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WARTIME EXPANSION OF MANUFACTURING FACILITIES

The War Production Board has recently reported that in the period July, 1940, through May, 1944, facilities authorizations exceeding 20 billion dollars were made for the expansion of the nation's manufacturing plant.¹ This expansion is estimated to have increased the prewar plant capacity from 40 to 50 per cent, and as such it marks the greatest expansion of industry made in any similar period of time in the history of the nation.

The purpose of this expansion was to produce the goods and munitions required for war, and the amount of the expansion, as well as its location, was dictated in large part by military considerations rather than economic. The role of this enlarged productive plant in the military victory has been well established, but the economic significance of the expanded manufacturing capacity for the nation as a whole, and for those areas in which the expansion took place, cannot be ascertained with any degree of certainty at this date. Practically every field of production is affected and the decentralization or further centralization of industrial areas in the next quarter of a century will be determined in large part, no doubt, by the nature and location of this expanded manufacturing plant.

The construction of a considerable part of this manufacturing capacity, and especially of new plant capacity in the Tenth Federal Reserve District, in which area a demand has long been expressed for a higher degree of industrialization, makes the expansion of particular interest to this District.

National Expansion Of the more than 20 billion dollars in authorizations made for the expansion of the nation's manufacturing plant, 13.9 billion was for new plant construction and equipment, about 4.2 billion for "expansions,"² and 2.2 billion for conversions. These facilities were cre-

ated for the manufacture of goods in nine product groups, but the major part of the expansion was concentrated in five of these: aircraft, 18.5 per cent of the total; ordnance, 14.5 per cent; chemicals and petroleum products, 14.1 per cent; explosives and loadings, 12.4 per cent; and ships, 12.2 per cent.

The facilities for the production of these groups were spread throughout all the geographical regions of the nation, but the larger proportions of the authorizations for "expansions" and conversions were concentrated in the two major prewar industrial regions and comparatively high proportions of the new plant authorizations were concentrated in these two regions and in the West South Central region. The East North Central region (Ohio, Indiana, Illinois, Michigan, and Wisconsin) received authorizations totaling 3.9 billion dollars for new plant, the Middle Atlantic region (New York, New Jersey, and Pennsylvania), 2 billion, and the West South Central region (Arkansas, Louisiana, Oklahoma, and Texas), 1.8 billion. Perhaps the most significant fact is that the latter region, which before the war contributed only 3.3 per cent of the "value added by manufacture," received 10.6 per cent of all authorizations and 13.6 per cent of the new plant authorizations. This region received a large proportion of the new synthetic rubber plants and facilities for producing petroleum products. Texas received over 58 per cent of the authorizations of the West South Central region.

A fundamental question raised by this wartime development is whether regional dispersion or relocation of industry resulted, or might be expected to result. A precise answer would require comparison of the amount of the expansion with the capital investment or the productive capacity of the prewar plant, but unfortunately no satisfactory data are available for such a direct statistical comparison. The only way in which the problem can be approached, therefore, is to use an index which might be assumed to indicate, at least in a relative way, the size or value of the prewar plant.

If "gross tangible assets, less estimated depre-

¹"The Geographic Distribution of Manufacturing Facilities Expansion," War Production Board, June 1, 1945. The war facilities authorizations covered both construction and equipment, but no separate statistical breakdown was made for the different types. The data do not represent war supply contracts and do not indicate the comparative production volumes of different areas.

²Expansion is used in a general sense to include all three types of plant capacity. When used in the technical sense to refer to the enlargement of existing facilities for the production of the same goods in war as in peacetime, the term is enclosed in quotation marks.

ciation" is used to represent the value of the prewar plant, a value of 21.3 billion dollars for 1939 is obtained. The War Production Board, using the index of net capital investment in the plant, concludes that a widespread relocation of industry has not taken place, but that there has been "a heavy concentration of these war expansions in the same states and areas where specific industries had chiefly operated before the war." The Board further states, "Actually, effective dispersion has been the exception rather than the rule."³

Statistical evidence can be developed to support the conclusions of the Board, but it does not appear that a final conclusion can be made on the basis of the information now available. Whether a relocation or dispersion of industry has actually taken place can be determined only after the reconversion adjustments indicate which parts of the expansion will become a permanent part of the peacetime manufacturing plant. The data appear to indicate that some shift resulted from the location of new plant in certain regions, but the East North Central region still holds first place in national manufacturing capacity and the Middle Atlantic region retains second place. Of the 48 states, Ohio received the largest number and greatest value of facilities authorizations, Pennsylvania the second largest, and the Dakotas the smallest. But, the construction of a large number of new plants in areas which were of no industrial importance or of relatively small importance in the prewar period is of particular significance. Although some of these plants are of such specialized character that they cannot be used for the production of peacetime goods, some of them may constitute a permanent addition to manufacturing capacity, as against "expansions," which frequently are of a temporary nature, and conversions, which are for the most part of a temporary nature. The extent to which these new plants can be utilized for the manufacture of peacetime goods will determine the "permanent" relocation of industry which may take place, and will influence greatly the industrial development programs of many sections of the nation, particularly the West and Southwest.

As a result of the expansion, the War Production Board has delineated 179 manufacturing areas. Although the basis used for designating a manufacturing area differs from that used by the Census of Manufactures, it is noteworthy that the latter designated in 1939 only 33 manufacturing areas, comprising 97 counties of the nation. The areas as defined by the War Production Board include 451

counties, and these counties received 93 per cent of the total authorizations. Over a third of the areas which expanded sufficiently in the war period to become new "manufacturing areas" are in the West South Central region.

More than 77 per cent of the expansion was publicly financed, but the proportion of public to private funds varied from region to region and by type of expansion. In the West North Central region, 90 per cent of the financing was supplied from Federal funds, and in the West South Central, 82 per cent. The highest percentage of private financing occurred in the older industrial areas, where facilities contracts were awarded in large part for plant "expansion" and conversion.

District Expansion In the period of approximately four years, facilities totaling almost a billion dollars in value were authorized in the areas included within the boundaries of the Tenth Federal Reserve District.⁴ These constituted 4.9 per cent of the total national authorizations in comparison with the estimated prewar annual manufacturing capacity of the District of 2.7 per cent, as measured by its contribution of "value added by manufacture" in 1939. Thus, the District received a greater proportion of the national facilities than its prewar manufacturing position in the nation, and on this basis may be considered to have improved its relative industrial position. The apparent gain indicated by these statistical comparisons is offset, however, by the fact that a large proportion of the facilities authorized was for the production of combat type goods and may not be readily convertible to peacetime production. In the tabulation below, the contract value of the District authorizations for each of the product groups is shown. The table also shows, for the District and for the nation as a whole, what proportion each class of authorization bears to the respective total authorizations.

	District	% of Total	
	Authorizations (Million \$)	District	U. S.
All groups	989.0	100.0	100.0
Explosives and loadings.....	364.7	36.9	12.4
Aircraft	295.4	29.9	18.5
Chemicals & petroleum prod.	150.4	15.2	14.1
Ordnance	119.6	12.1	14.5
Food and other manufactures	21.9	2.2	4.6
Iron and steel and its prod.	21.3	2.1	10.4
Nonferrous metals and prod.	10.5	1.1	7.4
Machinery	5.0	0.5	5.9
Ships	0.2	*	12.2

*Less than 1/10 of 1 per cent.

⁴ The contract authorization cost of the facilities was \$988,965,000 in those counties of the District for which separate data were reported. This amount does not include certain Tenth District counties in the states of Missouri, Oklahoma, and New Mexico, which were classified in the "all other counties" groups by the War Production Board. For these groups, the total authorizations amounted to 15.9 million dollars, but it is impossible to compute the portion which was in the Tenth District. Facilities authorized prior to July, 1940, are not included in these data.

³ For reference see footnote 1.

The above tabulation shows that the District was awarded facilities for the production of goods in all of the nine product groups but that the District percentages varied widely from the national percentages for the different groups. The District facilities were heavily concentrated in explosives and loadings and in aircraft. These two groups constituted 66.8 per cent of the District authorizations in comparison with 30.9 per cent for the nation. The District facilities in these two groups bulked very large in terms of the total national authorizations; in explosives and loadings, the District facilities were 14.5 per cent of the national total for the group, and in aircraft, 7.9 per cent. On the other hand, the District authorizations in ships, machinery, nonferrous metals, and iron and steel facilities were much lower than the national averages for these groups. The District proportion of the food and other manufactures group was also lower than the national, but in chemicals and petroleum products and in ordnance the proportions approximated the national averages. If the percentage of ordnance facilities is added to those for aircraft and explosives and loadings, it is seen that the facilities for the production of these three groups of combat goods amounted to 78.9 per cent of the total District authorizations as against 45.4 per cent of the national total.

The expansion took place in all states within the District, but the distribution of the facilities for all product groups, except explosives and loadings, tended to follow closely the prewar industrial patterns. The explosives and loadings facilities, and particularly those for explosives production, were located in the nonurban areas for security and safety reasons. The aircraft facilities were located in the larger centers of population where aviation activity was already developed, and the ordnance facilities in the prewar automobile assembly centers. Machinery facilities were concentrated in Kansas City and Omaha, and those for the production of chemicals, petroleum, coal, iron, steel, nonferrous metals, and the products of each of these, were centered in the producing and refining areas. The facilities for the food and other manufactures group were spread throughout the District, as in the nation.

Although these facilities were spread through all the states of the District, there was a decided concentration in a relatively few areas. The 15 manufacturing areas⁵ for which information is available

⁵ The War Production Board defined 16 manufacturing areas in the Tenth District but included the statistical data for the St. Joseph, Missouri, area in the "all other counties" classification; thus, the extent of the expansion in this area cannot be determined.

received 93.1 per cent of the District authorizations, and within this group, 3 areas received about half the total. The comparative contract value of the authorizations in these areas for the four major product groups of the District is shown in the accompanying chart.

The chart shows that the bulk of the authorizations was awarded in a relatively few areas and that a number of the areas were assigned facilities for the production of comparatively few product groups. The Lawrence, Pryor, Grand Island, and Rawlins areas received facilities for the production of a single product group, and Ponca City and Duncan for but two. On the other hand, Denver was awarded facilities for all product groups; Kansas City and Omaha for seven; Wichita, six; and Joplin-Coffeyville, Oklahoma City, Lincoln, and Tulsa, five each. Even in these areas, however, the facilities tended to be concentrated in one or two principal products.

The Kansas City area (Jackson and Clay counties in Missouri, and Wyandotte County in Kansas) was awarded facilities authorizations of 199.4 million dollars, which applied to all product groups, except ships⁶ and explosives and loadings. It ranked first in the District in the value of authorizations, having received 20.2 per cent of the total, and led all areas of the District in aircraft, ordnance, nonferrous metals and products, and machinery. Although by far the most important in the District in the value of aircraft facilities authorized, the Kansas City area ranked tenth in the 11 leading aircraft manufacturing areas of the nation. In nonferrous metals and products, it accounted for almost two-thirds of the District total; in ordnance, slightly over one-half; and in machinery, over one-third.

The Denver area (Denver County, Colorado), with authorizations of 132.1 million dollars, was the only manufacturing area to receive facilities in all product groups. The facilities were concentrated largely in two groups, however, explosives and loadings, 64.4 million, and ordnance, 50.9 million. It led all areas of the District in the iron and steel group and received the largest amount of facilities in explosives and loadings of any of the principal prewar manufacturing areas of the District.

The Joplin-Coffeyville area (Jasper County in Missouri, and Montgomery, Labette, and Cherokee counties in Kansas) received 74.5 million dollars in authorizations. Of the total awarded the area, 38.5 million was for chemicals and petroleum facilities and 35.2 million for explosives and loadings.

The Omaha area (Douglas, Sarpy, and Saunders

⁶ Some of the District facilities for the production of water craft were not classified in the ships group.

counties in Nebraska) received authorizations of 68.8 million dollars, covering all product groups except machinery, but the authorizations were concentrated largely in aircraft, 29.7 million, and explosives and loadings, 28.7 million. It led all areas of the District in facilities for the food and other manufactures group, with authorizations of 3.6 million, and it received \$112,000 of the \$158,000 District authorizations for the ships group.

The authorizations of the Wichita area (Sedgwick County, Kansas) amounted to 50.5 million dollars. Of this total, 48.7 million, or 16.5 per cent of the District total, was in aircraft facilities. The remainder of 1.8 million was spread over five groups in relatively small amounts, but with the largest amount in ordnance facilities.

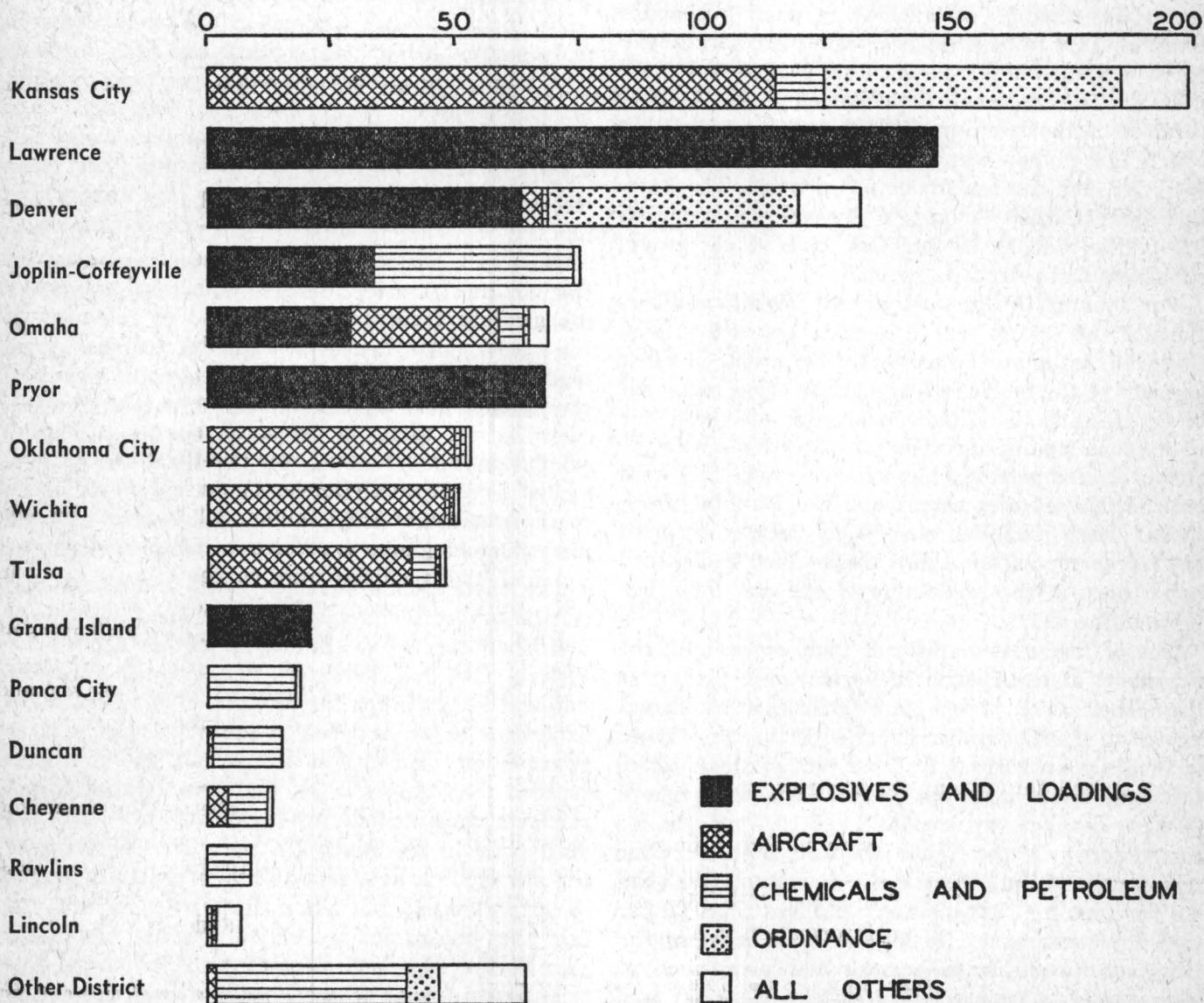
The Oklahoma City area (Oklahoma County, Oklahoma) received authorizations totaling 52.8 million dollars for facilities in five of the product groups. Of this total, 51.1 million was in aircraft, and 1.5 million in the chemicals and petroleum group.

The Tulsa area (Tulsa County, Oklahoma) was awarded facilities in the amount of 47.8 million dollars, of which 40.5 million was for aircraft, and 5.4 million for chemicals and petroleum products. It ranked fourth in the District in aircraft facilities authorized, sixth in chemicals and petroleum products, and third in machinery.

The Cheyenne area (Laramie County, Wyoming) received authorizations of 12.8 million dollars, of which 8.2 million was for chemicals and petroleum products facilities, 4.5 million for aircraft, and

DISTRIBUTION OF FACILITIES AUTHORIZATIONS IN THE TENTH DISTRICT

(In millions of dollars)



\$55,000 for machinery.

The Lincoln area (Lancaster County, Nebraska) received authorizations totaling 7.1 million dollars in four product groups. It accounted for almost one-third of the District authorizations in machinery, and for 18.8 per cent of those in iron and steel.

The Lawrence area (Douglas County, Kansas), Pryor area (Mayes County, Oklahoma), and Grand Island area (Hall County, Nebraska) became manufacturing areas solely because of the construction and equipment of plants for the production of explosives and loadings. The authorizations for the Lawrence area facilities totaled 148.4 million dollars, Pryor, 67.5 million, and Grand Island, 20.5 million, or a total in the three areas of 236.4 million. This amounted to 64.8 per cent of the total explosives and loadings facilities authorized in the District and to 8 per cent of those in the nation. The Ponca City area (Kay County, Oklahoma) received authorizations of 18.9 million dollars, of which almost the entire amount was for chemicals and petroleum facilities. The Duncan area (Stephens County, Oklahoma) received authorizations of 14.5 million dollars, of which 14.2 million was for chemicals and petroleum facilities, and the remainder for aircraft. The Rawlins area (Carbon County, Wyoming) was awarded 9.2 million dollars in facilities in a single group, chemicals and petroleum products.

For four of the product groups, significant portions of the District facilities were awarded outside these 15 designated manufacturing areas. Almost one-half of the facilities for food and other manufactures, slightly less than one-third of those for nonferrous metals, and about one-fourth of those for chemicals and petroleum and for iron and steel were outside the counties comprising the manufacturing areas. These facilities were widely dispersed, with the larger amounts in those areas which had gained importance in the production of the raw materials prior to the war.

One of the most significant facts concerning the expansion of the District manufacturing plant was the authorization of new plant facilities at a contract valuation of 936.9 million dollars. Of the three types of facilities authorized, 68.4 per cent of the national total was awarded for the construction of new plant, 20.8 per cent for "expansions," and 10.7 per cent for conversions. In the Tenth District, however, over nine-tenths of the total was for new plant, less than 4.0 per cent for "expansions," and less than 3.0 per cent for conversions. In all the state areas of the District, the authorizations for new plant were of high value in comparison with "expansions" and conversions.

The expanded manufacturing plant of the Tenth District was financed more largely by public funds than was the expansion for the nation. In the District, 89.6 per cent of the expansion was financed by public funds and only 10.4 per cent by private funds as compared with national averages of 77.7 per cent and 22.3 per cent, respectively. Public financing was above 75 per cent in all the state areas of the District, except New Mexico, in which the percentage was only 39.1.

Summary and Conclusions It is not possible solely upon the basis of statistical data to make a determination with respect to the possible peacetime use of the manufacturing facilities authorized in the war period, or to determine the effects which the expansion may have upon the future industrial development of a given community. Such determinations can be arrived at only upon the basis of an economic analysis of the particular area and a survey of the specific plants and equipments to determine their general condition and their possible productive uses. Analysis of the statistical data relating to the facilities expansion does point out certain general conditions, however, and gives some indication of the more important problems which confront the District as a result of the expansion.

The Tenth District received a larger percentage of the national facilities authorizations than its prewar manufacturing capacity constituted of the total of the nation, but it cannot be assumed that the industrial potential of the District has been increased to the full extent of this expansion. The bulk of these facilities was designed for the production of special combat goods, and unless these facilities can be converted to the production of peacetime goods and a market found for their product, the District may not have gained a more advantageous industrial position.

The District is confronted with a difficult and critical conversion problem; in fact, one that perhaps will be as serious as that to be met in any of the Federal Reserve districts. The greatly expanded national facilities for the production of aircraft and explosives are considered to pose the most serious reconversion problems in the nation, and it will be recalled that the facilities for these two groups of products constituted two-thirds of the facilities authorized in the Tenth District. The shrinking of the aircraft market from 16 billion dollars annually to approximately 1 billion dollars, together with the fact that the companies which operated the major part of the expanded aircraft facilities in the District have in their parent locations more productive capacity than will be required to supply the curtailed

market, makes it highly improbable that these newly expanded District facilities will be used for the production of aircraft or aviation components. Some of these facilities may be found to be convertible to other production, and some may be used for overhaul, maintenance and storage services, but it is not probable that any large portion will become a permanent part of the manufacturing plant unless the facilities can be converted to other production at an early date.

It was not expected at the time the explosives facilities were authorized that they would become a permanent part of the manufacturing plant. It may be found possible, however, to use a small portion of them in the fertilizer industry, and to utilize some in the expanding chemical industry, particularly plastics. But, except for a small proportion of these facilities, the probability of their utilization in the District is not promising at this time. Some may be placed in a "standby" status, but the industrial value of such plants to a community is questionable.

The problem of predicting the extent to which the expanded facilities of the District may be absorbed or retained as a permanent part of the manufacturing plant is made more difficult because these facilities are owned almost in their entirety by the Government. The question of whether they will become a permanent part of the District's manufacturing plant will depend in part, therefore, upon the policies and methods adopted with respect to the

disposition of surplus property.

Although the larger part of the facilities authorized in the District was assigned to those areas considered as the prewar manufacturing areas, over one-third of the total was authorized for areas which had been unable to gain any important industrial development up to the time of the war. Unless these areas possess the proper balance of the economic prerequisites for industrial activity, it is unlikely that they will be able to find any peacetime use for the newly acquired manufacturing facilities.

The negative or adverse elements of the expansion in the District pose formidable problems, but it should not be assumed because of the existence of "problem industries" and "problem areas" that the District will gain no net advantage from the wartime expansion of its manufacturing plant. The provision of additional facilities for the production of chemicals and petroleum and their many products, the increase in facilities for the manufacture of iron, steel, and nonferrous metals and their products, the expansion of food processing facilities, and the expansion in other smaller but important fields of manufacture can be expected to improve the manufacturing potential. Moreover, the "know how" gained by a large labor force through the war production experience and training should not be discounted as a factor of importance in the future industrial development of the District.

INCOME PAYMENTS IN TENTH DISTRICT STATES

Income payments to individuals in the United States increased 7 per cent during 1944 to a record high of 148 billion dollars, according to data recently released by the United States Department of Commerce. This was the smallest increase since 1939. The increase further contrasted with the earlier war years by a tendency towards uniformity in the rate of change among the states, with increases in 23 states falling within a range of 5 to 9 per cent, and 37 states within a range of 3 to 11 per cent. For the first time in six years, there was an actual decline in income in some states.

The tendency towards geographic uniformity of income rise during 1944 as compared with previous years is explained by the different causes of income expansion in 1944. From 1940 to 1943, the large growth of aggregate incomes resulted primarily from the rapid rise of wages and salaries in war manufacturing industries, agricultural income, Federal civilian pay rolls, and pay of the armed forces. These four components expanded from 15 billion dollars in 1940 to 54 billion in 1943, and thus contributed three-

fifths of the 63 billion dollar growth in total income over the period. The increases in these components varied considerably from one part of the country to another, and this fact caused an uneven expansion among the states, and a significant geographic redistribution of income.

In 1944, the peak war output made only nominal gains over the high level prevailing at the close of 1943, and thus the four factors that contributed most of the income increase from 1940 to 1943 accounted for only 5 per cent of the 9 billion dollar expansion in income payments in the United States. War industry pay rolls and pay of Federal civilian employees in this country showed small percentage increases. Pay of the armed forces stationed in this country (exclusive of voluntary allotments of pay) and agricultural income actually declined. For the entire period, 1940-44, however, the chief factors of increase were the same as in the period, 1940-43.

Most of the 1944 income rise was derived from military allowances and allotments, payments by the trade, service, and transportation industries, and

Federal interest disbursements. Military allowances and allotments, with an expansion of 3.2 billion dollars during the year, constituted two-fifths of the total increase in income payments.

The total income of four District states increased more than the national average of 95 per cent from 1940 to 1944. These four states were Kansas with an increase of 147 per cent, Nebraska with 112 per cent, New Mexico with 107 per cent, and Oklahoma with 111 per cent. Increases in Colorado, Missouri, and Wyoming were 87 per cent, 86 per cent, and 69 per cent, respectively.

From 1943 to 1944, only New Mexico with an income rise of 8.5 per cent and Oklahoma with an income rise of 11 per cent exceeded the national average of 7 per cent. Colorado showed a decline of 2 per cent, while Kansas, Missouri, and Wyoming showed increases of 3 per cent, 5 per cent, and 5 per cent, respectively. Nebraska's income expansion was less than one-half of 1 per cent.

PERCENTAGE CHANGE IN INCOME PAYMENTS

	TOTAL INCOME		NONMILITARY INCOME ¹	
	1943 to 1944	1940 to 1944	1943 to 1944	1940 to 1944
Colorado.....	-2.2	+86.9	-2.1	+69.3
Kansas.....	+3.2	+146.6	+1.6	+126.6
Missouri.....	+5.2	+85.9	+3.6	+72.6
Nebraska.....	+0.4	+112.3	-2.2	+97.5
New Mexico.....	+8.5	+107.4	+6.6	+71.1
Oklahoma.....	+11.4	+110.9	+10.4	+86.8
Wyoming.....	+5.4	+68.9	+4.5	+55.4
United States.....	+6.7	+95.2	+5.1	+81.5

¹ Total income payments minus pay of armed forces, mustering-out pay, family-allowance payments, and voluntary allotments of pay to individuals by military personnel.

If only nonmilitary income is included in the analysis, Kansas, Nebraska, and Oklahoma exceeded the national average increase of 82 per cent from 1940 to 1944. From 1943 to 1944, the national average increase of 5 per cent was exceeded by New Mexico and Oklahoma, while Colorado and Nebraska had decreases of 2 per cent in nonmilitary income.

Agricultural income was the largest factor of income expansion among District states from 1940 to 1944, and it accounted for one-fifth of the increase. It was the largest factor of increase in Colorado, Nebraska, and Wyoming, and ranked second in the other four states. In Kansas, the increase in agricultural income was only slightly less than that of war manufacturing pay rolls.

War manufacturing pay rolls and military payments were of equal importance in the income expansion of the Tenth District states as a group, each factor accounting for over one-sixth of the total income increase. War manufacturing pay rolls were the leading factor in Kansas and Missouri. In Kansas, pay rolls of war industries jumped from 15

million dollars to 288 million between 1940 and 1944, an increase from 2 per cent to 15 per cent of the state's income, and provided one-fourth of its income expansion. They accounted for only 2 per cent of the income increase in New Mexico, and less than one-half of 1 per cent in Wyoming.

PERCENTAGE OF TOTAL INCREASE IN INCOME PAYMENTS, 1940 TO 1944, ATTRIBUTABLE TO:

	War Manu- facturing Pay Rolls ¹	Agricul- tural Income ²	Federal Civilian Pay Rolls ³	Military Payments ⁴
Colorado.....	8.1	21.3	8.7	20.7
Kansas.....	24.6	24.0	5.2	14.2
Missouri.....	22.6	16.8	4.7	15.5
Nebraska.....	11.2	34.6	7.6	13.9
New Mexico.....	2.2	17.1	13.5	33.6
Oklahoma.....	15.3	19.3	9.3	22.4
Wyoming.....	0.2	23.0	7.0	21.0
United States.....	29.4	11.4	7.1	14.9

¹ War industries in manufacturing include chemicals and allied products, rubber products, iron and steel and their products, ordnance and accessories, transportation equipment, nonferrous metals and their products, machinery, and automobiles and automobile equipment.

² Includes net income of farm operators (adjusted for change in inventories of crops and livestock), farm wages, and net rents to landlords living on farms.

³ Include pay of employees in the Federal Executive Service in the continental United States.

⁴ Include net pay of armed forces, family-allowance payments, voluntary allotment of pay to individuals, and mustering-out pay.

The sharp expansion and contraction of war construction from 1942 to 1944 made strong impacts upon the income payments in several District states, notably Colorado, Kansas, Nebraska, and Oklahoma. Following the completion of military and industrial projects, construction pay rolls dropped sharply in 1943 and 1944.

Military payments were the largest single component of income increase in New Mexico and Oklahoma from 1940 to 1944. In Oklahoma, larger-than-average declines in military pay and income from construction in 1944 were partly offset by increases in farm income and Federal civilian pay rolls. Oklahoma's decline in war project construction occurred later than in other District states.

Both in the District and in the country as a whole, from 1940 to 1944, Federal civilian pay rolls were the smallest of the four components which constituted the chief sources of income increase in the country as a whole. New Mexico was the sole exception among District states, as the increase in Federal civilian pay rolls ranked ahead of the increase in war manufacturing pay rolls.

STATE INCOME PAYMENTS¹
(In millions of dollars)

	1940	1941	1942	1943	1944
Colorado.....	589	695	973	1,126	1,101
Kansas.....	757	974	1,427	1,809	1,867
Missouri.....	1,914	2,363	2,898	3,383	3,559
Nebraska.....	569	655	975	1,203	1,208
New Mexico.....	190	222	295	363	394
Oklahoma.....	829	956	1,305	1,569	1,748
Wyoming.....	151	174	216	242	255
United States.....	75,852	92,269	115,301	138,854	148,090

¹ Include only payments to residents of the continental United States; exclude, therefore, payments to the armed forces and Federal civilian employees stationed outside the country.

BUSINESS AND AGRICULTURAL CONDITIONS

FINANCE

Member Bank Credit The earning assets of the Tenth District weekly reporting banks decreased 12.8 million dollars in the five-week period ending September 19. The decrease occurred chiefly in the loans category, as "commercial, industrial, and agricultural" loans declined 5.6 million dollars, and loans on Government securities declined 7.4 million dollars. United States Government security holdings decreased only 0.8 million dollars. However, there were sizable changes in certain classes of Government securities, as Treasury bills declined 32.8 million dollars, and certificates of indebtedness increased 33.9 million. The increase in certificates was chiefly the result of the exchange of the Treasury bonds of 1945-47, called for redemption by the Treasury, for certificates of indebtedness. Expansion in the holdings of Government bonds early in the period under review largely offset the decline which occurred when the Treasury exchange took place.

Interbank deposits declined 24.5 million dollars from August 15 to September 19, and Government deposits declined 79.4 million. Private demand depos-

its and time deposits, however, continued to establish record figures as they increased 35.6 million and 8.2 million dollars, respectively. The weekly reporting banks reduced their reserves with the Federal Reserve Bank by 21.6 million dollars and their net balances due from other banks by 16.4 million.

Principal items of condition of 50 member banks:

	Change from		
	Sept. 19 1945	Aug. 15 1945	Sept. 20 1944
	(In thousands of dollars)		
Loans and investments—total.....	2,258,908	-12,775	+390,231
Loans—total.....	368,142	-12,117	+37,544
Coml., indust., agric.....	227,215	-5,569	+17,306
To security brokers and dealers.....	7,332	-821	+3,603
Other to purchase or carry secur.....	32,992	-6,125	+8,871
Real estate loans.....	37,655	+268	+292
Loans to banks.....	550	+400	+540
All other loans.....	62,398	-270	+6,932
Investments—total.....	1,890,766	-658	+352,687
U. S. Govt. securities—total.....	1,756,093	-757	+343,772
Bills.....	74,518	-32,835	-16,721
Certificates of indebtedness.....	440,544	+33,935	+48,068
Notes.....	462,646	-1,637	+160,529
Bonds.....	777,987	-220	+188,969
Guaranteed obligations.....	398	0	-37,073
Other securities.....	134,673	+99	+8,915
Reserve with F. R. Bank.....	459,077	-21,563	+78,639
Balances "due from" banks—net.....	289,207	-16,439	+16,856
Demand deposits—adjusted.....	1,411,379	+35,580	+219,924
Time deposits.....	276,500	+8,157	+66,420
U. S. Govt. deposits.....	240,612	-79,429	+9,214
Deposits "due to" banks—net.....	954,087	-24,517	+161,991
Borrowings.....	17,750	+7,750	+17,750

BANK DEBITS *

	Aug. 1945		Change from '44	
	8 Mos. 1945	8 Mos. 1944	Aug. 8 Mos.	(Per cent)
	(Thousand dollars)		(Per cent)	
Colo. Springs, Colo....	23,913	190,022	+6	+4
Denver, Colo.....	298,684	2,436,906	+11	+10
Gr. Junction, Colo....	6,520	54,946	+7	+7
Greeley, Colo.....	9,478	80,382	+12	+20
Pueblo, Colo.....	23,660	179,781	+7	+10
Atchison, Kans.....	6,706	54,679	+15	+9
Emporia, Kans.....	6,487	53,173	+1	+1
Hutchinson, Kans....	38,163	241,069	+31	+14
Independence, Kans..	4,496	34,997	+7	-1
Kansas City, Kans....	37,384	320,357	0	-1
Lawrence, Kans.....	7,869	65,872	+6	+21
Parsons, Kans.....	5,422	47,733	-6	+3
Pittsburg, Kans.....	6,251	52,351	+1	-1
Salina, Kans.....	31,886	189,933	+20	-1
Topeka, Kans.....	61,541	486,252	+17	+6
Wichita, Kans.....	206,404	1,757,328	-2	+13
Joplin, Mo.....	17,676	136,896	+13	+4
Kansas City, Mo.....	725,713	5,607,464	+8	+8
St. Joseph, Mo.....	58,855	450,583	+10	-3
Fremont, Nebr.....	6,890	55,857	+10	+9
Grand Island, Nebr..	13,720	111,724	+11	+8
Lincoln, Nebr.....	51,420	407,860	+10	+3
Omaha, Nebr.....	360,476	2,772,886	+8	+5
Albuquerque, N. M....	43,658	302,957	+50	+25
Bartlesville, Okla....	46,030	358,904	+9	+9
Enid, Okla.....	32,094	232,602	+22	+28
Guthrie, Okla.....	2,470	21,986	+11	+12
Muskogee, Okla.....	16,305	126,342	+21	+3
Okla. City, Okla.....	175,595	1,559,295	+4	+11
Okmulgee, Okla.....	4,770	32,287	+56	+16
Tulsa, Okla.....	267,737	2,273,237	+8	+17
Casper, Wyo.....	12,089	90,963	+14	+13
Cheyenne, Wyo.....	16,978	148,472	-4	+1
District, 33 cities.....	2,627,340	20,936,096	+9	+9
U. S., 334 cities.....	73,231,000	640,418,000	+6	+11

DEPARTMENT STORE TRADE

Dollar volume of department store sales in this District in August was only 5 per cent larger than a year ago, in contrast with a gain of 14 per cent for the first eight months of 1945 over the corresponding period of 1944. Sales in the middle of August were sharply under a year earlier, owing chiefly to the fact that stores in most cities were closed one day, and in some cities two days, in celebration of the Japanese acceptance of the Potsdam Declaration. Near the end of the month also, sales were down from the preceding year, reflecting in part a smaller volume of gift buying for shipment to members of the armed forces overseas, which had been an important factor in sales in August, 1944. Sales continued under the year-ago level in the first week of September but subsequently rose and for the first three weeks of September as a whole they showed an increase of 9 per cent over last year. Sales increased less than is usual from July to August, and the seasonally adjusted index of daily average sales declined to 214 per cent of the 1935-39 average in August from 243 in July, when the index had been little below the record level of 246 per cent last February.

Department store inventories increased much less

than is usual during August, following a steady rise in the preceding three months contrary to the customary seasonal pattern. The retail value of stocks at the end of August was 3 per cent larger than a year earlier, and the volume of outstanding orders was 22 per cent larger.

Department store sales and stocks in leading cities:

No. of Stores	SALES		STOCKS	
	Aug. '45	8 Mos. '45	Aug. 31, '45	Aug. 31, '44
	comp. to Aug. '44	comp. to 8 Mos. '44	comp. to Aug. 31, '44	
	(Per cent increase or decrease)			
Denver.....	7	+14	+16	+2
Pueblo.....	3	+8	+11	*
Hutchinson.....	3	+6	+19	*
Topeka.....	3	+15	+18	*
Wichita.....	4	-8	+5	*
Joplin.....	3	+7	+9	*
Kansas City.....	8	+2	+14	+11
St. Joseph.....	3	+16	+10
Omaha.....	4	0	+11	*
Oklahoma City.....	6	+4	+15	+5
Tulsa.....	5	+2	+19	+16
Other cities.....	30	+6	+11	-6
District.....	79	+5	+14	+3

*Not shown separately but included in District total.

The trend of sales, stocks, and outstanding orders at department stores since 1940 is shown in the accompanying chart. Stocks and orders are at retail value, and consequently may be compared directly with sales. Since 1940, sales have nearly doubled, and stocks have increased by about one-half, while orders have risen to a level seven to eight times that of prewar years.

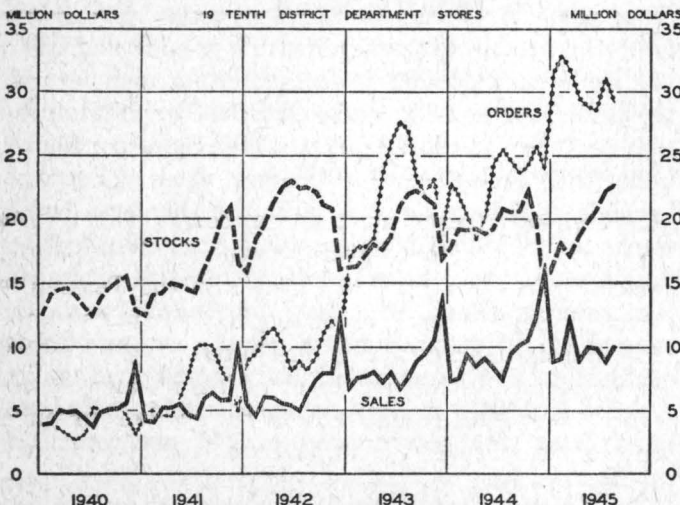
This extraordinary expansion of retail sales is the result not only of record wartime consumer purchasing power but also of unexpectedly high civilian inventories. The increase in dollar sales is also due in part to a number of other factors, including higher prices and some shift in consumer buying to luxury items. Indirect, as well as direct, price advances have

occurred, through the upgrading of merchandise, deterioration in quality of a number of staple articles, and the disappearance of many low-priced lines of merchandise.

Stocks began to increase about the middle of 1941 as stores sought to build up their inventories in anticipation of future shortages. Stocks reached their wartime peak about the middle of 1942 and have since been fairly well maintained close to that high level, although the ratio of stocks to sales has declined as sales continued to increase. In June, 1942, stocks on hand were equal to about 4 1/4 months' supply at the current rate of sales, while present stocks represent only about 2 1/4 months' supply. The composition of stocks, as with sales, has changed markedly, principally because of the shortage of household appliances and other housefurnishings and the substitution of heavier stocks of clothing and ready-to-wear accessories. Thus, while total stocks continue large, they represent a greatly reduced selection of merchandise. Moreover, the upgrading of merchandise and other factors that tend to inflate the sales figures similarly affect the stocks figures.

Orders began to increase in 1941 and the rise was accelerated beginning in 1943, in an effort to maintain stocks in the face of a rapidly expanding demand for nearly all types of merchandise. By early 1943, the volume of orders was greater than stocks, as compared with a prewar volume of around one-third of stocks, when supplies and delivery schedules were more certain. Currently, orders are about one and one-fourth times actual stocks on hand. The huge volume of dollar orders, of course, is inflated by the same factors, such as upgrading of merchandise, that inflate the stocks and sales figures. In addition, the figures for orders probably are padded to a considerable extent, because of the practice of ordering more than needed from any one supplier and of placing duplicate orders with other suppliers to be sure of receiving as much goods as possible. Orders reached their wartime peak early in 1945 and have declined only slightly from this level, despite recent reports of some cancellations following the Japanese surrender, particularly of orders for "substitute" merchandise and for goods on which delivery was long past due.

SALES, STOCKS, AND OUTSTANDING ORDERS



Monthly figures, latest shown are for August, 1945.

INDUSTRIAL PRODUCTION

Meat Packing In August, as in other recent months this year, operations at meat-packing plants in the District were sharply below the high level of the corresponding period of 1944. Cattle slaughter, as indicated by packers' purchases at leading markets, was down 8 per cent from last year,

that of calves 46, of hogs 54, and of sheep 35 per cent.

United States cold storage stocks of meat on September 1 totaled 630 million pounds as compared with 776 million pounds a year ago. Pork stocks, at 286 million pounds as compared with 478 million a year earlier, were at a new low level for September, but beef stocks, at 244 million pounds against 161 million last year, were three times their normal size for this season. Meat stocks declined less than is usual during August, and civilian meat supplies have improved substantially as a result of reductions in Government purchases.

Early in September, the OPA suspended for an indefinite period the restrictions on livestock slaughter and on meat distribution that had been imposed in the first half of 1945. The removal of these restrictions was designed to permit packers to handle the large numbers of cattle that are expected to be marketed this fall. Labor supplies at packing plants, however, thus far have increased little despite the termination of many war jobs, and the shortage of packing-house workers, already serious, may make it impossible to handle the heavy run of cattle anticipated. Effective for the period September 30 through October 27, the ration point values of the lower grade cuts of beef, veal, and lamb were reduced to zero, reflecting the increase in livestock marketings that had already taken place.

Flour Milling Southwestern flour production in August and in the first eight months of 1945 was 10 per cent larger than that in the corresponding periods of 1944. Flour milling operations in August and in the forepart of September continued at a very high level, around 93 per cent of full-time capacity. The labor shortage has been relieved considerably at Wichita, but at most other centers mills are still handicapped by inadequate labor, as workers released from war industries have been slow to return to jobs at flour mills.

Flour sales recently have been rather light, affording mills an opportunity to concentrate on production and shipments. The backlog of orders on mills' books is at or near a record level, with both civilian buyers and Government agencies pressing for deliveries of flour on old contracts. Early in September, mills were reported to be from 2 to 5 weeks behind schedule in their shipments, and indications were that an extended period of full-time operations would be required to permit mills to work out from under the heavy backlog of unfilled orders and become current in deliveries. Near the middle of September, the Government entered the market for 1,800,000 sacks of flour for September-October shipment for British

account, but Southwestern mills for the most part were unable to accept any sizable additional orders for delivery in this period.

Petroleum In August national crude oil production attained a daily rate of 4,911,500 barrels, a slight decrease from the daily rate of 4,925,700 barrels attained in July. For the nation the August, 1945, production showed an increase of 5 per cent over that of August, 1944, and for the Tenth District, an increase of 10 per cent.

The Petroleum Administration for War recommended a production rate of 4,912,070 barrels daily of all petroleum liquids to the various oil producing states for September. This rate represents a decrease of 327,930 barrels daily from the record rate of 5,240,000 barrels daily certified for August. Although Federal controls over the petroleum industry are gradually being removed, the Petroleum Administration for War has announced that it will continue to recommend production rates to the states through the month of October. This will be done because the state regulatory bodies have not yet had an opportunity to regain their peacetime channels of forecasts of demand for petroleum.

A revision of an Anglo-American petroleum agreement signed in Washington last year but later withdrawn in the face of opposition from American oil interests is now awaiting ratification by the United States Senate. The new pact, signed in London by petroleum administrators of Great Britain and the United States, is a preliminary step to the calling of an international conference to consider a multilateral petroleum agreement with the governments of all interested producing and consuming countries. The pact would not be concerned with domestic petroleum production in the United States but would deal with the development of British and American oil holdings in such important producing areas as the Middle East and South America. The agreement proposes a petroleum commission of six members which would act in a purely advisory capacity, relying upon "moral suasion" to enforce its suggestions as regards international petroleum trade.

Employment Cancellation of war contracts following victory over Japan resulted in the release of nearly 110,000 workers in the Tenth District by September 7, according to a War Manpower Commission survey based on United States Employment Service reports of the chief labor market areas. One of the significant effects of the sudden surrender in the Pacific and its immediate impact upon war production was the drastic reduction in employment which occurred during the first week following the

end of the war. About 81 per cent of the dismissals during the three-week period from the middle of August to September 7 occurred in the first week. By the third week, releases had dwindled to about one-twelfth of the initial figure. Employees in aircraft and ordnance industries bore the brunt of job terminations in the District.

The extent to which these workers have been absorbed by other industries is not known definitely. However, there are indications that in some areas a considerable number of those released have been engaged, chiefly by food processing, trade, and service establishments. In a few localities, construction industries have taken some workers but the large demand in that line is still to come.

Unfilled job openings listed on September 7 by the United States Employment Service in eight labor market areas of the District were approximately one-fourth of the number of layoffs reported for the preceding three weeks but represented a 14 per cent increase over the number unfilled on August 31. Some persons are not considering the work offered because the pay is less than that which they received in war plants, because it is not the type of work they prefer, or simply because they desire vacations before beginning new jobs. Probably, in a number of cases, employees are waiting to return to their former employment where plants are being reconverted to peacetime production. No doubt there also will be withdrawals from the labor force.

Data for the seven states which lie wholly or partially in the District showed 2,366,000 employed in nonagricultural establishments in June, the latest month for which figures are available. The number of employees was 32,400 or 1 per cent below the level of the comparable month of 1944. The six-months' average for 1945, compared with the corresponding period in 1944, was also 1 per cent lower. The June level was the lowest since 1942 and reflected the first May-June decrease since 1942. Reductions in manufacturing employment overbalanced the normal seasonal gains in nonagricultural employment.

Department of Labor estimates of nonagricultural employment:

	Aver.		Change from '44	
	June 1945	6 Mos. 1945	June	6 Mos.
	(Number)		(Per cent)	
Colorado.....	263,000	258,700	0	-1
Kansas.....	386,000	395,200	-6	-4
Missouri.....	945,000	945,300	-1	-1
Nebraska.....	259,000	259,700	+1	+1
New Mexico.....	82,200	79,800	+4	+3
Oklahoma.....	369,000	376,300	-2	0
Wyoming.....	61,800	60,400	-2	-1
Seven states.....	2,366,000	2,375,400	-1	-1
United States.....	37,556,000	37,833,000	-3	-3

AGRICULTURE

Crops Late September rains brought relief from pronounced dryness that had developed in August over eastern Nebraska and Kansas, much of Missouri, and parts of Oklahoma. August rains previously had broken a prolonged drought in New Mexico, and elsewhere in the District moisture supplies generally are quite adequate to abundant, as has been the case nearly all of the growing season.

Corn prospects improved markedly during August, except in Kansas and Missouri. The September 1 estimate for Kansas was unchanged from that a month earlier and the estimate for Missouri was somewhat lower. The very hot and dry weather of late August and early September, especially in north-eastern Kansas and adjoining portions of Missouri and Nebraska, hastened the maturity of corn. The lack of moisture in this area during the hot weather, however, prevented best development and filling of ears in late planted fields, while subsequent cool, cloudy weather was retarding progress of corn toward maturity. In Nebraska, the principal corn producing state of the District, much corn is very late and very wet. In the third week of September, the Nebraska crop still needed two or three weeks of warm weather to reach maturity. Consequently, the possibility of frost damage to late corn is a factor of more than usual significance. An early freeze not only would cut production but also would impair quality severely because of the resulting large proportion of "soft" corn.

The September 1 estimates, which of course do not allow for any changes that may have occurred since that time, indicated a corn crop for this District about one-fifth less than last year's crop. Although this decrease is large in comparison with a prospective decrease of only 5 per cent for the country as a whole, it is not nearly so large as the reduction of one-third to one-half forecast for the District earlier in the season.

Department of Agriculture corn estimates:

	Sept. 1 1945	Aug. 1 1945	Final 1944	Aver. '34-'43
	(In thousands of bushels)			
Colorado.....	15,477	13,266	16,283	11,335
Kansas.....	72,864	72,864	114,793	45,090
Missouri.....	113,126	117,477	162,554	102,409
Nebraska.....	282,414	222,508	329,855	115,032
New Mexico.....	1,950	1,800	3,510	2,628
Oklahoma.....	27,835	23,440	32,958	26,821
Wyoming.....	1,649	1,212	1,260	1,734
Seven states.....	515,315	452,567	661,213	305,049
United States.....	3,069,055	2,844,478	3,228,361	2,433,060

Cash prices of high protein wheat remain at the ceiling, and prices of lower grades of wheat in August and September regained fully half of the decline which occurred last July at the time of the harvest

rush of new crop wheat to market. This price strength, despite continued liberal marketings, is derived chiefly from Commodity Credit Corporation purchases of wheat on the open market and from other Government support measures. It also reflects materially enlarged estimates of the amount of wheat and flour that may be required for export, as reduced wheat supplies in other major exporting countries force greater reliance upon United States stocks. The Government, as agent for foreign purchasing missions, recently has been actively contracting wheat and flour supplies for shipment abroad. Moreover, since wheat is the only surplus major food available, wheat and flour seem certain to constitute a substantial proportion of all relief shipments to Europe, the Orient, and other war devastated areas.

Livestock In September, for the fourth consecutive month, the top price of grain fed beef steers at Kansas City was at that market's ceiling of \$17.65 a hundredweight. Prices of the lower grades of slaughter cattle and of stockers and feeders, however, have declined as receipts of grass cattle reached seasonal proportions. The movement of cattle from Oklahoma and Kansas pastures, previously delayed by excellent grazing conditions in July and much of August, increased sharply following a period of hot, dry weather in late August and early September. By late September, cattle receipts already had risen to a point considerably above last year's peak in fall cattle marketings, which occurred in October, but there is as yet no evidence of any excessive liquidation.

Top carlot livestock prices at Kansas City:

	Sept. 24 1945	Aug. 1945	July 1945	Aug. 1944	Aug. 1943	Aug. 1942
	(In dollars per hundredweight)					
Beef steers.....	17.65	17.65	17.65	17.50	16.10	16.25
Stocker cattle.....	14.25	14.25	15.15	13.75	13.90	14.25
Feeder cattle.....	14.25	15.00	15.50	15.15	14.25	14.30
Calves.....	14.00	14.25	15.50	14.00	14.00	14.00
Hogs.....	14.50	14.50	14.50	14.50	14.75	14.80
Lambs.....	13.35	14.75	16.35	15.00	14.85	15.00
Slaughter ewes....	5.60	7.50	8.25	5.25	7.50	6.50

According to September 1 prospects, production of the four principal feed grains—corn, oats, barley, and grain sorghums—for the country as a whole will be about the same as last year's large production. Together with the carry-over, the prospective supply of feed grains per animal unit for the 1945-46 season is the largest in twenty-five years of record. A near-record hay crop is in prospect. However, supplies of millfeed by-products and of protein concentrates, although large in comparison with prewar years, likely will continue tight, while domestic and foreign food requirements are such that smaller quantities of wheat probably will be utilized for feed.

Wool The quantity of wool shorn and to be shorn in this District in 1945 is estimated to be 6 per cent less than that in 1944, following a decrease of 16 per cent in 1944 from 1943. As in the preceding year, the decline in wool production was due to liquidation of sheep numbers resulting from rising producer costs and the shortage of competent and dependable herders. In most states, higher average fleece weights in 1945 than in 1944 partially offset the further reduction in the number of sheep shorn. In Colorado and Kansas, the increase in average fleece weights more than counterbalanced the smaller number of sheep shorn, so that the 1945 wool clip in those two states was larger than that of 1944. Prices received by farmers for wool this year are slightly lower than a year ago, largely because of differences in the quality and shrinkage of the wools. The Commodity Credit Corporation is committed to buy, at ceiling prices, less transportation, appraisal, and handling charges, all of the domestic clip offered to it.

Department of Agriculture shorn wool estimates:

	WOOL PRODUCTION			SHEEP SHORN		
	1945	1944	Aver. '34-'43	1945	1944	Aver. '34-'43
	(Thousand pounds)			(Thousand head)		
Colorado.....	13,372	13,259	13,631	1,537	1,617	1,648
Kansas.....	5,232	5,148	4,504	623	626	561
Missouri.....	8,406	9,596	9,425	1,251	1,426	1,390
Nebraska.....	2,593	3,149	3,337	305	370	407
New Mexico....	13,837	14,574	16,055	1,703	1,886	2,107
Oklahoma.....	2,141	2,203	2,337	258	272	276
Wyoming.....	25,631	27,591	31,465	2,698	2,999	3,270
Seven states..	71,212	75,520	80,754	8,375	9,196	9,659
United States	322,621	347,094	370,749	40,670	44,324	46,406

Farm Income Cash receipts from farm marketings in this District in June and in other previous months this year showed little change from the record level prevailing last year. For each of the first six months of 1945, receipts from crops, especially wheat and corn, were much greater than last year, partly because of the large crops harvested in 1944, of which a considerable proportion was carried over and sold in 1945. Cash receipts from livestock and livestock products in 1945, however, have been consistently below last year, reflecting marked reductions in hog marketings.

Department of Agriculture farm income estimates:

	June 1945	6 Mos. 1945	Change from '44	
	(Thousand dollars)		June	6 Mos.
			(Per cent)	
Colorado.....	13,466	105,024	-7	-18
Kansas.....	70,705	339,315	+6	+9
Missouri.....	52,403	295,010	0	-5
Nebraska.....	55,551	337,731	+8	-5
New Mexico.....	4,567	33,750	-2	+16
Oklahoma.....	41,811	185,526	-13	+9
Wyoming.....	3,832	23,846	-5	-15
Seven states.....	242,335	1,320,202	+1	-1
United States.....	1,528,970	8,710,214	+2	0