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Number Six

Cotton in Peace and War

By John F. Moloney

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Foreword

THIS is the sixth of a series of papers on the contemporary South. It deals with the impact of the war on the South, a general subject on which we hope to publish additional Papers. The purpose of this and similar studies is to present to a thinking public a factual interpretation of developments of a vital interest.

The Institute sponsors no program of action of its own. It endorses no opinion expressed herein. Its function is educational in the broadest sense—to lay before thoughtful persons matters worthy of their consideration.

The Editor

Cotton in Peace and War

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I

THE COTTON STATES

To a large segment of the American public, the terms "cotton" and "the South" are synonymous. Perhaps no better evidence of this automatic association of the region and the crop can be found than the everyday use of the term "Cotton South." Like all generalizations, this conception of the Southern States as one great cotton patch covers up many significant features of the region; for the South is many things besides cotton. The coal and steel industries of Alabama and Tennessee, the oil and cattle of Oklahoma and Texas, citrus fruit production in Florida, Louisiana and Texas, the production of lumber, corn and tobacco, and the developing chemical industries—these and many other factors go to make up the region broadly referred to as the South. While the South is not all cotton and all cotton is not produced within the South, the production, marketing and processing of the crop provide the greatest single source of income to the people of North Carolina, South Carolina, Georgia, Alabama, Tennessee, Mississippi, Arkansas, Louisiana, Oklahoma and Texas.

Throughout the present discussion, these ten states will be referred to as the "Cotton States" and the "Cotton Belt." This is by no means a homogeneous area. There are marked differences —economic, political, and social—between the Piedmont region of the Carolinas, the Mississippi Delta, and the Black Lands and Plains country of Texas. There are substantial differences

also in the degree of influence which cotton exerts upon the economic life of various parts of the region. In general, the crop has been of somewhat greater relative importance in the eight States east of Texas and Oklahoma. Because of this difference, it will be convenient to refer to this group of states as the "Eastern Cotton States."

One distinguishing feature common to all the Cotton States is the predominance of agriculture. With only 22.5 per cent of the total population of the United States, the area contains 42.6 per cent of the nation's farm population (see Table I). The ratio of farm population to total population is higher than that of any other area of comparable size within the United States. In 1940, 44.0 per cent of the total population of the Cotton States resided on farms. For all states outside the area, the comparable ratio was only 17.2 per cent. While the proportion of farm to total population in each of the Cotton States has declined since 1930, this is chiefly the result of increases in the non-farm population. Six of the states in the area show an increase in the number of persons living on farms during the decade ending in 1940. Only in Texas and Oklahoma was there a significant decline.

In 1940, slightly over 13 million persons resided on the farms of the Cotton Belt. (Table I) A majority of these farm residents have a direct interest in cotton. The Census of 1940 shows that the Cotton States contain 2,386,692 farms, 65.3 per cent of which produce cotton. (Table II) Cotton-producing farms range from 31.3 per cent of all farms in Tennessee to 89.2 per cent of the total in Mississippi (see Table II). Average population per farm in the area in 1940 was 5.5 persons.[1] On this basis, it may be estimated that there were in that year approximately 8.5 million persons living on cotton-producing farms within the ten Cotton States.

[1]Computed from Tables I and II.

In the agricultural economy which prevails throughout the Cotton States, cotton has consistently been the most important single source of farm income. Prior to 1930, it produced more than half the total cash farm income[2] of the Cotton States (Table III). Following 1930, depressed prices and restricted production reduced the farm income from cotton, both absolutely and in proportion to the total. Cotton continues, none the less, to be the area's most important source of agricultural income.

A number of efforts have been made to estimate the number of persons to whom cotton furnishes employment.[3] None of these estimates is satisfactory. For present purposes, it may be conservatively assumed that cotton provided employment at some time during the year for half the 8.5 million persons who lived on cotton-producing farms in the Cotton States in 1940. A. B. Cox has estimated that perhaps another 5 million persons derive employment from the marketing and processing of cotton and cottonseed after the crop leaves the farm.[4] Recognizing the inadequacy of such estimates, it can nevertheless be said that, on the basis of employment provided, income produced, and the number of persons directly and indirectly affected, cotton is the most important single factor in the economy of the Cotton States.

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[2]Data on farm income are from various mimeographed releases of U. S. Bureau of Agricultural Economics. The Bureau includes in the term "cash farm income" amounts received by farmers in the form of government payments. It is the writer's view that such payments, while they constitute a part of farmers' incomes, are not properly a part of farm income which term implies income from farm production. Accordingly, throughout this discussion the term "cash farm income" refers to cash obtained from the marketing of farm products.

[3]See Richards, H. I. *Cotton and the AAA*, p. 295. Washington, Brookings Institution. 1936; also, Cox, A. B. "Economic Significance of Cotton in the Economy of the United States and the World." *Proceedings—Third Cotton Research Congress, 1942*. College Station, Tex. The Cotton Research Committee of Texas, 1943.

[4]Cox, A. B., op. cit.

II

THE "COTTON PROBLEM"

The "cotton problem" has received probably more than its share of attention in legislative halls, administrative circles, and in technical and popular literature during the past decade. A substantial proportion of such discussions place at cotton's doorstep practically all of the economic and social ills of the areas in which the crop is grown. Cotton has been blamed for illiteracy, for racial suppression, and for the soil destruction and low level of incomes which have characterized the Cotton States. The Agricultural Adjustment Administration has described cotton as ". . . this ruthless ruler (who) has built a sprawling and densely populated kingdom where poverty and low income prevail."[1] There is much room for doubt as to whether cotton is such a ruthless force in Southern life or whether it is a convenient whipping boy which, like the "foreign devils," can be used as an alibi to explain our own inability to solve more basic problems which confront us. To define the "cotton problem," it is necessary to analyze briefly some of the distinguishing features of Southern agriculture.

The most obvious of these features is the low level of farm income. Reference was previously made to the total cash farm income of the Cotton States. In the aggregate, this is a significant sum but when reduced to an individual basis it is pitifully small. Per capita cash farm income in the ten Cotton States for the period 1924-28 was $190 a year. During the depression years 1931-35, it averaged only $95 a year. In 1940, it was $130.[2] Per capita farm income in the Cotton States is lower than

[1]U. S. Agricultural Adjustment Administration. *Cotton, Land and People.* SRM 428. 1940, p. 1.

[2]Per capita income for 1924-28 and 1931-35 from *Cotton, Land and People,* p. 2. 1940 data computed from *16th Census of the United States, 1940. Agriculture.* Ch. I, Vol. III, and U. S. Bureau of Agricultural Economics. Releases on farm income.

in any other large area of the United States. This may be attributed to several factors.

Farms in the Cotton States are considerably smaller than those in the rest of the Nation. Average acreage per farm in the area in 1940 was 131.4, compared with an average of 201.0 acres per farm in all states outside the Cotton Belt (Table IV). The Cotton States' average is, in itself, significantly weighted by the substantial number of large farms and ranches in Oklahoma and Texas which are not common to the Belt as a whole. The average farm in the Eastern Cotton States contains only 78.3 acres.

Moreover the South has relatively little first-rate land. Whereas over one half of the soils of the Middle States are rated as of first or second grade, only 13 per cent of those of the eleven Southeastern states fall in these two top grades.[3] It is not surprising, therefore, that the smaller farm in the Cotton States also represents a smaller capital investment. The total value per farm of land, buildings, implements, machinery and livestock is less than half that of all states outside the area. This small capital investment per farm is not attributable solely to the smaller size of farms within the area. Investment per acre is also small, averaging only two-thirds that of states outside the Cotton Belt (Table IV).

In contrast to the small acreage and capital investment per farm, the Cotton States have a larger population per farm than do all other states. As a consequence, total acreage and crop acreage available per person living on farms are substantially smaller within the area than they are in the rest of the nation. Likewise, capital (including land) available per farm person in the Cotton States is only about one-third as large as in all states outside the area. Even with the most intensive cultivation, land

[3]Van Sickle, J. V. *Planning for the South,* p. 46. Nashville, Vanderbilt University Press. 1943.

and capital available per farm person in the Cotton States is insufficient to provide a level of income and a standard of living comparable to that of farm populations in other sections of the country.[4]

The lack of land and capital relative to farm population has very definitely determined the course of agriculture in the Cotton States. To a large degree, it underlies the emphasis upon cash crops, the credit system, and the high rate of tenancy[5] in the area. The South came out of the Civil War with the major portion of its capital destroyed. It had, on the one hand, the land, and, on the other, a large body of labor, uneducated and unskilled. Neither land owners nor laborers had sufficient capital to operate the land. Two solutions were developed, first, the share-tenancy system bringing together land and labor and, second, the credit system for obtaining capital. Each of these systems requires cash crops.

In the area under consideration, cotton was and continues to be the most acceptable cash crop. It is non-perishable and possesses high value relative to bulk. It is best adapted to soil and climate over the area as a whole and it returns a greater income per acre and per hour than any other major crop except tobacco. Acreage required to produce $100 worth of farm products in the Eastern Cotton States, on the basis of yields and prices over a ten-year period (1923-32), has been reported as follows: cotton 2.8, peanuts 2.9, poultry 3.8, dairy cattle 5.9, wheat 6.6, corn 6.8, hogs 7.3, and beef cattle 23.2.[6] Only tobacco which required 0.8 acres per $100 worth of products compares favorably with cotton, and tobacco largely replaces cotton as the principal cash crop in those areas of the Cotton States to which it is adapted.

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[4]Agricultural Adjustment Administration, op. cit., p. 3.

[5]As used in this discussion, the term "tenancy" includes share-tenancy which prevails in large areas of the Cotton States.

[6]Agricultural Adjustment Administration, op. cit., p. 5.

Cotton is also well suited to the type of share tenancy which is widespread in the southern states. The proceeds of cotton production are easily divided, necessitating a minimum of record-keeping; culture of the crop requires little specialized skill, and the risk of crop damage due to negligence on the part of the tenant is relatively small. The tenancy system, in turn, assures that a supply of labor adequate to meet the heavy seasonal requirements of cotton chopping and picking will be available when needed. These circumstances plus the lack of adequate operating capital help account for the relatively high proportion of tenancy in the Cotton States—53.5 per cent compared with 29.4 per cent in all other states. Tenancy, however, is not peculiar to cotton; witness the fact that the proportion of tenant-operated farms is even higher in such agrarian states as Iowa, Nebraska, and South Dakota than in several of the Cotton States. While it is recognized that there are certain desirable sociological and political features inherent in the "family-sized" farm, it must also be admitted that specialization in ownership, management, and labor will in many instances produce a greater degree of well-being than can be achieved by self-employment. This principle would apply quite widely in the South regardless of the particular crop produced. While cotton, for the reasons cited above, readily lends itself to farming on the share basis, the high tenancy ratio in the area appears to be due not to cotton production *per se* but to the non-existence of millions of individuals possessing the combination of capital and managerial ability that is essential for success in agriculture today.

One of the major costs of cotton production is that of short-term credit. This is particularly true on farms which are operated on a share basis. The tenant may arrive at a farm about the first of the year with little or no funds and he must be supported until the crop is sold the following autumn. He receives such support in the form of monthly advances from the owner

who, in turn, quite generally operates on borrowed capital. Cash tenants and owner-operators also utilize short-term credit. In all cases, security for such credit is a lien against the crop that is to be produced.

Cotton production is carried on at all times under considerable risk. In addition to those of weather and insects which are normal to most agricultural lines, cotton producers are exposed to price fluctuations of exceptional violence. Consequently, creditors have charged very high interest rates ranging quite generally from 10 to 40 per cent.[7] There has been much debate as to whether such rates are in excess of the risk involved. The weight of argument seems to indicate that they are, although losses have run very high. While the lack of operating capital on the part of the individual farmer in the Cotton States requires that short-term credit be available, the cost of such credit has been an important obstacle to his realization of a reasonable income and to his accumulation of capital. It is also one of the pressures exerted upon southern agriculture to produce the maximum of cash crops.

This pressure for cash has resulted in widespread poor farm management in the Cotton States. The growth of cotton on the same land year after year, the exposure of bare fields to the eroding forces of winter rains, and the burning over of cotton fields to destroy insects have brought about extensive soil depletion and erosion. The lack of balance between livestock and crop production on a large proportion of Cotton States' farms has also resulted in soil depletion and in the inefficient year-round use of available labor. None of these practices, however, is peculiar to or is caused by the production of cotton. Such crops as peanuts and soybeans, when harvested for nuts or beans, are far

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[7]Works Progress Administration. *Landlord and Tenant on the Cotton Plantation.* Research Monograph V. Chap. V. Washington, WPA. 1936.

more destructive to the soil than is cotton.[8] Corn, where the stalks are harvested, also removes from the soil a greater quantity of fertility elements than does cotton.

Cotton is a food and feed crop as well as a fiber crop. With each 500 pounds of cotton lint, there are produced approximately 140 pounds of edible oil, 640 pounds of livestock feed in the form of meal and hulls, and 80 pounds of linters. Lint, linters and oil are composed primarily of carbon, hydrogen and oxygen which the cotton plant obtains from the atmosphere. The great bulk of the fertility elements—nitrogen, phosphoric acid, and potash—which the plant draws from the soil are contained in the stalk and leaves and in the meal and hulls of the cottonseed. If cotton stalks are turned under and meal and hulls are fed to livestock with animal wastes being returned to the land, cotton production takes very little of the fertility elements from the soil. Where sound farm management, including crop rotation, the use of winter cover crops, the application of appropriate fertilizers and insecticides, and the production of livestock, is practiced, cotton will not deplete the land. Under such conditions, it is ideally adapted to the agricultural resources of the Cotton States.

The "cotton problem," then, is actually a complex of all the many and involved forces in southern agriculture, centering upon the basic difficulty of insufficient land and capital to assure the farm population of the region a reasonable level of income. Such forces include a high proportion of tenancy, the cost of credit, educational deficiencies, poor farm management and other factors. In other words, the South's problem is not peculiarly a "cotton problem" at all. Cotton production could be completely eliminated in the South—an idea which seems to be

[8]Information furnished the writer by L. A. Niven, Editor, *The Progressive Farmer*, Memphis, Tenn. See also Lowery, J. C., *Peanut Production in Alabama* (mimeographed). Auburn, Ala. Agricultural Extension Service, 1941.

attractive in some quarters[9]—but the problem would remain in greatly aggravated form.

The problems associated with cotton are not confined to the field of production. Marketing conditions have played an equally important part. Down through 1930, more than 50 per cent of American cotton production was shipped to foreign markets[10] subject to the uncertainties of war, political controls, and programs of economic nationalism. Cotton exports have also been adversely affected by the traditional American policy of protectionism. So long as the United States was a large borrower on capital account or a heavy debtor on interest account—a situation that prevailed down to 1914, the effects of our tariff policy upon cotton were not so apparent. During that period, cotton exports were the major factor in maintaining our international balance of payments.[11] The first World War changed the country from a debtor to a creditor nation and greatly expanded our capacity to export manufactured goods. As a consequence, the nation's dependence upon cotton as a source of foreign balances was substantially reduced.[12]

Despite the change in the Nation's international economic position, tariff rates were sharply increased in the Fordney-McCumber Act of 1922, making it more difficult for foreign nations to purchase American cotton. During the 1920s, however, exports were maintained at slightly below the prewar level largely because of American loans abroad.[13] By 1929, foreign

[9]Morris, George. "New Dealers Push Program for South." In *The Cotton Digest.* Vol. XV, No. 42, p. 4, July 17, 1943.

[10]Based upon U. S. Bureau of the Census. *Cotton Production and Distribution.* Bulletin 168, pp. 57-58.

[11]Molneaux, Peter. "The Importance of Cotton in the American Economy." *Proceedings—First Cotton Research Congress, 1940,* pp. 47-54. College Station, Texas Cotton Research Committee of Texas, 1941.

[12]It is recognized that this was a trend which had set in before World War I. Exports of manufactured articles exceeded exports of raw materials for the first time in 1913.

[13]Cox, A. B. "Bases for the Export of United States Cotton Now and After the

lending had largely ceased and exports began to decline. The Smoot-Hawley Tariff Act of 1930 still further adversely affected the export situation.

In the domestic market, cotton has come to depend increasingly upon so-called "industrial uses" including tires, bags and bagging, cordage and twine, hose, belting, filters and similar products.[14] Such products are, for the most part, producers' goods and as such are subject to greater fluctuations in output than are consumers' goods. Further, the majority of all products (including consumers' goods) made from cotton are semidurable in character and therefore subject to deferred demand.

The extent to which cotton depends upon export markets, subject to a wide range of international disturbances, and the nature of the domestic market have made for wide price fluctuations which, in turn, have been reflected in producers' incomes. One indication of the instability of cotton prices is the fact that, over the 27-year period 1911-37, the average annual price variation of cotton lint was 27.7 and that of cottonseed 30.9, compared with 13.2 for all farm commodities.[15] Demand factors are not alone responsible for such variations but do play a major role.

Throughout the 1920s, cotton prices, which averaged above 16 cents per pound, were generally considered favorable. Yields, however, were below prewar levels and many farmers were still struggling under the inflated land values of World War I. The tariff, which adversely affected exports, also raised the cost of many commodities which the farmer purchased. Consequently, his real income was unsatisfactory.

War." *Proceedings—Second Cotton Research Congress, 1941,* pp. 113-32. College Station, Tex. Cotton Research Committee of Texas, 1943.

[14]Horne, M. K., Jr. "The Final Consumption of Cotton." *Southern Economic Journal.* Vol. IX, No. 4, p. 303. April 1943.

[15]Price variation computed by the author using the method of deviations from the mean of link relatives as suggested in Mills, F. C. *The Behavior of Prices,* pp. 49-50. New York. National Bureau of Economic Research. 1927.

Both foreign and domestic demand began to decline in 1929. During the 1930 and 1931 crop years, conditions grew progressively worse. Average price for the 1931 crop was only 5.6 cents a pound, the lowest on record except in 1894. By the end of that season, stocks on hand had risen to 9.7 million bales.

Cash farm income from cotton and cottonseed in the Cotton States declined from $1,425 million in 1929 (calendar year) to $436 million in 1932. Total cash farm income fell from $2,643 million to $985 million over the same period. Farm real estate values dropped sharply;[16] foreclosures were widespread. Thousands of banks and other business establishments dependent upon cotton failed.[17] The entire economic and financial structure of the Cotton States was badly shaken and demands for relief were strong.

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[16]U. S. Dept. of Agriculture. *Agricultural Statistics, 1942,* p. 633.

[17]Malott, D. W., and Martin, B. F. *The Agricultural Industries,* p. 145. New York. McGraw-Hill Book Co., 1939. Also, U. S. Bureau of the Census. *Cotton Production and Distribution. Bulletins 167 and 169.*

III

GOVERNMENT CONTROL OF COTTON, 1929-39

The first direct action of the Federal Government with respect to cotton was taken under the Agricultural Marketing Act of 1929. In the fall of that year, the Federal Farm Board offered, through cooperative organizations, to make loans on cotton on the basis of 16 cents a pound.[1] The theory underlying the Farm Board loans was that of "orderly marketing."[2] The view was widely held that the withholding from market of part of the supply of a non-perishable crop would stabilize the price of that crop. The withheld supplies could then be released in an "orderly" manner as the market would absorb them.

When the 1929 loan announcement was made, cotton was selling at between 17 and 18 cents per pound. The price declined steadily during the season to about 12 cents, and the cotton cooperatives ended the year with stocks of 1.25 million bales acquired on the basis of 16 cents a pound. This cotton was taken over by the Board[3] in June 1930 and held off the market for the following two seasons. The Board again made loans to cooperatives on the 1930 crop. Such loans were made at approximately 90 per cent of the market at the time of the loan. Prices continued to decline, however, and the cooperatives closed the 1930-31 season holding 2.1 million bales.[4] Most of this cotton was carried until 1933 when title was acquired by the government.

After its experience with the 1929 and 1930 crops, the Board

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[1]Except where noted, information regarding the operations of the Farm Board is based upon U. S. Federal Farm Board. *Second Annual Report.* Washington, 1931; and *Third Annual Report.* Washington, 1932.

[2]Black, John D. *Parity, Parity, Parity,* p. 287. Cambridge, Mass. Harvard Committee on Research in the Social Sciences. 1942.

[3]Actually this cotton was purchased by the Cotton Stabilization Corporation, an agency established at the instance of the Board and financed with Board funds.

[4]Part of these holdings were in the form of future contracts purchased by the cooperatives, with authority from the Board, when some of their holdings were sold.

revised its program. For the 1931-32 season, it negotiated an agreement with Southern banks whereby the latter agreed to finance 3.5 million bales by making or renewing loans secured by such cotton and the Board agreed to maintain its holdings at 1.3 million bales and to continue to finance the 2.1 million bales held by the cotton cooperatives. Cotton prices failed to respond to these withholding operations, however, and as of July 31, 1932, the Board was financing more than 3 million bales of cotton, valued at 100 million dollars, on which it had loaned 225 million dollars. By 1932, political opposition to the Board's operations was so strong that it was unable to put into effect any stabilization program for the 1932 crop. Congress donated about 850,000 bales of the Board's cotton holdings to the Red Cross, without reimbursing the Board's funds and the agency became practically dormant until it was abolished by the Agricultural Adjustment Act in May 1933.

During the three-year period of stabilization operations by the Farm Board, cash farm income from cotton in the ten Cotton States declined 66.5 per cent (Table III). The period was one of contracting markets and declining prices throughout the world. World cotton consumption fell from 25.8 million bales in the 1928 season to 22.4 million in 1930 and recovered only slightly to 22.8 million in 1931.[5] Prices of all growths of cotton on the Liverpool market during the same period declined 60-65 per cent.[6] Under the circumstances, it is not surprising that the Board's program was generally ineffective in supporting the price of American cotton and the income of cotton producers.

While the Farm Board had relied upon stabilization operations to support the price of cotton, the Agricultural Adjustment

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[5]U. S. Bureau of Agricultural Economics. *Statistics on Cotton and Related Data* (processed), p. 53. Washington, D. C. 1939.

[6]Ibid., p. 65.

Act of 1933[7] provided more direct methods. The Act authorized the Secretary of Agriculture:

"To provide for reduction in the acreage or reduction in the production for market, or both, of any basic agricultural commodity, through agreements with producers or by other voluntary methods, and to provide for rental or benefit payments in connection therewith . . ."[8]

The purpose of the Act was declared to be:

"To establish and maintain such balance between production and consumption of agricultural commodities and such marketing conditions therefor, as will re-establish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles farmers buy, equivalent to the purchasing power of agricultural commodities in the base period . . . August 1909 to July 1914 . . ."[9]

The Secretary was thus directed to restore cotton prices to the 1909-14 level, known as "parity," by means of production control. In return for reducing production, growers were to be compensated by rental or benefit payments in the form of cash, or of cotton which had been taken over by the Secretary from the Farm Board and other agencies which had made cotton loans. When the Act was approved on May 12, 1933, that year's crop was already planted. Growers were therefore offered contracts calling for the plow-up of 25 to 50 per cent of their growing cotton. Over 1,000,000 such contracts were signed and approximately 10 million acres, 25 per cent of the total planted, were destroyed.[10] Because of good growing weather and more intensive cultivation of the limited acreage, the average yield of lint cotton in 1933 was 213 pounds per acre, the highest since 1914. Total production declined only 46,000 bales below the 1932 level, or by about one-third of one per cent.

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[7]U. S., 48 Stat., 31.

[8]Ibid., Sec. 8, I.

[9]Ibid., Sec. 2, I.

[10]Number of contracts from Richards, H. I. *Cotton and the AAA*, p. 119; acreage destroyed computed from *Agricultural Statistics, 1942*, p. 100.

The failure of the original Agricultural Adjustment Act to reduce cotton production in its first season of operations led to demands for more stringent measures. These demands were given legal effect in the Bankhead Act,[11] enacted in April 1934. This Act provided for an allotment, on the basis of past production records, of 10,000,000 bales of cotton among producers. Individual producers were provided with tax-exemption certificates equivalent to their allotment, and all cotton marketed without such a certificate was taxed at 50 per cent of the market value, or in no event less than 5 cents per pound. The Act was designed to force growers into the AAA acreage reduction program and to discourage efforts to increase per acre yields through more intensive cultivation. Apparently, it was reasonably successful in both objectives since production declined from 12.7 million bales in 1933 to 9.4 million in 1934 and recovered only to 10.4 million in 1935.[12]

While the government, in its production control program, was pursuing a policy without precedent in this country, it was simultaneously following in the footsteps of the Farm Board in attempting to support the price of cotton by means of loans. The original Agricultural Adjustment Act contained no provision for crop loans but the President, under an obscure provision of the National Industrial Recovery Act,[13] established the Commodity Credit Corporation to deal in and make loans on agricultural commodities. The Corporation offered to make loans to producers on their 1933 cotton crop on the basis of 10 cents per pound. The following year the loan rate was set at 12 cents per pound and in 1935 it was cut back to 10 cents, but producers were offered "adjustment" payments equal to the amount by which the market price fell below 12 cents.

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[11]U. S. 48 Stat., 598.

[12]A part of this decrease in production must be credited to the weather which in 1934 particularly was highly unfavorable.

[13]U. S. 48 Stat., 195. Sec. 2 and 220.

The cotton loans were attractive to producers since the government underwrote all losses and agreed to give the borrower any gain resulting from an increase in price. When the 1933 loan was announced, the rate was above the market price and approximately 3.3 million bales were placed in the loan. While an advancing market later in the season led to heavy redemptions, the government, at the end of the 1933 crop year, either owned or had outstanding loans on about 3 million bales of cotton. During 1934-35, over 4.5 million bales went into the loan, and since the price fell below the loan rate, redemptions were small. At the close of the season, the government was financing 6.2 million bales of cotton, twice the peak of Farm Board holdings.

The following season, 1935-36, saw a substantial improvement in the cotton situation. Demand for American cotton increased and the tight market situation enabled the government to reduce its holdings. Exports recovered from the very low level reached in 1934. The season also was marked by the Supreme Court decision declaring the Agricultural Adjustment Act unconstitutional, by the repeal of the Bankhead Act, and by the subsequent passage of the Soil Conservation and Domestic Allotment Act.[14] This latter Act was designed to control production indirectly by paying farmers to grow "soil-conserving" or "soil-building" crops rather than "soil-depleting" crops. Cotton was placed in the latter class.

The first year under the new program was attended by highly favorable circumstances. World consumption of cotton and domestic consumption of American cotton both established new records during 1936-37. Government holdings by the end of the season were reduced to 1.7 million bales and it appeared likely that Federal agencies would, after eight years, be able to get out from under the cotton market. The 1937 crop complete-

[14]U. S. 49 Stat., 1148.

ly reversed this situation. Increased acreage and a record yield of 270 pounds of lint per acre brought about the production of 18.2 million bales. Acceding to widespread demands, the Secretary of Agriculture announced a loan of 9 cents per pound on the 1937 crop. 5.6 million bales were placed in the loan and redemptions were small. As a result, the government entered the 1938 season financing approximately 7.0 million bales of cotton.

The record crop of 1937 also led to demands for a renewal of direct crop control and, in February 1938, Congress passed the Agricultural Adjustment Act of 1938.[15] The Act provided for acreage allotments to individual producers, for marketing quotas, and for a penalty tax on all cotton marketed in excess of such quotas. It further provided that, whenever the price of cotton fell below 52 per cent of parity, Commodity Credit Corporation must offer loans at not less than 52 nor more than 75 per cent of parity. The Act placed an effective brake upon production which declined to 11.6 million bales in 1938. Demand also declined sharply and the price fell below 52 per cent of parity. A loan was announced on the basis of 8.3 cents per pound and 4.5 million bales were pledged as collateral. At the end of the 1938-39 season, the government was financing approximately 11 million bales of cotton. Total stocks on hand amounted to 13 million bales.

Despite ten years of government effort to support prices and improve the position of the cotton producer, the outlook for cotton in the summer of 1939 was probably the blackest since the Civil War. Farm income from the 1938 crop was, with the exception of 1931 and 1932, the smallest since 1902.[16] The price

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[15]U. S. 75th Cong. Public No. 430.

[16]This statement is based upon "farm value" of the crop as reported in *Agricultural Statistics, 1942,* p. 100. Farm income data were not accurately reported prior to 1910 and are shown for calendar years. "Farm value" data have been published since 1899 and refer to crop years.

of cotton was only about 50 per cent of parity, the goal of government control. While producers were realizing greater noncash income as a result of reduced cotton production, income from cotton and substituted crops was substantially less than that from cotton alone during the 1920s. Meanwhile, support prices during the decade preceding 1939 had stimulated foreign cotton production and had cost American cotton a large proportion of its foreign market. Exports of 3.3 million bales in the 1938-39 season were the smallest in more than fifty years.[17] Support prices had likewise encouraged the production and consumption of competitive products, particularly rayon and paper, both at home and abroad. It was under such circumstances that war was declared in Europe in September 1939.

[17] *Statistics on Cotton and Related Data*, p. 12.

IV

COTTON'S MARKETS IN WARTIME

The first year of the war in Europe was marked by a series of governmental efforts to move into consuming channels some of the stocks of cotton accumulated during the preceding decade. In June 1939, shortly prior to the declaration of war, there was signed with Great Britain a barter agreement whereby the United States exchanged 600,000 bales of cotton for approximately 80,000 tons of British rubber.[1] Each nation agreed to retain the bartered commodities as reserve stocks for a period of seven years, except in the event of war. This agreement represented a complete reversal of recent American foreign trade policy. From 1933 onward, the United States had been most emphatic in its denunciation of such bilateral agreements. The fact that the government was now willing to enter such an agreement was recognition of the disastrous position in which it found itself with respect to cotton.

The cotton-rubber agreement was followed very shortly by an agreement with France and Switzerland whereby these nations purchased 175,000 bales of government-owned cotton at a price below that prevailing in world markets.[2] As in the barter agreement with Great Britain, this cotton was to be held off the market for a period of years, except in the event of war.

Perhaps the most important action immediately preceding the war was the announcement on July 22 of an export subsidy of 1.5 cents per pound to be paid on all cotton exported prior to June 30, 1940.[3] Exports of manufactured cotton goods were likewise eligible for the subsidy on the basis of their raw cotton

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[1]Kreider, Carl. "The Anglo-American Cotton-Rubber Barter Agreement." *Southern Economic Journal.* Vol. 7, No. 2, pp. 216-24. Oct. 1940.

[2]*New York Times.* July 28, 1939, p. 28.

[3]Ibid., July 23, 1939, p. 1.

content. Here again, the government adopted a policy which it had severely criticised other nations for following. The export subsidy was adopted over strong opposition in the cotton industry, in Congress, and abroad.

Cotton exports increased substantially during the 1939-40 season and totaled 6.2 million bales. With the exception of exports to Central Europe which was cut off from direct contact with this country, and to Japan, this increase was general. It appears likely that some of these exports found their way, in either raw or manufactured form, into Central Europe for there was a very sharp increase in shipments during the season to Italy, Spain, Belgium, Sweden, and The Netherlands. Outside the German controlled area, for which data are not available, European mill activity was substantially higher in 1939-40 than during the preceding season.[4] Military demands, anticipation of rising prices, and the desire of belligerent and non-belligerent nations to build up reserve stocks against future uncertainties account for this rise. These factors plus the American subsidy explain the large increase in our exports.

At home, the Federal government also took several steps during the 1939-40 season to move cotton into consumption. One of these was the Cotton Stamp Plan whereby families on relief could obtain a portion of their cotton goods purchases free of charge.[5] Another was the Cotton Mattress Program under which the government provided free cotton to needy farm families who would agree to use it to make mattresses.[6] Still another involved subsidies on cotton used in the production of bale covering, writing paper, and insulation.[7] These various programs

[4]U. S. Bureau of Agricultural Economics. *The Cotton Situation, No. 41,* p. 9. March 28, 1940.

[5]U. S. Agricultural Adjustment Administration. *Agricultural Adjustment, 1939-40,* p. 44.

[6]Ibid.

[7]U. S. Dept. of Agriculture. *Report of the Administrative Official in Charge of Surplus Removal and Marketing Agreement Programs, 1940,* p. 14.

contributed slightly but not significantly to the increase in domestic consumption that took place during 1939-40. Of far greater importance were the rise of 18 per cent in general industrial production and the stepped-up purchase of cotton goods in anticipation of a rising price level. Domesitc consumption during the year totaled 7.8 million bales, second only to the record set in 1936-37. Total disappearance during 1939-40 was 13.9 million bales, the largest since 1932-33, and the carryover was reduced by 2.5 million bales. Government holdings were reduced approximately 2.0 million bales during the season.

In the summer of 1940, the cotton export market received another severe blow with the invasion of France and the Lowlands and the entrance of Italy into the war. Automatically, most of the remaining European markets were cut off, leaving Great Britain, Canada, China and Japan as the only important foreign outlets open to American cotton. The British, in a battle for existence, were limiting their textile production to "nucleus" plants in order to free labor and equipment for more essential operations.[8] Mills in Japan and occupied China were being similarly limited for military reasons. It is estimated that consumption of cotton in countries outside the United States during 1940-41 fell 3.5 million bales below that of the preceding season.

Even in the foreign markets still open, American cotton was losing ground to foreign growths, due to the disparity in prices. During the 1939-40 season, American cotton had averaged 2.1 cents per pound higher than Indian cotton and 1.2 cents higher than Brazilian.[9] Under the pressure of reduced world consumption, the price of both Indian and Brazilian cotton declined substantially during the 1940-41 season. The price of American cotton, supported by the loan of 8.90 cents per pound

[8] *The Cotton Situation.* No. 55, p. 9. May 1941.

[9] Ibid., p. 13. Quotations as follows: American at New Orleans, Indian at Bombay, Brazilian at Sao Paulo.

fell slightly during the early part of the season but then rose steadily to more than 14.3 cents at the close of the season. The principal reason for this sharp advance was the enactment, in the spring of 1941, of legislation making mandatory government loans at 85 per cent of parity on the 1941 crop.[10] As soon as it became apparent that this legislation would pass, the price rose in anticipation of the new loan rate. For the 1940-41 season, the price of American cotton averaged 4.4 cents higher than that of Indian and 4.1 cents above that of Brazilian.[11]

As a result of this price disparity, the shift from American to foreign cotton by importing countries, which had begun before the war, was greatly accelerated. Canada which had previously filled about 90 per cent of her mill requirements with American cotton, was by the end of 1940-41 using Brazilian cotton for approximately two-thirds of her needs. Britain, even with her limited textile production, reduced her consumption of American cotton from 47 per cent of her total use in 1939-40 to 38 per cent in 1940-41. Japan and China likewise reduced their consumption of American cotton relative to that of foreign growths.

Total exports of American cotton dropped from 6.2 million bales in 1939-40 to 1.1 million bales during 1940-41, the smallest since comparable data first became available in 1867. Included in these exports were 295,000 bales shipped to Britain under the cotton-rubber agreement, an unexpected shipment of 139,000 bales to Russia, and a small quantity shipped under the Lend-Lease Act. By 1941, the war, coupled with the maintenance of an artificial price level, had practically destroyed the foreign market for American cotton.

Domestically, a totally different situation had developed.

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[10] 77th Congress, 1st Sess. Public No. 74.

[11] *The Cotton Situation.* No. 58, p. 17. Aug. 1941.

With the fall of France in June 1940, the United States began in earnest to rearm. Almost immediately, large government orders were placed with the textile mills for cotton goods. Domestic mill consumption, which had averaged about 625,000 bales monthly during the latter half of the 1939-40 season, rose to 655,000 bales in August 1940, a record for that month. In October, consumption reached 770,000 bales and climbed fairly steadily to over 900,000 bales monthly by the end of the season. Total domestic consumption for the 1940-41 season was 9.7 million bales, substantially above the previous record.

Even this record consumption, however, was not sufficient to offset the loss of foreign markets. Total disappearance amounted to only 10.8 million bales. With a crop of over 12.0 million bales, the carryover increased to 12.3 million bales. While the total carryover increased, the advance in prices during the latter part of the season led to the withdrawal of substantial quantities of cotton from the loan and to the reduction of government holdings to about 8.3 million bales.[12]

Early in the 1941-42 season, the Federal government again took steps to move more American cotton into the few foreign markets still open. The first of these was an offer by Commodity Credit Corporation of its 1937 crop cotton for export at 13.25 cents per pound. When the offer was made, cotton prices in the ten spot markets averaged about 17 cents a pound. The offer was thus equivalent to an export subsidy of 3.75 cents per pound. In addition there was announced an export subsidy of 2.5 cents (later raised to 3.0 cents) per pound on shipments to Canada. Under the stimulus of these subsidy programs exports during the first quarter of the 1941-42 season increased about 20 per cent over the very low level of the preceding season. With the entrance of the United States into the war in

[12] *Report of the President of Commodity Credit Corporation, 1941,* p. 20.

December 1941, exports to the Far East were cut off, leaving Canada and Great Britain as the only important markets still open. The publication of all export data was at the same time discontinued but, from the total supply, domestic consumption, and carryover, it can be estimated that exports during the 1941-42 season totaled only about 680,000 bales.

Domestic consumption during 1941-42 continued to expand. Military demands for cotton goods mounted to phenomenal proportions. Operations in the textile industry averaged 131 per cent of theoretical capacity, compared with 81 per cent during the period 1935-39.[13] Total domestic consumption during the year was 11.2 million bales and total disappearance reached 11.9 million. The carryover was reduced to 10.6 million bales. Government holdings were reduced substantially by the sale of owned stocks and by the redemption of loans. At the end of the season, they amounted to approximately 5.0 million bales.[14]

Domestic consumption was maintained at a very high rate into the 1942-43 season. During the first half of the season, the rate was above that of 1941-42. During the latter half of the year, however, mill operations declined below the level of the preceding season. Principal reason for the decline appears to be labor difficulties. Output has been adversely affected by high labor turnover and by the rise in absenteeism caused in part by the increase of 50 per cent in the proportion of women employed. Depreciation of equipment resulting from the high rate of operations has also been a factor of importance with some mills reporting that depreciation allowances permitted by administrative agencies under the income tax and contract renegotiation laws are insufficient to cover the actual wear and tear on equipment.

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[13] *The Cotton Situation.* No. 70, p. 11. August 1942. Theoretical capacity is based upon a five-day, 80 hour week.

[14] *Report of the President of Commodity Credit Corporation, 1942,* pp. 12 and 19.

Total domestic consumption of cotton during 1942-43 was 11.1 million bales, slightly below the preceding season. Exports, meanwhile, recovered from the very low level of 1941-42 and are estimated at 1.5 million bales. While no official export data are available, it is believed that about two-thirds of the total went to Great Britain, largely under Lend-Lease. Most of the remainder was shipped to Canada, with a small quantity going to Spain. Total disappearance during the 1942-43 season was 12.6 million bales, leaving a carryover of 10.6 million, approximately the same as at the beginning of the year.

While the war has pushed domestic cotton consumption to record levels, it has also stimulated the production of competitive products both in the United States and abroad. American production of rayon filament yarn, which averaged 257.0 million pounds annually in the period 1934-38, rose to 412.0 million pounds a year from 1939 through 1942 and reached 479.0 million in the latter year.[15] Production of rayon staple fiber, which first appeared in the United States about 1928, rose from 30.0 million pounds in 1938 to 153.0 million in 1942.[16] To a substantial extent, this increase in the production of rayon filled the vacuum created by the cessation of silk imports and by the requirement of all nylon production for military use. To some degree, however, military demands for cotton fabrics enabled rayon to move into civilian markets, chiefly the finer goods, formerly filled by cotton.

The most significant threat to cotton, created by the expansion of rayon, is in the field of tire cord, cotton's most important peacetime market. Prior to the entrance of the United States into the war, "high-tenacity" rayon held approximately 4 per cent of the tire cord market and cotton filled the remainder. Total prewar production capacity for this type of rayon was

[15] *Rayon Organon.* Vol. XIV. No. 2. Special Supplement, p. 16. Feb. 1943.
[16] Ibid.

about 23.0 million pounds.[17] Shortly after Pearl Harbor, an expansion of 25.0 million pounds was authorized. In September 1942, the War Production Board authorized an additional 50.0 million pounds. During 1943, a further 140.0 million pounds has been authorized. While all the authorized increase in high-tenacity rayon capacity is not yet in operation and all such rayon produced is not now being used for tire cord, total capacity, completed and authorized, is equivalent to two-thirds the prewar production of tire cord. This expansion holds serious implications for cotton in the postwar period.

The increasing competitive importance of synthetic fibers is by no means confined to the United States. Most of Europe has been unable to import any significant quantity of cotton since 1940. Well developed rayon industries existed within the area prior to the war and there is no doubt that they are being utilized to the limit that labor and raw materials are available. Rayon production within the Axis-controlled area in 1940 has been reported at 1.7 billion pounds, equivalent to 3.5 million bales of cotton, compared with 836 million pounds in 1936.[18] British production of rayon, while slightly below the prewar level has been well maintained. It is indicated that the British are also using some rayon for tire cord and for insulation, markets formerly filled by cotton. They are also striving to maintain exports of rayon goods.[19] Switzerland, which in 1940 had practically no production of rayon staple fiber, in 1942 reported a production of 25 million pounds.[20] All of these developments indicate that cotton will have serious difficulty recovering foreign markets after the war.

Paper is another product which has made important advances

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[17]Data on expansion of rayon tire cord capacity from 78th Cong. 1st Sess. Senate. *Investigation of the National Defense Program.* Report 10, Pt. 11. July 16, 1943.

[18]*The Cotton Situation.* No. 64, p. 6. Feb. 1942.

[19]*Rayon Organon.* Vol. XIV, No. 8, p. 112. July 1943.

[20]Ibid., No. 5, p. 70. April 1943.

in the domestic market during the war, partly at the expense of cotton. This is particularly true in the case of bags. While the total quantity of cotton consumed in the manufacture of bags has increased during the war, this increase has been entirely in the field of heavy bags such as those used for marketing agricultural commodities. There, cotton has replaced jute which is normally imported and the supply of which has been far below requirements. In the manufacture of light-weight bags such as are normally used in the packaging of consumers' goods, cotton has been very largely replaced by paper. Even in the heavy bag field, a market that is partly served by cotton in peacetime, multiwall paper bags have made important advances.

The production and consumption of products competitive with cottonseed products has increased during the war on a scale comparable to that of products competing with cotton lint. The combined production of soybean oil, peanut oil, and lard, all of which compete with cottonseed oil, was in 1942 more than double that of the 1934-38 period. Production of oilseed cake and meal, exclusive of cottonseed, was in 1942 more than three times the 1934-38 level. While most of the output of cottonseed linters has been allocated to the production of smokeless powder, wood pulp has moved in large quantities into linters' peacetime chemical markets. Wartime demand has readily absorbed the increased supplies of vegetable oils and protein concentrates. The greatly increased output of these commodities, however, points to postwar readjustments of major proportions.

Four years of war, then, have brought about the almost complete destruction of foreign markets for American cotton except for small quantities shipped under subsidy programs or as gifts to military allies. Lack of cotton in foreign markets has resulted in increased dependence upon synthetic fibers which will likely have an important bearing upon the use of cotton after the war. At home, war demands for cotton goods have, to a sub-

stantial extent, compensated for the loss of foreign markets. On the other hand, shifts in the types of cotton goods manufactured have enabled competitive commodities, particularly rayon and paper, to take over some of cotton's most important peacetime outlets. Tremendous expansion has also taken place in the production and consumption of commodities that are competitive with cottonseed products. At the beginning of the 1943-44 season, the immediate cotton situation is somewhat improved over that of 1939. After four years of war, the total carryover has been reduced from 13.0 million to 10.6 million bales. During the same period, government holdings of cotton declined from 11.0 to 5.3 million bales, largely as the result of the disposal of cotton under Lend-Lease and the various subsidy programs. While the war continues, domestic cotton consumption promises to continue at a very high level although probably somewhat below that of the 1941-42 and 1942-43 seasons. The postwar market outlook for cotton and cottonseed products, however, is highly uncertain and is not such as to cause optimism regarding the future of the 13 million inhabitants of Cotton States farms.

V

THE COTTON PRODUCER IN WARTIME

Based upon experience in World War I, the declaration of war in Europe in 1939 was not an indication of good times ahead for the cotton producer. The high cotton prices that prevailed during the latter part of the earlier struggle are perhaps the best-remembered feature of that period. During the first few months of World War I, however, the price of cotton declined 50 per cent and it was not until two years later that it recovered to the prewar level. The highest prices occurred in 1920, eighteen months after the war had ceased. A decline in price did not take place during the first year of the present war primarily because of the existence of the loan. The average price of the 1939 crop was slightly above the loan rate and, with an active market demand, little cotton went into the loan. On the other hand, the huge carryover accumulated during preceding years acted to prevent any substantial price rise. Farm income from the 1939 crop was only 3.0 per cent higher than that of the preceding season.[1]

In the summer of 1940, the price of cotton was above 52 per cent of parity and a loan on the 1940 crop was therefore not mandatory under the Agricultural Adjustment Act. Nevertheless, early in August, a loan was announced at 57 per cent of parity or approximately 8.90 cents a pound.[2] Although the basis price at no time during the season fell below that level, over 3 million bales went into the loan. For this, there were two reasons. Normally, the shorter staples and lower grades of the American cotton crop moved into the export market. The shut-

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[1]Actually, farm income is not reported by crop years but by calendar years. In this section, "farm value" data have been used as the basis for statements regarding crop year farm income. Since all cotton is marketed, the discrepancy between "farm value" and "farm income" from the crop is not of major significance.

[2]*Report of the President of Commodity Credit Corporation, 1941*, p. 6.

ting off of exports and the fact that American mills are equipped to handle only limited quantities of low grade and short staple cotton resulted in heavy discounts for this type of cotton, so heavy that it was profitable for producers to place it in the loan, which did not reflect the market discounts. The second reason for cotton going into the loan was the anticipation of a future price rise. This price rise did not materialize during the first half of the season. As late as February, cotton was selling at approximately the same level as at the beginning of the season. The introduction of legislation requiring loans at 85 per cent of parity caused a sharp increase beginning in March 1941. By the end of the season, the farm price had advanced to 14.3 cents per pound, although the average for the entire season was only 9.9 cents.[3] Farm income from the 1940 crop increased 15.0 per cent over that of 1939, but this increase was chiefly the result of a larger crop.

During the first two years of the war, the increase in the price of and the farm income from the cotton crop had been considerably less than that of other farm products, except the grains. The 1941-42 season, however, saw a sharp increase in prices and values. The loan rate for the 1941 crop was established at 14.22 cents a pound which was higher than the price had been at any time since the 1929 season. As it had during the preceding season, the basic market price remained well above the loan rate. Producers placed 2.2 million bales in the loan but withdrew 1.25 million bales plus most of the 1938, 1939 and 1940 crops which had not previously been redeemed. The price rose from 15.5 cents at the beginning of the season to 18.4 at the close so that withdrawals of the loan cotton from previous crops yielded a substantial profit. Farm income from the 1941 crop amounted to 1,131 million dollars, the highest since 1929.

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[3]This price is computed on the basis of the average value of cotton going into the loan. It does not take into account the profit a producer may realize by putting cotton into the loan and later withdrawing it and selling on a higher market.

The 1942-43 season brought still higher prices to producers. The price advanced from 18.0 cents in August to 20.1 cents in April 1943. At that point, the Office of Price Administration threatened to impose a price ceiling on raw cotton. For some time, price ceilings had been effective upon manufactured cotton goods,[4] but such ceilings were tied to the price of cotton so that they rose as the price of the raw material advanced. The OPA proposal was opposed by farm organizations and by the cotton trade and did not receive the approval of the War Food Administration. Opposition was based primarily upon the ground that a ceiling on raw cotton, with some 700 classifications and several thousand pricing points, would be impracticable to administer. There is no doubt that such a ceiling would quite generally disrupt the cotton marketing system and cause widespread confusion and maladjustments. The ceiling was not imposed but an alternative program was worked out to prevent a further extensive rise in price. Under this program, Commodity Credit Corporation offered for sale government-owned cotton at 21.38 cents per pound, basis. Recommendation was also made for revisions in OPA ceilings on cotton goods and in some of the specifications established for purchases by the armed services. The latter two steps were designed to encourage, where practicable, the use of lower grade cotton which constitutes a large percentage of the available supply. Following the announcement of this program, the price did not advance. At the close of the season, it was slightly below 20.0 cents per pound. Farm income from the 1942 crop totaled 1,508 million dollars, 33.0 per cent higher than that of the preceding season and 140.0 per cent higher than that of 1938.

While the position of the cotton producer, during the second two years of the war, has been improved by rising prices, this

[4]Office of Price Administration. *Revised Price Schedule No. 7; Revised Price Schedule No. 35; Maximum Price Regulation 118.*

improvement has been partially offset by production difficulties and increased costs. One of the major difficulties has been the maintenance of an adequate labor supply in the face of calls from Selective Service and the attractiveness of industrial wages. This problem has been aggravated by the attitude of various Federal agencies toward cotton. The Department of Agriculture (subsequently the War Food Administration) has designated a number of farm commodities as "war crops." It has consistently refused, however, to include cotton, other than long staple, in this list. As a consequence the inference has been made that cotton production is not the most patriotic agricultural activity. This ruling holds despite the fact that the Quartermaster General's Office of the U. S. Army reports that "in pounds, in dollar value, and in diversity of military use, there is no basic raw material used by the Quartermaster Corps which ranks cotton."[5]

In November 1942, the War Manpower Commission issued standards governing the deferment of agricultural workers under Selective Service.[6] These standards classified cotton under 1 inch in staple as a non-essential commodity, the production of which would not entitle a farmer to any credit toward deferment. This action indicated a complete lack of comprehension of the cotton picture. It was based largely upon the assumption that there exists a surplus of short staple cotton. It is true that the supply of short staple cotton in the United States in recent years has been relatively large. On August 1, 1942, cotton of less than 1 inch in staple constituted 56 per cent of the stocks on hand, while consumption of such cotton has accounted for approximately 38 per cent of the total use. Staple length, however, is only one of the bases determining the value and consumption

[5]Stevens, Col. Robt. T. "A Report from the Office of the Quartermaster General." Proceedings: *National Cotton Conference—Forum.* March 8, 1943. New York, New York Cotton Exchange, 1943.

[6]War Manpower Commission. Release of November 27, 1942.

of cotton. Equally important is the grade. Mills can frequently meet the specifications for finished goods by shifting to shorter staples when they could not do so by shifting to lower grades. To a large extent, the stocks of short-staple cotton accumulated because the cotton was low in grade rather than because of its staple length. On the basis of consumption at the time the original standards for deferment of agricultural workers were issued, there was an actual shortage of cotton of 15/16 and 31/32 inch staple for use in military articles.[7] Yet such cotton was declared to be non-essential. Another factor ignored in the original deferment standards is that cotton is more than a fiber. It is a major source of edible fats and high-protein livestock feed. While the war needs for these commodities were (and remain) critical, the standards classified them as non-essential if they were produced coincidently with cotton of less than one inch in staple.

The objections raised to the handling of cotton in the original draft deferment standards led to their revision in January 1943.[8] Under the revision, the production of cotton regardless of staple is recognized as a ground for deferment. For cotton stapling less than 15/16 inch, twice as many acres are required for one unit of credit toward deferment as for 15/16 and over. While the revised standards are some improvement over the original, they still fail to recognize that cotton is a food and feed crop as well as a fiber crop.

The draft has fallen heavily upon the cotton producer. The ten Cotton States are in the group of twelve states in the nation having the lowest percentage of occupational deferments.[9] The

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[7]Cox, A. B. "The Cotton Surplus, A Fact or Fancy." *The Cotton Digest.* Vol. XV, No. 23, p. 4. March 6, 1943.

[8]Selective Service System. National Headquarters. *Local Board Release No. 175.* January 16, 1943.

[9]Data on occupational deferments from The Cleveland Trust Co. *Business Bulletin.* Vol. 24, No. 5, May 15, 1943.

other two states in this group are Kentucky and Florida. Mississippi, which is probably the most highly agricultural state in the Union, and where cotton production predominates, has the lowest percentage (0.99%) of occupational deferments in the nation. From these facts by themselves, it might be assumed that most occupational deferments have been granted in states having a heavy concentration of war industries. This, however, is not the case. The twelve states having the highest proportion of occupational deferments are also agricultural states. The highest rate (11.2%) is found in North Dakota. While it may be an oversimplification of the problem, it seems pertinent to ask how the war effort is served by deferring a farm hand to milk cows in the Dakotas, Minnesota or Wisconsin and drafting a cotton grower who produces feed for those cows. Other factors are naturally present but there is little doubt that the attitude of the various Federal agencies toward cotton has been, to a considerable degree, responsible for the low rate of occupational deferments in the Cotton States.

Cotton producers have also been faced with an increased flow of labor toward the cities. In the three years 1939-41, over 2.5 million persons left southern farms for non-farm areas.[10] The rate of departure in 1941 was 177.6 per cent of the 1934-38 average, compared with a rate of 147.0 per cent for all other states. Directly comparable data are not available later than 1941 but, on April 1, 1943, farm employment in the southern states was 8 per cent less than on the same date in 1941.[11] The decrease in farm employment for the nation as a whole over the same period was 6 per cent. As a result of the smaller labor supply and the

[10]Computed from *Agricultural Statistics, 1942,* pp. 644-5. The data cover the So. Atlantic, E. South Central and W. South Central Regions and thus do not apply strictly to the Cotton States.

[11]Computed from U. S. Bureau of Agricultural Economics. Release of April 14, 1943, entitled "Labor Supply Steady, Wage Rates Higher."

direct competition of industrial wages in certain areas, farm wage rates in the Cotton States are the highest on record.[12]

Governmental activity in the farm labor field has further complicated the cotton producer's problem in a number of instances. One such instance is worthy of note. Cotton growers in Arizona, the principal source of long-staple American-Egyptian cotton grown in the United States, have for many years used Mexican labor for picking. As a group, the growers made arrangements with the Mexican government to recruit such labor and to provide transportation and housing. Arrangements apparently had been satisfactory to all concerned. In 1942, the Farm Security Administration secured authority over such transient labor. It made arrangements with the Mexican government to recruit cotton pickers guaranteeing, among other things, that all such labor would be paid a minimum wage of 30 cents an hour. It then sought to impose this agreement upon the Arizona growers. The latter refused to accept the requirement of a minimum hourly wage for cotton pickers, for the very obvious reason that such a method of payment would necessitate approximately one supervisor for every two or three pickers, which was entirely impracticable. The growers offered to pay a picking rate per 100 pounds which would enable any average picker to earn more than the proposed minimum hourly rate, but this offer was refused by FSA.

The long-staple cotton involved was vitally needed for the production of military articles. Acreage of such cotton had been substantially increased in 1942 at the government's request and upon a government guarantee to purchase all such cotton. All types of pressure were brought upon the growers to have the cotton picked under the conditions set up by FSA. The growers were offered an increase in the buying price sufficient to cover

[12] *The Cotton Situation.* No. 78, p. 4. April 1943.

any possible costs involved in the payment of a minimum hourly wage. They were publicly accused of being unpatriotic by the Secretary of Agriculture and the Chairman of the War Manpower Commission. They remained firm, however, in their refusal to accept the minimum hourly wage. All available mechanical pickers were taken into the area and such local labor as could be obtained was used. This was not sufficient, however, to get the cotton picked during good weather. Some of it was still in the fields as late as March 1943 and some was plowed under. The grade of that which was picked was materially reduced and much of it was rendered unfit for military use. Another result of this incident has been the reduction of Arizona's 1943 cotton acreage by 72,000 acres below that of 1942,[13] a decrease of approximately 26 per cent.

This incident in Arizona highlights a development that will almost certainly have far-reaching effects upon the cotton economy in the postwar period. From it, growers obtained their first large-scale experience with the mechanical cotton picker. Mechanical pickers have been in the making for a number of years but, up to the outbreak of the war, had not passed the experimental stage. Research has been continued during the war and significant progress has been made. Arizona growers reported very satisfactory performance. Similar reports have recently come from Arkansas where several pickers are being used to harvest the 1943 crop. That the mechanical picker has arrived is indicated by an application of the International Harvester Co. to the War Production Board for permission to start construction of a plant to produce pickers on a quantity basis.

Despite increased costs of production and difficulties in procuring labor and certain supplies, the cotton producers' net position is substantially improved over what it was at the beginning

[13]U. S. Department of Agriculture. Crop Reporting Board. *Cotton Report as of July 1, 1943.*

of the war. From August 1939 to July 1943, the index of prices paid by farmers advanced 35 per cent.[14] During the same period, the index of prices received for cotton and cottonseed increased 114 per cent. This comparison must be qualified by the fact that the index of prices paid does not include the cost of labor and by the further fact that prices received were at an extremely low level in the summer of 1939. Nevertheless in terms of "parity," which takes into account both prices paid (excluding labor) and prices received, cotton lint has increased 71 per cent since 1939 while cottonseed has advanced 107 per cent.[15] A further increase in cottonseed to approximately 140 per cent above the 1939 level has recently been announced by Commodity Credit Corporation in the form of a price support program for 1943-44.[16] At least for the present, the cotton producer is enjoying a greater measure of prosperity than at any time since the 1920s. In view of increased yields per acre, the decreased population on cotton farms, and the lower level of land values that have since occurred, and the reduction in mortgage indebtedness, his net income is probably greater today than at any time in the past.

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[14]Computed from U. S. Bureau of Agricultural Economics. *Agricultural Prices* (mimeographed). September 29, 1939, and July 29, 1943.

[15]Ibid.

[16]Commodity Credit Corporation. *1943 C.C.C. Cottonseed Form A, Revised* (mimeographed). August 28, 1943.

VI

POSTWAR IMPLICATIONS

The changes that have taken place in the cotton situation since September 1939 have been significant. Four years of war have seen the almost complete disappearance of the export market which formerly took more than half the annual production of American cotton. They have seen this export market to a considerable extent replaced by a domestic market primarily dependent upon military purchases. Both at home and abroad, competitive products, especially rayon and paper, have greatly expanded their markets, partly at the expense of cotton. In each of the four seasons since 1939, the price of cotton has advanced until it is now around the 20 cent level, compared with 8 cents at the beginning of the war. Producers' incomes have increased with prices. Despite production difficulties and rising costs, cotton growers' net incomes are substantially above the level of prewar years.

Few of these changes, however, point in the direction of a permanent solution to the so-called "cotton problem." Probably the most significant development of the war period has been the great expansion in domestic consumption. As previously noted, this expansion was derived from the tremendous military demand for manufactured cotton goods. The Army's purchase list contains about 11,000 different items made of cotton.[1] In addition to such familiar cotton products as regulation clothing and tents, the list includes such items as life rafts, pontoons, blimps, ski-troop uniforms, jungle boots which outwear leather, collapsible and self-sealing gas tanks, and fabrics for plane surfaces, to mention only a few. The Navy's purchases cover a similarly wide range although they are smaller in volume than the

[1]Crain, J. L. "Cotton Serving the Nation." *Manufacturers Record.* Vol. 112, No. 7, pp. 28-9. July 1943.

Army's. This demand obviously is a temporary one which will cease when the war is over. There is already some indication of a decline in military and naval purchases as the armed forces approach the completion of their original equipment program. Replacement requirements are likely to be on a somewhat smaller scale depending, however, upon the extent and nature of combat operations.

Another temporary aspect of the current rate of domestic consumption may be found in those fields where cotton has replaced materials such as jute and hemp which are normally imported. Because of the shortage of shipping facilities, substantial quantities of cotton have been used to replace such imported materials in bags, bagging, twine and similar products. In peacetime, these imported materials have had a considerable price advantage over cotton and this advantage will probably again exist after the war. In the absence of unforeseen developments, the current demand for cotton as a replacement for imported materials not now obtainable will cease soon after the war is over.

There are certain features of this temporary wartime demand, both for military products and for the replacement of imported materials, that may prove favorable to cotton over the longer period. The development of cotton products to meet particular requirements has involved a large amount of technical research. Much progress has been made in producing improved cotton products for old uses and entirely new products for purposes never before served by cotton.[2] The knowledge and techniques thus obtained will assist cotton to maintain its position in postwar markets. Yet, it must be recognized that technical research is impartial and, during the war period, has by no means been confined to cotton. Significant advancement has also been made in the production and utilization of competitive materials: syn-

[2]Stevens, Col. Robt T. Op. cit., pp. 12-13.

thetic fibers, paper, etc. In a number of instances, the use of such materials in place of cotton during the war has involved the installation of special equipment. This has also been true in the replacement of cottonseed linters by wood pulp. Where such a capital investment is involved, cotton (or linters) will have to possess a substantial advantage in price or quality, or both combined, in order to recover markets after the war.

While the position of cotton has been improved, it does not appear likely that the knowledge and techniques developed under the necessities of war will result in a large postwar net increase in domestic consumption. Certainly such an increase will not equal the present volume of consumption for military purposes and as a replacement for materials normally imported. This means that the South must again look to foreign markets if cotton production is to continue as the major source of income for several million of its farm population.

Any appraisal of the postwar foreign markets for American cotton is subject to many qualifications. Unquestionably the postwar demand for cotton and cotton goods in the war-torn nations will be very great. The extent to which this demand will be reflected in purchases of American cotton will to a large degree depend upon the postwar political organization in Europe and the Far East and upon the arrangements that are made to enable both areas to obtain cotton and cotton goods. Assuming, perhaps optimistically, that both these factors are worked out satisfactorily, there should be a good foreign market for American cotton for several years after the war. It now appears likely that the immediate postwar demand will be for manufactured cotton goods rather than for raw cotton.[3] War damage, conversion to other types of production, and depletion of the labor supply will for a time prevent foreign textile mills from resum-

[3]Fleming, Lamar, Jr. "Possibilities of Post-War Trade in Cotton." *Southwestern Banking and Industry.* Vol. 43, No. 30, pp. 9-11, July 24, 1943.

ing production on a scale sufficient to meet demand. During this period, American mills should be able to export manufactured goods in substantial volume. As foreign mills get back into production, however, they will probably be able to undersell American mills as they did before the war and foreign demand, insofar as the United States is concerned, will then be largely limited to raw cotton.

The extent to which the Cotton States will be able to take advantage of this demand for raw cotton will depend in large measure upon governmental policies. Before the war, American cotton was rapidly being replaced in foreign markets largely because of our various programs of price support. These programs have been continued during the war without essential change. The cotton loan rate has been increased to 90 per cent of parity for the duration of the war and two years thereafter. Parity, itself, has increased substantially with the rise in the price level of the commodities which farmers purchase. As a result of the increased loan rate and the fact that foreign cotton has been cut off from most foreign markets, the price differential between American and foreign cotton is much greater at present than it was before the war. As various markets are reopened after the war, the prices of foreign cotton can be expected to rise, narrowing this differential. Nevertheless, if the American price support and holding operations of 1929-39 are continued beyond the immediate postwar reconstruction period, it seems only a question of time until American cotton will be limited to the domestic market.

With respect to cottonseed products, which account for about 15 per cent of the farm income from the cotton crop, the increased wartime production of hogs, peanuts, and soybeans has created a supply of edible oils and fats and of protein concentrates that is several times the prewar domestic consumption of these commodities. While some contraction of production can

be expected in the postwar period, supply is certain to remain greatly above prewar levels. Potential demand for protein concentrates is sufficient to absorb the increased supply and serious difficulty is not looked for. The supply of edible fats and oils, a large percentage of which is now moving abroad under Lend-Lease, is likely to create a postwar problem of major importance. Even a recovery of the lard export market to former levels would leave a substantially increased supply of fats and oils to be consumed in the domestic market. Historically, domestic demand for edible fats and oils has been more closely related to changes in population than it has to changes in national income and industrial activity. Assuming a high level of industrial activity and income in the postwar period, the supply of these commodities still appears in excess of that which will be readily consumed in domestic markets, except at a considerably lower price level. It is for this reason that the cotton industry has been particularly active in efforts to remove the legislative restrictions upon oleomargarine.

This latter product has for more than fifty years been enmeshed in a net of taxation and other legal restrictions, federal and state,[4] enacted to protect the butter industry from competition. The sale of margarine has been severely limited and the use of oils, such as cottonseed, peanut and soybean, has consequently been curtailed. It is estimated that the removal of these restrictions would open up a market for fully 10.0 per cent of the postwar production of edible fats and oils.[5] The wartime shortage of butter has focused attention upon the conflict between the restriction of margarine and sound national policy. Such agencies as the National Research Council and the Council

[4]For a tabulation of margarine taxes, see the writer's testimony before the Temporary National Economic Committee. Hearings Pursuant to Public Resolution No. 113 (75th Cong.), Part 29. *Interstate Trade Barriers*, pp. 15823-41. Washington. Government Printing Office. 1941.

[5]Ibid., p. 15838.

on Foods of the American Medical Association have reported that in a normally-varied diet there are no known nutritional differences between butter and margarine, and that the restriction of the latter prevents the proper distribution and utilization of our fat resources.[6] Organized consuming groups (including labor) have become active in seeking the repeal of restrictive legislation. Two States, Tennessee and Oklahoma, have repealed heavy taxes formerly imposed upon margarine. The dairy industry, however, has successfully resisted every effort to modify the federal and most state laws. Thus, while some small progress has been made toward opening up the margarine market, most of the restrictions upon the product still remain in force, and prospects for marketing any substantially increased percentage of postwar fats and oils production through this channel are not encouraging.

The postwar market outlook for cotton lint and cottonseed products does not, in the light of present conditions, indicate a particularly prosperous future for the Cotton States. The war has not created alternative sources of employment and income on a scale sufficient to replace cotton. In agriculture, despite Federal efforts to shift production to other crops, cotton accounted for a larger proportion of farm cash income in the Cotton States in 1942 than it did in the several years before the war. By the use of subsidies and penalties, acreage and production of certain crops, particularly peanuts and soybeans, have been increased. Only a small part of such increases appears likely to be permanent, however, for the reason that such crops, except in limited areas, will not yield an income comparable to that obtained from cotton.

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[6]National Research Council. *A Report on Margarine.* Reprint and Circular Series, No. 118. August 1943. Also, Report of the Council on Foods and Nutrition of the American Medical Association entitled "The Comparative Nutritional Value of Butter and Oleomargarine." *Journal of the American Medical Association.* Vol. 119, p. 1425. 1942.

Industrial expansion in the Cotton States has been substantial during the war. From the beginning of the defense program in June 1940 through November 1942, 2.5 billion dollars in contracts and allocations for industrial plants and facilities were placed within the area.[7] This was 17 per cent of the total of such contracts and allocations placed throughout the nation during the same period. The Cotton States, however, contain 22.5 per cent of the nation's population. Obviously, the area did not receive its share of war plants and facilities upon the basis of population or need for sources of employment. Such facilities had to be located with due regard to existing supplies of power, of skilled labor, and of complementary facilities. The Cotton States were at a disadvantage with respect to such factors with the result that the geographic distribution of war industries tended to follow the pattern of industrial concentration that existed prior to the war.[8]

The permanency of many of the war industries located in the Cotton States is questionable. Ordnance plants can be regarded as temporary only. Shipyards, aircraft plants and the greatly expanded aluminum facilities have an uncertain future and are practically certain to operate on a restricted basis after the war. The permanency of the synthetic rubber plants depends upon international political arrangements following the war. To the extent that industrial facilities created for war continue to operate or are converted to other types of production, the war will have assisted the Cotton States toward achieving a better economic balance. Before the war, however, the area was not sufficiently industrialized to provide employment for its surplus farm population. Regardless of the extent to which war-created industry continues in operation, it cannot be expected to make up for this original lack of balance, and, in addition, to offset

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[7] *Manufacturers Record.* Vol. 112, No. 2, p. 40. February, 1943.

[8] *Survey of Current Business.* Vol. 23, No. 1, p. 29. January, 1943.

the destruction of employment and income that would result from a further large cut in cotton production.

The "cotton problem," then, has not been solved by the war. The number of persons dependent upon cotton production has been somewhat reduced and the income of those remaining has been increased, making possible some reduction in farm indebtedness. The situation, however, is for the most part a temporary one which is likely to exist for only a limited period after the war. The decision will then have to be made as to whether the United States is to continue producing cotton on a scale which involves the export of approximately 50 per cent of production or whether, in an effort to maintain a high unit price, production is to be limited to the domestic market with the consequent destruction of a large proportion of the Cotton States' principal source of employment and income.

TABLE I

POPULATION: Total on farms, for United States, Cotton States, and all other States: 1940-1930.

	Farm Population			
	1940		*1930*	
	Number	*% of Total*	*Number*	*% of Total*
United States	30,546,781	23.2	30,445,350	24.8
North Carolina	1,659,477	46.5	1,599,918	50.5
South Carolina	916,611	48.5	916,471	52.7
Georgia	1,367,627	43.9	1,418,514	48.8
Tennessee	1,275,582	43.7	1,215,452	46.5
Alabama	1,343,080	47.4	1,340,277	50.6
Mississippi	1,403,142	64.3	1,362,843	67.8
Arkansas	1,113,102	57.1	1,119,464	60.4
Louisiana	853,949	36.1	830,606	39.5
8 Cotton States	9,932,570	47.7	9,803,545	51.5
Oklahoma	930,412	39.8	1,024,070	42.7
Texas	2,159,548	33.7	2,352,272	40.4
10 Cotton States	13,022,530	44.0	13,179,887	48.3
All other States	17,524,251	17.2	17,265,463	18.1

Source: *16th. Census of the United States: 1940. Agriculture.* Ch. I, Vol. III, p. 17. Percentages computed by the author.

TABLE II

FARMS: Total producing cotton and per cent of all farms; for United States, Cotton States and all other States.

	Farms Producing Cotton			
	1939		*1929*	
	Number	*% of Total*	*Number*	*% of Total*
United States	1,589,723	26.1	1,986,726	31.6
North Carolina	103,248	37.1	151,664	54.2
South Carolina	111,618	81.1	131,426	83.2
Georgia	167,256	77.4	206,734	80.9
Tennessee	77,405	31.3	88,346	36.0
Alabama	200,649	86.6	231,824	90.1
Mississippi	259,529	89.2	282,175	90.2
Arkansas	150,667	69.5	192,209	79.3
Louisiana	114,291	76.2	128,537	79.6
8 Cotton States	1,184,663	67.0	1,412,915	73.9
Oklahoma	86,889	48.4	123,477	60.6
Texas	272,820	65.3	395,106	79.7
10 Cotton States	1,544,372	65.3	1,931,498	73.9
All other States	45,351	1.2	55,228	1.5

Source: *16th. Census of the United States: 1940. Agriculture.* Farms producing cotton from Vol. III, Chap. VIII, pp. 96-97. Percentages calculated from figures for all farms as given in Vol. III, Ch. I, pp. 37-38.

TABLE III

CASH INCOME FROM FARM MARKETINGS: Total income and income from cotton (lint and seed): Average 1925-29 and 1935-39, annually 1930-42.

	TOTAL CASH INCOME		*COTTON CASH INCOME*		*COTTON AS % OF TOTAL*	
	Eight Cotton States	*Ten Cotton States*	*Eight Cotton States*	*Ten Cotton States*	*Eight Cotton States*	*Ten Cotton States*
	$1,000	*$1,000*	*$1,000*	*$1,000*		
1925-29 Avg.	1,489,269	2,590,760	838,472	1,427,347	56.3	55.1
1930	1,056,519	1,768,611	497,251	774,610	47.1	43.8
1931	682,992	1,182,869	280,633	466,704	41.1	39.5
1932	561,918	985,820	251,680	436,041	44.8	44.2
1933	692,079	1,184,760	303,341	547,103	43.8	46.2
1934	1,023,156	1,589,437	531,562	794,978	52.0	50.0
1935	1,015,636	1,591,375	442,887	666,422	43.6	41.9
1936	1,214,629	1,835,183	595,875	824,853	49.1	44.9
1937	1,236,403	2,032,739	525,557	785,013	42.5	38.6
1938	1,066,214	1,692,376	403,163	582,474	37.8	34.4
1939	1,035,487	1,677,281	382,968	552,654	37.0	33.0
1935-39 Avg.	1,113,687	1,765,790	470,090	682,283	42.2	38.6
1940	998,553	1,697,984	382,123	582,414	38.3	34.3
1941	1,412,855	2,375,446	600,363	922,686	42.5	38.8
1942	2,074,045	3,438,620	869,717	1,305,289	41.9	38.0

SOURCE: *U. S. Bureau of Agricultural Economics.* Releases on farm income (mimeographed). Percentage computed by the writer.

TABLE IV

FARMS: Acreage and values per farm, per acre, and per capita of farm population; 1940

	8 Eastern Cotton States	*10 Cotton States*	*All Other States*
Average acres per farm	78.3	131.4	201.0
Crop acres available per farm, 1939	41.9	59.2	104.6
Crop acres used per farm, 1939	29.1	39.6	66.5
Value of land and buildings per farm	$2,213	$3,099	$7,052
Value of implements and machinery per farm	$ 168	$ 235	$ 671
Value of livestock per farm	$ 340	$ 446	$ 938
"Capital Investment"[1] per farm	$2,721	$3,780	$8,661
"Capital Investment" per acre	$34.73	$28.76	$43.09
Population per farm	5.6	5.5	4.7
Total acres per capita	14.0	23.9	42.8
Crop acres available per capita	7.5	10.8	22.3
Crop acres used per capita	5.2	7.2	14.1
"Capital Investment" per capita	$486	$687	$1,843

Source: *16th. Census of the U. S. 1940. Agriculture.* Acreage data computed from U. S. Summary. 1st Series "Uses of Land." pp. 13-15. Value data computed from Vol. III, Ch. I. "Farms and Farm Property." pp. 28-29.

[1]"Capital Investment" is used to represent the total value of land, buildings, implements, machinery, and livestock.