other. The labor or cost of making or developing a farm amounted to far more than the cost of the raw land. Early guidebooks as well as more scholarly studies, which came later, pointed up this fact in their description of the cost of farm making. In his *A New Guide for Emigrants to the West* J. M. Peck shows the difference in the value of an improved farm and raw or virgin land in 1836:

The following table will exhibit the cost of 320 acres of land, at Congress price, and preparing 160 acres for cultivation of prairie land:

Cost of 320 acres at $1.25 per acre,	$400
Breaking up 160 acres prairie, $2 per acre,	320
Fencing it into four fields with a Kentucky fence of eight rails high, with cross stakes,	175
Add cost of cabins, corncribs, stable, &c.	250
Making the cost of the farm,	$1145

To those who said that the settler could develop a farm without paying out any money, it was only necessary to refer to the amount of labor required in erecting buildings and fences, and in breaking the tough prairie sod so crops could be seeded. All of this time and effort had a value which could be measured by what the settler would have received working for wages, or by what he would have to pay for food and other supplies to support himself and his family while he was engaged in making a farm. In light of this situation it is not surprising that farms with buildings and land broken for cultivation were often quoted at from $10 to $15 an acre while raw land was still available at from $1.25 to $2.50 an acre prior to 1860.

Another important element in the early land market was the difference between the cash and the time price for land. The price at the public land auctions or private entry was cash on the "barrel head," usually $1.25 an acre or a military land warrant which could often be bought for less than $1.25 an acre. If you did not have any money or not enough to pay for the land on which you had settled, there was still the opportunity to buy on time. With the maximum legal limit on interest varying between seven and ten per cent at different times, borrowing to buy would have been an easy alternative. The only difficulty was that few if any loaned at the legal rate. It was too low. Instead, those who had money to lend, chose to lend it at 40 per cent interest through a perfectly legal procedure in which they purchased the land themselves for $1.25 an acre and sold it to the settler for $1.75 an acre with a year's time in which to pay. The margin of 50 cents an acre figured out at 40 per cent on the investment of $1.25 an acre. In short, there was a definite two price market for Iowa land in the early years—a cash price of $1.25 an acre and a time price of $1.75 an acre for the same land if paid for in a year's time.

The economics of the frontier money market was simple. Those who had money were in a strong position because there was more money wanted on the frontier than there was money to go around at any rate less than 40 per cent for the kind of loans the settlers wanted. The money-lender land-agent of the Iowa frontier found an easy way to get around the legal maximum interest rate in order to get the 40 per cent which the supply and demand for money allowed.

The sale and disposal of Iowa's 35,700,000 acres by the Federal Government included not only outright sales for cash but the extensive use of military land warrants, many of which became available after the Mexican War. Under the Act of 1847, large quantities of the warrants were authorized, and they were made assignable (transferable) soon after. In this situation the warrants were as good as money in the purchase of land. One reason for the popularity of the military land warrants was that they could usually be bought for less than $1.25 an acre in the market which existed. There was an extensive market for the warrants because many of those who received them for military service wanted cash rather than land.

Quotations on land warrants varied. They were sold at from 75 to 80 cents an acre in 1847-1848, as low as 68 cents an acre in 1849. They gradually increased to $1.10 to $1.20 an acre in the years 1853-1856 but dropped down to 70 to 90 cents an acre in 1857-1860. A circular advertisement which was issued in the early 1850's by Le Grand Byington, a money-lender land-agent located in Iowa City, offered to sell land warrants in Iowa City at $135 cash for 160 acres and at $200 on one year's time. This gave the cash buyer a price of 84 cents an acre and the buyer on a year's time a price of $1.25 an acre.

More land in Iowa was sold for military land warrants than for cash by the United States Government. This is indicated in R. L. Lokken's *Iowa—Public Land Disposal,* as shown below:

Disposal of Iowa Lands by the Federal Government

Sale by use of military land warrants		14,100,000 acres
Sale for cash		11,900,000
Grants by Federal Government		
To railroads	4,400,000	
To education	2,100,000	
Internal improvements	2,300,000	8,800,000
Homesteads—Law of 1862		900,000
Grand total in acres		35,700,000

Strictly speaking, the land warrant sales were not sales but grants for military service. Most buyers, however, who used these warrants obtained them in the market for a price, simply using them in place of cash because it cost them less to buy this way. Consequently, viewed from the standpoint of the land buyer these land warrant transactions were sales similar in most respects to cash sales.

Railroad grants were an entirely different type of grant from the military land warrants. The Federal Government granted the land first to the State of Iowa and the state in turn granted it to the railroad as an incentive for the construction of railroad lines within the boundaries of Iowa. The first major grants by the Federal Government to Iowa occurred in 1856 for four proposed railroads. These roads eventually became the Burlington, Rock Island, Northwestern, and Illinois Central. The acreage involved in the grants to the railroads was estimated at 3,500,000 acres. The State Legislature accepted the grants and the unsold public lands near the proposed railroad lines were taken off the market at the various land offices.

The railroad grants were alternate sections for six miles on each side of the proposed right-of-way. Since these first major grants did not come until 1856 there were many areas where the alternate sections were already in private hands. Where this happened the railroads were allowed to take "in lieu of" lands—that is they could take other available lands in place of those already taken. Another provision raised the price of all public lands within the six mile area on each side of the railroad to $2.50 an acre; this applied when the unsold lands were again placed on the market after the railroads had taken their alternate sections.

Settlers and others who wanted to buy the lands granted to the railroads had to pay what the railroads asked and the railroads were able to put their own price on the land they obtained under such grants.

Lands granted to the state for education, including section 16 in each township, were also different from the land warrants. In most cases the land for education went directly to the state and the state acting under its own policy set the price, time, and other conditions under which these lands were sold.

Public lands in Iowa sold at a rapid rate in the middle fifties. Around 28 per cent of the state had been disposed of by the Federal Government between 1838 and the middle of 1853. In the next three years to June 30, 1856 an estimated 40 per cent of the state was sold for cash and military land warrants. Add to this the railroad grants of 1856 and 1857, and the total disposed of by the Government by 1858 was near 80 per cent, with the remaining 20 per cent located mainly in the northern and northwest portions of the state.

Development And Depression
1861-1900

During the 40 years from 1860 to 1900, farm values edged up slowly with the only major upsurge coming in the 1890's. During this long period crop and livestock prices remained low; in fact depressed conditions prevailed in many of the 40 years and farm mortgage foreclosures were a frequent occurrence.

The Homestead Act of 1862 was of little importance in Iowa except in the northwest part of the state where there were several million acres of public lands available for sale at $1.25 an acre and also available for homesteading. The total acreage homesteaded in Iowa was slightly more than 900,000—which was only 2.5 per cent of the state's area. Actually there were more acres on which homesteads were started but the law allowed the homesteader to take full title to a quarter section earlier than the required five years of continuous residence if he chose to pay $1.25 an acre in cash. This was done in numerous cases.

By the late 1860's anyone coming into Iowa to farm had to buy or rent from someone other than the Federal Government which had owned practically all of the state in 1833. In the 35-year period following 1833 the Federal Government had surveyed the state, had sold it either for cash or military land warrants, or had given it away in railroad, education, and internal improvement grants.

Much of Iowa was still undeveloped in 1860 even though it was in private hands. Only 28 per cent of the state's area was in farms in 1860 according to the Federal Census for that year. The percentage of land in farms and the value per acre of this land in farms for census periods, 1860 - 1900, is as follows:

Census Year	Per Cent of Land in Farms	Value Per Acre Land in Farms
1860	28%	$12
1870	43	20
1880	69	23
1890	85	28
1900	96	43

In 1860 a large area of Iowa was in the hands of investors or speculators, whichever you choose to call them. They had bought the land from the Federal Government and were holding it to sell to settlers at an advance in price. Although many did sell at an advance in the years that followed, there were others who sold at no gain or at a loss because of property taxes, interest charges, and a low demand for the land.

Usually, those who held this raw, virgin land did not get the price indicated by the Census value for land in farms. The raw land owned by the investor-speculator or the railroad was unimproved compared to the land in farms which had buildings and fences, with land broken for cultivation. A better indication of what these non-farmers obtained in selling their land is available in the following prices recorded for all land sales, improved and unimproved, in Story County during the 1860's and 1870's:

Year	Price Per Acre	Year	Price Per Acre
1860	$5	1870	$10
1861	5	1871	11
1862	5	1872	12
1863	5	1873	12
1864	6	1874	12
1865	7	1875	12
1866	6	1876	15
1867	7	1877	15
1868	8	1878	15
1869	10	1879	14

The value of land in farms only for Story County was $9 an acre in 1860, $25 an acre in 1870, and $21 an acre in 1880. In 1860 and 1870, it will be noted, land in farms was valued far above the price at which farms and raw land were selling on the average. By 1890 the two values—one for all land and the other for farms—were fairly close and continued close in the years that followed. This is what would be expected because most of the raw land had been converted into farms by 1890.

A substantial part of the farm value increase noted in the Federal Census values between 1860 and 1890—an increase of $16 an acre—represented farm improvements. The farm of 1860 was a different farm by 1890. In the 30 years that had elapsed some of the first temporary houses and buildings were replaced with better buildings. On farms that were developed during this period, the buildings and fences were better than those built on the 1860 farm. Then, too, there was more land in cultivation including wet areas that had been drained. The increase in farm value based on improvements was the result of hard, intelligent work and investment rather than a pure capital gain caused by forces outside the farm such as inflation.

How much profit was made by the investor-speculator who bought Iowa land in the 1840's and 1850's and sold it to settlers in the 1860 to 1890 period? This is a hard question to answer in a summary statement because it made a difference how long it was held. Robert P. Swierenga in a detailed study of land transactions by large operators—those who bought and sold more than a thousand acres—concluded in his doctoral dissertation that those who bought and sold in the 1850's and 1860's did very well with net rates of return averaging 72 per cent in the 1850's and 31 per cent in the 1860's. Many of these sales, which were taken from records in nine counties in central Iowa, included the typical time purchase by the settler at $1.75 an acre with a 40 per cent interest return to the investor-speculator. In the 1870's and 1880's the rate of return was down drastically to six per cent and below. These were depressed years as will be seen in studying the prices received by farmers for their corn and hogs.

Low farm product prices and farm mortgage foreclosures during the 1860-1900 period provide hard cold evidence of the relatively tough times experienced by our forefathers and their families who farmed in those years. The record of product prices shown along with farm mortgage foreclosures, in one of the accompanying charts, bears out the statement that conditions were generally depressed during the years from 1860 to 1900. Not only did product prices fluctuate at a low level but every time they went into a major decline the number of farm mortgage foreclosures increased.

Corn and hog prices indicate the depressed conditions which prevailed in many of the years. Corn sold at an average of only 17 cents a bushel in 1861 but reached a high of 70 cents in 1864. In the 1870's corn hit a high of 50 cents in 1874 and a low of 22 cents in 1877 and 1879. In the next 20 years, 1880 to 1900, it reached a high of 56 cents in 1882 and a low of 16 cents in 1897. The average for the 40 years was 33 cents but in the first 20 years the average was 37 cents and in the last only 30 cents a bushel.

Hog prices in these same years, 1860-1900, were also on a relatively low level. The highest price paid for the whole period was $7.75 a hundred in 1869 and the lowest was $2.82 in 1878. Again the $4.92 average for the first 20 years was higher than it was for the next 20 years which was $4.21. The 40-year average was $4.56 a hundred pounds.

In summary, the period 1860-1900 was as a whole one of farm development under adverse conditions which were caused by depressed prices for farm products. While only 28 per cent of the state was in developed farms in 1860, the percentage had climbed to 96 by 1900. Farm values did rise but a large part of the increase must be attributed to farm improvements — to better buildings and more crop land on the farms existing in 1860, and to better improvements and more crop land on the farms developed after 1860.

Other events in the period were the homesteading of 900,000 acres mainly in northwest Iowa, the purchase of lands from investor-speculators who had bought these lands from the Federal Government prior to 1860. The rate of return or profit on these transactions was large during the 1850's and 1860's but much lower in the years that followed, years in which foreclosures were heavy when the prices of corn and hogs dropped, as they did frequently in the period.

Prosperity And Land Boom
1901 - 1920

Rising corn prices, beginning in the early 1900's, sent the price of farm land and buildings on an upward path. The $43 level of 1900 was the highest experienced to that date. Almost each year in the 1900-1914 period brought a new all-time high record. The farmer who bought a quarter section for $7,000 in 1900 saw the value of his farm rise almost steadily until it reached a value of $20,000 in 1914. This was a rise of $81 an acre, from $43 to $124, in a 14-year period. Values had risen an average of almost $6 an acre a year, with the farm of 1914 worth almost three times its value in 1900.

This was prosperity. It is important to remember that the farmer whose farm had almost tripled in value since 1900 was also making good money from his farm in those same years, much more than he ever had made before. Corn in 1900 was selling around 30 cents a bushel while 14 years later it was selling at 60 cents or double the price of 1900. It is no wonder that some farmers and also some town and city people were beginning to look at farm ownership as an easy way to get rich quick.

Values continued to rise during the 1914-1918

World War I years. The farmer with the $20,000 farm in 1914 saw its value rise to $30,700 by March 1, 1919, a rise of over $2,000 a year. Corn prices during this same period climbed to $1.30 a bushel which was more than double the 1914 level. For agriculture this was prosperity piled on top of prosperity. It was hard to believe but the current prices at which farms were selling and the bulging deposit account in the bank were real.

The farm land boom came in 1919. Events of the years 1900-1918 had set the stage for this speculative splurge. Prices of both farm products and of farms had risen so many years without any serious decline that practically everyone believed there was no way for farm values to go but up. And up they went. There was a frenzied effort by farmers, businessmen, doctors, lawyers, bankers, and anyone who could get his hands on enough money to make the down payment on a farm purchase. If you had a farm you either sold it and bought a larger one, or you mortgaged the farm you had to buy another one. There were some, of course, who did not buy and even some who sold out and bought government bonds but they were few indeed.

How can you be sure it was a land boom? One of the best definitions of a land boom was given by Dr. L. J. Norton of the University of Illinois in an article written for the September 1943 issue of the *Country Gentleman:*

. . . A land boom is a period of relatively high and rapidly advancing land prices when, in many cases, purchases are not made with the expectation of holding the land as a home or as an investment but with the idea of reselling it at a higher price. It is a time when down payments become smaller and mortgages larger in proportion.

Land market activity in Iowa in 1919 met every land boom test without question.

When farm values continued to go up during the boom, some farm owners sold and took their profit in the form of a second mortgage owed them by the new owner. But as values continued to go up the itch to make more money the easy way resulted in many of these sellers going back into the market to buy a larger farm using the second mortgage they held and bank credit, which was easy to get, to finance the transaction.

The end of the boom came in the spring of 1920. In one year, from March 1919 to March 1920, farm values were up from $192 to $255 an acre, with many recorded sales of $400 to $500 an acre. In this short period of only one year values had risen $63 an acre which was almost as large an increase as in the five preceding years. The farmer with the $30,700 quarter section in March 1919 had a $41,000 farm in March 1920 and if he were able to resist the temptation to mortgage it to buy another farm, he was in an excellent financial condition in 1920.

Some idea of the land boom mania can be seen by checking the deed books at the county courthouses for 1919 and 1920. Since many of the farm sales during the year resulted in a final settlement the following March 1, the customary beginning of the farm year, the land boom is written large in the deed entries for March 1, 1920. Here, for all to read, is the tragic record of the speculation in farms which caused such acute financial distress.

The record of farm deeds and mortgages in Story County, which is located near the center of the state, provides the raw data — acres, sale prices, and mortgages — for 516 farm sales in this one year. This reflects the height of the boom. In 1919 there were 247 farm sales and in 1921 only 70 — nothing like the 1919-1920 boom had ever happened before nor has it happened in the 47 years following 1920.

One way to make the land boom real is to trace the steps in an individual sale. The farmer in this case, call him Farmer A, had a 311 acre farm in 1919 on which he owed a mortgage debt of only $11,000. Up to this time he had resisted all temptations to buy during the boom. He had seen the farm next to his sell four times between 1909 and 1917 — in 1909 at $100 an acre and in 1917 at $190 an acre. Finally at the top of the boom Farmer A got the fever and bought this neighboring farm of 240 acres at $396 an acre for a total of $95,000 according to the courthouse records of March 1, 1920.

To make the purchase, Farmer A borrowed $34,000 in cash by increasing the mortgage on his home farm from $11,000 to $45,000. This $34,000 plus $16,000 of additional cash from deposits and bank loans on livestock and equipment made a total of $50,000 which was paid on the $95,000 purchase, leaving only $45,000 to be financed by mortgages. Compared to most of the land boom sales this one was conservative with more than 50 per cent of the amount paid in cash.

Farmer A's mortgage debt in 1920 after buying the new farm was not heavy in relation to the value of the farm. He had a mortgage of $45,000 on each farm for a total of $90,000 of debt on 551 acres or an average of $163 an acre. With land valued at around $400 an acre this meant a debt which was considerably less than one-half of the land value.

To understand why Farmer A and countless others bought during the boom it is necessary to note the current thinking as reflected in the statements made at the time. A leading banker in Iowa gave a talk to the Farm Mortgage Bankers Association in September 1919. His address, which was entitled, "The Future Valuations of Farm Lands in the United States," was printed and given wide distribution. He said:

> I believe from personal experience farming Iowa land, from observation, from contact with farmers all over the country, from recent investigation with this address on

my mind, and from a lifelong study of farming and banking as correlated subjects, that the present land prices are warranted and that we shall see no appreciable decline for many years to come.

This was the kind of fuel which fed the land boom fire.

A cross-section of local thinking during the land boom was provided by a questionnaire put out by the *Traer Star-Clipper*, a weekly newspaper published in northern Tama County. Here are some of the answers received as a result of this survey in the summer of 1919:

From a young farmer: "Do we think land will advance as much in the next six months as it did in the last? Nobody knows. But my opinion is that Tama County land will never be as cheap as it was six months ago, and I look for the best to reach $700 if not more."

From a real estate broker: "We are not going to see farm products any cheaper for the next two years at least. Tama County land has advanced at least around $50 per acre in the last six months, but it never will be any cheaper and within the next ten years no farm in Tama County can be bought for less than $500 to $800 per acre."

From a banker: "It (Tama County land) will never be worth any less and the tendency will be for higher prices from now on, as land will be the safest investment in the world."

From a manufacturer of farm equipment: "There never was a more glorious opportunity in the history of the world for the Corn Belt farmer than there is today, and I think that any man is wise who has $8,000 or $10,000, if he can get terms or borrow the money from his friends, to buy at present prices. In my opinion he cannot lose."

These statements are typical of most of those that were received and printed in July and August of 1919.

However, there were two replies received which took a more pessimistic position. Here are excerpts from such comments:

From a banker: "The farmer, up to this time, has had the best of it, and now the real estate speculator is making the most of it; the latter, with the present price of products, has a very good argument. . . . For my part, I cannot believe it will be for more than the period of another favorable crop year, or two at the most, and thereafter the prices will be downward. . . . I believe it behooves us all to go cautiously, and instead of contracting heavy future obligations we should be utilizing these high prices to free ourselves from debt."

From a businessman: "Having witnessed the value of this northern Tama County land advance from $10 per acre to the present fabulous prices, this seems to be the first instance where we have experienced what appears to me to be an unhealthy and artificial boom in land values."

As a young high school student working on a north Tama County farm during the summer of 1919, the author remembers well the general reaction to these two minority statements when they appeared in print. It could be summed up as "These individuals must be suffering from ulcers."

Another statement from the minority came from a young farm economist at Iowa State College at Ames, E. G. Nourse who went on to a distinguished career at the Brookings Institution and chairmanship of the first Council of Economic Advisors to the president. Dr. Nourse, in an article in the June 20, 1919, issue of *Wallace's Farmer,* said:

> Some people say to me: "Why, Iowa land is going to $500 an acre." Some say $1,000! The first figure is quite certain; the second possible. But that is no excuse for paying such prices now if the earning power . . . on which to base such a valuation is not here, and here to stay. . . . Every boom has a stampede of buyers just at its climax, before recession begins. And the last buyer is the one who gets stung. The land boom should have stopped the day the armistice was signed. But the papers are full of it today; half the people you meet are talking of it; in some sections merchants, bankers, professional men, almost everybody, are neglecting their own proper business to go running around speculating in farm land. It's nice for the real estate agents, but as for the farmers, a look at the future is not reassuring. . . .

This was published in June of 1919 before the land boom reached its climax in the fall and winter of 1919-1920.

Two Depressions Between 1921 And 1940

There were two depressions between 1921 and 1940 — a junior mortgage depression during the years 1921-1930 and a senior or first mortgage depression during the years 1931-1940. To understand the nature of these two depressions it will be helpful to follow through the financial history of Farmer A who bought the 240 acre farm for $95,000 in 1920.

The first blow which came in 1921 was the drop in prices of farm products. Corn which had been averaging over $1 a bushel and actually selling for $2 a bushel in the summer of 1919 plunged to 41 cents in 1921. The land boom was definitely over.

The second blow was the interest payment on the mortgage debt which hit like a "ton of brick" in 1921. In the actual case of Farmer A with a $90,000 mortgage debt, the required interest payment of $5,000 was more than the value of all the corn produced on both of his farms that year. Some farm owners borrowed money from banks, relatives, and any other sources available in order to meet their required payments, hoping that next year would see corn above $1 a bushel. But the hoped-for did not happen, the average corn price for 1921-1925 was only 63 cents a bushel.

Foreclosures and bank failures began to occur in the early 1920's. Those buyers who had made only a small down payment and owed a large debt were the first to lose their farms, usually to the holder of a junior mortgage, that is a second or third mortgage. In the case of Farmer A, who had paid over half the purchase price in cash, the foreclosures did not occur until 1927 and 1928 when the farmer lost both of his farms. Up to this time our farmer had hopes that conditions might improve, but they did not. In the meantime he had borrowed all he could to stave off foreclosure only to give in finally when he had exhausted his borrowing ability and could meet neither his property taxes nor the interest on his debts. Farmer A was typical of a particularly unfortunate group of land boom victims who had invested a large amount of their own resources only to see them evaporate with the continued low level of corn-hog prices after 1920.

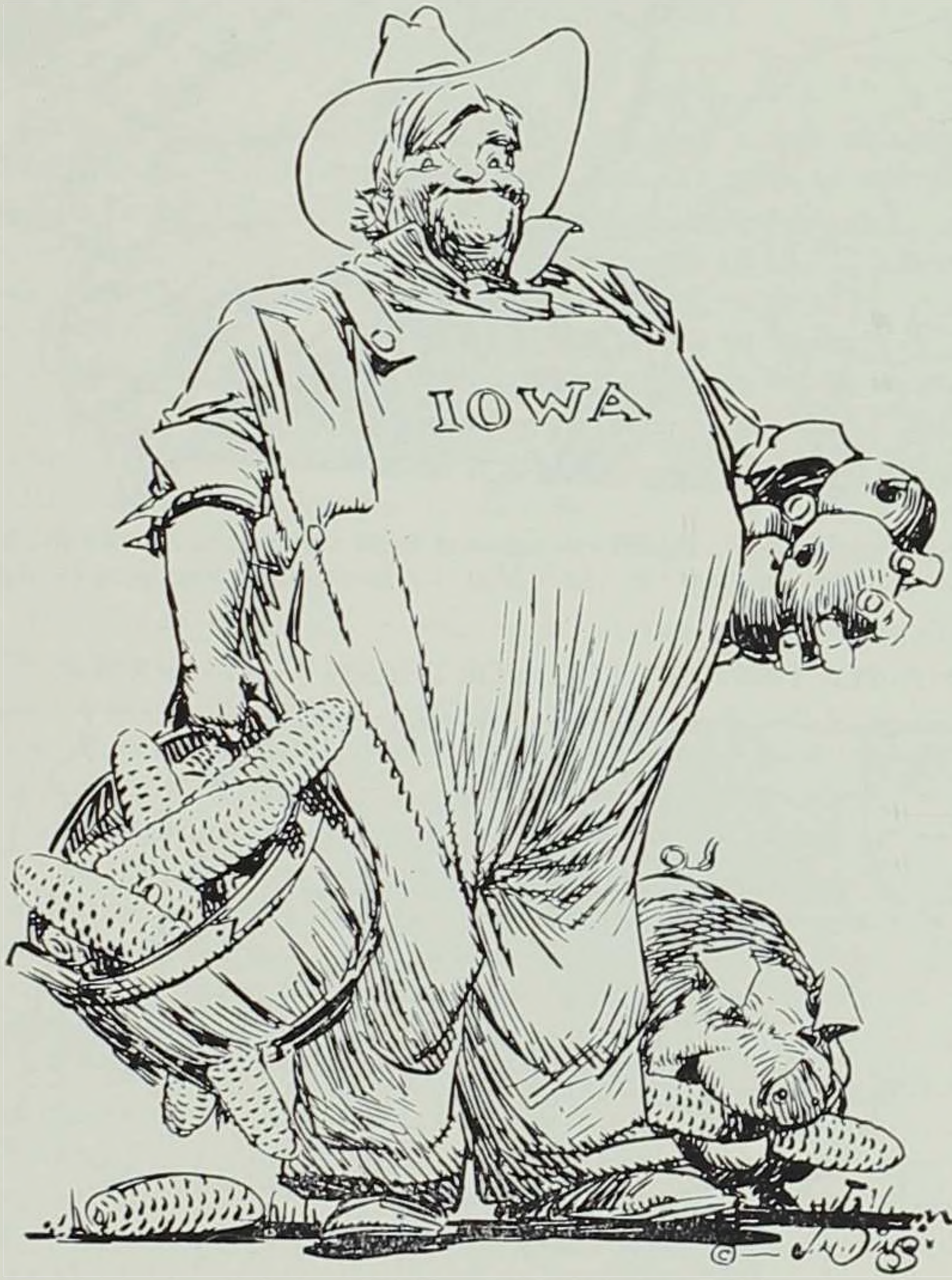
The foreclosures of the 1920's were largely the foreclosure of junior mortgages, in most cases second mortgages but in some cases, even third and fourth mortgages. When the farm owners were unable to pay the interest, they usually stopped paying all obligations including property taxes. In a situation like this the junior mortgage holder had to step in, pay up the property taxes and the interest on the first mortgage, and foreclose his mortgage to obtain title, otherwise the first mortgage holder could do this and cut the junior mortgage holder out entirely. In cases where the value of the farm had declined below the amount of the first mortgage, there was no point in the junior mortgage holder doing anything because he had no equity, but during the 1920's the farm in most cases was worth more than the first mortgage so the junior mortgage holder almost always stepped in, foreclosed, and took title.

In our example of Farmer A one of the second mortgages was for $16,000 on 160 acres representing part of the profit made by the seller of the farm in 1920. At the time of the foreclosure in 1928 the amount of back interest and penalties due on the $16,000 mortgage brought the total up to $19,200. At the foreclosure sale the farm was bid in by the second mortgage holder for $12,000 subject to an existing first mortgage of $16,000 or $100 an acre. The sale left a deficiency of $7,200 which the second mortgage holder used to have a receiver appointed so that he was entitled to rent from the farm during the year of redemption. About this time the second mortgage holder dropped out of the picture giving up all his rights to the farm to a local bank which obtained title to it. The bank sold the farm to a farmer, who will be designated as Farmer B, for $27,000 or $170 an acre. Farmer B paid $11,200 cash and took on a mortgage debt of $16,000.

Farm values during the junior mortgage depression declined steadily. They started at $255 an acre at the top of the boom in 1920. In 1921 they were down only to $235 but this was a nominal figure because there were few farms being bought, no one was interested in buying. By 1930 the average value per acre had dropped to $135.

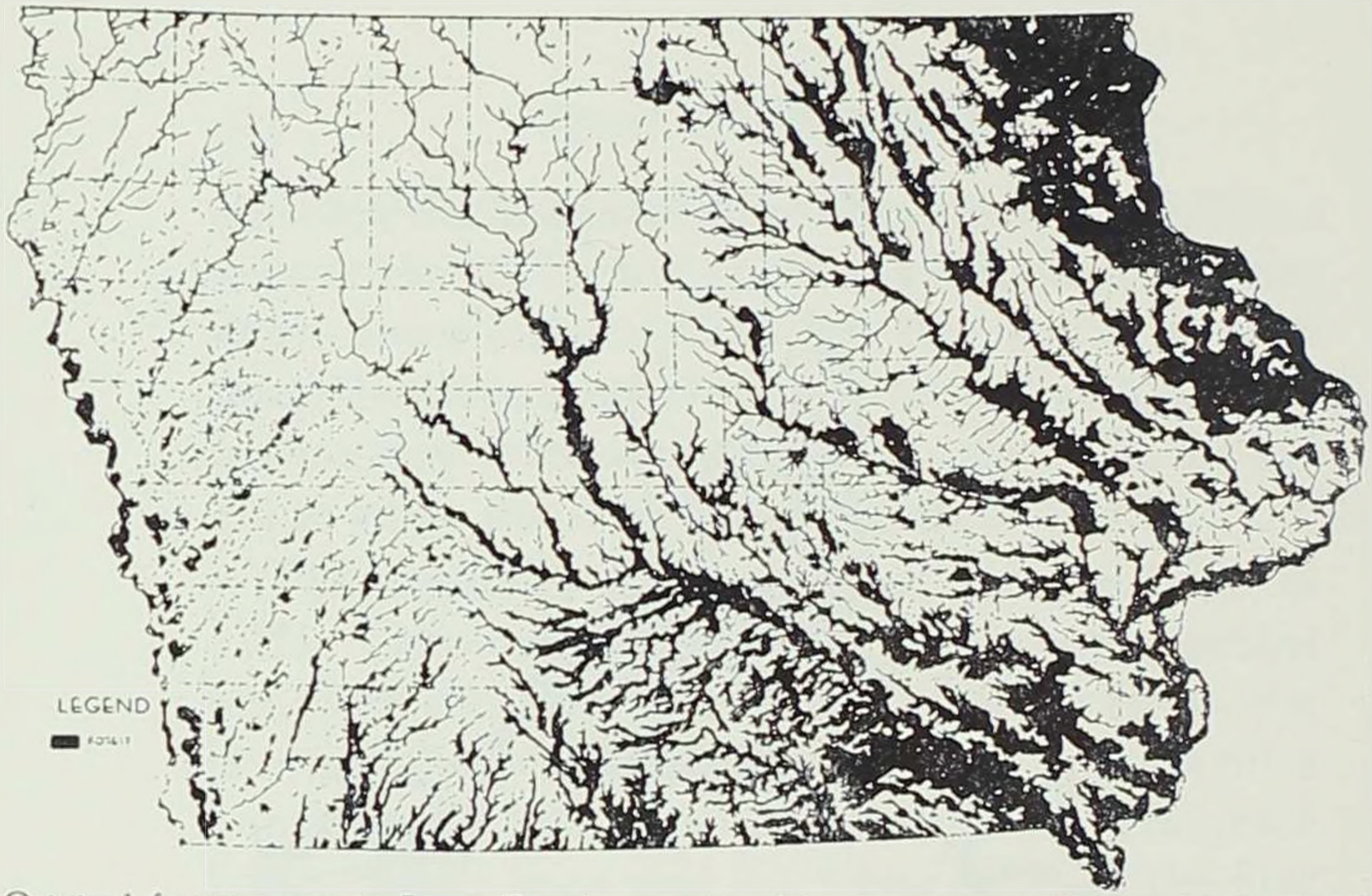
The senior or first mortgage depression hit in 1931. Corn prices were down to 43 cents a bushel and they dropped to 23 cents in 1932. Hogs, the proverbial mortgage lifter, declined from $8.80 a hundred in 1930 to $3.20 in 1932. A low price for corn and hogs was the basic cause of the first mortgage depression which saw farm owners having trouble paying their property taxes and the interest on their first mortgages. Those owners who had only a first mortgage against their land during the 1921-1930 period had been able to get by and in some cases make some progress financially. But the decline in corn and hog prices, which came in 1931 and 1932, made it virtually impossible to do much more than pay property taxes and current operating expenses with nothing left to pay the interest on the first mortgage.

The property tax burden was particularly heavy in the depression years and was one of the important causes of financial distress. Here are average figures for Iowa which show the slow adjustment of property taxes to changes in product prices:



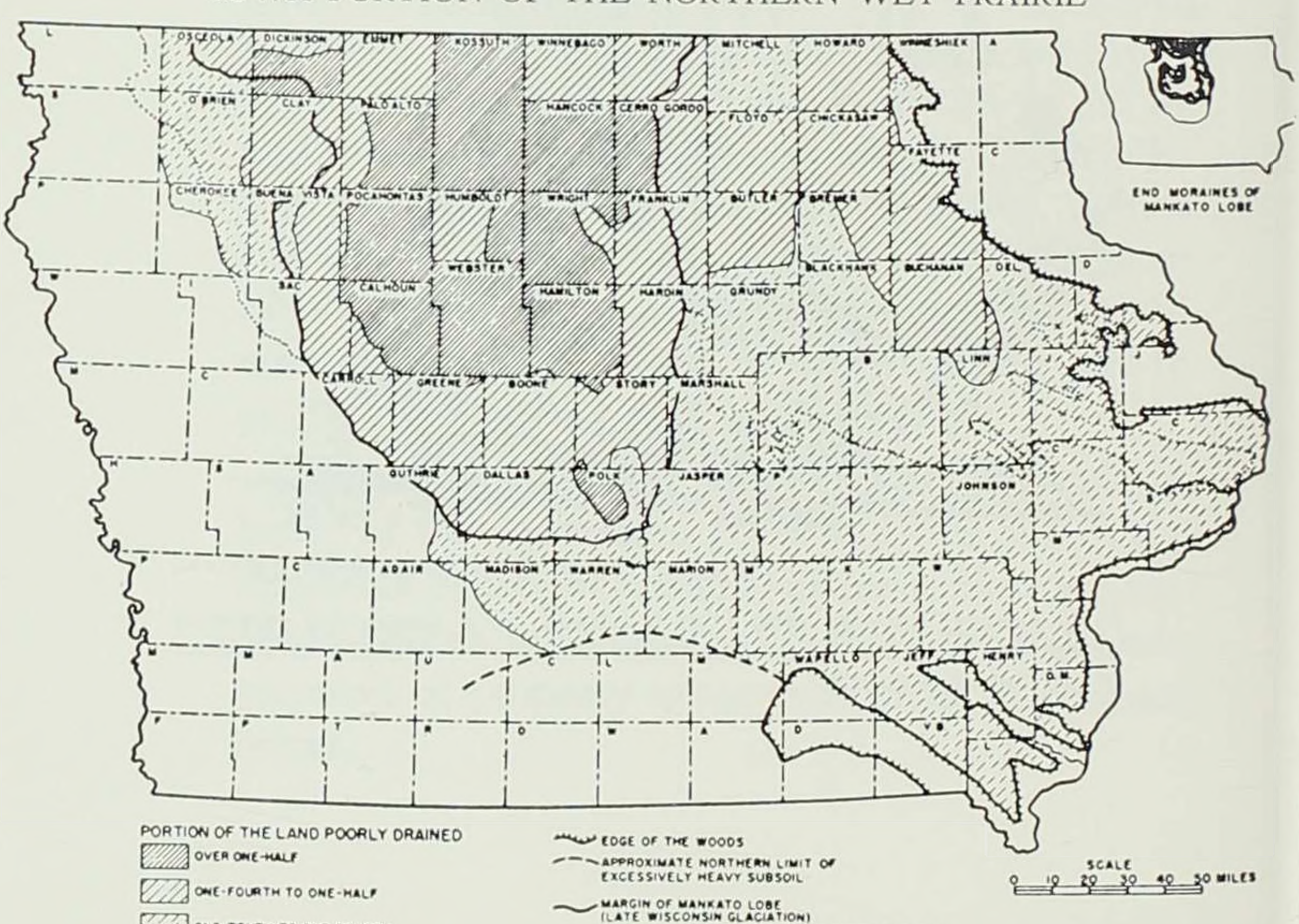
—— FROM IOWA AND PROUD OF IT ——

Iowa farmers have in their land the basis for a sound and enduring prosperity provided land speculation and severe declines in product prices can be prevented.



Original forest cover in Iowa. Based on original land surveys in Iowa which started in 1836 and were completed in 1859. Map by Iowa State Planning Board.

IOWA PORTION OF THE NORTHERN WET PRAIRIE



From a map by Leslie Hewes

Circular (No. 4)

IOWA GENERAL LAND AGENCY:

by LE GRAND BYINGTON

AT IOWA CITY, IOWA.

SIR: - The assignability of the Bounty Land Warrants issued under the act of 1850, has rendered the forms and instructions which accompanied my former circulars unnecessary, and induced me to modify the propositions therein submitted. I have also increased my facilities, with a view to more extensive operations. I will now receive these warrants, (assigned in blank) at my residence in Iowa City, Iowa, and, as directed by the sender, either-

I. Locate them upon the choicest land in the state (when the warrant holder desires the land for his own use, or for speculation) for the following fees in advance: for 40 acres, $5; 80 acres, $7; 160 acres, $10; paying thereout all land office and other charges of selection and location; or-

II. Purchase them at 15 per cent. above their current price in the city New York; or-

III. Sell them to actual settlers, for cash or on time, for a commission of ten per cent. upon the amount realized, besides conveyancing fees; or-

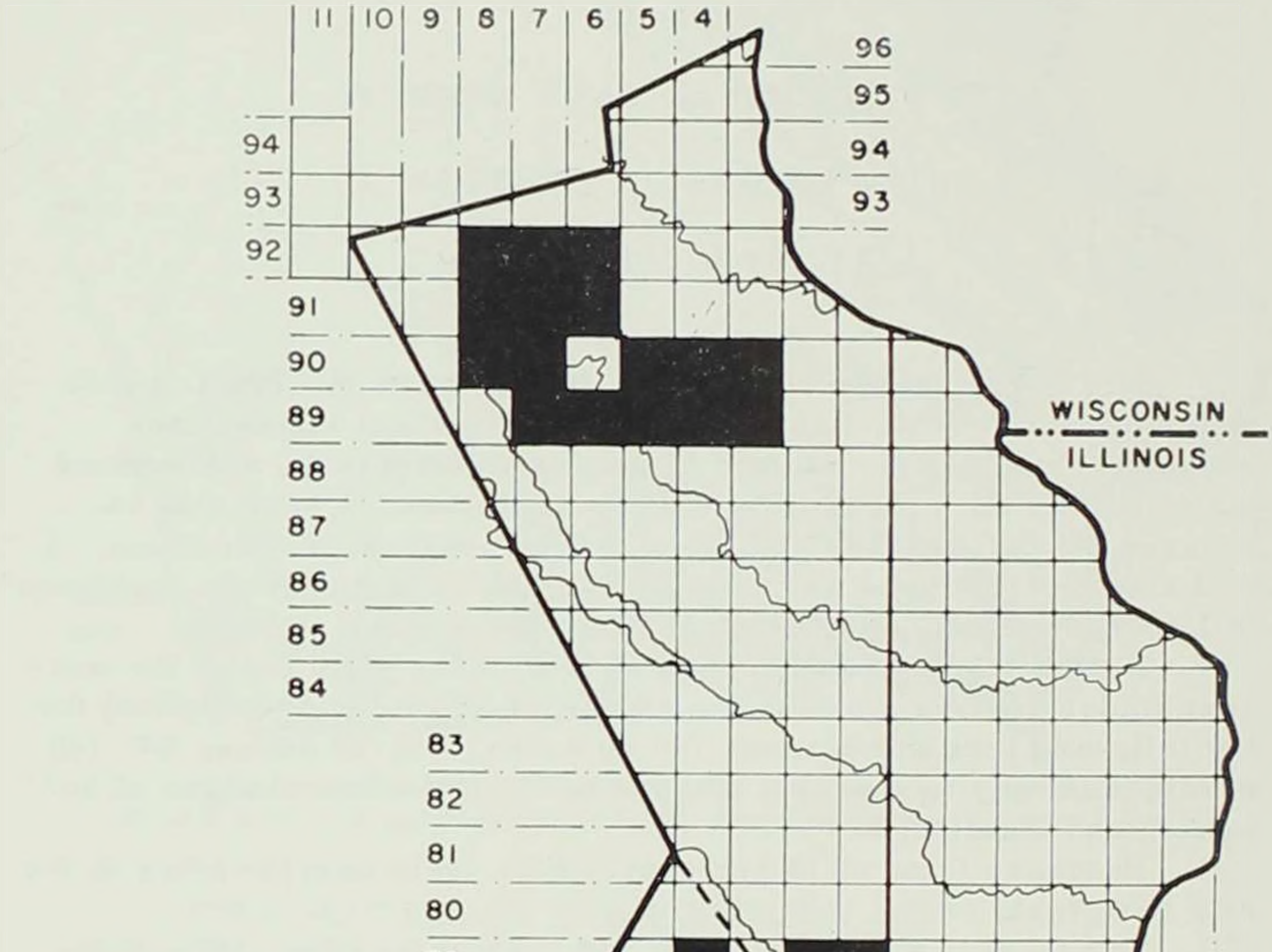
IV. Locate and sell the land, or sell the warrant in the first instance, to the very best advantage for a moiety of the net profits, and, on time sales, allow the sender, in addition, interest upon the cost of his warrants at the rate of 6 per cent. per annum, from the date of sale to the time his money is remitted.

Where warrants are sent to me regularly, by Eastern Agencies, I report sales and make settlements monthly, and on all time sales, guarantee the payment of the money to the sender, upon the expiration of the time given. All warrants, or packages of warrants, should be accompanied by specific directions as to the manner of disposal; and, if sent under the 4th of the above propositions, by a statement of the exact cost of each warrant.

I attach for your information, a schedule of the present selling prices of the warrants at Iowa City; remarking, however, that prices for the larger denomination of warrants, cannot, in my judgment, be maintained at these figures, for any great length of time.

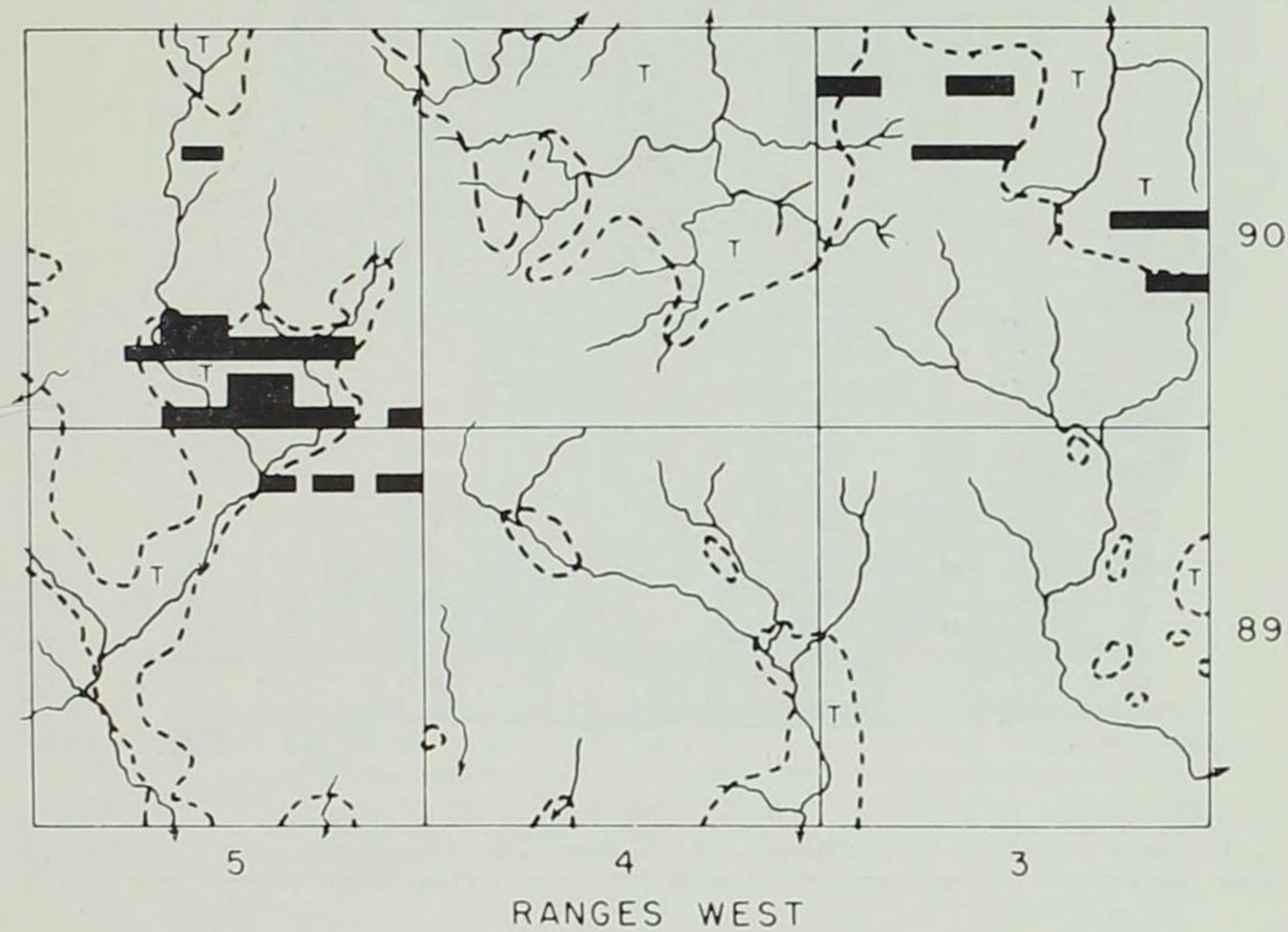
Warrants for	160	acres,	Cash	$135;	On	one	year's	time,	$200;
"	" 80	"	"	75;	"	"	"	"	110;
"	" 40	"	"	40;	"	"	"	"	55;

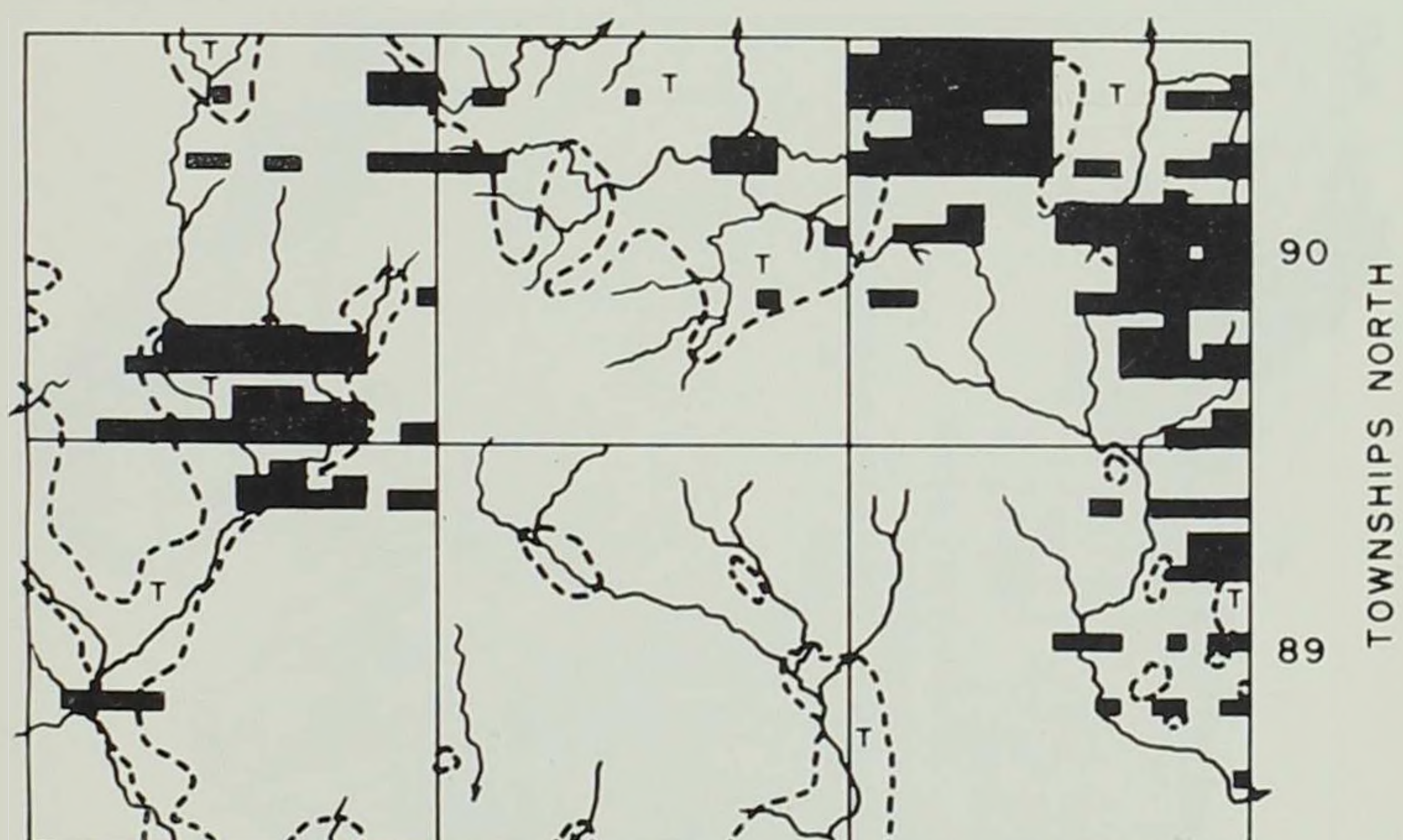
Part of an advertisement sent out in the 1850's by Le Grand Byington, an Iowa City land agent. Byington, a successful farmer and real estate agent, helped in bringing the Rock Island Railroad to Iowa City.



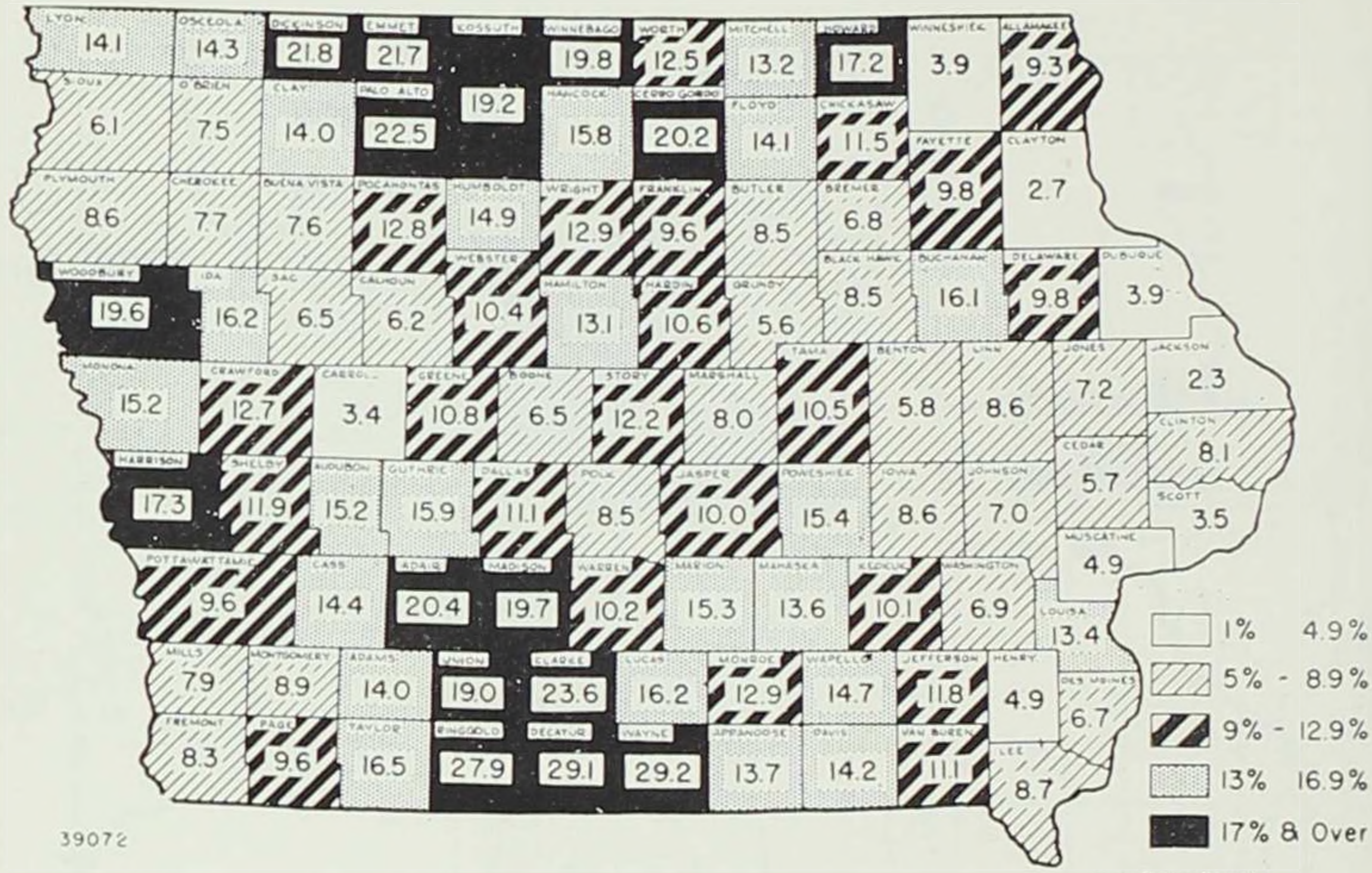
Location of 48 townships (in black) offered for sale by the U. S. Government in 1838, and the 7 townships (cross-hatch) offered in 1839.

(Opposite page, top) Timber, streams, and original entry sales of public lands through 1839 in a block of 6 townships in northeastern Iowa are shown. This is the location of original entry sales in 1839. Timber (T) is enclosed within dash lines, streams are solid lines, and original entry sales are in black. Most sales, it is evident, were located in or near timber.

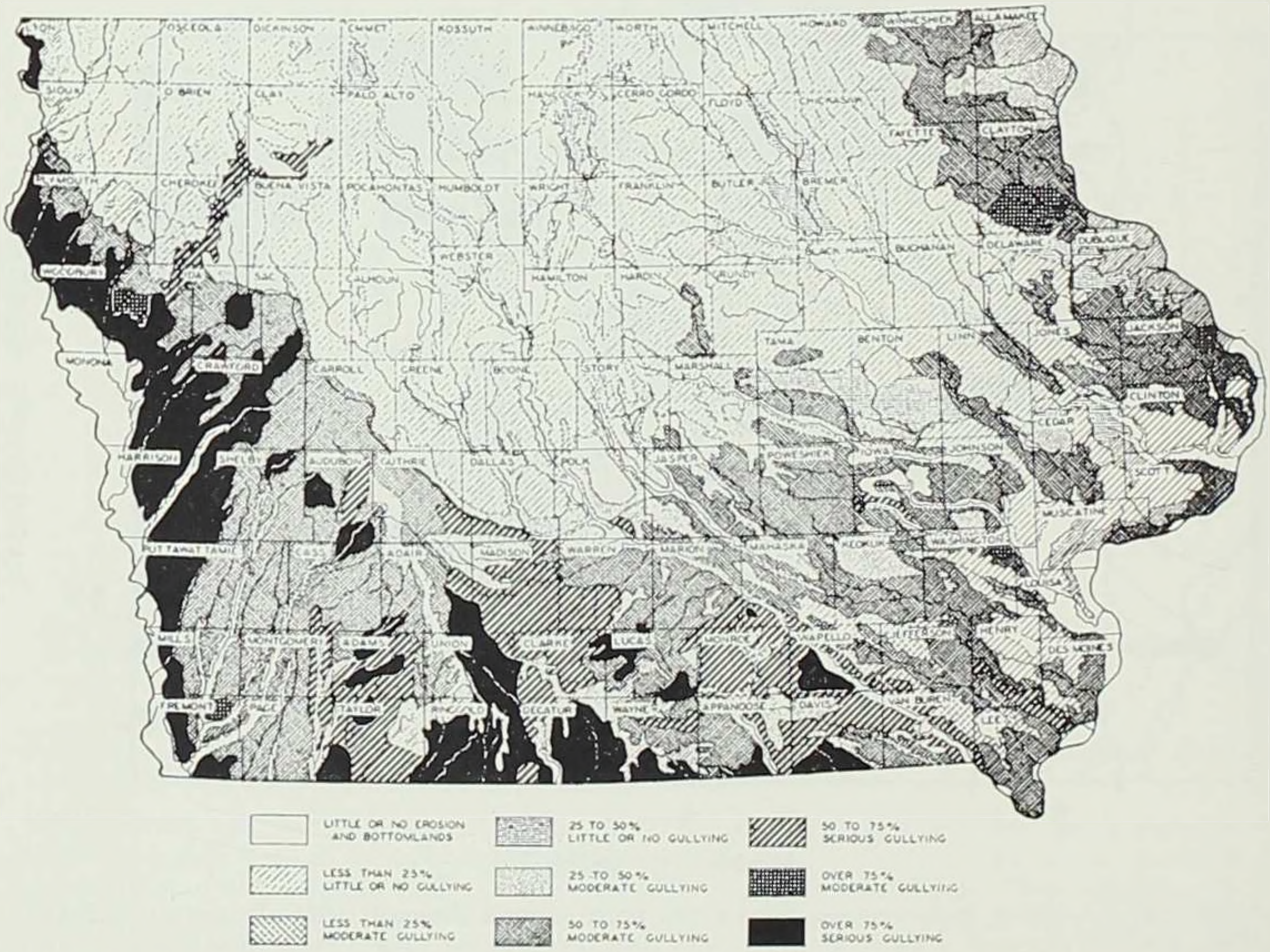




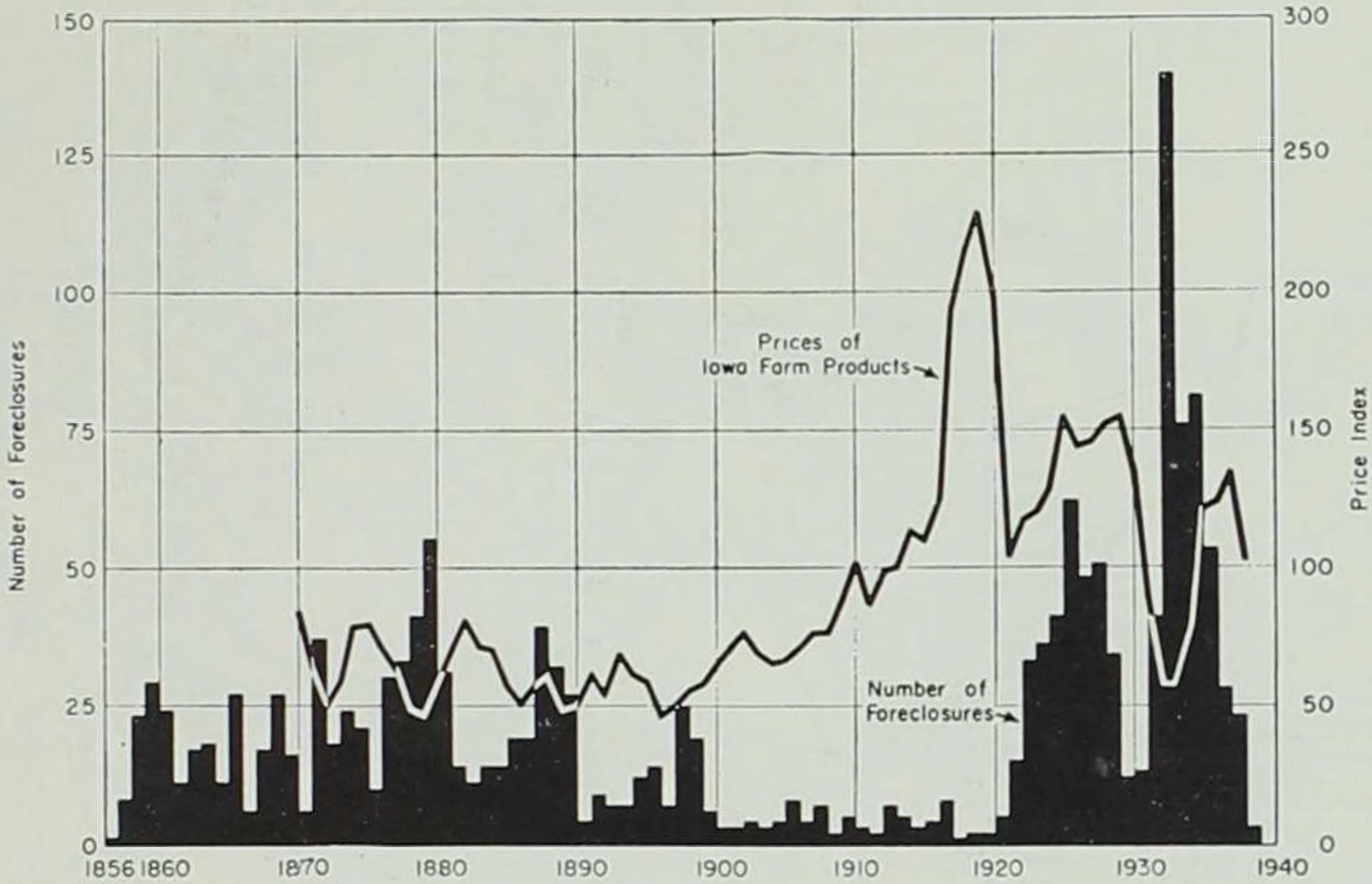
Same map as above, but with original entry sales shown through 1846. In the period, 1838-1846, settlers showed a definite preference for lands in or near timber and water. Out of 130,778 acres offered for sale in the 6 townships, 14,007 acres, or 11 per cent, were sold through 1846.



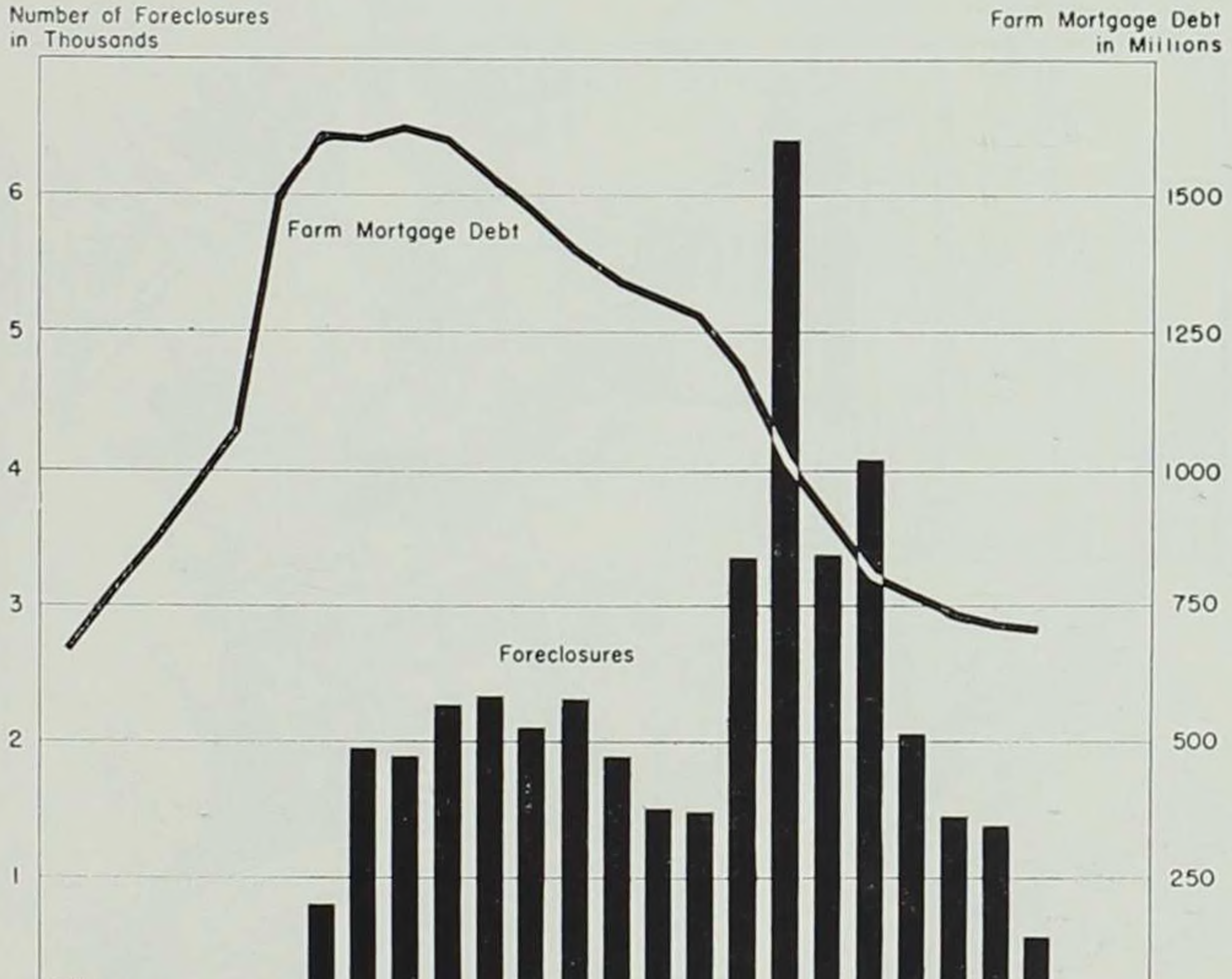
Corporate-owned land in Iowa, January 1939. Figures show percentage of farm land in each county owned by corporations—most of them farm mortgage lenders. Counties with high percentages are generally those with low farm values. State average was 11.9%.



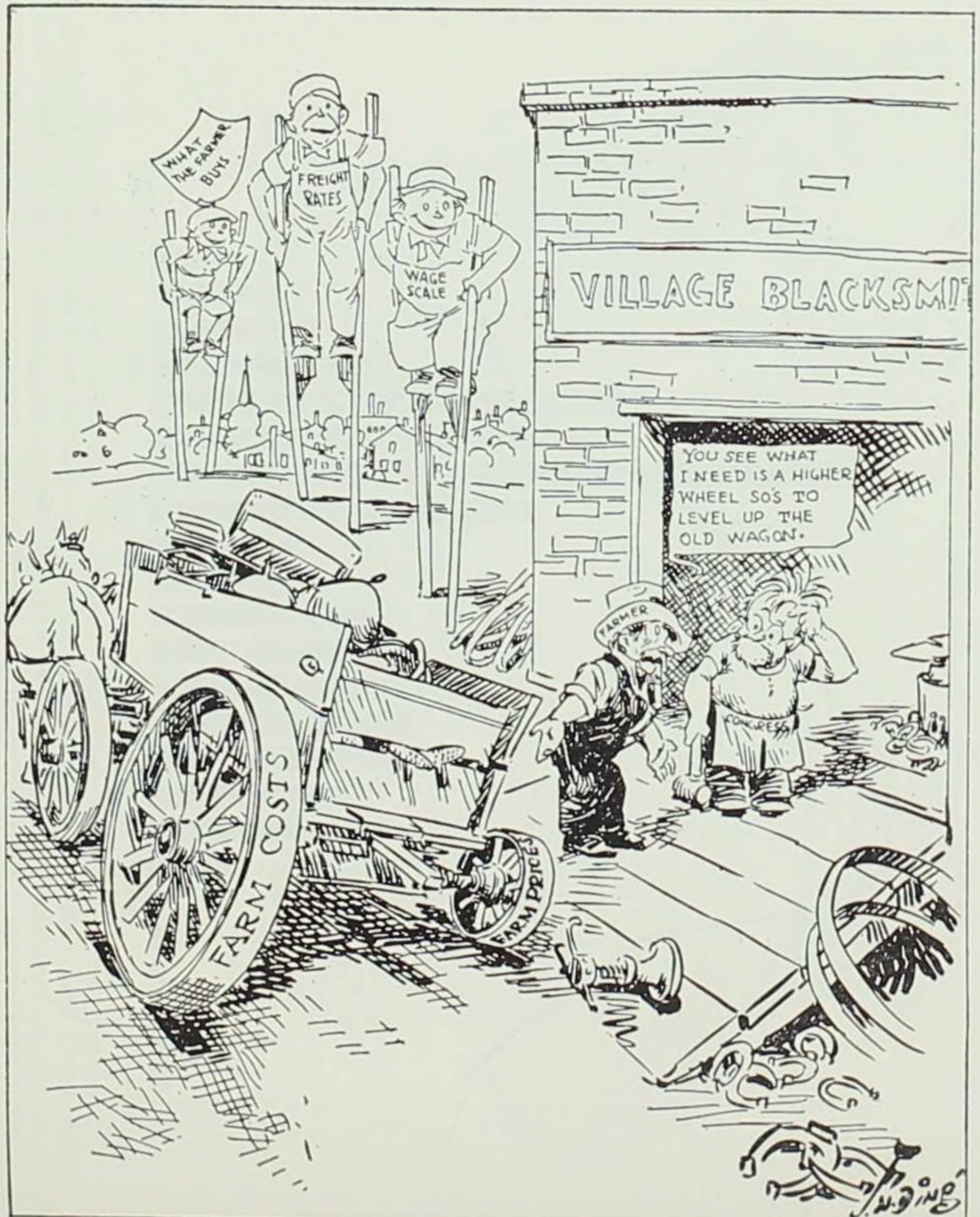
Areas of highest erosion in southern and western Iowa are also areas where foreclosures and corporate land holdings were especially high. Prior to 1930, such areas were frequently over-valued. Poor drainage, not erosion, was a serious problem in northern Iowa.



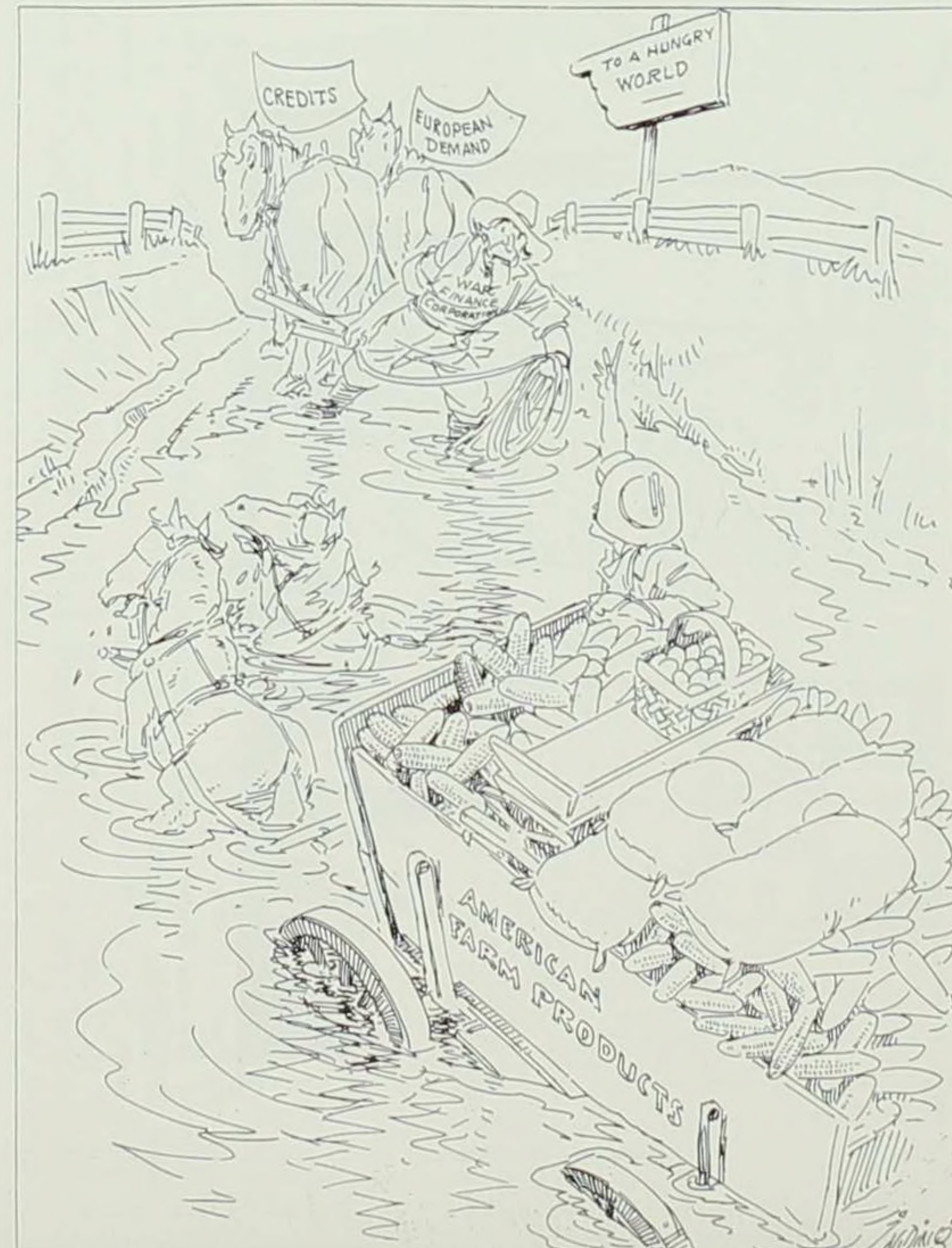
Shown are the number of farm mortgage foreclosures in Boone and Story Counties, 1856-1938, and index of prices of farm products, 1870-1938. From 1870 to 1900 farm product prices fluctuated at a low level and foreclosures were relatively heavy each time the price index fell. From 1900 to 1920 prices rose rapidly and foreclosures were almost non-existent. From 1921 to 1938 prices slumped and foreclosures rose to new highs.



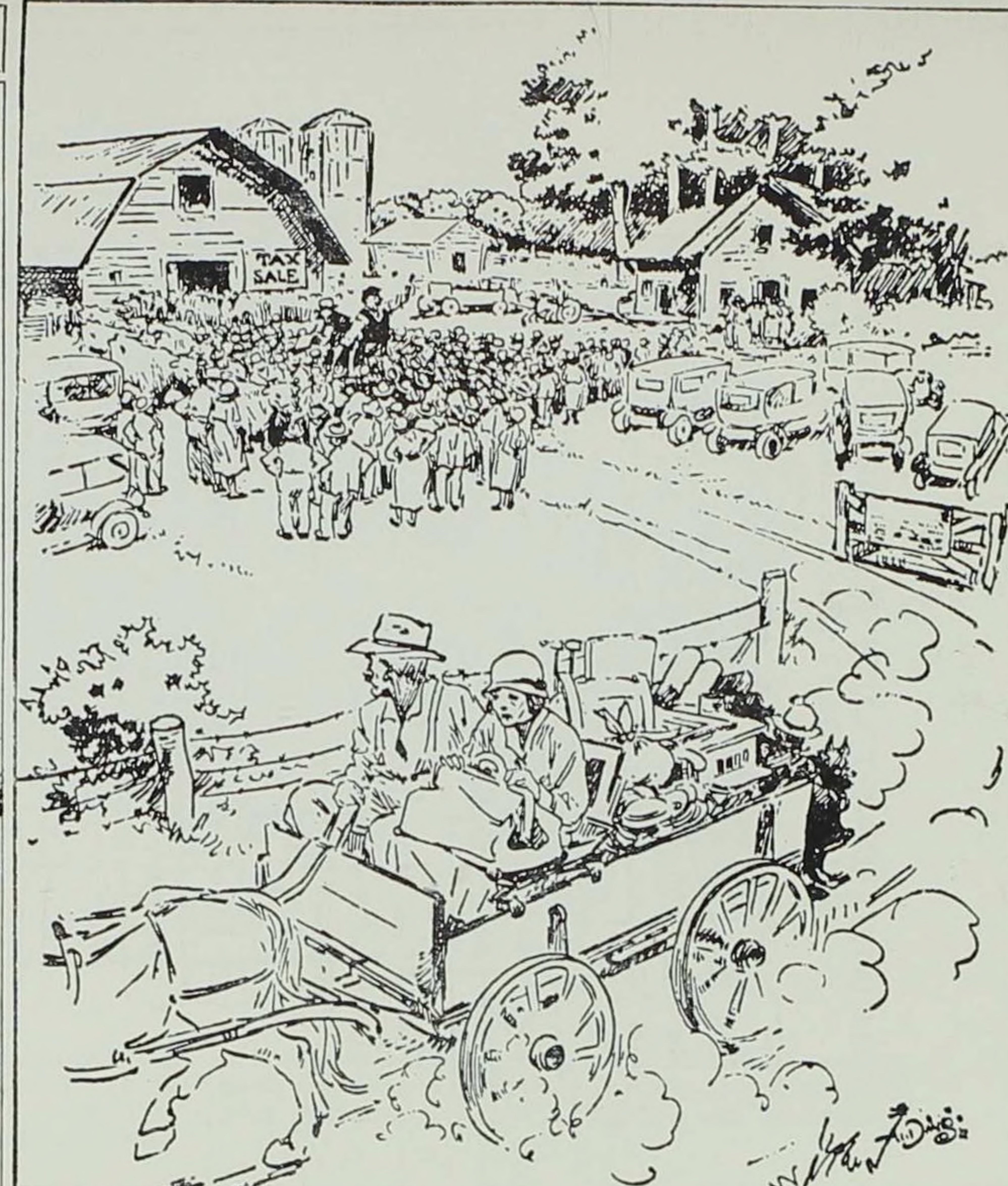
Estimated number of farm mortgage foreclosures and total farm mortgage debt in Iowa, 1915-1939. Chart shows two depressions—that of 1921-1930 when junior mortgage foreclosures predominated, and the deeper depression of 1931-1939 when first mortgage foreclosures were common.



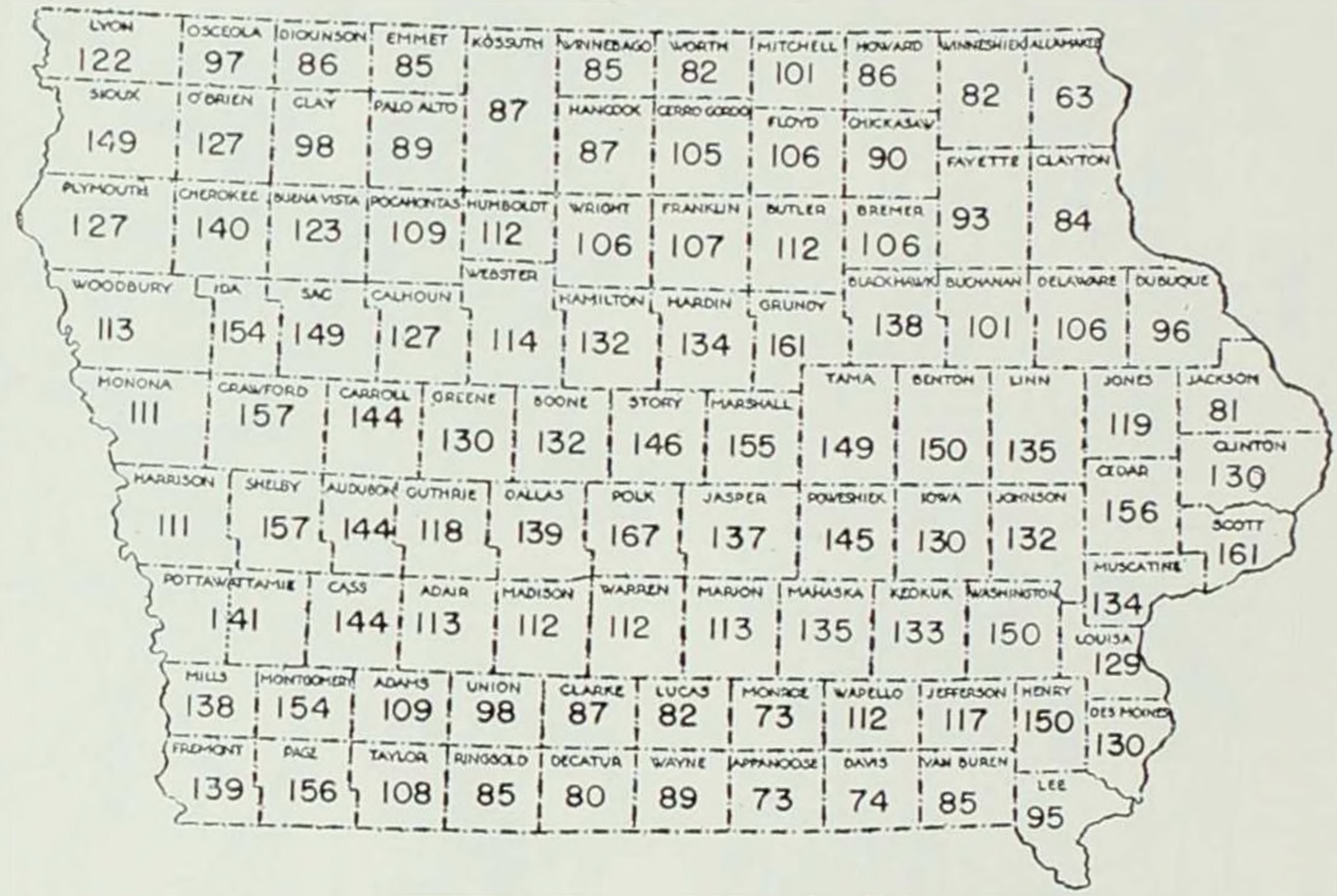
IT'S ABOUT TIME SOMEBODY GAVE HIM A LIFT



HEADED FOR THE STRATOSPHERE.



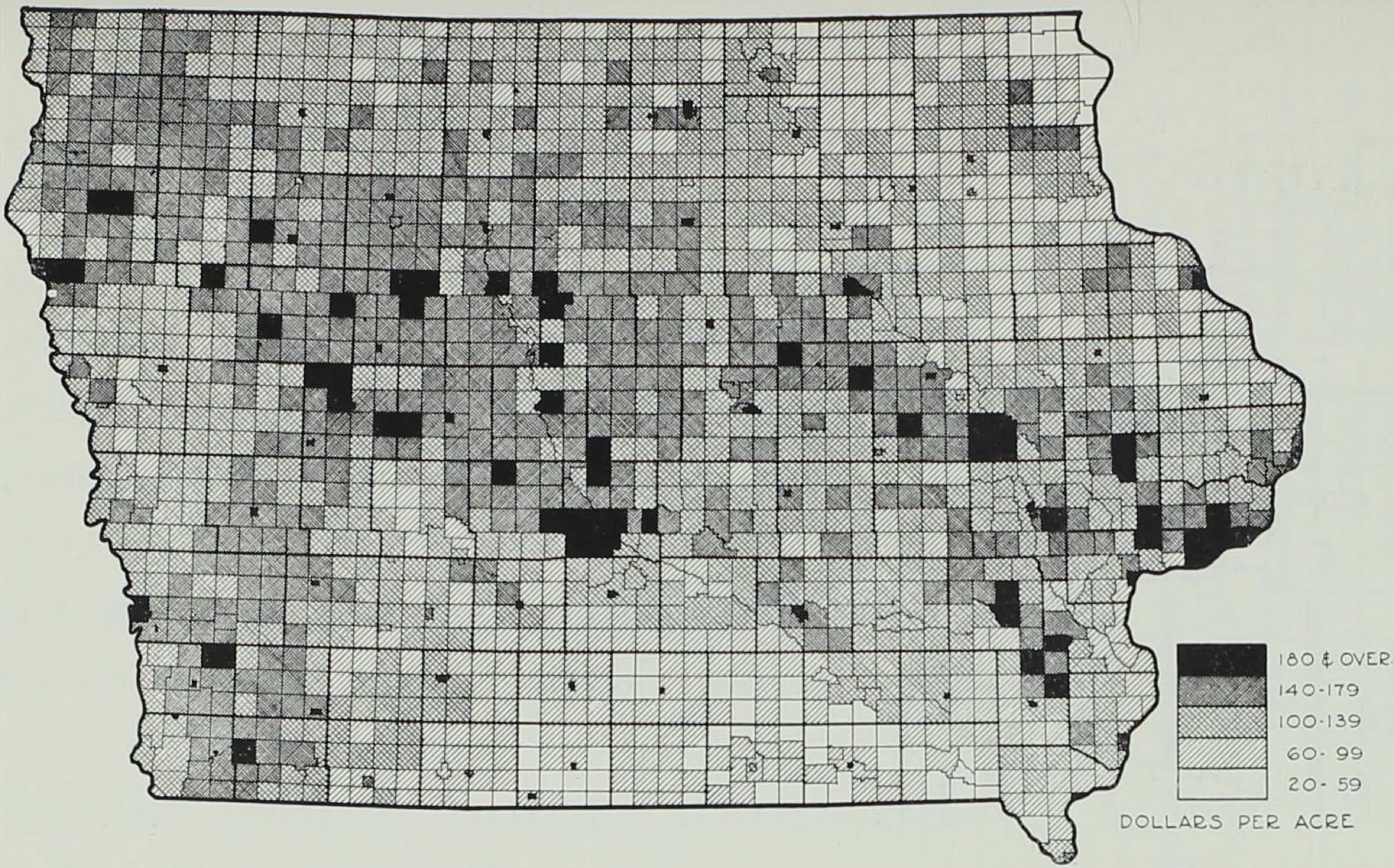
ESTIMATED MARKET VALUE PER ACRE OF FARM LAND AND BUILDINGS BY COUNTIES, MARCH 1, 1913



Iowa state average—1913—$118

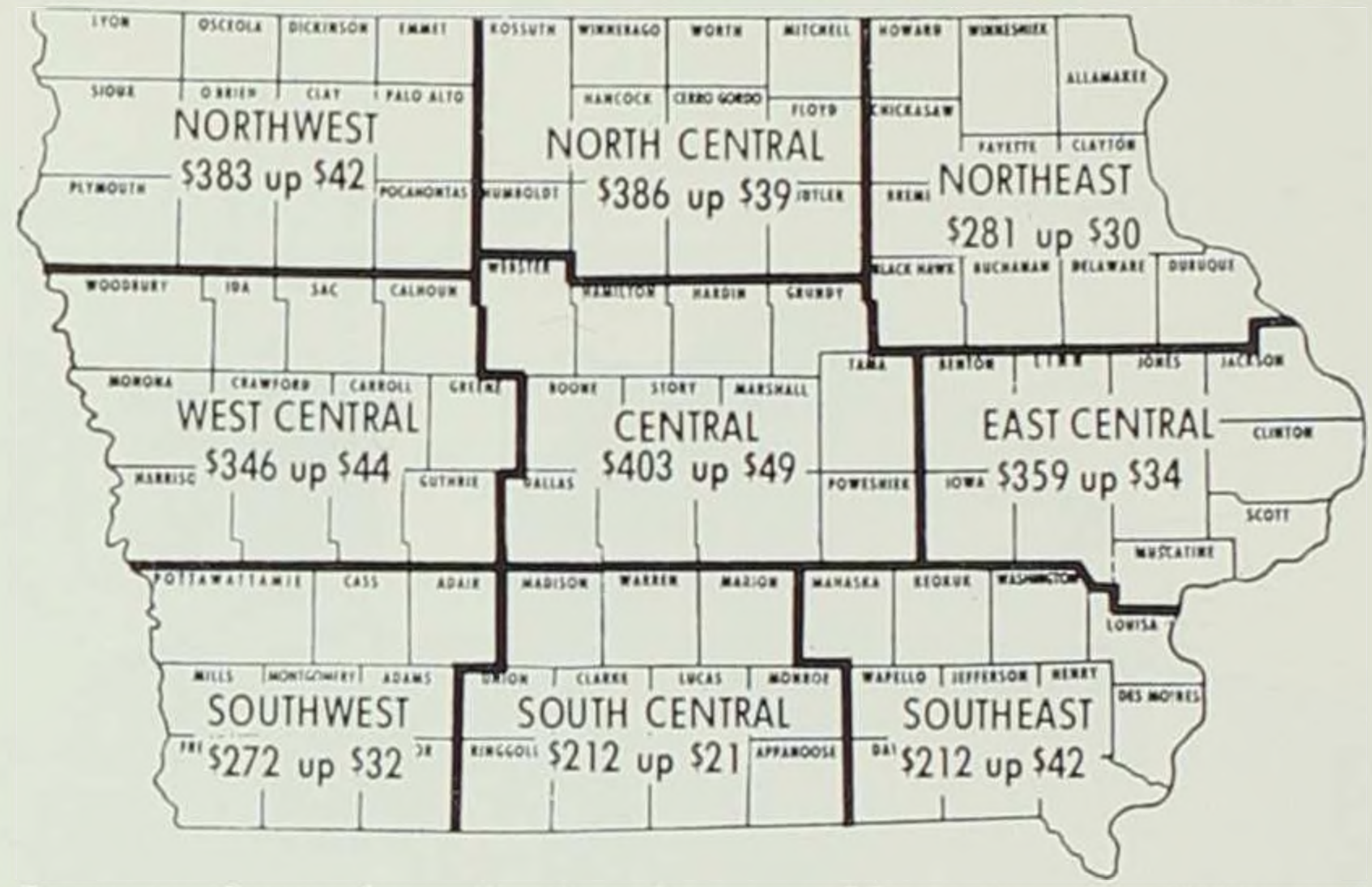
1901 -$48	1911 -$110	1921 -$235	1931 -$117
1902 - 58	1912 - 115	1922 - 194	1932 - 96
1903 - 66	1913 - 118	1923 - 186	1933 - 69
1904 - 66	1914 - 124	1924 - 171	1934 - 75
1905 - 67	1915 - 134	1925 - 162	1935 - 80
1906 - 75	1916 - 153	1926 - 155	1936 - 87
1907 - 78	1917 - 160	1927 - 145	1937 - 87
1908 - 82	1918 - 174	1928 - 140	1938 - 88
1909 - 93	1919 - 192	1929 - 139	1939 - 88
1910 - 96	1920 - 255	1930 - 135	1940 - 88
			1941 - 88

Average value per acre of farm land and buildings, March 1, 1901-1941. Figures for 1901-1911 from the Iowa Agricultural Experiment Station; for 1912-1941 based on index figures of the U. S. Department of Agriculture.



Value per acre of farm land and buildings shown by townships from data supplied by the Federal Census of 1930. The Census of 1930 is the only one providing farm values by townships. Those with the highest values are located in or near the larger cities and in an area extending from northwest to southeast Iowa. Low-value townships are located mainly in southern and northeastern parts of the state where timber and permanent pasture are more prevalent.

IOWA FARM VALUES BY CROP REPORTING DISTRICTS

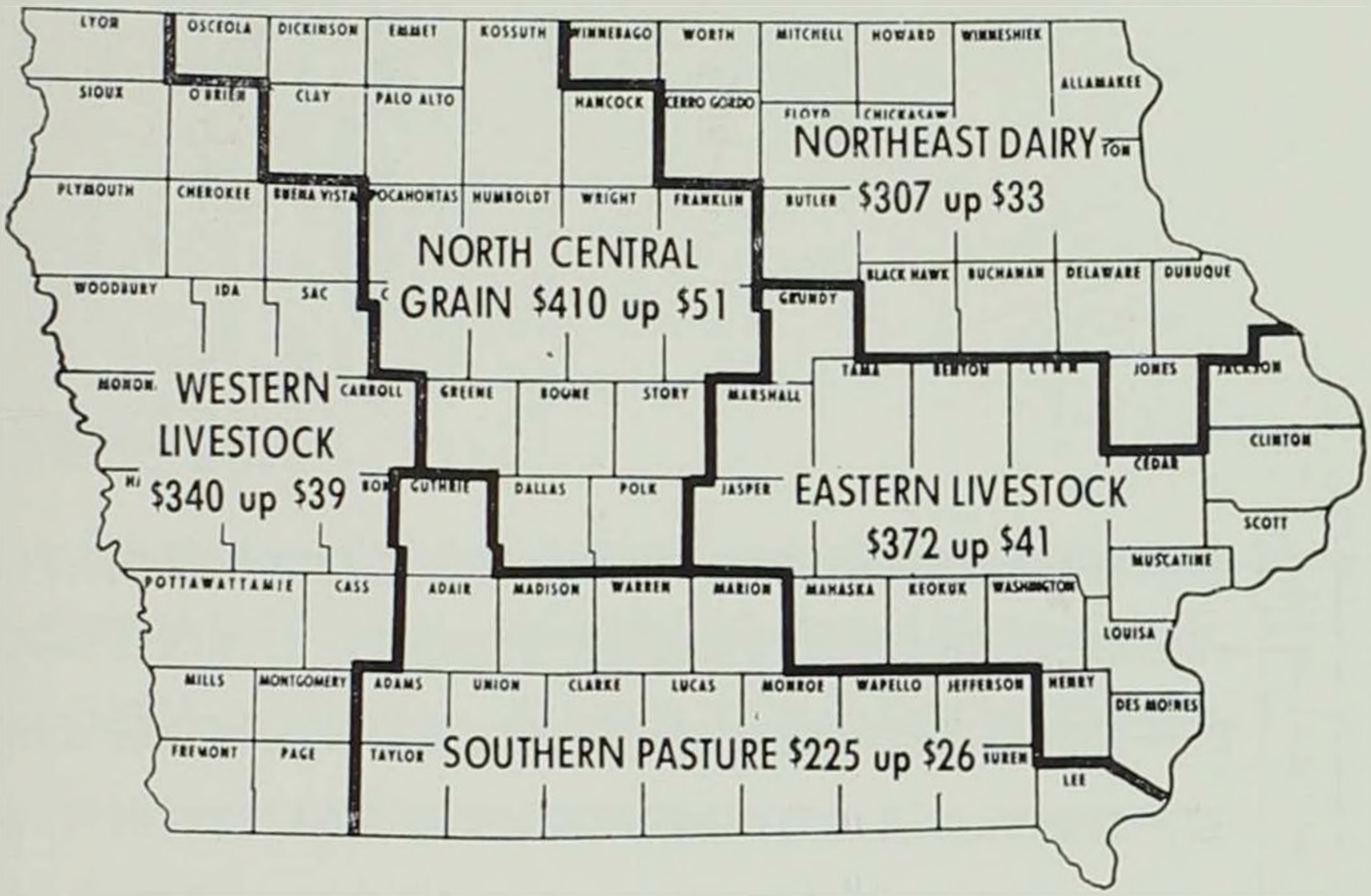


Average Iowa farm land values on November 1, 1966, and amount of increase over the previous year.

Year	North-west	North Central	North-east	West Central	Central	East Central	South-west	South Central	South-east
				All Grades Land					
1957	$274	$263	$193	$226	$277	$262	$184	$138	$211
1958	289	286	213	244	293	286	202	153	226
1959	292	279	225	256	305	305	200	160	227
1960	270	271	214	238	287	280	191	149	224
1961	270	268	224	243	283	276	192	153	226
1962	277	279	214	250	293	277	197	155	232
1963	284	291	231	262	295	283	211	154	239
1964	307	311	229	277	324	292	213	171	252
1965	340	346	250	302	354	325	239	191	276
1966	383	386	281	346	403	359	272	212	318
				High Grade Land					
1957	370	350	272	330	393	407	270	223	359
1958	388	375	306	347	411	440	292	248	376
1959	392	348	326	368	427	445	292	256	373
1960	359	362	317	350	403	416	281	238	366
1961	363	361	324	355	397	409	272	247	369
1962	374	370	316	364	405	409	286	249	378
1963	384	378	334	378	413	419	299	245	391
1964	412	401	332	396	443	432	309	267	402
1965	454	452	358	422	481	478	339	297	436
1966	509	506	400	497	550	525	392	328	498
				Medium Grade Land					
1957	275	261	193	219	272	254	178	129	191
1968	291	285	207	243	291	276	195	141	210
1959	291	291	219	251	301	310	192	150	210
1960	271	272	205	235	283	277	184	140	208
1961	274	266	216	235	281	274	189	142	214
1962	280	279	205	243	293	273	193	145	219
1963	287	288	220	254	292	278	210	143	220
1964	308	313	221	271	322	288	210	161	239
1965	337	348	241	299	349	319	236	185	263
1966	379	383	272	331	402	352	260	200	301
				Low Grade Land					
1957	178	178	113	129	166	126	102	61	83
1958	189	196	126	143	177	143	119	71	93
1959	191	198	131	149	183	158	118	75	98
1960	178	180	200	131	175	148	107	70	97
1961	172	177	131	139	170	145	108	71	94
1962	176	189	121	144	180	148	112	71	98
1963	182	206	138	153	180	153	123	73	106
1964	202	218	135	163	206	156	120	83	114
1965	230	238	153	185	232	180	143	91	130
1966	261	268	169	212	256	201	162	108	155

Average value per acre of Iowa farm land and buildings, by crop reporting districts and grades of land, November 1, 1957-1966.

IOWA FARM VALUES BY TYPE OF FARMING AREAS



Average Iowa farm land values on November 1, 1966, and amount of increase over the previous year in various type areas.

Year	State Average	North Central Grain	Eastern Live-stock	Western Live-stock	Northeast Dairy	Southern Pasture
1941	$ 88	$106	$101	$ 90	$ 87	$ 58
1942	100	118	115	103	95	67
1943	119	141	138	119	110	83
1944	130	158	151	136	115	87
1945	140	168	167	148	118	98
1946	149	180	177	161	127	103
1947	167	196	200	187	138	117
1948	176	207	204	198	146	124
1949	177	213	203	197	151	122
1950	197	240	226	217	168	135
1951	212	258	244	238	174	148
1952	209	258	240	224	182	143
1953	198	246	226	212	171	134
1954	205	258	236	222	180	126
1955	215	270	242	231	190	140
1956	220	279	251	231	197	144
1957	276	278	264	228	212	147
1958	244	305	282	246	231	158
1959	252	306	290	253	244	165
1960	237	284	277	237	230	158
1961	237	282	273	241	229	159
1962	241	292	278	247	228	162
1963	250	307	281	257	237	167
1964	265	328	297	272	248	180
1965	293	357	331	301	274	199
1966	331	410	372	340	307	225

Average value per acre of Iowa farm land and buildings, by type of farming area on November 1, 1941-1966.

FARM REAL ESTATE VALUES IN IOWA BY COUNTIES, 1850-1964

County	1850	1860	1870	1880	1890	1900	1910	1920	1925	1930	1935	1940	1945	1950	1954	1959	1964
							IOWA										
Adair	--	10	17	19	23	36	92	211	112	110	58	53	76	113	143	167	190
Adams	--	9	21	21	24	41	89	189	114	103	59	53	77	111	131	150	162
* Allamakee	71	9	17	17	19	29	51	111	93	75	39	44	55	69	92	117	127
Appanoose	3	10	20	17	22	31	59	123	84	63	29	32	44	58	73	102	128
Audubon	--	8	20	18	24	41	117	264	147	134	80	75	102	166	192	225	243
Benton	4	13	27	26	35	55	122	266	179	149	88	104	145	204	257	324	326
Blackhawk	2	14	30	24	32	52	112	242	169	130	81	99	119	198	249	339	358
Boone	--	12	21	21	27	46	107	273	179	152	91	103	145	222	262	320	370
Bremer	--	10	28	18	31	49	86	170	135	112	78	83	96	152	187	267	279
Buchanan	4	12	25	20	29	44	82	184	123	99	57	70	92	126	167	245	283
Buena Vista	--	4	10	15	29	47	100	312	186	155	95	106	146	221	279	317	329
Butler	--	8	21	20	26	46	91	200	146	112	68	82	98	154	188	265	284
Calhoun	--	8	11	13	22	42	103	313	201	166	98	112	154	242	291	364	376
Carroll	--	5	9	19	31	45	120	293	189	164	99	100	135	217	265	301	348
Cass	--	9	22	22	31	45	117	264	144	134	74	71	97	146	164	209	222
Cedar	6	16	36	35	42	59	127	270	170	151	88	108	140	205	272	343	347
Cerro Gordo	--	8	19	18	24	44	85	213	152	115	69	84	105	178	208	307	337
Cherokee	--	5	11	14	28	44	114	302	167	140	90	90	119	207	284	295	303
Chickasaw	--	6	21	19	23	45	73	163	115	92	50	57	76	107	134	205	238
Clarke	--	10	17	18	21	33	71	156	95	78	37	36	56	80	105	105	125
Clay	--	5	6	11	19	38	80	245	145	131	85	96	128	207	248	305	307
Clayton	5	13	25	24	28	39	68	148	121	107	62	69	81	103	122	167	167
Clinton	5	14	33	36	42	56	106	206	152	126	74	86	105	165	220	295	303
Crawford	--	6	21	17	25	41	104	260	152	134	76	74	92	144	179	211	241
Dallas	--	10	24	24	29	46	113	261	175	156	84	93	137	198	237	297	310
Davis	4	11	21	16	20	30	60	122	86	61	30	30	42	61	78	108	131
Decatur	6	9	17	16	21	31	65	142	83	62	32	32	43	65	71	95	104
Delaware	5	8	29	29	34	50	86	186	138	109	63	80	97	136	167	241	265
Des Moines	9	22	39	38	39	49	106	201	141	109	65	72	112	182	225	296	342
Dickinson	--	6	7	10	19	32	70	214	143	109	69	84	106	165	214	297	263
Dubuque	5	13	29	31	39	47	78	150	120	112	67	73	84	122	155	215	245
Emmet	--	2	11	12	17	33	69	224	141	110	72	91	120	180	249	293	305
Fayette	6	7	21	21	26	43	76	173	122	95	53	64	82	117	144	213	224
Floyd	--	11	23	22	26	46	86	199	136	116	60	80	100	151	194	275	298
Franklin	--	9	19	17	24	44	87	230	151	136	83	96	122	193	253	330	344
Fremont	7	13	29	24	30	48	113	233	160	143	82	82	98	159	203	218	246
Greene	--	6	18	19	26	42	106	298	185	157	92	106	154	233	266	351	363
Grundy	--	11	20	23	35	57	131	277	186	150	89	116	151	241	283	374	406
Guthrie	--	9	18	19	23	37	96	220	134	113	61	63	81	128	152	197	204
Hamilton	--	11	20	18	24	43	107	283	192	163	88	110	155	218	289	351	391
Hancock	--	12	15	9	18	38	71	214	155	125	80	91	122	195	242	323	338
Hardin	--	10	27	19	27	45	109	254	168	145	85	99	130	203	248	322	346
Harrison	--	1	19	20	24	36	90	208	143	122	70	58	86	129	159	182	198
Henry	9	11	33	31	32	49	122	224	145	124	73	77	116	166	215	271	273
Howard	--	7	21	20	20	40	70	139	101	85	49	50	66	97	119	198	195
Humboldt	--	5	15	11	22	42	91	286	180	149	88	108	147	215	285	358	388
Ida	--	5	9	16	25	45	125	307	176	154	82	83	123	197	246	263	280
Iowa	13	10	23	24	29	45	106	223	153	121	62	78	94	144	182	232	237
Jackson	5	11	25	24	29	38	66	137	103	81	47	56	65	95	118	177	200
Jasper	4	13	29	27	32	48	111	254	163	129	66	81	107	155	202	245	279
Jefferson	7	18	31	26	28	42	95	192	126	95	51	55	80	110	148	181	198

Dates at which the Federal Census were taken follow:

1850-1900	June 1
1910	April 15
1920-1925	January 1
1930	April 1
1935	January 1
1940	April 1
1945	January 1
1950	April 1
1954-1964	November 1

IOWA (cont.)

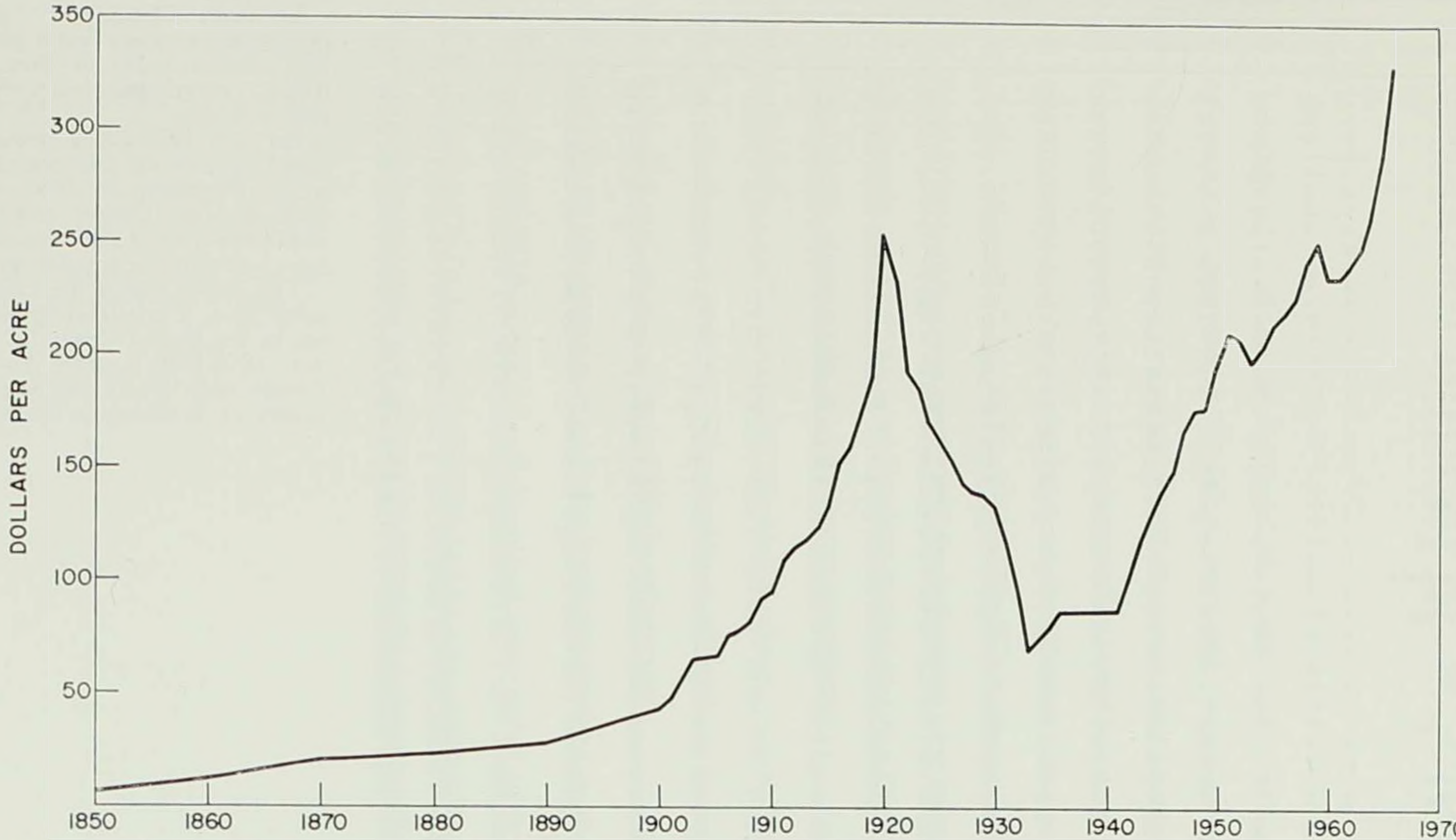
County	1850	1860	1870	1880	1890	1900	1910	1920	1925	1930	1935	1940	1945	1950	1954	1959	1964
Johnson	6	16	27	32	35	50	107	228	155	136	72	91	118	186	216	308	328
Jones	6	11	27	29	36	50	97	196	151	118	69	81	93	141	193	230	262
Keokuk	6	13	26	25	30	45	108	223	146	120	59	68	93	143	159	206	226
Kossuth	--	4	14	14	19	35	71	227	155	125	84	98	126	186	240	324	342
Lee	7	23	30	30	30	38	77	143	117	91	51	52	69	100	146	175	199
Linn	6	15	32	32	38	54	110	227	171	143	83	96	118	178	222	323	341
Louisa	6	20	31	29	31	44	105	209	143	115	57	67	85	154	183	261	302
Lucas	3	8	19	21	22	33	67	143	93	69	35	35	52	68	85	110	126
Lyon	--	--	4	9	22	37	99	308	165	135	85	89	115	203	255	303	299
Madison	3	4	18	21	25	39	91	200	128	106	54	56	75	110	136	175	191
Mahaska	6	14	29	30	36	50	110	247	159	138	67	75	109	170	184	251	264
Marion	4	14	30	24	28	40	92	193	123	104	49	56	73	116	148	174	218
Marshall	5	9	29	28	35	51	126	278	187	142	82	101	135	199	239	299	327
Mills	--	13	24	24	32	50	112	255	166	150	87	80	95	165	201	244	249
Mitchell	--	1	18	22	25	47	82	187	129	103	67	71	91	135	189	259	302
Monona	--	5	8	22	23	34	77	185	133	115	66	62	79	125	152	195	218
Monroe	5	14	23	17	21	35	59	115	84	65	30	32	40	57	68	92	103
Montgomery	--	10	19	23	33	52	125	261	182	145	82	77	103	173	188	233	225
Muscatine	6	21	37	35	41	53	109	239	151	134	73	92	120	182	208	303	332
O'Brien	--	5	5	12	24	44	103	317	175	149	98	107	136	232	295	344	368
Osceola	--	--	--	8	20	37	79	258	153	124	80	95	128	198	259	304	325
Page	9	18	24	24	33	52	127	265	170	144	82	76	100	165	182	221	209
Palo Alto	--	3	8	12	19	32	72	228	158	119	72	90	116	188	245	272	308
Plymouth	--	6	8	13	27	40	103	265	170	142	80	80	120	190	226	270	278
Pocahontas	--	3	9	10	21	43	89	282	193	153	99	111	148	233	273	332	352
Polk	5	16	29	31	45	61	136	284	205	171	95	108	146	219	272	372	391
Pattawattamie	7	8	24	21	34	49	115	255	174	150	93	82	109	176	199	249	271
Poweshiek	4	10	26	23	31	49	118	274	158	129	69	79	105	146	193	243	261
Ringgold	--	8	16	16	21	34	69	148	97	75	38	37	52	72	84	112	120
Sac	--	12	11	16	27	45	121	334	191	159	99	104	137	224	280	323	344
Scott	7	23	45	52	57	68	131	251	206	173	104	123	145	235	288	402	435
Shelby	--	7	20	20	39	44	128	312	173	149	90	84	118	189	234	261	273
Sioux	--	--	4	10	28	45	121	342	179	157	105	99	152	238	299	351	358
Story	--	9	25	21	20	52	119	310	185	154	89	107	142	224	278	351	385
Tama	--	19	24	23	31	49	121	252	173	138	75	93	113	180	231	281	308
Taylor	7	7	20	20	25	40	88	204	113	101	54	51	74	105	110	143	146
Union	--	9	19	19	24	38	80	170	105	100	47	45	72	108	121	148	148
Van Buren	4	13	25	24	22	34	69	135	100	68	31	33	52	68	93	122	137
Wapello	6	14	28	25	28	43	91	192	122	99	50	54	74	110	139	191	188
Warren	3	13	30	23	29	40	91	188	118	101	52	54	79	126	139	192	196
Washington	6	15	31	28	34	51	122	256	162	139	80	87	120	188	202	263	297
Wayne	2	9	20	18	23	35	72	160	98	68	37	35	46	72	81	112	129
Webster	--	8	19	18	22	42	93	274	184	155	88	104	151	223	286	351	389
Winnebago	--	3	12	16	16	37	69	192	150	112	74	85	107	166	227	301	331
Winneshiek	--	10	23	22	27	42	67	148	119	104	60	60	75	99	118	162	188
Woodbury	--	9	17	14	26	37	92	233	147	134	73	69	97	139	182	205	220
Worth	--	6	14	15	19	42	67	176	126	103	64	75	97	130	194	264	286
Wright	--	7	14	15	21	42	86	246	175	140	91	101	147	218	270	347	376
State	6	12	20	23	28	43	96	227	149	124	72	79	105	161	199	254	269 * *

*Value for Allamakee in 1850 was $7 **The 1964 state average was $271.77

In every Census the value is understood to mean "estimated current market value of farm land, fences, permanent improvements, and buildings."

Up until 1950 every farmer was asked to give an estimate of farm value. Beginning in 1950 and in each Federal Census since only about one-fifth of the farmers have been asked the farm value question.

This table, except for 1964, was taken from "Farm Real Estate Values in the United States by Counties, 1850-1959," edited by T. J. Pressly and W. H. Scofield, University of Washington Press, 1965.



Average value per acre of Iowa farm land and buildings from 1850 through November 1, 1966. From 1850 to 1900 values shown are from Federal Census figures. From 1900 annual figures are from U.S.D.A. and the Ia. Ag. Exp. Sta.

State comparisons, farm values per acre. (From Ia. Ag. Exp. Sta., Fed. Cen., U.S.D.A.)

Year	Iowa	Ill.	Ind.	Minn.	Mo.	Nebr.
Mar. 1920	$255	$188	$126	$109	$ 88	$ 88
Mar. 1935	80	70	51	42	31	34
Nov. 1966	331	429	362	196	169	123

Property Tax Per Acre on Farms

Year	Tax	Year	Tax	Year	Tax
1918	$ .72	1926	$1.14	1934	$ .85
1919	.90	1927	1.14	1935	.94
1920	1.10	1928	1.15	1936	.97
1921	1.12	1929	1.22	1937	.99
1922	1.12	1930	1.24	1938	.99
1923	1.13	1931	1.13	1939	1.04
1924	1.14	1932	1.02	1940	1.00
1925	1.15	1933	.90	1941	1.01

Local commercial banks, along with farm owners, had hard sledding in the 1920's and early 1930's. In 1920 there were 1,703 state and national banks operating in Iowa. By 1930, largely as a result of bank failures and mergers to avoid failure, the total had declined to 1,212, and by 1935 the total was down to 656 banks.

The low point in farm values came in 1933 at $69 an acre as the average value for farm land and buildings in Iowa. Every year from 1920 to 1933 farm values had dropped—a total decline of $186 in 13 years or an average of $14 a year.

The contrast between the situation before and after 1920 was striking. From the beginning of the state's history to 1920 there is no record of any decline in farm values for the state as a whole. All of the Federal Census values reported to 1900 show increases, and all the annual values reported from 1900 to 1920 show an increase, with the exception of 1904, when values remained stationary. The farm family in 1920 which looked back could see nothing but rising farm values for three generations back to the original settlers in the 1840's and 1850's. On the other hand, this same family in 1933 could look back 13 years and see nothing but declining values with each year bringing a new low to the value of its farm.

It is no wonder that farm owners with mortgages were discouraged in the early 1930's. Some of these owners, like Farmer B, had purchased their farms in the depressed years of the 1921-1930 period and had invested substantial amounts in their farms. Other owners had bought their farms before the land boom, had weathered the junior mortgage depression of 1921-1930, and were now about to lose their farms through no speculation on their part. With close to one-half of the land in Iowa being under mortgage at an average debt of $75 an acre, it was evident in 1931 that a serious financial crisis existed.

The crisis in 1931 which became worse in 1932 can be illustrated in simple terms by referring to the farm which Farmer B purchased only a few years earlier for $170 an acre. This was part of the same farm which sold for $396 an acre in 1920. Now, in 1931, Farmer B was in trouble with his first mortgage debt of $100 an acre. Besides he was in debt for loans on livestock and equipment.

There were only two ways Farmer B could go in 1933—one was to give up and the other was to hang on by using emergency financial measures voted by Congress and the State Legislature.

If he gave up, as many did, his first mortgage would have been foreclosed and he would have lost his farm, or he might have agreed to deed his farm to the holder of the mortgage for a small amount provided he could give a deed that the lender would consider satisfactory. The fact that corporate lenders owned nearly 12 per cent of the farm area in the state in 1939 is sufficient evidence to indicate the large number of farm owners who lost their farms to first mortgage holders.

Farmer B, however, like many other farmers took the other route—hung on by using emergency aids in the hope that farm product prices would eventually bail him out. As it turned out, Farmer B and others, who hung on, lived to see the value of their farms rise substantially above the 1933 level, and lived to see themselves move from a bankrupt condition to one of solvency and a sizeable net worth.

What actually happened to Farmer B is typical of the success story of the depression in the 1930's. First, he applied for relief under the Iowa Mortgage Moratorium Act which froze any foreclosure actions for the duration of the emergency which eventually ended in 1939. This made it impossible for the holder of the first mortgage on B's farm to foreclose and take title. Under this Moratorium Act Farmer B was required to pay the mortgage holder a rental share of the crop produced which had to be applied on the mortgage interest due, and if there were anything left over, which was unlikely, it had to be applied to the principal of the mortgage.

Another emergency aid at this time was a refinancing program provided by the Federal Land Banks and the Farm Credit Administration. If the mortgage holder was pressing for payment and willing to take a discount on his loan in order to get cash, it was possible through the combined financing of a first mortgage Federal Land Bank loan and a second mortgage Land Bank Commissioner loan to pay off all the creditors. This allowed the distressed farm owner a new start with all of his old debts cancelled and a new debt load which was adjusted to what his farm would support under current price conditions.

The Federal refinancing was assisted by county debt conciliation committees who used the refinancing offer to scale existing debts to a level which the farmer could carry. For example, Farmer B, in 1933, had total debts of more than \$19,000 and total assets including his farm of \$16,000. B became discouraged and tentatively decided to give up, deed the farm to the mortgage holder, and try to rent the farm from him. As a last resort he came to the county debt conciliation committee before deeding the farm. The committee, after extended negotiations, arranged an agreement with the bank and other creditors to give Farmer B time to work out his difficulties. There was no scale down of debt; neither was there any refinancing through the Federal Land Bank and the Land Bank Commissioner. Farmer B held on to his farm, did well in the next ten years accumulating $26,000 of net worth in his land when it sold in 1943 for $206 an acre.

Another actual example, this one involving refinancing, shows how many financially distressed farm owners were able to hold on to their farms. In this case the farmer had a $30,000 first mortgage on a half-section farm and owed the local bank and other creditors $10,000 on machinery and livestock. All that he owned was his farm worth $28,000 and machinery and livestock worth $6,000. In short, he was $6,000 in the "hole."

Although this farmer considered his farm worth $28,000, actually there was no one willing to pay him that much for it. It was a nominal value in the sense that if there had been more buyers it could have been sold for that figure. There were, to be sure, a few buyers, enough to set a market price but that was all. In Story County, there were only 19 farm sales in 1932 compared to 70 in 1930 and 516 in 1920.

The Federal Land Bank and Land Bank Commissioner offered to lend $26,000 on this farm and the Regional Agricultural Credit Corporation offered to advance $5,000 on the machinery and livestock. With these offers totalling $31,000 the county debt conciliation committee went to work. They obtained a settlement of $26,000 on the first mortgage and an agreement with the bank and other creditors to take $5,000 in cash for their $10,000 in claims. The creditors did not get paid in full but they did get cash which at this time was at a premium and could be invested in many places to good advantage. The farm owner who had been hopelessly insolvent with $40,000 of debt was now able to make a fresh start with his debts at a manageable level of $31,000. This assumed, of course, that product prices did not go any lower. If they had declined even the $31,000 would have been too high. As events worked out, product prices and values did not go down, they went up instead. This farmer saved his farm.

Between the depth of the depression in 1933 and 1940 there was some recovery but not much. Farm values which hit their lowest point at $69 in 1933 had recovered to $87 by 1936. Part of this recovery was the support which the refinancing loans of the Federal Land Bank and Land Bank Commissioner gave to the land market. This was the extent of the recovery. In the next four years there was practically no change in average farm values. In 1940 farm values were still $88 an acre, far below the average of $135 in 1930.

One reason why farm values failed to rise more than they did in the late thirties was the large supply of farms in the hands of corporate lenders.

As pointed out earlier, the total acreage held in 1939 was nearly 12 per cent of the farm area of the state, with a major portion of the total, roughly two-thirds, owned by insurance companies who had been heavy lenders on first mortgages in Iowa prior to 1930. Other lenders included joint stock land banks, Federal Land Bank of Omaha, and local banks. By law most of these lenders were required to sell any farms they acquired within five years. Consequently, even though there was no rigid enforcement of the five-year rule, there was an active campaign to sell the farms they had acquired through foreclosure of loans and through deeds in place of foreclosures.

Some of the insurance companies provided excellent terms in their efforts to sell their farms. Contract sales were common, and down payments as low as 10 per cent were also common. The prevailing policy of most lenders was to sell their farms at current prices and not try to hold for an increase in price.

Considerable resistance to the buying of farms was evident in the 1936-1940 period when lenders had a large supply of farms to sell and were making a determined effort to sell them. It was the reverse of the situation in 1920 when every one was eager to buy. How strange! When the price of an Iowa farm was $255 an acre there was a stampede to buy, when it was down to $88 an acre it was difficult to get anyone interested in buying.

An explanation of the low interest in buying in the 1936-1940 period is not hard to find. Farmers had just been through a continuous 13-year decline in farm values which had wrecked the hopes and dreams of countless farm families. Many a farmer, who was tempted to buy a good quarter section at $100 an acre with only a small down payment required, decided against it. Some of those who got "burned" in the land boom vowed "never again." There was a current attitude commonly expressed that you could make more money by investing in livestock and machinery than you could in land, by renting rather than owning. Fortunately, there were a number of farm operators who did yield to the temptation and bought one of the best farm bargains between 1909 and 1967.

The irony of the situation in 1936-1940 is illustrated by the excess of sales in 1920 and the relatively few sales in 1939. In Story County, the 516 sales in 1920 averaged $289 an acre while the 95 sales in 1939 averaged only $99 an acre. Those who bought in 1920 in many cases lost everything while those who bought in 1939 made a small fortune.

For the future the moral of the 1919-1940 period is clear. If we can avoid the speculative excess of the land boom we can avoid the tragic consequence of financial distress. This means we may never again have farms on the bargain counter as they were in the 1936-1940 period.

War, Technology, Farm Values 1941 - 1967

With the exception of two minor dips, in 1952-1953 and in 1960, farm values had a continuous rise from 1941 through 1966. By far the largest increase took place in the last two years of the period, in 1965 and 1966. The rise in these two years, from $265 to $331, amounted to $66 an acre, an increase of 25 per cent.

World War II started farm values on the first major upward trend since the land boom of 1919-1920. The slight rise during the 1934-1936 period was merely a recovery from the depression crisis of 1932-1933. World War II, just like World War I, was forcing product prices up and this in turn was lifting land values. Corn, which averaged 39 cents a bushel in Iowa in 1939, was up to 58 cents in 1941, to 72 cents in 1942, and to $1.00 in 1944. Those who had bought farms on the bargain counter in the late 1930's not only were getting a rising net income from their farm operations during World War II but they also saw the value of their farms rise slowly at first and then move up fairly fast. Average values, starting at $88 an acre in 1941 were up over 50 per cent to $140 an acre at the end of World War II.

Many looked for another land boom and bust after the end of World War II, similar to the aftermath of World War I, but the depression of the 1930's was still a potent deterrent and economic events took a different turn. Actually the ingredients of another land boom were all present with corn prices averaging \$1.84 and \$1.85 a bushel in Iowa in 1947 and 1948. Gross income per farm, which averaged \$7,300 in 1945, shot up to \$11,500 in these same two years. But an active educational campaign against land speculation received a favorable response, especially from those who had recently experienced heavy financial losses from the boom of 1919-1920. Then, too, conditions were different. Instead of a return to "normalcy" in the late 1940's, similar to the postwar years in the 1920's, the Cold War developed and it was followed by the Korean conflict. The economic upsurge caused by these two events maintained high farm product prices and gave added support to farm values. There was a small decline in values during 1952-1953 following the end of the Korean War, but after that values started up again at a fairly steady rate.

At this point a new powerful factor entered the scene in the form of improved farm technology. It took a number of forms but the sum total result was increased production per acre and the ability of the farm operator to handle more acres with improved power and equipment. In short, beginning in the years 1953-1955, the effects of a speeded-up agricultural revolution in farm technology were being felt.

The technological revolution in Iowa farming in the 1953-1967 period has been striking. Evidence to document the change is readily available. First we have corn yields which in the years 1950-1954 averaged 52 bushels an acre, in 1956-1960 averaged 62 bushels, and in 1962-1966 averaged 82. The increase in the averages from 52 to 82 was phenomenal with most of the increase occurring since 1960.

Another startling change was the increase in soybean acreage in recent years, mainly at the expense of oat acreage. The figures on Iowa acreage in millions of acres are as follows:

	Acreage	
	Soybeans	Oats
1953	1.6	5.7
1960	2.6	4.0
1967	5.7	1.8

In this short period of 14 years the position of the two crops has been almost completely reversed. Back in 1953 there was more than three times as much Iowa farm land in oats as in soybeans. In 1967 there was more than three times as much land in soybeans as in oats. The effect of this change on net income and land values can be seen by comparing the average acre return on soybeans at $70 (28 bushels at $2.50) with that on oats at

$35 (50 bushels at .70 cents). Twice as much gross income per acre comes from soybeans as from oats, and a similar relationship holds for net income. Thus the increase in soybean acreage indicates an important reason why farm values have risen dramatically in recent years.

Back of the changes in corn yields and soybean acreage are new technologies in seed, fertilizer, herbicides, pesticides, and other cropping factors. What is important for our purpose is the effect of all these changes on income, because land income changes have a direct effect on land values.

A final and all important feature of the current agricultural revolution as it has been happening in Iowa is the marked change in power and equipment. One can measure this in the size of the farm unit, with the following figures telling much of the story for Iowa:

	Number of Farms	Average Size	Number of Persons Living on Farms
1954	194,623	179	733,196
1960	180,595	192	667,823
1966	149,277	224	577,136

The farm operator who handled 179 acres in 1954 was handling 224 acres in 1966 and will be handling more in the years ahead in all probability. It is not just more power and larger machinery, it is also new types adapted to new cropping practices.

The effect of the new power and machinery technology has been recorded in the increased demand by farmers to expand the size of their farms. Farm enlargement as a bullish land value factor was first reported in the 1955 annual farm value survey conducted each year since 1942 by the Agricultural Experiment Station at Iowa State University. The survey report for November 1, 1955, showed values up $10 an acre over values a year earlier, with the following comment:

> The pressure of farm owners wanting additional land to enlarge their present farms was a strong factor in the rising values. In most cases these farmers have enough machinery and labor to operate larger farms than they now have. And they're often willing to pay more than the prevailing market price to get an adjoining tract of unimproved land.

In each of the succeeding annual broker surveys, from 1956 through 1966, farm enlargement has been emphasized by the brokers as an important factor in the market in pushing farm values higher. Even in 1960 when values declined, pressure to expand farm size was reported as a bullish factor preventing values from going lower.

In 1966 when farm values advanced 13 per cent to the highest point on record, farm enlargement was listed by the brokers as the major cause, as indicated by this statement in the report:

> Again this year, farm enlargement was reported as the most important factor in increasing land values. About 84 percent of the participating brokers indicated that the

desire to enlarge existing units by successful farmers was the major reason for higher values in 1966. The willingness of many farmers to pay higher prices for adjoining tracts was definitely the most important cause of higher land values in the North Central Grain region, while it was not as important in Southern Pasture.

In 1964 a significant event concerning Iowa land values occurred and one which received little notice at the time. In this year the average value of Iowa farms climbed above the 1920 land boom peak of $255 an acre to $265 an acre. In each year since a new high point has been reached.
presented in the center spread, farm values

For the farm owner of 1967, who bought a farm during the 1930's or held on to his farm during those years, the contrast between conditions now and then is almost too great to believe possible. The farm bought in the 1930's has increased from around $85 an acre to an average of $331, an increase of almost four times. If it were a 200 acre farm, the value has gone up from around $17,000 to $66,000.

With farm values at an alltime high in 1966-1967 the question in the minds of many present and prospective farm owners is where are values likely to go from here. It is impossible, of course, to forsee the future clearly, but it is possible to get some insight into the likely trend of the years ahead. This can be done by taking a hard look at the factors which make land value.

What Makes Farm Value

The value of a farm depends mainly on what it will produce. Back of production is soil, climate, fertilizer and other productivity factors. In terms of soil and climate, Iowa has been fortunate, being blessed with fertile soil and a reasonably good climate for crop production.

A comparison of Iowa's soil productivity with that of other states is provided by a preliminary classification of all land into five grades made by the National Resources Board and published in their report for 1934. Iowa ranked at the top of the 48 states with one-fourth of all the Grade 1 or best land in the country. The list of the top six states in Grade 1 land, which follows, shows that all six states are located in a solid block in the Corn Belt and that Iowa is far in the lead:

State	Millions of Acres	Per Cent
Iowa	26.0	25.7%
Illinois	14.8	14.6
Minnesota	12.0	11.9
Missouri	8.7	8.7
Nebraska	8.1	8.0
Indiana	5.2	5.2
Other	25.2	25.9
Total	100.0	100.0

Production, of course, is not the only factor which makes value. There are intangible factors like location, type of road, community, and the like, but year in and year out the crucial question in valuing a farm is what it will produce, and what will it give the owner in net income.

The best way to measure net income to farm land and buildings is to figure what the return in dollars per acre is to a landlord who rents the farm out on terms common to the area. Owner-operator income is more difficult to measure than landlord income because of numerous owner-operator income and expense items which are not related to land value. Livestock returns can vary tremendously depending on the owner's ability and losses from disease, factors which generally do not influence landlord income.

The relationship between net income and value has been a helpful one down through the years. In one sense this expresses the difference between the right to the net return in one year and the right to the net return for all years in the future which is farm ownership.

An easy way to state the income-value relation is with an example. A farm with an average net return of $5 an acre a year is valued at $100 an acre. In this case the relationship of income to value is 1 to 20, or in percentage terms the net income is five per cent of the value. What is important is that the owner is getting a return of five per cent on an investment of $100 an acre.

The relationship or rate of return on farms in Iowa has been far from constant over the years. Some wide swings in percentage return are shown by the following Iowa figures:

Per Acre Returns

	Value	Net Income	Percentage or Rate
1920	$255	$7.60	3%
1941	88	4.45	5
1966	331	14.90	4½

What is particularly important in these figures is the low rate of return received by owners in 1920 at the top of the land boom. This brings out the highly speculative level of farm values during the boom period when buyers bid up the price of farms to a point where they were only getting three per cent return on their land investment. At this same time the current rate on farm mortgages in Iowa was 6 per cent. What buyers were betting on was increased income and increased values in the future. In short, they expected farm values to continue going up in the future as in the past.

In 1941 and 1966, on the other hand, the return received by an owner of a farm bought in each of these years was much higher. Since farm mortgage interest rates were higher in 1966 (6 per cent) than in 1941 (4½ per cent), it is clear that more people anticipated an increase in value in 1966 than in 1941. In 1941 the country had just come through 20 years of declining or low values, while in 1966 it had just come through 26 years in which values rose in all but four years.

The 1966 buyer was counting, to some extent, on net income going up in the years ahead which in turn would cause farm values to go up. This same buyer hoped that he would have the same experience in the next ten years as the 1956 buyer who bought at $220 an acre a farm that was worth $331 an acre in 1966. The latter buyer would have a clear gain of $111 an acre if he sold his farm in 1966. Also with present yields and cropping practices he would be making around $15 an acre net return compared to $11 back in 1956.

Looking ahead, therefore, expectations of future values should be based on an estimation of what net income will be in the future. This will depend on crop yields, cropping practices, product prices, farm expenses, and farm size in acres. Second, the current rate of return should be noted—figuring the percentage return on the price paid for a farm today. Comparing this rate of return with present and estimated future interest rates we can see to what extent buyers are counting on future increases in net incomes to justify and support present values.

In 1967 the future for net income looks good, much better than in the 1950's. To be sure expenses are going up, but so are yields and the size of a farm which a farmer can operate efficiently.

On net income we can conclude that if improvements in technology continue as in recent years and the demand for farm products continues to show strength, it is likely that these two factors will outweigh the downward pressure of increased farm expenses.

On the rate of return the situation is one that bears watching. We are, it is true, far above the three per cent return of 1920, but the purchaser today must pay a higher rate on his mortgage than he is receiving on his land investment—6 per cent versus $4\frac{1}{2}$ per cent.

The most favorable factor of all in the present land market is the absence of speculation. Buyers today, in most cases, are buying farm land to operate or to keep as an investment, not buying, as in 1920, to hold for a short time and to sell at a profit. The emphasis now is mainly on rate of return and not on gain from buying and selling. Mortgage lenders and bankers are insisting, in the main, on sound financing practices.

Farm land values in 1967 at their highest point in history certainly provide no bargain. On the other hand, for the capable operator of an efficient-sized farm, they are reasonably well supported by present net income and the future outlook for farm product prices.

Variations Within The State

Iowans have always been conscious of different qualities of farm land in the state. In the early years, as explained in the Public Land Sale chapter, settlers preferred land with a combination of timber, dry prairie, water, and closeness to a navigable river. Later, in the 1860-1900 period, with the coming of the railroads and improved methods of drainage, the quality preference shifted to the level and undulating tillable lands of rich soil which were usually distant from timber and water.

Even in the last 50 years there has been a marked shift in the quality preference as indicated by farm values. Attention was drawn to the quality factor by the foreclosures and other cases where lending agencies acquired mortgaged farms during the depression years 1921-1940. These lenders, principally insurance companies and the Federal Land Bank of Omaha, wanted to know if they could do a better job in lending on farms in the future. Accordingly, they cooperated with the agricultural experiment stations, including the one at Iowa State University, in studies designed to improve appraisals for farm loans.

In these studies it became apparent that the lower valued lands, with some exceptions, had been over valued and the loans placed on them had been excessive compared to the loans on the better grades of farm land. Concrete evidence on this point was provided by the percentage of corporate land (land owned by lending agencies) that existed in each county. The corporate land map for the state in 1939 showed a much higher percentage in the counties of below average farm values. Where this did not occur, as in parts of northeast and southeast Iowa, it was due to the fact that farm lands in these areas were recognized as not being capable of supporting farm mortgage loans out of line with soil productivity.

Unfortunately, the appraisal policy prior to 1930 had not given a correct estimate of soil productivity, especially in relation to erosion and drainage aspects. Not enough discount on land valuation had been made for thin soil on rolling land and poorly drained areas. For example, a thin or wet soil was given a $70 an acre loan while a deep rich soil was given a $100 loan. When the depression hit, farm owners had to farm their soils hard to get maximum production to pay taxes and interest. This resulted in severe erosion on the rolling farms with an eventual decline in productivity, which left the farm owners unable to meet the interest on relatively high mortgage loans.

An example of the faulty loan policy is readily available in a comparison of the corporate acreage in some of the southern Iowa counties compared with some central Iowa counties. Thus, in 1939, in one group of seven southern counties corporations owned an average of 24 per cent per county, while a group of seven central Iowa counties averaged only nine. The value per acre of the southern counties in 1940 was $42, while in the central counties it was $106. A state soil erosion map showed heavy erosion in southern and western areas, the same areas where corporate land holdings were heavy in 1939. In northern Iowa the heavy corporate land holdings resulted not from over valuation of areas subject to erosion but to failure to allow for drainage problems, depth of surface soil, and other soil productivity factors.

A new emphasis on soil productivity came out of these studies. In fact, a new method of farm appraisal called the "Productivity Method" developed. In essence, the shift to productivity was recognition of crop yields and net income as more important than sale values in determining valuations for loans. As a consequence, productivity in appraisal was introduced into the textbooks and was adopted and practiced by the lenders and their appraisers beginning in the middle 1930's.

An example from the Federal Land Bank of Omaha's lending experience in Iowa illustrates how the new emphasis on productivity worked. The example covers a four county district in north central Iowa analyzed by Aaron G. Nelson with the following results:

Quality of Land

	High	Medium	Low
Average Loan			
1917-1932	$77	$78	$73
Foreclosures	8%	7%	23%
Average Loan			
1933-1936	$63	$58	$50
1937-1941	67	59	48

Loans after 1932 were spread wider to reflect the difference in productivity and income potential of the high and low grades of land.

Variations in farm values within the state differ widely. A spectacular increase in the values in northern Iowa as compared to southern Iowa took place after 1910. What happened can be shown by comparing two counties—Hancock County in northern Iowa and Wayne County on the southern border. The farm value figures for these two counties in 1910 and 1966 show the dramatic change which occurred:

Farm Values Per Acre

	1910	1966
Hancock County	$71	$422
Wayne County	72	161
State of Iowa	96	331

In this period Hancock County values rose from a level the same as Wayne and below the state average to a level two and one-half times Wayne County and almost 25 per cent above the state average.

For an answer to the rapid rise in land value in northern Iowa we have to go to the expansion of corn acreage and production which has occurred in this area. North central Iowa was poorly drained originally and drainage improvements have been a continual process over the years. Evidence of the progress is revealed by the following figures:

Corn Acreage

	1909	1966
Hancock County	81,000	124,000
Wayne County	77,000	49,000

Hancock County had only slightly more corn acreage than Wayne in 1909 but had two and one-half times as much in 1966. While Hancock was having extensive investments made in drainage, Wayne was experiencing heavy losses from erosion.

Value changes for other northern and southern counties, which show similar results, can be noted with the use of the Federal Census values by counties which appear in a table in the center spread of this article.

A recent and entirely different type of variation in farm values within the state is the change which is taking place around the large cities in Iowa. The change is particularly noticeable around those cities which have been expanding rapidly in population. A comparison of Polk and Story counties in central Iowa gives some indication of what is happening. The City of Des Moines with 209,000 in population is located in Polk County and the City of Ames with a population of 27,000 is located in Story County. The farm value figures for the two counties are:

Farm Values Per Acre

	Polk	Story
1950	$219	$224
1954	272	278
1959	372	351
1964	391	384

Polk County, with the larger area of land around it with rising values, has pushed ahead of Story County where there is not as much urban influence. These figures, of course, give only an indication of the more rapid rise around the cities. If the areas around the cities could be sampled by themselves the results would show the rapid rise even more conclusively.

Farm value comparisons within the state can be highly useful to farm owners, lenders, assessors, and others affected by value changes. To make good comparisons, however, it is important to have reliable figures. Actually, an extensive array of farm value figures are now available, in a much greater supply than formerly existed.

From 1850 to 1940 the only comparison figures available were the Federal Census reports which were obtained every 10 years until 1925 when the five-year series started. These Census values have been obtained by asking the farm operator the market value of the farm he is operating. With a complete record of these county-by-county data, presented in the center spread, farm values in any Iowa county can be traced back from November 1964 to the first Federal Census in the county. Comparisons over a period of census years can be made between counties, as illustrated in the case of Hancock and Wayne counties.

Beginning in 1912 the United States Department of Agriculture estimated an index of farm real estate values for each state. This series, which has continued to the present, does not provide any district or county figures within the state. At first this index was issued only once a year (on March 1), but in recent years indexes have been published for November 1 and in some cases for July 1 also. These indexes appear in a publication entitled, *Developments in the Real Estate Market*.

Beginning in 1941, and continuing to the present, the Agricultural Experiment Station at Iowa State University has issued annually as of November 1 farm value figures for five types of farming areas in the state. The boundaries of these five areas, which follow county lines, are shown in an accompanying state map. A major objective of these annual surveys of farm brokers is to provide not only area averages but also values for high grade and low grade farms as well. Thus, each year 15 values are given—three values by grade in each of the five areas. Beginning in 1957, the results of these same surveys were broken down into nine crop reporting districts, also with three grade values in each district.

Another useful aid is a report issued four times a year by the Federal Reserve Bank of Chicago which shows farm value changes in percentage terms for the five farm type areas in Iowa.

As a result of state legislative action in 1961, the State Tax Commission began collecting details on each real estate sale, either by deed or contract, as part of an assessment-sale ratio study aimed at improving assessment uniformity. Annual reports have been published by the Tax Commission, beginning with the report for 1962, which include sales information by counties for both urban and rural sales, and with the rural sales not only broken down into deeds and contracts but each of these groups divided into improved and unimproved tracts.

At first thought these actual sales figures issued by the State Tax Commission might appear to be the most nearly accurate data available on the farm land market, especially since they include all deed and contract sales recorded. This is not necessarily true because to be reliable averages the sales would have to be representative of the different grades of land present in the county or township. It is common, in some areas, for more of the medium or low grade farms to sell than of the high grade which are often tightly held by families and passed down from one generation to the next without being recorded as a bona fide sale. On this account it happens frequently that the average of all sales is below what would have been the average if a proper proportion of high grade farms were included in the sales total.

On the other hand, these farm sales do provide a wealth of information and to the extent that they include the same biased representation each year they do give an excellent indication of year to year changes. In addition, these sales are the best source available on the proportion of deeds and contracts. They also allow a comparison of improved and unimproved land sales, all on a county basis, and with some comparisons being made on a township basis.

Estimating A Farm's Value

What is the value of a farm now and what was it in some earlier year? This question is frequently asked not only out of pure curiosity but for more practical reasons. A farm estate may have to be settled with no way to calculate the capital gain or loss without establishing a value in some former year. Another case is the farm buyer or seller who wants to estimate present value by using a sale in some previous year.

The first example is finding the value in some former year, in this instance, estimating the value of a farm in March 1913. We can take any county and for our example will select Cherokee County. First, the Cherokee County value for 1910 from the Census was $114 an acre. To get to 1913 we use the United States Department of Agriculture estimate which shows the state average in 1913 to be $118 as compared to $96 in 1910, an increase of 23 per cent. When we apply this 23 per cent to the Cherokee County figure of $114 we get an average value for Cherokee County in 1913 of $140 an acre. If our farm is about 10 per cent above the county average, the value in 1913 was about $155 an acre.

The year 1913 was selected for this example because it is frequently the year for which values are wanted in determining capital gains and losses on Federal income taxes. The Federal Income Tax Law, which went into effect in 1913, uses this year as its base for valuations, and it does not require the taxpayer to use any years prior to 1913, unless the value before 1913 was higher, which is not likely in Iowa.

We can find the November 1966 value for our Cherokee County farm by starting with the Federal Census figure for November 1964 which was $303 an acre. The annual farm broker survey published by Iowa State University shows for the Northwest District (which includes Cherokee County) an increase from 1964 to 1966 of 25 per cent. A 25 per cent increase of $303 brings the Cherokee average in 1966 to $379 an acre. If our farm is still 10 per cent above the county average, which we will assume is the situation, then the estimated market value of our farm in November 1966 was $420 an acre.

Instead of using the Federal Census we can use the annual broker figures after 1940. If our Cherokee County farm sold in the fall of 1952 for $275 an acre, what was its value in November 1966? The 1952 broker survey figure for the Western Livestock area, which includes Cherokee County, was $224, and the 1966 figure was $340. Since our farm at $275 in 1952 was 23 per cent above the district average, the November 1966 estimate would be 23 per cent higher than $340 or $418, which we will round off at $420 an acre. This $420 figure assumes, of course, that no major changes, like a new set of buildings, has occurred on the farm between 1952 and 1966. If they have, an adjustment is necessary. As an example new buildings erected in 1964 might raise the 1964 value by $40 an acre, to a market value estimate of $460.

Sometimes we want to estimate the value of a farm which is far below or far above the county average. This can be done by using the high grade and low grade broker estimates. If we have a Cedar County farm which sold for only $130 an acre in 1958 (the 1959 Federal Census average was $343), we can refer to our broker estimates for low grade land to obtain an estimate for 1966. We find the low grade estimate for the East Central District in 1958 was $143 and for 1966 was $201. Our farm is nine per cent below the district which means a 1966 value estimate of around $185 an acre.

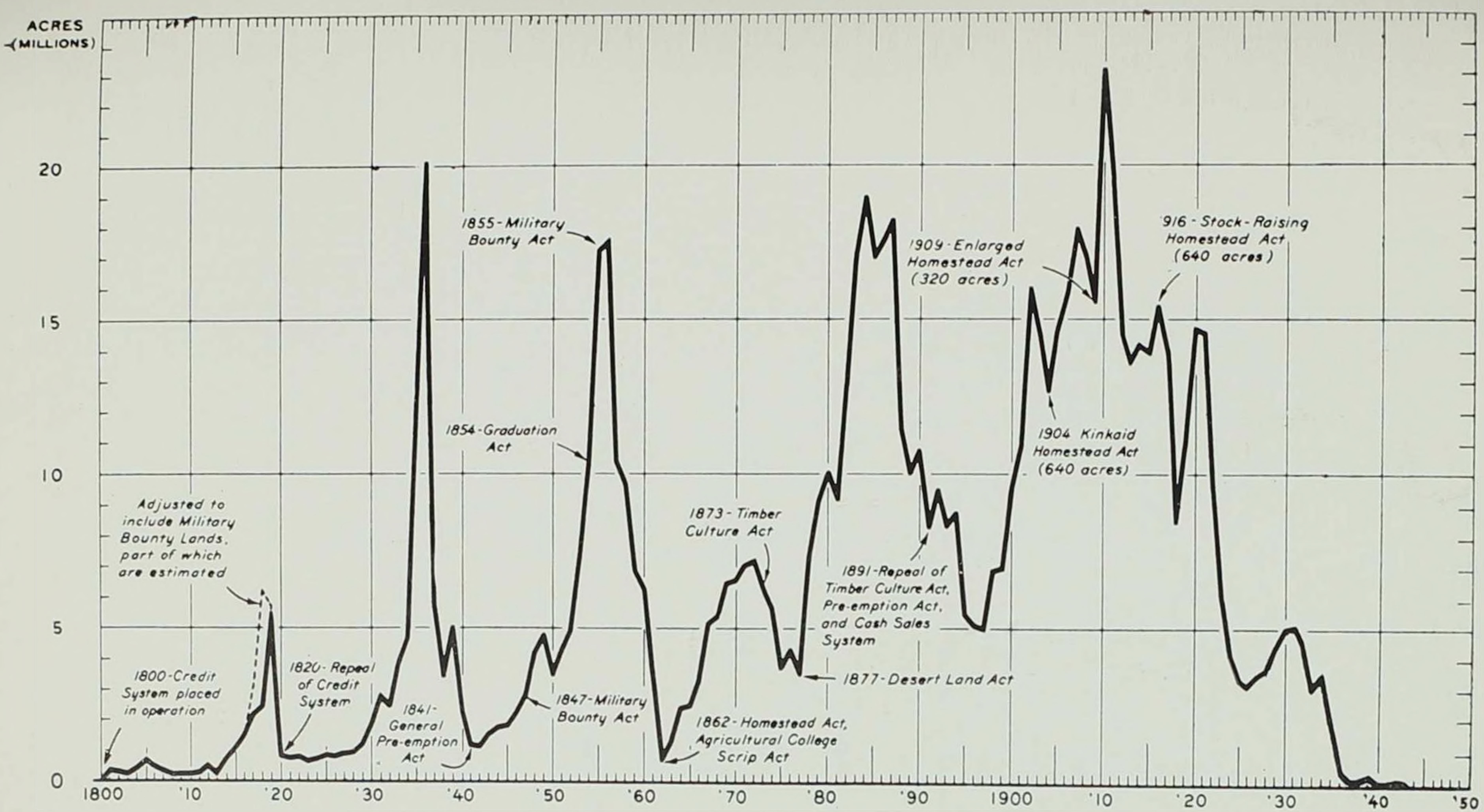
If, on the other hand, we had a Cedar County farm which sold in 1958 for $500 an acre, with no major changes between 1958 and 1966, then we would turn to the broker estimates for high grade farms in the East Central District which were $440 in 1958 and $525 in 1966. In this example the farm is 14 per cent higher than the district which gives a 1966 estimate of $600 an acre.

One final word of caution should be added. All of the figures—from the Federal Census, brokers, U. S. Department of Agriculture, Federal Reserve Bank of Chicago, and actual sales— are estimates and should be treated as such. It is not only extremely difficult to get an average value for a large group of farms of which only a few have been sold in any one year, but it is also true for the value of an individual farm on any given day as is evident when a farm is sold at auction.

Our market value estimates, we will grant, are only approximate, but it is important to remember that we do have to make decisions on farm values —in buying and selling, in assessing for property taxes, in condemning for highways and other public use, and in appraising for loans. In all these operations we need the best information we can get on market values and the factors which cause them to change.

It is encouraging to note the progress we have made, especially in the last 30 years, in providing more farm value estimates and a better understanding of what lies behind them. But this is not enough! We must continue to press forward in our study of farm value estimates because there is much improvement still to be made, as the situation in property tax assessments so clearly indicates. Iowa's farm value, the state's greatest resource with a price tag of $12 billion, deserves more rigorous study than given it in the past.

ORIGINAL LAND ENTRIES, 1800-1943



Original sales of public land in the United States by the Federal government.