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Volume Author/Editor: Lawrence A. Jones and David Durand

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Chapter Author: Lawrence A. Jones, David Durand

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OTHER AREAS: DAIRYING, TRUCK AND FRUIT,
TOBACCO, AND GENERAL FARMING

The Northeast

THE Northeast (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania), like the eastern Cotton Belt, is one of the earlier-settled sections of the country, and its agriculture, too, has faced substantial competition from newer areas. On the whole, however, adjustments appear to have been less difficult in the Northeast than elsewhere, and although they continued throughout the interwar period, agriculture probably suffered less there during the twenties and thirties than in most other sections of the country.

Fundamentally, the greater part of the Northeast is best suited to the production of grass—the basis of the region's dairy industry. The climate is cool and moist. Over wide areas soils are heavy, acid in reaction, and imperfectly to poorly drained. In addition, some of them are thin and stony. Much of the topography is too rough and hilly to permit efficient use of modern farm machinery. There are, of course, important areas with well-drained soils and level to gently rolling topography that are well adapted to crop production.

During the period of settlement and until about 1880 the Northeast produced a wide variety of agricultural products. But as newer and better farming areas developed in the West, northeastern farmers found themselves at a competitive disadvantage in producing the more concentrated agricultural products such as grains, meat, cheese, butter, and wool. Furthermore, as agricultural technology and transportation facilities improved, this competitive disadvantage increased. Northeastern agriculture met the new competition in two ways: first, by shifting population out of farming entirely or into part-time farming; second, by concentrating on those products in the production of which the region still enjoyed a comparative advantage. The adjustment of northeastern agriculture was greatly facilitated by the expansion of business and industry in the region.

One of the major effects of industrialization on northeastern

agriculture was the provision of nearby nonfarm job opportunities. Many farmers on marginal land were able to find work in the growing towns and cities. Some remained on their farms, terminating their farming operations entirely or reducing them to a part-time basis; others actually abandoned their farms. With the improvement of transportation facilities, particularly the automobile and the all-weather road, many farmhouses once abandoned were repaired and reoccupied by nonfarm workers, and new homes were built in the open country. As a result the substantial decrease in the farm population, particularly during the decade of the twenties and again in the forties, was more than offset by an increase in rural nonfarm population. This had a stabilizing effect on land values.

A second major impact of industrialization on the agriculture of the Northeast was the expansion of markets for certain bulky, perishable products that are fairly well adapted to the soils and climate of the region. Of these fluid milk is the foremost, but poultry, eggs, fruits, and vegetables are also important. Except for a few areas where soils and climatic conditions are especially well suited to the production of specialty crops (principally fruits and vegetables), most farmers in the Northeast are engaged in dairying, either as the sole enterprise or combined with poultry or cash crops (see color map). One of the specialized crop areas is Aroostook county, Maine, where a cool climate, a long growing season, adequate and regular rainfall, and well-adapted soils encourage intensive potato production. Another such area is that along the southern shores of Lake Ontario and Lake Erie, where deep, well-drained soils and climate tempered by the lakes provide excellent conditions for orchards and vineyards. Finally, some of the sandy soils of the New Jersey coastal plain are well suited for truck farming.

Partly because of excellent nearby markets and partly because of the type of farming engaged in, prices received by farmers in the Northeast were somewhat more stable during the interwar period than in many other parts of the United States.¹ Although agricultural prices during the World War I period rose in the Northeast as much as in most major regions,

¹ During the depression years 1930-34 the index numbers of prices received by United States farmers for dairy products averaged 105 (1910-14 = 100). Indexes for poultry and eggs averaged 94, for fruit 98, and for truck crops 104. The average for all livestock products was 91 and for all crops 84. See *The Agricultural Situation* (Bureau of Agricultural Economics), Vol. 37, No. 1 (January 1953), page 15.

the subsequent decline was much less severe. In fact the index of farm prices in the Northeast remained above the United States average for the entire interwar period.

The farm real estate market in the northeastern states also exhibited great relative stability. In the high year 1920, farm real estate values had risen only 37 percent above the 1912-14 level, whereas the United States average had risen 73 percent.² Mortgage debt also rose moderately in the Northeast during the World War I period, increasing only 78 percent from 1910 to the peak year, 1923,³ while there was a 236 percent rise for the United States as a whole. When land values declined after World War I, the decrease by 1933 averaged only 26 percent for the Northeast, as against 57 percent for the entire nation.

On the whole, mortgage experience in the Northeast was good to excellent. Statewide distress transfer rates per thousand farms during 1925-39 were low for all the nine states in the region. Indeed, four of the states—Massachusetts, Rhode Island, New Hampshire, and Connecticut—had the lowest rates in the entire nation (Figure 6, Chapter 1). There were few bank suspensions in the Northeast during the twenties (Figure 16), and bank deposits either increased, or decreased relatively little, over most of the region during 1920-33 (Figure 18). Banking statistics, to be sure, do not reflect agricultural conditions in the Northeast so well as in many other parts of the country, because in all but a few areas, such as Aroostook county, Maine, business and industry dominate the commercial banking picture.

Since insurance companies did very little farm mortgage lending in the Northeast during the interwar period, their experience is hardly significant. But the land banks did a good deal of business, and their foreclosure and loss rates (Figures 9 and 10, Chapter 1) show considerable variation in mortgage experience within the region. In general, experience was quite good, especially loss experience, in the area designated A in Figure 23 and comprising southern New England, the Hudson River valley, northern New Jersey, and eastern Pennsylvania.

² *The Farm Real Estate Market* (Bureau of Agricultural Economics), July 1953, Table 9, pp. 22 f.

³ Donald C. Horton, Harald C. Larsen, and Norman J. Wall, *Farm-Mortgage Credit Facilities in the United States* (Bureau of Agricultural Economics, Misc. Pub. No. 478, 1942), pp. 219 f.

Western New York and northwestern Pennsylvania had relatively poor experience, as did most of southern and central Maine. In Aroostook county (northern Maine) land bank foreclosures were heavy but losses comparatively small. Commissioner losses were heavy there, however (Figure 11).

The relatively good experience in areas adjacent to Boston, New York, and Philadelphia is primarily the result of proximity to great centers of population. The metropolitan centers provide excellent markets for farm products, many opportunities for off-farm employment, and an active demand for farms to be used as rural residences.

In central and southern Maine, where land bank experience was poor, soils are not very productive and much of the topography is rough. Although fairly prosperous in times of high prices, the agriculture in most of the area has been declining for the past half century. That the long-term trend was not always recognized probably constitutes the main explanation for the relatively heavy foreclosure and loss rates by the land bank on its early loans.

Aroostook county, the specialized potato-producing section of northern Maine, is identified as area IX-C1 on the color map. Unstable potato prices, accentuated by the long distance from markets, constitute a high risk factor.⁴ With heavy land bank foreclosures, losses were nevertheless moderate during the inter-war period (Figures 9 and 10, Chapter 1). It was on Land Bank Commissioner loans, which were made after 1933, that loss rates were relatively high (Figure 11). During the early and middle thirties, when there were several successive years of low prices, mortgage distress was severe.

The southern tier of counties in western New York and the adjoining counties in northern Pennsylvania are illustrative of an early-settled area where farm mortgage distress resulted mainly from a failure to foresee the difficulty agriculture would have in adjusting to changing competitive conditions. Until near the end of the nineteenth century the farmers of that area, which lies in the foothills of the Alleghenies, were making a fair living by selling their milk to local butter and cheese factories. In addition they sold some hay, potatoes, and other crops to supplement their dairy income. But strong competi-

⁴ For a discussion of the economic problems of potato producers, see *Farm Credit in Aroostook County, Maine*, by Charles H. Merchant (University of Maine Agricultural Experiment Station, Bulletin 418, April 1943).

tion, beginning about 1880, developed from the Lake states in butter and cheese production, and from the Corn Belt and the more productive parts of the Northeast with other agricultural commodities. Then, between 1910 and 1920, the development of automotive power began to reduce the demand for cash hay. All this bore heavily on the hill farmers of southern New York and northern Pennsylvania. Their plight was aggravated, moreover, by heavy acid soils suited only to a limited range of crops, by rough topography unsuited to the use of modern farm machinery, and by inaccessibility during much of the year due to poor roads. Many unproductive hill farms were abandoned. As late as the decade between 1920 and 1930 the acreage in farms in both New York and Pennsylvania decreased approximately 13 percent.⁵ The largest acreage abandoned was in the Allegheny plateau of southern New York and northern Pennsylvania.

Loan experience was poor not only in the southern tier of counties in western New York but also in the section lying between them and Lake Ontario (areas I-B6 and IV-D2 on the color map). It is a section of generally much better farming country than the Allegheny plateau, with substantial acreages of land well adapted to the production of cash crops as well as to dairying. Fruit growing is important along the south shore of Lake Ontario, and elsewhere such cash crops as cabbage, potatoes, fresh vegetables, canning crops, dry beans, and wheat are common. Prices received by farmers for most of these crops are subject to wide fluctuations, whereas the cash costs of production are usually substantial and relatively inflexible. Farm incomes therefore fluctuate violently, which often leads to debt difficulties. A further important factor contributing to debt difficulty in the western New York cash crop area is wide variations in soil, which often occur within short distances. In the vicinity of productive land, farmers and appraisers have frequently overrated the debt carrying capacity of soils not well suited to the production of the crops commonly grown in the area. The hazard is especially serious in the case of intensive crops with heavy annual cash costs of production.

Appalachian States

The seven states Tennessee, Kentucky, North Carolina, Virginia, West Virginia, Maryland, and Delaware form a region

⁵ 16th Census: 1940, *Agriculture*, Vol. 3, Table 18, pp. 53 f.

whose main physical feature is the Appalachian mountains and where general farming is the characteristic type. Soils of the region range from the sandy soils of the coastal plain and the thin, unproductive soils of the mountain areas to the fertile lands of the blue grass section of north central Kentucky. Length of growing season varies from more than 250 days in parts of the tidewater area of North Carolina to less than 150 days in the northern part of the mountainous area that extends northeastward through the region from eastern Tennessee and western North Carolina into southwestern Pennsylvania. Rainfall, which averages from 30 to 55 inches annually, is generally adequate for crop production.⁶

The color map shows several specialized types of farming in the Appalachian region—cotton, tobacco, dairy, fruit, and truck. General farming predominates, however, including livestock-tobacco, livestock-dairy, and truck-livestock-tobacco combinations. There is also a large area in the Appalachian mountains devoted to small-scale farming of a largely self-sufficing type.

Although distress transfers per thousand farms were below the United States average in all seven of the Appalachian states (Figure 6, Chapter 1), distress transfers per thousand *mortgaged* farms were above the United States average in five of the states (Figure 7). In particular, North Carolina and Virginia were rather substantially above the average. Yet there were no large areas of severe debt distress such as existed in the Great Plains and Mountain region and in the Corn and Cotton Belts. This was due in part to the prevalence of small-scale, largely self-sufficient farms that neither require much credit nor are considered good credit risks by institutional lenders. The highest loss and foreclosure rates in the region appear to have been in some of the specialized tobacco, fruit, and vegetable sections where cash operating costs per acre are high and prices received for the commodities produced are extremely variable (Figures 8-13). Also there were debt troubles in the fringes between productive and unproductive farming areas, where it is not uncommon to make mistakes in loan appraisals.

Western Kentucky and several adjoining counties in northwestern Tennessee accounted for much of the farm mortgage distress occurring in those two states. The difficulties were prob-

⁶ *Climate and Man*, Yearbook of Agriculture, 1941 (U.S. Department of Agriculture).

ably connected with specialization in western fire-cured and other types of export tobacco. During the twenties the foreign market for dark tobacco declined and prices decreased sharply. The farm value of western fire-cured tobacco produced in Kentucky dropped from over \$12 million in 1919 to an average of \$4.4 million in the twenties and to an average of only \$1.5 million in the thirties.⁷ Experience with insurance company loans indicates that there was considerable farm mortgage distress in western Kentucky as early as 1929 (Figure 12).

In the heart of the blue grass area of north central Kentucky and in the Tennessee central basin there were relatively few farm foreclosures and distress transfers (areas VIII-B₁ and VI-J₁ on the color map). Conditions in the two areas are quite similar.⁸ Soils and climate are suited to a variety of farm enterprises including livestock, dairy, tobacco, corn, and wheat. Burley tobacco, a very important crop in both sections, is raised primarily for domestic markets and did not experience the sharp price decline of the dark tobaccos. In localities in the Tennessee basin specializing in cotton, however, and in the less productive counties on the edge of the basin, some foreclosures by insurance companies occurred.

The cotton-producing section of western Tennessee had favorable experience with land bank and insurance company loans, as compared to other sections of the central and eastern Cotton Belt. Its topography is undulating to rolling, and the silt and clay loams are generally productive. Markets and transportation facilities are good. The fact that western Tennessee has not been dependent on cotton alone, but has some dairy, livestock, truck, and cash grain farming, partly explains its good experience.

East of Kentucky are the limestone valleys that extend in a northeasterly direction along the eastern Tennessee and western Virginia boundaries. The experience of the land banks and of insurance companies in these valleys has generally been good. The area has few hazards of production, and wide diversity in

⁷ A. J. Brown and Dana G. Card, *Thirty Years of Farm Prices and Production in Kentucky* (University of Kentucky Agricultural Experiment Station, Bulletin 403, May 1940), p. 273.

⁸ For a description of Kentucky and Tennessee agriculture, see *Types of Farming in Kentucky*, by Bruce Poundstone and Walter J. Roth (University of Kentucky Agricultural Experiment Station, Bulletin 357, June 1935), and *Types of Farming in Tennessee*, by B. H. Leubke, S. W. Atkins, C. E. Allred, and W. J. Roth (University of Tennessee Agricultural Experiment Station, Bulletin 169, April 1939).

types of farming helps to spread the price risk. Land values neither increased as much during World War I nor declined as much in the subsequent deflation as they did in many places where farming was more specialized. The character and background of the people who settled the area, many from Pennsylvania, have been in large part responsible for the generally good soil-conserving practices that are followed—a sharp contrast to the exploitive agriculture that was traditional in the cotton- and tobacco-growing sections of North Carolina and Virginia.

There was some farm mortgage distress in the central and eastern portions of North Carolina and Virginia. Flue-cured tobacco is produced in an important specialized crop area in the central coastal plains and piedmont of North Carolina extending northward into south central Virginia. Farmers in the area did fairly well during the twenties, when the price of tobacco held at about 20 cents per pound, but an appreciable volume of mortgage distress developed in the early thirties when the price dropped to 8 and 10 cents per pound.⁹ In east central Virginia, where there are many sandy soils of low productivity, the land banks experienced some losses. Heaviest land bank losses, however, were in the Norfolk section of Virginia and in the southern half of the Delaware-Maryland-Virginia peninsula. These areas specialize in the production of truck crops and potatoes, both of which are subject to wide year-to-year price fluctuations with only small changes in production costs. In the two counties near Norfolk extensive land drainage systems, involving high tax assessments and heavy upkeep expense, were a further factor contributing to debt difficulties.

The relatively good farm mortgage experience in northern Virginia and north central Maryland was due largely to the proximity of urban Washington and Baltimore, whose expanding markets, particularly for fluid milk, helped to sustain agricultural incomes during the depression years.¹⁰

Florida

In northern Florida, where cotton and general farming pre-

⁹ *Agricultural Outlook Charts—1950* (Bureau of Agricultural Economics, 1949), p. 79.

¹⁰ For a description of agriculture in Maryland see *Types of Farming in Maryland*, by A. B. Hamilton and T. D. Johnson (University of Maryland Agricultural Experiment Station, Bulletin 432, February 1940).

dominate, farm mortgage experience appears to have been similar to that in sections of the Cotton Belt immediately to the north, which has been discussed in Chapter 4. Here we shall be concerned only with the experience in the remainder of the state, where agriculture concentrates primarily on fruit and truck crops. Sales of fruit and vegetables amounted in 1944 to approximately 65 percent of the total value of Florida farm products sold.¹¹

In contrast to the United States as a whole, Florida had one of its periods of greatest expansion during the 1920's, particularly in citrus and truck farming. In 1924 farm real estate values began to increase and by 1926 they had risen 25 percent above the 1920 level.¹² Thereafter land values in Florida declined, but when the low point was reached in 1933 they were still above the 1912-14 average and were higher in relation to the postwar peak than were values in the country as a whole. Farm mortgage debt, too, increased spectacularly in Florida during the mid-twenties, more than tripling between 1925 and 1927.¹³ By 1933 such debt had declined nearly 60 percent from the 1927 peak but was still nearly twice the 1920 level.

Despite the sharp increase in total farm mortgage debt that accompanied the Florida real estate boom of the mid-twenties, and the heavy liquidation of debt that followed, the average annual number of distress farm transfers per thousand farms during the period 1925-39 was considerably lower in Florida than in the United States generally (Figure 6, Chapter 1). Moreover, the number of distress farm transfers per thousand farms *mortgaged* in 1930 was also lower than in the United States as a whole (Figure 7). There was, of course, considerable variation in farm mortgage distress both in different parts of the state and among different lenders. Insurance companies held too few farm mortgage loans in Florida during the interwar period for their experience to be significant. Land bank and Commissioner loan experience was somewhat less favorable than would be expected in view of the generally low rate of distress farm transfers in the state.

The Hastings early potato section of northeastern Florida, in which experience with land bank and Commissioner loans

¹¹ *Census of Agriculture: 1945*, Vol. 2, pp. 590-93.

¹² From a release by the Bureau of Agricultural Economics, September 1953.

¹³ Horton et al., *op.cit.*, pp. 220 f.

was relatively poor, is a high risk section that must market its crop within a short period of time to avoid ruinous price competition with other areas. If the Hastings potato crop is much earlier than usual it competes with the last of the southern Florida crop; if it is later than usual it competes with the first of the Alabama and Georgia potato crops. Variations in the growing season sometimes cause wide year-to-year price fluctuations, and in years of low prices losses may be quite heavy, since production costs are relatively high and inflexible. Another northern Florida area in which land bank loan experience was poor is the group of counties in the western part of the state just north of Tampa. A vegetable-growing section, it has experienced increasing difficulty in competing with newer vegetable-producing areas farther south that have better soils and a more favorable climate.

Relatively few loans were made by the land bank in the southern half of Florida in the twenties and up to 1933. Throughout much of that period, land bank loans on citrus groves were based primarily on the value of the land for general agricultural purposes, without regard to the value of existing trees or to the additional value of the land because of its suitability for citrus production. This conservative lending policy restricted both volume and losses up to 1933. In that year the land bank began allowing mortgage loans on citrus groves to be based on the value of the land for citrus production. The change in policy, together with the urgent demand for refinancing that existed at the time, resulted in a considerable volume of land bank and Commissioner loans in the southern half of Florida during 1933-35. Losses on Commissioner loans, which were of an emergency character and usually less well secured than regular land bank loans, were quite heavy (Figure 11, Chapter 1). The high loss rates resulted partly from low prices for citrus fruit during much of the thirties and partly from a severe freeze in December 1934, which killed or damaged large numbers of citrus trees.

Lake States

The Lake states—Michigan, Wisconsin, and Minnesota—include a wide range of climate, soils, and topography.¹⁴ For the

¹⁴ For detailed descriptions of agriculture in the Lake states, see: *Types of Farming in Michigan*, by E. B. Hill, F. T. Riddell, and F. F. Elliott (Michigan State College Agricultural Experiment Station, Special Bulletin 206, December

most part this is a region of cool summers and cold winters. Rainfall is moderate and largely concentrated during the growing season. Topography varies from nearly level to rough, and soils are highly variable, as in all glaciated areas. The region produces a wide variety of crop and livestock products, but sales of dairy products are the largest single source of income.

The main dairy belt in the Lake states occupies most of the southern half of the region.¹⁵ To the north of the dairy belt, and covering roughly the northern half of the three states, is the cut-over country (areas marked IV-C1 on the color map). Along the eastern shore of Lake Michigan there is a fruit, truck, and mixed farming section. The southwestern part of Minnesota is an extension of the Corn Belt, producing cash grain and livestock. The Red River valley of northwestern Minnesota is an extension of the Great Plains, with wheat and general farming.

Farm mortgage distress in the Lake states was quite severe during the interwar period. Northern and central Minnesota, a large part of Wisconsin, and Upper Michigan (extending eastward from the northern Wisconsin border) constituted one of the major farm mortgage trouble spots in the country (Figures 9-13 and Figure 23, Chapter 1). In contrast, experience in southern Minnesota, southeastern Wisconsin, and Lower Michigan was relatively good.¹⁶

Conditions affecting farm mortgage experience in the north-

1930); *Forces Affecting Wisconsin Agriculture with Resulting Types of Farming*, by P. E. McNall and W. J. Roth (University of Wisconsin Agricultural Experiment Station, Research Bulletin 131, November 1935); and *Agricultural Production and Types of Farming in Minnesota*, by Selmer A. Engene and George A. Pond (University of Minnesota Agricultural Experiment Station, Bulletin 347, May 1940).

¹⁵ That is, all of the dairy region of the Lake states as delineated on the color map except the areas designated as IV-C1, "Lake states, cut-over, small-scale." It should be kept in mind that many different crop and livestock enterprises are carried on in the dairy belt, usually, however, in combination with dairying.

¹⁶ Insurance companies made few if any loans in the cut-over areas. In other parts of the Lake states, including southern Minnesota, southern Wisconsin, and the south central part of Lower Michigan, distress ratios were high in a number of counties at the end of 1932 (Figure 13). Losses, however, appear to have been small. During the period 1929-37 thirteen life insurance companies for which data have been made available sold acquired Lake state properties in which they had an investment of \$16.6 million at time of sale. Losses averaged slightly less than 2 percent of that amount. (Investment at time of sale includes capital investment at time of acquisition plus maintenance, improvements, and taxes, less income.)

western and southwestern sections of Minnesota were similar to those discussed in Chapters 2 and 3 dealing with the Great Plains and the Corn Belt. It is mainly to the cut-over and commercial dairy sections of the Lake states that attention will be directed here.

CUT-OVER COUNTRY

The cut-over country, one of the more recently settled sections of the United States, is a distinctive feature of the Lake states. From the standpoint of agricultural production it is not very important. Only a small proportion of the land is in farms, and a small-scale agriculture, partly subsistence in character, predominates. Originally the region was covered with heavy stands of pine, cutting of which extended well into the twentieth century. The peak period of settlement of the cut-over areas in Lower Michigan had been reached by 1910 or earlier. In the cut-over areas of Upper Michigan, Wisconsin, and Minnesota, however, land in farms was still increasing in the decade between 1910 and 1920 (Figure 26, page 64), and settlement continued into the middle twenties.

Much of the once-forested area looked productive, land was lower-priced than in the Corn Belt, and there was a large amount of promotional activity by real estate and lumber interests. During most of the period of settlement, production conditions were good, agricultural prices, particularly for dairy products, were high, and farm land values were rising—all of which stimulated a rush of settlers to the area. Before long the settlers learned that the cut-over country had serious limitations. Removing stumps and stones, constructing buildings, and stocking with livestock often required several years and a substantial cash outlay.¹⁷ The high degree of variability in climate, topography, and especially soil resulted in many mistakes in settlement. Soils of both good and poor quality are found within relatively small areas in the cut-over region—sometimes on the same farm. Hartman and Black state: "One of the chief mistakes made by settlers is to judge the productivity of sandy soils too much on the basis of crops grown or growing in years or seasons when there is an abundance of rain. Likewise, heavy

¹⁷ For a good description of the physical and economic characteristics of the area see *Economic Aspects of Land Settlement in the Cut-Over Region of the Great Lakes*, by W. A. Hartman and J. D. Black (U.S. Department of Agriculture, Circular No. 160, April 1931).

soils are judged during dry seasons when the lack of drainage is not so noticeable."¹⁸

It is not surprising that farm mortgage distress was severe in the cut-over country during the interwar period. Although insurance companies made loans only on the fringes of the area, a high proportion of such loans were in difficulty by the end of 1932 (Figure 13, Chapter 1). The Minnesota Department of Rural Credit suffered heavy losses, especially in central Minnesota, and also in the northern cut-over area. The total loss to the state at the end of 1945 was approximately \$39 million, or nearly two-thirds of the amount originally loaned.¹⁹ Both land bank and Commissioner foreclosures and losses were heavy in the cut-over country of Upper Michigan and northern Wisconsin (Figures 9-11). They were somewhat less severe in the cut-over areas of northern Minnesota and Lower Michigan.

The variations in distress within the cut-over sections of the Lake states are related basically to the time of settlement. Lower Michigan, where experience was relatively favorable, had been settled early, and by World War I it was generally recognized that the northern part was of little agricultural value. This helped to prevent the expansion of debt which occurred in many other cut-over areas. Another section where debt distress was less acute was in the most northern section of Minnesota, the last part of the state to be settled. When settlers arrived, there had been sufficient experience elsewhere to make both farmers and lenders more cautious with respect to farm mortgage debt. Further, it is probable that soils in north Minnesota were on the whole basically more productive than those of northern Wisconsin and Michigan and that farming was attempted only in the better parts of the area.

¹⁸ *Op.cit.*, p. 18.

¹⁹ From *Sales, Collections and Operating Statistics, January 1, 1945 to December 31, 1945*, a report of the Department of Rural Credit of the state of Minnesota. The Department of Rural Credit was created by act of the legislature in 1923. It was authorized to make first mortgage loans on improved or partially improved farm land in amounts ranging from \$500 to \$15,000. The law provided that loans should be limited to 50 percent of the appraised value of the land plus 30 percent of the appraised value of the buildings, the latter not to exceed \$8,000 or 50 percent of the value of the land.

By 1933, when liquidation of the agency was ordered, some \$60 million had been loaned. Loan funds were obtained by the sale of securities to investors. These securities were obligations of the state. See Rural Credit Act, Minnesota Laws, 1923, Chapter 225.

COMMERCIAL DAIRY BELT

The commercial dairy belt of the Lake states was settled earlier than the cut-over region, is more accessible, and contains areas of much better farming land. Yet the dairy belt experienced widespread farm mortgage distress during the interwar period, parts of it having even more serious difficulties than the cut-over country. In general, financial distress stemmed from the large increase in debt that accompanied the expansion of the dairy industry during and just after World War I. Debt was incurred to purchase farms, increase dairy herds, construct buildings, and clear and improve additional land, in many cases without proper consideration for the productive limitations that existed in much of the area. Productivity varied greatly, and the fertility of the thin forest soils prevalent in many sections was easily depleted except under the most careful management. When agricultural prices declined, particularly in the early 1930's, areas where productivity had been overestimated had many mortgage foreclosures.

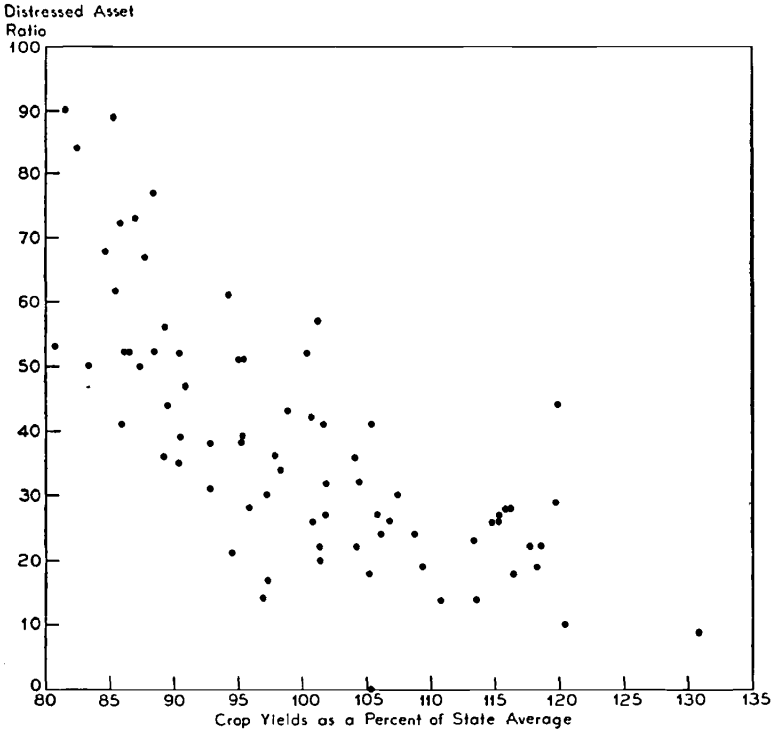
In central Minnesota and central and western Wisconsin there is a belt of counties south of the cut-over area in which land bank, insurance company, and Commissioner loan experience was poor (Figures 9-13, Chapter 1). Soils in substantial areas of central Minnesota are sandy and of low productivity. Rainfall varies from slightly more than 20 inches in the western part of the state to between 25 and 30 inches in the eastern part (Figure 25). Engene and Pond have computed indexes of the amount and variability of crop yields during the period 1918-42 for each county in Minnesota.²⁰ The highest and most stable yields were in the south central part of the state, and there loan experience was good. The lowest and most variable crop yields were in the western counties and in parts of central Minnesota, and there loan experience was poor. The relationship between crop yields and foreclosure rates on insurance company loans is indicated in Figure 36 for all counties except those in the northeastern cut-over section where the insurance companies made few loans. Evidently lenders did not properly appraise differences in productivity resulting from differences in soils and rainfall during the period under review. Central Minnesota has

²⁰ Selmer A. Engene and George A. Pond, *Agricultural Production and Types of Farming in Minnesota* (University of Minnesota Agricultural Experiment Station, Statistical Supplement to Bulletin 347, revised, June 1944), Tables 1 and 2, pp. 4-7.

an intermixture of good and poor soils, which makes accurate appraisals difficult.

Failure to differentiate sufficiently between soils of varying productivity appears also to have been the basic cause of much of the poor mortgage loan experience in central and western

Figure 36. Relation between Crop Yields, 1918-42, and Distressed Farm Assets of 15 Life Insurance Companies, 1932, for 75 Counties in Minnesota



Distressed asset ratios for each county give the amount of assets involved in pending and completed foreclosures as a percentage of the companies' total farm investment there; see Figure 13. Crop yield indexes are from the work of Engene and Pond cited in the text.

Wisconsin. Many of the soils there have a tight subsoil and are highly acid. Others are sandy and yield poorly in dry years, as they did in the thirties. The topography of western Wisconsin, moreover, is rough and rolling, and it is possible that in appraising farms, lenders did not make sufficient allowance for the relatively large percentage of nontillable land on many of them.

In southeastern Wisconsin (area IV-A2 on the color map) land bank and insurance company foreclosure and loss rates were comparatively low. This is a specialized dairy area and perhaps the best farming section in the state. Also it is located close to two large urban centers, Chicago and Milwaukee, which provide a market for large amounts of fluid milk. Prices received by farmers for dairy products during most of the interwar period, and particularly during 1930-34, were higher in relation to the prewar level than prices received for any other major group of crop or livestock products.²¹ Thus dairy farmers, especially those near a market for fluid milk, were better off during the depression years than most other groups of farmers.

Pacific Coast States

The three Pacific Coast states, Washington, Oregon, and California, have a highly diverse agriculture. Intensively farmed areas such as the Puget Sound-Willamette Valley country of western Washington and Oregon and the Sacramento and San Joaquin valleys of central California are separated by vast areas of land which, because of rough topography or lack of rainfall, are suited only to extensive uses such as forestry, range livestock production, or dry farming (see the color map). Products vary from subtropical fruits grown in the warm irrigated valleys of southern California to crops requiring a cool, moist climate such as that in the Puget Sound basin. Individual farm businesses vary from highly diversified to highly specialized, and from small-scale subsistence farms in the cut-over areas of Washington and Oregon to large-scale manager-operated farms in parts of California. With all their variations, many farms on the Pacific Coast have the common characteristic of relatively high and inflexible production costs—mainly the result of intensive cultivation on irrigated land. This inflexible cost structure appears to have been an important factor contributing to mortgage difficulty in some of the more conspicuous trouble spots that developed on the Pacific Coast during the interwar period. Mortgage difficulty was not, however, widespread in the region.

During the interwar period the Pacific Coast states experienced a very substantial growth, which undoubtedly had a stabilizing effect on the agriculture of the region. Between 1920 and 1940 the population in the three states, mainly in their

²¹ *The Agricultural Situation*, Vol. 34, No. 4 (April 1950), p. 15.

western portions, increased over four million, or about 75 percent. For the United States the population increase was 25 percent.²² Bank deposits—a good indicator of general economic conditions—were 90 percent higher in 1929 than in 1919, and even in 1934 were 58 percent above the 1919 level.²³ For the United States the comparable figures were 55 and 24 percent, respectively. In 1941, deposits in the Pacific region were 161 percent higher than in 1919, which compares with 108 percent for the country as a whole.

Loan experience in terms of distress transfers per thousand *mortgaged* farms was appreciably better in the Pacific Coast states than in the United States generally (Figure 7, Chapter 1). Within the region, however, there was considerable variation in insurance company and land bank experience. Very little mortgage distress occurred in a strip of territory along the Coast, about one hundred miles deep, which is designated D in Figure 23 (Chapter 1). On the other hand, considerable distress occurred in the eastern two-thirds of Washington and Oregon (an exception being the Palouse wheat area) and in a few scattered counties of California.

In Washington and Oregon, farming west of the Cascade mountains is located mainly around Puget Sound and in the Willamette valley (areas marked IV-E1 on the color map). In those sections, where mortgage loan experience was favorable, soils are generally fertile, rainfall is adequate, and there is a long growing season. There is also considerable diversity of farm enterprises, which include dairy, poultry, fruit, and vegetable farming. Diversification, together with an expanding population, has provided a degree of stability not shared by many specialized areas. And there were many small family farms, in the western valleys, with small out-of-pocket costs and with opportunities for supplemental off-farm income in lumbering and other local industries; among them farm mortgage distress was relatively low.

In the part of Washington and Oregon east of the Cascades, the large number of farm mortgage foreclosures resulted mainly from two factors: attempts at dry farming in areas normally best suited to grazing, and relatively inflexible production costs associated with irrigation farming and fruit production. Lying

²² *Statistical Abstract of the United States: 1949*, p. 33.

²³ *Banking and Monetary Statistics* (Board of Governors of the Federal Reserve System, 1943), pp. 24-33.

mostly within the Columbia River basin, the area has limited rainfall, averaging from as little as 8 to 10 inches annually just east of the Cascade mountains to about 20 inches along the western border of Idaho (Figure 25, page 62).

In the dry, western portion of the Columbia River basin wheat area (marked III-A₁ and III-B₁ on the color map), including the section in north central Oregon, farm mortgage distress was quite severe, especially in the mid-twenties. During World War I, when wheat prices were high and rainfall was above average, considerable expansion of wheat acreage had occurred. When wheat prices declined after 1920 and yields were more nearly normal, many farmers found themselves in serious financial difficulties. There was a heavy liquidation of farm mortgage debt through foreclosure and assignments, and considerable reorganization of farms into larger holdings that could be operated at lower unit costs with large-scale farm machinery. As a result of the shakedown in the twenties, farm mortgage distress in the thirties was not particularly severe in the western part of the Columbia basin.

In the famous Palouse country, located mainly in Whitman and adjoining counties in the eastern part of the Columbia basin, both climate and soil are well suited to wheat production by dry farming methods, and yields are remarkably high and stable for an area with so little rainfall.²⁴ There the mortgage experience with both land bank and insurance company loans was good.

Many farms in irrigated sections of eastern Washington and Oregon experienced debt distress during the interwar period. Irrigation districts had been developed there, in the main, at relatively high cost and with large bonded debt. The heavy taxes and assessments necessary to cover upkeep and debt payments caused difficulty in periods of low prices. In some irrigated sections, particularly the lower Yakima valley, poor drainage resulted in badly waterlogged soils and lowered production.

²⁴ Wheat and other small grains were formerly grown in the Palouse area almost to the exclusion of other crops. In recent years, however, peas have taken up an increasing acreage. While some are grown for canning and freezing, larger quantities are sold for seed. Most of the pea seed used in the United States now comes from the Palouse region. The pea crop is grown on land which is to be summer-fallowed. It is sown in the early spring and harvested a few weeks later, after which the land is summer-fallowed and sown to wheat in the fall.

In the specialized fruit-producing Wenatchee-Okanogan²⁵ and Yakima areas of central Washington and the Hood River valley of northern Oregon, agricultural distress during the thirties was associated with low prices for fruit, especially apples, and high and relatively inflexible production costs. On the whole the fruit industry in the aforementioned areas had been in a healthy economic condition during the twenties. Apple prices declined drastically in 1930, however, and continued at low levels throughout most of the thirties. Production costs for labor, spray materials, boxes, and irrigation water remained at a relatively high level. According to Black and his associates, "Under normal prewar cost conditions and average yields in this area, it took about 29 cents per box to cover the cash costs, and 7 cents per box more to cover depreciation and the like. Prices in the 1920's were generally enough above this latter figure to cover these costs and leave a good return to the farmer for his management and labor and for his investment. During the 1930's, however, farm prices were below 36 cents a box in five of the years, and 29 cents in three of the years. In 1937, farm prices were 15 cents per box."²⁶ Some farmers, moreover, were producing varieties of apples for which there was little demand.

In California, agricultural production conditions were relatively favorable during the interwar period. Soils in the valleys, where farming is heavily concentrated, are generally good, and because of the widespread use of irrigation, crop failures are infrequent. Furthermore, climate permits the production of subtropical as well as temperate zone crops and the maturing of various fruit and truck crops in seasons when they are not produced in quantity elsewhere.²⁷

The importance of California's rapid population growth and industrial development since 1920 in providing the basic economic conditions favorable to a prosperous agriculture has already been mentioned. Between 1920 and 1940 the population doubled, an increase matched by no other state. Urban employment was available to many part-time farmers, and the demand for farm products, at least those produced for local mar-

²⁵ See *Production, Marketing and Credit Problems of the Wenatchee-Okanogan Fruit Industry* (Farm Credit Administration, April 12, 1949).

²⁶ John D. Black, Marion Clawson, Charles R. Sayre, and Walter W. Wilcox, *Farm Management* (1947), p. 878.

²⁷ See *Types of Farming in California Analyzed by Enterprises*, by L. A. Crawford and Edgar B. Hurd (University of California Agricultural Experiment Station, Bulletin 654, September 1941).

kets, was better maintained than in many other sections of the country. Further, the influx of settlers, many of whom were Midwestern farmers in the market for farms, tended to prevent farm land values from declining seriously.

In California neither insurance companies nor federal land banks were very important lenders during the period under review. In 1930 insurance companies held only 3.7 percent and the land banks only 4.8 percent of the total farm mortgage debt in the state.²⁸ Thus their experience may not be as good an indicator of variations in farm mortgage distress for California as for other sections of the country. The sample of counties included in the WPA study of distress transfers also was small, and the number of distress transfers was available for only a relatively few years. But there is little doubt that mortgage experience was generally good.

Such farm mortgage distress as occurred in California during the interwar period seems for the most part to have been associated with the high degree of specialization by some farmers, especially in fruit production, and with the high level of fixed costs frequently established when farms were developed or purchased. Some operators of highly specialized farms with high fixed charges were also dependent upon distant markets and were thus particularly vulnerable in the world-wide depression of the thirties. Heavy taxes and assessments in irrigation districts were particularly troublesome during the depression. That appears to have been a major cause of difficulty in the northern end of the Sacramento valley, where insurance company foreclosures were relatively numerous. The top-heavy debt structure of irrigation districts may also partly explain the poor experience of insurance companies in the southern end of the San Joaquin valley. An additional cause there, particularly in Kings county, was wet land and the failure to evaluate drainage conditions properly in making mortgage loans.

The Imperial valley in the extreme southeastern corner of California is a third area where high irrigation costs led to serious financial difficulties among farmers during the interwar period, although poor soil drainage was also a factor and perhaps even more important. Imperial county, which was California's chief cotton-producing county in the early twenties, later shifted to

²⁸ Harald C. Larsen, *Distribution by Lender Groups of Farm-Mortgage and Real Estate Holdings, January 1, 1930-45* (Bureau of Agricultural Economics, mimeo., August 1945), pp. 22 and 38.

the production of winter truck crops—a highly speculative type of agriculture in which either large losses or large profits may occur.

As in every other section of the United States, a certain amount of land in California was put to agricultural uses for which it later proved to be marginal. For example, fruit production was undertaken in the foothills of the Sierras in Eldorado and surrounding counties in east central California, where soils in general are not well suited to it and the construction of irrigation systems is both difficult and expensive. Farmers there, who received early market premiums for their fruit when their orchards first came into bearing, found themselves in financial difficulties when orchards farther south came into production.

