

6th District *District* **Agriculture**



Federal Reserve Bank of Atlanta

RESEARCH DEPARTMENT

SIXTH DISTRICT AGRICULTURE SINCE 1910

FACILITIES

OUTPUT

INCOME

DEBT

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FEDERAL RESERVE BANK OF ATLANTA

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In carrying out its responsibilities for monetary and credit matters, the Federal Reserve Bank of Atlanta must keep abreast of developments within the economic structure of the region that it serves. For that reason, statistical data are gathered by the Bank from a variety of sources and serve a number of purposes. In this instance, the data have been used to compile a brief history of how new ways of farming have affected agriculture in the Sixth District states. The pamphlet is presented for the use of bankers, businessmen, industrialists, farmers, and others who are interested in the progress of the area. Additional copies are available upon request.

SIXTH DISTRICT AGRICULTURE SINCE 1910

FACILITIES, OUTPUT, INCOME, AND DEBT

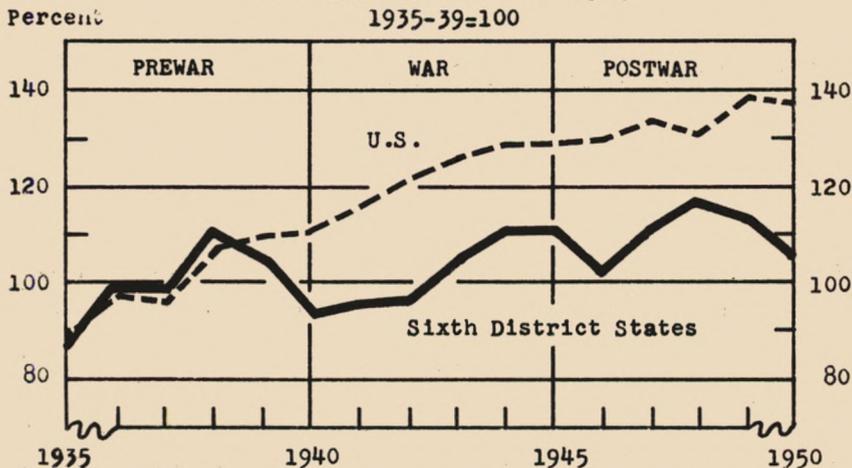
Farmers in the United States set production records during World War II and surpassed them in postwar years. The national farm output for consumption and sale¹ in 1940-44 was about 21 percent above the 1935-39 average, and in 1945-49 was 32 percent higher than the prewar average (Figure 1). Although farmers in the Sixth Federal Reserve District states² did not match this performance, they maintained a 1940-44 output that was roughly one percent above 1935-39. After the war they made a better showing, pushing 1945-49 production 11 percent above 1935-39.

High farm output began, of course, when the wartime need for food and raw materials created a favorable market for farm products. Farmers were able to supply the market during and after the war in large part because the wartime shortages in farm labor and production materials and the postwar rise in operating expenses encouraged efficiency in production. They were more willing to try recommended practices that accumulated from farm research after World War I—practices designed to help them feed the growing national population despite the declining farm labor force. American farming since 1940 has therefore been in one of its most active periods of change.

¹The index of farm output for consumption and sale was calculated for this study by dividing the index (1935-39=100) of gross farm income (cash receipts, value of home consumption, and annual rental value of farm dwellings—calculated for District states as 10 percent of U.S. rental values) by the index of prices received for farm products.

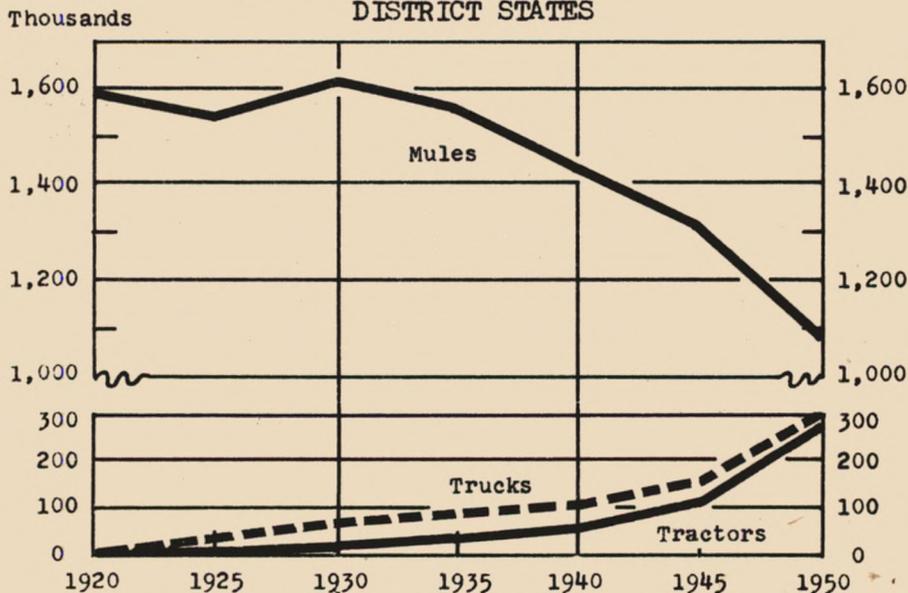
²Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee.

Figure 1
INDEX OF FARM OUTPUT FOR SALE AND CONSUMPTION
DISTRICT STATES AND U.S.



Farm output in the Sixth District states rose less and fluctuated more than in the nation.

Figure 2
MULES, TRUCKS, AND TRACTORS ON FARMS
DISTRICT STATES



Trucks and tractors are replacing mules on farms.

MECHANIZATION ✓

In District states, an important part of the changing production program on farms has been the replacement of manpower and mule power with farm machinery. Between 1920 and 1940, tractors on District state farms increased from around 10,000 to about 57,000 (Figure 2). The number reached 117,000 in 1945; and with the greatest strides in mechanization taking place after the war, farmers in District states were using 277,000 tractors in 1950—one tractor for every 409 acres of farm land. Meanwhile, mules on farms had declined from 1.5 million in 1935 to around one million.

FERTILIZERS ✓

With the use of commercial fertilizers, farmers have been able to gain greater production through higher yields. In 1940, fertilizer consumption in District states, at 2.6 million short tons, was 13 percent higher than the 1935-39 average and averaged around 150 pounds per acre of cropland harvested. In 1950, District state farmers used about 4.9 million short tons of commercial fertilizer, an average of approximately 336 pounds per acre of cropland harvested.

NUMBER AND SIZE OF FARMS ✓

A reshaping of the traditional structure of agriculture has been seen in a decline in the number of farms and an increase in their average size. The 1950 Census of Agriculture reported that there were approximately 275,000 fewer farms in the District states than there had been in 1935 (Figure 3). The average size of farms had increased from 75 acres to 130.

FARM TENURE AND LAND OWNERSHIP

Changes in farm tenure and in the proportion of land in farms owned by farm operators have accompanied the consolidation of small farms into larger holdings. In 1930, over 400,000

croppers represented 31 percent of total farm operators (Figure 4). By 1950, the number had dropped to 186,000 and the percentage to 17. Farm operators have owned an increasing share of the land in farms since 1935, when they held title to only 50 percent. In 1950, operators owned 74 percent of the land in farms.

LAND USE ✓

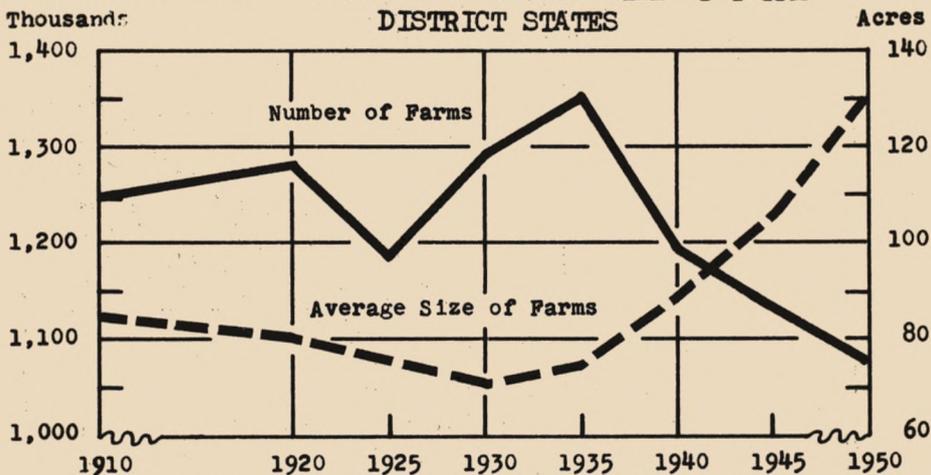
Between 1935 and 1950, about 13 million acres were added to the land in farms in District states, but cropland harvested declined 5 million acres (Figure 5). Of the 18 million acres in new land or land diverted from harvested crops, 16 million went into pasture acreage. According to the Census of Agriculture, 1945 was the first year when pasture acreage surpassed that of harvested cropland in the District states' land use pattern. By 1950, farmers were using 45 million acres of their land for pasture, whereas crops were harvested from only 29 million acres.

LIVESTOCK AND POULTRY

The increase in pasture signals a rapid development of livestock enterprises. Rising prices for red meats, Government control of cash crops, and the efficient use of labor and land obtained in a livestock program contributed to an upward trend in livestock numbers after 1930 (Figure 6). A higher production per animal unit has been obtained through the grazing of high protein cover crops and the feeding of oil-bearing crops. Winter cover crops have afforded almost year-round grazing. Success in cultivating and harvesting hay, small grains, and pasture crops with farm machinery has also helped the feed production program.

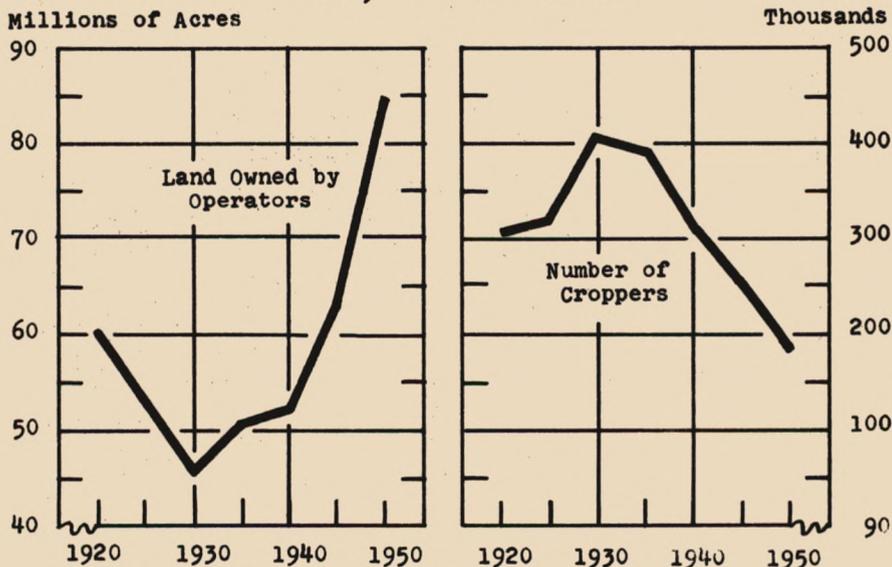
The 1925 Census of Agriculture disclosed the lowest inventory of dairy cows on District state farms since 1910. After that the number of dairy cows increased steadily, and by 1950 there were 2.3 million cows on farms, or roughly

Figure 3
NUMBER OF FARMS AND AVERAGE SIZE OF FARMS
DISTRICT STATES



After 1935 the marked decline in the number of farms was accompanied by a growth in the average size of farm units.

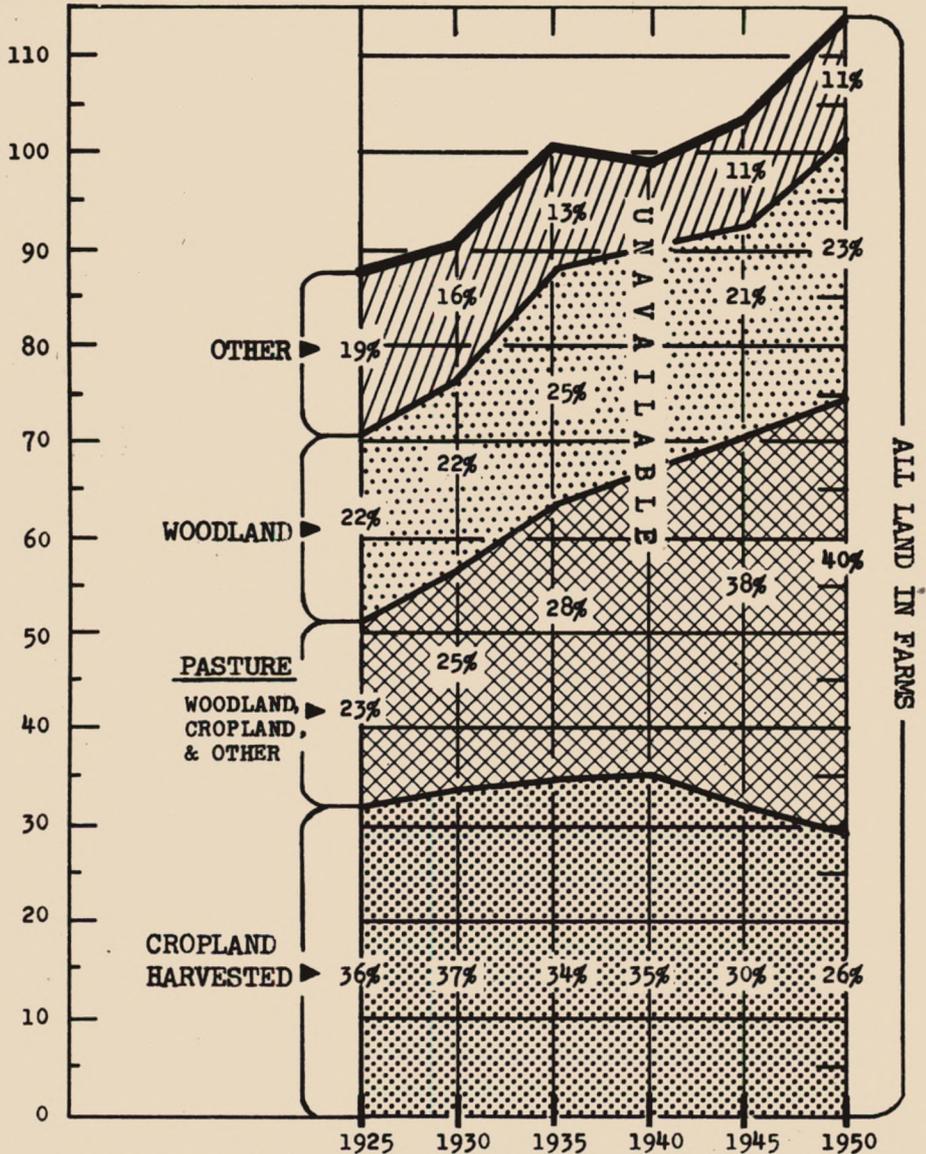
Figure 4
LAND OWNED BY FARM OPERATORS AND NUMBER OF
CROPPERS, DISTRICT STATES



Ownership of farm land has been rapidly passing into the hands of farm operators. A corresponding reduction in the number of croppers has taken place.

Figure 5
FARM LAND USE
DISTRICT STATES

Millions of Acres



The major shift in the farm land pattern has been toward more acreage in pasture or pasture-type crops. Recently, more land has been put to pasture than to any other single use.

twice the 1925 inventory. Undoubtedly, the improvement of grazing and feeding programs was the foundation for an uninterrupted expansion in beef and dairy enterprises.

The inventory of swine on farms in 1920 was the highest ever reported by the Census of Agriculture for District states, but inventories then dropped sharply until 1930 (Figure 7). Although the trend has been upward since that time, producers must overcome an inability to compete with midwestern producers before hog production becomes a major agricultural enterprise in District states.

In postwar years, modern transportation facilities and the low prices of chicken in comparison with the prices of red meats have opened markets throughout the nation for broiler growers in District states. The mushrooming production of commercial broilers to supply this market has been one of the most phenomenal developments in the section's agriculture. District state growers produced 11.3 million birds in 1939 (Figure 8). Production in 1952 totaled 187.8 million. Feed dealers were primarily responsible for this expansion. Under contracts with growers, they agreed to supply chicks, feed, and management advice. Growers furnished labor and equipment. The typical contract further provided that the feed dealer assume responsibility for marketing the mature birds and that the grower's returns be determined by the degree of efficiency he achieved in converting feed into meat.

Alabama, Georgia, and Mississippi are the leading broiler producers in the Sixth District, with Georgia first among District states as well as in the nation. Georgia growers produced 112.6 million broilers in 1952.

CASH CROPS

Despite the increased emphasis on livestock in District states, farmers still depend primarily upon their cash crops—particularly cotton, peanuts, and tobacco. A survey of crops

for recent years reveals a rising production obtained with higher yields.

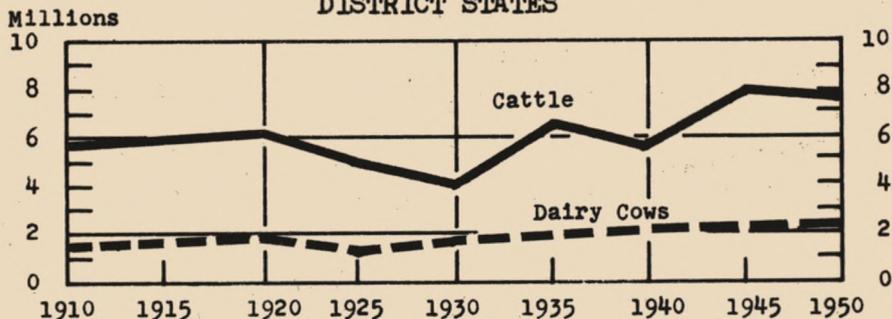
Since 1910 cotton yields in District states have been increasing, which has offset the downward trend in acres harvested. Between the census years 1910 and 1950, the number of acres harvested dropped from 14 million to 8 million, whereas the average yield for the six states rose from 165 pounds of lint cotton to 262 (Figure 9). Excluding years of exceptionally large or small crops, cotton production has averaged about 4.5 million bales.

Part of the falling-off in cotton acreage has resulted from a conversion of cropland into permanent or temporary pasture, but importance is also attached to factors involved in production that are taking some of the profitableness out of cotton growing. Aside from labor shortages, rising farm wage rates have added to the expense of turning out this labor-consuming crop. Mechanization has been slow because the small size of the typical farm unit limits the efficient use of cultivating and harvesting machinery. This condition has recently given rise to another problem for cotton growers in District states—the necessity of competing with rapidly developing cotton enterprises in Arizona, New Mexico, and California, where machinery can be used efficiently from planting to picking on large, flatland farms.

A favorable increase in cotton yields, however, is evidence that farmers in District states have managed the degree of efficiency needed to maintain their production. They have reserved their best land for cotton, and have preserved the the fertility of this land by fertilizing adequately and by rotating cotton with legumes. Boll weevil damage has been held down with insecticides.

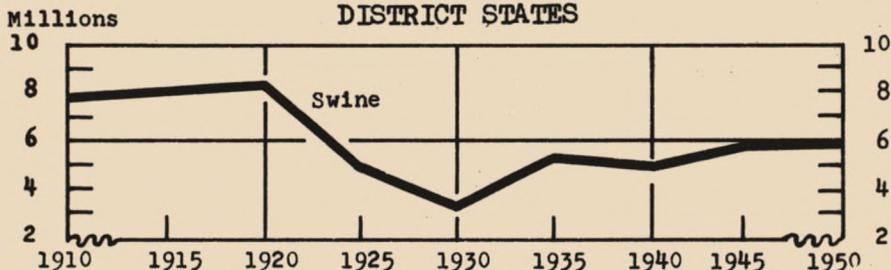
Peanut acreage and production were on the rise in District states from 1910 throughout the war years, but both declined after the war. Sparked by a wartime demand for oil-bearing

Figure 6
CATTLE AND DAIRY COWS ON FARMS
DISTRICT STATES



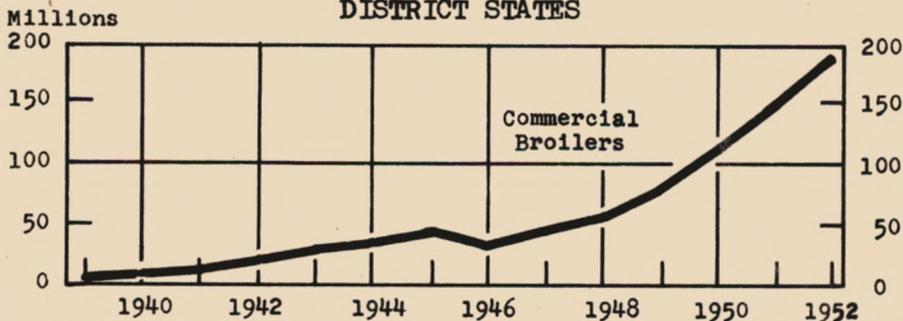
Cattle and dairy cow numbers have been rising since 1910, but the increase in dairy cows has been much less pronounced than that in cattle.

Figure 7
SWINE ON FARMS
DISTRICT STATES



After falling sharply between 1920 and 1930, hog inventories have since shown a gradual rise.

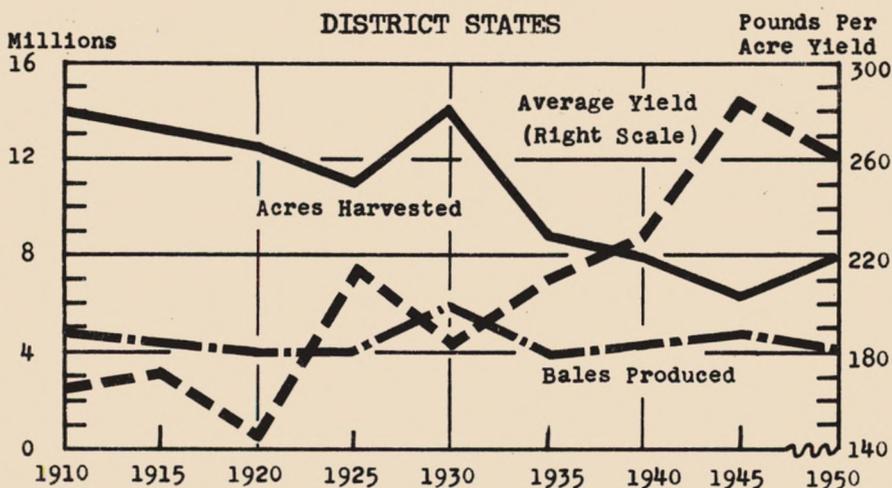
Figure 8
COMMERCIAL BROILERS PRODUCED
DISTRICT STATES



During the postwar years, commercial broiler production has expanded phenomenally.

Figure 9

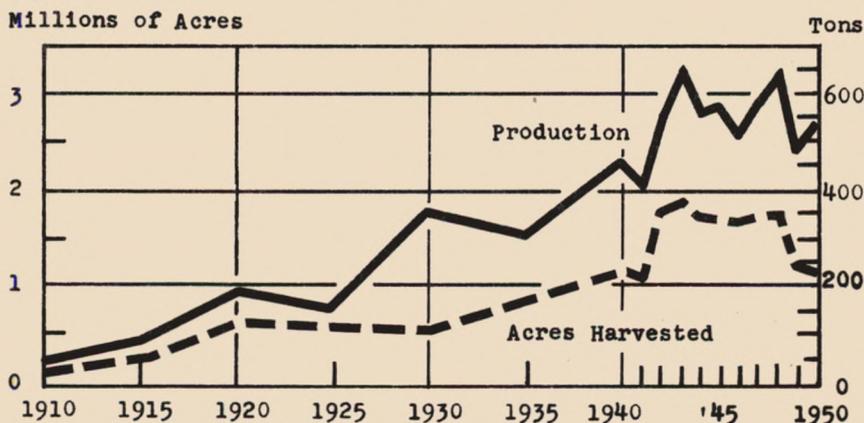
COTTON: ACRES HARVESTED, PRODUCTION,
AND AVERAGE YIELD



In the face of declining cotton acreage, improved yields have tended to stabilize production.

Figure 10

PEANUTS: ACRES HARVESTED AND PRODUCTION
DISTRICT STATES



Production of peanuts for war use led to a peak in acreage harvested. Since the war acreage allotments have restricted plantings.

crops, production of picked and threshed peanuts rose in the six states from 289,000 tons harvested from 1.1 million acres in 1939 to a peak of 654,000 tons harvested from 1.8 million acres in 1943 (Figure 10). Both production and acreage then remained at a high level until 1948, when a noticeable downward trend began.

Peanuts were used more in food products during the war than as a source of oil for industrial purposes. The demand for peanuts for food and the success peanuts achieve in competing with other sources of oil, therefore, will probably have a lot to do with determining their future as a cash crop.

Of the leading cash crops, tobacco is under the strictest Government programs of acreage allotments and of marketing quotas, which are aimed at keeping production closely in line with demand (Figure 11). Since the imposition of these controls in the 1930's, tobacco production in District states has accompanied the steady growth in tobacco consumption. Exceptions have been a decline in the early 1940's, reflecting the effects of the war which disrupted marketing of tobacco abroad, and another drop between 1947 and 1950, that coincides with a dollar shortage in foreign nations that ordinarily use large quantities of cigarette tobacco.

The over-all agricultural pattern presented here is one that may apply most generally to the three entire states and that portion of three other states which make up the Sixth Federal Reserve District. A general discussion of this sort obscures the contributions that selected crops make to the farm economy of the individual states. Such crops are often leading cash crops in some states and production and prices received for them in any year are reflected throughout the state's agriculture. Some examples are citrus fruits in Florida, rice and sugarcane in Louisiana, and small grains in Tennessee.

FEED AND HAY CROPS

In District states corn is important as a feed crop rather than a cash crop. Although more cropland is planted to corn than to any other crop, this acreage has been declining since the mid-1930's (Figure 12). Much of the land on which corn was once grown for mule feed now supports meat animals or is being planted to cash crops.

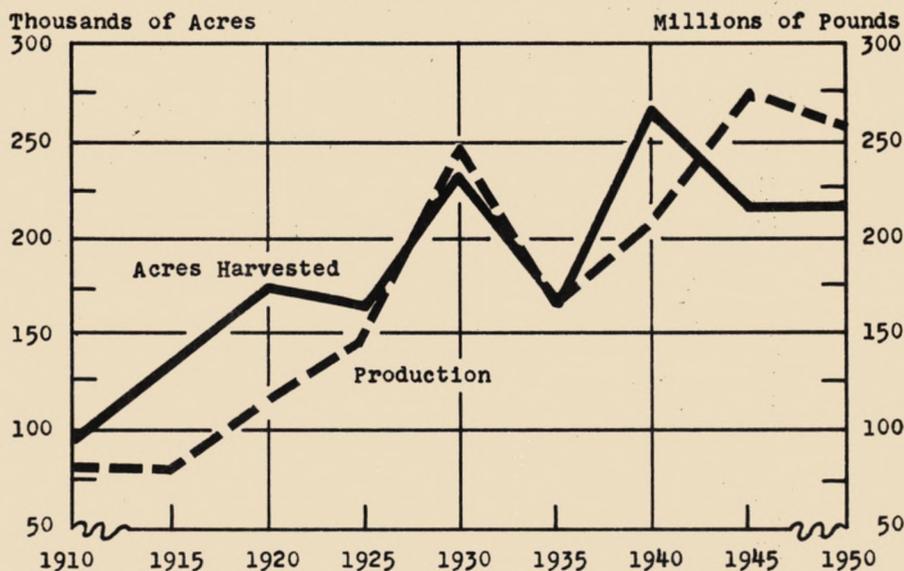
Despite this reduction in corn acreage, there has been no appreciable falling-off in production because the average six-state yield has risen about five bushels per acre since 1944. Corn output, therefore, has probably helped support the rise in hog numbers concentrated in Alabama, Georgia, and Tennessee.

Because a field of small grain can be grazed as well as harvested for feed, a marked growth in small grain acreage and production since 1930 has accompanied the increase in livestock numbers (Figure 13). Of the small grain feed crops, oats lead by a wide margin in acreage and production. Barley and rye are relatively insignificant. Wheat production in the District is centered in Tennessee, where it is the most important small grain grown and where it is primarily a cash crop rather than a feed crop.

Hay has been of major importance in the development of the feeding program that has supported the growth of livestock enterprises in District states. The most rapid expansion in acreage and production of hay took place between 1930 and 1940 (Figure 14). A decline in hay acreage and a slight drop in production during the war years probably came about because the demand for such crops as cotton and peanuts sparked an extension of cash crop acreage. After 1945, production turned upward sharply, although acreage continued to go down. This was possible largely because of a shift to higher

Figure 11

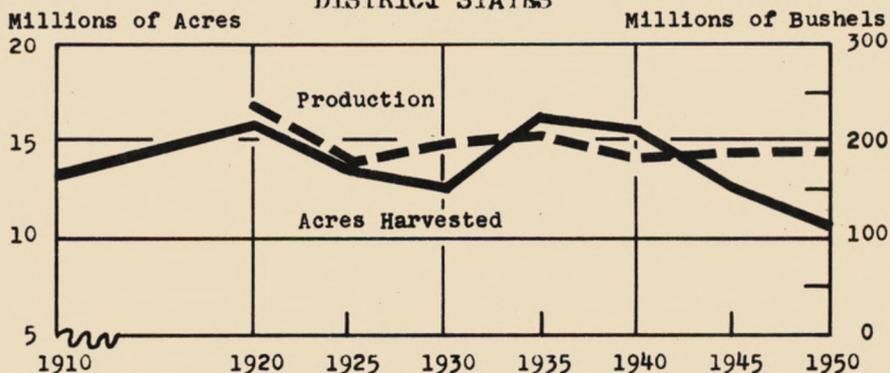
TOBACCO: ACRES HARVESTED AND PRODUCTION
DISTRICT STATES



The peak in tobacco production was reached in 1945; whereas the peak in acres harvested had occurred in 1940.

Figure 12

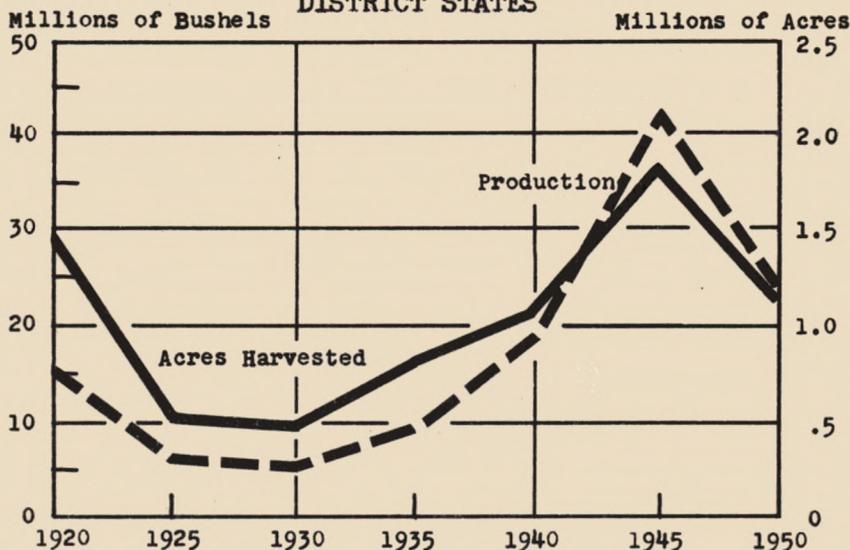
CORN: ACRES HARVESTED AND PRODUCTION
DISTRICT STATES



Corn acreage has been declining since 1935, but because of higher yields there has been no appreciable change in production.

Figure 13

SMALL GRAINS: ACRES HARVESTED AND PRODUCTION
DISTRICT STATES



Small grain and hay production has tended to increase. These crops are the foundation of the feed program which has made possible the recent expansion in livestock.

Figure 14

HAY: ACRES CUT AND PRODUCTION
DISTRICT STATES

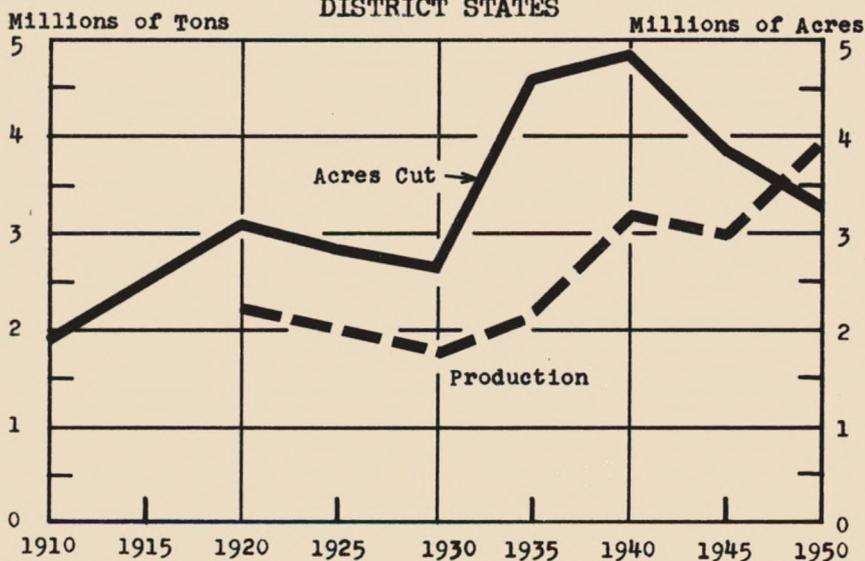
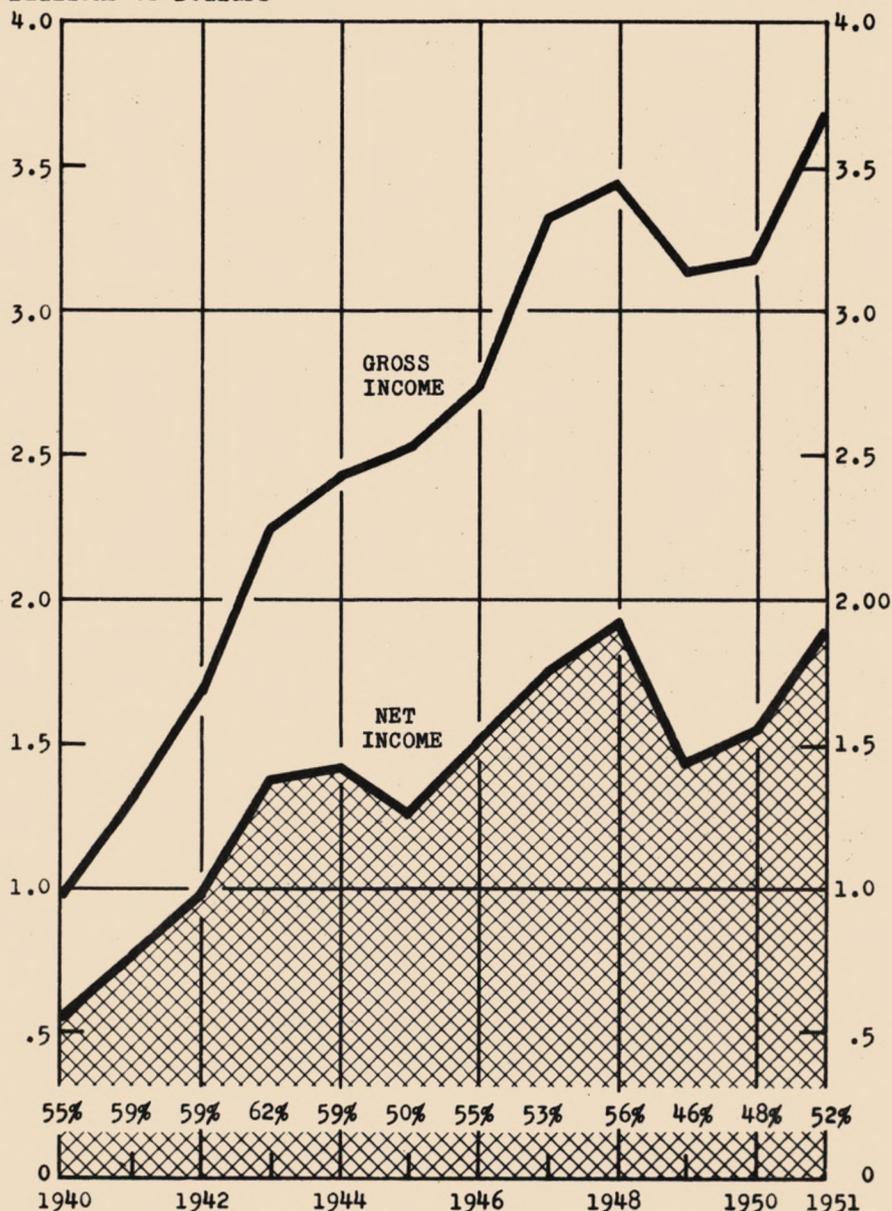


Figure 15
 FARM INCOME
 DISTRICT STATES

Billions of Dollars



Farmers received a high net income during the war years but after 1946 rising costs reduced net as a percentage of gross.

yielding legume hays, and an increasing use of these hays in crop rotation programs.

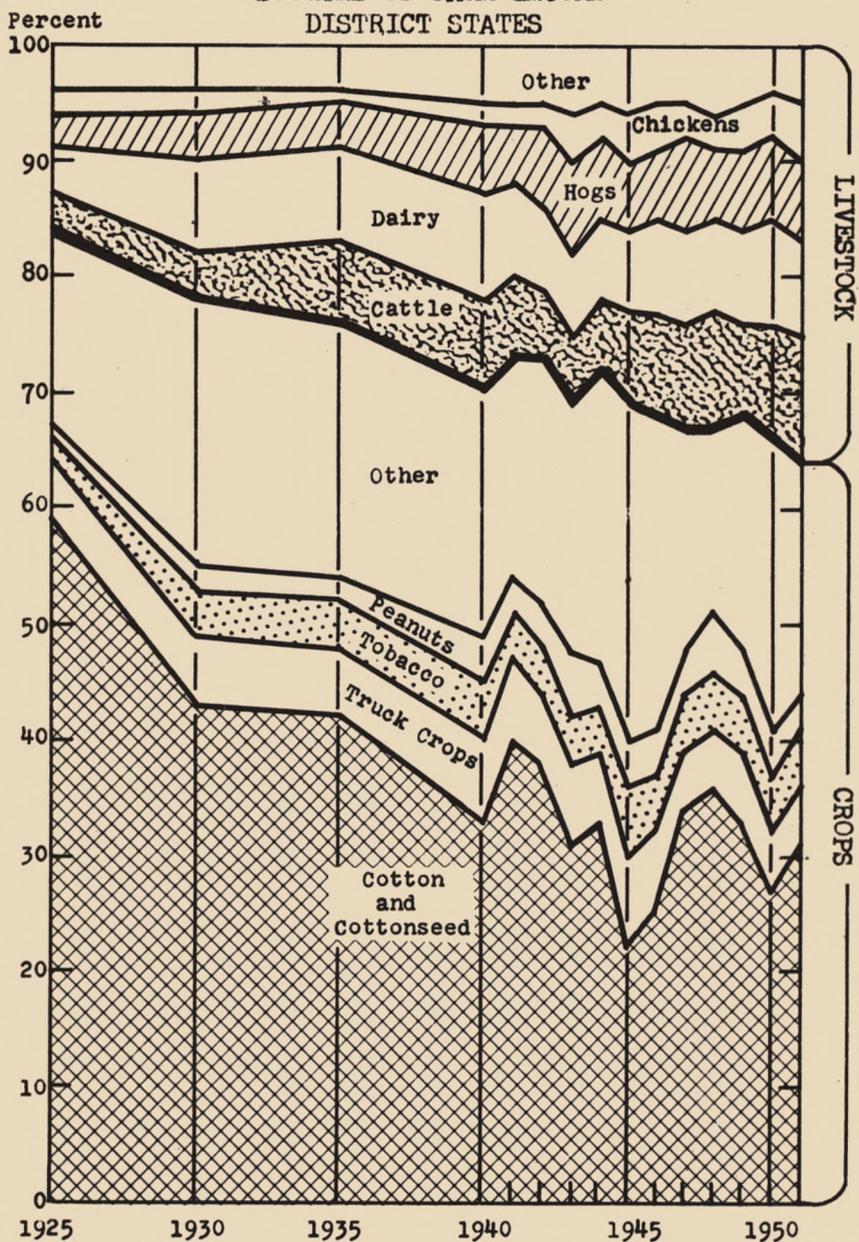
FARM INCOME SHIFTS

Farmers in District states saw their gross income rise from about one billion dollars in 1940 to around 3.6 billion by 1951 (Figure 15). This increased income, of course, resulted largely from the trend of higher prices for farm products that has been in evidence since 1940. As far as farmers in the six states are concerned, the share of this gross income that they have realized as net income has depended mainly upon the prevailing demand for their cash crops. When the wartime demand for cotton and peanuts caused prices received to climb faster than production expenses, farmers enjoyed a period of high net income. Their 1941-44 average was around 60 percent of gross. Since 1945 a falling-off in demand for these cash crops and rising costs of production have resulted in a reduced net income. Net income for 1945-49 averaged around 52 percent of gross.

That farmers in District states have shared in a national growth in farm income does not reveal how the relative importance of farm products as a source of this income has changed. Farmers in the section got 84 percent of their 1925 cash receipts from the sale of crops, and 16 percent from livestock (Figure 16). Of total receipts that year, cotton and cottonseed brought 59 percent; peanuts, truck crops, and tobacco, only 8 percent. On the livestock side, cattle and hogs each sold for 3 percent of total receipts, dairy products for 4 percent, and chickens for 2 percent.

By 1951 the pattern of income sources for farmers in the six states had changed considerably. Crops brought 64 percent of cash receipts, and livestock and livestock products brought 36 percent. Only 31 percent of the total was obtained through sale of cotton and cottonseed. Peanuts, truck crops,

Figure 16
 SOURCES OF FARM INCOME
 DISTRICT STATES



Income from livestock and livestock products is increasing, whereas that from cotton and cottonseed is declining.

and tobacco accounted for 13 percent. Cattle sales contributed 11 percent; dairy products, 8 percent; chickens, 5 percent; and hogs, 7 percent.

FARM DEBT

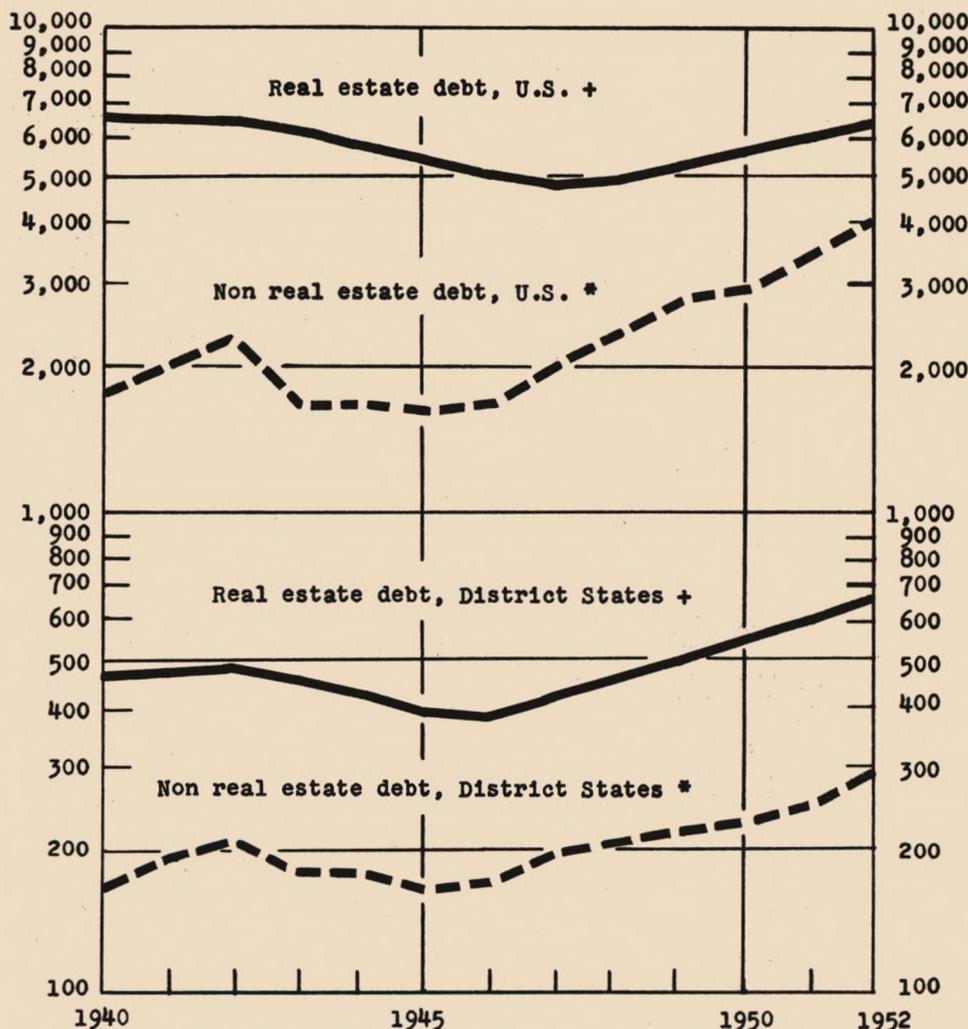
During the war when the brisk demand for cash crops grown in District states kept prices received rising faster than operating expenses, farmers were able to reduce their total debt. Between 1942 and 1946, the farm real estate debt was reduced from 465 million dollars to 379 million; non-real estate debt, excluding Commodity Credit Corporation loans, dropped from 207 million dollars to 169 million³ (Figure 17).

Farm mortgage debt in each of the six District states followed this general pattern of decline during the war years and of sharp increase in the postwar period (Figure 18). The most pronounced rise in farm mortgage debt after 1946 occurred in Florida, with Georgia and Mississippi next in importance. On January 1, 1946, Florida farm mortgage debt stood at 26 million dollars. By January 1, 1952, the debt had reached 96.5 million dollars.

In the non-real estate sector, the debt picture in District states has also been one of wartime reductions and postwar increases, with the exception of Mississippi (Figure 19). Non-real estate loans to Mississippi farmers rose from around 23 million dollars in 1940 to an average of 45 million for 1943-47. Loans outstanding January 1, 1948, showed a decline, but January 1 reports show loans have been rising in Mississippi since 1948. The sharpest wartime reduction in non-real estate loans took place in Tennessee—from 56 million dollars in 1940 to 21.8 million in 1943. The subsequent increase in non-real estate loans to farmers in Tennessee was also more pronounced than in other District states. By January 1, 1952, non-real estate debt in Tennessee, totaling

Figure 17
TOTAL FARM DEBT: U.S. AND DISTRICT STATES

Millions of Dollars

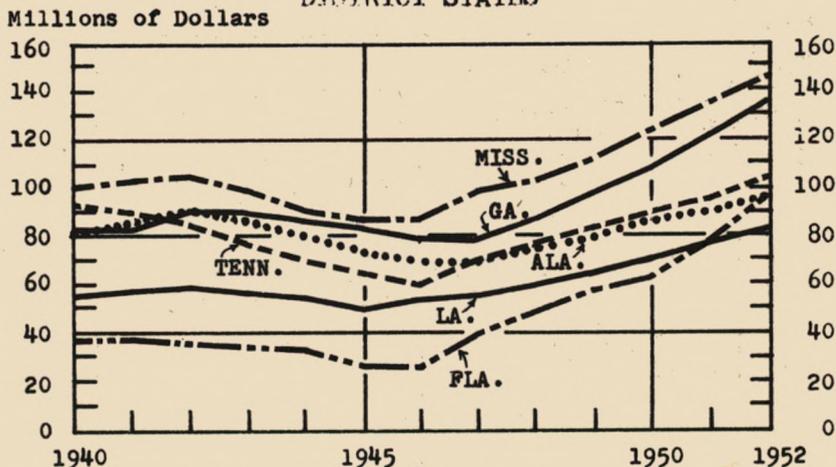


Long-term debt is increasing at about the same rate as for the nation as a whole. Short-term debt is increasing at a slower rate than for the nation.

* Includes loans at all commercial banks, production credit associations, Federal intermediate credit banks, and FHA production and subsistence loans, disaster loans, and emergency crop and feed loans.

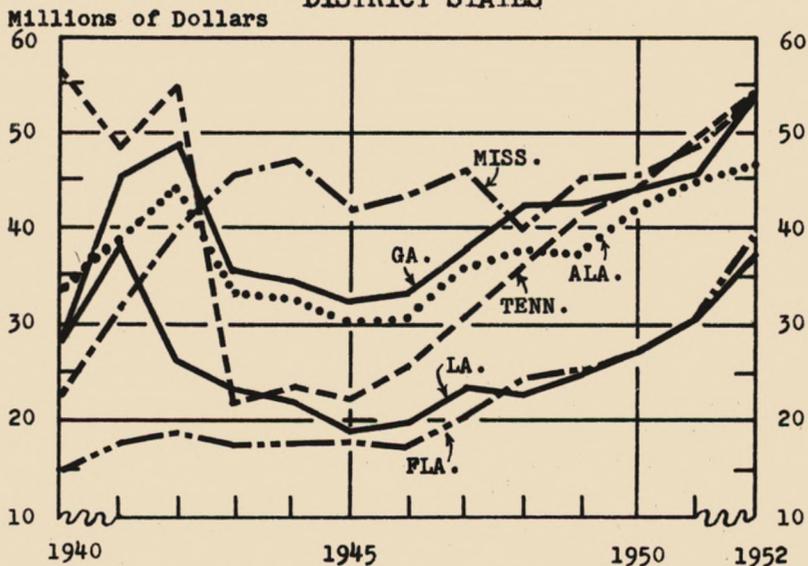
+ Includes debt outstanding held by Federal Land Banks, Federal farm mortgage corporations, FHA, life insurance companies, commercial banks, individuals, and others.

Figure 18
 REAL ESTATE FARM LOANS, OUTSTANDING JAN. 1
 DISTRICT STATES



Since 1946, farm real estate loans by all agencies have risen sharply.

Figure 19
 NON REAL ESTATE FARM LOANS, OUTSTANDING JAN. 1
 DISTRICT STATES



Total non real estate loans have been rising since 1943.

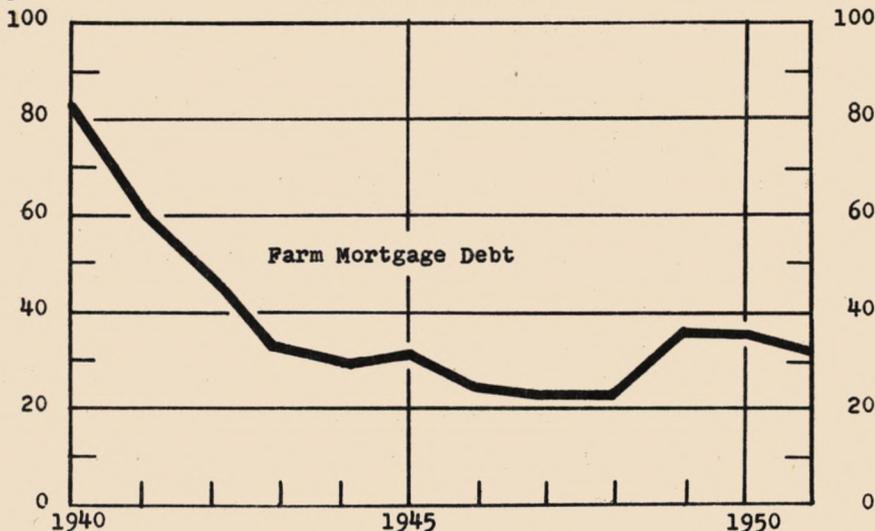
54 million dollars, was the highest among District states.

The farm mortgage debt in District states totaled 661 million dollars on January 1, 1952, and the non-real estate debt reached 283 million. On the real estate side, the rising postwar debt probably has financed the increase in the average size of the farm unit, the bringing of new land into the farming system, and the development of a cattle enterprise on many farms. Recent increases in the value of farm land would also have the effect of increasing the mortgage debt by making it necessary for operators to incur larger loans in order to buy additional land. On the non-real estate side, factors operating to expand the debt have been the rise in the quantities and costs of production materials and the expense of a postwar shift from traditional cash crops to other enterprises, an important example of which is livestock.

Despite the postwar rise in total farm debt, farmers in the six states appear to be in a far better financial position than they were before World War II. In 1940 their mortgage debt was 83 percent of their net income, out of which this debt is paid (Figure 20). Their 1946-51 mortgage debt (reported on January 1 in these years), however, averaged only 29 percent of their net income for this period. Non-real estate debt in District states in 1940 was about 27 percent of total cash receipts, from which the debt is paid (Figure 21). The 1946-52 debt averaged only about 8 percent of cash receipts.

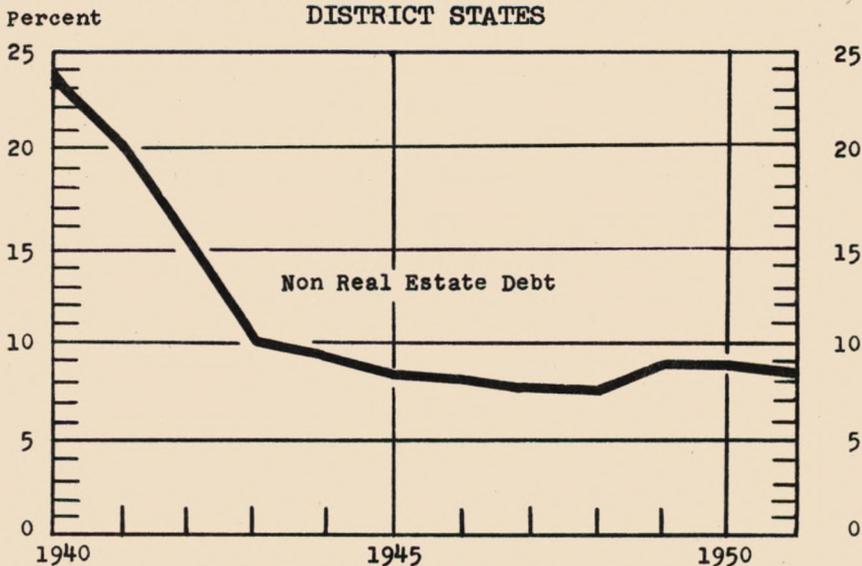
Since 1940 there have also been some changes in the importance of the sources from which farmers borrowed. The over-all pattern of real estate borrowing shows growing activity in commercial and private financing; and, with the exception of Farmers Home Administration loans, a decline in Government financing. In the postwar years, the financing of the non-real estate debt by commercial and private agents

Figure 20
FARM MORTGAGE DEBT AS PERCENT OF NET FARM INCOME
DISTRICT STATES



Since 1940, farm mortgage debt has become a much smaller portion of net farm income.

Figure 21
FARM NON REAL ESTATE DEBT AS PERCENT OF CASH RECEIPTS
DISTRICT STATES



Non real estate debt was a smaller proportion of cash receipts after 1943.

has expanded rapidly; whereas, Government financing gained mostly during the war and has since stabilized at a high level.

SUMMARY

Mechanized farming for more efficient production, increased use of fertilizer and improved seeds for higher yields, and a conversion from row-crops to livestock are significant trends in District agriculture. Their development was hastened by a war and postwar demand for farm products on the home front, as well as abroad. Barring another period of wartime conditions, these trends may therefore be expected to lose some of their force in the coming years. Whether District state farmers will continue to push a diversification of their farm systems, particularly in giving more attention to livestock, will depend largely upon future demand for their cash crops, which are still the mainstay of farming in the six states.

The intensification of production efforts during recent years by District state farmers has contributed to a greater need for capital in the farm production pattern. The financing of fertilizer, machinery, or the initial acquisition of livestock for breeding will have to come out of retained net farm incomes or be carried on with borrowings. Possible falling prices for farm products may retard diversification of enterprises unless output is upped enough and costs are cut enough to maintain incomes at a level that will facilitate the repayment of debts. So far, District state farmers seem to have kept their short-term debt low in relation to long-term debt, and have been favored with an over-all debt which is low in relation to their receipts and income.

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