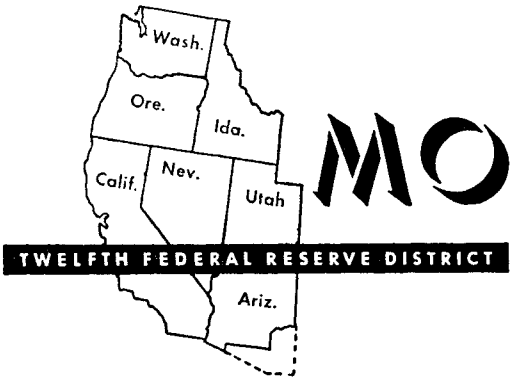


MONTHLY REVIEW

JANUARY 1950 FEDERAL RESERVE BANK OF SAN FRANCISCO

REVIEW OF BUSINESS CONDITIONS

DECEMBER and early January developments continued to indicate that the District economy was not currently beset by many of the problems apparent a year earlier. In December, total nonagricultural employment was only a little over 1 percent below its year-ago level, according to early reports. Nonagricultural employment gained over November because of the continuing return of workers to jobs in steel processing industries and a sharp seasonal gain in trade and government employment. Manufacturing employment dropped from November to December, despite the gain in steel and related industries, because of normal seasonal declines in food processing, apparel, and lumber, and small declines in automobile and other durable goods lines.

Even with these over-all gains in December in nonagricultural employment, unemployment continued to rise because of seasonal increases in the labor force. The November to December increase in unemployment was only half as great as a year earlier, however, and though December unemployment was greater than in 1948, the year-period percentage spread was smaller than for most months in 1949. Unemployment continued to rise early in January, but again the rate was slower than a year ago, and the increases could be attributed almost entirely to weather conditions and other seasonal influences.

The lumber industry reported an exceedingly strong demand for its products in December, and increased prices for finished lumber were reflected in higher log prices. Reports from both the Douglas fir and western pine regions indicated order volumes for December that approached records for that month. Except where severe weather conditions intervened, lumber producers were pushing their mills to obtain maximum output. Not until January was a sizeable cut in logging and mill operations forced by the weather. Construction activity remained strong in the District as well as in the nation. This was particularly true in California, where December weather was mild enough to make any significant reduction in construction employment unnecessary.

The District steel industry continued to have a good volume of orders and did not yet appear to feel any effects of the three-day week in coal. The canning industry experienced an earlier than usual round of price reductions, which was followed by an unusually high volume of orders. In mid-December prices were cut sharply on several items, particularly California cling peaches and fruit cocktail, and the sales that followed resulted in record shipments during the last week of the year. Early reports for January indicated that the buying spree was not over.

During the last quarter of 1949, consumer expenditures continued at a high rate and showed considerable strength even in comparison with the record level of a year ago. This high level of expenditure was sustained in part by increasing consumer instalment credit. The increase in instalment credit outstanding nationally during the last quarter of 1949 was probably twice as great as the $400 million increase during the fourth quarter of 1948. The percentage increase was perhaps a little greater in the District, according to evidence covering only a part of the field. Automobile sale credit outstanding showed the largest dollar increase as well as percentage increase. It is evident, however, that consumers were relying more on credit for other retail purchases, too. For example, December credit sales at District department stores were 54 percent of total sales in 1949 as against 51 percent a year earlier.

Mortgage credit played a leading role in financing the high level of housing expenditures. In the last three months of 1949 dollar volume of mortgages recorded nationally showed a marked increase over the same period in 1948. It appears likely that mortgage credit—because of the high rate of housing starts—and instalment credit —because of automobile sales and renewed interest in most other consumer durable goods—will continue to rise significantly.

The most recent proof of the public's ability and willingness to buy goods is the high volume of retail sales during the past Christmas season. And during the next six months, the distribution of the National Service Life Insurance refund, totaling nearly $3 billion, should help sustain a high level of consumer spending. District department store executives, in fact, expect that their sales volume in the first half of 1950 will be close to that of a year earlier.

Also in This Issue

The Rice Industry in California

Department Store Trade—The Christmas Season and a Look at the Future[1]

In a recent survey, executives of major department stores in the Twelfth District reported, for the most part, that Christmas sales were above their pre-season expectations. Sales figures reported to this bank each week show, in fact, that during the four weeks ending December 24, Twelfth District shoppers spent more dollars than during the comparable period in any previous year. Sales were 2 percent higher than during the same priod a year ago. San Diego, Spokane, Salt Lake City, and San Francisco showed the largest increases among the major cities. The dollar volume of department store sales in the United States as a whole was about the same as in 1948.

Late Christmas buying

Christmas shopping started slowly in 1949. In November, sales at District department stores were 9 percent below November 1948. It was not until the week ending December 17 that sales were heavy enough to exceed those of last year and then by only 2 percent. Sales for the week just preceding Christmas, however, were considerably higher than during the same week last year, in part because of an additional day of shopping before Christmas this year. However, department store representatives claim that business the day before Christmas was quite slow. The lag in sales during the first part of the shopping season may have reflected the changing seasonal pattern of Christmas sales. During the war, November, and October to a lesser extent, became important months for Christmas shopping. Limited stocks of goods encouraged early shopping; also, overseas packages had to be mailed early. Since the end of the war the length of the shopping season has shortened. Customers, particularly during this year and last, have tended to make a greater portion of their purchases during the weeks just before Christmas.

Sales for 1949 below 1948

Although sales during the first part of December were below last year, preliminary figures indicate that with the late shopping spree, District dollar sales for the entire month matched those of December 1948. April is the only other month in 1949 in which sales equaled or exceeded those of the same month in 1948, and that was because Easter fell in April in 1949. It is estimated that District sales for the year as a whole were about 6 percent below last year. This compares with minus 5 percent for the nation as a whole. Indications are that San Francisco was the only major city in this District in which sales for the year broke even with 1948. None showed increases. Los Angeles Area stores experienced the largest decrease—minus 8 percent. Even with these decreases, however, the level of dollar sales in 1949 was higher than in any year prior to 1947.

If the decline in prices during 1949 is taken into consideration, sales are placed in a more favorable position. While physical volume sales also probably were below those of a year ago, it is estimated that they decreased by a smaller margin, possibly only 2 or 3 percent. Prices of nearly all goods sold by department stores reached their peaks in 1948 and showed some decline last year. Prices of soft-goods items decreased the most.

Sales by departments

While a few of the store executives included in the survey reported that they were not satisfied with Christmas business, most stated that sales in significant departments were better than anticipated. Housefurnishings generally sold better than expected. Sales of television sets were an outstanding feature, and radio-phonographs did well also. (In October and November, sales of radios, phonographs, and television sets as a group were more than 50 percent above last year). There was less agreement among the stores regarding sales in other departments, although sales of men's wear were considered favorable by several stores, while sales of jewelry, silverware, cosmetics, furs, and luggage were disappointing to some. Opinions as to sales of women's wear were mixed. It is difficult to generalize, but shoppers perhaps emphasized utility items a little more and luxury items somewhat less than had been anticipated.

Inventory position favorable

Most department stores reported their year-end stocks to be as low or lower than had been anticipated and in better balance than a year ago. Because the stores did not find themselves in an overstocked position after Christmas, the January clearance sales were largely promotional. They were not as extensive as last year, nor did they involve distress stocks of consequence, though stores are clearing out the usual slow-moving fall and winter items to make room for spring merchandise.

Sales outlook for first half of 1950

The effects of veterans' insurance dividend refunds are expected to be substantial, especially in sales of household appliances and men's clothing. Even so, only a few department store representatives anticipate increased dollar sales for the first half of 1950; most of those queried expect them to be about the same or slightly below those of the first half of 1949. Even the pessimistic forecasts of dollar sales imply, however, that unit sales would run close to or slightly above a year earlier.

Demand for housefurnishings is expected to hold up well, but prospects for women's apparel and accessories and for soft goods in general are more uncertain. Last year, in contrast, demand for housefurnishings, especially major household appliances, was weak and their sales fell off sharply. No appreciable changes in present conservative policies regarding total inventories and new orders are indicated, though it is quite likely that inventories of housefurnishings will be increased.

[1] This section is a summary of recent interviews with department store executives, and attempts to reflect only the opinions of those interviewed.

THE RICE INDUSTRY IN CALIFORNIA

RICE, the "staff of life" for nearly half the people of the world, has one of the longest histories of any food on the earth. Few other foods have entered the lives of so many people, and its social and economic significance today is great.

As sources of food energy, the cereals group is much more important than any other group. Rice and wheat are, of course, the most widely used cereals, and these two plus maize or corn are the principal cereals in terms of acreage and production. Corn is used heavily as a feed for livestock, but rice and wheat far outweigh it and all other cereals as foodstuffs. Though these two crops are about equal in volume of production, rice is more important in the lives of more people. Both the producers and the consumers of rice undoubtedly outnumber the producers and consumers of wheat. In addition, rice occupies a much more important place in the diet of rice-consuming countries than does wheat in the diet of wheat-consuming countries.

Though wheat and rice are both important foodstuffs, rice differs markedly from wheat in geographical concentration of acreage, production, and consumption. Wheat is almost a universal crop, grown and consumed on every continent. Rice, on the other hand, is predominantly an Asiatic and Oriental crop. The countries of southeast Asia from India to Japan, with the adjacent islands, normally produce and consume about 95 per cent of all the rice in the world.

The origin of rice is placed in the southeastern part of Asia, probably long before recorded history. It was certainly known in India and China by 3000 B.C. Rice culture gradually spread to other tropical areas and then to the temperate areas of Europe. Its introduction into the United States is thought to have been in the early 1600's. Experiments with rice are recorded in Virginia as early as 1647. The first rice industry of any importance was established in South Carolina in 1685, and its culture soon spread to other Southern states. Prior to the Civil War, the main producing states were South Carolina, Georgia, and North Carolina. The Civil War adversely affected the production of rice in this area, and production gradually spread to Louisiana, Texas, and Arkansas. These three states remain the center of rice production in the United States. Plantings in these states are concentrated in relatively small areas—in the eastern part of Arkansas, the southwestern section of Louisiana, and the southeastern part of Texas. Along with California, where rice culture was started in 1912, these states make up the entire commercial production of the United States. In 1948, Louisiana led the other states in production, followed by Texas, Arkansas, and California.

Few consumers of rice realize that there are several types of rice and several thousand distinct varieties, more than are known for any other cereal. There are two main groups into which all rice may be classed—common or non-glutinous and glutinous. Common rice is that whose kernels remain separate when cooked. This type of rice constitutes the bulk of production and consumption everywhere. Glutinous types cook into a gluey, sticky mass and are used primarily for preparing pastries and confections by Orientals. Based on the method of production, rice may be classed as either upland or lowland. Upland rice is grown without irrigation while lowland types, whatever their variety, are grown under irrigation and constitute by far the most important type. Rice is also classed according to the shape of the kernel into long-grain, medium-grain, and short-grain varieties. Nearly all the rice grown in the United States as well as in other parts of the world is of the non-glutinous, lowland type. In the United States, the medium-grain and the long-grain varieties predominate in the Southern states and the short-grain varieties predominate in California.

Growing and Processing Methods

For successful culture, rice requires certain fairly restrictive climatic and soil conditions. It must have high temperatures during the growing season, a dependable fresh water supply for irrigation, level land with an impervious subsoil, and good surface drainage. The most satisfactory soil, though it is hard to cultivate, is heavy clay adobe, three inches or more in depth. Such soils are relatively impervious to water but, when provided with proper drainage facilities, they drain rapidly and become firm enough to support heavy harvesting machinery.

The heat and water requirements of rice are probably the principal factors determining the geographical limits of its culture. Temperate zones are thus less favorable than the tropical and subtropical zones, and the large amounts of water needed exclude desert, semiarid, and subhumid areas. Though rice makes no special demands as to soil, the continuous submergence of the land favors heavy soils which hold the water and provide easy surface drainage.

Rice-growing areas in California

These restrictions have resulted in the concentration of rice growing in two major areas in California, the Sacramento and the San Joaquin Valleys. The acreage in the Sacramento Valley has always been much the larger of the two, averaging about 90 percent of state acreage. The soils are predominately heavy, the land is level, summer temperatures hot, and water close at hand in the Sacramento and Feather Rivers. The bulk of the acreage in the valley is found in Butte, Glenn, Colusa, Sutter, and Yolo counties. In the San Joaquin Valley, Fresno county is the most important, with small acreages scattered throughout the rest of the valley. The primary difference between the two valleys is the source of water since well water is largely relied upon in the southern valley. Small acreages have also been grown in the Imperial Valley for some time.

The climatic conditions of these interior valleys are suitable largely for the short-grain rice varieties. These

varieties are hardier than the medium or long-grain varieties and require less heat units during the growing season to reach maturity. The interior valley nights are not sufficiently warm for the longer-grain rices. The group of short-grain rices grown in California are referred to as California Pearl, and make up about 95 percent of the total acreage. The principal variety, Calora, was introduced about 1915-20 and has remained the favorite since. This year indications are that this variety makes up about 80 percent of total acreage. The other principal variety is Colusa which yields less per acre but matures about 3 weeks earlier. A new medium-grain variety, Calrose, has been developed by the Biggs Experiment Station and was grown on about 1,000 acres this year. Early results indicate that it is hardier than Calora and yields very well. It is anticipated that most of the rice from the 1,000 acres will be used to seed an increased acreage next year.

Land ownership

The structure of land ownership in the rice growing areas of California is somewhat different from that usually found in other field crops. First of all, rice needs little attention during the growing season. Secondly, most rice growers have tended to become specialists in rice production. Third, flooded rice fields are usually not desirable places for farm homes. Fourth, rice is usually not grown on the same land year in and year out. In normal times, the land is left idle every other year, or for two years in a row. Fifth, much poor land, not fit for growing other crops, is put in rice for several years and then abandoned. As a result of all these conditions, much of the rice in California is grown by tenants. It has been estimated that before the war 70 percent of the rice land was farmed by tenants, though this figure is somewhat less at the present time. For the most part, however, these tenants own some land themselves, often have their own equipment, and are usually permanent citizens of the area. Share renting predominates, with the average share being one third of the crop. Under these conditions, the tenant must supply the seed, water, equipment, and all labor. If the landlord supplies the water, the share may be as much as 40 percent. Generally the leases are written for one year only, since it is not advisable to grow rice continuously on the same land.

The costly seeding, spraying, and harvesting operations required in growing rice make production loans a necessity. Where growers have excellent financial statements and a good record of profitable operation, they may be able to obtain an open line of credit. Most other growers must give a chattel mortgage on their land or equipment. Financing at the present time is about evenly divided between the production credit associations and the commercial banks, and does not present much of a problem for most growers.

Production methods

Since rice land is kept under water during most of the growing season, proper leveling and preparation of the land is important. Levees or checks are thrown up at intervals to hold the irrigation water on the fields at a uniform depth. Just prior to seeding time in the spring, the land is plowed and harrowed. Applications of fertilizer are usually made early in the growing season. Rice responds well to nitrogen in California, and most growers supply this element in the form of ammonium sulfate which is applied by airplanes. Seeding is done as early as possible in California and should be finished by the middle of May so that the required number of solar units may be obtained. Any variety of rice tends to take a given time to mature regardless of the time of seeding. Not only is there less danger of losses from fall rains if the crop is sown early, but yields and quality are generally higher. Rice can be, and generally is in the Southern states, sown with a grain drill or broadcast seeder. In California, however, most rice has been sown by airplane since about 1930 in order to control weeds. Since dry soil and weather make water necessary for germination, the land is submerged to a depth of from 4 to 6 inches just prior to seeding. The seed, which has been previously soaked, is then sown, and from 5 to 10 days later, the crop is usually up.

Weeds constitute a serious problem to the culture of rice in California. They not only increase the costs of production and reduce yields, but if weed seeds are mixed with the threshed grain, the price received by the farmer may be considerably lowered. The use of pure seed will go a long way in reducing weed infestation, as well as assuring good stands and high yields. The most common and dangerous impurities are the presence of red rice and weed seeds, and a mixture of varieties. But even in spite of pure seeds, weeds may be brought in on machinery or by wind, or may remain dormant in the soil for several years. Though some weeds are controlled by flooding the land, the usual practice is to spray 2-4-D by airplane. In recent years, California growers have made great progress in controlling weeds with resultant increases in yields and quality.

Profitable rice crops cannot be grown in California without submerging the land continuously for 90 to 140 days. An adequate and dependable water supply is an absolute necessity. As a result, the major rice growing areas of the state are located near rivers or streams. The Sacramento and Feather Rivers supply most of the water for rice irrigation in the Sacramento Valley both by gravity flow systems and by pumping facilities. In the San Joaquin Valley, on the other hand, deep wells are often the only source of water. Areas relying on gravity flow do not have much of an irrigation problem, but those relying upon pumps or wells must watch per acre costs more closely and take precautions against power failures or shortages such as occurred in 1948.

During the growing season, rice land is kept submerged to a depth of from 4 to 8 inches, and few other cultural practices are necessary. About two weeks before harvest when the rice is fully headed and the heads are turned down, the water is drained off the land. Proper timing of the drainage operation is important both for high yields and good quality. While the rice finishes ripening, land

dries so that harvesting machinery can be used in the fields. The mature rice kernels, commonly referred to as paddy or rough rice, contain from 20 to 25 percent moisture. For safe storage the moisture content must be reduced to about 14 or 15 percent. In the early days of rice culture in California, rice was generally cut and shocked or windrowed in the field to allow the kernels to dry. After the introduction of the mechanical drier, however, growers found that dehydrating increased yields about 4 to 6 sacks per acre and increased milling quality. As a result, combines, which cut and thresh in one operation, came into general use. As soon as the rice is threshed, the grower hauls it, usually in bulk form, to one of the commercial driers where the moisture content is reduced by the circulation of hot, dry air and the rice is sacked.

Processing the crop

Before rice can be finally marketed, it must have the hulls and bran removed. The milling of rice differs substantially from the milling of some of the other grains. In milling wheat, for instance, the end product is flour so the wheat kernels must be ground very fine. In milling rice, however, the kernels must be cleaned, scoured, and polished with a minimum amount of breakage since most rice is marketed in whole form for table use. The actual milling process consists of first removing the outer hulls. The result is brown rice or rice with a brownish coating of bran. The bran coating is then removed and the rice is cleaned and polished. Not all kernels come through the milling process whole so the broken pieces must be screened off.

The most important single factor determining the value of rough rice to the grower is its milling quality. This term signifies the ability of the rice to resist breakage during the milling process or the quantity of whole-grain or "head rice" which will be obtained from a given quantity of rough rice. When growers sell directly to mills, the price arrived at is based on the quality of the lot as shown by inspection. Cooperatives also use the quality of the growers' lot as a basis for payments. Outside of general cultural practices, the milling quality of rice is largely determined by harvesting quickly, efficiently, at the proper maturity, and by proper drying. The milled head rice, which makes up the greatest percentage, is graded and sold on the basis of set U. S. grades. The various factors which determine the grade are the percent of broken kernels, the presence of damaged rice, and the percent of red rice and other weed seeds present. To some extent, mills are able to make up whatever grades of rice they desire since they can mix broken kernels with head rice to make lower grades.

Production Trends

The first commercial rice production recorded in California was grown on 1400 acres in 1912. The success of this first seeding resulted in a rapid expansion of the industry; by 1920 harvested acreage had grown to 162,000. This acreage was the record high for the next twenty years as acreages fluctuated between 95,000 and 160,000. War demands stimulated production and since 1942, harvested acreage has been above 200,000. The year 1949 will undoubtedly be the record year for some time to come, as 294,000 acres were harvested.

The short-grain varieties of rice yield much better than do the medium or long-grain varieties. Since the short-grain varieties predominate in California, yields in this state have always been the highest among the rice-growing states. In 1949, for example, California growers averaged 73 bushels to the acre as against an average of 44 bushels for the three Southern states. In addition to the type of rice grown, the particular variety sown, cultural operations, the fertility of the soil or the extent to which fertilizer is used, and the purity of the seed are the factors that determine the resulting yield. Since the beginnings of the rice industry in California, yields have varied from 47 to 80 bushels or from 21 to 36 sacks, per acre.[1] Though yields have averaged somewhat higher during the last twenty years, there has been no apparent trend in evidence. During the 1930's they averaged higher than before or since. Though cultural operations and the use of fertilizers have undoubtedly improved yields in recent years, the planting of poorer land during the wartime expansion of the industry held average yields down.

Shortly after the establishment of the rice industry in California, the state's production became an important part of the total United States crop. From 1920 to 1930, California's crop averaged about 17 percent of the United States total. This percentage has gradually increased in recent years as California's production has increased somewhat faster than has production in the other three rice-producing states. The 1949 record production of 9,657,900 sacks amounted to 24 percent of the nation's total rice production. This record crop was the result of both a sharply increased acreage and an unusually favorable growing season. Prices were expected to be more satisfactory than for many other field crops, and weather at planting time was ideal. In addition, much of the increased planting was done by growers in order to increase their historical base for the anticipated 1950 acreage allotment program. Most of the increased plantings were made on land well suited to rice, and this, in combination with almost perfect growing and harvesting weather, resulted in very high yields.

Utilization and Consumption of California Rice

The production, harvesting, and drying of rice are entirely in the hands of the grower. The actual marketing begins after the rice has been properly dried and sacked. Rice marketing in California is largely dominated by two milling and marketing cooperatives whose membership includes more than half the rice growers in the state. Growers belonging to a cooperative turn over to it title to their crop, if the crop has been placed in storage, or actually make physical delivery to the cooperative. When

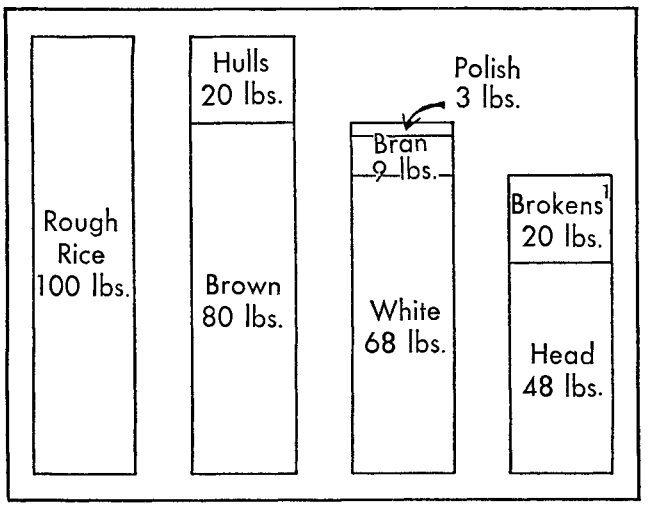
[1] Statistics on rough rice for the United States and Louisiana, Texas, and Arkansas are usually quoted in terms of bushels of 45 pounds. In California, rough rice is sold in 100 pound bags or sacks. After milling, all rice is quoted in terms of 100 pound bags or "pockets."

the cooperative receives the rice or a warehouse receipt for it, the grower receives his first payment on the crop. Those growers who do not belong to one of the cooperatives usually sell their crop to one of the several private mills in the state, either immediately or after a storage period. Such sales are generally made on the basis of inspections which estimate the quality and grade which the rice will make after it is milled.

Millings by local establishments are, of course, by far the most important single outlet for the total supply of rough rice available in any season, but small quantities may be shipped to the insular possessions, to the Southern states, or exported, in addition to the amounts saved for seed and used as feed. During the period 1938-42, the average quantity of rough rice milled in California was 82 percent of the total supply. An average of about 5 percent was used for seed, another 5 percent was shipped out of state or exported, and only 1 percent was used for feed. In recent years the proportion shipped out of state has declined. During the 1948-49 crop year, less than 2 percent of the total supply was exported, chiefly to Canadian mills. With feed and seed use remaining about the same as in former years, the proportion milled in California has increased. It amounted to over 91 percent in the 1948-49 season.

As shown in the accompanying chart, the end products of the milling process are hulls, head rice, second heads and screenings, brewers, bran, and polish. The hulls are often used as insulation material; the bran and polish or dust generally go into feed concentrates. Head rice, of course, is the most valuable product of milling since it is used entirely as a food product. Though most head rice is marketed in whole kernel form, small quantities are taken each year by the cereal manufacturers for exploding, flaking, or puffing into one of the dry cereals. The finely broken pieces, commonly referred to as brewers, are used almost entirely by manufacturers of beer in the malting process. The larger broken pieces, called second heads and screenings, may either be mixed with head rice to make lower grades or may be granulated into brewers rice. Small quantities are often sold for table usage in competition with corn grits. Over the last 15 years, the total milled product obtained (head rice, second heads and screenings, and brewers) has varied from 68.1 to 70.5 pounds per 100 pounds of rice.

PRODUCTS OF THE MILLING PROCESS



[1]Includes 2nd heads (½ kernel) and screenings, and brewers (fine brokens).

The domestic market

Two factors have an important influence on the market for California's rice crop. The first is the relatively small extent to which consumers in the United States eat rice. Annual per capita consumption for the country averaged 5.6 pounds of milled rice from 1935-39. Since then, consumption per person has decreased. The estimate for 1949 is 4.5 pounds. This compares with an average consumption of wheat of over 200 pounds. Consumption of rice in the Asiatic countries is, of course, much higher, estimates being over 400 pounds per person for southeastern China and parts of India. The second factor is the preference of most Americans for the medium and long-grain types of rice. Though there is little difference between the three types when properly cooked, the average housewife does not have the time, patience, or knowledge necessary to do a good job on the short-grain varieties and usually gets a cooked dish which is sticky and in which the kernels adhere to one another.

A somewhat dependable market for part of California's head rice has been the cereal manufacturers. During the past season, they took about 250,000 bags, or more than one-third of domestic distribution of head rice. The balance is used to fill consumer needs in West Coast markets. Plentiful supplies of Southern rice as well as high freight rates have tended to restrict sales of California rice east of the Rockies.

The distribution of California broken rices in recent years has been relatively small. Prior to the war, as shown in the accompanying table, shipments of brewers rice averaged one-fourth of total distribution, but this percentage has decreased in recent years. Even so, this market is relatively stable from year to year and can generally be counted on to take about half a million bags. Shipments of second heads and screenings are somewhat erratic since this product may be marketed in several forms. During the war, California shipments of this type of broken rice increased sharply, but they have declined sharply the last two years and will undoubtedly remain relatively minor as they were before the war.

The domestic market is small to start with, but the preference for medium and long-grain varieties, which California does not produce, forces California producers to rely largely upon outlets outside the United States which prefer the short-grain varieties. The accompanying table clearly shows this dependence. Of the total amount of California rice distributed from 1936-37 to 1940-41, shipments outside the continental United States averaged 55 percent. For the 1947-48 and the 1948-49 seasons, the figures were 69 and 64 percent respectively. Since total dis-

DISTRIBUTION OF CALIFORNIA MILLED RICE
(amounts in thousands of 100 lb. bags)

Head rice	Annual average 1936-37 to 1940-41 Amount	Per-cent	1947-48 Amount	Per-cent	1948-49 Amount	Per-cent
Exports	136.8	8.2	1,305.3	30.5	516.8	16.0
Hawaii	715.3	43.0	642.5	15.0	617.9	19.1
Puerto Rico	459.3	27.6	1,621.2	38.0	1,420.0	43.9
Domestic	352.4	21.2	706.9	16.5	678.6	21.0
Total head	1,663.8	100.0	4,275.9	100.0	3,233.3	100.0
Second heads and screenings	115.2		483.5		373.0	
Brewers	626.0		439.5		410.7	
Total distributed	2,405.0		5,198.9		4,017.0	

Source: U. S. Department of Agriculture, Production and Marketing Administration, Federal State Market News Service.

tribution figures include second heads and brewers which are relatively unimportant compared to milled head rice, it is more significant to consider shipments outside the United States as a percent of all head rice distributed. For the prewar period, these shipments amounted to 79 percent of all California head rice consumed, and during the last two seasons, 83 and 79 percent, respectively. Though the quantity of California head rice used domestically has about doubled since prewar, largely because of population increases, domestic usage as a percent of total distribution has not changed markedly.

Territorial and foreign markets

Of the two insular possessions to which rice is shipped, Hawaii was by far the most important prewar market. Shipments which averaged over 700,000 bags dropped off some during the war, but since then they have regained some of the loss, being over 600,000 bags in each of the last three years. Hawaii's place as the most important market has been taken over, since the war, by Puerto Rico whose imports from California have increased sharply over prewar takings. Annual shipments to this territory were about 450,000 bags before the war; they were about 1½ million bags in each of the last two seasons.

Prior to the war, exports to foreign countries represented only about 6 percent of the distribution of California milled rice. Cuba was the largest foreign market, taking 41 percent of total California exports during the 1939-40 season; Sweden took 14 percent and the Philippines 13. As production was curtailed in foreign-producing regions because of the war, exports from California as well as from the Southern states increased sharply. A record quantity of 1.3 million bags was exported from California in 1947-48 which represented one-fourth of all California rice distributed during that season. More abundant world food supplies dropped exports to half a million bags this past season. In addition, the principal foreign markets for California rice have shifted some in recent years. Whereas Cuba, Sweden, and the Philippines were the principal prewar importers, the latter two have taken no California rice the past two seasons, and Cuba has taken only about 10 percent of total California rice exports. The bulk of the exports in recent years has been represented by CCC shipments to China.

Prices and Returns

Demand does not appear to be too important a price-making factor for total United States rice. Domestic demand for table rice is relatively inelastic; that is, consumption does not change significantly when prices change. Over the last ten years, total consumption for table use has been remarkably constant. The quantities taken by the brewing trade during the last decade have varied somewhat more, but this market is still a relatively stable one. The demand for United States rice in the territories and in Cuba is likewise somewhat inelastic.

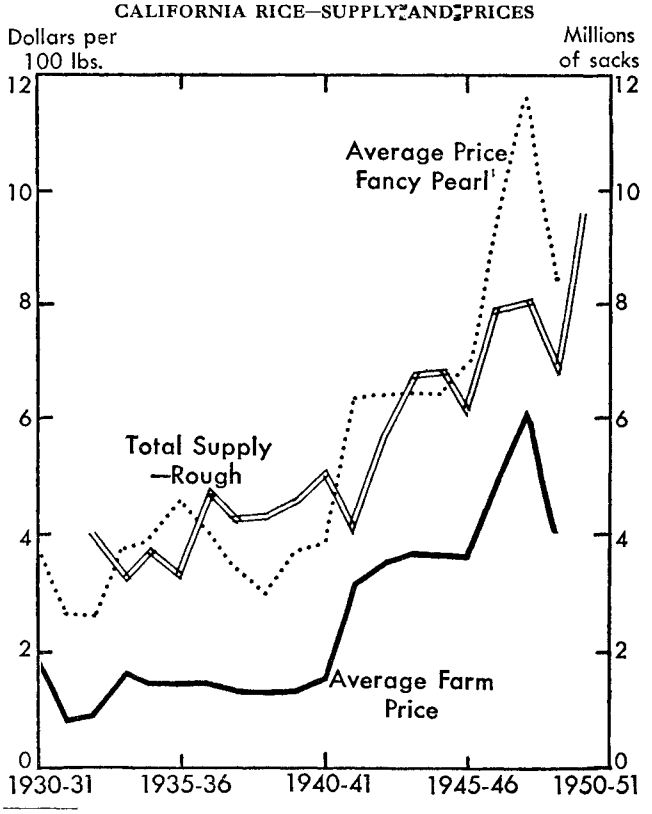
The demand for California rice is somewhat more responsive to price changes. The Hawaiian market has long been solely California's, and cereal manufacturers seem to prefer California to Southern short-grain types. But in the domestic table market, the brewing market, Puerto Rico, and the export market, Southern rice is a strong competitor. If the price spread between California and Southern rice becomes too great, the amount of California rice demanded will fall as Southern rice is substituted.

In addition to the supply and quality of California rice available in any season, the supply of Southern rices available will influence California milled rice prices. Since both California and the Southern states now export substantial quantities of their annual rice production, foreign supplies of rice also exert an influence on milled prices.

Price behavior

The trends in California milled and rough rice prices are shown in the accompanying chart along with the an-

CALIFORNIA RICE—SUPPLY AND PRICES



[1]At San Francisco.

nual total supply of California rough rice available. Up until 1942, when price controls were invoked, there was some tendency for prices and total supply to move in the opposite direction. From 1933-34 through 1935-36, prices of both cleaned and rough rice were at relatively higher levels than during the following three years when supplies rose to a higher level. Since then, price controls during the war, depleted world rice supplies, and the price support program have destroyed the former supply-price relationship.

A study of these two price series brings out two interesting facts. One is that the wholesale prices of cleaned rice have tended to change more frequently than the farm prices for rough rice. On the other hand, when pronounced changes did occur, the relative increase or decrease in farm prices was generally much the greater. The other point, which should be of interest to rice growers, is that the spread between the farm price of rough rice and the wholesale price of milled rice has been greater when milled rice prices have been high. In other words, the farmer has received a greater percentage of the milled rice price when prices have been relatively low than he has when prices have been relatively high.

The general preference for the longer grain rices has been reflected over the years in the prices received by farmers in the various rice growing states. During the last ten years, California growers, who grow only short-grain rice, have received an average of 20 cents a bag less than have all United States rice growers.

Price support

Ever since the inception of the first price support program, rice has been one of the six basic commodities for which support is mandatory. Because of the high demand during and immediately after the war, however, grower prices were consistently above the support or loan level. Requests for loans or purchase agreements were either negligible or nonexistent. It was not until the close of the 1948-49 season that farm prices received by California growers for the 1948 crop slipped below the average support level of $3.58 per bag. Loans on the 1948 crop amounted to only 347 bags, but 937,758 bags were placed under purchase agreements. The CCC finally acquired around 600,000 bags of rough rice which they took in milled form.

Factors influencing returns

The last several years have been quite profitable for the California rice industry. When the request came for increased production at the start of the war, most growers did not have to invest heavily to obtain and prepare additional acres. Since rice land is generally left idle every other year, acreage could be increased simply by not leaving the usual acreage idle. The actual returns which a grower will get from his crop are determined, of course, by his production costs, yield per acre, and the price he receives. The three crucial factors over which he has some measure of control are the yield per acre, the harvesting costs, and the milling quality. A recent study made in Colusa County[1] clearly shows that as yields decrease, costs increase. In addition to efficient cultural practices, the use of pure seed and applications of fertilizer will generally increase yields appreciably. This study also indicated that efficiency in the grower's harvesting operations could make the difference between profit and loss. Over the last several years, harvesting costs have averaged about one-third of total costs, which attests to their importance. Since milling quality is the basis upon which the grower is paid for his crop, he can, within a certain range, increase the price he receives by harvesting quickly at proper moisture content, and by properly drying his crop. Poor yields, high harvesting costs, or low milling quality will, of course, result in losses.

The 1949-50 Season

The year 1949 proved to be one of the most favorable growing seasons on record. Ideal weather conditions allowed early seeding and harvesting. As a result, yields per acre, averaging 33 sacks, were 5 sacks above last year's average. This large yield combined with a record seeded acreage resulted in the largest production in the 38 years during which California has been an important rice producing area. While the carryover of the 1948 crop was unusually small, the record crop brought total supplies 20 percent above the previous record supply of 1947. In spite of hurricane damage to the crop in Texas and Louisiana, the total supply of Southern rice is also the largest on record. Not only was the carryover of old crop rice the largest since 1941, but production established a new record.

The record supply of California rice has already been reflected in the prices received by growers. For the first time, farm prices have been at or below the support level, which averages $3.48 per bag for 1949 California rice. Even so, the industry anticipates no difficulty in moving the crop, largely because of Government buying for foreign feeding. Indonesia has just completed a purchase of short and medium-grain varieties of which 480,000 bags came from California. This will be of some help in preventing a large carryover. Even so, much more rice than last year is being placed under loan and purchase agreement, and the greater part of this will probably be turned over to the Government.

Because of these record supplies of both California and Southern rice available for the 1949-50 season, the Department of Agriculture has estimated that total carryover on August 1, 1950 would be three times last season's carryover and double the average prewar carryover. As a result, acreage allotments are required for the 1950 crop.

Though total United States carryover is expected to be excessive, the California industry does not anticipate a burdensome carryover at the close of the 1949-50 season. Acreage allotments may not be so necessary for Califor-

[1] *Colusa County Rice Management Study,* University of California and Colusa County Agricultural Extension Service.

nia, but with them, the 1950 crop should be reduced enough to keep supply in line with any reduction in demand.

The Future of the Industry

As with so many agricultural commodities, 1950 may well prove to be the turning point for the California and Southern rice industries. During and since the war, reduced world rice production and Government price supports at 90 percent of parity caused sharp increases in United States acreage and production, principally in California. But total demand for United States rice will certainly not increase and in all probability will decrease as foreign production increases. The imposition of acreage allotments on the 1950 crop is clear indication that total United States supplies are expected to be greater than demand. The next few years should see more attention being paid to new varieties, to more efficient production, and to the problem of maintaining dependable market outlets.

Varietal problems

If California is to capture a greater proportion of the domestic market, it must develop an acceptable medium or long-grain variety of rice. Climatic conditions prohibit the growing of any of the medium and long-grain varieties presently grown in the South. Yield results of the new medium-grain variety, Calrose, have been highly satisfactory but milling quality is still uncertain. Early reports indicate that it has not been readily accepted. Even if Calrose does meet with some trade approval, however, many persons in the industry feel that it is not the answer to California's problem. They insist that only a long-grain rice can assure the state a bigger share of the domestic market. It is probably true that a medium-grain rice would allow California to compete more effectively in both the domestic and export markets. But it is also true that a long-grain variety must be developed before the state can hope to take over an appreciable portion of the domestic market. Because of California's climatic conditions, the development of such a long-grain variety will take many years.

Production problems

With allotments in effect on the 1950 crop, growers obviously will not have to concern themselves with the number of acres to plant. They can concentrate their efforts on increasing yields, reducing costs, and obtaining high milling quality. In one respect, at least, the imposition of allotments will be a boon to the industry—growers can summer fallow, plow, and level their land. During the last several years, in contrast to normal practices, most rice land has been planted every year and fertilized heavily. More attention can now be given to good land management and to building up the productivity of the soil. Though most of the heavy rice land is not suited to the production of many crops, a return to definite rotation schedules or the planting of legumes would be desirable. Ladino clover is well adapted to most rice lands, and a rotation of rice-beans-wheat-beans-rice will maintain the land in excellent condition.

Outside of these land-use problems, production problems as such will probably not be an important factor in the immediate years ahead. California rice growers are generally specialists in rice production, and production and harvesting are highly mechanized. Most growers are well acquainted with the efficient production techniques and the industry is continuously being serviced by the Extension Service, the Experiment Station, and the Department of Agriculture. The major adjustment necessary, if it has not already been accomplished, will merely be a return to the farm management practices which most growers followed prior to the wartime expansion.

Consumption problems

Total demands for California rice seem to assure a fairly optimistic picture for the immediate future. Domestic and territorial consumption appear to be fairly stable. Shipments to Hawaii, which is strictly a California market, can be expected to increase slightly since they are presently somewhat below their consistent prewar takings. For the last three years, shipments to Puerto Rico have been three times the prewar average. Prior to the war, the Southern States shipped substantial quantities to this territory, but in recent years an increasing part of Southern production has been in long-grain varieties. If this trend continues, the present high level of consumption of California rice in Puerto Rico may be maintained. Commercial exports have been running close to prewar averages. Competition from Southern rices, increasing world production, and the ever-present dollar shortage will effectively keep commercial exports by California millers from increasing. Government buying for export is the major factor in which abrupt changes are possible, if not probable. But many persons in the industry feel that such purchases may well continue to be a stabilizing factor in the California market at least for the next few years. The present world rice situation seems to justify these statements. Though total world production in 1948 and 1949 was slightly above the prewar average (1935-36 to 1939-40), it is far below what is needed to restore the prewar levels of consumption. It will take years to make up the deficiency caused by population increases. World rice exports during the 1948-49 season represented less than half the prewar trade of an average year.

If shipments to Hawaii and Puerto Rico continue at about 2 million bags, domestic takings for table, cereal, and brewing use remain somewhat above 1 million, and commercial and Government exports account for another half million bags, carryovers will not exceed normal prewar figures, especially if the 1950 acreage allotment reduces production somewhat.

Price problems

Rice prices seem to be largely determined by the supplies of rice available for distribution—as long as they are above a certain level. That level is the floor provided by

the price support program. As one of the basic agricultural commodities, rice must be supported. Since supports operate at the farm level, the support program is probably somewhat more effective in maintaining farm prices than it is in maintaining the prices of milled rice. In either case, however, prices are effectively prevented from dropping sharply. Another favorable aspect is provided by the parity computations set forth in the new Agricultural Act of 1949. The law specifies that the basic commodities shall receive price support based on either the present parity formula or a new modern Aiken formula, whichever is the highest. For rice, the modernized parity gives the higher support level, which for 1950 has been estimated at about $4.50 per 100 pounds compared with $3.96 average support on the 1949 crop. Whatever the precise figure, it will certainly be appreciably higher than the present level. After 1950, at the discretion of the Secretary of Agriculture, the law allows support levels to be lowered gradually, depending upon supplies and needs, to not less than 80 percent of parity in 1951, and not less than 75 percent in 1952 and after.

Apparently, California rice growers will not have a price problem in the immediate future. Support levels for this year's crop should assure higher average farm prices than are being received for the 1949 crop. And in the following years, as the law now stands, prices should gradually come back down to the 1949 level. Production and harvesting costs, of course, cannot be expected to drop much since so many of the seeding and harvesting operations are mechanized. All things considered, returns per acre should continue to be profitable in the next few years.

AVAILABLE FOR DISTRIBUTION

The pamphlet, "Distribution of Bank Deposits by Counties, June 30, 1949," published by the Board of Governors of the Federal Reserve System, is available for distribution and may be obtained from this bank. (The most recent previous survey covers bank deposits by counties as of December 31, 1947.)

BUSINESS INDEXES—TWELFTH DISTRICT[1]

(1935-39 average = 100)

Year and Month	Industrial production (physical volume)[2]								Total mf'g employment[4]	California factory payrolls[4]	Carloadings (number)[2]	Dep't store sales (value) [2,*]	Dep't store stocks (value)[5]	Retail food prices[6]
	Lumber	Petroleum[3] Crude	Petroleum[3] Refined	Cement	Lead[3]	Copper[3]	Wheat flour[3]	Electric power						
1929	148	129	127	110	171	160	106	83	....	111	135	112	134	132.0
1930	112	101	107	96	146	106	100	84	....	93	116	104	127	124.8
1931	77	83	90	74	104	75	101	82	....	73	91	92	110	104.0
1932	46	78	84	48	75	33	89	73	....	54	70	69	86	89.8
1933	62	76	81	54	75	26	88	73	....	53	70	66	78	86.8
1934	67	77	81	70	79	36	95	79	....	64	81	74	83	93.2
1935	83	92	91	68	89	57	94	85	88	78	88	86	88	99.6
1936	106	94	98	117	100	98	96	96	100	96	103	99	96	100.3
1937	113	105	105	112	118	135	99	105	112	115	109	106	108	104.5
1938	88	110	103	92	96	88	96	102	96	101	96	101	101	99.0
1939	110	99	103	114	97	122	107	112	104	110	104	109	107	96.9
1940	120	98	103	124	112	144	103	122	118	134	110	119	114	97.6
1941	142	102	110	164	113	163	103	136	155	224	128	139	137	107.9
1942	141	110	116	194	118	188	104	167	230	460	137	171	190	130.9
1943	137	125	135	160	104	192	115	214	306	705	133	203	174	143.4
1944	136	137	151	128	93	171	119	231	295	694	141	223	179	142.1
1945	109	144	160	131	81	137	132	219	229	497	134	247	183	146.3
1946	130	139	148	165	73	109	128	219	175	344	136	305	238	167.4
1947	141	147	159	193	98	163	133	256	184	401	142	330	300	200.3
1948	144	149	162	211	107	153	116	284	189	430	134	354	348	216.1
1948														
October	144	151	155	229	107	152	114	293	192	452	131	344	346	217.1
November	138	153	173	217	115	109	126	296*r*	191	449	132	349	340	215.6
December	134	153	171	196	111	104	122	298	189	444	131	358	320	216.5
1949														
January	115	151	174	176	112	108	128	300	185	430	105	342	321	217.9
February	115	152	170	173	107	129	118	297	185	423	103	314	327	214.1
March	131	153	176	195	120	169	102	295	185	412	118	329	342	213.3
April	141	152	169	212	124	167	82	303	186	412	126	335	331	215.6
May	143	149	170	215	126	159	100	304	186	415	134	340	320	211.0
June	146	148	174	219	118	138	104	315	185	419	139	335	313	209.9
July	136	146	162	217	98	131	108	299	182	423	120	329	302	206.3
August	135	144	165	209	93	121	109	310	185	429	138	333	309	205.7
September	140	144	166	208	84	136	108	308	183	437	138	326	333	207.3
October	139	141	158	200	77	136	104	306	183	435	124	337	330	205.5
November	147*p*	140	161	200	86	146	101	299	181*p*	421	129	319	331	205.0

BANKING AND CREDIT STATISTICS—TWELFTH DISTRICT

(amounts in millions of dollars)

Year and month	Condition items of all member banks[7] Loans and discounts	U.S. Gov't securities	Demand deposits adjusted[8]	Total time deposits	Bank rates on short-term business loans[9]	Member bank reserves and related items[10] Reserve bank credit[11]	Commercial operations[12]	Treasury operations[12]	Coin and currency in circulation[11]	Reserves	Bank debits index 31 cities[5,13] (1935-39 = 100)[2]
1930	2,218	467	1,158	1,933	.....	− 16	− 53	+ 89	+ 16	183	126
1931	1,898	547	984	1,727	.....	+ 21	− 154	+ 154	+ 48	147	97
1932	1,570	601	840	1,618	.....	− 42	− 175	+ 234	+ 30	142	68
1933	1,486	720	951	1,609	.....	− 2	− 110	+ 150	− 18	185	63
1934	1,469	1,064	1,201	1,875	.....	− 7	− 198	+ 257	+ 4	242	72
1935	1,537	1,275	1,389	2,064	.....	+ 2	− 163	+ 219	+ 14	287	87
1936	1,682	1,334	1,791	2,101	.....	+ 6	− 227	+ 454	+ 38	479	102
1937	1,871	1,270	1,740	2,187	.....	− 1	− 90	+ 157	− 3	549	111
1938	1,869	1,323	1,781	2,221	.....	− 3	− 240	+ 276	+ 20	565	98
1939	1,967	1,450	1,983	2,267	.....	+ 2	− 192	+ 245	+ 31	584	102
1940	2,130	1,482	2,390	2,360	.....	+ 2	− 148	+ 420	+ 96	754	110
1941	2,451	1,738	2,893	2,425	.....	+ 4	− 596	+1,000	+ 227	930	134
1942	2,170	3,630	4,356	2,609	.....	+ 107	−1,980	+2,826	+ 643	1,232	165
1943	2,106	6,235	5,998	3,226	.....	+ 214	−3,751	+4,486	+ 708	1,462	211
1944	2,254	8,263	6,950	4,144	.....	+ 98	−3,534	+4,483	+ 789	1,706	237
1945	2,663	10,450	8,203	5,211	.....	− 76	−3,743	+4,682	+ 545	2,033	260
1946	4,068	8,426	8,821	5,797	.....	+ 9	−1,607	+1,329	− 326	2,094	298
1947	5,358	7,247	8,922	6,006	.....	− 302	− 443	+ 630	− 206	2,202	326
1948	6.032	6.366	8.655	6,087	.....	+ 17	+ 472	− 482	− 209	2,420	355
1949	5,926	7,014	8,596	6,221	3.20	+ 13	− 931	+ 378	− 65	1,924	350
1948											
November	5,984	6,358	8,658	5,998	.....	− 25	− 40	+ 7	− 8	2,323	355
December	6,032	6,366	8,655	6,087	3.16	+ 11	− 2	+ 45	− 61	2,420	376
1949											
January	6,009	6,382	8,664	6,082	.....	+ 2	− 101	− 58	− 54	2,329	356
February	5,910	6,306	8,330	6,097	.....	− 4	− 7	− 19	− 4	2,308	344
March	5,899	6,208	8,147	6,102	3.27	− 15	− 34	+ 6	− 31	2,299	364
April	5,811	6,230	8,157	6,109	.....	+ 6	− 127	+ 109	+ 11	2,264	354
May	5,738	6,357	8,154	6,112	.....	− 8	− 202	+ 94	+ 37	2,128	345
June	5,762	6,330	8,006	6,179	3.24	0	− 53	− 5	0	2,063	351
July	5,707	6,548	8,139	6,179	.....	+ 20	− 213	+ 130	− 16	1,997	344
August	5,729	6,846	8,221	6,170	.....	− 30	− 194	+ 40	+ 1	1,832	332
September	5,853	6,863	8,273	6,186	3.14	+ 13	+ 41	− 37	+ 9	1,837	336
October	5,860	6,933	8,353	6,186	.....	+ 2	− 95	+ 92	+ 7	1,831	351
November	5,919	6,944	8,511	6,157	.....	− 20	+ 49	− 21	− 13	1,854	349
December	5,926	7,014	8,596	6,221	3.16	+ 40	+ 32	+ 30	− 8	1,924	376

[1] All monthly indexes but wheat flour, petroleum, copper, lead, and retail food prices are adjusted for seasonal variation. Excepting for department store statistics, all indexes are based upon data from outside sources, as follows: Lumber, various lumber trade associations; Petroleum, Cement, Copper, and Lead, U.S. Bureau of Mines; Wheat flour, U.S. Bureau of the Census; Electric power, Federal Power Commission; Manufacturing employment, U.S. Bureau of Labor Statistics and cooperating state agencies; Factory payrolls, California State Division of Labor Statistics and Research; Retail food prices, U.S. Bureau of Labor Statistics; and Carloadings, various railroads and railroad associations. [2] Daily average. [3] Not adjusted for seasonal variation. [4] Excludes fish, fruit, and vegetable canning. Factory payrolls index covers wage earners only. [5] At retail, end of month or year. [6] Los Angeles, San Francisco, and Seattle indexes combined. [7] Annual figures are as of end of year; monthly figures as of last Wednesday in month or, where applicable, as of call report date. [8] Demand deposits, excluding interbank and U.S. Gov't deposits, less cash items in process of collection. Monthly data partly estimated. [9] New quarterly series beginning June 1948. Average rates on loans made in five major cities during the first 15 days of the month. [10] End of year and end of month figures. [11] Changes from end of previous month or year. [12] Minus sign indicates flow of funds out of the District in the case of commercial operations, and excess of receipts over disbursements in the case of Treasury operations. [13] Debits to total deposit accounts, excluding interbank deposits. *p*—preliminary. *r*—revised. *—Seasonal factors revised for certain areas.