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## THE COTTON BELT

THE Cotton Belt, as traditionally defined, begins just back of the Carolina-Georgia tidewater area and extends westward to the high plains of west central Texas. It includes nearly all of South Carolina, Georgia, Alabama, and Mississippi, the greater part of Arkansas and Louisiana, and most of southern Oklahoma and central Texas. It extends also, as the color map shows, into substantial areas of south central North Carolina, western Tennessee, and southeastern Missouri.

During the interwar period there was comparatively little cotton acreage outside the Cotton Belt thus defined. But since that time irrigated cotton acreage has been increasing rapidly in New Mexico, Arizona, and California. The total harvested acreage in these three states increased from 589,000 in 1939, only 2.6 percent of the total for the United States, to 2,365,000 in 1952, or 9.5 percent of the total. In volume of cotton production, California had advanced to third place by 1952, surpassing such older cotton states as South Carolina, Georgia, and Alabama.<sup>1</sup>

The boundaries of the Cotton Belt are determined largely by climate. The primary production requirement for cotton is a long, hot growing season, and the northern boundary is set by the factor of temperature. Very little cotton is produced in areas with growing seasons of less than 200 frost-free days and a mean summer temperature below 77° F. Within the region of suitable temperature, cotton is grown in areas where the annual average rainfall is as little as 20 inches and as much as 50 inches (Figure 25 and the color map). In all important cotton-producing areas, however, the months during which the crop matures and is harvested are relatively dry. Along the Gulf coast, where autumn rainfall in many places exceeds 10 inches, cotton is not grown because wet weather interferes with harvesting and damages the lint.

Cotton can be produced under a wide range of soil and topographic conditions. Since the 1920's, however, an increasing proportion of the total crop has been produced on the better-

<sup>1</sup> Data for 1939 are from *Census of Agriculture: 1945*, Vol. 2, pages 508 f.; for 1952, from *Cotton Production* (Bureau of Agricultural Economics release, December 8, 1952).

adapted lands, and substantial acreages of rough, hilly land, much of it badly eroded, have been shifted from cotton to other uses.

*Crop and Livestock Enterprises in the Cotton Belt*

Cotton is the principal cash crop of the South: in 1939 it accounted for about 35 percent of the value of farm output in the eight leading cotton-producing states from South Carolina and Georgia on the east to Texas and Oklahoma on the west.<sup>2</sup> Although acreage per farm was small in many cases, cotton was grown on 70 to 90 percent of all farms in South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Arkansas; on 65 percent of all farms in Texas; and on nearly one-half the farms in Oklahoma.<sup>3</sup> Cotton production is characterized by high labor requirements. It is estimated that in 1939 from 20 to 40 percent of all farm labor required on farms in the eight principal Cotton Belt states was needed for this one crop (Table 16).

Although cotton is the principal crop in the South when judged by value and by labor input, it does not take up a major share of the acreage. In 1939, for example, cotton accounted for less than 30 percent of the total cropland harvested in the eastern and delta cotton states, and there was an average of 1.5 acres of corn for every acre of cotton.<sup>4</sup> Since 1932, acreage control programs have been the main limiting force, but in earlier years acreage was often limited by the amounts of hand labor required for thinning and picking the crop. The usual plan was to plant as much cotton as the available labor force could thin and pick. The remaining acreage would then be planted to crops that could be fitted around the cotton enterprise with available tools and labor. Corn was a common alternative, although yields in the South were typically very low compared with yields in the Corn Belt.<sup>5</sup> In recent years mechanical cotton pickers have de-

<sup>2</sup> Value of cotton lint and cottonseed produced, as a percentage of the total value of crop and livestock products sold or used in farm households. (*Census of Agriculture: 1945*, Vol. 2, pp. 511 and 589.)

<sup>3</sup> *Census of Agriculture: 1945*, Vol. 2, pp. 22 and 508.

<sup>4</sup> *Ibid.*, pp. 445 f. and 508.

<sup>5</sup> Corn yields per harvested acre in selected Corn Belt and Cotton Belt states averaged as follows during the ten-year period 1936-45:

|          |    |                |    |
|----------|----|----------------|----|
| Iowa     | 47 | South Carolina | 15 |
| Illinois | 46 | Georgia        | 11 |
| Indiana  | 44 | Alabama        | 13 |

(From *Agricultural Statistics, 1948*, U.S. Department of Agriculture, Table 46, page 44.)

TABLE 16

Percentage Distribution of the Estimated Man-hours of Labor Required on Farms in the Cotton Belt States 1939, by Type of Enterprise

| State          | Cotton | All other crops | All live-stock | Farm maintenance <sup>a</sup> | Total  |
|----------------|--------|-----------------|----------------|-------------------------------|--------|
| South Carolina | 34.7%  | 40.3%           | 10.9%          | 14.1%                         | 100.0% |
| Georgia        | 26.2   | 45.1            | 13.7           | 15.0                          | 100.0  |
| Alabama        | 31.2   | 37.0            | 16.5           | 15.3                          | 100.0  |
| Mississippi    | 41.1   | 28.3            | 16.2           | 14.4                          | 100.0  |
| Louisiana      | 28.7   | 40.6            | 16.4           | 14.3                          | 100.0  |
| Arkansas       | 41.6   | 26.0            | 18.5           | 13.9                          | 100.0  |
| Oklahoma       | 19.4   | 31.1            | 34.5           | 15.0                          | 100.0  |
| Texas          | 30.5   | 27.3            | 27.4           | 14.8                          | 100.0  |

From *Farm Labor Requirements in the United States, 1939 and 1944*, by Reuben W. Hecht (Bureau of Agricultural Economics, F.M. 59, April 1947), pages 44 f. and 49-54.

<sup>a</sup> Farm maintenance includes the farm labor required for such work as construction and repair of fences and buildings, machinery repair, work on permanent pasture and in farm forestry, construction and upkeep of ditches and structures for irrigation, drainage and erosion control, and other miscellaneous work.

creased labor requirements in some parts of the South, notably the delta areas.

For years livestock was comparatively unimportant in the old Cotton Belt. In terms of animal units the livestock population of the six states from South Carolina west to Arkansas and Louisiana was smaller in 1939-40 than that in the single state of Iowa.<sup>6</sup> Less than 20 percent of the 1940 farm income in those states was derived from livestock and livestock products. By 1952, however, the proportion had increased to 31 percent.<sup>7</sup>

<sup>6</sup> The number of grain- and roughage-consuming animal units fed in the above-mentioned six Cotton Belt states during the year beginning October 1, 1939 was 6,721,000; in Iowa, 7,689,000. An animal unit is defined in terms of feed consumption. A dairy cow is considered as 1.0 animal units, a sheep as 0.15 units, a hog as 0.18 units, etc. See *Animal Units of Livestock Fed Annually, 1919-20 to 1948-49* (Bureau of Agricultural Economics, F.M. 64 revised, October 1949), Tables 5 and 9, pages 15 and 22.

<sup>7</sup> Value of all livestock and livestock products sold, as a percentage of the value of all farm products sold. The 1940 data are from *Census of Agriculture: 1945*, Vol. 2, pages 590 and 596; the 1952 data are from *The Farm Income Situation* (Bureau of Agricultural Economics), December 1952-January 1953, Table 10, page 15.

*Changes in Cotton Acreage, 1909-49*

Between 1909 and 1929 the cotton acreage of the United States increased by about one-third as new cotton lands were brought into production in Texas, Oklahoma, and the far western states (Table 17). During the same period cotton acreage decreased somewhat in the eastern states, particularly in South Carolina and Georgia. The result was an important shift in the percentage distribution of acreage between the eastern and western parts of the Cotton Belt. In 1909 the cotton acreage of Texas and Oklahoma was roughly equal to that of South Carolina, Georgia, and Alabama; but by 1929 it was more than double that of the three eastern states. The shift in acreage as between the eastern and southwestern states was particularly great in the early twenties.

Underlying the drastic shifts in which Texas and Oklahoma's

TABLE 17  
Cotton Acreage in the Principal Producing Areas  
of the United States, 1909-49

| <i>Area</i>  | <i>1909</i> | <i>1929</i>                         | <i>1939</i> | <i>1949</i> |
|--|-------------|-------------------------------------|-------------|-------------|
|  |             | <i>Acreage (in thousands)</i>       |             |             |
| Eastern cotton states<br>(South Carolina,<br>Georgia, Alabama) | 11,169      | 8,945                               | 4,964       | 4,630       |
| Delta cotton states<br>(Mississippi,<br>Louisiana, Arkansas)   | 6,510       | 9,401                               | 5,595       | 6,280       |
| Texas and Oklahoma   | 11,907      | 20,962                              | 9,777       | 12,025      |
| Other states <sup>a</sup>                                      | 2,458       | 3,919                               | 2,475       | 3,963       |
| United States  | 32,044      | 43,227                              | 22,811      | 26,898      |
|  |             | <i>Share of United States total</i> |             |             |
| Eastern cotton states  | 34.8%       | 20.7%                               | 21.8%       | 17.2%       |
| Delta cotton states  | 20.3        | 21.7                                | 24.5        | 23.3        |
| Texas and Oklahoma   | 37.2        | 48.5                                | 42.9        | 44.7        |
| Other states <sup>a</sup>                                      | 7.7         | 9.1                                 | 10.8        | 14.8        |
| Total  | 100.0%      | 100.0%                              | 100.0%      | 100.0%      |

Figures for 1909, 1929, and 1939 are from *Census of Agriculture: 1945*, Vol. 2, pages 508 f. Figures for 1949 are from *Crop Production, 1949 Annual Summary, Acreage, Yield, and Production of Principal Crops* (Bureau of Agricultural Economics), page 79.

<sup>a</sup> Includes Arizona, California, Florida, Illinois (1929-49), Kansas, Kentucky, Missouri, Nevada (1949), New Mexico, North Carolina, Tennessee, and Virginia.

share of total cotton acreage outgrew that of South Carolina and Georgia were a number of physical production advantages enjoyed by farmers in the western states. Topography in the western cotton areas is smoother, fields are larger, and the average cotton acreage per farm is greater. All these factors favor the use of machinery in cotton farming to an extent not feasible on the small, hilly farms with irregularly shaped fields that prevail in much of the eastern Cotton Belt. The level topography of the West is also an advantage in facilitating soil conservation, which is difficult in most of the Southeast. Thus, although scanty rainfall limits yields in many parts of Texas and Oklahoma, soils there are in general more fertile than those of the upper coastal plains and piedmont of the eastern cotton states. Finally, the dry climate of the western states is an advantage in the control of the boll weevil, since the damage caused by this pest is closely related to the amount of late summer moisture. Damage has been greatest in the humid climate of the old Cotton Belt.

Even more striking than the shift in cotton acreage within the Cotton Belt during the period 1909-29 has been the sharp reduction in total acreage since 1929. The Census of Agriculture reported 43.2 million acres in cotton in 1929, 26.8 million acres in 1934, 22.8 million in 1939, and 19.0 million in 1944.<sup>8</sup> The Department of Agriculture estimated that in 1945, the lowest year since well before the turn of the century, the acreage was only slightly in excess of 17.0 million acres.<sup>9</sup> Since then there has been a substantial increase, and the acreage in 1949 was estimated at 26.9 million acres (Table 17). Although some reduction in cotton acreage occurred in the early thirties, the greatest reduction took place after 1932 as a result of acreage control programs initiated in an effort to stem the sliding prices of basic agricultural commodities, including cotton. Legislation providing various forms of incentives to restrict cotton acreage has been in effect most of the time since then.

Control programs to date have been more successful in reducing acreage than in reducing production. Farmers have concentrated the reduced acreage on their better land, used higher-yielding varieties, increased the use of fertilizer per acre, and adopted improved cultural practices, with the result that yield per acre has increased substantially. Between 1929 and 1939,

<sup>8</sup> *Census of Agriculture: 1945*, Vol. 2, pp. 508 f.

<sup>9</sup> *Agricultural Statistics, 1948*, Table 91, p. 79.

acreage in cotton decreased 47 percent while production decreased by only 21 percent. During the next five years, 1939-44, acreage decreased 17 percent while production actually increased by 3 percent.<sup>10</sup>

It had long been recognized that heavy dependence upon cotton was a major weakness of the old South and that intertilling over many years had caused serious erosion and leaching and was continuing to deplete the soils of much of the region. It was also clear that more cotton was being produced than could be sold at prices that would provide a satisfactory living for producers and enable them to maintain their farms. Hence government programs provided incentives not only for reducing cotton acreage but also for shifting acreage to soil-conserving grasses and legumes, for growing cover crops, and for using lime and fertilizers.

An important phase of the agricultural programs in the South has been the encouragement of livestock enterprises. Acreages of plowable pasture land increased somewhat between 1929 and 1939. In the eastern cotton states the increase was 1.8 million acres; in the delta states, 3.1 million acres; in Texas and Oklahoma, 2.7 million acres.<sup>11</sup> With increases in pasture land have come increases in the number of livestock other than work animals and in the sale of livestock products. But rapid expansion of livestock enterprises has been difficult in the South, especially the Southeast. To reduce feed costs, traditionally high in the South, has required the development of new forage crops and cultural practices. Considerable progress has been made along that line. A more difficult problem is presented by the large number of holdings too small to provide a living for a farm family unless used to produce cotton or some other labor-intensive crop. Combining farms into larger units and shifting farm population into other occupations is necessarily slow. The rate of progress in this direction increases, of course, during a period of prosperity—such as World War II and after—when farm incomes are high and nonfarm job opportunities plentiful. But during periods of depression, such as the thirties, the rate of change must inevitably be slow.

#### *Cotton Prices, 1920-40*

Although the farm price of cotton declined after the first World War from 38.5 cents per pound in April 1920 to 9.5 cents per

<sup>10</sup> *Ibid.*

<sup>11</sup> 16th Census: 1940, *Agriculture*, Vol. 3, pp. 40 f.

pound a year later, there followed a rapid and fairly substantial recovery. By April 1922 the farm price of cotton was 16.1 cents per pound, and except in the 1926 marketing season it remained at that level or higher most of the time until the end of 1929. In four of the eight marketing years 1922-29 the average farm price per pound for the year was 20.0 cents or more.<sup>12</sup> In comparison with the prewar average of 11.0 cents (1910-14), and also with the prices of other agricultural products, the price of cotton was favorable during most of the twenties (Table 18).

Presumably because the price of cotton was holding up fairly well, no great wave of foreclosures swept the Cotton Belt states during the twenties. In fact, with the exception of South Carolina and Georgia, where boll weevil damage and severe soil erosion were involved, farm mortgage distress in the Cotton

TABLE 18  
Index Numbers of Prices Received by Farmers  
for Cotton, All Crops, and Livestock, 1910-39  
(1910-14 = 100)

| <i>Period</i> | <i>Cotton</i> | <i>All crops</i> | <i>Livestock and livestock products</i> |
|---------------|---------------|------------------|---|
| 1910-14       | 100           | 100              | 100                                     |
| 1915-19       | 175           | 171              | 157                                     |
| 1920-24       | 197           | 162              | 140                                     |
| 1925-29       | 150           | 143              | 152                                     |
| 1930-34       | 77            | 84               | 91                                      |
| 1935-39       | 87            | 99               | 115                                     |

From *The Agricultural Situation* (Bureau of Agricultural Economics), Vol. 37, No. 1 (January 1953), page 15.

Belt appears to have been little if any greater during the twenties than in the United States generally. In western Texas, debt distress was substantially less than in other parts of the United States except the Northeast (Figure 23, page 56).

In 1930, however, the price of cotton again broke sharply, and this time the collapse was much more lasting. For the years 1930-33 cotton prices averaged only 8.0 cents per pound, or 73 percent of their average in the prewar base period, and for the entire decade 1930-39 their average was only 9.4 cents, or 85

<sup>12</sup> *Agricultural Outlook Charts, 1948* (Bureau of Agricultural Economics, 1947), p. 49.



percent of the prewar base.<sup>18</sup> This drastic and prolonged decline in the price of the principal cash crop of the South resulted in a wave of foreclosures and other distress transfers of farms. In Texas and Mississippi the average annual number of distress transfers per thousand farms during 1931-33 was more than double the number during the preceding six years, 1925-30 (Table 19). Increases in the rate of distress transfers in Oklahoma, Louisiana, Arkansas, and Alabama were also large. Only

TABLE 19  
Average Annual Distress Transfers per Thousand  
of All Farms in the Cotton Belt States,  
1925-30 and 1931-33

| <i>State</i>   | <i>1925-30</i> | <i>1931-33</i> |
|----------------|----------------|----------------|
| South Carolina | 25.2           | 29.2           |
| Georgia        | 21.5           | 28.7           |
| Alabama        | 13.4           | 28.3           |
| Mississippi    | 16.1           | 41.1           |
| Louisiana      | 15.8           | 26.4           |
| Arkansas       | 17.3           | 31.7           |
| Oklahoma       | 20.8           | 33.0           |
| Texas          | 10.0           | 24.6           |
| United States  | 17.1           | 31.7           |

Calculated from data on the estimated number of farms changing ownership by foreclosure of mortgages, bankruptcies, assignments, and related defaults per thousand of all farms, from *The Farm Real Estate Situation, 1929-30*, by E. H. Wiecking and B. R. Stauber (U.S. Department of Agriculture, Circular No. 150), pages 41 f., and *The Farm Real Estate Situation, 1933-34*, by B. R. Stauber and M. M. Regan (USDA Circular No. 354), pages 30 f.

The reporting years used by the Department of Agriculture end on March 15; thus the period referred to as 1925-30 runs from March 16, 1925 through March 15, 1931.

in South Carolina and Georgia, both of which had undergone heavy liquidation in the twenties, was the increase in distress transfers in the early thirties relatively moderate.

#### *Geographic Variations in Mortgage Experience*

On the basis of statewide distress transfers per thousand *mortgaged* farms (Figure 7, Chapter 1), debt difficulty was most severe in South Carolina and Georgia, which contain most of

<sup>18</sup> *Ibid.*

trouble area H indicated in Figure 23 (Chapter 1), and it was also severe in Mississippi, which contains a large part of trouble area I. Debt difficulty was least severe in Texas, with an annual average of 37.5 distress transfers per thousand mortgaged farms compared with 54.5 for the United States. The area in central and western Texas designated C in Figure 23, which contains much of the cotton-producing land in the state as well as most of its ranch land, is one of the relatively few large areas in the United States where mortgage experience was good during the interwar period.

#### EASTERN COTTON STATES

Historically the eastern Cotton Belt, which includes most of South Carolina, Georgia, and Alabama, as well as part of North Carolina, was one of the best cotton-producing sections of the country, and until 1920 it was relatively prosperous. In this section, which includes the old plantation piedmont, there were many large farms and a high proportion of the land was in crops.<sup>14</sup>

Although continuous row crop cultivation had resulted both in erosion and in depletion of fertility, the quality of cotton produced was high, and with heavy applications of fertilizer, yields remained fairly good. The boll weevil, which had been spreading from the west, did not reach Georgia until about 1915, and damage before 1920 was comparatively small. Thus during most of the decade spanning World War I cotton production in the eastern states was very profitable and land values increased sharply. Between 1910 and 1920 the value of farm land and buildings, as reported by the Census, increased 166 percent in South Carolina and 152 percent in Georgia, while in the United States as a whole the increase was 75 percent (Table 20). Farm mortgage debt also increased rapidly in the eastern Cotton Belt: for South Carolina and Georgia the increases between 1910 and 1923 were 377 and 474 percent, respectively.

But wartime prosperity in the eastern Cotton Belt suddenly

<sup>14</sup> For a description of agriculture in the eastern Cotton Belt and some of its farm problems see *Types of Farming and Farm Business Studies in South Carolina*, by J. L. Fulmer (Clemson Agricultural College Agricultural Experiment Station, Bulletin 310, June 1937); *Georgia Land Use Problems*, by W. A. Hartman and H. H. Wooten (University of Georgia Agricultural Experiment Station, Bulletin 191, May 1935); and *Factors Influencing Alabama Agriculture, Its Characteristics and Farming Areas*, by Ben F. Alvord, M. A. Crosby, and E. G. Schiffman (Alabama Polytechnic Institute Agricultural Experiment Station, Bulletin 250, April 1941).

came to a close in the early twenties, and the area soon became one of the nation's most conspicuous trouble spots—particularly in the specialized cotton-producing areas of the upper coastal plains and piedmont. By the late twenties the rates of distress farm transfers in South Carolina and Georgia were considerably higher than the rate in any other major cotton-producing state except Oklahoma, and were well above the average for the United States. In 1929 the foreclosure rates on farm mortgage loans of life insurance companies were higher in Georgia and South Carolina than in any other part of the United States except the Great Plains (Figure 12, Chapter 1). Bank deposits shrank in this area during the twenties more than in most parts of the nation (Figure 17), and bank failures were numerous (Figure 16). Between 1920 and 1930 the average value of farm real estate declined in both South Carolina and Georgia by more than 40 percent—a substantially greater decrease than in any other Cotton Belt state and greater than the average for the United States (Table 20). When the second agricultural price collapse occurred in the early thirties, the two states experienced a further increase in debt difficulties, although the rate of increase in distress transfers between 1930 and 1933 was less there than in other Cotton Belt states or for the nation—presumably because large numbers of farm businesses had been liquidated during the twenties. For the interwar period as a whole, however, land bank foreclosure and loss rates, Commissioner loss rates, and insurance company foreclosure rates were high in South Carolina and Georgia (Figures 9-13, Chapter 1).

The severity of the agricultural depression that engulfed the eastern Cotton Belt in the early twenties was apparently due to the occurrence of severe boll weevil damage at almost exactly the same time as the postwar price collapse. In other Cotton Belt states the boll weevil had arrived earlier, which gave farmers an opportunity to work out partial control methods during the period of high wartime prices. Furthermore, by reducing yields and increasing costs the weevil had exercised a restraining influence on rising land values and mortgage debts. That was true as far east as Alabama, where the wartime land boom was much less pronounced than in Georgia and South Carolina (Table 20).

The arrival of the boll weevil in Georgia and South Carolina could not have come as a complete surprise, for the pest had been traveling eastward steadily ever since it first crossed the

TABLE 20

Percentage Changes in Farm Land Value 1910-20 and 1920-30, in Size of Farm Mortgages 1917-20, and in Farm Mortgage Debt 1910-23 and 1923-40, in the Cotton Belt States

| State          | Change in average value of farm real estate per acre <sup>a</sup> |         | Change in average size of farm mortgages recorded <sup>b</sup> |         | Change in farm mortgage debt <sup>b</sup> |  |
|----------------|---|---------|--|---------|---|--|
|                | 1910-20   | 1920-30 | 1917-20  | 1910-23 | 1923-40                                   |  |
| South Carolina | +166%   | -44%    | +62%   | +377%   | -56%                                      |  |
| Georgia        | +152  | -42     | +54  | +474    | -43                                       |  |
| Alabama        | +100  | +3      | +62  | +215    | +3  |  |
| Mississippi    | +141  | -24     | +37  | +377    | -40                                       |  |
| Louisiana      | +108  | -6      | +52  | +207    | -7  |  |
| Arkansas       | +143  | -21     | +54  | +574    | -44                                       |  |
| Oklahoma       | +67   | -14     | +21  | +344    | -43                                       |  |
| Texas          | +98   | -11     | +71  | +247    | -5  |  |
| United States  | +75%  | -30%    | +62%   | +236%   | -36%                                      |  |

<sup>a</sup> From 16th Census: 1940, *Agriculture*, Vol. 1, Part 3, pages 423 and 491; Part 4, pages 279 and 375; Part 5, pages 5, 115, 213, and 321. Figures for the United States are from *Historical Statistics of the United States, 1789-1945* (Bureau of the Census), page 95.

<sup>b</sup> From *Farm-Mortgage Credit Facilities in the United States*, by Donald C. Horton, Harald C. Larsen, and Norman J. Wall (U.S. Department of Agriculture, Misc. Pub. No. 478, 1942), pages 162 and 219 ff.

Mexican border in the 1890's. But the amount of damage it could do appears to have been seriously underestimated. Perhaps this was partly because its greater destructiveness in humid climates was not yet well known. At any rate, when weevil damage became severe in Georgia and South Carolina in the early twenties, farmers found themselves faced simultaneously with diminished prices and greatly diminished yields. It is estimated that for the state of Georgia the reduction in cotton yield in 1921 from weevil damage was 45 percent.<sup>15</sup> In 1922 and 1923 the estimated reductions below full yield were 44 and 37 percent, respectively. In South Carolina the greatest weevil damage occurred in 1922, when the yield was reduced by an esti-

<sup>15</sup> *Cotton—Acreage, Yield, and Production, 1866-1938* (U.S. Department of Agriculture, Agricultural Marketing Service, September 1940), p. 59.

mated 40 percent. In some sections, of course, the damage was even more serious than statewide figures indicate.

Control of the boll weevil proved to be extremely difficult and costly in the humid climate of the eastern Cotton Belt, and farmers there found themselves at a distinct disadvantage in competing with cotton producers farther west. Even when the unprofitability of cotton farming in much of Georgia and South Carolina became apparent, shifts to other crop and livestock enterprises came slowly. Farmers had little experience with other types of farming, unskilled labor constituted a hindrance to sudden change, capital was difficult to obtain, and soils in many localities were not well suited to other cash crops, such as peanuts and tobacco. Moreover, some farms were too small to constitute economic units under types of agriculture less labor-intensive than cotton farming.

Debt distress in South Carolina and Georgia during the interwar period was less severe in areas with alternative cash crops than in specialized cotton-producing areas such as the upper coastal plains and piedmont. In northeastern South Carolina the soil and climate are well suited to the growing of tobacco, and in the lower coastal plains of southeastern Georgia both peanuts and tobacco are important sources of farm income. Loan experience was better in both of those areas than in the upper coastal plains and piedmont. The same is true of the coastal flatwoods area, where small-scale farms producing forest products and truck crops in combination with cotton predominate. Loans made in that area by insurance companies and the land bank were relatively few, however, and carefully selected.

Loan experience was fairly good in the limestone valleys of north central Alabama and northwestern Georgia. There the soil is productive and the topography reasonably level. Cotton and general farming predominate. The use of tractors and other labor saving machinery has been more common there than in many other parts of the eastern Cotton Belt, and control of the boll weevil has been comparatively successful because of climatic factors. Relatively good loan experience in the parts of northern Georgia and northeastern Alabama where the topography is rough and the soils are poor and stony is explained by the fact that both land banks and insurance companies were cautious in extending credit in those areas.

Although there was considerable farm mortgage distress in

southeastern Alabama in the interwar period (Figures 8, 9, 12, and 13, Chapter 1), it did not develop as early nor was it as widespread as in South Carolina and Georgia. The part of the Black Prairie extending into west central Alabama shared the relatively poor loan experience that characterized the entire black belt during the twenties, for reasons to be noted in the next section.

#### DELTA COTTON STATES

In the delta states—Arkansas, Mississippi, and Louisiana—the most valuable farm land is in the flood plains of the Mississippi River and its tributaries (area VII-A<sub>4</sub> on the color map). Soils there generally are fertile, the topography is flat, and farms are of relatively large size. It was in the delta counties, therefore, that insurance companies largely concentrated their farm investments. Few loans were made elsewhere in the delta states by insurance companies except in the Black Prairie belt in the northeastern part of Mississippi (area VII-D<sub>1</sub> on the color map). There, too, soils are rich, topography is level, and a high percentage of all land is in farms. The land banks made loans throughout the three states, but like the insurance companies concentrated their heaviest lending in the delta counties.

Both land bank and insurance company foreclosures were numerous in the delta counties in the twenties and early thirties (Figures 9, 12, and 13, Chapter 1), the sole exception being the upper Louisiana delta. Although losses by insurance companies through 1937 were small (Figure 35), land bank losses were, on the whole, relatively heavy (Figure 10).<sup>16</sup>

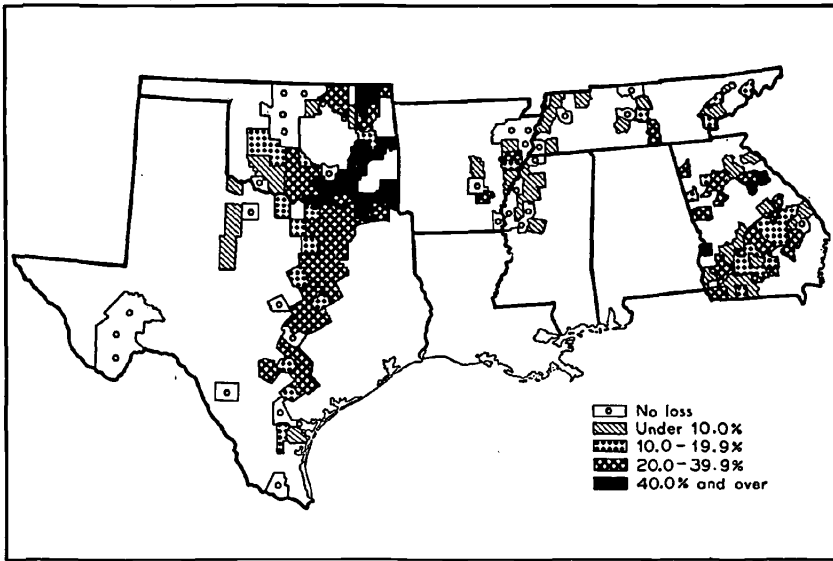
One of the important causes of debt distress in the delta has been dependence on one crop—cotton. When cotton prices are good, cotton farming is very profitable and usually results in rapidly rising land values and increasing mortgage debt. When cotton prices decline, economic distress is severe because there are few alternative sources of income from which to pay operating expenses and debt charges.

Farm mortgage foreclosures in the delta (and in the flat alluvial lands of northern Mississippi outside the delta as well) appear to have been associated also with the development of

<sup>16</sup> When land values were greatly depressed during the early thirties, the insurance companies held and operated more of their foreclosed farms than did the land banks, selling them at a later time, after land values had recovered somewhat.

drainage and levee improvements. From 1910 through the middle twenties numerous drainage districts were organized, and there was considerable optimism over prospective benefits from such undertakings.<sup>17</sup> Land values usually rose when a district

Figure 35. Loss Rates on Farms in and near the Cotton Belt Sold by 13 Life Insurance Companies, 1929-37



From unpublished data supplied by major life insurance companies. Loss rate is the percentage by which receipts from sales failed to cover investment and costs. For coverage and other details see pages 40 to 43, and page 86 n.

was projected—often to levels that long-term earnings could not support. Between 1910 and 1920, land values in parts of the delta in Arkansas increased as much as 250 percent and in Mississippi as much as 400 percent. During the twenties land values declined, in some counties falling 60 percent and more below 1920 levels (Figures 3 and 19, Chapter 1).

Land drainage was promoted, often at very high cost, by lumber companies, plantation interests, railroad corporations, and professional promoters. Bonds usually were issued and benefits assessed against the land. The tax problem became serious especially after cotton prices fell. In addition to drainage taxes

<sup>17</sup> See *Drainage Reclamations in the Bartholomew-Boeuf-Tensas Basin of Arkansas and Louisiana*, by Robert W. Harrison and Walter M. Kollmorgen (University of Arkansas Agricultural Experiment Station, Bulletin 476, April 1948).

and regular county and state taxes, there were taxes for levee districts, road districts, and sometimes fence districts. Harrison and Kollmorgen state that during the depression the defaulting of special improvement taxes was almost universal in Arkansas. Since that time, as a result of scale-downs and refinancing of bonded indebtedness, many districts have been placed in improved financial condition.

It has been noted that the experience with land bank and insurance company loans was much better in the delta counties of upper Louisiana than in the delta areas of Arkansas and Mississippi. The upper Louisiana delta is subject to flooding by the backwater of the Mississippi, and much of the low land is not farmed. Furthermore, because Louisiana law limits drainage taxes to fifty cents per acre for a forty-year period, the promotion of drainage activities was given little encouragement. These factors tended to restrain land values during the World War I period, made lenders cautious, and prevented the establishment of a tax burden as heavy as that in Mississippi and Arkansas.<sup>18</sup>

In the lower Louisiana delta, foreclosures both by insurance companies and by the land bank were comparatively heavy. Sugar cane production is important there, and it appears probable that farm mortgage distress in the mid-twenties was associated with the cane diseases that developed during that period.

Outside the delta areas insurance companies made few farm loans in Louisiana, Arkansas, and Mississippi, but the land bank was fairly active. In the late twenties and early thirties the land bank acquired a considerable number of farms in the upland areas of northwestern and southeastern Louisiana, but losses were comparatively small (Figures 9 and 10, Chapter 1). In the upland areas of Arkansas, land bank foreclosures and losses were heavy except in a small group of counties in the northwestern part of the state, a group of oil-producing counties along the southern border, the rice-producing county in the east central part of the state, and the urban counties of Saline and Pulaski in the central part.<sup>19</sup> In Mississippi, land bank foreclosures and losses in upland areas were heavy except in the east central and southern parts of the state.

Severe boll weevil damage had occurred relatively early in

<sup>18</sup> *Ibid.*, p. 62.

<sup>19</sup> The city of Little Rock is located in Pulaski county and the city of Benton in Saline county.



Louisiana.<sup>20</sup> In southern Louisiana, where climatic conditions favored the weevil, a shift was made to rice, truck crops, and some livestock. In the uplands of northern Louisiana the boll weevil could be combatted more successfully, and as methods of control were developed, cotton acreage again expanded in that part of the state.<sup>21</sup> It appears, however, that adjustment problems during the decade 1910-20 acted as a restraining influence on both farm land values and debt in Louisiana, with the result that farmers' financial difficulties during the interwar period were not so severe as in many other parts of the South. The leasing and development of oil lands in the western part of the state in the twenties and thirties also undoubtedly provided income that helped meet many farm mortgage payments.

In the cotton and general farming sections of Arkansas outside the delta cotton acreage was expanded during the World War I period, as in other parts of the South.<sup>22</sup> It is probable that both farmers and lenders misjudged the long-term profit possibilities of producing cotton in upland parts of the state, where much of the land is of relatively low productivity. When cotton prices declined, many farmers in low-yield localities found it impossible to meet their loan obligations. With the exception of the few counties previously mentioned, land bank foreclosure and loss rates were high in the upland areas of Arkansas.

Debt distress was especially severe during the early thirties in the upland as well as the delta areas of Mississippi, with the exception of relatively small sections in the east central and southern parts of the state (Table 19; Figures 9 and 10 in Chapter 1). In the latter areas are many small-scale subsistence farms on cut-over timber lands. Insurance companies made no loans there, and the land bank did so on a highly selective basis. Another factor that may have caused slightly better experience in the southern part of the state was the appearance of the boll weevil before World War I. This resulted in a shift from complete dependence on cotton into other farm enterprises, including livestock.<sup>23</sup>

<sup>20</sup> The boll weevil had covered most of the state by 1907.

<sup>21</sup> *Louisiana Agriculture, Progress and Opportunities* (Louisiana State University and Agricultural and Mechanical College, Division of Agricultural Extension. Circular 89, Part 1, July 1926), Table 17, p. 114 f.

<sup>22</sup> *Types of Farming in Arkansas* (University of Arkansas, Research and Extension Staff of the College of Agriculture, Circular 351, June 1936).

<sup>23</sup> *Types of Farming in Mississippi*, by M. A. Crosby (Bureau of Agricultural Economics, mimeo., January 1940).

In the Black Prairie section of northern Mississippi, soil fertility had declined somewhat by the twenties as the result of continuous cropping. The boll weevil also contributed to reduced yields. The main factor causing distress, however, was not so much productivity as almost complete dependence upon cotton in a period when cotton prices were low.

#### TEXAS AND OKLAHOMA

The high plains of west Texas near the eastern border of New Mexico form the western boundary of the Cotton Belt (area VII-A<sub>1</sub> on the color map) as traditionally defined. South and west of the Texas cotton area is a vast range livestock area with year-long grazing. To the north is the wheat, sorghum, and range livestock section of the southern High Plains.

On the whole, experience with land bank and insurance company loans was much better in Texas than in states to the east (Figures 6, 7, 9, 10, 13, and 23, Chapter 1). Shrinkage of commercial bank deposits during the interwar period was also relatively low (Figures 17 and 18).

Within Texas there is wide diversity of physical conditions that affect agricultural production and prosperity. Soils range from dune sand to heavy clay, topography varies from rough and broken to level, and annual average rainfall ranges from 50 inches in the southeastern corner to 10 inches in the far west. These factors make possible many different types of farming, ranging from the production of subtropical fruits and a wide variety of vegetables in the southern tip of the state to large-scale wheat farming in the northwest, and from crop farming under humid conditions in the east to semiarid farming and extensive livestock ranching in the west.<sup>24</sup>

Farming in Texas is heavily concentrated on the Grand and Black Prairies, which form a strip running from north to south about a third of the way across the state from the eastern edge (area VII-A<sub>2</sub> on the color map). The soils there are mostly dark calcareous clays, high in natural fertility. Rainfall averages 30 inches or more. Although corn is important, the area—particularly the Black Prairie section—specializes to a high

<sup>24</sup> For a brief description of characteristics and trends of the major cotton production areas in Texas see *Changes in Cotton Production in War and Peace*, by E. L. Langsford (Bureau of Agricultural Economics, F.M. 45, December 1944); also *A Description of the Agriculture and Type-of-Farming Areas in Texas*, by C. A. Bonnen and B. H. Thibodeaux (Agricultural and Mechanical College of Texas Agricultural Experiment Station, Bulletin 544, June 1937).

degree in cotton. Lending both by the land bank and by insurance companies was comparatively heavy in the prairie strip, and foreclosure rates were the highest in the state. Land bank loss rates in the black lands, although lower than in many other parts of the United States, were much higher than in east or west Texas (Figure 10, Chapter 1). Insurance company losses were also comparatively high (Figure 35). In the northern part of the prairie area there were numerous bank failures during the twenties and early thirties (Figure 16).

The basic cause of debt distress in the black land area of Texas appears to have been low cotton prices, especially in the thirties. A contributing factor in some localities was reduced yields resulting from continuous cropping, water erosion, and root rot. In recent years, as a result, there has been some shifting to feed crops, pasture, and livestock production.

Although farm foreclosure rates in the black land area were high compared to those in other parts of Texas, they were lower than those in many specialized cotton-producing areas in states to the east. The early appearance of the boll weevil in Texas allowed time to cope with it before the decline in cotton prices in the early twenties and thirties. In fact the presence of the weevil in the central Texas cotton section before 1910 may have tended to restrain the rise in land values and mortgage debt during World War I, when cotton acreage was expanding and the price of cotton was rising.

In eastern Texas, soils are sandy and there is much cut-over timber land. Before 1925 cotton acreage increased rapidly, but in view of poor production conditions it later contracted. Insurance companies made few loans in the sandy section, and the land bank followed a conservative lending policy. Other lenders, however, apparently were less cautious. In Hardin county—a WPA sample county in a poor agricultural section of southeastern Texas—the number of distress farm transfers during the period 1920-35 totaled more than 100 percent of the estimated number of mortgaged farms in 1930 (Figure 8, Chapter 1). The bulk of the foreclosures occurred in 1927 and 1928.

West of the Black Prairies of Texas, annual rainfall diminishes and lack of moisture constitutes one of the major production hazards. Notwithstanding the production risks involved in the dry area, it appears to have experienced less farm mortgage distress during the interwar period than any other large section

of the South. In fact western Texas has been delineated as one of the few parts of the United States where all data—insurance company and land bank foreclosures and losses, commercial bank suspensions and deposit changes, and distress transfers of farms—point to generally excellent farm loan experience (Figure 23, Chapter 1).

The low rate of foreclosures in western Texas may be in part the result of conservative lending practices during the World War I and interwar periods. The main reason, however, is that the types of farm and ranch operations carried on there are well suited to the arid and semiarid climate of the region. Apparently little effort was made to break up the land into small crop-farming units as was done in the northern part of the western Great Plains. Furthermore, as has been pointed out, the cotton-producing sections of western Texas have several production advantages over the eastern Cotton Belt, where farm debt distress was especially severe. The dry climate of the plains is particularly helpful in restricting boll weevil damage, which was so great during the twenties in the humid cotton areas farther east. Although yields are comparatively low and much of the cotton grown on the plains of Texas and Oklahoma is not of high quality, topography and climate are such as to make possible the adoption of large-scale, low-cost production methods.<sup>25</sup> Cotton acreage in west central Texas expanded rapidly after 1915. The upward trend continued into the middle thirties, even during periods when agricultural prices were low and cotton acreages were declining in the eastern Cotton Belt. During the twenties, while land values in most parts of the country were declining, in western Texas they continued to increase (Figure 19, Chapter 1).

In Oklahoma the geographic variations in soil, topography, and rainfall are similar in some respects to those of Texas. Average annual rainfall ranges from 45 inches in eastern Oklahoma to less than 20 inches in the western panhandle. Much of the western half of the state consists of open prairies with a fairly productive red soil. The eastern half of Oklahoma, on the other hand, is much rougher, with the Ozark mountains ex-

<sup>25</sup> See Langsford's report, cited above; also *Information Basic to Farm Adjustments in the High Plains Cotton Area of Texas*, by A. C. Magee, C. A. Bonnen, and B. H. Thibodeaux (Agricultural and Mechanical College of Texas Agricultural Experiment Station, Bulletin 652, July 1944), and, by the same authors, *An Economic Study of Farm Organization and Operation in the High Plains Cotton Area of Texas* (Bulletin 568 of the foregoing station, January 1939).

tending well into the southeastern part of the state. Wheat farming predominates in the northwest, cotton in the southern half, and grazing and general farming in the northeast. There is also a small fruit and mixed farming area on the Ozark plateau, which extends into northeastern Oklahoma.<sup>20</sup>

Farm mortgage distress in western Oklahoma during the interwar period was closely associated with variations in rainfall. A number of counties there were in the Dust Bowl, which developed in the mid-thirties under a series of droughts. Losses on Commissioner loans (direct government loans of an emergency character) were especially high (Figure 11, Chapter 1). Before the drought years of the thirties, debt distress in western Oklahoma had been relatively small. Since 1940, with generally favorable weather and high agricultural prices, that section of the state has made a rapid financial recovery.

In eastern Oklahoma the land bank and the insurance companies, as well as the Land Bank Commissioner, acquired large numbers of farms by foreclosure during the interwar period, and sustained heavy losses (Figures 9-13, Chapter 1, and Figure 35). In Latimer county, a WPA sample county in southeast Oklahoma, the number of distress transfers between 1920 and 1935 was greater than the number of farms mortgaged in 1930 (Figure 8). Bank failures in eastern Oklahoma were also high (Figure 16).

The productivity of the soils in much of eastern Oklahoma is generally low, and the topography is rough. During World War I, when agricultural prices were high, farmers planted crops—principally cotton—on large acreages of land that normally should have remained in pasture and woods. In the twenties much of that land was abandoned. A complicating factor in the east was the small size of the typical farm. In southeast Oklahoma, with a history of land grants to individual Indians rather than to the tribe, 40 acres was the most common size of farm in the twenties. Efficient, low-cost operation was impossible on such small units. In contrast, the most common sizes of farms in the midwestern and western parts of the state were 160 and 320 acres respectively.

The question arises why lenders misjudged farm loan risks

<sup>20</sup> For a more detailed description see *Types of Farming in Oklahoma*, by J. O. Ellsworth and F. F. Elliott (Oklahoma Agricultural and Mechanical College Agricultural Experiment Station, Bulletin 181, June 1929).

in eastern Oklahoma. Possibly it was because crop farming was comparatively new in that area during World War I. Cotton was profitable for a time, and only after prices fell was it realized that with prices that could be expected in ordinary years the area was marginal for cotton production.