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THE AGRICULTURAL OUTLOOK FOR 1936

Prepared by the Staff of the Bureau of Agricultural Economics

Assisted by Representatives of the Agricultural Adjustment Administration, the Extension Service, and the State agricultural colleges and extension services

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THE SCOPE OF THIS REPORT

This report presents a summary of facts bearing upon the present situation and probable developments with respect to agricultural production and marketing in 1936. The best available information has been assembled and carefully studied before preparing statements designed to help farmers in making decisions for the next year's operations. These statements were prepared by the staff of the Bureau of Agricultural Economics and have been considered in detail and revised in conference with agricultural economists from the agricultural colleges, experiment stations, and extension services of the States, as well as others representing other bureaus of the Department of Agriculture, the Agricultural Adjustment Administration, and the Farm Credit Administration. The conclusion, therefore, presents a composite result of the best judgment of the representatives of these several agencies.

In the preparation of these reports the workers had available all the information accumulated by the Bureau, the facts regarding the results of the various adjustment and marketing-agreement programs, as well as a large amount of special data assembled for use in planning these activities. The facts concerning foreign competition and demand were also more comprehensive than have been available at any time in the past, as a result of the numerous special studies on general subjects relating to foreign-trade agreements.

A section of the report, on the outlook for farm-family living, has been prepared in cooperation with representatives of the Bureau of Home Economics and the Extension Service for the last 4 years. Home-economic workers from the States attended the outlook conference for the second time this year, there being 42 representatives present from 35 States. The Bureau of Home Economics and the Extension Service conducted a conference on farm-family liv-

ing, considering such phases as the income and purchasing power of farm families, adjustment of food supplies, and the home-production program.

This report presents, therefore, a summary of the outlook based upon more complete information than has heretofore been available for use in appraising the probable trends of agriculture.

This report for 1936 will be the only report issued by this Bureau until the summer of 1936, when the usual summer outlook reports will appear, if there is no change in the outlook program. This report represents the national viewpoint primarily. Most of the State agricultural colleges and extension services will prepare reports, applying particularly to conditions in their respective States, for the use of their extension workers. Any farmer who receives a copy of this, the Federal report, is urged to secure a copy of any reports that may be distributed by his State extension service for consideration in connection with his individual problems.

DOMESTIC AND FOREIGN DEMAND

The demand for the farm production of the United States of 1936 is likely to be greater than was the demand for the production of the 1935 season. Such increased demand, as reflected by consumer buying power, would result in prices for the present volume of agricultural production higher than in the present season, but an increase in farm production would tend to check the advance in prices.

Consumer buying power in the United States is likely to be increased about 10 percent in 1936. The buying power of consumers in many foreign countries is also likely to increase in 1936, but with the various restrictions upon international trade, the foreign demand for American farm products, possibly excepting cotton, is not likely to be increased as much as the buying power of foreign countries.

Taking a longer time view, it appears that the trend of industrial activity and of consumer buying power, which has been generally upward in the United States and in many foreign countries during the last 3 years, will probably continue through the next 2 or 3 years. The general price level in the United States and in many foreign countries may continue to advance during the same period, though possibly not at a rate as rapid as the increase in industrial production unless monetary or credit inflation becomes a factor in raising the general price level.

DOMESTIC DEMAND

The income of industrial workers in 1936 probably will be about 10 percent higher than in 1935. It is estimated that industrial production in 1935 will average about 88 percent of the 1923–25 average, and show a further increase of about 10 percent in 1936. Factory pay rolls which will probably average about 69 percent of the 1923–25 average in 1935 will probably increase as industrial production increases in 1936. The increase in factory pay rolls probably would be accompanied by correspondingly increased pay rolls of many other industrial workers. Since the cash income from many agricultural products, particularly meats and dairy, fruit, and vegetable products, is closely related to the volume of industrial pay rolls, this would indicate an increase of about 10 percent in the demand for such products in 1936.

The greatest advances in industrial activity in 1936 over 1935 are expected to be registered in the durable-goods industries. The output of durable goods is reflected very largely in the activity of the railroad, building, and automobile industries. The importance of these industries in indicating the level of consumer buying power for agricultural products seems to warrant particular attention to the present conditions and the outlook for these industries.

Purchases of equipment and supplies by railroads are likely to show some increase in 1936 over 1935. Should railway traffic increase appreciably, it seems probable that there may be, in the latter part of 1936, a marked expansion in railroad purchases which would contribute indirectly to increased consumer buying power. Much rolling stock has been retired during the depression and there have been few replacements, and the condition of remaining equipment has deteriorated. The reduction in serviceable equipment and in purchases of materials for maintenance and improvements has been so great that substantial purchases for rehabilitation and improvement are in prospect. The beginning of such an expansion of purchases was in evidence in 1934 but

orders for equipment have decreased during the current year. In 1935, revenues have been required more largely to cover immediate operating costs, partly as a result of the restoration of wage rates. Roads that reported a net corporate income in 1935 show an increase in net income over last year and are in a better position to increase their expenditures for equipment and maintenance. This improvement is in contrast with an increased deficit for other roads, offset in part by relief from meeting fixed interest charges on the part of those roads in receivership.

An increase of about 10 percent in industrial production in 1936 might result in railway earnings comparable with those of 1931. In that year expenditures for durable goods, although much lower than in years immediately prior to 1929, were greatly in excess of the expenditures in 1934. Although a portion of railway income in 1936 may have to be devoted to pension payments, the increase in earnings on account of increase in business activity probably will make a larger proportion of the revenues available for expenditures on maintenance and equipment.

Building activity in 1936 probably will be at an appreciably higher level than in 1935, owing chiefly to an expected expansion of about 50 to 100 percent in residential construction. The total value of building contracts of all kinds awarded in 1935 will be about the same or only slightly higher than in 1934. A considerable decrease in Federal building expenditures during the year has been offset by increased private residential construction.

After a long period of deferred repairs and deferred new construction, the improvement in consumer incomes and the prospects for further business recovery are bringing out commitments for construction which were deferred during the last few years because of unfavorable economic conditions. The value of residential contracts in 1935, although equal to only about one-fourth of the 1923–25 average, will be about twice as large as in 1934, and shows the first significant annual increase since 1925. Housing rentals, which declined almost continuously during the last 10 years, became fairly stable in 1935, and in many cities have now turned upward. Labor and material costs remain relatively high, but reductions in financing costs already in effect and in prospect, together with more liberal terms of payment, will tend to reduce payments required for the purchase of homes and may be a factor in increasing building.

Increases in 1936 in the amount of privately financed nonresidential building probably will be less marked than those in the residential field. It is doubtful whether construction of commercial structures, stores, office buildings, etc., will increase materially during 1936. Construction of new industrial and commercial structures is currently smaller in relation to 1929 and earlier years than is residential construction. Office buildings, in particular, were overbuilt during the decade of the twenties. It is generally observed, however, that there will be some expansion in industrial construction of factories, etc., and that modernization of plant may increase more rapidly than new construction during the coming year.

Automobile production has shown the most rapid recovery of any of the major industries and this increase in output is expected to continue through 1936. Automobile production in 1935 is now estimated at 3,700,000 cars and motor trucks. The estimated output for 1935 is 30 percent higher than last year and 160 percent higher than the low level of 1932. The sharp drop in the number of cars purchased annually since 1929 has materially increased the average age of cars now in the hands of owners. With the improvement in consumer incomes that began in 1933, automobile purchases expanded rapidly. A continuation of the recovery in incomes may be expected to increase further the purchase of new cars to offset the low rate of replacements during the last few years. The value of automobile exports, which more than doubled from 1933 to 1934, has shown a further increase of 13 percent in the first 8 months of 1935 as compared with the similar period of last year. Further gains in the export field seem probable in 1936. Exports during the first 8 months of 1935 represented 6 percent of the total number of passenger-car factory sales and 21 percent of commercial-car sales.

Of the miscellaneous uses of iron and steel, such as machinery and tools, farm equipment, and metal containers, prospects indicate a further expansion in 1936. Next to automobiles, the demand for iron and steel for miscellaneous uses has shown the best recovery. Machine-tool orders increased each month from February 1935 to August, and in the latter month were three times as large as a year ago, and the highest since 1929. The low level of replace-

ments during the last 5 years, together with the developments of more efficient methods of production, has resulted in an accumulation of deferred requirements. It seems probable that rapid rise in orders during 1935 thus reflects an increased confidence on the part of manufacturers in the possibility of increased sales in the immediate future and a desire to improve their competitive position through the utilization of more efficient equipment.

The progressive improvement in farm income since 1932 and the increasing need of replacements have resulted in expanded sales of farm equipment. The increase in farm income in 1935 as compared with last year and the prospective increase for 1936 therefore should contribute to a further increase in the demand for iron and steel for farm equipment. The expansion in the uses for metal containers also will probably sustain an increased demand for steel from this source in 1936.

Output in the nondurable-goods industries which has been maintained at relatively higher levels than in the industries producing durable goods also is likely to show some improvement in 1936 over the current year. Textile activity will probably be characterized by an increase in output of about 10 percent. The output of wool textiles during 1935 has been at a relatively high level and no increase is anticipated in 1936, but cotton output is likely to increase by about 10 to 15 percent. No major change in output is expected in the food industries in 1936. In the meat-packing industry the volume of livestock slaughter will be about the same or slightly higher than in 1935.

Thus the general outlook for industrial production in 1936 is characterized by a general increase in all lines of activity and the impetus to the production of durable goods, particularly in building, and in industrial equipment is more apparent than in any of the 3 previous years. Furthermore as agricultural production in the current crop year is larger than a year ago there will be an increased volume of business for the railroads and for industries that handle agricultural products. Railway traffic in agricultural products will be larger during the 1935–36 crop year than it was during 1934–35, a decrease in livestock shipments being offset by a prospective increase of 9 percent in tonnage of agricultural products other than livestock. Agricultural traffic in 1936–37, in the absence of severe drought, should be higher than in the crop year 1934–35.

With the progressive increase in the incomes of various groups of producers, both industrial and agricultural, the amount of their income, over and above that necessary to pay interest, taxes, rent, and insurance, available for current expenditures for both durable and nondurable goods, becomes proportionately larger. It seems probable that increased buying power from this general improvement will result in a material increase in the demand for many farm products, especially those products that are affected most by changes in incomes, such as the higher quality meats, dairy and poultry products, and fruits and vegetables.

CREDIT

The general improvement in the outlook for business, the high level of bank reserves, and the low level of money rates are likely to give an impetus to the expansion of credit. With member banks having reserves about twice their legal requirements, the basis exists for a substantial expansion of credit.

Loans of commercial banks are still near the lowest level reached in any recent year. With the progressive improvement in economic conditions, individuals and corporations will be more likely to need bank loans and will be in a better position to qualify for them. Some expansion in loans thus may be expected in 1936 in view of the prospective higher level of industrial activity and of commodity prices. The volume of demand deposits are now at the highest level in history. The increase of 63 percent, since April 1933, in net demand deposits of member banks of the Federal Reserve System has resulted chiefly from the purchase of Government securities and from gold imports. This deposit credit is available for a considerable expansion in business activity. Should commercial banks reenter the market as purchasers of nongovernmental securities, or expand their holdings of mortgages under the broadened provisions of recent legislation, the rate of deposit expansion would be accelerated. Such purchases of securities would also tend to increase the capacity of the capital market to absorb new issues, a development which would be helpful to further recovery in the output of durable goods.

Low interest rates in central money markets are facilitating the refunding of a substantial volume of corporate indebtedness into issues bearing a lower interest rate. The volume of new corporate security issues in the first 9 months of 1935 was $1,597,175,220 compared with $382,645,299 in the same period a year earlier. This refinancing has tended to improve the financial status of many corporations through reducing annual charges on bonded indebtedness. A small portion of the proceeds of these issues has been used for the expansion or improvement of plant equipment. Other corporations with adequate cash resources have also undertaken or announced plans for a substantial increase in expenditures for plant and equipment. On the basis of the marked expansion, in 1935, in the flotation of security issues for refunding purposes, it seems probable that a further improvement in business activity will result in an increased volume of securities issued for new capital purposes in 1936.

Although banks have large excess reserves, it does not seem probable that credit will expand much more rapidly in 1936 than it has in the last 2 years. As long as there remains a surplus of unutilized productive capacity, it seems probable that the use of buying power made available through expansion of bank credit will be reflected more in an increased output of goods than in higher prices. Such a development took place after 1878 and 1896, respectively, when deposits of national banks practically doubled. In both periods there was a rapid advance in industrial production with prices rising much more slowly.

FOREIGN DEMAND

General foreign-demand conditions, as measured by the level of industrial activity in foreign countries, are improving. The resulting improvement in purchasing power, however, will not result in a corresponding improvement in the prospects for selling American farm products abroad because of the continued high level of import restrictions in our principal foreign markets.

Industrial activity in foreign countries has improved materially since 1932, and this improvement seems likely to continue for some time. The gain has been far from uniform and has been most marked in countries like Great Britain, the Scandinavian countries, and Japan, which have depreciated their currencies; it has been least marked in those countries like France and the Netherlands which continue to adhere to the old gold standard. In Germany and Italy, adhering nominally to predepression exchange parities, industrial production has increased markedly, but this has been brought about through internal measures without improving the opportunity for foreign countries to sell in their markets. In China business conditions are more depressed than at any time during the last 5 years. In the surplus agricultural countries, particularly in the Southern Hemisphere, economic conditions have been greatly improved. The tendency for betterment in economic conditions in foreign countries is being strengthened by the increasing purchasing power of the United States for a considerable number of important world staples, such as silk, rubber, and tin. On the whole, it seems probable that the depression has about run its course in most countries and the tendency during the next few years will be for improvement.

So far as the foreign demand for American agricultural products is concerned, however, the prospects are for continued maintenance of a higher level of import restrictions than prevailed prior to the depression and, therefore, these commodities will not get the full benefit of better economic conditions. Trade barriers will undoubtedly continue to be most restrictive in the case of commodities, such as wheat and pork, of which the deficit countries are in a position to produce a considerable part of their own requirements. But higher prices for these products may lead to some relaxation in trade restrictions in some markets.

Foreign-demand conditions will be of considerably greater importance during the 1936–37 season than they have been during 1934–35 and 1935–36. At the beginning of the program of the Agricultural Adjustment Administration it was considered necessary, in view especially of the large accumulations of stocks of certain products, to plan for a substantial curtailment in agricultural production. Reductions in area for harvest and in livestock breeding, combined with the severe drought of 1934 in certain areas, have not only resulted in the elimination of excess stocks, except cotton, but have also greatly reduced the supplies available for export. Several of the programs now being developed provide for production larger than in the last 2 years.

In fact, the adjustment programs have at all times been developed with a view to a sufficient production (assuming about average weather conditions) to provide a substantial export surplus of the important export products. If this policy is continued, and if more normal weather conditions prevail, the quantity of such products as wheat and pork available for export in the 1936–37 season would be much above the level prevailing during the 2 preceding years

FOREIGN ECONOMIC CONDITIONS

It is now clear that world industrial production reached its low point in 1932. Since that time there has been an upward trend in industrial production in practically all the countries of the world. This is an important factor in the outlook for foreign demand for our raw-material exports, like cotton. It is noteworthy, however, that the improvement in industrial activity has been most pronounced in the countries that have depreciated their currencies. This applies particularly to Japan, the United Kingdom, and the Scandinavian countries. In the countries that have still maintained their currencies on the gold standard at the predepression exchange parity, notably France and the Netherlands, the improvement in industrial production from the low point of 1932 has been very slight. In fact, industrial production in France in 1935 has been running at a level almost as low as the lowest point in the depression.

The situation in Germany and Italy calls for separate consideration. In both Germany and Italy the Government has maintained its currencies nominally on the gold standard but at the same time has taken over the control of foreign exchange and of foreign trade generally. In both these countries a very marked improvement in industrial production since the low point of 1932 is evident, the production indexes having reached, in the current year, the highest point since 1929, although industrial output in Italy has turned downward in recent months. However, the expansion in industrial activity, which is to a large extent a result of governmental aid to the unemployed, has not been accompanied by a corresponding improvement in external trade.

In Japan, industrial production, which is running well above that of 1929, seems likely to be substantially maintained during 1936. On the other hand, China is experiencing the most depressed economic conditions since 1929 with reduced exports forcing a curtailment of imports, including agricultural products from the United States.

TRADE-BARRIER SITUATION

In considering foreign-demand prospects for agricultural products it is significant to note that although internal economic conditions (particularly industrial production) have shown marked improvement since 1932, there has been but little increase in the volume of international trade from the low levels of the world depression. Restrictions on trade, both direct and indirect, account to a considerable extent for this situation.

Barriers to international trade considered in the broadest sense have been increased rather than reduced during the last 12 months. It is perhaps significant, however, that the recent increases in trade barriers to a very large extent have been restrictions growing out of shortages in foreign exchange which have forced some countries, such as Germany and Italy, drastically to reduce their imports of any but the most indispensable materials and to place such imports largely on a barter or compensation basis. Barriers in the form of high duties or import quotas, erected primarily to protect the domestic price level or to encourage domestic production, have not on the whole been significantly changed during the calendar year 1935, and some scaling down in such barriers might be expected with a continuation of the general improvement in world economic conditions and rising world prices. Such a scaling down would presumably be hastened, particularly with respect to exchange restrictions, in the event of a revaluation of currencies in some countries and a general stabilization of exchange. Upon the whole, however, for at least as long as the marketing period for the 1936 crops, it seems probable that barriers to imports of commodities, especially foodstuffs that can be produced within the importing countries, will continue to be maintained at a much higher level than prevailed prior to the depression.

In this connection reference should be made also to the situation in regard to regional trade preferences, such as are embodied in the Ottawa agreements

affecting British Empire trade, and in certain preferential arrangements between countries in the Danube Basin and other European countries. With respect of the former, the effects of the agreements have begun to be evident, and in a number of cases have caused a shift from American to Empire products in the United Kingdom and in the Dominions. No great modification in this general policy seems to be in prospect. The principal effect of the Danubian preferences has been to assure to those countries a preferential outlet for their wheat and pork. These Danubian arrangements seems likely to be continued, although perhaps on a somewhat different basis than at present.

Some progress has been made by the United States in connection with its trade-agreements program in the direction of securing reductions in the import duties and other barriers affecting agricultural exports. But these concessions, with the exception of the special preferential agreement with Cuba, have been made by countries that have represented relatively small outlets for our agricultural products. It is not to be expected that the trade-agreements program will in itself achieve any marked reduction in the barriers affecting certain of our major agricultural exports, such as wheat and pork products, during the 1935–36 and 1936–37 seasons. The influence of the trade-agreements program, however, in the direction of a general relaxation of trade barriers throughout the world, may be substantial in the long run. In the meantime, it may be assumed that this program is an influence tending to counteract the forces making for even higher barriers.

PRICES

Increased demand will have a tendency to raise the prices of the products of the farm in 1936, but the effect of the improvement in demand upon the prices of some commodities may be offset by increased production. The sharp advance in prices from an average of 65 percent of the pre-war level in 1932 to about 107 percent in 1935 is due not only to improvement in demand but also to a reduction in supplies of farm products and to a rising general price level.

The volume of agricultural production declined about 15 percent between 1931 and 1934. The high level of production prior to 1932, together with reduced demand, had resulted in large stocks, and the reduction of the stocks of important commodities, with the exception of cotton, to about normal levels is a strengthening factor in the situation. But with a normal crop-growing season, total production in 1936 is likely to be larger than in 1935, and with a favorable season the supply might be large enough to prevent a further increase in the prices of some farm products.

In the past year the prices of several farm products have been influenced by supplies that were at times below domestic requirements. Production plans for 1936 contemplate an increased output. Although the increased demand will tend to raise the prices of the farm commodities of the United States which have remained on a world-market basis, the shifting of some commodities from a domestic market to a world-market basis by increased production may result in lower prices in spite of the increase in the demand for such products.

The advance in farm prices in the last 2 years has been appreciably more rapid than the advance in the general wholesale price level. As a rule, the prices of farm products fall more rapidly than the general price level during the downward phase of the business cycle and then recover more quickly. The great disparity between the prices of agricultural and nonagricultural products that reached its maximum early in 1933 has been largely eliminated by the rapid recovery in the prices of agricultural products. With the removal of most of this disparity, the future movement of farm-commodity prices will tend to correspond more closely to the movements of the general wholesale price level.

Continued industrial recovery might have only a moderate influence on the general price level. Judging from the experience of previous peace-time industrial revivals in the United States, the general commodity price level might rise moderately or remain relatively stable with industrial prices tending downward as production expands and agricultural prices continuing to benefit from increased consumer purchasing power.

The trend of wholesale prices in the United States will depend in part, of course, upon conditions in world markets. The prices of many farm products in the United States, together with many nonagricultural commodities, are influenced by foreign supply and demand conditions. If wholesale prices in foreign countries tend to advance in 1936, this would have a strengthening

influence upon the domestic price level. Pressure upon the prices of international commodities, because of substantial accumulations of commodity stocks during the period 1929 to 1932 when consumption fell off sharply with the decline in world industrial production, has lessened. The increased consumption of raw materials and foodstuffs which has accompanied the recovery of industrial production since 1932 has reduced stocks of many important international commodities. For nine international commodities, the reduction in stocks has been about 12 percent during the past year.

A progressive improvement in world industrial production over the next year or two, particularly if such improvement is accompanied by a substantial increase in the United States industrial output, would probably result in a further reduction in world commodity stocks and the strengthening of international commodity prices. With such an increase in prices of important raw materials and foodstuffs, the producers of such commodities will be in a better position to increase their industrial purchases from the manufacturing countries that are important markets for American farm products. Such increased purchases would tend to accelerate world industrial production and to strengthen wholesale prices in foreign countries.

AGRICULTURAL CREDIT

Further improvement in the farm-credit situation appears probable during 1936. An increase in the volume of credit available to farmers is indicated for both private and federally sponsored credit institutions. The farmers' need for short-term credit will probably be somewhat larger than in 1935. Since most of the emergency refinancing of long- and short-term indebtedness apparently has been completed it is probable that, unless there is a rapid turn-over in farm land, the need for new long-term credits will be substantially smaller than in 1935. As a whole, the supply of available credit for farmers will be larger relative to the needs than has been the case for several years.

NEED FOR SHORT-TERM CREDIT

In most areas farmers themselves are in an easier financial position. Increased income in 1935 has enabled more farmers to pay off their current debts and even to make some reduction of old obligations. It has probably, also, enabled more farmers to accumulate a little surplus to take care of expenses of the following season than had been possible during the few preceding years. No large areas have suffered complete loss of crops and although crops have been small in some States, higher prices and payments by the Agricultural Adjustment Administration have offset those losses to some extent. Thus the amount of distress borrowing should be less in 1936 than in several preceding years.

The farmers' need for working-capital funds, however, may be somewhat greater than in 1935. Higher wages for farm labor and possible increases in the price of some of the things farmers buy may necessitate a greater outlay for expenses. Also, higher prices of farm products may stimulate production, thus increasing the amount of supplies and labor needed, although acreage and other restrictions may curb, along some lines, any large-scale increase in production. Prices of feeder cattle are now higher than a year ago, and more cattle will be fed in the winter of 1935–36, thus requiring more credit for feeding operations. In some sections seriously affected by the drought in 1934, restocking of breeding herds will require investment of new funds. Expenditures in 1936 for long-delayed replacement and repairs of equipment and buildings will probably be increased. On the other hand, less credit will be needed for feed as supplies are more plentiful and prices are lower. The need for production credit will also be influenced by the adjustment payments of the Agricultural Adjustment Administration and loans of the Commodity Credit Corporation.

COUNTRY BANKS

The principal sources of short-term farm credit—country banks, country merchants, and federally sponsored credit institutions—will probably supply an increased volume of credit in 1936.

Country banks, the loan activities of which were drastically curtailed during several recent years, have an ample supply of loanable funds, and pros-

pects indicate an increase in the volume of their agricultural loans during 1936. The ability of farmers to qualify for bank loans has been appreciably enhanced by the higher level of farm-commodity prices which has increased the value of the security they can offer as collateral.

Increase in farm income in most areas, since early 1933, has been accompanied by about the same percentage increase in deposits at country banks. In 20 of the leading agricultural States net demand deposits of member banks of the Federal Reserve System, located in places of less than 15,000 population, in August 1935, were equal to 77 percent of the 1923–25 monthly average and were the highest for that month since 1930. A further rise in deposits is probable in all regions, with the possible exception of the spring-wheat area which was severely affected by rust. By the end of the current year, deposits in country banks will probably be at the highest level for the end of any year since 1929. Interest rates on loans obtained from country banks usually change very little from year to year but in 1935 there have been some reductions, particularly in the more desirable types of loans, because of increased competition. No further appreciable change is probable in 1936 except in the Western States where some reduction is in prospect.

MERCHANT CREDIT

Probably no great change will occur in the amount of merchant credit extended in 1936. Reports of fertilizer companies indicate that the percentage of farmers' fertilizer purchases made on credit on the average will be only slightly larger in 1936 than in 1935. Reports of those companies also indicate a probable average increase of approximately 2 percent in tonnage of fertilizer to be sold in 1936 on account of credit conditions. The improvement in banking conditions will no doubt make it possible for some who in past years have used store credit to get bank credit. On the other hand, it will also make it possible for merchants to secure more credit with which to sell goods on time.

FEDERALLY SPONSORED PRODUCTION-CREDIT INSTITUTIONS

Plentiful supplies of short-term credit for farmers are available for 1936 through institutions discounting at the Federal intermediate-credit banks. The market for debentures of these banks continued highly favorable, and the discount rate, which was reduced to 2 percent in May 1934, remains unchanged. At present, this means a maximum rate of 5 percent to farmers for loans discounted with the Federal intermediate-credit banks.

During the first 9 months of 1935, short-term credit extended by institutions now operating under the Farm Credit Administration amounted to nearly $399,000,000 compared with $320,000,000 and $330,000,000 during the corresponding periods of 1934 and 1933, respectively, and $240,000,000 during the entire year 1932. Production-credit associations, which number about 560, accounted for $147,000,000, the Federal intermediate-credit banks through privately owned institutions for $80,000,000; the regional agricultural-credit corporations for $75,000,000; and the emergency crop and feed loan offices for $97,000,000, including $39,000,000 of drought-relief loans.

The number and relative importance of agricultural-credit corporations and livestock-loan companies, practically all of which were organized as privately capitalized institutions prior to the establishment of the new system of production-credit associations, have decreased in 1935 and will probably continue to decrease during 1936. Outstanding discounts of these institutions, as of September 30, were $56,000,000 in 1935, as compared with $63,000,000 in 1934, and $71,000,000 in 1933.

Further progress has been made in the orderly liquidation of the regional agricultural-credit corporations, which was begun in the spring of 1934. On September 30, 1935, loans outstanding amounted to approximately $59,000,000 as compared with $107,000,000 a year earlier.

CREDIT FOR COOPERATIVES

An ample supply of credit at favorable rates of interest appears assured to farmers' cooperative associations during 1936. Loans to cooperative associations by Federal farm-credit institutions during the first 9 months of 1935 amounted to $90,000,000 as compared with $58,000,000 and $52,000,000 during

the corresponding period of 1934 and 1933, respectively. Of the loans made during 1935, approximately $42,000,000 was accounted for by the Federal intermediate credit banks and $46,000,000 by the banks for cooperatives. Approximately $6,900,000 was advanced from the revolving fund of the Agricultural Marketing Act, but some of the loans have been refinanced with the banks for cooperatives.

With passage of the Farm Credit Act of 1935, the banks for cooperatives may make commodity loans as well as working-capital and facility loans. In addition, these loans now may be made to any type of cooperative farm business. Formerly, eligibility for working-capital loans was limited to cooperative buying and selling organizations and facility loans to the latter only.

ADJUSTMENT PAYMENTS AND COMMODITY CREDIT CORPORATION LOANS

The short-term credit needs of agriculture in 1936 will be influenced, as during last year, by adjustment payments of the Agricultural Adjustment Administration and by loans available through the Commodity Credit Corporation. These payments and loans will supply farmers who participate in the various programs with cash funds which will be available for financing farm operations. Payments under the various commodity programs during 1935 are estimated as follows: Cotton, $125,000,000; wheat, $130,500,000; corn-hog program, $249,000,000; sugar, $50,500,000; tobacco, $30,000,000; rice, $6,600,000; and peanuts, $3,600,000. The Commodity Credit Corporation loans now being made on the 1935 cotton crop will be available until April 1, 1936. It is expected that about $50,000,000 will be loaned in 1936 under the present cotton-loan program.

Loans on corn properly stored and sealed on the farm will be available to producers who are cooperating in the Agricultural Adjustment Administration corn-hog adjustment programs. Loans on the basis of 45 cents per bushel will be made only on corn which, if shelled, would grade no. 3 or better.

MORTGAGE CREDIT AGENCIES

With the bulk of the emergency refinancing of farm mortgages by the Farm Credit Administration apparently accomplished, the principal demand for farm-mortgage credit will arise from refinancing to obtain lower interest rates and the financing of sales and transfers. A large part of such sales and transfers probably will consist of the disposal of properties acquired by former mortgage holders and hence will be financed principally by the sellers. The increase in the demand for new mortgage credit arising out of the financing of voluntary farm real-estate transfers, therefore, will probably be only moderately greater than during 1935.

The number of pending applications at the Farm Credit Administration has been reduced by more than 50 percent since the beginning of 1935 and to less than one-sixth of the peak level of December 1933. The number of new applications received declined from the peak of approximately 75,000 per month during the latter part of 1933 to approximately 12,000 during June 1935, but has shown some tendency to increase in more recent months. From May 1, 1933, through September 30, 1935, loans made by the Federal land banks and the Land Bank Commissioner amounted to nearly $1,860,000,000. Of this amount nearly $1,080,000,000 represented Federal land bank loans and $780,000,000 was in the form of Land Bank Commissioner loans.

Of especial interest to prospective purchasers of farms are the provisions in the Farm Credit Act of 1935 which extend the period for making Land Bank Commissioner loans to February 1, 1940, and provide that loans from this fund may be made for the purchase of farms as well as for any other purpose for which land-bank loans may be made.

The volume of new farm-mortgage loans made by other than federally sponsored agencies during last year, although at an abnormally low level, has shown some increase over a year ago. New loans of such agencies are expected to show further increase in 1936. Farm-mortgage loans held by life insurance companies and by commercial banks have been reduced by about one-half since the end of 1929. Such reductions have been due largely to foreclosures and assignments, and since 1933 partly due to refinancing of such loans with Federal land bank and Land Bank Commissioner loans. Although a few of the

life-insurance companies are actively seeking new loans a large number are inactive or have ceased to make new loans.

Reports from life-insurance companies holding approximately 40 percent of all farm-mortgage loans held by all life-insurance companies indicate that about 56 percent of the new loans made in the first 9 months of 1935 represented mortgages on farm property sold by such companies and about 30 percent represented an increase of mortgages previously held by them.

The number of voluntary sales will be a factor affecting the demand for mortgage credit. A continued increase in the number of such sales, as well as a further moderate rise in farm real-estate values, might reasonably be expected during the coming year. The number of voluntary sales of farm real estate in the country, as a whole, during the year ended March 15, 1935, continued to rise for the third successive year, while the number of forced sales declined to the lowest level since 1931. During 1935 sales prices and asking prices have continued to increase in most areas.

Interest rates on farm-mortgage loans decreased during last year and are now at the lowest level on record. Federal land-bank loans are now being made with an interest rate of 4 percent per annum. These loans, however, bear a temporary rate of 3½ percent for the year ending June 30, 1936, under provisions of the Farm Credit Act of 1935. Commercial banks and individuals in many areas are also quoting lower rates than formerly for desirable mortgages. Rates charged by most insurance companies decreased from one-fourth to one-half percent during last year, some loans being made with an interest rate as low as 4½ percent. Commission charges on loans obtained from insurance companies have also been greatly reduced or entirely eliminated.

DEBT DELINQUENCIES

The percentage of delinquent farm-mortgage loans has decreased during last year, particularly in those areas that were not seriously affected by the drought in 1934. Although the higher level of farm income has brought about a substantial improvement, a part of the reduction is accounted for by the transfer of delinquent loans into the category of acquired real estate and, in the case of loans held by private agencies, through the refinancing of such loans by the Federal land banks and Land Bank Commissioner.

The collection of interest on Federal land-bank and Commissioner's loans has shown considerable improvement since January 1935. On August 31, 1935, 82 percent of all interest maturities on Land Bank Commissioner loans had been paid. The percentage of interest maturities collected has been highest in the South Atlantic and East North Central States, and lowest in the West North Central States.

Reports from life-insurance companies representing 40 percent of the total farm-mortgage loans held by all life-insurance companies indicate that during the first 9 months of 1935 there was a reduction of 23 percent in the number of delinquent loans. Of this reduction about 37 percent was accounted for by foreclosure or assignment, 34 percent by refinancing by federally sponsored agencies, and 29 percent by other means.

FARM TAXES

Preliminary estimates based on the judgments of State tax officials and tax experts in more than one-half of the States, suggest that for the country as a whole the 1935 farm-property taxes per acre probably will not differ greatly from those of 1934. The 1934 figure stands 36 percent below the 1929 peak, but still is 54 percent above the 1913 level. In relation to real-estate values, farm taxes continued to rise until 1932. Since then they have fallen 26 percent, but in 1934 still averaged more than 100 percent above 1913.

It appears that the period of general decrease in taxes per acre which began in 1930, with the most rapid decrease in 1932 and 1933, has come to an end. Benefits to farm owners from the recent property-tax decreases have been partially offset by substitute taxes. Approximately one-half of the States enacted general or retail sales taxes in 1932 and later years. Also, farmers pay a part of special sales taxes and privilege taxes, revenue from which is substituted for property-tax revenue to a considerable extent.

For several years many farmers were unable to meet their property-tax levies, with the result that farm-tax delinquency increased alarmingly. As a

consequence these same farmers, in order to clear their land of this tax debt (back taxes, interest, and penalties), are now faced with the necessity of making tax payments larger than indicated by current levies.

FINANCIAL AID THROUGH RESETTLEMENT ADMINISTRATION

The usual credit facilities available to farmers will be supplemented in 1936 by the new types of financial aid available through the Resettlement Administration. This financial assistance will be given chiefly to destitute and low-income farm families principally in the form of supervised credit. This involves the financing and assisting of families which would otherwise have difficulty in setting up a practicable farm-plan arrangement. Loan operations will be carried on in all parts of the country and will fill a gap that has existed in the provision for farm credit. The Resettlement Administration has stated that it is prepared to provide financial aid during the ensuing year to farm families of three classes as follows:

(1) Standard rehabilitation cases, which will include all destitute and low-income farm families in need of public aid, for whom rehabilitation loans have been approved that are based on regular farm- and home-management plans accepted by the Resettlement Administration. Such loans are to be repaid in from 1 to 5 years and it is expected that the recipients will be restored to self-support within that time.

(2) Emergency rehabilitation cases, which will include:

(*a*) All destitute and low-income farm families in need of immediate public aid, the granting of which cannot, without causing human suffering, be deferred until farm- and home-management plans have been fully developed. Such farm families will be considered as potential standard rehabilitation cases. These emergency cases may at any time, upon the development of farm- and home-management plans and the granting of rehabilitation loans repayable in from 1 to 5 years, be reclassified as "standard rehabilitation cases."

(*b*) Farm families in distress because of drought, flood, hail, tornadoes, etc., who are in need only of temporary aid to tide them over the emergency and who do not require plans for reorganizing their farm- and home-management operations.

(3) Families to be resettled on farms either in organized communities of various sizes or by a process of infiltration in established communities. The Rural Resettlement Division is prepared to resettle from 10,000 to 15,000 farm families.

Cases represented by the first two classes, otherwise designated as cases for rehabilitation-in-place, comprise by far the greatest number of clients that the Rural Resettlement Division expects to care for. A total of 354,000 families were on the Rural Resettlement Division rolls on September 15, 1935. An additional 418,000 families are reported on relief. It is expected that 175,000 of these families will be added to the rehabilitation rolls during the coming year, bringing the total number of rural resettlement farm clients to approximately 525,000.

Present rural resettlement clients have received loans varying from less than $100 to several hundred dollars each. It is expected that the loans to be made during the coming year will range from $300 to $600 each, the amount to be loaned depending on the individual farmer's needs. Interest rates on non-real-estate loans are uniformly made at 5-percent interest. The terms for repayment vary from 1 to 5 years, according to the purpose of the advance.

Advances made as loans indicated above are not to be confused with subsistence grants made to prevent distress pending the development of plans and the granting of loans.

Loans for financing community and cooperative service are also made by the Resettlement Administration when such loans can be justified on the basis of their contribution to the rehabilitation of farm families in need of public aid.

In addition to the major activities already described, the Rural Resettlement Division is responsible for the administration of voluntary debt-adjustment work with distressed farm debtors. Two million dollars has been allotted for this purpose. A trained personnel for handling debt-adjustment work has been employed and provisions have been made for cooperating with some 2,767 voluntary State and county debt-adjustment committees which will continue the program started 2 years ago by the Farm Credit Administration in effecting voluntary agreements between creditor and debtor to adjust farm debts.

FARM LABOR, EQUIPMENT, FERTILIZER, ETC.

The average price of commodities and services used in agricultural production will be a little lower in 1936 than in 1935 chiefly because of the declines in the prices of feed, seed, and fertilizer. Farm-wage rates doubtless will continue to advance during the coming year but feed and seed prices will be materially lower. Little change is expected in the prices of other commodities used in production. Wholesale prices of building materials during last year were relatively steady and no appreciable advance in prices paid by farmers for these items is probable during 1936. Although farm-machinery prices may advance slightly no material change is in prospect during the coming 12 months. Prices of feed and seed have declined sharply in response to the larger crop outturn this year and feed prices may decline further as the new corn crop becomes available. Fertilizer prices probably will be lower in the spring of 1936 than a year earlier.

The combined index of prices paid by farmers for commodities used in production and farm-wage rates advanced from 113 percent in June 1934 to 120 in September 1934 and remained relatively high until July 1935. On September 15 the index averaged 117 percent of pre-war. The index of feed prices declined from 132 to 102 percent from December 15, 1934, to September 15, 1935, and seed prices declined from 162 to 118 percent of the pre-war average. Prices paid for fertilizer also declined in this period, the index reaching 99 percent of the pre-war average on September 15, 1935, compared with 105 a year earlier. Prices paid for farm machinery advanced slightly while little change was registered in prices paid for building materials, equipment, and supplies. From October 1, 1934, to October 1, 1935, farm-wage rates advanced by 10 percent as the result of an improvement in the demand for hired labor and a sharp reduction in the number of workers available for hire. The index of farm-wage rates on October 1, 1935, was 102 percent of the pre-war average, compared with 93 a year earlier.

FARM LABOR AND WAGE RATES

Farm-wage rates are expected to continue to advance in 1936 in view of the greater demand for hired farm workers now in prospect. If industrial production increases in 1936, some reduction in the number of workers available for hire in rural areas may be expected, which will also tend to strengthen farm-wage rates.

Farm-wage rates rose steadily throughout 1935, the index number reaching 102 on October 1. This was the first time since 1931 that the level of farm-wage rates was higher than the pre-war rates. For the first 9 months of 1935, farm-wage rates averaged 100 percent of pre-war rates, compared with 90 percent in the corresponding period a year earlier.

The demand for farm labor increased at a rate faster than the increase in wage rates during 1935. Larger crops materially increased labor requirements, and higher farm incomes enabled farmers to pay higher wage rates. On October 1 the demand for farm labor, as reported by crop correspondents, was 80 percent of normal, compared with 68 percent in October 1934. This was an increase of 18 percent. The demand for farm labor rose as much as 30 percent or more in the West Central and Mountain States, where the 1935 crop outturn was much larger than in 1934 during the same period. The increase in demand in the Southeastern and Atlantic Coast States, on the other hand, amounted to less than 10 percent, with little change in crop conditions from 1934 to 1935. Barring abnormal growing conditions in 1936, crop-adjustment programs will be the primary factor determining changes in farm-labor requirements next year. Any increase in agricultural production in 1936 will tend to increase the demand for farm labor. A further increase in farm income in 1936 may result in the use of additional hired farm labor even if there is no great increase in agricultural production.

The supply of workers available for hire in rural areas, as reported by crop correspondents, declined during last year, dropping from 105 percent of normal on October 1, 1934, to 95 percent on October 1, 1935, the most recent date for which data are available. This decline resulted from an increase in employment in manufacturing industries and from the absorption of many surplus workers by various work-relief projects. If industrial employment continues to increase in 1936 as in 1935, the supply of farm labor available

for hire will decline further. This decline will be tempered, however, by the fact that increased industrial output may mean merely a reduction of part-time work rather than a sharp increase in the number of workers employed. Furthermore, nonagricultural industries may not take on new workers much faster than employables are removed from relief rolls.

BUILDING MATERIALS

Prices paid by farmers for building materials are likely to remain at about present levels during 1936 since wholesale prices of lumber, the principal building material purchased by farmers, showed practically no change during last year. Although sales of building material have been increasing considerably since the spring of 1935 and are expected to continue to increase, owing to the upward trend in building contracts awarded, there is as yet no indication of any major change in prices. Even if there should be a change in wholesale prices it would probably not be reflected in prices paid by farmers, for several months, because of the lag between changes in wholesale and retail prices. Labor costs of building on farms are likely to advance in line with farm-wage rates. Wage rates for carpenters and other craftsmen in rural areas, although usually higher than wage rates for hired farm labor, ordinarily are not governed by union wage scales.

FARM MACHINERY AND EQUIPMENT

Prices of farm machinery are likely to advance slightly in 1936 because of increases in prices of materials, labor costs, and other costs. Prices paid by farmers for farm machinery advanced about 2 percent from September 1934 to September 1935 and are now only about 3 percent below the 1925–29 price level for farm machinery. Prices of many items of farm machinery, particularly horse-drawn implements, are now relatively high compared with the prices of other commodities paid by farmers.

Wholesale prices of several items of farm machinery are now higher than at any time during the 23 years for which prices have been collected. This is particularly true of important items of horse-drawn equipment, such as grain drills, mowers, hayrakes, and corn planters. Many other important items of farm machinery are now selling at about the same prices as prevailed in the period 1925–29, particularly grain binders, cultivators, disk harrows, gas engines, and manure spreaders. There are several items, on the other hand, the prices of which are now at least 10 percent below the levels prevailing in 1925–29 and that have shown only moderate price advances since 1933. The most important of those are larger sized tractors, combines, corn pickers, and wagons. Although a part of the relatively high prices may be due to the improvement in the efficiency and durability of farm machinery, the continued decline in output of many farm-machinery items during the last 25 years and the importance of labor costs in the manufacture of farm machinery also are factors contributing to the price advances.

Sales of farm machinery in 1935 have been the largest for any year since 1930, and for some machines sales have been so large that deliveries were greatly delayed. In view of the low level of replacement of farm machinery in the last 5 years, however, the age of machines on farms is still above average and it is probable that sales of farm machinery will be still larger in 1936.

The demand for electricity on farms continues to increase. Electrical facilities available to farmers may be expanded considerably if the plans of the Rural Electrification Administration materialize.

FERTILIZER

The outlook is for somewhat lower fertilizer prices during the 1935–36 season than in 1934–35. During 1935, wholesale prices of the principal potash salts have been decidedly lower than a year earlier. Prices of sulphate of ammonia and nitrate of soda have been somewhat lower, while prices of superphosphate are about the same. Wholesale prices of mixed fertilizer to dealers during the third quarter of 1935 were somewhat lower than in the first half of the year. Prices paid by farmers for fertilizer declined from 106 percent of pre-

war prices in March 1935 to 99 percent of pre-war prices in September 1935. It seems probable that this decline in retail prices will continue during the spring season of 1936.

During the 1934–35 fertilizer season the fertilizer industry operated under a code of the National Recovery Administration. The effect of the code was to raise and maintain prices. These codes were terminated in May 1935.

The 1934–35 fertilizer tonnage was 10 percent larger than in the preceding season in the 12 Southern States as shown by fertilizer-tag sales and 26 percent larger in 5 Midwestern States. Combined sales in the two areas were 11 percent larger than in the preceding season and the highest since the 1930–31 season. With but little change in income from the 1935 crops of cotton and tobacco than that secured a year earlier, no marked increase in fertilizer use is expected during the coming year.

THE FARM-FAMILY LIVING

[A report of a joint committee representing the Bureau of Home Economics, the Bureau of Agricultural Economics, the Agricultural Adjustment Administration, and the Extension Service]

SUMMARY

Cash income available to farm families after meeting production expenses probably will be higher in the calendar year 1935 than in any year since 1929. However, not all sections of the country are sharing equally in the increased income of 1935. The greatest gain is in the North Central States, with moderate increases in some and declines in other regions. For the country as a whole, the outlook for 1936 income is for a continuance of the present upward trend.

Levels of living of farm families have risen considerably since the low point of 1932. The volume of purchases for family use has increased. The value of sales by mail-order houses, which do a large proportion of their business with farmers, averaged higher during the first 8 months of 1935 than in any period since 1929. Sales by chain stores operated primarily in rural areas were the highest since 1930. Apparently, many families have used a large portion of their income increases for family living—replenishing depleted household inventories. Farmers now seem to be making replacements of capital goods, however, as indicated by increased expenditures for automobiles, farm machinery, building materials, and other capital equipment. During the latter part of 1935 and the first half of 1936 such expenditures may absorb a greater portion of the available cash than they did in the 2 previous years, thus leaving the share of the increase allotted to family living relatively smaller.

Cost of living of farm families, as measured by the index for all goods purchased, has not changed appreciably during 1935. However, the relative stability of this index is the result of a balancing of opposite trends in price movements for different commodities. Prices paid for food advanced considerably whereas prices of clothing, household operation, and household furnishings, declined to a greater or lesser extent. No significant changes in prices of goods for farm-family maintenance are anticipated during the next 6 months.

With more money available for family living in 1935–36, any increases in expenditures probably will be distributed unequally among food, clothing, and other living items instead of going to only 1 or 2. Expenditures for automobile upkeep and purchase may take a relatively large share; food probably will absorb proportionately less of the increase than it did in 1935. Purchases of food in the early months of 1935 were higher than usual, owing to the effect of the 1934 drought on the following winter's supplies of farm-furnished food.

In 1935 farm families continued extensive programs of food production for family use. With good yields from garden and orchard in most sections of the country, the supplies of home-canned and stored fruits and vegetables are greater for this year than last. Home canning and curing of meat probably will be lessened, because higher prices for livestock encourage sales instead of slaughter for family use. In 1936 there probably will be a continuation of well-considered programs of home food production.

Thus, the 1936 outlook for farm-family living is toward a somewhat higher living level than in 1935, with less of the increased available cash devoted to food and more to other goods.

GROSS CASH INCOME RECEIVED FROM AGRICULTURE

THE UNITED STATES AS A WHOLE

The gross cash income received from agriculture during the calendar year 1935 is continuing the upward trend which began in 1933. The total received from the sale of farm products and from payments by the Agricultural Adjustment Administration will be approximately $6,800,000,000 for the calendar year 1935, according to preliminary estimates. Although this amount is only 67 percent as large as the average annual cash income received by farmers during the 5 years preceding 1930, it represents an increase of 59 percent over the low level reached in 1932, and an increase of 6 percent over the $6,387,000,000 received in 1934. The outlook for 1936 is for a continuation of this upward trend.

The improvement in 1935 income is due largely to the marked advance in the prices of livestock, though greater crop production has been an important factor also. It is estimated that Agricultural Adjustment Administration payments to farmers, including drought-cattle purchase payments, rental and benefit payments, and payments on cotton option pools and sales will be approximately 10 percent higher in 1935 than in 1934.

The distribution of the increases in income from agriculture in 1935 is materially different from last year. In 1934 the greatest income gains occurred in the cotton and tobacco States; in 1935 they are occurring in the North Central States, owing to more favorable conditions for grain and livestock production. The 1935 increases in other regions are expected to be only moderate. Reports for the first 9 months of 1935 show that cash receipts from farm marketings were larger than in the same months of 1934 in 35 States. Decreases were shown, however, in the following 13 States: Maine, Virginia, Nebraska, North Carolina, South Carolina, Florida, Alabama, Arkansas, Louisiana, Texas, Wyoming, New Mexico, and Arizona.

NORTH CENTRAL STATES

The most important factor in increasing 1935 farm income in the North Central States is the higher level of farm prices for meat animals. Although shipments of cattle, calves, and hogs have declined from those of 1934, farmers' income from meat animals is appreciably higher. Larger marketings of grain may cause income to be greater in the first half of 1936 than in the same months of the current year.

In the East North Central States, especially in Indiana and Ohio, the reduction in crop output in 1934 was less severe than in the other major cattle- and hog-producing areas. This region, therefore, has been in a better position to gain from the higher meat prices of 1935 than have States in which farmers were forced to liquidate their livestock in 1934. Larger rental and benefit payments in 1935 as compared with 1934 also are contributing to a higher level of income in this region. Cash receipts from farm marketing in the East North Central States for the first 9 months of 1935 were 23 percent greater than in the same period a year ago.

In the West North Central region, the production of grains is larger this year than it was last. This is expected to increase income substantially over that received in 1934, notably in North Dakota and South Dakota where wheat production that year was almost a complete failure. For the first 9 months of 1935 receipts in the West North Central States were 8 percent more than in that period in 1934.

SOUTHERN STATES

Larger marketings of cotton and tobacco are being offset by the lower prices of these commodities, compared with the early months of the 1934–35 season. Although increases in livestock sales may result in some increase in income in the South Central region, income in the South Atlantic region may be slightly lower than in 1934. During the first 9 months of 1935, receipts in the South Central States were 1 percent lower than during the like period of the previous year, while in the South Atlantic States they were 6 percent lower. For 1936, during the first 6 months, income probably will be higher than during the same period of 1935; during the second 6 months, income will depend largely upon crop production.

NORTH ATLANTIC STATES

Cash receipts for the first 9 months of 1935 in the North Atlantic States were 7 percent above those for the corresponding period of 1934. In 1936 income gain during the first 6 months may be less marked than in other regions when compared with the first half of 1935, since income in this region is largely from dairy products.

WESTERN STATES

Increased income from livestock in the Western States is more than offsetting a decline in income from crops in the calendar year 1935, cash receipts being 12 percent higher in the first 9 months of this year than in the same period in 1934. The increased production of some crops in this region and the higher prices of livestock are favorable to higher incomes in this region during the first 6 months of 1936.

ADDITIONAL CASH INCOME

The 1935 cash incomes of some farm families are being supplemented by earnings of family members employed in nonagricultural industries though there are no data for estimating amounts so received. At the time of the 1930 census 11 percent of the men and boys and 37 percent of the women and girls living on farms and reporting gainful occupations were thus employed. Similar data are not yet available from the 1935 census, but preliminary reports indicate that there has been a marked increase in the number of part-time farms during the last 5 years and an increase in farm population in contrast with the downward trend from 1910 to 1930. Consequently the number of family members available for work in nonagricultural industries is now somewhat larger than in 1930, but, because of the large amount of unemployment, the actual number of family members earning outside incomes may be smaller than in 1930. As industrial activity increases and there are more opportunities for employment, it is probable that such supplemental earnings from industry will increase in 1936.

During the first half of 1935, especially in areas where dust storms and drought consequences were severe, farm families received substantial payments from the Government and other agencies that were carrying out relief programs which have supplemented their receipts from nonagricultural sources.

Some farm women have continued to contribute to cash income by selling home-baked and canned foods, home-made baskets and rugs, and other handicraft articles. In addition, sales of poultry, eggs, dairy products, fruits, and vegetables, through roadside stands, women's markets, and by direct delivery to homes, have increased the incomes of many farm families. Reports indicate that the volume of products sold in these ways was larger in 1934 than in 1933 and that net returns to participants reached a higher figure. This trend probably will continue through 1935 and 1936.

Farm families along main highways and near tourist resorts probably shared in the increased revenue from tourist trade reported during the vacation season of 1935.

Compared with national income from agriculture, cash income of farm families from nonagricultural sources is relatively unimportant, but it may be very important to the individual families, thus supplementing their farm-business receipts. For example, in localities where submarginal land does not provide an adequate living, earnings from other sources are especially necessary for family well-being. There is likelihood, therefore, that an appreciable number of farm families will continue their efforts to increase their cash incomes by these means, even though the return per hour of labor so spent may be small.

CASH AVAILABLE FOR FAMILY LIVING

Total cash available in 1935 for farm operators' labor, capital, and management will show some gain over 1934. The major factor in this improvement is the expected increase of nearly $400,000,000 in the income from farm marketings in 1935. Partly offsetting the benefits of this increase is the rise in farmers'

production expenditures. In 1935 the larger crops produced have required more farm labor, and farm-wage rates are higher than they were in 1934; hence labor costs have increased. Prices of commodities used in production also are higher. However, these tendencies toward increased costs are balanced somewhat by the improved situation from preceding years in regard to farm taxes, loans, and interest. Farm taxes are now (1935) about 36 percent below the 1929 peak. Some scaling down of debts, considerable refinancing of the remaining indebtedness on a longer amortization basis, and reduced interest rates have lessened farmers' yearly debt payments. The net result is an increase in income available for family use in 1935.

The extent to which this increased available cash will be devoted to family living is problematical. There is evidence that household inventories which were much depleted during the depression have been somewhat restored by increased purchasing during 1934 and 1935. On the other hand, there has been comparatively little replacement of farm equipment during the last 5 years. Although sales reports indicate that farmers' expenditures for machinery, automobiles, building materials, and other capital equipment have increased sharply in 1935, the condition of farm equipment throughout the country is still much below normal. In addition, some farmers who were forced to liquidate their livestock in 1934 are this year paying materially higher prices when replacing their herds. The farm business therefore may be expected to compete very closely with family living for the increased cash available in 1935, and this situation probably will continue into 1936.

PRICES PAID FOR GOODS PURCHASED FOR FARM-FAMILY LIVING

Prices paid by farm families for goods used for family living were slightly higher in the first 6 months of 1935 than in the corresponding period of 1934. Index numbers of the Bureau of Agricultural Economics showing prices of all commodities for farm-family maintenance rose from 122 on June 15, 1934, to 124 on June 15, 1935, an increase of only 1.6 percent.

This small increase, however, represents the balancing of somewhat pronounced opposite trends in prices of different commodities rather than a uniform small increase in the prices of all; a 13-percent rise in food prices was offset by a fall of 5 percent in prices paid for clothing and a small reduction in prices of other goods purchased.

With prices of different purchased goods moving in opposite directions, a farm family having increased cash expenditures for maintenance during 1935 may or may not have improved its level of living. A farm family in an area untouched by drought, with the normal supply of home-produced food for the winter, may have been able to spend its increased cash income so as to raise its level of living. But in a drought area, the farm family that has been forced to buy a larger proportion of its food supply than usual, doubtless has been much less fortunate.

Food prices paid by farmers have not moved uniformly throughout the last 20 months. During the period from December 1933 to September 1934 there was an advance of 13 percent. They then receded a little, but advanced again during the first half of 1935. From June to September 1935 they have remained practically unchanged, according to the index numbers for all foods purchased. The higher prices paid in September for pork products, sugar, and dairy products have been offset by lower prices paid for beef, apples, coffee, tea, and some other foods. During November and December seasonal price advances may be expected in dairy products and in some vegetables; but a downward trend in the prices of these foods probably will occur from January to midsummer 1936.

Average expenditures for food by farm families differ greatly from region to region, but probably fall between $32 and $38 per capita per year at September 1935 price levels. A large share of these expenditures, about 28 percent, goes for bread, flour, and cereals; another 30 percent goes for meats and fats. These are the foods of which supplies for 1935–36 are relatively short and for which prices somewhat higher than in 1935 probably will prevail during the first half of 1936.

Clothing prices for June 1935 were 5 percent lower than in the same month of 1934. In September 1935 the index number for prices paid by farm families for clothing was 125, a slight increase over the June figure of 124. There may be slight increases in clothing and textile prices during 1936, especially in wool,

silk, and rayon. Prices of shoes probably will rise; prices of hides and leather have risen since the summer of 1935.

Prices of goods used for household operation, such as kerosene, coal, gasoline, soap, and other supplies for laundry and cleaning, are practically the same as a year ago. Prices paid by farmers for furniture and furnishings, for automobiles, and for building materials for houses, changed little during the first 8 months of 1935. Although an upward trend in industrial activity is increasing the demand for building materials, there is at this time no evidence of probable increase in their prices, or in prices of automobiles.

ADJUSTMENTS IN FARM-FAMILY CONSUMPTION

The consumption program of the farm family is related both to its program of money expenditures and to its program of production for family living. All resources therefore must be considered in making and carrying out consumption plans—not only the money available and the goods on hand, but also the time and energy of the family members and the production capacities of the farm itself. It is important, also, that the plans for consumption be made as a balanced whole, within which the parts supplement one another. Thus, when cash income falls, as during the worst years of the depression, it becomes necessary to change plans for production for family use so that levels of living may not fall so low, relatively, as do cash receipts. With rising cash income, the farm family still must take important choices as to how it will use its resources in order to obtain maximum human values. What proportion of the increased income to devote to family living, what proportion to the farm business, and what to provision for the future; how best to use the money allocated to the family; the extent to which production for family living shall be emphasized in order to free more money for purchases of goods and services which cannot be home-produced; the balance between use of time for work and for leisure—these and related questions must be considered in making consumption plans, and must be decided by each family on the basis of its own assets, needs, and desires.

ADJUSTMENTS IN FAMILY EXPENDITURES

Many farm families will have more cash available for living expenditures during 1936 than during the year previous. Indications are that improvements in levels of living, begun in 1933, will continue through 1936. The rise will be moderate, since a part of the anticipated increase in cash available from agriculture will go to repairs and replacement of farm equipment and other capital goods needed by the farm business.

Ways of spending the increased cash income available for family living will vary, depending in part on the extent to which expenditures for different items have been cut during depression years. Families who have been unable to replenish their stocks of clothing probably will spend a larger proportion of their increased cash for this item than will families who have made needed replacements each year. Families whose incomes have provided adequate food and clothing may now spend a relatively large share of the increase for replacements of household furnishings and for the purchase and upkeep of automobiles. Studies comparing farm-family expenditures for the year 1934 with those for 1933, when incomes were lower, indicate that the increase will be distributed somewhat unequally over many items of family living rather than devoted to only 1 or 2. The automobile probably will take a goodly share.

Figures for the 1934 expenditures of a group of Nebraska farm families may not be typical of those for the country as a whole, especially since the drought was severe in that State, but they probably are indicative of how increased income may be spent in many other areas. In 1934, average living expenditures of these Nebraska families were $612, as compared with $549 in 1933. (The latter figure is adjusted to 1934 price levels and for size of family.) This difference of $63 was spent approximately as follows: 22 percent for food; 24 percent for clothing; 6 percent for household operation; 15 percent for education, recreation, medical care, church, charity, and gifts; and 33 percent for the home share of automobile expenditures and for other transportation. In areas less affected by the drought, families probably will spend a smaller proportion of the increase for food, thereby freeing more money for other goods.

More families than heretofore are making long-time plans for the use of total available cash, budgeting funds for both the farm business and for family

living. Such budget-making should focus attention upon a consideration of all family needs in addition to emphasizing financial progress. Financial planning has been stimulated by the increased use of farm and home accounts, promoted by various departmental agencies in Washington and in the field.

Improvements in farm-family well-being are indicated by the decrease in the number of farmers on relief, only two-thirds as many being reported in October 1935 as in the same month of 1934, according to the Rural Research Section of the Federal Emergency Relief Administration. This decrease is due in part to increased income from agriculture, although some of the farmers taken from relief rolls may have been given employment on public-works projects, and many have been aided by resettlement and rural-rehabilitation projects.

ADJUSTMENTS IN HOME-PRODUCTION PROGRAMS

Year in and year out, most farm families count on supplementing their cash incomes by farm-furnished income "in kind" in order to provide a higher level of living than they could purchase. The contribution of such production to family living varies from year to year as is indicated by average figures for the country as a whole. In 1929, the farm products retained for family consumption constituted 12.8 percent of the total gross income from agriculture. In the succeeding years, 1930–34, the relative importance of these products became considerably greater. A high point in production for family use was reached in 1932 when farm-furnished products constituted 18 percent of the gross income from agriculture. These products helped families to reduce the cash outlay necessary for living expenses, and to sustain a higher level of living than would have been possible that year when the available cash from agriculture was only about 30 percent as great as in 1929. Since 1932, as cash income from agriculture has increased, there has been some relaxation in the program of home production of nonfood items, like soap. Some of these home-production activities make great inroads on the time and energy of the family without achieving large cash savings.

Growing and preparing food for family use is, as a rule, the most important and the most time-consuming of home-production activities. Food averaged 90 percent or more of the value of all home-produced goods consumed by farm families in 39 of 64 family-living studies which have been made since 1922 and include information on this point. Few data are available on the time-costs of food production. One recent study (South Carolina, 1932–33) reports that white families producing at home from 80 to 90 percent of a food supply valued at $105 per capita per year were spending about 37 hours weekly in dairy, poultry, and garden tasks, in food preservation, and in meal preparation and service. These figures refer to households that included fewer than 4 persons. Slightly more than 50 hours weekly were spent by larger households (from 4 to 8 persons) whose diets had a similar money value. Both groups spent about one-third of the total food-production time in garden, poultry, and other tasks outside the house.

The figures just given relate to household production of food only. If to the 37 hours so spent in the smaller households are added the hours used in the making and mending of garments, bedding, and other household linens, in the repairing of furniture, and in housecleaning and other routine tasks of housekeeping, it is obvious that one person's days may be more than comfortably filled. Yet, to this must be added the time spent in child care and development, in social contacts, in recreation and in other activities and leisure—all of which are essential to a well-balanced life. Frequently other members of the household relieve the homemaker of some of these homemaking activities, but it is obvious that the program of production for family use must take account of the possibilities of overexpenditure of time and energy as well as the possibilities of money saving.

Planning a food-production program based on the year's requirements has long been promoted by the Extension Service. As a result, this practice has been widely adopted, especialy during 1935. Many families have raised and preserved food according to plans based on household needs and tastes, on local growing conditions, and on types of farming. Families accepted for rural rehabilitation have received help in developing sound food-production programs.

In most parts of the country, 1935 has been a year of good returns from gardens and orchards. Farm families are canning and storing many more

vegetables and fruits than usual this year, except in some sections where drought affected the local growing season. The comparatively high prices prevalent for livestock may induce some families to retain less than the usual supply of meat products for home use, and in consequence, to be somewhat more economical in their consumption—especially of fats.

In some States relief agencies have again sponsored community gardens and food-preservation programs. Most of the community canning centers, established by the Federal Emergency Relief Administration in 1934, were continued in 1935, except for large meat-canning plants operated in drought areas. No comprehensive figures are available to show the quantity of food produced and preserved in 1935 under the auspices of relief agencies, but preliminary reports indicate that it varies greatly from State to State.

Even with the prospect of more cash for family living in 1936, it is probable that farm families over all the country will undertake well-considered programs for home production of food, and, in some regions, of fuel, ice, and other goods. Only a small percentage live under conditions that warrant the purchase of all needed goods and services, or have incomes sufficient to buy all the commodities and services required for satisfactory living.

ADJUSTMENTS IN PURCHASING PRACTICES

After planning expenditures and production for home use, farm families face the problem of effective buying of the goods and services they have decided to buy. Since the amount of cash available for these purchases is limited, and market offerings and human wants are many and varied, these families are following various buying practices that are helpful in stretching the buying power of their dollars and in increasing their satisfactions from money spent.

Payment of cash rather than use of "open-book" or installment credit has been found to be an effective method of increasing the buying power of the farm-family's dollar. Recent studies show a wide variation in interest rates on installment credit and on time purchases. Many stores hide such charges in their customary prices and do not give the cash customer the advantage he should receive if he does not use this credit service. Some farm families who are able to pay cash have found it economical to buy at stores operating on a cash basis, thus eliminating payment of the costs of credit that they do not receive. With a more wide-spread knowledge of the costs of installment credit, many farm families probably will use less expensive credit facilities when they are unable to pay cash for their purchases.

Cooperative purchasing of goods for family living is another practice which many farm families, chiefly in the North Central States, have found effective in saving money. Compared with 1934, 1935 has shown a growth in the number of farm cooperative associations and in their membership as well as in the volume of business of cooperative wholesale societies. Recent legislation enlarging the federally sponsored credit facilities available to cooperative purchasing associations will tend to increase the scope of their operations.

Commodities that can be purchased for family living through farmers' cooperatives often are limited in number and variety. Supplies for the farm business, like feed and fertilizer, constitute the bulk of the stock carried by the farm cooperative. Flour, breakfast cereals, molasses, and some other foods are frequently sold, because they can be bought by the cooperative in the same wholesale market in which it buys feed for the farm business and, therefore, can be sold to farm families at marked savings over retail prices. Automobile tires and tubes, gasoline, oil, paint, and coal also are items commonly stocked. Some organizations have so developed their stores that they sell canned and packaged foods, yard goods, sheets, pillowcases, towels, shoes, overalls, and some other ready-to-wear garments, stoves, and other kitchen equipment. It is expected that the farmers' cooperative organizations will continue to increase the volume of business done through their stores and thereby will reduce operating costs so that they may offer even greater savings on goods for family living than are now possible.

Farm as well as urban families are showing increased interest in understanding their problems as consumers. More attention is being given to this subject by schools and colleges, by the Extension Service, by women's clubs, and by other groups. Federal governmental agencies are playing an increasing role in developing an awareness of the difficulties met by consumers as purchasers and in supplying information to guide them in their choices.

The Consumers' Division of the National Recovery Administration is undertaking for 1935–36 a broad program of research, education, and representation, the aim being to assist the consuming public, to raise living standards, and to increase consumption of useful goods. That Division will attempt to keep the consumer informed as to his problems through direct contact with the public and through county councils in the field; and it will represent the consumer's interests in various matters concerning public policy.

The Consumers' Counsel in the Agricultural Adjustment Administration continues to work for consumer protection and education. The Counsel participates in the formulation of marketing agreements and basic commodity programs, emphasizing in such work the necessity of insuring a normal and adequate food supply for consumers. Consumers' Guide continues to be published, and will undertake to explain the 1936 programs for agricultural adjustment and how they affect consumer interests.

The Bureau of Home Economics is continuing its publication of quality guides for consumer buying and other educational material. The Bureau of Agricultural Economics continues to develop standardized grades for certain foods and to promote the use of these grades in retail markets. Several other governmental agencies are preparing various types of economic information of help to consumer buyers. It is probable that the demand for material of these kinds will increase in 1936.

WHEAT

Average yields on the prospective United States acreage to be harvested in 1936 would produce more wheat than is usually consumed, resulting in a surplus which would tend sufficiently to reduce domestic prices in relation to foreign prices so that exports would be possible. Largely as a result of small crops in each of the last 3 years, domestic-wheat prices beginning with the 1933 crop, have been 20 to 30 cents above a level at which any significant volume could be exported. It is probable, however, that any volume of wheat that might be available for export would not result in depressing domestic prices as low as those in 1931 and 1932, when this country was last on an export basis. World business conditions are expected to be materially improved over those existing at that time and prospective supplies both in the United States and abroad promise to be materially lower. For these reasons world wheat prices for the 1936 crop are expected to be substantially higher than prevailed during 1931 and 1932 but they may be lower than those which prevailed in the late fall of 1935, if average yields are obtained on present acreage. Further war developments, which are not predictable, might materially influence the course of world prices.

For the long-time outlook, wheat prices in the United States probably will be on an export basis and world prices after the present year are likely to fluctuate around somewhat lower levels than during 1935–36 unless there is a substantial reduction in acreage or a series of unfavorable harvests.

PRICES

With normal yields, the probable United States acreage would produce a surplus for export and bring prices in 1936–37 to, or close to, an export basis. Since the beginning of 1933, wheat prices in the United States have been maintained at unusually high levels relative to world prices. This has been largely the result of 3 successive years of low production, but acreage reduction and the removal of surplus wheat from the Pacific Northwest through governmental aid have also tended to increase United States prices relative to world prices. The reduced production in this period has been due mostly to low yields and heavy abandonment, since the average area sown for the crops of 1933–35 was only about 2 percent below the average for the 3 years preceding. This reduced production, generally speaking, has lifted domestic prices 20 to 30 cents above what might have been expected with more nearly normal yields. Prices east of the Rocky Mountains in particular, where the supplies have been short, have been relatively higher compared with prices in the Pacific Northwest than can be expected with more nearly normal supply conditions east of the Rockies. As the result of the cumulative deficiency in production extending over these 3 years, the carry-over in the United States is expected to be reduced from the record high on July 1, 1933, to near normal proportions by July 1, 1936.

Total wheat supplies in the United States for 1935–36 are estimated at 751,000,000 bushels, consisting of a carry-over on July 1 of 152,000,000 bushels and a crop of 599,000,000 bushels (Oct. 1 indication). The effective supply, however, is less than these figures indicate, since much of the crop, particularly of spring wheat, is of low milling value and some is entirely unsuitable for milling. Hard red spring wheat this year, although running high in protein content, is unusually light in test weight per bushel, and a very considerable percentage is of such low value for milling that a large quantity will probably be fed. Durum wheat is running considerably lighter and hard red winter somewhat lighter in test weight than last year. Much of the soft red winter wheat crop contains a high percentage of moisture which already has resulted in some damage and can be expected to result in additional damage during storage before the crop is utilized.

High-quality wheat is commanding unusual premiums over the lower grades this year because of the small supplies of wheat of good milling quality. Although this year quality has been reduced by rust, which is beyond farmer control, ordinarily many of the causes for wheat failing to qualify for the top grades, such as excess moisture, garlic, smut, high foreign-material content, and mixtures of classes, can be largely avoided by the use of clean, pure, treated seed and proper cultural and grain-handling methods on the farm.

Wheat utilization in the United States in 1935–36, considering that more wheat of light test weight is necessary to make a barrel of flour and that unmillable lightweight wheat will be fed, is expected to be around 650,000,000 bushels, compared with the 5-year (1924–25 to 1928–29) average utilization of 625,000,000 bushels. Because of the shortage of good milling spring and hard winter wheats, it seems reasonable to expect that net imports of high-test-weight milling wheat this year may be in the neighborhood of 35,000,000 bushels, which is about 5 percent of the prospective utilization. In 1934–35, 14,000,000 bushels of wheat were imported for consumption in the United States. About 6,000,000 bushels of this was durum and about 8,000,000 bushels was feed wheat. There will be no need to import either of these types of wheat in 1935–36, domestic supplies of durum wheat being adequate, as are supplies of feed grains.

The wheat price level in the United States during the current year is higher than is probable in 1936–37 and the relationships between classes and grades will doubtless be different. With Canadian wheat being imported this year, the price of hard red spring wheat will be influenced largely by the price in Canada. Prices of other hard wheats in the United States will be somewhat lower than those of hard red spring but relatively higher than those of soft wheats. Prices of high-quality soft wheats are also likely to be above an export basis much of the 1935–36 year, as the result of a larger-than-usual milling demand for such wheat, even though supplies are fully adequate for domestic needs.

Prices of wheat in the relatively unprotected markets of the world are now higher than at any time since 1930. Much of the rise in world prices of wheat in early 1933 when expressed in United States currency was due to the depreciation of the dollar. The recent rise, however, reflects the prospects of short crops in the Southern Hemisphere, the unsettled political situation in Europe, and an improvement in the world business situation. Total supplies, although still large, were greatly reduced during last year.

It is too early to forecast the 1936 world wheat production. If average weather conditions prevail, even assuming that world carry-over will be somewhat reduced, world supplies may be expected to be larger than those of the current crop year. This would tend to cause world prices in 1936–37 to be lower than in the fall of 1935. It is not probable, however, that supplies for 1936–37 will be so large as they were for the crop years 1931–32 and 1932–33. Moreover, it is anticipated that world business conditions will continue to show improvement. It would appear probable, therefore, that world prices in 1936–37, although lower than in 1935–36, will be materially higher than the levels of 1931–32 and 1932–33, which was the last period in which this country was on an export basis.

AMERICAN PROSPECTS

The estimated acreage planted for the 1934 wheat crop was 60,371,000 acres and that for 1935 about 66,000,000 acres, compared with an average of 65,926,000 acres for the crops of 1930 to 1932. No estimate is yet available of

the acreage sown or to be sown for harvest in 1936. The acreage reduction with reference to the new crop for farmers who will sign the wheat-adjustment contracts for 1936–39 has been announced at 5 percent.

Cooperating farmers, whose allotment contracts covered about three-fourths of the 1930–32 seeded acreage, were originally required to reduce their acreage seeded for harvest in 1935 by 10 percent but growers of winter wheat were permitted to seed additional wheat for pasture. On March 20, 1935, the Secretary of Agriculture announced a modification of requirements on plantings of spring wheat for 1935 for those farmers under wheat-allotment contracts who signed agreements to offset increases with corresponding reductions for 1936. This same privilege was extended to growers of winter wheat who had seeded additional acreage under pasture permits. Partly as a result of these revisions but largely as a result of increases on the part of growers not under contract, seedings for the crop of 1935 were considerably in excess of those for 1934 and approximated the area seeded during the 1930–32 period.

It would seem from an examination of all the factors involved that the acreage which has been and will be planted for harvest in 1936 is likely to be as large as, or larger than, that seeded for the crop of 1935. An area of 66,000,000 acres, with average abandonment and yields would result in a crop of 825,000,000 bushels. An analysis of the abandonment and yields that have been experienced in the United States since 1919 indicates a probable range in yields of 10 to 14 bushels per seeded acre. This probable range would indicate a production of from 660,000,000 to 924,000,000 bushels. Thus, even if yields in 1936 should be rather low, production would probably be equal to domestic utilization, and with average yields or greater-than-average yields a considerable surplus above domestic requirements would be obtained.

The above reasoning would imply that the chances are good that the United States will have a considerable surplus of wheat for export or carry-over in 1936–37. In the absence of any special measures such as governmental aids to exports or storage to relieve the pressure on the market, such a surplus would probably bring United States prices close to an export basis. It is to be recognized, however, that the surplus from another very small crop only moderately in excess of domestic requirements plus a normal carry-over might possibly be retained in this country and still permit United States prices to remain above an export basis.

WORLD PROSPECTS

Total world wheat supplies, excluding Russia and China, in 1935–36 are estimated at 4,360,000,000 bushels, a decline of about 240,000,000 bushels from the 1934–35 year, and more than 500,000,000 bushels below the average supplies available during the period 1928–32. Estimated world production during 1935–36 of around 3,500,000,000 bushels promises to be about the same as the previous year and about 370,000,000 bushels below average production during the years 1928–32. The reduced supplies this year result from lower stocks in all of the major countries except Canada. Should crops in the Southern Hemisphere turn out as expected, stocks will decline further by at least 125,000,000 bushels by the end of the 1935–36 season, which would bring them well down toward normal.

Severe droughts in North America last year and in South America this year, together with drought and rust damage in North America this year, are the major factors contributing to the reduction of the excessive stocks of wheat accumulated during recent years. Although world stocks are expected to be somewhere near normal by the end of the 1935–36 crop year, the improvement in the statistical position promises to be only temporary, unless a substantial reduction in acreage is made. Thus average yields in 1936–37 on present world acreage would result in a crop of around 3,700,000,000 bushels, about equal to the average production during the years 1928–32 when, despite higher consumption than at present, stocks accumulated rapidly.

With another small wheat crop in the United States and a prospective heavy reduction in the crop in the Southern Hemisphere, the export market will be dominated largely by the policy governing the disposal of the large Canadian supplies during 1935–36. Supplies of wheat in the principal exporting countries available for export or carry-over in 1935–36 are estimated at about 720,000,000 bushels, of which Canada alone could supply 395,000,000 bushels. In addition, Russia could probably supply about 50,000,000 bushels, but the quantity actually exported will depend largely upon governmental policy in that country.

Import requirements for wheat during 1935–36 are estimated at about 560,000,000 bushels, compared with 530,000,000 in 1934–35. The increased requirement is expected to result from the improved business outlook in Europe, smaller crops in European importing countries and the Orient, the desire of some countries to build up existing low stocks because of expected higher prices, and the unsettled political situation in Europe. The imports into the United States, as indicated above, will also be a factor in international trade in wheat.

A world wheat crop this year that is in general of poorer quality than that of last year should assist somewhat in adjusting downward the excessive effective supplies that have accumulated during the last several years. This is particularly true in North America where severe rust damage, early frosts, and excessive moisture at harvest time resulted in an unusually large percentage of low-test weight and otherwise poor-quality wheat. Damage to the quality of the European crop, although more severe than in recent years, is in itself not sufficient to bring about any material increase in import requirements.

As the United States at present is not exporting wheat, this year's situation in the importing countries is not of great interest, except as United States prices are related to world wheat prices. But the longer-time outlook is of vital interest to growers in the United States. European developments in particular will play an important part in determining the future outlet for United States wheat.

During recent years European importing countries have greatly expanded wheat production with a resultant decline in import needs. This decline has been due particularly to improved yields but also to an increase in acreage. It should perhaps be mentioned that in at least 3 out of the last 4 years, exceptionally favorable weather conditions have resulted in average yields of wheat greatly in excess of the last 10-year average. The continued occurrence of such favorable growing conditions appears very improbable. Some former very heavy importers, including Germany, France, and Italy, have reached a point of self-sufficiency in wheat production in years of average yields or better. Further expansion of European acreage is not probable and there are even some signs that self-sufficiency is not the unmitigated blessing many supposed; but acreage reduction will come slowly and European import requirements are not likely to regain or even approach their former volume during the next several years, except in the event of very unfavorable growing conditions or war. Not only has the expansion in European wheat acreage apparently reached its peak, but the upward trend in yields, having reached or gone beyond pre-war levels, is showing a tendency to flatten out so that any significant increase in European production will be the result of unusually favorable growing conditions.

FLAXSEED

World supplies of flaxseed for 1935–36 from present indications will be smaller than last season with the sharply increased production in the United States and larger outturns in Europe likely to be more than offset by the materially smaller crop now in prospect in Argentina. Demand in the United States and abroad is expected to be somewhat better than last season. The unfavorable influence of decreased building activity in certain foreign countries, the larger use of substitutes for linseed oil, and lower prices for oil cake and meal is expected to be more than outweighed by increased building activity in the United States and the United Kingdom.

Prices and market demand for the 1936 United States crop will be mainly determined by supplies of old seed on hand, prospects for the world crop and building activity and general industrial conditions in this and other countries. World stocks of flaxseed are likely to be small in the fall of 1936 because of the reduced stocks in Argentina as a result of the short crop now in prospect in that country. Little information is available as to the 1936–37 world crop except that seedings in the United States will probably be slightly larger than for the 1935 crop. In the United States, building activity, repairs, and alterations, and industrial activity in general, are expected to be greater in 1936 than in 1935. In England building activity and industrial activity are expected to be as high or higher in 1936 than in 1935. In the rest of Europe industrial activity is expected to be maintained at present high levels, though in Germany and Italy recent increases in industrial activity have not resulted in a corresponding improvement in foreign trade.

WORLD SUPPLIES

World supplies of flaxseed during the 1935–36 marketing season will be somewhat smaller than last year, when the world crop totaled 137,061,000 bushels.

United States flaxseed production in 1935 is about one-half of the average domestic requirements for crushing and seed. The October 1 estimate of the United States flaxseed crop was 14,115,000 bushels compared with 5,213,000 bushels harvested in 1934 and the 5-year (1928–32) average production of 15,961,000 bushels. Conditions favored the seeding of the larger 1935 acreage and yields were the best since 1928. The estimated 1935 harvested acreage was 2,138,000 compared with 969,000 in 1934 and 2,757,000 acres, the 5-year (1928–32) average. Approximately one-third of the seeded acreage in 1934 was abandoned because of drought. Based on available information to October 1, the yield per acre in 1935 was 6.6 bushels compared with a 10-year average (1923–32) of 6.9 bushels. Recovery from the drought was apparent in South Dakota, where the 1935 acreage for harvest was 320,000 acres compared with 17,000 acres harvested in 1934. The North Dakota acreage in 1935 was 970,000 compared with 268,000 acres harvested in 1934. The increase in the California acreage from 11,000 in 1934 to 40,000 acres in 1935, together with high yields, was a feature of the domestic-crop situation.

The trend of flaxseed acreage continued downward in Canada although the 1935 crop of 1,636,000 bushels was larger than the small 1934 outturn of only 910,000 bushels. The area seeded in Argentina in 1935 was 6,128,000 acres compared with 8,102,000 acres sown in 1934 and the 5-year (1928–32) average of 7,517,000 acres. Conditions have been favorable for at least average yields in about one-third of the Argentine flax belt, but drought reduced prospects somewhat over a large proportion of the remainder. A production of from 41,000,000 to 45,000,000 bushels seems a reasonable estimate based on information now available. This compares with an average production of 74,000,000 bushels in the 5 preceding years. Although Argentina reduced its acreage, European countries increased their acreage from 532,000 acres in 1934–35 to 734,000 acres in 1935–36, or about 38 percent. However, the larger acreage in the United States and Europe was not sufficient to offset the prospective decrease in Argentina. As a result, the acreage in 17 countries which in 1934–35 accounted for about two-thirds of the estimated world total (excluding Russia) was 12,601,000 acres compared with 13,096,000 acres in 1934–35 and 12,154,000 acres in 1933–34. Data on production and stocks are not so readily available as acreage statistics, but from reports received to October 1, world production and stocks of flaxseed in 1935–36 may be considerably below last year when the world crop totaled 137,061,000 bushels. The 1935–36 crops will be supplemented by fairly large supplies of old-crop flaxseed in Argentina, which on October 1 were placed at 16,644,000 bushels compared with 15,038,000 bushels on that date in 1934 and 12,120,000 bushels on October 1, 1933.

WORLD DEMAND

World demand for flaxseed during the 1935–36 marketing season is expected to be somewhat larger than in 1934–35. Increased building activity in the United States and the United Kingdom is expected more than to offset such unfavorable developments as a decline in building activity in France, a larger use of substitutes for linseed oil, especially in Germany, larger supplies of other oils that may be used in paint, etc., in the United States, and lower prices for oil cakes and meals here and abroad.

It is expected that building activity in the United States in 1935–36 will be materially greater than in 1934–35 because of increases in residential and certain other types of construction. The value of total building contracts awarded in July, August, and September 1935 was 42 percent greater than in the same months of 1934; residential building, which normally represents about 20 percent of total building, more than doubled in value, and public works and utilities increased 43 percent.

In the 8 years ended June 30, 1935, the disappearance of linseed oil in the United States ranged from a low of 348,000,000 pounds in 1932–33 to a high of 810,000,000 pounds in 1928–29. In the same years imports of oil and flaxseed in terms of oil ranged from 114,000,000 pounds in 1932–33 to 429,000,000 pounds in 1928–29. The average disappearance of the six other oils—soybean,

tung, fish, perilla, sunflower, and hempseed—in drying-oil uses was probably not over 159,000,000 pounds and in all uses was 179,000,000 pounds. On the basis of present indications, the disappearance of these six oils in 1935–36 is expected to be much larger than in any year for which information is available. This expectation is based principally upon the unusually large prospective crop of soybeans. This year's crop of soybeans gathered in six important States is estimated at 32,870,000 bushels or 85 percent larger than last year's harvested crop of 17,762,000 bushels and over double the 5-year average, 1930–34. The oil equivalent of soybeans crushed from the 1934 crop was about 70,000,000 pounds and averaged 40,173,000 pounds from the five crops of 1930–34. Imports of perilla oil and hempseed have been increasing and may continue to do so. Though the estimated disappearance of the six oils exclusive of linseed oil in 1935–36 is very large compared with past experience, it is believed the effect of increased supplies of these oils will be more marked in reducing the imports of flaxseed than in reducing the price of flaxseed.

Lower prices for linseed cake and meal may offset in part the prospective firmer market for linseed oil. This will tend to hold prices of domestic flaxseed somewhat lower than they otherwise would be. Prospective crushings of domestic flaxseed will produce approximately 220,000 tons of linseed cake and meal this season compared with about 70,000 tons produced from the 1934 flax crop. Last season about 91,000 tons of cake and meal were retained from crushings of imported seed and these were supplemented by imports of 12,000 tons. With more abundant supplies of other concentrates, including cottonseed, soybean, and peanut meals also in prospect, prices of linseed meal will probably average well below those of last season. At the close of October linseed meal was quoted at Minneapolis at $27 per ton compared with $40 per ton a year ago.

The European flaxseed market will be influenced not only by building activity and general industrial conditions but also by the relatively heavy stocks of linseed oil, substitution of other vegetable oils in the building trades, indirect competition from animal fats and other oils, and the prospective light demand for oil cake and meal during the current year.

Takings of linseed cake and meal in the important consuming countries of northwestern Europe will probably be less active than in 1934–35. Factors tending to restrict demand are the competing oil cakes and meals offered at relatively low prices, pressure of cheap feed grains, notably Argentine corn and Russian barley, and the relatively larger local supplies of other feedstuffs and forage. Oil-cake prices in the United Kingdom and on continental markets have generally tended downward except where regulatory measures have maintained prices above world levels or where unstable currencies and fluctuating exchange values have obscured price trends.

Tariffs and trade regulations have been factors in the trade in oilseeds and oilseed products. Great Britain, under the Ottawa agreement, placed a 10-percent duty on imports of foreign seeds in the interests of Indian producers. Subsequently British imports of Argentine seed dropped to 44,000 long tons in 1934 compared with 344,000 long tons in 1932, while imports from British India during the same period increased to 140,000 tons from only 10,000 tons in 1932. The total importation of linseed into the United Kingdom, however, has decreased materially, and this has been associated with heavier imports of Egyptian cottonseed and of peanuts. The German national policy designed to reduce imports has resulted in a marked decrease in imports of oil cakes. Netherlands, Denmark, and Sweden have adopted similar measures to restrict imports of oil cakes. France has imposed drastic quota regulations on imports of flaxseed and has imposed practically a prohibitive import duty on imports of peanuts from India and British West Africa in an effort to assist French colonial producers.

CONDITIONS IN 1936

Indications now are for a United States flax acreage for the 1936 crop only slightly below the pre-drought (1927–31) average of 2,900,000 acres. The acreage of flax seeded for the 1936 crop will be influenced by planting conditions in the spring and by the prices of wheat and flax existing at that time. If farmers in seeding the crop of 1936 respond to the acre returns from flax as compared with the acre returns from wheat as they have in past years when moisture conditions were favorable to seeding both wheat and flax, a marked increase in flax acreage above that of last year may be expected in the more

important flax-producing areas. Flax yields in 1935 only slightly below the average of 1922 to 1931 are indicated in areas where wheat yields were most severely affected by rust. Although flax prices at the beginning of the marketing season were lower than average relative to the price of wheat, the acre return from flax was greater than from wheat. Unless prices of flax become less favorable in relation to prices of wheat and unless conditions next spring are unfavorable to flax seeding, an increase in flax acreage in North Dakota and Minnesota may be expected.

Other things being equal, the maximum return per acre from flax is obtained through the seeding of clean seed of high-yielding, disease-resistant varieties in proper crop rotation. Clean seed aids in the control of weeds. The use of wilt-resistant varities, such as Bison, Redwing, Buda, and Linota, in the North Central States will reduce losses from disease. A crop rotation which includes a legume followed by corn which is given clean cultivation is the practicable soil preparation for maximum flaxseed yields per acre.

Cleaning the threshed flaxseed before it is sold on the market would effect a further saving to the farmer. In the crop year of 1933–34, when feed grains were at a premium because of the drought, 2,567 carloads of flaxseed, which contained 10 percent or more of dockage, were shipped to the Minneapolis market. In most cases it would have been more profitable to the grower to clean such seed on the farm or at the local elevator and retain the screenings on the farm for feed.

Over half the domestic 1936 flax crop will probably leave farmers' hands during August, September, and October. Market conditions in those 3 months will be influenced to a considerable degree by the available supplies of Argentine seed and by prospects for the coming Argentine crop. Since the Argentine crop that will begin to move in January 1936 is expected to be about one-third smaller than average, it is reasonable to assume that supplies of Argentine seed in the fall of 1936 will be below average. Demand for flaxseed in the fall of 1936 will depend mainly on building activity and general business conditions here and abroad. In the United States, building activity and repairs and alterations in 1936 will probably be at an appreciably higher level than in 1935, and industrial production and factory pay rolls are expected to be about 10 percent higher. In England, one authority estimates that about 12 months elapse, on the average, between the passing of the building plans and the completion of the buildings. Building permits in July and August were 17 percent higher than in the same months of 1934, and higher than in the same months of any year back to 1923. Assuming that from 8 to 12 months elapse between the granting of the permits and the completion of the buildings, then the present level of building permits in England gives some ground for expecting actual building in England in the fall of 1936 to be considerably above present levels.

No estimates are available regarding building activity in the fall of 1936 in other European countries, but industrial activity in general in foreign countries has improved greatly over the low point of the depression, and it seems reasonable to expect at least a maintenance in 1936–37 of the higher level that has now been reached. It should be noted, however, that in the case of Germany and Italy the expansion in industrial activity has not been accompanied by a corresponding improvement in the external trade situation, owing largely to the necessity of reducing imports drastically in order to conserve the short supplies of foreign exchange for the purchase of indispensable foreign materials.

COTTON

SUMMARY

The world supply of all cotton for the 1935–36 season is now (late October) expected to be slightly larger than the preceding season's supply and about 12 percent larger than the average for the 10 years ended 1932–33. The smaller world carry-over of all cotton at the beginning of the current season will almost offset the prospective increase in world production. The world supply of American cotton is expected to be slightly larger than last season and about the same as the 10-year average, while the indicated supply of foreign growths is about the same as in 1934–35 but about 27 percent larger than the 10-year average.

The indications are that, owing to smaller stocks at the beginning of the season, the supply of Indian and Egyptian cottons in 1935–36 will be somewhat smaller than last season despite the prospective larger crops, while the supply of Chinese cotton is expected to be smaller because of a marked reduction in the current crop. The supply of Russian cotton will probably be considerably larger than that of 1934–35 because of a larger crop. Owing both to larger stocks and to a probable increase in production, the supply of Brazilian is expected to be considerably larger than the record supply of last season.

The world mill consumption of all cotton for the year ended July 31, 1935, was slightly larger than that of the previous season, the largest since 1928–29, and somewhat larger than the 10-year average. Total consumption of American cotton in 1934–35, however, declined 2,200,000 bales from 1933–34, and with the exception of 1930–31 was the smallest for 11 years and was 16 percent less than average. Mill consumption of foreign cotton increased approximately 2,300,000 bales last season to a new high level and was 34 percent larger than the 10-year average. In 1934–35 world mill consumption of foreign cotton exceeded that of American by 1,000,000 bales, whereas during the 10 years ended 1932–33, annual mill consumption of American exceeded that of foreign by approximately 4,250,000 bales.

Total consumption in the United States last season, 98 percent of which was American, was about 6 percent less than in the previous year, but 10 percent above the low point reached in 1931–32. About 86 percent of the decline in world consumption of American cotton in 1934–35 occurred in foreign countries, most of which was in Europe. The marked decline in consumption of American cotton in Europe was only partially offset by an increase in consumption of foreign cotton, largely of sundry growths, a substantial part of which was Brazilian. In the Orient, cotton textile-mill activity reached a new high level in 1934–35, but consumption of American cotton, about 84 percent of which was in Japan, was 11 percent less than a year earlier. On the other hand, mill consumption of cotton other than American, largely Indian and Chinese, was 21 percent larger than a year earlier.

One of the important factors contributing to the decline in the consumption of American last season was the relatively high prices of American cotton, due to reduced total supplies of American cotton, increased supplies of foreign cotton, and the 12-cent loan. Another important factor was found in the difficulties experienced by Germany and to some extent by a few other countries in obtaining foreign exchange. In addition, a factor of some importance was the further shift in cotton consumption from Europe to the Orient and the accompanying tendency for Oriental cotton to replace American.

Conditions in late October indicate that the world consumption of American cotton in 1935–36 will probably be somewhat larger than the comparatively small consumption of last season, although consumption might be materially affected by further war developments. Factors favorable to such an increase include the somewhat lower prices of American cotton relative to a year earlier and relative to foreign growths, and the higher level of business activity, along with prospects for further improvement.

Domestic cotton prices declined during most of 1934–35 and the first part of the current season, and in September 1935 the average price of Middling ⅞-inch cotton in the 10 markets was the lowest monthly average since December 1933, and was 2.37 cents per pound lower than in September 1934. Despite declining prices in 1934–35, the average for the season as a whole was about 14 percent higher than the previous season, and the highest since 1929–30. The weighted average price received by producers last season amounted to about 12.4 cents compared with 10.2 cents the previous season and 5.7 cents in 1931–32. Although there was an increase of 22 percent in the weighted average price received by producers, the total gross farm income from lint in 1934–35 was estimated at 10 percent less than the gross income the previous season owing to the 26-percent smaller crop. The total estimated gross income to cotton producers from cotton and cottonseed in 1934–35, including cotton rental and parity payments, amounted to about $822,000,000, which was 8 percent smaller than in 1933–34, but 77 percent larger than in 1932–33. When adjusted for changes in the prices of things farmers buy and interest and taxes, the purchasing power of the gross income from cotton and cottonseed, including rental and parity payments, averaged 66 percent larger in 1933–34 and 1934–35 than in 1932–33, but 22 percent less than in the 5 years ended 1913–14.

During the current season cooperating farmers, who will probably produce approximately 90 percent of the total crop, will receive adjustment payments equal to the difference between 12 cents and the average price of Middling ⅞-inch cotton in the 10 designated markets on the date the cotton is sold in addition to the price received for their cotton. With the crop of 1935 estimated in October at 19 percent larger than that of 1934, it seems probable that farm returns from lint in 1935–36 will materially exceed those of 1934–35.

During the first part of the 1934–35 season the price of American cotton was very high relative to most foreign growths. In September and October 1934 the price of American at Liverpool was the highest relative to Indian with the exception of June, July, and August 1930, since August 1920, and higher relative to Egyptian Uppers than at any other time since the early part of 1923–24. Since that time, however, the price of American has declined relative to foreign growths, and in September and the first part of October this year it was not greatly higher relatively than the average for the last 10 years.

SUPPLY

ALL COTTON

The total world supply of all cotton for the 1935–36 season is expected in late October to be about 39,900,000 bales, which is a little larger than that of the previous season and 12 percent larger than the average for the 10 years ended 1932–33 but about 6 percent smaller than the record supply in 1933–34. The world carry-over of all cotton on August 1 of about 13,600,000 bales was 15 percent smaller than a year earlier, 20 percent smaller than the record carry-over in 1932, but 34 percent larger than the average for the 10 years ended 1932. World production of all growths in 1935–36 is now (late October) expected to be about 26,300,000 bales and, if the crop turns out as now expected, it will be about 2,700,000 bales, or 11 percent, larger than for the previous season and 3 percent larger than the average for the 10 years ended 1932–33.

Conditions in late October indicated that the world supply of American cotton in the 1935–36 season will be a little larger than in the previous season and about the same as the 10-year average, and the supply of foreign is expected to be approximately the same as in 1934–35, but about 27 percent above the average for the 10 years ended 1932–33. The October 1 estimate of the 1935 crop of American cotton is 19 percent larger than the greatly restricted crop of the previous year, but is 20 percent smaller than the 10-year average, while the production of foreign cotton in 1935–36 is expected to be 6 percent larger than the record crop of the previous season and 33 percent larger than the 10-year average.

AMERICAN COTTON

The world supply of American cotton for the current season is now indicated to be about 20,500,000 bales, which is 200,000 bales larger than in 1934–35 and approximately equal to the average for the 10 years ended 1932–33, but about 5,500,000 bales less than the peak supply of 1931–32. The world carry-over of American cotton at the beginning of the current season which amounted to about 9,000,000 bales was 15 percent less than the 10,600,000 bales on hand August 1, 1934, but was about 3,000,000 bales larger than the average for the 10 years ended 1933. Of the total stocks of American cotton on hand at the beginning of the current season, about 5,100,000 bales were Government-financed stocks compared with about 3,000,000 bales a year earlier. Whereas Government-financed stocks showed a net increase of more than 2,000,000 bales under the 12-cent loan in 1934–35, the 10-cent loan for the current season offers little inducement for further increases in these stocks at present price levels. Because of the small 1934 domestic crop, the decrease in carry-over occurred despite a substantial decline in the world consumption of American cotton. The indicated 1935 domestic crop which was forecast as of October 1 at a little less than 11,500,000 bales of equivalent 478 pounds net weight is 19 percent larger than the 9,600,000-bale crop of 1934, but with that exception is the smallest since 1923 and is 20 percent smaller than the average for the 10 years 1923–32.

The estimated area for harvest in 1935 of 28,650,000 acres is 1,700,000 acres larger than the 1934 acreage but 29 percent below the average for the 10 years ended 1932. Although the indicated area left for harvest in 1935 is only 6

percent larger than a year earlier, the crop is expected to be 19 percent larger owing to a material increase in yield. The indicated yield in October was about 192 pounds per acre compared with 171 pounds in 1934.

The outlook with respect to the supply of American cotton in 1936–37 depends very largely upon the 1936 cotton-adjustment program of the Agricultural Adjustment Administration. Without restrictions, domestic cotton acreage in 1936 would undoubtedly show a very marked increase and with average yields the domestic crop and the world supply of American cotton would probably materially increase, since present indications point to a comparatively small decrease in the world carry-over of American cotton on August 1, 1936. As yet, no announcement has been made relative to the 1936 acreage-adjustment program.

FOREIGN COTTON

Present indications are that the world supply of foreign-grown cotton will be about 19,450,000 bales (of approximately 478 pounds) which is about the same as the record supply of the previous season, and 27 percent larger than the 10-year average ended 1932–33. The current season's supply of foreign growths remained about unchanged as a result of a marked reduction in the carry-over at the beginning of the year and despite a considerable increase in production. The carry-over on August 1, amounting to 4,600,000 bales, was 800,000 bales, or 15 percent, smaller than for the previous year, but 12 percent larger than the average for the 10 years ended 1932–33. Information available in late October indicates that foreign production in 1935–36 will probably be about 850,000 bales larger than the record production of last season. Such an increase would give a total foreign crop of approximately 14,850,000 bales, which is considerably larger than the production in any other year and 33 percent larger than the average for the 10-year period ended 1932–33.

Available information relative to the carry-over and production of foreign cottons, indicates that the 1935–36 supply of Indian and Egyptian cotton will be somewhat smaller than last season and the supply of all other growths combined, commonly referred to as sundries, will be about 300,000 bales larger than in 1934–35. Because of unfavorable weather conditions, reductions are indicated in the 1935–36 crop in China and in Mexico, and in some of the other smaller producing countries, whereas increases are expected in India, Russia, Brazil, Egypt, and a number of the minor countries. The supply of Indian cotton for the current season will probably total about 6,800,000 bales of 478 pounds, which is 3 percent less than the 1934–35 supply, and about the same as the 10-year average even though the crop is expected to be the largest in 6 years. Stocks of Indian cotton at the beginning of the current season amounted to about 2,300,000 bales, which was 650,000 bales less than a year earlier and somewhat less than the 10-year average. The Indian crop of 1935-36 is expected to amount to about 4,500,000 bales, which would be 12 percent larger than that of 1934–35, and about the same as the average for the 10 years ended 1932–33. According to official estimates of the Indian Government, the area planted in India up to October 1 was about 8 percent larger than that planted to the same date last year, and 7 percent larger than the 10-year average. The increase in acreage was about in line with what was expected in view of the prices received for the 1934–35 cotton crop and the prices of other commodities in India last season.

With the 1935 crop in Egypt estimated in October at 1,700,000 bales, the expected world supply of Egyptian is approximately 2,500,000 bales. This is 100,000 bales less than last season's supply and 300,000 bales less than in 1933–34. It is 2 percent larger than the average for the 10 years, 1923–24 to 1932–33. The new crop as estimated in October is about 150,000 bales larger than that of last season, which was about average in size. The 1935 Egyptian crop is expected to be about 9 percent larger than the previous year owing to very high indicated yields and despite a decline of about 4 percent in the acreage, which is attributed to a marked increase in grain prices in Egypt last season. Total stocks of Egyptian cotton on August 1, 1935, amounted to approximately 800,000 bales of 478 pounds, compared with a little over 1,000,000 bales at the beginning of each of three previous seasons and a 10-year average of approximately 900,000 bales.

With substantial increases expected in the 1935–36 crop in Russia and a number of other foreign cotton-producing countries the total supply of sundry cotton is expected in late October to be about 10,150,000 bales. This is about

300,000 bales larger than the record supply of the previous season and 67 percent larger than the 10-year average. The supply of Chinese cotton, the most important element making up the sundry growths, is expected to be somewhat smaller than last season despite some increase in stocks of Chinese cotton. Because of unfavorable weather conditions the 1935–36 crop, which is estimated at a little less than 2,700,000 bales, is about 15 percent less than the record crop of last season. The supply of Russian cotton for the current season will probably not be materially different from that of 1934–35. Production in Russia during the current season is expected to be about 2,000,000 bales or about 20 percent larger than the revised estimate of 1934–35, and, as indicated by the estimated stocks held by mills in Russia, the carry-over of Russian cotton at the beginning of the season was comparatively little different from that of a year earlier.

The supply of Brazilian cotton, which is now an important part of the sundry growths, is expected to increase again to a new high level. Stocks of Brazilian cotton at the beginning of the season were apparently considerably larger than a year earlier. The 1935–36 cotton crop in northeastern Brazil has been estimated by the Brazilian Government at about 950,000 bales. This is approximately 30 percent larger than the estimated production in this section of Brazil the previous season, 118 percent larger than the 10-year average, and the largest in history. Little is definitely known as to crop prospects in southern Brazil where the crop is not planted until September, October, and November, but it is expected that the crop in the southern states of that country will also increase to a new high level, partly because of continued low prices of coffee relative to cotton prices.

The indications are that the 1935–36 supply of Mexican cotton will be somewhat smaller than the previous season. Despite an increase in acreage of about 36 percent, the crop has been forecast at approximately 200,000 bales, which is less than either of the two previous seasons and about equal to the 10-year average.

The 1935 cotton acreage in Manchuria was reduced by more than 30 percent by dry weather at planting time, and excessive rains and floods during July and August reduced yields. In late October the crop was expected to be about 50,000 bales, or approximately 35 percent below that of 1934–35. According to reports from the American consul at Seoul, the cotton acreage of 1935–36 in Chosen has been estimated as 14 percent larger than that of the previous season, despite unusually dry weather at planting time. With average summer weather it is expected that the crop will be larger than the 140,000 bales produced last season.

CONSUMPTION

The estimated world mill consumption of all cotton for the season ended July 31, 1935, was equivalent to slightly more than 23,700,000 bales of approximately 478 pounds. This was slightly larger than the estimated mill consumption of all cotton the previous season, the largest since 1928–29, and somewhat larger than the average for the 10 years ended 1932–33. These figures are based largely on the running-bale figures released by the International Federation of Master Cotton Spinners' and Manufacturers' Associations. Owing to the large number of running bales of Indian and sundry growths, which average less than 478 pounds, these estimates are smaller than those in running bales released by the federation. Of the total consumption in 1934–35, almost 12,350,000 bales, or 52 percent, was foreign cotton, and 11,350,000 bales, or 48 percent, American. The previous season, out of a total that was about the same as in 1934–35, a little more than 13,500,000, or 57 percent, was American cotton, and 10,100,000 bales, or 43 percent, was foreign. Consumption of American cotton in 1934–35, therefore, decreased about 2,200,000 bales from the previous season and was about 2,100,000 bales below average. Mill consumption of foreign cotton, on the other hand, increased approximately 2,300,000 bales over the previous season and exceeded consumption of American by more than 1,000,000 bales. During the 10 years ended 1932–33, world mill consumption of American exceeded that of foreign growths by approximately 4,250,000 bales annually. Consumption of American cotton last season was, with the exception of 1930–31, the smallest for 11 years, while mill consumption of foreign cotton was the largest in history.

Most of the decline that occurred in the consumption of American cotton from 1933–34 to 1934–35 is accounted for by the decline in consumption in

foreign countries, as domestic consumption declined only 300,000 bales. A considerable part of the decline in consumption of American occurred in Germany where the quantity of American cotton consumed was nearly 600,000 bales below the previous season. Smaller consumption of American also occurred in France, Italy, Japan, and a number of other countries. In practically all of these countries, however, the consumption of foreign cotton increased.

Several factors contributed to the decrease in the consumption of American cotton in 1934–35 relative to the consumption of American cotton in 1933–34 and relative to the consumption of foreign growths of cotton in 1934–35. One of the most important of these was the relatively high prices of American cotton due in part to reduced supplies of American cotton as a result of the adjustment program and the drought and to increased supplies of foreign cottons and in part to the 12-cent loan which in effect further reduced the available market supplies of American cotton. Another important factor was the difficulties experienced, particularly by Germany, and to some extent by Italy and Poland, in obtaining foreign exchange with which to purchase American cotton along with special trade arrangements with other cotton-producing countries. Another factor of less importance was the further shift in cotton processing from Europe to the Orient and the accompanying tendency for foreign-produced cotton to replace American cotton.

The world mill consumption of Indian cotton during the 12 months ended July 31, 1935, is estimated on the basis of the data from the federation to have been equivalent to 4,650,000 bales of 478 pounds. This represented an increase of 800,000 bales over the preceding 12 months and was the largest since 1930–31 when the equivalent of 4,800,000 bales was consumed. During the 10-year period 1923–24 to 1932–33 the average world consumption of Indian was 4,250,000 bales. Of the total increase in the consumption of Indian last season as compared with the season before, about 250,000 bales are accounted for by the increase within India and 450,000 bales by an increase in Japan. Smaller actual increases occurred in most of the countries that use considerable quantities of Indian cotton. Except in the case of consumption in India, a large part of the increase in the consumption of Indian cotton may be attributed to its relatively low price.

Consumption of Egyptian cotton last season was equivalent to about 1,800,000 bales of 478 pounds, and was about 120,000 bales, or 7 percent, larger than the previous season, which was the largest in history. The increase to the new high level during last season occurred despite the fact that the production and supply were slightly smaller than in 1933–34, stocks having been reduced to the lowest level for 7 years.

During 1934–35 the total mill consumption of sundry cottons is estimated to have amounted to the equivalent of about 5,950,000 bales of 478 pounds. This represented an increase of about 1,350,000 bales over the record consumption of the previous season. This new high level of consumption of sundry cottons is largely accounted for by the increase in consumption of Brazilian and Chinese cottons.

The slightly larger prospective supply of American cotton and approximately the same supply of foreign cotton along with a considerably lower price of American, relative to foreign, are favorable to an increase in the world consumption of American cotton this season. In addition, the level of cotton prices in the first quarter of the season averaged about 15 percent lower than a year earlier and the spots-futures price relationship was more nearly normal. Along with these factors is the higher level of business activity in the first part of the season than a year earlier and prospects for further improvement in business activity.

UNITED STATES

Domestic consumption of all cotton during 1934–35 declined 340,000 bales from the previous year to a total of approximately 5,360,000 bales which is 775,000 bales, or 13 percent, less than the comparatively large consumption in 1932–33. The consumption last season was 10 percent larger than the low point reached in 1931–32 and 25 percent less than the peak consumption of 7,190,000 bales in 1926–27. Of the total domestic consumption last season, 5,240.000 bales was American cotton, which was 300,000 bales less than the previous season. Available data indicate that from 1928–29 to 1931–32 mill

consumption of raw cotton declined relatively more than the consumption of cotton textiles, and that stocks of cotton goods in all hands from mills to consumers were greatly reduced. Increased mill production along with merchant and consumer buying in 1932–33 replaced depleted stocks to a considerable extent. But stocks have apparently been permitted to decline and at the beginning of the current season, stocks of cotton textiles, particularly in wholesale and retail establishments, were reported to be comparatively small.

Cotton consumption in the United States is influenced to a considerable extent by changes in general business conditions, because a substantial proportion of the total production of cotton fabrics is used directly in industrial goods, and consumer-purchasing of clothing and household articles is directly affected by changes in industrial pay rolls. Industrial activity was lower in September 1934 than at any other time since April 1933. This, together with the general strike in the cotton-textile industry, reduced cotton consumption for the month to one of the lowest figures in the last quarter of a century. Following the settlement of the strike at the end of September 1934, the index of cotton consumption increased more than general business activity until January 1935, when both turned downward. The index of cotton consumption declined more rapidly from January to July 1935 than the index for all industries. Since July, industrial activity has continued substantially higher than the average for the preceding year. Cotton consumption increased even more proportionately from July to October than industrial activity and the index of cotton consumption in October was about equal to that for industrial activity. Comparatively small stocks of cotton goods, the somewhat higher level of industrial activity, and employment and increased farm incomes are favorable to an increase in the domestic consumption of cotton in 1935–36. In addition, prices of cotton and cotton cloth during the first quarter of 1935–36 were lower relative to most other textile materials than a year earlier.

EUROPE

Cotton consumption and mill activity for Europe as a whole was considerably lower last season than the season before but the highest with that exception since 1929–30. Total consumption of all cotton for the 12 months ended July 31, 1935, amounted to a little less than 9,000,000 bales of approximately 478 pounds, compared with almost 9,500,000 bales during the previous 12 months. The increase of 1,100,000 bales, or 27 percent, in the consumption of foreign cotton in Europe only partially offset a decline of more than 1,600,000 bales, or 30 percent, in the consumption of American cotton. The greatest increase in the consumption of foreign cotton occurred in the consumption of sundry growths, although increases also occurred in the consumption of Indian and Egyptian. The consumption of sundry growths, amounting to nearly 2,800,000 bales, was 900,000 larger than in 1933–34 and the largest on record. A considerable part of the increased consumption of these growths in 1934–35 was due to increased consumption of Brazilian cotton, particularly in Germany, where a considerable quantity of cotton was obtained from Brazil through special trade arrangements.

In Great Britain the consumption of all cotton last season was equivalent to 2,400,000 bales of 478 pounds, which was just slightly smaller than the consumption of the previous year, but the largest, with that exception, since 1929–30. The consumption of American cotton of 1,050,000 bales was approximately 400,000 bales less than in 1933–34 and the smallest, with the exception of 1930–31, since records became available in 1919–20. The consumption of foreign growths, on the other hand, increased about 350,000 bales last season, as compared with the previous 12 months, and was the largest on record. The increase in consumption of foreign cotton in Great Britain resulted largely from the increase of 250,000 bales of approximately 478 pounds, or 85 percent, in sundry growths, a substantial part of which was Brazilian. Consumption of Indian cotton increased almost 100,000 bales, or 47 percent, and was the largest in history.

Cotton consumption on the continent of Europe, including Russia, in 1934–35 decreased more than 500,000 bales, or about 6 percent, but with the exception of 1933–34 was the largest since 1929–30. The consumption of American cotton declined about 1,600,000 bales, or 30 percent, and was the lowest for about 15 years. Continental European consumption of Egyptian cotton again increased in 1934–35 and amounted to 1,365,000 bales, which was the largest in history. Consumption of sundry growths also increased to a new high level and ex-

ceeded that of the previous season by about 930,000 bales, or 51 percent. Of the total decline in consumption of American cotton on the continent of Europe, about half occurred in Germany, where the consumption of American cotton dropped 55 percent to approximately 450,000 bales, which was the lowest since 1919–20. Germany's consumption of all cotton, however, declined a little less than 350,000 bales, or about 22 percent. The consumption of sundry growths in Germany increased about 300,000 bales, or 343 percent, and was the largest in history.

The replacement of American cotton in Germany by other growths was largely due to reciprocal trade arrangements between Germany and other cotton-exporting countries, especially Brazil. The quantity of cotton replaced in Germany and Italy by synthetic fibers increased somewhat last season and production of these fibers is expected to increase further in 1935–36, but the additional quantity of cotton replaced this season as a result of this increase is not likely to be of more than minor importance.

In France the consumption of American cotton last season declined about 220,000 bales, or nearly 30 percent; part of this decline was offset by an increase of about 60,000 bales in the consumption of sundry cottons. The consumption of Indian and Egyptian remained about unchanged. Total consumption of all cotton in Italy declined about 100,000 bales, or 11 percent, in 1934–35, compared with the previous season. A decline of almost 200,000 bales, or 29 percent, in the consumption of American was only partly offset by an increase in Indian, Egyptian, and sundry growths. Consumption of American cotton in most of the smaller consuming countries of Europe held up fairly well. Some decline occurred in most of them, but these declines were in most instances about offset by the use of larger quantities of foreign cotton, particularly sundry growths.

Prospects are for an improvement in European business conditions in 1935–36, but this is not expected to result in a proportional increase in the consumption of cotton, since much of the improvement in at least several of the important countries is likely to be of an "internal character." Nevertheless, the prospective improvement together with the relatively lower prices of American cotton are favorable to some increase in the consumption of American cotton in Europe during the current season over the depressed level of the previous season, despite the fact that stocks of American cotton in Europe at the beginning of the season were 500,000 bales, or 40 percent, less than a year earlier and the lowest in 11 years. It is recognized that further war developments might materially affect general business conditions and cotton consumption.

ORIENT

In Japan total consumption of all cotton in 1934–35 increased to a new high level and amounted to approximately 3,350,000 bales of 478 pounds, which was about 400,000 bales larger than the previous peak consumption of 1933–34. Consumption of American cotton declined about 100,000 bales to the lowest level since 1931–32, but still represented 50 percent of the total. Consumption of Indian increased about 450,000 bales to a level approximately the same as that of 1925–26 and accounted for about 42 percent of the total. The increased consumption in Japan last season was accounted for by the continued increase in exports of cotton cloth, which probably represented nearly two-thirds of its total production. During the 12 months ended July 31, 1935, total exports of cotton cloth from Japan amounted to about 2,700,000,000 square yards, compared with 2,360,000,000 during the preceding 12 months, and an average for the 5 years ended 1932–33 of about 1,700,000,000 square yards. The improvement in general economic conditions in many foreign countries and the fact that Japan's textiles were offered at a comparatively low price relative to textiles from other countries, together with the continued efforts on the part of the Japanese Government and cotton manufacturers and exporters to expand sales in foreign countries, have been important factors contributing to the further expansion in export trade.

Cotton-textile mills in China were more active last season than in the previous season, but were somewhat less active than in 1932–33. Mill consumption last season of nearly 2,500,000 bales was the largest in the history of the Chinese industry with the exception of 1932–33. The increase over the previous season was accounted for by the record consumption of sundry growths, which of course was primarily Chinese cotton. Consumption of

American cotton in China last season declined to about 250,000 bales compared with a little more than 400,000 bales the previous 12 months, and was the smallest since 1925–26. The new high level of mill activity and the large Chinese cotton crop last season, along with reduced consumption of Indian and American, due in part to a higher tariff on raw cotton, largely account for the new peak in mill consumption of Chinese cotton in China.

In India, mill consumption of raw cotton increased to a new high level in 1934–35 of about 2,400,000 bales of approximately 478 pounds, which was approximately 350,000 bales larger than in 1933–34 and about 150,000 bales larger than the previous peak reached in 1931–32. A small increase in the consumption of American, Egyptian, and sundry growths occurred, but most of the increase was in the consumption of Indian cotton, which represented 86 percent of the total.

The indications are that, unless influenced by war developments, mill consumption of all cotton in the Orient in 1935–36 will be about the same as, or possibly somewhat greater than the new high level reached last season and that consumption of American cotton will probably be about equal to the 2,000,000 bales consumed in 1934–35. In Japan, where almost 1,700,000 bales of American cotton were consumed in 1934–35, total consumption of all cotton and the consumption of American cotton in 1935–36 are expected to be about the same as last season. Because of increased restrictions against Japanese cotton textiles in export markets, it is expected that exports of cotton goods will be less than the new high level of 1934–35, but is expected to be about offset by somewhat higher consumption of cotton textiles in Japan.

PRICES

Following the upward trend in domestic cotton prices throughout 1933–34 to a peak of 13.12 cents in early August 1934, cotton prices declined during 1934–35, and in September 1935 the price of middling ⅞–inch cotton in the 10 markets averaged 10.48 cents per pound. This was 2.37 cents per pound lower than in September 1934, but with that exception was higher than for any other September since 1929. For the 1934–35 season as a whole the average price in the 10 markets was 12.36 cents, which was 14 percent higher than the previous season and the highest since 1929–30 when the 10-market price averaged 15.79 cents. The weighted-average price received by producers last season amounted to about 12.4 cents for cotton of various qualities compared with 10.2 cents the previous season and 5.7 cents in 1931–32. In addition, cooperating cotton producers received approximately $116,000,000 in cotton rental and parity payments in 1934–35 which, on the basis of the estimated quantity produced by cooperating producers, was equivalent to about 3.2 cents per pound. This, plus the weighted average farm price of 12.4 cents, gave cooperating producers a total return in 1934–35 equivalent to about 15.6 cents for their cotton last season. The average farm price received during the 5 years ended July 31, 1914, was 12.4 cents per pound. This, when adjusted for changes for the average index of the prices paid by farmers for commodities bought, and interest and taxes, gives a parity price for the 1934–35 season of 16 cents per pound.

Although there was an increase of 22 percent in the weighted-average price received by producers, the total gross farm income from lint cotton in 1934–35 is estimated at $595,600,000, exclusive of rental and benefit payments, compared with the estimated gross income the previous season of $663,500,000. The decline in the estimated gross income from lint cotton last season, compared with the previous season, is accounted for by the fact that the 1934 crop was about 3,400,000 bales or 26 percent smaller than the previous crop. The total estimated gross income to cotton producers from cotton and cottonseed in 1934–35, including cotton rental and parity payments, was about $822,000,000, compared with nearly $890,000,000 in 1933–34, and about $464,000,000 in 1932–33. The average income from cotton and cottonseed during the 10 years ended 1932–33 was approximately $1,235,000,000. During the 5 years 1909–10 to 1913–14 the estimated average gross income from cotton and cottonseed was $872,000,000. The gross income from cotton and cottonseed, including cotton rental and parity payments during the last two seasons averaged about 84 percent above that of 1932–33, but about 2 percent less than the average income from cotton and cottonseed during the 5 years 1909–10 to 1913–14. When

adjusted for changes in the prices of commodities farmers buy and in interest and taxes, which during the last two seasons averaged about 26 percent higher than in the 5-year pre-war period, the purchasing power of the gross income from cotton and cottonseed, including Government payments in 1933–34 and 1934–35, averaged about 66 percent above the purchasing power of the gross income from cotton and cottonseed in 1932–33, but was 22 percent below the pre-war average.

During the 1934–35 season a 12-cent loan on cotton Low Middling ⅞-inch and better was available to growers. During the latter part of August 1935, a plan was announced which provided that the Commodity Credit Corporation would make loans on the 1935 crop at 10 cents per pound, basis ⅞-inch Low Middling or better, to cotton producers who participated in the cotton-adjustment program in 1935 and who will agree to participate in the 1936 program. The plan also specified that cooperating farmers will receive price-adjustment payments from the Agricultural Adjustment Administration equal to this difference between 12 cents and the average price of Middling ⅞-inch cotton in the 10 designated markets on the date their cotton is sold. The payment of the difference is limited to their allotments under the Bankhead Act. With the 1935 crop estimated in October at 19 percent larger than that of 1934, it seems probable that the farm value of lint plus price-adjustment payments in 1935–36 will materially exceed those of 1934–35. It is estimated that about 90 percent of the 1935 crop will be produced by cooperating producers, which, on the basis of the October estimate of total production would give about 10,450,000 bales. It is estimated that the total rental and parity payments to producers, under their 1935 cotton-adjustment contracts, will amount to about $125,000,000, which is considerably larger than the $116,000,000 paid cooperating producers in 1934, and is equivalent to about 2.4 cents per pound on the estimated production of the cooperating farmers.

Middling ⅞-inch cotton in the 10 designated markets in 1934–35 averaged about 14 percent higher than in the previous season and more than 110 percent higher than in 1931–32. Including the processing tax, cost of cotton to domestic mills was about 11 percent higher last season than in 1933–34 and approximately 170 percent higher than in 1931–32, but was 8 percent lower than the average for the 5 years ended 1929–30. On the average, the raw-cotton costs last season represented about 59 percent of the wholesale prices of unfinished goods compared with an average of 56 percent in the 5 years ended 1929–30. During the first quarter of the current season, cotton represented 56 percent of the wholesale price of unfinished goods. In Liverpool the price of American Middling ⅞-inch in terms of British currency averaged about 15 percent higher last season than in the previous season, and 44 percent higher than in 1931–32. In general, the increase in the price of American cotton since the 1931–32 cotton season in most other countries has also been much less than that which has occurred in the United States since the value of the dollar has declined substantially relative to the value of the currency of most foreign countries since that time.

In 1931–32 and 1932–33 the price of American cotton in foreign countries was very low relative to most foreign growths, particularly Indian. From that time until the first part of the 1934–35 season, there was a rather steady increase in the price of American relative to foreign growths. In September and October 1934 the price of American at Liverpool was the highest relative to Indian (with the exception of June, July, and August 1930) since August 1920, and higher relative to Egyptian Uppers than at any time since the early part of 1923–24. Later in the season, however, the price of these growths increased relative to American owing in part to the decline in crop conditions in India and Egypt, particularly in India, and to the rather substantial shifting on the part of spinners from American to other growths. For the 1934–35 season as a whole the price of three types of Indian cotton at Liverpool averaged 72 percent of the price of American Middling and Low Middling, compared with 74 percent in 1933–34, 87 percent in 1932–33, and a 10-year average of about 81. In October 1934 the ratio was 65, while in August and September this year it was 76. The price of Egyptian Uppers in Liverpool averaged 109 percent of the price of American Middling last season, compared with 111 percent the preceding 12 months and a 10-year average of 126 percent. During the first 2 months of the current season the ratio was 114. Most southern Brazilian cotton is of American upland varieties and usually sells for a price not greatly

different from that of the bulk of the crop produced in the United States. Last Season Sao Paulo Fair averaged about 97 percent of the price of Middling 7/8-inch American.

STAPLE SITUATION

The domestic supply of American cotton with staples 1 1/8 inches and longer for the 1935–36 season is now expected to be slightly larger than for the 1934–35 season, and is about as large as, or larger than, for any other season since records became available in 1928–29. The carry-over of these staples on August 1 of 498,000 bales was about 25 percent smaller than a year earlier, but this decrease in the carry-over is now expected to be more than counterbalanced by the increase of these staple lengths in the 1935 crop. The increase in supply of American long-staple cotton, along with further increases in the supply of Brazilian cotton, a considerable proportion of which is of the longer staples, is counterbalanced to some extent by a decrease in the supply of Egyptian cotton.

Premiums in cents per pound for staples 1 1/8 inches and longer, following the advance from 1932 to 1934, declined during the season 1934–35, and in August and September 1935 were narrower than for the corresponding period in any year since 1932. These premiums, when expressed as a percentage of the Middling 7/8-inch price, were narrower in August and September than for the corresponding period in any other year since 1928. Prices of long-staple cottons of foreign growth (Egyptian, Brazilian, and Peruvian) compared with prices of Middling 7/8-inch American cotton in Liverpool were also relatively low during the season 1934–35, and in August and September 1935 were relatively lower than for the corresponding period in any other year, except 1934, since 1931. The relatively low prices of rayon in recent years which competes more directly with longer-staple cotton, and technological improvements which have increased the substitution of shorter staples for the long staples, particularly in the production of automobile tires, supplemented the influence of increased supplies on prices of the longer staples. The 12-cent loan, by giving more support to prices of the shorter than to prices of the longer staples, tended to narrow premiums for the longer-staple American cotton in 1934–35.

The indicated supply of medium staples ($\frac{15}{16}$ inch to $1\frac{3}{32}$ inches, inclusive) in the 1935–36 season of approximately 9,290,000 bales is about 8 percent larger than for the preceding season, but about 8 percent smaller than the average for the 5-year period ended 1933–34. The carry-over of these staples in the United States on August 1 of 3,329,000 bales was 28 percent smaller than a year earlier, but 7 percent larger than the average for the 5-year period ended 1933. The indicated production of the medium staples in the 1935 crop, amounting to about 5,961,000 bales, was 37 percent greater than in 1934, but 9 percent less than the average for the 5-year period ended 1933. The increase in premiums for staples $\frac{15}{16}$ inch to $1\frac{1}{16}$ inches, inclusive, during the 1933–34 season was on the whole well maintained throughout the 1934–35 season, and in August and September 1935 premiums for these staples, when expressed as a percentage of the price for Middling 7/8-inch, were somewhat wider than for the corresponding period a year earlier. Premiums on cotton $\frac{15}{16}$ inch to $1\frac{1}{16}$ inches, inclusive, are one of the reasons for further efforts to increase the production of these staples to replace the shorter staple cottons. This, along with further improvements in quality in other respects, offers a means of strengthening the competitive position of American cotton in foreign markets.

The indicated domestic supply of American cotton with staples twenty-nine thirty-seconds inch and shorter for the 1935–36 season of approximately 7,773,000 bales is about 10 percent larger than a year earlier, about the same as in 1933–34, but considerably smaller than for any other season since records became available in 1928–29. The increase in the indicated supply in 1935–36 is due largely to the larger quantity of these staples in the 1935 crop. Discounts for staples of thirteen-sixteenths inch continued to widen from the narrow point reached in 1932–33, and in August and September 1935 were wider than for the corresponding period in any other year since 1932, although prices of Indian relative to American cotton in Liverpool, after reaching a low point in October 1934, advanced somewhat, and in August and September 1935 were relatively higher than for the corresponding period a year earlier. The effect of this increased supply of short-staple cotton in the United States on prices is counterbalanced to some extent by a decrease in the supply of Indian and Chinese cotton, most of which is of the shorter staples.

COTTONSEED

The relatively small supplies of edible fats and oils in the United States and in foreign countries, along with the upward trend in consumption, are favorable to maintaining prices of cottonseed oil at relatively high levels throughout the current season. Furthermore, the supplies of edible fats and oils at the end of the current season will probably be relatively small. The influence of smaller stocks and relatively high prices of edible fats and oils on cottonseed prices will no doubt be counterbalanced to some extent by the influence of somewhat lower prices of cottonseed hulls and meal as a result of increased supplies of feeds.

Cottonseed produced in the United States in 1935–36 is now expected to reach about 5,000,000 tons, which is about 19 percent larger than the crop in the previous season, but with that exception the smallest since 1923–24, and 22 percent smaller than the 5-year average for the period ended 1933–34. The United States average farm prices of cottonseed increased from $9.52 a ton in 1931–32 to $34.76 in 1934–35. The average price of $32 on October 15 was 10 percent lower than a year earlier, but was higher than on the corresponding date for any other year since 1928 and 93 percent higher than the average on the corresponding date for the 5 years ended 1933. Since about three-fourths of the cottonseed crop in the United States is crushed, prices of cottonseed are largely determined by prices of cottonseed products, which include cottonseed oil, cake or meal, hulls, and linters. Prices of these products are in turn affected by the supply of these and other competing products.

COTTONSEED OIL

Oil is usually the most valuable cottonseed product and during the last 10 years it averaged approximately 53 percent of the gross value of all cottonseed products. Cottonseed oil is used largely in the production of compounds and vegetable shortenings, in which form it competes directly with lard, other vegetable oils, edible tallows, and fish oils. The indicated supply of cottonseed oil for 1935–36 (stocks on July 31 plus estimated production during the succeeding 12 months) is now (October) expected to be about 1,826,000,000 pounds (crude and crude equivalent), which is about the same as for the previous season, but 8 percent smaller than the average for the 5 years ended 1933. Stocks of cottonseed oil on hand July 31, 1935, amounting to 27,187,000 pounds of crude and 446,641,000 pounds of refined, totaled about 31 percent less than a year earlier, but were slightly greater than the average on the corresponding dates in the 5 years ended 1933. Production of cottonseed oil in 1935–36 is expected to be about 1,300,000,000 pounds (crude), which is about 17 percent larger than in the previous season, but about 13 percent smaller than the average for the 5 seasons ended with 1933–34. Although prices of crude cottonseed oil declined somewhat from the high point in February 1935, the average price of 8.74 cents a pound in September 1935 for oil in tanks f. o. b. southeastern mills was 33 percent higher than a year earlier, 75 percent higher than the average on the corresponding dates in the 5-year period ended 1933, and higher than for the corresponding period in any other year since 1927.

Lard is the principal competitor of cottonseed oil and the commercial supply of lard for the 1935–36 season (stocks on hand June 30 plus production during the succeeding 12 months, basis Bureau of Census data) is now (October) roughly estimated at about 988,000,000 pounds, which is about 18 percent smaller than a year earlier, and 45 percent smaller than the average for the 5-year period ended 1933–34. Stocks of lard on hand June 30, 1935, of 63,578,000 pounds were 53 percent smaller than a year earlier, 48 percent smaller than the average on the corresponding dates for the 5-year period ended 1933–34, and the smallest for more than a decade. Conditions in October indicate that the commercial production of lard in 1935–36 will probably be about 925,000,000 pounds, which is about 13 percent smaller than a year earlier, but 45 percent smaller than the average for the 5 years ended 1933–34. Prices of lard advanced considerably during the season 1934–35 and in September 1935 the average price of refined lard at Chicago of $16.97 per 100 pounds was 31 percent higher than a year earlier, 69 percent higher than for the corresponding date in the 5 years ended 1933, and higher than for the corresponding period in any other year since 1926. It is expected that the number of hogs slaughtered and the

quantity of lard produced will be materially larger in 1936–37 than in the current season. (See Hogs, p. 55.)

The supply of vegetable oils that compete directly with cottonseed oil is not expected to be greatly different in 1935–36 from that of a year earlier. Stocks of the principal competing vegetable oils (peanut, coconut, corn, and soybean) on June 30, 1935, of 246,300,000 pounds (crude and crude equivalent) were 8 percent smaller than a year earlier but 6 percent larger than the average for the 5 years ended 1933. Production of these oils in the 12 months ending June 30, 1935, of 448,000,000 pounds was 16 percent smaller than a year earlier and 7 percent smaller than the average for the 5 years ended 1933.

Imports of cottonseed oil during the year ended July 31, 1935, amounted to about 131,320,000 pounds, compared with no imports during the previous year. In 1934 the quantity of fish oils used in compounds and vegetable shortenings amounted to about 10,775,000 pounds, which was about 16 percent more than a year earlier, but about 6 percent less than in 1932. Trade reports indicate that stocks of edible fats and oils in foreign countries at the beginning of the current season were somewhat smaller than a year earlier.

COTTONSEED MEAL AND HULLS

Conditions in October indicate that the supply of cottonseed cake and meal for 1935–36 will be about 2,122,000 tons, which is about 22 percent larger than a year earlier, but about 6 percent smaller than for the 5-year period ended 1932–33; and that the supply of cottonseed hulls for 1935–36 will be about 1,164,000 tons, which is about 23 percent larger than a year earlier, but about 17 percent smaller than for the 5-year period ended 1933–34. These changes in supplies of cottonseed cake and meal and hulls are due largely to changes in the size of the crop of cottonseed. The supplies of competing feeds are also considerably larger for the 1935–36 season than for the previous season. (See Feed Crops and Livestock, below.) Prices of cottonseed meal (41-percent protein) at Memphis declined from a peak of $37.75 a ton in December 1934 to $24.30 in July 1935, when prices averaged lower than for the corresponding period in any other year since 1933. Prices of cottonseed hulls at Atlanta declined from a peak of $16 a ton in December 1934 to $10.12 a ton in July 1935, when prices were 28 percent lower than for the corresponding month a year earlier, but were 6 percent higher than for the corresponding period in 1933.

FEED CROPS AND LIVESTOCK

The total 1935 production of corn, oats, barley, and grain sorghums was 91,366,000 tons (Oct. 1 estimate), compared with 50,781,000 tons harvested in 1934 and 100,642,000 tons, the 5-year period (1928–32) average. These grains were each supplemented by unusually small carry-overs of old-crop feed grains at the beginning of the 1935–36 season. About the same quantity of wheat, but more rye, may be fed in 1935–36 than in the previous season. Supplies of commercial feeds in 1935–36 will probably be somewhat more plentiful than in 1934–35, particularly the high-protein supplements. Taken all together, the 1935–36 supply of feed grains, including the carry-over of old-crop grain, probable quantities of wheat and rye that may be fed, and the prospective supplies of byproduct feeds total approximately 106,000,000 tons, compared with 120,000,000 tons, the annual average for the period 1928–29 to 1932–33. Allowing for an average carry-over into the 1936–37 season and for commercial use of feed grains, the 1935–36 supply of these items for feed purposes would give each grain-consuming animal unit, including poultry, about the same quantity per unit as on the average in the years 1928–29 to 1932–33.

Hay supplies, after making adjustments for the carry-overs at the beginning and the end of the season, provide nearly 2 percent more tonnage per hay-consuming animal unit than on the average in the years 1920–29. Compared with the last 5 years, hay supplies per unit seem high.

The acreage of feed grains—corn, oats, barley, and grain sorghums—in 1936 may not be greatly different from that of 1935. In 1935 the corn acreage was 9 percent under the average of the period 1928–32; the oat and barley acreage was about equal to average, but the grain-sorghum acreage was the largest on record. The soybean acreage was also the largest on record.

With normal weather conditions in the spring of 1936 and a continuation of the corn-hog program, a smaller grain-sorghum acreage, about an unchanged oat and barley acreage, and a slightly increased corn acreage may be expected. Some decrease in the soybean acreage for grain and for hay or forage from the record 1935 acreage may be anticipated. The increase in corn may not fully offset the prospective reductions in grain sorghums and soybeans.

The wheat-adjustment contract for 1936–39 provides that the adjusted acres on farms under contract may be used for soil-improving or erosion-preventing crops, for pasture, fallow, forest trees, and such other purposes as the Secretary of Agriculture may prescribe. A similar provision will probably be included in other contracts. Such a provision places emphasis on pastures and meadows for feed on the adjusted acres. The long-time trend in the use of land under contract will be toward an increase in feed obtained from pasture, meadows, and hay crops, and a decrease in the feeds obtained from cultivated crops.

Average yields on the prospective acres of feed grains would give a 1936 production about 5 percent larger than in 1935, but such production would still be under the 1928–32 average. The increase in the production of grain-consuming livestock will probably be as great or greater than this increase in feed production.

FEED SUPPLIES FOR 1935–36

THE DIFFERENT FEEDS

Corn.—The 1935 United States corn crop for all purposes was 2,213,000,000 bushels (Oct. 1 estimate), compared with 1,377,000,000 bushels harvested in 1934, and 2,562,000,000 bushels, the 5-year (1928–32) average. The harvested area of 93,590,000 acres was 9 percent under average. Planting of corn was delayed by wet weather over most of the Corn Belt. In Missouri, Kansas, and Illinois, considerable acreage intended for corn was never planted because of unfavorable weather conditions. The 1935 corn acreage in these three States, of 22,024,000 acres, was only 77 percent of the 5-year average. In some areas the inability of farmers to plant corn in season resulted in an increased acreage of soybeans or other crops which could be planted late. The corn crop matured rapidly in most areas.

Other feed crops.—The 1935 oat crop (Oct. 1 estimate) was 1,184,000,000 bushels, and, although it was more than double the small 1934 crop of only 526,000,000 bushels, it was 3 percent below the 5-year (1928–32) average of 1,218,000,000 bushels. The harvested acreage of 39,530,000 was only 1 percent under average. Because of an early and urgent demand for grain to supplement the short corn supplies, and because of the good hay crop, less oats were probably cut for hay from the 1935 crop than in recent years when hay supplies were below average. The quality of the 1935 oat crop is poor owing in part to unfavorable weather at harvest time. The 1935 barley crop of 290,000,000 bushels was the fourth largest on record, but was only slightly larger than the 5-year (1928–32) average production.

A record acreage of grain sorghums was harvested in 1935. An acute shortage of feed, heavy abandonment of winter wheat, and the late breaking of drought in the Southwestern States resulted in a sharp expansion in the grain-sorghum seedings to 11,091,000 acres, compared with an average of 6,855,000 acres. The 1935 production of grain sorghums was 124,000,000 bushels (Oct. 1 estimate), compared with 34,500,000 bushels harvested in 1934 and 93,800,000 bushels the 5-year (1928–32) average. The 1935 Texas crop of grain sorghums was 42 percent larger than average. The acreage and production of grain sorghums increased sharply in Nebraska. Not much change in production compared with average occurred in Kansas or Oklahoma, but slight increases took place in the minor producing States of Colorado, New Mexico, Arizona, California, and Missouri. Production of sorghum hay and forage was much larger than average owing to a material increase in acreage.

The larger soybean acreage was confined principally to the North Central States. Soybean production in six States of Ohio, Indiana, Illinois, Iowa, Missouri, and North Carolina, which produced about 91 percent of the total 1934 crop, was 32,870,000 bushels (Oct. 1 estimate), an increase of 93 percent over last year's production in these six States, and is by far the largest crop ever harvested. A higher-than-usual proportion of the total soybean acreage

was harvested for beans because of the ample supplies of hay and forage crops this year. (See Flaxseed, p. 25, report for further comments.)

The acreage of cowpeas grown alone and of velvetbeans was slightly larger than the 5-year (1928–32) average.

Wheat and rye feeding.—The 1935 United States wheat crop is small—only about 70 percent of average. However, the quantity of wheat feeding in 1935–36 on farms that grow wheat will probably not be greatly different from 1934–35 when about 80,000,000 bushels were fed. This is indicated by the price of wheat, compared with corn, and the large quantity of low-quality wheat. The price of wheat was relatively low compared with corn when wheat from the 1935 crop became available and old-crop supplies of corn were very small. In view of the strength in wheat prices and the prospective decline in corn prices with the availability of the 1935 crop, wheat per bushel will probably be higher priced than corn during the winter season and spring of 1936. The test weight per bushel of spring wheat and to some extent of hard winter is light and will thus force considerable quantities into feed channels.

The 1935 rye crop of 52,200,000 bushels was over three times as large as the small 1934 crop and 35 percent larger than average. Normal domestic utilization may be placed at about 32,000,000 bushels. Although the United States usually has a surplus of rye, the 1933 and 1934 rye crops, owing to low yields, were less than domestic requirements, necessitating some imports in the 1933 and 1934 crop seasons. The 1935 rye crop again exceeds normal domestic requirements, which will cause prices in 1935–36 to be lower than in 1934–35. Use of rye for feed in 1935–36 will probably be within the range of 10,000,000 to 14,000,000 bushels.

Hay and pastures.—Production of tame and wild hay in 1935 was 89,000,000 tons compared with an average of 80,400,000 tons for the 5 years 1928–32. The trend of United States total hay acreage has been downward since 1931; most of the decline in these years was in wild hay and most of the recovery in 1935 was in this kind. The 1935 alfalfa-hay crop of 28,300,000 tons was the largest on record. Compared with average (1928–32), the increase in alfalfa-hay acreage was 13 percent and in production 19 percent. The increased production compared with average was particularly marked in New York, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, and Iowa, and it more than offset decreases in North Dakota, South Dakota, Montana, and a number of the Western States. In sharp contrast, the acreage and production of timothy and clover has been decreasing. With the exception of 1934, the crop of 26,900,000 tons in 1935 was the smallest on record for recent years and compared with the average of 30,500,000 tons. Hay crops had good weather for growth, but poor weather for harvesting, and as the result of the latter, the quality of the crop is generally below average. (See Hay and Pasture, p. 50, for further details.)

The conditions of pastures and ranges, October 1, were about average. Pastures supplied more feed this summer and fall than at any time since 1928 and 1929 and ranges were the best since 1932.

Forage seeds.—See Hay and Pasture, p. 52.

Commercial feeds.—Supplies of commercial feeds in 1935–36 will probably be somewhat more plentiful than in 1934–35. Total supply of wheat offal in 1935–36 may be approximately the same as last year with the prospective increase in production about offset by smaller imports. The proportion of offal in a given quantity of wheat milled will be unusually large because of the light test weight of much of the 1935 spring wheat crop. Wheat-offal production during 1934–35 totaled 4,024,000 tons. This was supplemented by net direct imports of 271,000 tons, an increase of almost 100,000 tons over 1933–34, and compares with the 5-year (1928–29 to 1932–33) average of 150,000 tons.

The outturn of high-protein feeds in 1935–36 will be much larger than in 1934–35. The 1935 cottonseed crop may yield about 1,820,000 tons of cottonseed cake and meal. Adding to this the August 1 carry-over of cake and meal at mills gives a total supply of 2,019,000 tons for the 1935–36 season. This is about 10 percent larger than the supply available last season. The quantity of cottonseed cake and meal to be fed, however, will be influenced by exports and the quantity used for fertilizer. Last year because of the high price of meal only small quantities were used for fertilizer or were exported. Imports of cottonseed cake and meal in 1934–35 totaled 51,000 tons. Present indications are that exports may be small compared with the average and that no more than the usual quantity will be used for fertilizer.

The quantity of domestic flaxseed available for crushing will produce about 232,000 tons of linseed cake and meal, which exceeds the domestic consumption in any year since 1930–31. Production of gluten feed and hominy feed is expected to be larger during 1935–36 than in the previous year. With re-legalization of alcoholic-beverage production, distillers' dried grains and brewers' dried grains have again become important byproduct feeds. Average monthly production of these feeds has been about 17,000 tons.

The record 1935 crop of soybeans suggests increased supplies of soybean cake and meal. The quantity of soybeans used for seed, feed, and other purposes on the farms from the 1934 crop was 9,680,000 bushels compared with 7,800,000 bushels, the 5-year (1928–32) average. Allowing for a normal increase in these uses to 10,000,000 to 10,500,000 bushels, the remainder of 24,500,000 to 25,000,000 bushels would be available for crushing, export, or carry-over. Only 8,666,000 bushels or 47 percent of the crop was crushed in 1934–35. If this proportion of the 1935 soybean crop is crushed there would still remain an unusually large quantity for export, for carry-over, or for an increased use as feed on farms or as seed. (See Flaxseed, p. 25, for further comments.)

FOREIGN SITUATION

Imports of feed grains and hay, which were unusually heavy in 1934–35, may not exceed normal in 1935–36. Shortage of hogs, the products of which constitute the principal export item of the United States livestock industry, also reduces the importance of livestock developments abroad, at least during 1935–36.

For the longer time outlook, European livestock numbers, particularly hogs and dairy cattle, will probably be increased and an expansion in the feed-grain acreage may be encouraged, possibly at the expense of wheat, but the latter development might be delayed by a continuation of present international uncertainties. Exports of feed grains from the United States will probably meet increasing competition and are not likely to approach former levels during the next several years at least.

European requirements of feedstuffs during 1935–36 may be somewhat less than in 1934–35 as a result of reduced livestock numbers. But European supplies of feeds will apparently be reduced even more than livestock numbers and, since stocks are not large, import requirements this year should be somewhat in excess of those of 1934–35. Feed-grain production in Europe this year was about 8 percent below last year and the potato crop promises to be about 10 to 12 percent smaller. Some reduction in the root crops is also expected. A large part of the decline in feed-grain production was accounted for by a much smaller corn crop in the Danube Basin. The acreage planted to feed grains for harvest in 1936 may be increased as a result of an unfavorable season for the sowing of winter grains.

In Argentina, the inability to complete wheat seedings may lead to a substantial increase in plantings of corn and other feed grains. This will depend on better-than-normal weather conditions because rainfall up to October 1 was unusually small and subsoil moisture over wide areas is deficient. Regardless of an increase in acreage a corn crop equal to this year's record harvest can scarcely be expected.

DEMAND FOR FEED

LIVESTOCK NUMBERS

Livestock numbers on farms January 1, 1935, were reduced more from a year earlier than in any previous year. The reduction from a year earlier was greatest for cattle and hogs and was caused primarily by short feed supplies as a result of the drought and purchases of livestock by the Agricultural Adjustment Administration as a part of the Federal Government drought-relief program. When all classes of livestock are converted to a common basis which allows for differences of size and consumption of feed grains (weights used: 1 milk cow 1.00, 1 horse 1.14, 1 mule 1.14, 1 other cattle 0.51, 1 hog 0.87, 1 sheep 0.04, and 1 chicken 0.045) total livestock units on January 1, 1935, were the smallest since 1910 and were about 16 percent less than the 5-year (1928–32) average. Total grain-consuming animal units, January 1, 1935, were not quite 115,000,000 compared with about 139,000,000

at the beginning of 1934. The distribution of the decrease of slightly more than 24,300,000 grain-consuming animal units was as follows: Milk cows, 1,100,000; other cattle, 3,300,000; hogs, 17,600,000; horses, mules, and sheep, 300,000; and poultry, 2,000,000 units.

Livestock numbers may also be weighted by hay consumption. On this basis (weights used: 1 horse 1.00, 1 mule 1.00, 1 milk cow 1.00, 1 other cattle 0.75, and 1 sheep 0.12) hay-consuming animal units on January 1, 1935, of 74,400,000 were 8 percent under those a year earlier, when 80,917,000 units were on hand, but only 2 percent below the 5-year (1928–32) average. The decrease in hay-consuming animal units from the beginning of 1934 to 1935 was almost entirely in cattle.

The inventory of livestock at the beginning of 1936 is not expected to show much change from that at the beginning of 1935. Numbers of hogs and poultry probably will be slightly larger, those of cattle about unchanged, and those of horses and mules and of sheep and lambs probably a little smaller. In view of the increased quantities of feed grains and of hay and forage available for feeding, it is to be expected that livestock generally will be fed much more liberally in 1936 than they were in 1935. Hogs will be fattened to heavier weights and both dairy and beef cattle will be fed more grain per head. It is thus not probable that the carry-over of old-crop feed grains in 1936 will be as large as average.

The general trend of livestock numbers is likely to be upward during 1937 and 1938. The increase in hog production is expected to begin with the fall pig crop of 1935, which according to present indications will be about 20 percent larger than the fall crop of 1934. The 1936 spring pig crop is likely to be 20 to 25 percent larger than the spring crop of 1935 and a marked increase in the 1936 fall crop is also very probable. If corn production in 1936 should be average, the relationship of feed-grain prices to hog prices in the winter of 1936–37 will be such as to cause a further increase in hog production in 1937, the increase being mostly in the number of pigs farrowed in the spring of that year.

Cattle numbers, both beef and dairy stock, are likely to show some increase at the beginning of 1937 and a further increase at the end of that year. Many low-grade cattle and calves were slaughtered in 1934 and 1935. The increased slaughter of cattle and calves in 1935 resulted in part from the operations of the measures taken by the Federal Government in cooperation with the States to eliminate Bang's disease and bovine tuberculosis. The relatively high prices prevailing for low-grade cows during most of 1935, together with the shortage and high prices of feed, served as a further incentive to dairymen and to owners of low-grade cattle to dispose of such cattle accumulated in recent years. With increased feed supplies and improved pasture conditions, together with the better demand for dairy products and for beef in prospect, it is expected that both dairymen and beef-cattle producers will retain and increase their breeding stock in 1936 and 1937. The tendency to increase herds probably will be most pronounced in those areas most seriously affected by the 1934 drought.

Sheep numbers also probably will show some increase at the beginning of 1937 and possibly some further increase at the beginning of 1938. There is likely to be some expansion in flocks in those sheep-producing States that were adversely affected by the drought. Numbers of horses and mules may not show material change in 1937 and 1938 from present levels, but there are indications that the downward trend in numbers of such stock is drawing to an end. Continued increases in colt production which began in 1933 may terminate the long downward trend in the number of horses and mules on farms in the early part of 1936. The low point in the number of animals of working age, however, may not occur until a few years later.

FEEDING PROSPECTS, 1935–36

With supplies of hay and roughage large and with prices low in nearly all States, with 1935–36 feed-grain supplies much larger than last season and hog numbers greatly reduced, there is a wide-spread tendency to turn to cattle feeding to utilize available feed. The high price of beef as compared with butterfat has been a factor in increasing the interest in beef production. The number of cattle to be fed for market during the late fall and winter feeding period of 1935–36 will probably be materially larger than the small number fed

in 1934–35. The increase will be general both in the Corn Belt and in other areas where cattle are finished for market in considerable numbers.

Dairy cattle will receive nearly the usual quantity of grain during the 1935–36 feeding period. The number of milk cows on farms this winter will be 6 or 7 percent fewer than the peak numbers of 2 years ago, but only down to about the level of January 1932. Numbers of milk cows are not expected to show much, if any, increase for another year or two. The quantity of grain fed per cow was greatly reduced during the summer and early fall of 1935 by the excellent pasturage available and by the relatively high cost of grain and feed as compared with prices of dairy products.

After the pasture season closes it is probable that milk cows will receive about the usual quantity of grains and concentrates per head. Some butterfat producers with limited grain supplies will feed their milk cows little except roughage in order to save grain for meat animals, which are selling at relatively high prices. Elsewhere many farmers with small herds will be inclined to use the liberal supplies of hay on hand, rather than purchase grain, particularly if prices of dairy products tend to discourage intensive feeding. It is expected, however, that the relatively high prices of meats and lard and the upward trend in consumer incomes will help to maintain a generally good demand for dairy products this winter. As fewer cows are on farms than for several years and a smaller-than-usual proportion of cows have freshened this fall, it would seem that moderately liberal feeding of feed grains to dairy herds will be required to supply the usual per capita supply of milk and butterfat. On the whole, therefore, it seems probable that, in most sections, commercial dairymen will be able to sell their products at prices that are moderately favorable in comparison with feed costs and that they will be able to purchase about their usual feed supplies.

The hog-corn price ratio will be unusually favorable in 1935–36. Hogs will probably be fattened to heavier weights. The United States hog-corn price ratio based on farm prices was 13.3 on October 15, compared with 6.8 a year earlier and the long-time October 15 average of 11.7. The price ratio may be expected to increase further during the season and remain at an unusually high level for practically all of 1935–36. With an average 1936 corn production, the ratio will probably remain favorable during most of the 1936–37 corn season. It is probable that hog feeders will keep a large proportion of feed on farms until 1936 crop prospects are clearly indicated.

The number of lambs to be fed for market during the 1935–36 feeding season is expected to be substantially smaller than the number fed during the 1934–35 season and will probably be the smallest number in at least 6 years. Although the total number in the Corn Belt States will be smaller this season than last, it is probable that farmers in some of the States where the 1934 drought was most severe will feed more lambs than last season.

The relationship between poultry prices and feed prices and also between egg prices and feed prices in the fall of 1935 were favorable to poultry and egg production. The number of laying birds in farm flocks in the first half of 1936 is likely to be at least 5 percent larger than in the first half of 1935, and an increased hatch of young chicks in the spring of 1936 is probable. The number of laying birds, including potential layers, in farm flocks on October 1 was nearly 3 percent greater than a year earlier.

COMMERCIAL DEMAND FOR FEEDS

The quantity of corn and other feed grains used by industries in 1935–36 will probably be somewhat larger than in 1934–35, when commercial demand was restricted by short supplies and high prices. The reduction in commercial demand in 1934–35, however, was not so great as the decrease in the supply of feed grains, since many of the products made from feed grains are nationally advertised food products and the retail prices fluctuate less than does the cost of raw materials. The relatively high cost of feed grains increased competition from various substitutes. Competition may be much less effective in restricting the quantity of feed grains used by industries in 1935–36. The current processing tax on corn is 5 cents per bushel. No processing tax is levied on the other feed grains.

Wet-process corn grindings from the 1934 corn crop (November 1934 through September 1935) totaled 50,000,000 bushels compared with 64,000,000 bushels in the same period of 1933–34 and 66,600,000 bushels, the 5-year (1928–29 to

1932–33) average. The 1934–35 grind was the smallest for this period since 1920–21. The narrow price spread between cane sugar (sucrose) and either corn sugar or corn sirup, and increased competition from duty-free imported starches were important factors causing a reduced outlet for the products of the wet-process industry. The shortage of vegetable oils and feeds facilitated the disposal of corn oil, gluten feed, and gluten meal. Prospects are for a slight increase in the fall grinding of corn and for a considerably heavier grinding when supplies from the 1935 corn crop become generally available.

A larger production of corn meal is also probable. The annual production of corn meal in the United States in the past has been a fairly constant percentage of the corn crop. The current active demand for brewers' grits and flakes, however, increased the proportion somewhat. Current production figures on corn meal are generally lacking, but, based upon freight movement of the product, production from the 1934 crop was below that from the 1933 crop by a considerable margin. Competition from imported brewers' rice, a form of broken rice, has been light and will continue to be so in 1935–36 because of the large compensating tax of 75 cents per 100 pounds.

Use of corn and corn products in the distilled-spirit and fermented-liquor industries continued to increase in 1934–35. Some further increase is probable in 1935–36, although at a somewhat slower rate than during the last several years. Total utilization of corn products in the legal manufacture of cereal beverages and fermented malt liquor in the fiscal year ended June 30, 1935, was 340,841,000 pounds, compared with 256,000,000 pounds in the previous year and 57,000,000 pounds in 1932–33. Last year's use was the equivalent of around 11,000,000 bushels of corn. The distilled-spirits (including alcohol) industry used 19,400,000 bushels of corn in the fiscal year ended June 30, 1935, as against 12,800,000 bushels in 1933–34 and 5,800,000 bushels in 1932–33.

An unusually large commercial outlet has been developed for barley and other grains suitable for malting purposes. The estimated production of barley malt in 1934–35 was 57,000,000 bushels of 34 pounds each, compared with from 20,000,000 to 28,000,000 bushels in the years just prior to relegalization of beer. Imports of barley malt were unusually heavy in 1934–35 and totaled the equivalent of 7,254,000 bushels of barley against 4,524,000 bushels in 1933–34 and 1,401,000 bushels in 1932–33. Prospective requirements of barley malt for 1935–36 may be placed at about 70,000,000 bushels, compared with 64,000,000 bushels in the previous year and 52,000,000 bushels in 1933–34.

Manufacturers of beer used 50,757,000 bushels of barley malt in the fiscal year which closed June 30, 1935, compared with 42,147,000 bushels in 1933–34 and 11,294,000 bushels in 1932–33. Distillers used 4,974,000 bushels of malt in 1934–35, 4,556,000 bushels in 1933–34, and 922,000 bushels in 1932–33.

Barley that has suitable malting qualities for brewing purposes commands a substantial price premium in cash markets over ordinary or feed barley. About the usual proportion of the 1935 California barley crop was of malting quality. By far the greatest proportion of the barley used for malting in the United States consists of barley produced in the central Northwest east of the Rocky Mountain area. Of this barley that was shipped to the terminal markets in 1934, 49 percent was graded as malting barley but only 23 percent of the 1935 crop marketed up to October 1 met the grade requirements for malting barley. To grade as malting barley, the barley must be of a variety acceptable to the maltsters, and must be fairly plump, sound, and clean, and practically free of diseased and broken kernels.

Although the malting quality of the barley produced east of the Rocky Mountains this year has been materially lowered, principally by factors beyond farm control, ordinarily many of the quality factors which prevent commercial barley from meeting the requirements for malting barley can be largely avoided by the use of clean, pure seed of desirable malting-barley varieties, and through proper cultural and grain-handling methods on the farm.

INFLUENCE OF 1934 DROUGHT AND OF GOVERNMENTAL ACTION ON FEED-GRAIN AND LIVESTOCK PRODUCTION

The severe drought of 1934, which extended over nearly three-fourths of the area of the United States, created an unprecedented emergency in feed-grain production and livestock feeding. Low yields and acreage abandonment resulted in feed supplies much under the requirements of the livestock on hand. With limited funds with which to buy feed, farmers had the alternative of

rushing their livestock to market in an unfinished condition and at relatively low prices or of leaving the animals to die of thirst or starvation.

As the seriousness of the situation became apparent, measures were taken to aid farmers in the affected areas. The problem of inadequate feed supplies was approached from numerous directions. Conservation and the most efficient utilization of available feeds and forage crops were encouraged. Local regional surpluses were noted and a wide distribution of such feeds was made in deficit areas. An agency was established which functioned as a clearing house to supply information concerning location and quantities of surplus feeds. A commercial market for corn fodder and stover was guaranteed. Purchases of soybean hay were arranged and a deficiency feed agency was organized to import Canadian hay. The western railroads, in cooperation with the Government, gave reduced rates on feeds, hay, and other forages to be moved into the drought area and on livestock to be moved out of the area for feeding.

Large numbers of cattle, sheep, and goats were purchased by the Government in areas where the feed shortage was most severe. Some were slaughtered soon after purchase; others were shipped to regions with surplus feed and pasture and were slaughtered later. Emergency loans were granted to aid in buying necessary feed wherever feasible. Finally, the provisions of the adjustment contracts of the Agricultural Adjustment Administration were modified to encourage a greater acreage of emergency forage crops. The extreme changes made in productive organization and in the methods of operation as a result of the drought in 1934 were from necessity, but the lessons learned may lead to permanent changes on many farms. The drought brought out forcefully, especially to farmers in regions of low rainfall and in regions where rainfall is quite variable, the desirability of carrying adequate feed and financial reserves. Feed reserves in 1936 will very probably be larger than in 1935, with prospects for a relatively greater increase in roughage than in feed grains. The drought also effectively demonstrated that each year much feed in the form of low-grade roughage is normally wasted which can be profitably utilized in livestock feeding, especially during emergency periods. Attention is also focused on the necessity of controlling wind erosion in regions of low rainfall. Some shifting of livestock production in some areas, and a more conservative balance between livestock numbers and feed-crop production in others, may result from the 1934–35 experience.

Farmers who were faced with the necessity of selling their livestock, reduced their poorer stock and held their better-quality animals. The necessity of maintaining breeding stock in important breeding areas was recognized. In other words, the livestock-purchase program served as a gigantic culling process. Some improvement in the efficiency of beef-producing herds should be a result.

The short 1934 feed crops were supplemented to a certain extent by imports of foreign feeds. Although foreign feeds are imported into the United States in practically every season, the imports were much larger than usual in 1934–35. Imports of feed grains in the year ended June 30, 1935, totaled 1,134,000 tons, or only about 2 percent of the small 1934 domestic production of these grains. Imports of byproduct feeds and hay were also larger than usual. The value of the imports of feed grains, including the imports of 8,000,000 bushels of feed wheat, of the byproduct feeds, and of hay, totaled about $41,500,000. The value of these imports was only 5 percent of the increase in gross farm income (including benefit payments) from 1933–34 to 1934–35.

Many extensive shifts in feed-crop acreage have taken place. The total United States acreage of corn, oats, and barley in 1935 was 146,077,000 acres, or 94 percent of the 5-year (1928–32) average of 155,394,000 acres. The 1935 acreage was below average by more than 10 percent in most of the States comprising the Corn Belt. The reduction is particularly significant in Nebraska, Missouri, Iowa, Illinois, Indiana, and Ohio. Planting of the 1935 corn crop was delayed materially in several of these States. The reduction was also marked in Texas and Oklahoma and in the areas closely surrounding the Corn Belt.

The dairy States of New York, Wisconsin, and Minnesota, the Southeastern States, and practically all of the Western States increased their feed-grain acreage in 1935 over the average acreage. Nevada, Colorado, and Wyoming were exceptions. The increase in the above dairy States was 5 percent, in the Southeastern States 12 percent, and in the Western States (where increases did occur) 13 percent. The tendency to increase feed-grain production in areas outside of the Corn Belt will probably increase livestock numbers in order to make the best utilization of feed grains, hay, and pastures.

The extent to which these changes may take place will depend in a large livestock control programs, on the relative prices of various farm commodities, on rainfall conditions in the dry regions, on the extent to which soil-erosion control is emphasized, and on the apparent effect of more legumes on crop yields.

CORN BELT

Material reductions in the acreage of corn and wheat in the Corn Belt and northern dairy States have taken place. The commodity contracts have usually provided that under normal conditions, the areas retired from the production of basic commodities be seeded to permanent pastures, to soil-improving and erosion-preventing crops, for resting or fallowing the land, for weed eradication or for planting farm wood lots. The normal tendency will be to increase the number of cattle or sheep in order to make full use of the increased hay and pasture land. With less intensive feeding this does not necessarily mean increased meat production from these classes of livestock. More attention probably will be given to the immediate increase in feed resources in the western part of the Corn Belt where variations in the yield of feed grains are relatively great. The drought experience revealed that larger quantities of certain roughages which are normally wasted may be utilized in feeding. Some changes in feeding methods to include more roughage may result. Continued extensive use of lespedeza in the southern Corn Belt and northern cotton States is anticipated.

NORTHEASTERN DAIRY REGION

In the Northeastern States sufficient hay and roughages are normally produced, but this region depends to a large extent upon the feed grains from surplus areas. High feed-grain prices relative to milk prices in 1934–35 reduced farm incomes. If relatively high feed-grain prices are maintained the quantity of feed grains purchased may be decreased by growing more grain locally in the most favored areas. More alfalfa hay may be grown and the quantity of purchased high-protein feeds reduced. The proportion of grain in the dairy ration may also be reduced.

COTTON BELT

A very large part of the acreage taken out of cotton and tobacco production in the South has been planted to food or feed crops. The 1935 acreage of corn in the six important cotton States east of the Mississippi River was 9 percent greater than average, of hay 4 percent, and of wheat 36 percent. In the past the South has been a market for the feed grains and hay produced in the Corn Belt and in the Great Plains region, for pork and lard produced in the Corn Belt, and for wheat, eggs, and dairy products. With increases in the local production of these products, the quantity purchased from surplus areas will be less. It may be expected that the increases in hay and feed crops will be sufficient to supply feed for work stock and whatever other livestock may be kept. With larger supplies of feed, some increase in the number of livestock seems probable, especially dairy cattle, hogs, and poultry, since greater quantities of dairy products, meat, poultry, and eggs may be used on the farms. As the result of the drought there probably will be less shifting of crop land to grazing land in western Texas and in the Oklahoma cotton area than in the wheat and grazing region and less shifting to feed crops than in other parts of the cotton region.

The extent to which these changes may take place will depend in a large measure on the prospective trend of cotton acreage. Since the cotton acreage and corn acreage in the important cotton States vary inversely, an increase in the cotton acreage would suggest a decrease in the corn acreage.

WHEAT AND GRAZING REGION

More permanent changes in organization and management of farms may be expected in the western cattle and grazing regions than in other areas. The drought clearly indicated the necessity for wind-erosion control in parts of this area. This, together with larger feed and financial reserves in order to prevent a repetition of the 1934 crisis, would bring about a better balance between livestock production and feeding. In the Pacific Northwest the crop-reduction

program may result in a greater acreage of permanent pastures to prevent erosion, in more summer fallowing, and in more alfalfa in those areas in which there is sufficient rainfall.

FEED PRICES

Prices of feed grains, feedstuffs, and hay declined from the scarcity level of 1934–35 to a basis of plenty in 1935–36. Generally speaking, prices of important feeds reached seasonal peaks in late 1934 or in early 1935. The winter months of December to February and the early spring months of March and April were warmer than normal in nearly all sections of the country, which made it possible to conserve much feed. Weather conditions were thus an important factor in the early seasonal downward trend of prices. Although corn planting was delayed by the wet, cold May and June, the warmer months of July and August favored the oat, barley, and hay crops and prices of these feeds declined sharply. Pastures yielded more feed last spring and summer than in many years. Based on farm prices, corn declined from a peak of 85.3 cents (Jan. 15) to 71.8 cents (Oct. 15); oats from 54.7 cents (Feb. 15) to 27.0 cents (Oct. 15); barley from 80.2 cents (Jan. 15) to 39.4 cents (Oct. 15); and hay from $14.02 (Feb. 15) to $7.26 per ton (Oct. 15). The premium paid in September and October for malting barley over feed-barley types in cents per bushel is not greatly different from that paid in these months last year. Alfalfa-hay prices declined to the level of prices for clover hay and close to that of timothy hay. Feedstuffs, as a group, reached a peak of 120 percent of the 1926 level about the middle of December and were only 71 percent of that level on October 22.

The farm price of corn October 15 was 89 percent of the "fair exchange value", oats 54 percent, barley 51 percent, grain sorghums 66 percent, and hay 49 percent. "Fair exchange value" as defined by the Agricultural Adjustment Act is determined by multiplying the 5-year average farm price, August 1909 to July 1914, by the current index number of "prices paid by farmers, including interest and taxes."

The index number of grains reached a peak in the 1934–35 season of 116 percent of the 1910–14 level. The October 15 index was 101. In the same period the index of meat animals increased from 73 percent to 125 percent, and chickens and eggs from 119 to 132 percent, whereas the index number of dairy products receded from 107 percent to 104 percent. As the result of the relatively sharper increase in prices of meat animals and poultry compared with prices of feed grains, the ratio of livestock prices to feed prices has reached levels favorable for feeding. The decline in corn prices this fall and early winter will probably be of a greater degree and at a greater rate than in hog prices, so that the hog-corn price ratio will maintain a position considerably above average during 1935–36.

The probable seasonal movements of corn prices in 1935–36 are difficult to determine, since numbers of livestock in the aggregate are outside of post-war experience. It is expected, however, that the low level of farm reserves, the favorable feeding ratios, and the probable feeding of livestock to heavier weights will tend to build up a somewhat greater-than-normal demand for livestock feed. Utilization by industries will probably increase over 1934–35.

In years when livestock numbers are below normal, and when feed supplies are moderate, as they are at present, the price of corn on the average does not make so great a seasonal rise in the winter months as when livestock numbers are large and feed supplies are short, provided the general price level for all commodities remains unchanged. In recent years when livestock numbers were below a long-time normal, corn prices on the average weakened in November and then maintained a steady level from December through March, finally advancing in April and May to a slightly higher point than the November figure. The United States farm price during 1935–36 will probably average above the corn-loan basis of 45 cents per bushel. The 1936 summer and fall prices will be principally affected by the condition of pastures and new-crop prospects.

The general commodity price level for 1935–36 may be slightly higher than in 1934–35, despite the prospective lower level of prices of some agricultural products. The probable upward trend of the general price level may tend to offset the influence of the small livestock numbers on corn prices and thus bring about a seasonal advance in corn prices somewhat closer to normal

than otherwise would be obtained. Prices of the other feeds may be affected in somewhat the same way as corn, with barley from the 1936 crop particularly influenced by the size and extent of the feeding of the prospective larger number of spring pigs, prior to the availability of corn from the 1936 crop. Large supplies of barley in California will tend to hold down the price structure for all feeds on the west coast unless an enlarged export outlet is found for the large local supply of barley.

HAY AND PASTURE

The supply of hay for the 1935–36 feeding season is more than ample for the hay-consuming animals now on farms and should leave a normal carry-over next spring. Total production is expected to be 89,037,000 tons as compared with an average of 80,384,000 tons for the 5 years 1928–32. The quantity of hay marketed in 1935–36 will probably be less than in 1934–35 because supplies are fairly well distributed. The quality of the crop, however, is below that for recent years because of heavy rains during harvest time. There will be a more-than-normal deficiency in certain counties in Texas, Oklahoma, Kansas, Colorado, Nebraska, and New Mexico where the drought continued during 1935.

The prospect of marketing hay from most surplus-producing areas is not promising because the hay acreage is approaching a self-sufficient basis in most States and former deficient areas may even have a surplus, but the poor quality of much of the 1935 crop of hay indicates that a market outlet for the small quantity of high-grade hay will be available.

HAY SUPPLIES

Total production, exclusive of straw, fodder, stover, etc., is expected to be 89,037,000 tons in 1935, which is more than 50 percent larger than the extremely small crop of 57,028,000 tons harvested in 1934. Large quantities of straw, stover, and other roughages are saved every year and exceptionally large quantities were used as emergency feed in the drought areas in 1934. The average production of hay for the 5 years 1928–32, inclusive, was 80,384,000 tons. The total supply of hay for the current crop year, including an estimated carry-over on farms, of 4,512,000 tons May 1, 1935, is 93,549,000 tons compared with the 1928–29 to 1932–33 average of 90,110,000 tons. The supply per hay-consuming animal unit is larger than in recent years and about the same as the average for the 5 years 1928–29 to 1932–33, inclusive.

In the western drought area, hay production was extremely small in 1934, and in the 17 Western States disappearance of hay was larger than production in 1934 and probably larger than the production in 1933. In this group of States alfalfa acreage, as well as production, is still much below the 1928–32 average. On the other hand, alfalfa acreage has tended to increase in the 8 North Central States east of the Dakotas, Nebraska, and Kansas, and in Kentucky, particularly in 1935. In this area clover acreage has been somewhat reduced during the same period. In the 13 States east of Ohio and north of North Carolina alfalfa has also increased but the hay crop in that area is still predominantly clover and timothy. In the eastern Cotton Belt, including Louisiana and Arkansas, hay acreage and production have increased substantially in recent years.

QUALITY AND DEMAND

The total quantity of hay marketed from the crop of 1935 will be less than from that of 1934. The movement of forage during the emergency caused by the 1934 drought was greater than for any year since the period of the World War. The forage that was shipped into the drought area included hay, straw, and stover which came from such sources as the States west of the Rocky Mountains; from Illinois, Tennessee, and Kentucky; and from the Provinces of Canada. None of these States or Canada normally ship forage into the territory that comprised the 1934 drought area. Territory adjacent to the 1935 drought area has a surplus of forage which may be shipped into that area unless it is more economical to ship out the cattle than ship in the hay. Outside the 1935 drought area, except for a scattered shipping demand for high-grade hay, the market for hay will be largely limited to nearby stockyards, dairies near large cities, alfalfa mills, and retail feed stores.

There has been a steady decline in hay marketings because of an increased tendency on the part of farmers in deficit hay areas to produce their own feed and to a lessened demand because of a decline in the numbers of horses and mules. The seeding of the adjusted acres, under the adjustment program, to hay and pasture is likely to result in an expansion of acreage to those crops and a further decline in the commercial demand for hay, especially for medium- and low-grade hay. An example of the increased tendency on the part of farmers to produce their own feed is found in Kentucky, Tennessee, Georgia, Alabama, and Mississippi, where the 1935 production of both tame and wild hays indicated by the October 1 crop report was 3,919,000 tons. This is an increase of 291,000 tons over the 1934 production in these States and 474,000 tons larger than the 5-year average, 1928–32.

The quality of hay produced in 1935 is considerably below that for recent years. Heavy rains at harvest time caused the majority of the crop to be damaged after cutting or they delayed the cutting until the hay became overripe. Most of the prairie hay is unusually weedy as a result of last year's drought, which reduced the stand of native grasses. Even in the surplus hay producing sections, however, where the largest amount of damage occurred to hay produced in 1935, there is likely to be a good demand for high-grade hay. The large supply of low-grade hay in 1935, the limited market demand, and relatively low prices may result in greater-than-normal quantities of hay being fed on farms where produced.

MARKETINGS OF HAY

The decline in total hay marketings and the movement of hay directly from country points have brought about a steady decline in the volume of hay received at terminals. For example, the receipts of hay at Kansas City declined from 46,500 cars in 1920 to approximately 3,500 in 1933. There was a marked increase in the hay receipts at a number of markets during the winter of 1934–35 as a result of the drought. But the receipts at most of the terminals since July 1, 1935, have been almost negligible. Another cause of the reduction of hay receipts at larger markets has been the increased transportation of hay by motor truck which has encouraged the shipment directly from producing to consuming points. In some areas as much as 50 to 75 percent of the shipped hay is hauled by motor truck.

Imports of hay into the United States from July 1934 to June 1935 were approximately 86,000 tons. About 55,000 tons of this quantity came in duty free, under the President's proclamation which provided for the removal of the duty on hay imported for drought-relief purposes. Imports of hay in 1935–36 are expected to be negligible.

PRICES

Hay prices in 1934–35 advanced to the highest point since 1920–21. The drought of 1934, which extended over nearly three-fourths of the area of the United States, reduced the 1934 hay crop 29 percent below the 1928–32 average. The utilization of increased quantities of roughage such as stover and straw, and other important drought-relief measures tended to limit the price advances for hay. The mild winter of 1934–35 reduced hay requirements, while the wet spring with favorable midsummer weather produced more pasturage from temporary and permanent sources than in many years.

Alfalfa hay prices receded from $15.38 on December 15, 1934, to $8.10 on October 15, 1935. Alfalfa prices for the 1934–35 season were the highest since the World War, except for a few months in the latter part of the 1928–29 season when feed supplies were short. The 1935 record alfalfa crop and its below-average quality forced alfalfa-hay prices on farms in many parts of the central west to the level of clover prices and nearly down to the prices for clover and timothy mixtures. The proportion of alfalfa hay increased from one-fourth of all tame-hay production in the early 1920's to 37 percent in 1935. Although prices of alfalfa hay are relatively low compared with those for dairy cows, they are about average compared with butter prices.

Prices of timothy and clover mixed declined from $16.01 on January 15, to $8.66 on October 15, with prices averaging close to $7 per ton in the West North Central States at the latter date. The 1934–35 prices of timothy hay were the highest since 1925–26 and 1926–27 when small crops of timothy were harvested. From a peak of $16.34, February 15, clover-hay prices declined to

$9 per ton on October 15. Prices for prairie hay declined relatively more than prices for other classes of hay, from an average farm price of $13.33 on April 15, the highest price since the World War, to $5.81 per ton on October 15.

HAY-PRODUCTION TRENDS

The trend toward increased acreage of pasture and of hay and forage crops will probably continue. The 1936 crop-adjustment contracts of the Agricultural Adjustment Administration encourage the use of the land that is retired from the production of basic commodity crops under contract, for the planting of soil-improving or erosion-preventing crops, and for pasture, fallow, forest trees, etc.

The increase in the use of improved pastures and properly cured roughage crops is being encouraged in order to achieve more economical production of meat, milk, and other animal products. The ample seed supplies of most pasture and meadow crops and lower prices for such seed should encourage much wider use by farmers in establishing new seedings of pastures and meadows during 1936.

The program of the Soil Conservation Service of the United States Department of Agriculture will encourage increased plantings of erosion-preventing crops adapted also to pasture and meadow use.

In the 1935 drought area the planting of emergency hay and forage crops will depend largely on the rainfall that occurs during the winter and spring of 1935–36. If there is sufficient moisture in the soil at planting time in 1936, there are likely to be extensive plantings of Sudan grass, sorghums for forage, and quick-growing roughage crops and there will probably be increased interest in improving the native range.

That part of the large soybean acreage in the Corn Belt utilized for hay and pasture may be somewhat curtailed in 1936. Continued extensive use of lespedeza in the southern Corn Belt and northern cotton States is anticipated. Owing to the large number of cattle in the Southeastern States, increased planting of pasture, hay, and forage crops will probably continue in 1936.

PASTURES

The crop-control programs are undoubtedly encouraging increased acreage of permanent and semipermanent pastures. The lessons learned in recent drought years will undoubtedly encourage better treatment of pastures and ranges and will probably lead to some improvement of them. Overgrazing was general in the drought area in 1934, but was relieved to some extent during the winter and spring of 1934–35 by a large amount of temporary grain pasturage and a reduction in numbers of livestock. Many permanent pastures that appeared to have been killed by the drought recovered considerably in the spring of 1935. Although, in general, ranges and permanent pastures were in poorer-than-average condition until early summer, they then improved rapidly and in late summer and early fall the condition of both farm pastures and ranges was generally reported much above 1934, and equal to or better than the 10-year average ended in 1932. On August 1 the condition of pastures was 109 percent of the 1923–32 average condition and on October 1 was about the same as the 10-year average for that date. On August 1, the condition of ranges in 17 Western States was 105 percent of the 1923–32 average and on October 1 was 103 percent of the 10-year average. The pasturage available in the summer of 1935 was therefore an important factor in the feed situation and was in marked contrast to the situation in 1934 when considerable summer feeding had to be done out of the current hay supply.

With ranges and pastures now in better-than-average condition, they should furnish a normal supply of feed at the beginning of the 1936 season and if normal weather occurs during the summer this favorable position should be maintained.

FORAGE-CROP SEEDS

Supplies of the seeds of most grasses, particularly timothy, appear to be more than sufficient for the normal requirements in this country, in sharp contrast with the short supplies of 1934. The production of the seed of such grasses as the wheatgrasses and smooth bromegrass is much larger than in the recent past. Large crops of Sudan grass and millet seed were produced.

The acreage of the grasses harvested for seed in 1935 was increased chiefly because of the high prices of seeds in the spring of 1935, the ample supplies of hay during that year, and the rather favorable weather for seed production and harvesting

Supplies of alfalfa, sweetclover, and Korean lespedeza seed appear to be sufficient for normal seeding requirements. The production of Korean lespedeza seed and soybeans will be large. On the other hand, supplies of red and alsike clover seed are below normal because the extreme drought of 1934, together with hot weather, killed a large portion of the fall seedings in 1933 and of the spring seedings in 1934.

Current prices to growers of grass seed average only about one-third as much as last year, three-fourths as much as in 1933, and one-half as much as the 5-year (1928–32) price. Prices for alfalfa and clover seed are about one-third lower than the 1934 prices and one-sixth lower than the 5-year average, but about one-third higher than the 1933 prices.

MEAT ANIMALS AND MEATS

Livestock slaughter and meat production in 1936 will be little if any larger than in 1935, when meat supplies were relatively small. With much larger supplies of feeds, both grains and hay, available in 1936 than in the present year, weights of both hogs and cattle slaughtered will be heavier than in 1935, and about equal to the average. A considerable increase in slaughter supplies of hogs is probable in the last half of 1936, especially in the last 3 months, when supplies from the 1936 spring-pig crop become available, but this may be offset at least in part by a smaller number of cattle slaughtered in 1936. Although cattle slaughter in the first half of 1936 probably will be smaller than in the corresponding period a year earlier, the supply in this period will include a much larger proportion of well-finished cattle than in 1935. Slaughter of lambs in the first 6 months of 1936 will be considerably smaller than in the first half of 1935.

The probable further improvement in consumer demand for meats and the continued small total livestock slaughter are likely to result in the general level of livestock prices being at least as high in 1936 as in 1935. Some decline in the price of the better grades of slaughter cattle is probable in the first half of 1936 in view of the probable increased supplies of these kinds of cattle. Prices of the lower grades of slaughter cattle may be strengthened somewhat by a strong replacement demand, and they probably will make at least an average advance from January to June and will average for the year higher than in 1935. It also appears probable that hog prices in the summer of 1936 will be somewhat lower, and in the last 3 months of 1936 considerably lower than in the same period of 1935, but the average yearly price of hogs in 1936 (calendar year) may be only slightly lower than that in 1935. It should be noted, however, that the yearly average price of hogs in the hog-marketing year ending September 1936 probably will be higher than the average for the year 1934–35.

SUPPLIES

The supply of meat animals on farms in terms of the total live weight of the three species at the beginning of 1936 probably will not be greatly different from a year earlier, when the aggregate supply was estimated to be the smallest in more than 30 years. With none of these species is there any present certainty as to whether numbers on January 1, 1936, will be larger or smaller than a year earlier, and with none of them is the change, either upward or downward, expected to be large. It seems probable, however, that a considerable increase in the number of hogs on farms will occur during 1936 and some increase in cattle numbers next year is also probable.

From 1928 to the beginning of 1934 the trend in the number of meat animals was upward. The increase during this period in terms of total live weight was about 12 percent. Most of this increase was eliminated in 1934, largely as a result of the severe drought. The number of cattle on farms increased steadily from 1928 to early 1934 with the increase in numbers from January 1, 1928, to January 1, 1934, amounting to 11,600,000 head, or 20 percent. By the beginning of 1935, however, cattle numbers were about 7,600,000 smaller than at the beginning of 1934. Thus, more than three-fifths of the increase occurring in the 5 years 1928–34 was eliminated by the beginning of 1935.

Hog production (number of pigs raised) decreased from 1928 to 1930 and increased sharply in 1931 with little change in 1932 or 1933. Partly as a result of the 1934 drought and the resulting shortage of feed grains and partly as a result of the low corn-hog price ratio prevailing from the middle of 1933 to early 1934, the number of pigs produced in 1934 was 35 percent smaller than in 1933 and was the smallest number produced in many years. The number of hogs on farms at the beginning of 1935 was the smallest in 50 years. Sheep numbers increased steadily from 1923 to 1932, the increase amounting to about 17,000,000 head, or 45 percent. From 1932 to 1934, sheep numbers declined slightly but the number on January 1, 1935, was about 5 percent smaller than a year earlier and was the smallest since 1929.

Commercial supplies of meat and lard during the first 8 months of 1935, as measured by the total dressed weight of animals slaughtered under Federal inspection, was about 28 percent smaller than in the same period last year and was about 26 percent below the 5-year average. As compared with a year earlier, production of pork, including lard, under Federal inspection was 41 percent smaller; production of beef and veal was 14 percent smaller; and that of lamb and mutton was 15 percent greater. For the first time in many years the dressed weight of cattle and calves slaughtered under Federal inspection was larger than the dressed weight of hogs. Since beef and veal production in the first 8 months of 1935 was slightly larger than the 5-year average while the production of pork including lard was about 46 percent below the 5-year average, the proportion of beef and veal in the total supply of meat produced under Federal inspection was abnormally large.

The decrease in meat production in 1935 compared with 1934 resulted from the smaller number of hogs and cattle slaughtered as well as lighter average weights of cattle. In the first 8 months of 1935 the number of hogs slaughtered under Federal inspection was 41 percent smaller than a year earlier, while the average live weight of hogs was about the same in 1935 as in 1934. In the same period of 1935 inspected cattle slaughter was 9 percent smaller than in 1934 and the average live weight of cattle was 3 percent lighter than a year earlier. The number of sheep and lambs slaughtered under Federal inspection in the period January to August 1935, was about 12 percent greater than in the corresponding period of the previous year and the average weight of sheep and lambs was slightly heavier in 1935 than in 1934.

During the next 3 or 4 years a considerable expansion in livestock numbers and meat production will take place. The largest increases from present levels will be in hogs. Some increases in both cattle and sheep are also expected. The trend of numbers of the various species during these years may be considerably affected by governmental actions of one kind or another. If programs are continued for the control of hog production and feed-grain production and if producers representing the bulk of production cooperate in these programs, the number of hogs raised in the Corn Belt in the next several years will be somewhat smaller than they otherwise would be. This reduction, however, may be no greater than the decrease that has occurred in exports of hog products because of restricted foreign outlet. In this case if yields of corn per acre are about average or better, weights of hogs probably will be heavier than average. With the number of hogs limited by a control program for hogs and feed grains, the increase in cattle and sheep raising in the Corn Belt probably would be greater than if no program were adopted, and there may be little or no decrease in the quantity of grains utilized by cattle and lambs.

The result of these several tendencies probably would be to reduce the total meat output from Corn Belt livestock production below what it would be if there were no production-control programs for hogs and feed grains.

Although a program of feed-grain production control or of hog-production control will tend to stimulate cattle and sheep growing in the Corn Belt and in the South, the grazing policies of the Grazing Administration and the Forest Service are tending to reduce production of these species in the Western States, where most of the public domain is located. The cotton- and tobacco-acreage reduction programs will tend to increase pasture and forage-crop acreage (if not feed-grain acreage) in the Cotton Belt. If this increased acreage is maintained permanently, an increase in livestock production of all species in the South is probable, but such an increase would be small in relation to the total livestock production of this country.

The net results of these different factors influencing livestock production probably will be to perpetuate a situation caused temporarily by the 1934 drought;

that is, to decrease somewhat the proportion of livestock production from the area covering the Great Plains and westward and to increase the proportion in the area east of the Mississippi River and including the East North Central, East South Central, and South Atlantic States.

DEMAND

Further improvement in the consumer demand for meats occurred in 1935 following the very marked improvement in 1934. For the first 8 months in 1935 the demand for various classes of meats measured in terms of quantities taken and prices paid by consumers was at a higher level than at any time since 1931. As compared with last year the decrease in the quantity of meat consumed thus far in 1935 has been accompanied by a proportionately greater increase in retail prices of meats. Per-capita consumption of federally inspected meats and lard from January to August 1935, totaling about 55 pounds, was about 20 percent less than in the corresponding months of 1934, and was the smallest on record. In the first 8 months of 1935 the index of retail meat prices, as reported by the Bureau of Labor Statistics, averaged 34 percent higher than in the same period last year.

The demand for each class of meat improved materially during 1935. Per-capita consumption of federally inspected pork, including lard, in the 8 months, January to August 1935, was 30 percent less than in 1934, and retail prices of hog products at New York averaged 50 percent higher in the January to August period this year than in the same months of 1934. Per-capita consumption of federally inspected beef and veal for the same 1935 period was reduced 11 percent and retail prices of Good grade beef at New York rose by about 35 percent. Per-capita consumption of lamb and mutton, on the other hand, from the period January to August 1935 was 13 percent greater than a year earlier, while retail prices of Good grade lamb at New York averaged 7 percent higher in 1935 than in 1934.

The improvement in the consumer demand for meats in 1935 as well as in 1934 was brought about chiefly by increased industrial activity and pay rolls and a higher level of national income. The demand for meats, as well as for other food products, also has been strengthened to some extent by large Government disbursements for relief and other purposes.

The domestic demand for meats in 1936 will depend chiefly upon developments in the business and industrial situation. As indicated in the section of the report on demand, it now appears that further increases in industrial output and employment are probable in the coming year, hence some additional improvement in consumer incomes along with further strengthening in the demand for meats is expected.

HOGS

The downward trend in hog production (pigs raised) which began in the fall season of 1933 apparently ended in the spring of 1935, and increasing production can be expected during the fall of 1935, and in 1936 and 1937. Supplies of hogs for slaughter in the present marketing year which ends September 30, 1936, however, are expected to be even smaller than the very small supplies in the previous marketing year.

The seasonal distribution of marketings in 1935–36 is likely to be materially different from that of 1934–35 and from the average. Present indications point to a considerable decrease in slaughter supplies during the winter season (October to April) as compared with a year earlier and to some increase in slaughter in the summer season (May to September 1936). It is expected that the proportion of the total slaughter in 1935–36 that is slaughtered in the first quarter will be very small, and that slaughter in the last half of the year may exceed that in the first half. Average weights of hogs slaughtered in 1935–36 will be heavier than in 1934–35, which will offset, at least in part, the decrease in the number slaughtered.

Further improvement in consumer demand for hog products in this country is probable, but little improvement in the present restricted foreign outlet for American hog products is in prospect. In view of continued small slaughter supplies of hogs and the further improvement in domestic demand, it is probable that the yearly average of hog prices in the marketing year 1935–36 will be higher than the yearly average of 1934–35. Seasonal price relationships, how-

ever, are expected to be quite different, and prices are not likely to reach as high a peak as they did in the summer of 1935.

How rapidly hog production will increase during 1936 and 1937 is uncertain, since there are no other periods in which the decrease in production was so great as it was in 1934–35. On the basis of the feed-grain production in 1935 and the probable relationship between hog prices and corn prices this winter, an increase in hog production in 1936 over 1935 of 25 to 30 percent would be about the maximum that could be expected. If feed-grain production in 1936 should be average or better, a further material increase in hog production would occur in 1937.

DOMESTIC SUPPLIES

Although federally inspected slaughter of hogs during the 1934–35 marketing year, totaling 30,678,000 head, was the smallest in 25 years, it is expected that slaughter in the 1935–36 marketing year will be even smaller. The 1935 spring pig crop was estimated by the Department of Agriculture at 30,402,000 head for the United States. This is a decrease of 7,405,000 head, or 19.6 percent, from the spring pig crop of 1934 and a decrease of 20,814,000, or 40 percent, from the average of the spring crops of 1932 and 1933. In the North Central (Corn Belt) States the spring crop this year was 22.3 percent smaller than that of 1934 and 42 percent below the 1932–33 average.

The number of sows to farrow in the fall season of 1935 was estimated in the June pig crop report at 3,175,000 head. This is an increase of 19.5 percent over the very small number farrowed in the fall of 1934, but is 34 percent smaller than the average of 1932 and 1933. The total number of litters, spring and fall, to be farrowed in 1935 was indicated in the June pig crop report to be about 8,196,000. This is a reduction of more than 10 percent from the total of 1934 and of 41 percent from the average of 1932 and 1933. For the Corn Belt States the reduction in total litters in 1935 is 12 percent from 1934 and 44 percent from the average of 1932 and 1933. If the average number of pigs saved per litter in the fall of 1935 is as much above the fall of 1934 as the spring of 1935 was over the spring of 1934, the total number of pigs saved in 1935 will be less than 50,000,000 head. This would be about 4,000,000 head less than the total number of pigs saved in 1934 and more than 31,000,000 head less than the average of 1932 and 1933 Inspected slaughter in the marketing year 1935–36 from such a production probably will total between 27,000,000 and 28,500,000 head, and be the smallest since the year 1909–10.

The seasonal distribution of slaughter in 1935–36 will differ greatly from that of 1934–35 and will differ markedly from the normal distribution. In 1934–35 the distribution also was very abnormal. Slaughter during the first 3 months of 1934–35, October to December, was a record proportion of the marketing-year total, being 39.3 percent of such total. The next largest proportion that this 3 months represented of the 12-month total was in 1901–2 when it was 33 percent. The average proportion from 1920–21 to 1933–34 was 27.3 percent. The proportion of the yearly total slaughtered in the last 3 months of the year, July to September, was unusually small, amounting to 15.8 percent compared with an average of 19.8 percent for the years 1920–21 to 1933–34.

This unusual distribution of slaughter in 1934–35 was the result of several circumstances. The spring-pig crop was relatively large compared with the fall crop; the shortage of corn in many States and the very low hog-corn price ratio everywhere caused an early movement of the spring-pig crop. This tended to increase the proportion marketed in the 3 months, October–December. For much the same reasons the fall-pig crop also was marketed early, with a larger proportion marketed in April, May, and June, and a smaller proportion marketed in the 3 months, July to September 1935.

The seasonal distribution of slaughter in the 1935–36 marketing year is expected to be very different from that of 1934–35. Slaughter during the first quarter will represent a relatively small proportion of the yearly total and that during the last quarter will be a relatively large proportion. The change from the 1934–35 marketing year will be characterized by large decreases in the first quarter and progressively smaller decreases as the year advances, giving way to an increase in the last quarter.(July to September 1936). It is probable that the proportion of the 12-month total which will be slaughtered in the first quarter (October–December 1935) will be about the smallest on record and that slaughter in the last half of the year may exceed that in the first half as has

happened in only 1 year of record, 1910–11. Not only will the fall-pig crop of 1935 be unusually large relative to the spring-pig crop, but as hog production tends to increase in 1936 a much larger-than-normal proportion of gilts from the 1935 spring pig crop will be kept for breeding purposes. This will tend to reduce slaughter during the first 6 months of the marketing year and to increase it in the last 6 months when a large part of such hogs will be marketed as packing sows. Since the average date of farrowing of the 1935 spring-pig crop was unusually late with the largest percentage farrowed in May for any year in the 6 for which records are available, this will tend also to reduce the proportion of the crop marketed during the first quarter of the year.

The average weight of hogs slaughtered during the 1935–36 marketing year will be somewhat heavier than in the corresponding months of 1934–35, but probably no greater than the average of the preceding 5 years. The increase in weights will offset in part the decrease in the number of hogs slaughtered but probably will be reflected relatively more in lard production than in pork tonnage.

STORAGE SUPPLIES

Because of the very large reduction in hog slaughter in 1934–35 the hog-product-storage situation during the 1934–35 hog-marketing year was greatly different from that of previous years. Stocks of both pork and lard at the beginning of the storage season in November 1934 were considerably larger than the 5-year average for November 1. Holdings of pork increased in November and December but after January 1 they decreased, the out-of-storage movement being very rapid after March 1. Ordinarily, pork stocks reach their peak for the year at the beginning of March, but the out-of-storage movement from March 1 to August 1 is usually relatively small, whereas from August 1 to November 1 it is very large. Stocks of pork on October 1, 1935, were the smallest of record for the 20 years that storage figures have been compiled, and were about 47 percent less than those of the year earlier and than the 5-year average. Lard stocks usually increase from December 1 to August 1, but in the 1934–35 marketing year they reached their peak on January 1 and have since been decreasing. The total on October 1 was the smallest of record for that date and was 57 percent less than the 5-year October 1 average.

It now seems probable that storage stocks of hog products at the end of the 1935–36 winter season will be smaller than those of a year earlier. The small slaughter supplies of hogs and the relatively high prices of hogs expected during the 1935–36 winter season, along with the very small storage stocks on hand at the beginning of the season and the probability that hog slaughter in the summer of 1936 will be large in relation to slaughter in the preceding winter, are factors that will tend to hold storage stocks at the end of the season at a lower level than a year earlier. But since storage stocks will be very small at the beginning of the season, additions to storage holdings of hog products during the coming winter probably will be larger than those in the previous winter even though the total stocks on hand at the end of the winter are expected to be smaller than those at the end of last winter.

FOREIGN COMPETITION AND DEMAND

United States exports of pork and lard in 1936 probably will be even smaller than the very small exports in 1935. Indications are that foreign import restrictions may be liberalized and that European production, especially of lard, will be at a relatively low level. But as in 1935, reduced supplies available for export from the United States and the high domestic price level for hog products will be the major factors limiting exports in 1936. With a low level of domestic hog production expected during most of 1936 no material increase in exports of hog products is probable until late 1936 or early 1937.

Exports of pork from the United States in the hog-marketing year ended September 30, 1935, totaled about 105,000,000 pounds, a decrease of 33 percent from the 1933–34 exports. Lard exports in 1934–35, amounting to 142,000,000 pounds, were 73 percent smaller than in the preceding year. During the first half of the 1934–35 year, foreign import restrictions were still an important factor limiting the export movement. In the second half, however, the very great reduction in United States supplies, with the consequent increase in prices were more significant factors reducing exports of hog products than the existing import restrictions of the importing countries.

British import quotas continue to be the outstanding foreign restrictions on the exports of pork from the United States. Under these quotas the United States is allotted 8.1 percent of the total volume of cured pork allowed entry from non-Empire countries. For 1935, the total import allotment to such countries amounts to about 620,000,000 pounds as compared with an average annual importation of about 1,200,000,000 pounds in 1929–33. Since British pork production has increased somewhat since the quotas were originally imposed in late 1932 the latter have been reduced considerably from 1933 to 1935. There is evidence, however, that British production has not increased so rapidly as was anticipated and that some liberalization of the quotas may take place in 1936. Any enlargement of quotas would be accompanied by import duties on pork, now duty-free, with some preference being shown the Empire countries. During recent months, however, United States exporters have experienced some difficulty in filling even present allotments because of the relatively high prices obtainable in this country. It is probable, therefore, that the United States may not take advantage of an enlarged export outlet during most of 1936.

During 1934–35, and especially since February 1935, the scarcity of domestic lard for export has been reflected in the very small movement of this commodity to Great Britain which is an unrestricted market. Prior to early 1935 the virtual closing of the German market to United States lard was the chief limiting factor to the United States export trade in lard. One result of the curtailment of the United States supply has been the movement to the British market of lard from sources formerly supplying little lard to that outlet. In the first 8 months of 1935, only 44 percent of the lard imported into Great Britain was of United States origin as compared with 95 percent in 1934.

Among European hog surplus-producing countries, available data indicate that the low point in the hog-production cycle has been reached in Denmark and perhaps in the Netherlands. Reductions in hog numbers appear to be still in progress in Poland and in the Baltic countries. Control measures now in operation in most European surplus-producing countries are likely to prevent any marked expansion in hog output in those countries, but in view of the present favorable relationship of hog prices to feed prices some upturn in production is to be expected.

In Germany, the leading continental European importing country of hog products, the production cycle also appears to have reached a low point and indications are for an expansion in hog numbers. Germany and Czechoslovakia, two of the importing countries, are largely self-sufficient in the production of pork, but are unable to produce sufficient lard without creating a surplus of pork. These countries have found it advantageous to obtain their necessary supplies of both fat and pork from countries that are willing to accept their manufactured products in exchange.

In general, it is not probable that increased European hog production will be reflected in substantially increased marketings of hogs before late 1936. Total European hog marketings and slaughter in the first half of 1936 probably will be less than in the first half of 1935, but during the latter half of 1936 they should show an increase over the corresponding period a year earlier.

With respect to European lard production, supplies will be definitely smaller in 1936 than in 1935. Increased hog production in northern Europe will not materially increase lard supplies on the Continent, and in the Danubian lard-producing countries feed costs are not low enough to encourage much expansion in hog numbers.

PRICES

The trend of hog prices was sharply upward from late 1934 to mid-August 1935, with a moderate seasonal decline occurring in March and April and a temporary downward reaction taking place in June. The low point in prices during the 1934–35 marketing year was recorded in early November 1934 when the Chicago weekly average was $5.38 per 100 pounds. At the high point in mid-August the weekly average was $11.23. The highest daily price recorded at Chicago was $12.25 and was paid in September when the price spread for the different weights was wider than in August. Including the hog-processing tax of $2.25 per 100 pounds, the cost of hogs to packers when hog prices reached their peak in August and September was the highest since the summer of 1926.

The rise of more than 100 percent between the low price of November 1934 and the high prices reached in the summer of 1935 was relatively the largest

advance on record during a single hog-marketing year and in actual amount was only exceeded during the war year 1916–17 when prices were at a much higher level.

The extremely sharp reduction in hog marketings after December 1934 was the principal factor accounting for the marked rise in hog prices during the first 8 months of 1935. Improvement in consumer demand as a result of increased consumer buying power also contributed to the price advance.

The total live weight of hogs slaughtered under Federal inspection during the 1934–35 hog-marketing year, totaling 6,744,000,000 pounds, was about 32 percent less than in the preceding year, and 35 percent less than the 5-year average (1929–30 to 1933–34).

The average price paid by packers for hogs during the 1934–35 marketing year (exclusive of processing tax) was $7.74, compared with $4.07 in 1933–34, $3.68 in 1932–33, and $5.72 the 5-year average (1929–30 to 1933–34). Adding the processing tax (computed at the different rates in effect) the cost of hogs to packers in 1934–35 would be $9.99 compared with $5.65 in the previous year.

The total amount paid by packers for hogs slaughtered under Federal inspection during the 1934–35 marketing year, excluding processing-tax payments, was about $522,000,000 compared with $401,000,000 in 1933–34, $402,000,000 in 1932–33, and $595,000,000 the 5-year average (1929–30 to 1933–34).

If there is no change in the hog-processing tax the yearly average of hog prices in the 1935–36 marketing year is expected to be somewhat higher than the average in 1934–35. The trend of prices during the year, however, and the price relationships as between seasons will be considerably different because of the differences in the distribution of marketings over the year. Since supplies during the first quarter of the 1935–36 marketing year (October-December 1935) will be very small and much smaller than a year earlier, prices during this period are expected to be much higher relative to those of a year earlier than in any other period of the marketing year.

In view of the indications that a much larger-than-average proportion of the winter supply of hogs will be marketed in the late winter and early spring, the seasonal rise in prices that usually occurs in the late winter may not take place or will be relatively small and very much smaller than that which occurred in 1935. With the 1936 summer supply relatively large, both in relation to the winter supply and to that of the summer of 1935, prices during the last half of the marketing year 1935–36 are expected to average lower than those of the corresponding months of a year earlier.

PRODUCTION OUTLOOK

The end of the downward trend in hog production which began in the fall season of 1933 apparently was reached with the small spring-pig crop of 1935, and increasing production can be expected during 1936 and 1937. How rapidly hog production will increase during the next 2 years is uncertain, since there are no other periods in which the decrease in production was so great as it was in 1934 and 1935. The nearest comparable situations to the present were those from 1908 to 1912 and from 1891 to 1896. Inspected slaughter for the marketing years 1909–10 (pig crops of 1909) decreased 7,500,000 head, or about 21 percent, from the previous year. Hog prices in 1910 advanced sharply and the 1910 pig crop, especially the fall crop, increased markedly. Inspected slaughter for the 1910–11 marketing year increased about 4,000,000 head and in the 1911–12 year was back about to the 1908–09 level.

Between the marketing years 1891–92 and 1892–93 the estimated inspected slaughter equivalent decreased about 6,500,000 head, or 27 percent, and it was not until the marketing year 1895–96 that it again reached the 1891–92 level. During that period, the 1894 drought occurred—probably the most severe ever known in this country with the exception of the one in 1934—and this doubtless tended to keep production from increasing more rapidly. In that period the drought occurred in the second year after production had been greatly reduced, whereas in the present period it occurred in the same year. The decrease in federally inspected slaughter for the 1934–35 year from 1933–34 amounted to 13,200,000 head, or 30 percent. If allowance were made for the pigs bought by the Government and slaughtered in August 1933 from the 1933 pig crop, the decrease was about 39 percent. Slaughter in the marketing year 1935–36 is expected to be about 5 to 10 percent smaller than that in 1934–35. No such reduction, either in numbers or in percentages as has taken place in the last 2 years, has ever before occurred and how rapidly a recovery can be made is very uncertain.

With production of corn and other feed grains in 1935 much greater than in 1934 and hog supplies so greatly reduced, it is expected that the hog-corn price ratio this winter will be unusually favorable for the feeding of hogs. This would be a stimulus to increased hog production in 1936, but in view of the general shortage and high prices of brood sows and the relatively small corn crop produced in some of the western Corn Belt States, it would seem that an increase in hog production (number of pigs raised) in 1936 over 1935 of 25 to 30 percent would be the maximum to be expected. The corn-hog program of the Agricultural Adjustment Administration to follow the one that expires November 30, 1935, will contain provisions intended to insure a hog production (pigs raised) in 1936 no smaller than would occur if no hog-control program were in effect. If an increase of 25 to 30 percent takes place this would give a total number of pigs saved in 1936 of about 62,500,000 to 65,000,000 head, assuming that the 1935 crop is about 50,000,000 head as was indicated in the June pig crop report. Such a pig crop in 1936 would be 20 to 24 percent smaller than the average of the crops of 1932 and 1933. If total feed-grain production in 1936 should be average or larger, another increase in hog production in 1937 would be expected.

BEEF CATTLE

Total cattle numbers in the United States at the end of 1935 are not likely to be greatly different from those of a year earlier but with feed-grain production much greater than in 1934, the number of cattle fed in 1936 is likely to be larger than the number fed in 1935. Marketings of grain-fed cattle during 1936, therefore, are expected to be larger than those of a year earlier but total slaughter of cattle and calves probably will be smaller. The slaughter supply is expected to include a much larger proportion of steers and a smaller proportion of cows and heifers and of calves than in the previous year.

Consumer demand for beef and veal in 1935 has been considerably stronger than in 1934 and much stronger than the comparatively weak demand in 1932 and 1933, and there are indications that further improvement may occur in 1936.

In view of the prospective increase in the marketings of grain-fed cattle in 1936, prices of the better grades of slaughter cattle during the first half of the year are likely to average lower than in the corresponding period a year earlier. Because of the reduced supplies of the lower grades, and the continued small supplies of pork, especially during the first half of the year, prices of such grades are likely to be relatively high compared with those of the better grades and may average as high as, or higher than, a year earlier. Seasonal price movements on all grades of cattle throughout 1936 are expected to be more nearly normal than they were in 1935.

Although the number of cattle on farms and ranches at the beginning of 1936 may be little different from the number at the beginning of 1935, it is probable that the trend in cattle numbers will be upward during the next few years. Most of the increase in numbers will be in the States west of the Mississippi River where the number was sharply reduced in 1934 as a result of the severe drought and the Government cattle-buying program. The rate of increase in this region will depend on feed conditions, the availability of credit, and the level of cattle prices. In other areas of the country no material change in cattle production in the next few years is probable unless some decrease in cash crops produced should result in a shift to the production of hay and pasture and thereby cause some increase in cattle numbers in such regions. If cattle numbers increase during the next few years, as now seems probable, the cattle supply situation (numbers on farms Jan. 1) at the beginning of 1939 will not differ greatly from that at the beginning of 1934 when numbers were relatively large.

SUPPLIES

The number of cattle on farms January 1, 1935, was 60,557,000 head, according to the estimate of the United States Department of Agriculture. This was 7,623,000 head, or 11.2 percent, less than the number January 1, 1934, but was about 3,000,000 head more than on January 1, 1928, the last low point of the cattle-number cycle. Compared with 1928, however, all of the increase was in the number of cattle kept principally for milk (cows, heifers, and heifer calves) and there was a small decrease in the number of other cattle, mostly cattle kept principally for beef. Compared with January 1, 1934, there were reductions of

2,221,000 head, or 6 percent in milk stock and 5,402,000 head, or 17 percent, in other cattle.

The decrease in cattle numbers during 1934 was larger than during any year of record. It was largely a result of the severe drought which extended over most of the country west of the Mississippi River and of the purchase and slaughter of cattle and calves as a part of the drought-relief activities of the Federal Government. Had there been no drought, it is probable that some decrease in cattle numbers would have occurred in 1934, but if feed production had been fairly normal the reduction would have been relatively small. With no abnormal conditions, such as wide-spread feed shortage or production-control plans, cattle numbers would have declined for some years and another low point in numbers would have been reached in about 1939 or 1940. Most of the decrease that would have normally extended over the following 5 or 6 years therefore occurred in 1934.

According to the estimate of the Department of Agriculture, the increase in cattle numbers between January 1, 1928, the low point of the cattle cycle, and January 1, 1934, was relatively larger in the West North Central States than in other areas. This area was most seriously affected by the 1934 drought, and the resulting reduction in cattle numbers there was the largest for all areas. As the 1935 census figures become available, they show many more cattle in the Southern States than do the Department's estimates as of January 1, 1935. Although detailed studies of these new census figures have not been completed, it is apparent that in a number of these States, the 1935 census figures indicate a much more complete enumeration in 1935 than in 1930. Since the Department's estimates in these States are based largely on the 1930 census figures, the published estimates are probably too low and after the final 1935 census reports become available the estimates for most of these States probably will be revised upward.

For nine Southern States for which 1935 census figures have been obtained, the number of cattle enumerated on January 1, 1935, was about 1,500,000 head larger than the estimate of the Department for that date, and was about 2,600,000 and 1,300,000 head larger, respectively, than the census enumerations of January 1, 1925, and January 1, 1920. With the large number of cattle in these States and little, if any, decrease in the North Atlantic and East North Central States during 1934, and the sharp reductions in cattle numbers west of the Mississippi River in 1934, the proportion of total cattle in the latter area has decreased materially from what it had been for some time.

From such studies as have been made of the differences between the estimates of the Department and the new census figures on cattle for States in areas other than the South, it is probable that when revised estimates for the years 1930 to 1935 are completed, they will show a larger increase in total cattle numbers between January 1, 1930, and January 1, 1934, and a smaller decrease between January 1, 1934, and January 1, 1935, than do the present estimates. Apparently the cattle situation measured in terms of cattle numbers on farms January 1, is somewhat less favorable from the standpoint of producers than the present estimates of such numbers indicate.

Developments during the present year until the end of September indicate that cattle numbers on January 1, 1936, may be somewhat smaller than a year earlier. During the 9 months, January to September 1935, total inspected commercial slaughter of cattle and calves of 10,936,000 head was the fourth largest commercial slaughter for the period on record. For the 3 months, July to September, it was the third largest. If slaughter during the last 3 months, October to December, bears somewhat the usual relationship to slaughter during the preceding 3 months as has prevailed in years of heavy slaughter, the total for the year will probably be one of the four largest totals on record. The 1935 percentage calf crop raised was small as a result of the poor condition of breeding stock during the breeding season and the heavy death losses of calves in the drought area. Death losses of cattle in the same area were also much above average. On the other hand, the large increase in importations of cattle in 1935 offsets, in part at least, those other factors that indicate decreasing numbers.

Slaughter of cattle and calves under Federal inspection during the first 9 months of 1935 was notable for the large numbers of cows and heifers and of calves in the total. The number of cows and heifers slaughtered was the largest and that of steers was the smallest for the period in the record covering 17 years. The proportion of cows and heifers in the total cattle slaughter

(52.5 percent) was much the largest on record and compares with an average proportion of 44.2 percent in the preceding 10 years. The number of calves slaughtered was the second largest on record, exceeded only by the commercial slaughter in 1934, and the proportion of calves to total cattle and calves was the largest on record. Records of State of origin of cattle receipts at a large number of public stockyards and packing plants this year show that there has been a heavy movement from the important dairy States in the East North Central and North Atlantic States and a relatively large movement from the South Atlantic and South Central States. Cattle marketings from all the West North Central States, except Kansas, during the first half of the year were sharply below those of the first half of 1934 and the marketings from most of the Western States were relatively small, except from California.

It is probable that the large slaughter of cows and heifers is directly associated with the heavy marketings of cattle from most of the important dairy States. The intensified tuberculosis-eradication campaign of the Bureau of Animal Industry and the marketings of cattle that have reacted to the test for Bang's disease have doubtless been important causal factors in this increased slaughter. The high cost and scarcity of feed in many areas during the winter and spring months, and the sharp advance in prices of cows and veal calves for slaughter after January 1 also encouraged a considerable culling of cows in all areas and probably accounted for the heavy marketings of calves.

Although cattle slaughter during the remainder of 1935 is expected to continue large, the number of grain-finished cattle in the supply will be small, as it was during the first 9 months of the year. Receipts of beef steers at Chicago during the first 9 months of 1935 were much the smallest for those months in the 14 years of record, being nearly 30 percent smaller than in 1934 and 34 percent smaller than the average of the preceding 5 years. The number of cattle on feed in the Corn Belt States on August 1 was estimated as about 30 percent smaller than a year earlier and the smallest for that date in many years.

Slaughter of cattle during the first 6 months of 1936 is expected to be smaller than during the corresponding period in 1935. The number of grain-finished cattle, especially steers, is expected to be considerably larger than in 1935, but supplies of cows and heifers may show a sharp decrease. The slaughter of calves during this period is also expected to be smaller than a year earlier.

CATTLE-FEEDING SITUATION

Information available at the beginning of October points to a material increase in the number of cattle to be fed for market during the late fall and winter feeding period this year over the small numbers fed a year earlier. It appears that the increase in feeding will be general, both in the Corn Belt and in other areas where cattle are finished for market in considerable numbers. With supplies of hay and roughage large and prices low, in nearly all States, and with feed-grain production much larger than last year and hog numbers greatly reduced, there is a wide-spread tendency to turn to cattle feeding to utilize available feed.

In the eastern Corn Belt States where cattle feeding in the winter and spring of 1934–35 was reduced little, if any, a considerable increase is indicated for this coming winter. Shipments of stocker and feeder cattle, inspected at stockyard markets, into this area during the 3 months, July to September this year, were but little smaller than the record for the period. These large inshipments followed record large inshipments during the first 6 months of this year, making a total for the 9 months, January to September, the largest in the 17 years for which records are available. The cattle bought in the first half of the year were largely for summer grazing to be fed out this coming winter, rather than cattle for immediate feeding.

In the western Corn Belt States, where cattle feeding in the winter of 1934–35 was greatly reduced as a result of the drought, a considerable increase in feeding in the winter of 1935–36 over a year earlier is indicated. This increase will be the largest in the States west of the Missouri River and in Missouri, the States where the 1934 drought was most severe. Since corn production this year in the States west of the Missouri River will be much below average, cattle feeding in these States this winter, although much larger than last, is expected to be considerably below average. Shipments of stocker and feeder cattle, inspected at public stockyards, into the western Corn Belt States

during the 3 months, July to September, were the smallest on record for these months. There has been, however, a very heavy movement of stocker and feeder cattle through large-scale auction markets in some of these States, as well as a heavy movement direct from cattle-growing areas to feed lots in these States, which did not go through either stockyards or auction markets.

A considerable increase in cattle feeding this year over last is indicated in nearly all far Western States. Feed supplies this year are generally abundant and low-priced and cattle feeding is being increased to utilize the feed. A considerable increase in cattle feeding in Texas, at cotton-seed oil mills and elsewhere, is reported as probable.

In line with present prices of slaughter steers, prices of stocker and feeder cattle are much higher this fall, and are the highest for any year since 1930 and about the same as in that year. Although the price of corn is expected to be considerably lower during the 1935–36 feeding season than during the 1934–35 season, it is likely to be materially higher than in the three preceding seasons. With prices of both feeder cattle and corn relatively high, the cost of finished cattle to feeders next winter and spring will be the highest since the winter of 1930–31.

CATTLE AND BEEF IMPORTS

The relatively high prices that have prevailed during 1935 in the cattle and beef markets in this country have attracted the largest volume of beef and cattle imports since 1929. Imports of live cattle during the first 8 months of the year totaled 279,000 head, compared with about 50,000 and 60,000, respectively, during the same periods of 1934 and 1933. Total imports for the calendar year 1934 reached 69,000 head. In 1929 the total amounted to 509,000 head.

Imports of live cattle from Mexico during the first 8 months totaled 185,000 head, whereas last year's corresponding figure was 44,000. Imports from that country for all of 1934 amounted to about 59,000 head, compared with 75,000 in 1933 and 253,000 in 1929. Most of the imports from Mexico were stockers and feeders.

Receipts of cattle from Canada totaled somewhat more than 92,000 head in the first 8 months of 1935. Of that number 34,000 were feeders or stock cattle, 45,000 were slaughter cattle and calves, and the remainder was made up of dairy and breeding stock. In the first 8 months of 1934 the total amounted to only 4,000 head and was in line with the small imports received annually since 1929. In the comparable period of the latter year, 162,000 head were received from Canada, of which 43,000 were feeders and 88,000 were slaughter cattle. Imports from Canada in all of 1934 totaled only about 7,000 head compared with 253,000 in 1929.

The volume of cattle imports into the United States is determined largely by the spread between prices in the exporting countries and those in this country in relation to the import duties in effect. These duties at present amount to 3 cents per pound on cattle weighing 700 pounds or more, and 2½ cens per pound on those weighing under 700 pounds. The spread between prices of comparable kinds of cattle in the United States and Canada widened materially early in 1935 as prices of cattle in this country advanced more than prices of cattle in Canada advanced. During recent months, however, prices of cattle have weakened somewhat more in the United States than in Canada and the spread between Canadian and domestic prices since May has not been so wide as it was earlier in 1935. This narrowing of the spread during recent months has caused imports from Canada to decrease as compared with the earlier months of the year.

There is little current information on the trend of cattle numbers in Mexico. There were reports of considerable cattle losses from drought during last summer on the ranges of northern Mexico, but there are no satisfactory estimates of the number of cattle in that country available for export. Cattle numbers in Canada have increased somewhat during the last few years, but the number on June 1, 1934, was not much larger than that reported for 1929.

Imports of canned beef into the United States during the first 8 months of 1935 totaled nearly 50,000,000 pounds, compared with about 26,000,000 pounds in the corresponding period of 1934. Practically all of such imports came in about equal proportions from Argentina and Uruguay. In the calendar year 1934 total imports of canned beef amounted to nearly 47,000,000 pounds compared

with about 41,000,000 pounds in 1933. In 1929, such imports totaled about 80,000,000 pounds. There was a marked reduction in 1930 and 1931, but since then such imports have been increasing.

For many years prior to 1932, the British market absorbed most of the exports of South American beef in the form of frozen or chilled beef. Restrictions imposed on that trade in more recent years, however, have tended to increase exports in the form of canned beef to the United States. There appears little likelihood of British import restrictions being liberalized in the near future and this will tend to maintain the movement of South American canned beef to the United States. Such imports are subject to a duty of 6 cents per pound.

Imports of fresh and frozen beef during the first 8 months of 1935 totaled 7,116,000 pounds compared with 137,000 pounds imported during the same period of 1934. Canada and New Zealand continue as the leading sources of imports of fresh and frozen beef, supplying 4,723,000 and 2,158,000 pounds, respectively.

Expressed in terms of live weight, the imports of cattle and beef during the first 8 months of 1935 were roughly the equivalent of about 6 percent of the cattle and calves slaughtered under Federal inspection during this period, or about 4 percent of total slaughter of cattle and calves.

PRICES

Cattle prices rose sharply from the fall of 1934 to the spring of 1935 and then declined until late July, after which they made some recovery but did not reach the high levels recorded in the spring. The rise was relatively not so great in the prices of the higher grades as it was on the lower grades, which were greatly depressed in 1934 because of the drought. Prices of canner cows, for instance, rose more than 200 percent and those of other grades of cows and Common-grade steers more than doubled, whereas prices of Choice-grade steers increased 65 to 70 percent.

The rise in the prices of the better grades during the late winter and early spring was contrary to the usual seasonal movement and was due largely to the great reduction in the supplies of pork, although the decrease in the numbers of Choice-grade cattle as a result of the drought was an important contributing factor. The price declines from early May to the end of July were in part seasonal, especially on the lower grades, although consumer agitation against the increase in meat prices at that time tended to depress prices. During the late summer and early fall, prices of the better grades were sustained by the small supplies of such cattle, and those of the lower grades by reason of the strong demand for stocker and feeder cattle and the demand for low-grade beef to replace pork in the manufacture of sausage.

The United States monthly average farm price of beef cattle rose from $3.81 per 100 pounds in November 1934 to $6.80 in May 1935, then declined to $6.20 in July and recovered to $6.41 in September. The May average was the highest price for any month since July 1930 and compares with $4.13 in May 1934 and $3.12 in December 1933, which was the lowest monthly price for the period for which records of farm prices have been kept (1910–35). In September farm prices averaged $2.20 higher than a year earlier.

The average price of cattle slaughtered under Federal inspection during the first 8 months of 1935 was $6.88 per 100 pounds, compared with $4.62 in the corresponding months of 1934 and $4.28 in the same period of 1933. The average price of slaughter calves in the first 8 months was $6.95 compared with $4.69 in the same months of 1934 and $4.71 in the corresponding months of 1933.

The total live weight of cattle slaughtered under Federal inspection for commercial purposes during the first 8 months of 1935, amounting to 5,324,000,000 pounds, was 11 percent less than that of the same period in 1934, but was 2 percent greater than the 5-year average (1930–34). Total live weight of calf slaughter during the 8 months was about 8 percent less than in 1934, but was nearly 17 percent greater than the 5-year average. Both live weights and dressing yields of cattle were much less than average and total beef production from inspected slaughter was 14 percent less than a year earlier and about 3 percent less than the 5-year average.

Because of the higher prices paid for cattle, packers paid a total of $366,000,000 for the cattle slaughtered under Federal inspection during the first 8 months of 1935 compared with $277,000,000 in the corresponding period of 1934 and $308,000,000, the 5-year average (1930–34) for the period. Payments

for calves slaughtered under Federal inspection totaled $47,000,000 compared with nearly $34,000,000 in the first 8 months of 1934 and $37,000,000 the 5-year average.

With increased cattle feeding probable during the next 8 months, supplies of fed cattle during 1936 will be considerably larger than in 1935, especially after the first quarter. Prices of well-finished cattle, therefore, are likely to decline during the late winter and spring as supplies of such cattle increase and probably will average lower than in the corresponding period of 1935. Prices of the lower grades on the other hand are expected to advance seasonally during this period and, because of reduced supplies of such cattle and the small supplies of pork probably will average as high as, or higher than, a year earlier. Seasonal price movements on all grades of cattle throughout 1936 are expected to be more nearly normal than they were in 1935.

PRODUCTION OUTLOOK

Although cattle numbers on January 1, 1936, will be much reduced from the number on January 1, 1934, as a result of the marked decrease in 1934 and a possible further slight decrease in 1935, numbers of cattle would seem to be about sufficient to furnish fairly ample supplies of beef and veal. Cattle numbers could be maintained at about the present level for the country as a whole, and permit an annual inspected slaughter of cattle and calves combined of about 15,000,000 head (assuming the relationship of recent years between inspected slaughter and total slaughter). Such a slaughter would be about 10 percent larger than the average for the 10 years 1924–33, but would include a smaller proportion of cattle and a larger proportion of calves than did the average of that period. In terms of total live weight of animals slaughtered, it would be equivalent to about the 10-year average.

It is very doubtful, however, whether cattle numbers in the next several years will be kept as small as they were at the beginning of 1935. In some of the States in the Great Plains area numbers at the beginning of 1935 were less than in 1928, and in some areas in these States cattle numbers were reduced by two-thirds. Since large areas in all of these States are better adapted to cattle production than any other kind of agricultural enterprise, it is certain that they will have a material increase in cattle numbers during the next few years. How rapidly this increase will take place will depend largely on the availability of credit and the level of cattle prices. In the past, when cattle prices were advancing and the outlook appeared favorable, an abundance of credit was always available in these areas for expanding cattle production. Although recent experiences may tend to make private financial organizations more cautious in advancing funds for cattle production than in the past, the availability of credit through the Farm Credit Administration and the general surplus of funds in local banks will probably make possible the securing of funds for restocking by all producers who can show evidence of being reasonable financial risks. The tendency to increase cattle numbers doubtless will be greater in areas and with producers that derive their principal source of income from cattle. But in the Great Plains region, itself, and generally in the other areas of the Plains States, there are many small producers whose herds were drastically reduced last year. It is probable that increased numbers with such producers will come from the natural increase of their present herds rather than through purchases of stock cattle and such increases will take place very slowly.

In most of the States west of the Mississippi River, cattle numbers will probably tend to increase during the next 2 or 3 years until a considerable part of the reduction that occurred in 1934 is canceled. The rate of increase will depend on feed conditions and cattle prices. A series of good feed years will tend to speed up the rate of increase, especially if cattle prices remain fairly high. A continuation of the conditions with respect to deficient rainfall and short feed which prevailed fairly generally from 1930 to 1934 might materially check both the rate and final amount of increase.

In the South, where cattle numbers were reduced very little, if any, during 1934, and where numbers are now unusually large, there would be little reason to expect any considerable further increase under normal conditions. But if the acreage of land devoted to cotton and to other cash crops is kept at a permanently low level and much of this land should go into grass, there would be a possibility of a further increase of cattle numbers in these areas. Likewise,

if corn acreage in the eastern Corn Belt should be maintained below the average of recent years, and the acreages of hay and pasture crops are correspondingly increased, cattle production in that area may be further stimulated. In the North Atlantic States and in other States where cattle are almost exclusively of dairy type, the trend of cattle numbers will be influenced largely by conditions in the dairy industry.

Although the sharp advance in cattle prices in 1935 was a result partly of increased consumer purchasing power and some reduction in cattle slaughter as compared with 1934, apparently the chief causal factor in this advance was the very short supply of hogs and the high prices of hog products. The hog situation is expected to continue to be a strengthening factor during most of 1936, and hog slaughter is likely to continue below average until 1938 at least. If cattle numbers increase during these years, the cattle-supply situation by the beginning of 1939 will not differ greatly from what it was at the beginning of 1934, when numbers were relatively large.

SHEEP, LAMBS, AND WOOL

Supplies of lambs for slaughter during the remainder of the present marketing year, up to May 1, 1936, are expected to be smaller than for several years. In view of the small late-lamb crop in the Western States the supply of feeder lambs this year is much smaller than last year, and lamb feeding probably will be restricted considerably in the fall and winter of 1935–36. The small supplies of fed lambs in prospect for next winter and the probable improvement in consumer demand are likely to result in higher lamb prices in the 1935–36 fed-lamb season (December 1935 to April 1936) than in the 1934–35 season, and higher than for any season since 1929–30.

Wool production in this country in 1935 was smaller than in the previous year and some decrease has occurred in foreign wool production. Stocks of wool in all positions in this country at the end of September this year were materially smaller than a year earlier. Domestic mill consumption of wool in the first 9 months of 1935 was very large following the very small consumption in 1934. Although mill consumption in 1936 is not likely to be so large as in 1935, it probably will not decline to the very low level of 1934. Domestic wool prices are likely to be well maintained at least until the 1936 domestic clip becomes available.

With improved range conditions and increased feed production this year, it is probable that the number of stock sheep in the Western States on January 1, 1936, will be no smaller, and may be larger, than a year earlier. The trend of sheep numbers in the Western States is expected to be upward for several years if feed conditions continue favorable. This upward tendency may be checked, however, by the grazing policies that may be inaugurated by the Grazing Administration of the Department of the Interior under the Taylor Act and by grazing policies for the national forests. Little change in sheep numbers in the native or farm-flock sheep States is expected in the next few years.

SHEEP AND LAMBS

SUPPLIES

According to the estimate of the Department of Agriculture, the 1935 lamb crop of 27,630,000 head was the smallest since 1929. It was 7 percent, or 2,030,000 head, smaller than the 1934 crop and 4,600,000 head smaller than the record crop of 1931. The decrease from 1934 was all in the western sheep States since the native-lamb crop of 1935 was somewhat larger than that of 1934. Although the number of breeding ewes on January 1, 1935, in the native-sheep States was 2 percent smaller than a year earlier, the number of lambs saved per 100 ewes (the percentage lamb crop) in 1935 was enough larger than in 1934 to more than offset this decrease in ewes. The native-lamb crop of 1935 was practically the same as the average native-lamb crop for the 5 years 1930 to 1934.

The 1935 lamb crop in the western sheep States was the smallest since 1927, being 11 percent, or 2,079,000 head smaller than the 1934 crop. The number of breeding ewes January 1, 1935, was 7 percent smaller than a year earlier and the percentage lamb crop was the smallest in the 14 years for which records are available, being 70.3 compared with 73.8 in 1934 and 78.2 the

average from 1925 to 1934. The crop of 1935 was smaller than that of 1934 in all of the Western States, except California and New Mexico. The decreases from last year were relatively the largest in the late-lambing States and all of the decrease from last year was in late lambs, as the early-lamb crop (which covers lambs dropped before Mar. 15) was but little different from last year.

The small western lamb crop this year was a result of the 1934 drought. The reduction in breeding ewes was related directly to the drought through the relief activities of the Federal Government under which some 3,450,000 ewes were bought in the Western States in the late months of 1934. Because of the very bad range conditions during the summer and fall of 1934, ewes in nearly all of the western sheep States were in poor condition at breeding time and the number of dry ewes this spring was relatively large. Death losses of ewes, although rather heavy in some States, were only about average for the western area as a whole. The favorable weather during most of the winter and early spring tended to offset the shortage of feed and the poor condition of ewes at the beginning of the winter. Weather conditions during lambing were about average, but there were above-average losses of lambs in some States as a result of the cold, wet weather in May and early June and because of the lateness of new grass.

Although the lamb crop of 1935 was materially smaller than that of 1934, the slaughter of 1935 lambs during the first 5 months of the 1935–36 marketing year (May 1, 1935, to Apr. 30, 1936) was considerably larger than during the first 5 months of the 1934–35 year. Inspected slaughter during the 5 months this year of 7,765,000 head was 962,000 head, or 12½ percent larger than in 1934 and the largest for the 5 months on record. This heavy slaughter during the first half of the marketing year, in view of the smaller lamb crop, indicates a reduction in the slaughter supply during the remainder of the year relatively much greater than the reduction in the size of the lamb crop. In most marketing years the proportion of the total slaughter taking place during the first 5 months, which averages about 42 percent, varies but little. Present indications are that the proportion in the first 5 months of the current year will be the largest on record, exceeding the 46.4 percent in 1921–22. This heavy early slaughter resulted from a relatively large early lamb crop in the Western States, a heavy early marketing of lambs from the native-sheep States, and the large proportion of western lambs that went for immediate slaughter both because of their better condition, and because of the restricted feeder demand early in the season. The market supply of sheep and lambs in recent months has included a relatively large proportion of sheep, especially ewes. This has been reflected in an increase in both the proportion and the number of sheep slaughtered.

The number of lambs to be fed for market during the 1935–36 feeding season is expected to be smaller than the number fed during the 1934–35 season. Although the total number in the Corn Belt States will be smaller this season than last, it is probable that some of the States where the 1934 drought was most severe will feed more lambs than was the case last season.

Shipments of stocker and feeder lambs and sheep, inspected at stockyards markets, into the North Central (Corn Belt) States for the 3 months, July to September, were about 724,000 head, a decrease of more than 13 percent from the shipments in 1934. This decrease resulted from a sharp reduction in September shipments since the total for July and August was larger than last year. In all other years for which records are available, shipments in September have been much larger than in August, but this year the increase was not so great. Shipments in October were also small relative to shipments in July and August. Available information indicates that a much larger than usual proportion of the shipments during the 3-month period this year were breeding ewes, with a corresponding reduction in the proportion of feeder lambs. The reduction from last year was much larger in the number shipped into the western Corn Belt States than into the eastern Corn Belt, with the largest reduction being in the number shipped into Iowa.

Reports from the Western States show that the number of lambs to be fed in the feeding areas in those States will not be greatly different from last year. The number to be fed in Colorado is expected to be about the same this season as the small number of a year earlier. A decrease in lamb feeding is probable

in the Scottsbluff area of Wyoming and Nebraska. Supplies of feed grains and hay are much larger in the Western States this year than last and prices of feeds are much lower. The much-reduced supply of feeder lambs resulting both from the smaller late-lamb crop and the holding of an increased proportion of the ewe lambs for flock replacement together with the delay on the part of western lamb feeders in contracting feeder lambs are the principal causes of the failure of lamb feeding to increase in this area. A considerable increase in lamb feeding in Texas is expected.

PRICES

Prices of sheep and lambs declined rather sharply during the early summer of 1934, and from late July to the end of November of that year they were maintained at relatively low levels. A fairly sharp seasonal advance occurred during December and early January, and by mid-January prices of Good and Choice lambs were about $2.50 higher than they were at the November low point. The trend of prices from mid-January to late July 1935 was generally downward. In early August, however, a sharp advance got under way, and in early September the top price of lambs at Chicago reached $10.50, the highest price paid at that market since August 1930. Some decline in prices of slaughter lambs occurred in late September and early October, but the average price of Good and Choice Slaughter lambs at Chicago for the month of September of $9.34 was about $2.70 higher than a year earlier.

Market prices of feeder lambs advanced in August and early September as prices of slaughter lambs advanced, but did not decline later in September with the drop in slaughter-lamb prices. Top prices of feeder lambs in late September were as high as or higher than top prices of slaughter lambs for the first time in several years. In August and September prices of slaughter ewes advanced rather sharply, and during September prices of ewes were the highest for the month since 1930. The strong demand from the Corn Belt States for ewes for restocking and the shortage of meat supplies probably are largely responsible for the advance in prices of slaughter ewes. Prices of ewes this fall have been sufficiently high to encourage a large market movement of such stock, whereas in other recent years the very low prices of ewes have prevented the shipments to market of any considerable number of stock sheep.

In view of prospective marked decreases in lamb feeding and in slaughter supplies of fed lambs in the winter of 1935–36, it is expected that an advance in lamb prices will occur after December 1, the beginning of the fed-lamb marketing season. Prices during the 1935–36 fed-lamb season will probably average higher than for any season since 1929–30. In addition to the probable smaller slaughter supplies, the improved consumer demand for meats will be an important factor in the higher lamb prices expected during the coming winter.

WOOL

PRODUCTION

The quantity of wool entering international trade channels during the season July 1 to June 30, 1935–36, probably will show a reduction of about 5 percent as compared with 1934–35. The 1935 wool clip in the four principal wool-exporting countries of the Southern Hemisphere—Australia, New Zealand, the Union of South Africa, and Argentina—the bulk of which is shorn in the last few months of the year, is provisionally estimated at 1,796,000,000 pounds, a reduction of about 72,000,000 pounds, or 4 percent, as compared with 1934. These four countries furnish about 90 percent of the world's wool exports. Not only does wool production in these countries show a reduction, but the carry-over into the 1935–36 season in the Southern Hemisphere countries was about 30 percent smaller than a year ago.

World production in 1935 will show a reduction of about 3 percent compared with 1934 and will be smaller than the average for the 5 years, 1930–34, according to estimates for 20 countries which furnish over four-fifths of the world total, exclusive of Russia and China. Decreases in production have been estimated for Australia, New Zealand, Argentina, the United States, the United Kingdom, and France. These six countries produce about two-thirds of the world wool production, excluding Russia and China. An increase of about

17 percent in wool production in the Union of South Africa from the very low level of 1934 appears probable, according to preliminary estimates.

The 1935 wool clip in Australia (mostly to be shorn during the last half of 1935) is tentatively estimated at 948,000,000 pounds or 8 percent less than the clip of 1934 and 5 percent less than the 1930–34 average. The 1935 Argentine clip also will show a reduction of about 6 percent according to preliminary estimates, the new clip being placed at about 331,000,000 pounds. The decreases in the Australian and Argentine wool clips in 1935 are primarily the result of severe drought in important wool-producing regions. In 1934, wool production in the Union of South Africa was the smallest in 10 years because of drought conditions, but the return of more favorable weather conditions has assured an increase this year. Production in New Zealand has been decreasing since 1933 with a further reduction estimated for 1935 despite larger sheep numbers reported in April 1935.

Production of wool shorn or to be shorn in the United States in 1935 is estimated at 344,000,000 pounds, which is a decrease of about 4 percent from the shorn-wool production in 1934 and from the 5-year (1930–34) average. The decrease in shorn-wool production in 1935 occurred almost entirely in the Western States and Texas, since there was little change in production in the native-sheep States. In the 13 Western States, including Texas and South Dakota, shorn-wool production was estimated to be 5.4 percent smaller than that of 1934 and the smallest for this region since 1929. Although the number of sheep shorn in the Western States in 1935 was considerably smaller than a year earlier, the average weight of wool shorn per sheep was slightly heavier than last year. This heavier weight per fleece was due partly to an increased proportion of 12-month wool included in the clip in Texas and some other States in the present year, and partly to larger-than-average quantity of foreign material, like dust, in the fleeces. Because of greater shrinkage of wool this year the decrease in scoured wool produced from last year probably will be relatively greater than that reported in shorn-wool production on a grease basis.

World wool production in 1934, excluding Russia and China, totaled about 3,302,000,000 pounds compared with 3,350,000,000 pounds in 1933 and the 5-year average (1929–33) of 3,343,000,000 pounds. The record year of production was 1932. Wool production in Russia in 1934, according to official estimates, was slightly smaller than in either 1932 or 1933, and was considerably smaller than in other recent years.

STOCKS

At the end of September 1935 available supplies of wool in the United States were considerably smaller than a year earlier and probably were below average. Stocks of wool in early months of 1935 were considerably greater than average, but because of the unusually large consumption in the spring and summer and the smaller domestic clip, stocks have been sharply reduced.

Stocks of wool in the hands of dealers and manufacturers at the end of September 1935 were reported by the Bureau of the Census to be considerably smaller than a year earlier. On a greasy shorn basis such stocks at the end of September this year amounted to 365,000,000 pounds, which was 90,000,000 pounds or 20 percent smaller than stocks reported for September 30, 1934. As compared with a year earlier, stocks in the hands of dealers at the end of September 1935 were 45 percent smaller, whereas stocks held by manufacturers and topmakers were 57 percent larger. Because there is frequently a fairly large quantity of wool held in the wool-producing States in late summer and early fall, changes in stocks in the hands of dealers and manufacturers reported at that time may not be an adequate measure of changes in available supplies of wool from year to year. Since there is usually relatively little new-clip wool in the hands of dealers and manufacturers at the end of March, reported stocks as of that date, plus the estimated annual production and imports from April to September and minus consumption of wool by mills during April to September, give a better indication of available supplies in early fall than do the stocks reported in the hands of dealers and manufacturers at the end of September.

Stocks of wool in the hands of dealers and manufacturers were not reported by the Bureau of the Census at the end of March 1934, but it has been estimated that such stocks on April 1, 1934, were about 285,000,000 pounds, grease basis. Stocks of wool on March 30, 1935, were about 338,000,000 pounds. Consumption of wool by mills in this country from April through September 1935

was very large, being about two and one-half times as large as in that period in 1934. Hence, with the smaller domestic production in 1935 than in 1934, estimated stocks were considerably reduced from April 1 to October 1, 1935. On the basis of stocks at the end of March 1935, estimated domestic production for 1935, and imports and domestic mill consumption from April through September, it was estimated that available supplies of wool on hand on October 1, 1935, plus the quantity to become available in the remainder of 1935 were about 421,000,000 pounds, which was about 30 percent smaller than a year earlier.

Stocks of wool in the United Kingdom have been reduced somewhat in recent months and stocks, as reported at the end of August 1935, were considerably smaller than a year earlier. Stocks of wool tops at principal commission combing establishments in continental Europe at the end of August 1935 also were smaller than at the end of August in 1934, and were smaller than the average stocks on that date in the 5 years 1930–34. The carry-over of wool in Southern Hemisphere countries at the end of the 1934–35 season (June 30 for Australia, New Zealand, and the Union of South Africa, and Sept. 30 for Argentina and Uruguay) was considerably smaller than a year earlier although slightly larger than 2 years earlier. Decreases in carry-over were reported by all countries except New Zealand where estimated stocks of old-clip wool on June 30, 1935, were substantially larger than at the end of June 1934.

CONSUMPTION AND TRADE

Manufacturing activity in the wool-textile industry of the United States has been maintained at a very high level in 1935. Consumption of apparel-class wool (scoured basis) in the first 8 months of 1935 was larger than for any similar period since 1923, and apparently was larger than domestic production of shorn and pulled wool for the present season. Consumption from January to August of this year was 349,429,000 pounds of shorn wool, greasy shorn basis, and 62,326,000 pounds of pulled wool, greasy pulled basis. Consumption for the entire year 1935 undoubtedly will be one of the largest in the years since 1918 for which records are available. Government contracts for wool blankets and other wool fabrics and the large business in upholstery fabrics for the automobile industry have contributed greatly to the maintenance of wool consumption in 1935 at the highest level in years. Building up inventories of goods also may have been partly responsible for the increase in mill consumption of wool this year.

The high rate of activity in the domestic-wool manufacturing industry this year is in sharp contrast to the activity of 1934. Consumption of apparel-class wool, in the first 8 months of 1935 was 80 percent larger than in the same months of 1934. In 1934 for the first time on record the estimated domestic-wool production, both pulled and shorn, exceeded the consumption of wool by mills in this country. The Bureau of the Census reported that consumption of apparel-class wool on a greasy shorn basis was only 381,400,000 pounds in 1934 compared with 572,000,000 pounds in 1933 and an average of 512,000,000 pounds in the 5 years 1929 to 1933. The small consumption of wool by domestic mills in 1934 was preceded by a very large consumption in 1933, and the decrease in consumption in 1934 probably was partly the result of large stocks of manufactured and semi-manufactured goods accumulated in 1933. An additional factor tending to reduce wool consumption in 1934 was the high prices of wool in relation to prices of other textile materials during late 1933 and during the first half of 1934.

In view of the high rate of consumption in 1935 and the reported building up of inventories it seems probable that consumption in 1936 will be smaller than in 1935. However, with the substantial improvement that has occurred in consumer demand in the last 2 years, there appears to be no reason to expect mill consumption in 1936 to be as low as in 1934. Although consumption of wool by United States mills in 1936 probably will be smaller than in 1935, stocks of old-clip wool will be relatively small when the marketing season for the 1936 domestic clip begins. On the basis of present conditions the carry-over into the 1936 season should be the smallest in years. Thus the outlook for a good clearance of the 1936 clip is favorable despite the probability of decreased consumption.

United States imports for consumption of combing and clothing wool in the first 9 months of 1935 were 15,347,000 pounds compared with 18,082,000 pounds in the same months of 1934. In each month since May, however, imports have

exceeded the imports for the same month in 1934. Although the carry-over of 1934 clip into the present season was very large it is probable, in view of the large consumption in recent months, that increased imports will be necessary before the beginning of the new season (April 1936).

Conditions in the wool industries in foreign consuming countries during last year were somewhat similar to conditions in the United States. After remaining very unsettled through most of 1934, wool-trading and manufacturing activity in Europe improved considerably in the latter part of the year and the improvement continued in the first half of 1935. Imports into most European countries and into Japan during the first 8 months of 1935 were considerably larger than during the same period of 1934. Retained imports of raw wool into the principal European importing countries and into Japan in 1934 were much smaller than in 1933, but in this respect it must be remembered that imports in 1933 were unusually high. With the exception of Italy and Japan, however, retained imports in 1934 also were smaller than the average for the 5 years 1928 to 1932.

The restrictions on imports put into effect by Germany in 1934 have been greatly modified through exchange agreements with certain wool-exporting countries. Import restrictions on wool in Italy have been modified only slightly and wool imports into that country in 1935 have been greatly reduced. European buyers were active in the final months of the 1934–35 season and at the beginning of the 1935–36 season in Southern Hemisphere countries, and imports into most countries in recent months have been relatively large for this season of the year.

PRICES

Prices of wool in the domestic market declined almost continuously from April 1934 to April 1935. In May 1935, however, prices turned upward as a result of rising prices in foreign markets, the reduced domestic clip, and the increased consumption by domestic mills. A further sharp increase in prices followed in August and September. Prices of Strictly Combing wool in the Boston market at the low point in April were from 24 to 44 percent below prices in March 1934 when the 1934 decline in prices began, but they were much higher than the low points of 1932 and 1933. By September 1935 prices of Strictly Combing territory wools had advanced about 20 percent on Fine grades and 25 to 30 percent on Medium grades of territory wools as compared with April 1935. The advance on Medium grades of Ohio and similar fleece wools was somewhat greater than on the Medium grades of territory wools.

Prices of Strictly Combing territory wool at Boston averaged 78.8 cents a pound scoured basis for 64s, 70s, 80s, and 54.2 cents for 46s, respectively, in September 1935, compared with 65.8 cents and 40.6 cents, respectively, in April before the recent price rise got under way. Ohio and similar fleece wools of Strictly Combing order were quoted at 30 to 33.4 cents a pound, grease basis, in September, compared with 20.6 to 27.2 cents in April, and 27.5 to 30.8 cents in September 1934. The United States average farm price of wool as of October 15 was 21.3 cents a pound compared with 16.1 cents at the low point in May and 20.9 cents in October 1934. October and September were the first months in 1935 for which the average farm price exceeded the price for the same month in 1934.

Price movements in the foreign markets in the last year have been somewhat similar to those in the domestic market. The advance in wool prices in foreign markets in 1935, however, began somewhat earlier than the advance in the domestic market, and the spread between domestic and foreign prices was considerably reduced in the early months of the year. Since July, prices of foreign wool in terms of United States currency have declined slightly whereas domestic prices have continued to advance. By September the spread between domestic and foreign prices had been greatly increased and domestic prices were rapidly approaching import parity for many grades of wool.

With supplies of wool in this country below average for this time of the year, steady to higher prices on the domestic market are probable during the remainder of the present wool-marketing season (up to Apr. 1, 1936). As it seems probable that increased buying of foreign wool by the United States industry will be necessary before the beginning of the new season developments in the foreign wool market will be of increasing importance to the domestic situation.

PRODUCTION OUTLOOK FOR SHEEP AND LAMBS

The trend of sheep numbers and of lamb and wool production in this country has been downward since 1931. This downward trend was a result partly of the financial situation in the industry arising from the depression, but largely of the succession of years of deficient rainfall in the western sheep States, which culminated in the disastrous drought of 1934. During these years range conditions were relatively poor and feed production was low and these conditions have been reflected in fairly heavy death losses, small-percentage lamb crops, and decreasing numbers.

With improved range conditions and increased feed production this year, it is probable that the number of stock sheep (number of sheep on farms, excluding lambs on feed) in the Western States on January 1, 1936, will be no smaller and may be larger than a year earlier, despite the small lamb crop raised this year. The trend of numbers in the Western States, under normal conditions, would be upward for several years if feed conditions were fairly favorable. This upward tendency, however, may be restrained and may actually be stopped, temporarily at least, by the grazing policies that are being inaugurated by the Grazing Administration of the Department of Interior, under the Taylor Act in conjunction with the grazing policies on the national forests. More than any other species of livestock in the Western States, sheep are dependent upon use of the public domain and national forests. As a result of the succession of dry years the range has suffered somewhat, partly from lack of moisture and partly from overgrazing caused by general shortage of range feed. Hence the present policy of both the Grazing Administration and of the Forest Service is to reduce the number of livestock to be allowed on the public domain.

If this period of drought years should be succeeded by a series of years of above-average moisture as has happened in the past, conditions on the ranges may again become as good as they were from 1925 to 1929. Under such weather conditions and with the permanent improvements that will be possible under both the grazing district and leasing provisions of the Taylor Act, the carrying capacity of the public domain should be considerably increased. But unless such favorable weather conditions prevail, it is highly probable that grazing permits for the national forests and for the grazing districts will be permanently cut down and the number of sheep allowed may be considerably smaller than have been maintained from these sources during the last 6 years. To what extent the present forced reductions on the public domain will be offset by increases in numbers, not dependent upon the domain, can hardly be foreseen. It is highly probable, however, that most of the breeding flocks going from the public domain will be largely retained in the western sheep area, but there may be a considerable shift among States and among localities within States.

Sheep numbers in the native-sheep States have changed little during the last 5 years and the lamb crop in those States has shown little fluctuation from year to year, varying in the last 5 years only from 10,603,000 to 10,968,000 head. Under normal conditions there is little reason to anticipate any considerable change in the sheep situation in these States from what it has been for some years. If, however, the acreage of land devoted to cash crops in all States, and the acreage of corn or of all feed grains in the Corn Belt should be permanently reduced as a result of crop-control programs, it is not improbable that much of this acreage will go into permanent pastures or meadows. Such an increase of grassland would tend to encourage the expansion of livestock production, including sheep husbandry, which is best suited for such land. The increased shipments of breeding ewes into these States this fall may be a beginning of such a readjustment.

MOHAIR

There has been some improvement in the mohair situation during 1935. The outlook is more favorable than at any time since 1930. Consumption of mohair during 1935 has been large; there has been a sharp advance in prices; stocks from previous years' clips have been considerably reduced; Angora goat numbers have declined; and feed supplies in the mohair-producing States are plentiful.

Domestic supplies of mohair declined during 1935. The supply in hands of manufacturers, dealers, and growers is estimated to be one-half to two-

thirds as large as the quantity on hand about November 1, 1934. Imports of mohair for consumption during the fiscal year 1935 have amounted to 16,000 pounds compared with 1,320,000 pounds imported in 1934, 89,000 pounds in 1933, and 11,000 pounds in the fiscal year 1932.

Estimates of the 1935 production have not yet been made, but preliminary reports from Texas indicate that the clip in that State will be about the same as last year. Total production in the United States will be around 12,000,000 pounds which is 26 percent less than the average annual production for 1930–34. A large proportion of the 1935 clip in Texas as well as accumulated stocks from previous years' clips has passed into hands of dealers and manufacturers.

Domestic consumption of mohair increased rapidly during 1935 and exceeded production for the first time since 1930. Although definite information as to the volume of mohair consumed is not available, it is estimated that consumption in 1935 was more than twice that of 1934. The larger consumption in 1935 has been due both to increased use of mohair by the woolen manufacturers and to increased activity on the part of regular mohair users.

Prices of mohair advanced during 1935. Average monthly quotations at Boston early in 1935 on medium sorted mohair were about 30 cents per pound and 58 cents per pound for kid hair. During September the same grade of mohair advanced to about 55 cents and kid hair to 70 cents per pound. These prices represent an advance of about 100 percent over prices paid in 1934. Prices paid for the 1933 spring clip of mohair in Texas were 12–13 cents, but prices in the fall reached 45 cents. Practically no sales were made in the spring of 1934 and prices fell rapidly, and in the fall of 1934 adult hair was being bought in Texas as low as 15 cents per pound and kid hair for 25 cents per pound.

Mohair supplies available for disposal in the 1935–36 season in the two principal foreign producing countries, Turkey and the Union of South Africa, are expected to be about the same as in the preceding season, or 22,000,000 pounds. Available supplies in these two countries have ranged from 43,000,000 pounds in the 1930–31 season to 32,047,000 in the 1933–34 season. Production in the 1935–36 season is expected to exceed that of the 1934–35 season which was estimated to be 12,000,000 pounds compared with 17,000,000 pounds produced in the 1933–34 season.

Mohair prices in Turkey and the Union of South Africa advanced since the opening of the 1935–36 season and are on a higher level than 2 years ago. The official average price in Turkey in March 1935 was 19 cents per pound compared with 15 cents per pound in March 1934 and 6 cents in March 1933. The average export price of mohair in the Union of South Africa in July 1935 was 16 cents per pound compared with 24 cents in July 1934 and 10 cents per pound in July 1933.

Russia and Germany have taken most of the Turkish exports during the last two seasons, and the United Kingdom has been the principal purchaser of South African mohair. This season South Africa may sell some mohair to Germany under the new trade agreement in effect since October 1, 1935.

Angora goat numbers in Turkey declined from 3,455,000 head, in 1931 to 2,636,000 in 1934 and in the Union of South Africa they declined from 1,807,000 in 1930 to 944,000 in 1934, according to the new census figures.

Angora goat numbers have been reduced sharply within the last year. This is a result of heavy death losses and Government purchases of 355,000 head in the fall of 1934. With mohair prices higher than in any year since 1929, and favorable feed conditions in the mohair-producing States, some increase in Angora goat numbers during 1936 is to be expected. A year ago available supplies of mohair were extremely large compared with the current consumption. If the 1935 rate of consumption should be maintained in 1936 and if the increase in Angora goats is moderate, the relationship between consumption and supplies by the end of 1936 will be about the same as that for the period 1924–29.

HORSES AND MULES

Continued increases in colt production, which began in 1933, promises to terminate the long downward trend in the number of all horses and mules on farms during the early part of 1936. The low point in the number of animals of working age, however, will not occur until a few years later. Demand for work stock probably will continue strong for the next 3 to 5 years, depending

largely on the future volume of colt production and on the extent to which tractor power displaces the use of horses. A strong market for mules is expected to continue somewhat longer than for horses. Further large increases in prices above those now being paid for good young work animals, especially horses, are not anticipated.

NUMBERS

The number of horses and mules on farms on January 1, 1935, of 16,622,000 head was 266,000, or about 1½ percent, smaller than on January 1, 1934. This decrease during 1934 was the smallest, both relatively and in actual number, in more than 15 years. The net decrease in animals 2 years old and over was about 493,000, but this was partly offset by the increased number of colts under 2 years of age, resulting from the sharp increase in the numbers of colts raised in 1933 and 1934. The combined number of horse and mule colts raised in 1934 and on farms January 1, 1935, was estimated at 785,000, an increase of about 24 percent over the number raised in 1933 and of more than 50 percent of the number raised in 1931, in which year the number of colts raised was the smallest of all years in the present century. This combined total in 1934 was the largest since 1924.

The number of horses on farms has been decreasing for almost twice as many years as has the number of mules, and renewed interest during the last 3 years in the production of mule colts has been less pronounced than in the case of horse colts. Consequently, the number of horse colts born in 1934 and on farms January 1, 1935, amounted to about 6 percent of all horses on farms, whereas the number of mule colts raised in 1934 amounted to only 2 percent of all mules on farms on January 1, 1935. The number of horse colts raised in 1934 was 22 percent larger than the number raised 10 years earlier, or in 1924, but the number of mule colts raised in 1934 was only 48 percent of the number raised in 1924.

The increased production of colts which started in 1933 was continued during 1935, and present indications are that the number of colts raised in 1935 may considerably exceed 900,000. This number of colts would be sufficient to maintain the present number of horses and mules 2 years old and over, if the age distribution of the latter group were fairly normal, but may not be enough to offset the death losses and other disappearance of the present number because of the large proportion of animals in the older age groups. Hence, it is probable that the total number of horses and mules, including colts, on farms January 1, 1936, will be smaller than a year earlier; and that the number of horses and mules 2 years old and over will continue to decline for several years yet, but that the number of colts under 2 years of age will increase. It is not improbable that the January 1, 1936, estimates of all horses and mules on farms will closely represent, in a statistical way, the bottom of the downward trend in the combined number of horses and mules. Thereafter, numbers are expected to increase gradually for a few years and then more rapidly as the animals of the very old ages disappear and the number and proportion of young animals become progressively larger.

DEMAND AND PRICES

The demand for horses and mules continued to expand during 1935 and this was reflected in a further advance in prices. The average farm price of horses September 15, 1935, was $87.70 compared with $70.90 a year earlier, and was the highest September price since 1920, but was still materially below prices from 1910 to 1920. The September 15 price of mules was $103.40, compared with $83.90 a year earlier. This was the highest mule price for September during the period that farm prices for mules have been collected, beginning in 1926. Because of the large proportion of old horses and mules now on farms, a comparison of present farm prices with the pre-war prices does not give a true picture of the price relationship. It is certain that present prices of good young horses and mules are much closer to pre-war prices than are present average prices to pre-war average prices.

Reports from leading horse and mule markets indicate an active market during most of 1935 with prices for most weights and classes considerably higher than in 1934. There has been an exceptionally good demand for colts and for young mares suitable for both work and breeding. Heavy draft horses and big mules have been less in demand than lighter animals, and prices for the former

have advanced little, if any. The present demand, apparently, is for farm replacements with relatively few animals bought for industrial or city use.

There has also been a marked improvement in the demand for and prices of purebred draft animals. Reports from purebred associations show much larger sales, advancing prices, greatly increased registrations, and wide-spread interest. Enrollment of stallions and jacks in the States which require that such animals for public service be licensed increased considerably in 1933 and 1934 and a further marked increase in 1935 is expected.

PRODUCTION OUTLOOK

The long downward trend of horse and mule numbers is drawing to an end and colt raising is showing a marked expansion. The situation confronting the producers of work animals at the present time, however, is much different from that confronting them at other periods when advancing prices led to a marked expansion in colt raising. The situation as regards price advances and increased breeding in the last few years has been similar to that at the close of the last century and during the early years of the present century. Prices of horses and interest in colt production declined sharply during the depression years from 1893 to 1898. As prices advanced after 1898 and horse prices became high relative to other farm animals, there was a sharp increase in colt raising. At that period, however, the outlet for horses and mules was expanding. Not only was there an increasing outlet in agriculture as new farms were being opened up, but horses and mules were the principal sources of motive power in cities and towns, and for construction work, and the demand from these sources tended to increase as urban population increased rapidly and construction work expanded. At present, on the contrary, there is no such expanding outlet for work animals. The city and industrial outlet is practically gone and there is little reason to expect that it will be appreciably revived. Large areas of new lands for farm use in the United States are no longer available, and, although the number of farms has increased in recent years the present tendency is to decrease rather than to expand crop acreage. It is believed that any substantial increase in the use of work stock on farms above the present use can come only from a shift from mechanical power to animal power, and the tendency to such a shift decreases as prices of work animals and feeds advance relative to prices of mechanical equipment and fuel. Since the number of animals of working age will continue to decrease for several years, an expansion rather than a decrease in the use of tractor power is probable during this period.

For the 85 years for which information on numbers of horses and mules in the United States is available there was apparently only one definite cycle of numbers. This cycle was a steady increase in numbers for about 70 years, up until about 1917 or 1918, but with a tendency to flatten out during the late nineties, and then a rather precipitous decline during the last 15 years. A new cycle of numbers is about to get under way and it is highly probable that future cycles will be much different from the one now drawing to an end. Because of the much restricted outlets for work animals everywhere and the competition between animal power and mechanical power on farms, the possibility of overproduction will be much greater in the future than in the past, and cycles of increasing and decreasing numbers and decreasing and increasing prices are likely to be much shorter.

If the number of colts raised in 1935 should exceed 900,000 head, as now seems probable, the number needed for replacement of the present number of animals of working age will have been about reached. Any further considerable increase in colt raising above the number raised in 1935 will result in a supply of work animals 3 to 5 years hence, somewhat in excess of the number now on farms. As it seems probable that the use of work horses and mules for farm work will not expand greatly from the present use, the number of working age 3 to 5 years from now may represent about the maximum need for work animals on farms.

It is evident, then, that producers of horses and mules for sale should follow closely the trend of the next few years in colt production and in the use of mechanical power by farmers, in order to adjust their production to future demand. Those farmers who produce work animals for use on their own farms, are less interested in the demand situation for work stock 4 or

5 years hence; others who usually buy their work stock may be induced by high prices to produce their own animals. Frequently the farmer who produces his own farm motive power in the form of horses or mules finds this to be an economical way of more fully utilizing his time and making use of quantities of cheap roughage. With these facilities, young mares that can perform the farm work and also produce colts form the most economical basis for the production of work animals for replacement purposes.

DAIRY PRODUCTS

No marked change in the number of milk cows is in prospect for the next 2 years. By January 1, 1936, the number will probably be decreased by about 600,000 below the number on hand January 1, 1935. The decreases in numbers in 1934 and 1935 bring the number of cows per capita down to about the average for the last 10 years. Total milk production in 1935 will probably be slightly higher than the low production in 1934, and with average weather and feed production during the coming year milk production in 1936 may be expected to be about 4 to 5 percent greater than in 1935. Stocks of dairy products are larger than a year ago, and with prospects for higher production during the late winter than a year previous, total supplies of dairy products during the winter of 1935–36 will be larger than in the winter of 1934–35.

Farm prices of butterfat are higher in relation to feed grains than a year ago and during 1936 butterfat prices will probably average considerably higher in relation to feeds than in 1935. Farm prices of butterfat are low in relation to meat animals, and are likely to continue relatively low during 1936. In those areas in which shifts are most easily made from dairy to meat production, dairy production will tend to be checked because of this price relationship. Foreign prices of butter are now decidedly higher than in 1934, and imports of butter during 1936 will probably be very small.

Receipts of milk and cream indicate that the decline in city consumption of fresh milk and cream is probably past and with further improvement in business and in consumer incomes, city consumption will probably show an increase over the low level reached during the depression. With further business improvement, butter prices will probably rise in relation to other commodities.

NUMBER OF MILK COWS

The number of milk cows increased steadily from early 1928 until the spring of 1934, when the drought and general shortage of feed caused a rapid decrease in the number until the spring of 1935. Estimates of numbers on January 1 showed 22,129,000 milk cows in 1928, 26,185,000 in 1934, 25,100,000 in 1935, and are expected to show about 24,500,000 in 1936.

October reports from dairy correspondents seem to indicate that in nearly all parts of the country more farmers are planning to increase their dairy herds than in any year since 1932, but actual increases during the next year or two seem likely to be small. The number of heifers and heifer calves being raised for milk cows is slightly less than the number normally required for replacements, and the number of heifer calves saved for milk cows is likely to continue relatively small as long as the price of milk cows continues abnormally low in comparison with the prices of beef cattle, veal calves, and other livestock. The number of cows milked could, of course, be increased by delaying the culling process or by the milking of cows previously kept only for beef production, but there is as yet no evidence that such changes are being made. The high price of beef cattle as compared with butterfat has increased interest in beef production at the expense of dairying. If beef-cattle prices continue fairly high for a few years, as seems probable, this will soon begin to cause an increase in the number of cattle kept for beef production. In some States in which most of the cattle are of the dual-purpose type, this will tend to increase the number of cows that can be milked. So far, the high prices being paid for the lower grade of cattle have resulted in continued heavy marketings of cows and, for the country as a whole, this has about offset the tendency to retain cows for restocking purposes in those parts of the drought area which now have sufficient feed.

The new program to eradicate both tuberculosis and Bang's disease has also increased marketings and will probably continue to do so for another year. During recent years condemnations of cattle for tuberculosis have averaged about 230,000 head per year, but during the 12-month period ended July 1, 1935,

this number was increased more than 50 percent, and in addition some 381,000 cattle reacting to the test for Bang's disease were elimated from the herds, making a total eliminated by the two tests of 737,000 head, a number equal to about 3 percent of the number of milk cows on farms. Condemnations during the current fiscal year will probably be nearly as large. Most of these animals are of dairy breeding. Their slaughter tends to decrease the numbers of milk cows, except insofar as their loss can be offset by lighter culling of the cows remaining.

The number of milk cows is down to about the level of 3 years ago and is not expected to show much, if any, increase for another year or two, but milk cows are still relatively cheap and no particular shortage of milk cows is in prospect. During the last 10 years the number of milk cows per thousand people has ranged from a low of 177 cows in 1928 and 1929 to 195 in 1933. During this period, the average has been 184 cows per 1,000 people, and that is the number at present. During the next year or two, the growth of population will probably be greater proportionately than the increase in the number of milk cows. This will tend to make conditions slightly more favorable for dairying.

MILK PRODUCTION

From 1929 through 1933 the increase in the number of milk cows on farms was partially offset by a decrease in the production per cow. From the spring of 1934 until the spring of 1935 both the number of cows and the production per cow declined in most States, owing chiefly to the drought and to the resulting high cost of feed. In the spring of 1935, when excellent pasturage became available in the principal dairy sections, milk production per cow increased sharply, and during the summer months there was about the usual per-capita supply for that season of the year, even though the prices of milk and butterfat were exceedingly low both in comparison with prices of most other animal products and in comparison with the cost of grain. During September production declined sharply.

Looking ahead to the winter of 1935–36, prospects point to nearly an average per-capita production of milk in contrast to the short supply of last winter. The chief uncertainty seems to be the extent to which the shift toward having more of the cows freshen in the spring will reduce supplies during the late winter months. Meat supplies will be short. Under these conditions the prices of hogs, cattle, calves, and poultry are likely to continue to be relatively high in comparison with the price of butterfat. This will tend to limit milk production in the butter-producing sections, even though the supply of feed grain is expected to be sufficient to permit feeding at about the usual rate. In the northeastern market-milk areas, where prices in the winter of 1934–35 were high enough to cause fairly liberal feeding, there is likely to be a somewhat stronger demand for milk than there was then. As the number of milk cows on farms in that region is now only about 2 percent less than at this time in 1934, and as feed prices are expected to be much lower than they were in the last feeding period, milk production there is expected to continue moderately above production in the corresponding months of last season.

During the pasture season in 1936, milk production will depend largely on pastures and on other conditions which cannot be foreseen. The number of milk cows will probably show little change from numbers in the summer of 1935. The proportion of the cows freshening in the spring will probably continue above average, which will tend to increase production from early May through September. On the other hand, the quantity of grain fed per cow is expected to be rather low and the quantity of milk taken by calves is likely to be materially increased unless the prices of milk and butterfat rise materially in comparison with the prices of veal calves and beef cattle, which are now high and are expected to continue fairly high.

FEED SUPPLIES

Current estimates of feed-grain production combined with estimates of farm carry-over of such grains on July 1 indicate that the feed-grain supply of the current fiscal year is about 13 percent below the 1926–33 average. The number of units of grain-consuming animals and poultry at the end of the year, however, is expected to be about 14 percent below the average number during the same years, so there is slightly more than the usual supply of

feed grain per unit of livestock. This represents only a moderate supply in comparison with the prospective demand. The quantity of grain to be used to finish cattle for market will also be larger than usual in relation to the supply of grain. Farmers also appear to be feeding their poultry flocks rather more liberally than usual, and they will need more grain for an increased number of hogs next spring.

Milk cows are now receiving very little grain, but present price relations are more favorable for feeding than they were a year ago.

Unusually favorable weather conditions during the 1935 season enabled pastures to recover from the adverse effects of last year's drought to such an extent that they furnished an abundance of feed in most sections. For the United States as a whole, the condition of dairy pastures as reported by crop correspondents during the 1935 season averaged 78.4 percent of "normal" compared with 53.2 percent in 1934 and a 5-year average (1930–34) of 64.8 percent. The recovery has been general in all regions, except in portions of the southern Great Plains. Pasture conditions in 1935, though better than during the previous 5 years when adversely affected by dry weather, were not particularly favorable when compared with earlier years. The 1921–30 average was 79.4 percent or slightly better than the conditions this year. As a result of the 1934 drought and overgrazing, pastures are still thin and weedy in some sections, and somewhat better-than-average weather conditions would seem to be necessary to insure the usual supply of feed from pastures in 1936.

Allowing for an average carry-over into the 1936 season, the 1935 hay crop in the United States provides 1.13 tons per unit of hay-consuming animals. This compares with a yearly average of 0.95 ton per unit for 1930–34, and with a yearly average of 1.11 tons per unit for the period 1920–29. Compared with the last 5 years, therefore, hay supplies seem high, but they are only slightly above the longer time average supplies.

Much of the 1935 hay crop was reduced in quality by rain at harvest time or by overripeness. On the other hand, there is somewhat more soybean and alfalfa hay this year than usual. With hay supplies fairly abundant and likely to be low in price compared with grain, dairymen are in a position to shift to heavy hay feeding and light grain feeding in any area if prices of dairy products tend to discourage grain feeding.

MANUFACTURED DAIRY PRODUCTS

The sharp reduction in total milk supplies during the early months of 1935, compared with the corresponding period of 1934, has been mentioned. In the period January to April, inclusive, 1935, the productions of manufactured dairy products showed a decrease of 7.5 percent under the production of the same months in 1934, and was the smallest for any of the last 5 years. After the beginning of the grazing season, the production of manufactured dairy products began to show a larger-than-seasonal rise. During the first 9 months of 1935 production was less than 1 percent below the corresponding period of 1934, compared with the 7.5 percent decrease at the end of April. The different dairy products varied considerably, however, and for the above 9-month period creamery-butter production was about 2 percent less than during the same period in 1934; cheese was only slightly less, but condensed milk showed an increase of about 8 percent, and evaporated milk almost 14 percent. New high records of evaporated-milk production were reached in 1935.

Butter and cheese are produced principally in the dairy States of the Middle West and Northwest, and since pastures and feed crops in a number of these States were damaged severely by the 1934 drought, the subsequent reduction in feed supplies and in the number of cows had a curtailing effect on the production of these products during the winter and early spring months of 1934–35. The total domestic production of creamery butter in January, February, and March 1935 was 11.6 percent smaller than for the same months in 1934. In the West North Central States, which suffered a greater damage from the 1934 drought than any other section, the decrease was 15.8 percent, while in the adjoining East North Central States the decrease was only 4.2 percent, and in the South Central States production was practically unchanged.

Beginning with May 1935 creamery-butter production began to show an increase in relation to the corresponding month of 1934. May was only fractionally above May 1934, but June was 7.5 percent and July 6.6 percent larger than for the corresponding months of 1934. August production, however,

dropped 4.4 percent under August 1934, and September was 1.8 percent less. August 1935 production was the third largest of record for that month. Estimated production of creamery butter for the 5-month period, May to September, inclusive, amounted to 865,436,000 pounds, which was 2.1 percent greater than during the same period in 1934, and only 1.3 percent short of the record high for those months made in 1933.

The production of American cheese in January, February, and March 1935 was 15.8 percent less than during the same months in 1934. A greater-than-usual seasonal increase in the output of cheese occurred after the beginning of the pasture season, so that for the first 9 months of 1935 the total production of American cheese was less than 1 percent below the same period in 1934. New high records were established in July, August, and September, with June being exceeded only once in previous records of production.

When there are surpluses in milksheds which supply cities, due either to more favorable production conditions in those areas or to reduced city consumption of milk, these surpluses must be converted into some manufactured dairy product, or producers will suffer a serious loss. During the last few years increased quantities of such surplus milk were converted into manufactured dairy products, and there has been some feeling that this constituted a major source of supply, particularly of butter, but no information is at hand to indicate that this was the case, nor does an analysis of the situation suggest that such changes are permanent. Total production of creamery butter and American cheese in the Middle Atlantic States in 1934, for example, was only 1.59 percent and 6.3 percent, respectively, of total United States production. For the first 9 months of 1935, estimated creamery-butter production in this same area was 13 percent less than in 1934, compared with a decrease of 2 percent for the entire country, and estimated production of American cheese during this period was 19 percent less than in 1934, compared with a 1 percent decrease in total domestic production. With improvement in business conditions, and with more people becoming employed, the consumption of fluid milk should again show an upward trend, thus relieving the pressure exerted by surplus fluid-milk supplies on manufactured dairy products.

STOCKS OF MANUFACTURED DAIRY PRODUCTS

Stocks of butter and cheese, condensed and evaporated milk, in terms of milk equivalents, on October 1, 1935, were 18 percent heavier than a year earlier and 25 percent above the October 1 5-year average (1930–34).

Stocks of butter in cold storage on October 1, 1935, amounted to 148,666,000 pounds, compared with 125,047,000 pounds on October 1, 1934, and on October 1 5-year average (1930–34) of 120,178,000 pounds.

The peak of storage stocks of butter in 1935 was reached on September 1. In the 15-year period beginning with 1920, stocks of butter on that date exceeded those of 1935 only three times—in 1927, 1929, and 1933. In but one of these storage seasons, however, was there an abnormally heavy carry-over of storage butter into the following season, that being in the spring of 1930, which was during the first year of the depression.

The heavier into-storage movement in 1935 was partly due to heavier production than in 1934 during the flush period, and to lighter consumption. There has been an active movement out of storage since September 1, and with a continuation of the present rate, and the lowered rate of butter production since the late summer, it may be expected that storage stocks of butter will approach average toward the close of the present storage season in the spring of 1936.

Stocks of American cheese in storage on October 1 were 102,633,000 pounds, a decrease of 6,000,000 pounds below October 1, 1934, but 15,000,000 pounds above the October 1 5-year average. Evaporated milk stocks in manufacturers' hands during the summer and early fall of 1935 were the heaviest on record, with an all-time high of 358,780,000 pounds reached on September 1, an increase of 114 percent over September 1, 1934, and 86 percent above the 5-year average (1930–34) for that date. Offsetting to some extent the heavy stocks of this class of goods held by manufacturers were the lighter stocks of the distributors, who during the summer of 1935 bought little beyond immediate requirements, because of anticipated price declines. Manufacturers' stocks of evaporated milk on October 1, 1935, of 343,132,000 pounds were 98 percent above a year earlier, and 87 percent above the October 1 5-year average (1930–34).

GOVERNMENT PURCHASES FOR RELIEF DISTRIBUTION

Through the purchase of dairy products and distribution through relief channels, the Government has diverted substantial quantities of these products from commercial channels at times when supplies were large and appeared to be exerting a price-depressing influence. The Government began purchasing dairy products in August 1933, and up to May 1, 1934, had bought 51,569,000 pounds of butter (including 5,800,000 pounds purchased by the Federal Emergency Relief Administration) and 6,346,000 pounds of cheese. The purchases made during the storage season May 1, 1934, to May 1, 1935, were as follows: Butter, 16,176,000 pounds; cheese, 11,574,000 pounds; evaporated milk, 37,596,000 pounds; and dry skim milk, 6,523,000 pounds. From May 1 to October 31, 1935, the following quantities were purchased: Butter, 7,006,000 pounds, including approximately 2,070,000 pounds on the Chicago and New York Mercantile Exchanges; cheese, 194,000 pounds; evaporated milk, 9,431,000 pounds; and dry skim milk, 9,322,000 pounds. The above quantities include 635,000 pounds of butter, 144,000 pounds of cheese, 2,360,000 pounds of dry skim milk, and 9,431,000 pounds of evaporated milk to be delivered prior to December 14, 1935, on contracts awarded during October. Deliveries are now under way on these contracts.

FOREIGN COMPETITION

Imports of butter into the United States during the first 9 months of 1935 amounted to 21,826,000 pounds or about 1 percent of the total consumption. Imports amounted to 436,000 pounds in the same period in 1934, and the record importation in any 1 year was 37,454,000 pounds in 1920 when the tariff was 6 cents per pound. Imports of Swiss cheese during the first 9 months of 1935 and 1934 amounted to 4.619,000 pounds and 5,014,000 pounds, respectively, and of all cheese other than Swiss 25,766,000 pounds and 24,602,000 pounds, respectively.

Swiss cheese was therefore the only product of the three of which importation was less this year. This indicates a continuance of the tendency during recent years toward heavy domestic production of cheese of the Swiss or Emmenthal type and its steady displacement of imported supplies. Imports from Switzerland alone had amounted to 18,000,000 pounds as late as 1930. Production of cheese in Switzerland declined from 122,137,000 pounds in 1933 to 106,925,000 pounds in 1934, and total exports of cheese from Switzerland declined from 45,347,000 pounds in 1933 to 38,819,000 pounds in 1934.

Along with the general increase in the importation of butter and cheese into the United States in 1935, resulting from the light domestic production of last winter and the relatively high prices prevailing in this country, exports of condensed and evaporated milk have shown a marked decline. Exports of condensed milk amounted in the first 8 months, January to August of this year, to 3,573,379 pounds, against 5,560,973 pounds in the corresponding period of last year. Exports of evaporated milk, most important of all exported dairy products, declined from 26,103,969 pounds in the first 8 months of 1934 to 22,505,276 pounds during the corresponding period in 1935.

Price margins as between New Zealand butter in London and 92-score butter in New York, which had averaged about 6 cents during the summer months of 1934, were widened by the abnormal advance in domestic prices until the December 1934 average margin practically equaled the prevailing 14-cent import duty. During the 4 months, January to April, inclusive, 1935, this margin exceeded the amount of the import duty, and importation in unusual volume began in January. Imports of butter "for consumption" amounted to 521,000 pounds in January; 3,049,000 pounds in February; 4,907.000 pounds in March; and 8,851,000 pounds in April. These imports represented 0.5 percent of the domestic production of creamery butter in January; 3.1 percent in February; 4.6 percent in March; and 7 percent in April. During this period the imports were principally of New Zealand butter. By May, the narrowing of the price margin had stopped the diversion of New Zealand butter, but European butter, particularly from the Netherlands and the Baltic States continued in considerable quantities with 2,665,000 pounds in May and 1.437.000 pounds in June. More recent imports have been negligible, and early October prices are about the same on Danish butter in London as on 92-score butter in New York.

Aside from the pressure of supplies of butter upon world markets the abnormal exports to the United States this year reflect governmental aid to butter exportation by the governments of almost every important foreign surplus-

producing country. This general stimulus to exportation combined with widespread protection of the dairy producers within deficit areas had become fully as important in their effect upon international trade in butter as the matter of comparative volume of domestic and foreign supply. Under these conditions, the basis of competition of foreign butter in domestic markets is shifted from purely economic consideration to that of national policies. In view of recent developments, however, indications are that a repetition of the heavy importation of 1935 is exceedingly improbable in 1936.

PRICES

In February 1935 the price of 92-score butter at New York averaged 36.2 cents per pound, the highest for any month since October 1930. The most serious effects of the 1934 drought on dairy production occurred in the early part of 1935 when manufactured production of dairy products was the lowest in 5 years. Following this period of unusually low production, pastures were above average and during the pasture season production increased rapidly to the highest on record; and prices dropped from 36.2 cents in February to 23.9 cents in July. But since July only about the usual seasonal changes in butter prices have occurred.

During 1934 there was a marked decline in the number of cattle and an unprecedented reduction in the number of hogs. Following this reduction in the number of livestock there has been a marked rise in livestock prices, and little change in butterfat prices except for the temporary rise last winter. In August the farm price of butterfat was the lowest in relation to hogs in over 25 years, the price being only 53 percent as high in relation to hogs as in the 15 year period 1920–34, in relation to beef cattle only 64 percent as high, and in relation to veal calves only 76 percent as high. Butterfat prices are unusually low in relation to livestock prices. Because of the impossibility of increasing livestock numbers quickly, livestock prices will probably continue high in relation to butterfat for the next year. In those areas in which shifts can be easily made from dairying to beef cattle and hogs, present price relationships favor the production of meat animals in the place of butterfat.

During the 15-year period, 1920–34, the average farm price of butterfat equaled the average farm price of 29.2 pounds of feed grains, compared with 22.1 pounds in the pre-war period, 1910–14. During the first 9 months of 1935, the average farm price of butterfat was equivalent to 19.4 pounds of feed grains at average farm prices. Farm prices of feed grains have declined about one-third since the first of the year. Prices of butterfat are higher in relation to feed grains and byproduct feeds than a year ago and the low point is probably past. Fluid-milk prices are generally higher than a year ago. These lower feed prices indicate that the milk-feed price relationship for commercial dairymen is more favorable than a year ago.

Another important factor in the dairy price situation is the rise of about 10 cents in the price of New Zealand butter in England during last year. In 1934, the purchasing power of butter prices in England was the lowest since 1844. For the last 50 years there has been no consistent tendency for butter prices to rise or fall as compared with the general level of commodity prices. Thus the rise in butter prices in England is a recovery to a more normal relationship to other commodities and will probably be maintained. This rise in foreign prices in relation to domestic prices is a strengthening factor in the domestic situation.

In the United States, butter prices are low in relation to other commodities and, with business recovery, the outlook for butter prices is a rise in relation to other prices.

CONSUMPTION

Fluid-milk and cream consumption in cities and villages declined about 6 percent from 1930 to 1934. Combined receipts of fluid milk and cream at Boston, New York, and Philadelphia declined sharply in 1932 and 1933. In 1934 the decline continued at a much slower rate, and in July and August of 1935 receipts were slightly larger than a year earlier. It is probable that the decline in city consumption is about ended, and the outlook is for increased city consumption.

In contrast with the decline in consumption of fluid milk and cream the trend of consumption of evaporated milk during the depression has been up-

ward. During the first 8 months of 1935, however, apparent consumption was 3 percent less than the high consumption for the same months of 1934.

Apparent consumption of creamery butter in 1934, including that distributed by the Government for relief, was the highest on record, and consumption during the first 8 months of 1935 was 9 percent less than in the same period of 1934. During the latter part of 1933 the Government purchased large quantities of butter for relief, most of which was consumed in the early part of 1934. This made consumption during the first quarter of 1934 unusually high. The light production in the early part of 1935 tended to reduce consumption. With larger stocks and larger production in prospect for the coming winter, butter consumption during the coming winter will probably be larger than a year ago.

With the rise in butter prices early in the year, the margin between the retail prices of butter and oleomargarine widened and oleomargarine consumption increased. For the first 7 months of the year the increase has been about 93,000,000 pounds, or 72 percent. The shortage of lard and high prices of lard compared with oleomargarine has also been a factor in stimulating oleomargarine consumption. The supply of lard for the coming winter being relatively small, consumption of oleomargarine will probably continue to be relatively large.

Cheese consumption during the first 8 months of 1935 exceeded the previous year by 4 percent. The short supplies of meats has probably been a factor in stimulating cheese consumption.

POULTRY AND EGGS

Relatively short supplies and high prices for poultry are probable during the remainder of 1935 and the first half of 1936. The price-depressing effect of the expected increase in egg supplies in this same period over those of a year earlier will probably be only partially offset by improved demand conditions. Present favorable conditions pertaining to both poultry and egg production are likely to induce an increased hatch of young chicks in the spring of 1936 and result in a further lowering of prices for both eggs and poultry during the latter half of 1936.

The number of young chickens in farm flocks on October 1, 1935, was 5.8 percent greater than on October 1, 1934. Poultry receipts are not likely to fully reflect this increase until late spring of 1936 because of the tendency to save a larger-than-usual proportion of pullets for layers. Somewhat more plentiful feed may encourage the marketing of birds of heavier-than-average weights and partly offset this tendency toward lighter receipts. Storage stocks of poultry are not expected to be so large on January 1, 1936, as a year earlier. Poultry prices, which were relatively high throughout 1935 owing largely to very light receipts, will probably continue on the same level relative to corresponding pre-war prices during the first half of 1936 especially if prices of meats remain high and expected improvement in demand conditions materialize.

The number of laying birds in farm flocks on October 1, 1935, was 1.5 percent greater than a year earlier, and the increase, when including potential layers, is 2.7 percent. Hence, laying flocks in the first half of 1936 are likely to be larger than in the first half of 1935. Together with a prospective higher rate of production this indicates larger production for that period than in 1935. This will especially be the case if the present favorable relation of egg prices to feed prices continues. Low supplies and the improving demand situation in 1935 put egg prices on a higher level than in 1934. In view of a larger production for 1936 than in 1935 the prospective continuance of improvement in business conditions is likely to be entirely offset and egg prices in 1936 as a whole are not expected to average above those in 1935.

COMMERCIAL HATCHINGS

The reduction in laying flocks last year because of the drought and the general feed situation, together with rising prices for both eggs and poultry meat, created a better demand for commercially hatched baby chicks during the 1935 hatching season. Reports received from representative commercial hatcheries indicate an increase in the number of salable chicks hatched of 22.4 percent in 1935 over 1934.

On the basis of volume of output, the hatchery industry in 1935 had the best year of its history since 1930. Fairly sharp increases over 1934 were reported by all sections, the smallest being by the Mountain States where the increase amounted to only 9.3 percent. The small increase here is explained by the fact that an unusually large proportion of hatchery capacity was used for the production of early turkey poults. In contrast, the increase of 36.0 percent in baby-chick production for the Pacific Coast States was the largest reported for any section. The higher egg prices of last year are undoubtedly causing an expansion in the commercial egg producing areas of the Pacific Coast States, particularly California, and larger supplies of eggs from that section can be expected at eastern markets during 1936.

Production of baby chicks in the West North Central States this year was slow in expanding, owing both to the high price of eggs and to the difficulty of obtaining suitable hatching eggs in quantity during the early part of the season. Beginning with April, hatchings rose above those of the corresponding month in 1934, and at the end of the season showed an increase of 13.3 percent above the same period last year. Increases in other sections were between 20 and 30 percent.

YOUNG CHICKENS

Since July there has been a tendency for farmers to retain young chickens. Thus, while the average number of young chickens in farm flocks was only 2.6 percent greater on July 1, 1935, than on July 1, 1934, it was 5.8 percent greater on October 1, 1935, than on October 1, 1934. The most pronounced gain was in the number of young birds for layers. The increase in number of pullets was 6.6 percent and in number of other young chickens was only 4.3 percent.

MARKET RECEIPTS OF POULTRY

The reduction in the numbers of poultry on farms through the Middle West during the latter part of 1934 curtailed seriously the receipts of dressed poultry at the leading terminal markets during the major part of 1935. Receipts at the four markets of New York, Chicago, Philadelphia, and Boston for the first 9 months amounted to 150,900,000 pounds compared with 185,100,000 pounds during the same period in 1934, and 196,900,000 pounds for the 5-year (1930–34) average. Receipts for the months of January to September this year were the smallest for that period since 1922. The greatest decrease reported for any geographic section was for the West North Central States, which supplies about one-half of the dressed poultry received at these four markets. Receipts from these States declined from 112,600,000 pounds for the first 9 months in 1934 to 74,900,000 pounds for the same period in 1935, a decrease of approximately one-third. The only other sections to show decreases were the South Central and the Mountain States. Small increases were reported for the East North Central and the Middle Atlantic States, and fairly substantial increases for the other areas. The quantity of dressed poultry received from the States along the Atlantic seaboard, however, is not very large, as most of the poultry marketed in that area is sold alive.

The tendency to save as many layers as possible for egg production this winter will limit fall and early-winter marketings both of fowl and of young pullets. The increase of 5.8 percent shown in the number of young stock on farms October 1, 1935, over that of October 1, 1934, is thus likely to be more than offset by lighter fall cullings of hens and pullets. The total number of all chickens in farm flocks on October 1, 1935, was about 3 percent greater than in 1934. Hens are about 2.7 percent less, pullets 6.6 percent more, and other chickens 4.3 percent more than last year. Considering that flocks are being built up this year, these increases in young birds offer little probability of increased marketings of chickens and smaller marketings are probable. With the improved feed situation, however, the average weight of chickens will be greater.

Although marketings of fowl in the late winter and spring will depend considerably on the price of eggs then prevailing or in prospect, there will still be the tendency to maintain hens in laying flocks and poultry marketings will continue at low levels relative to the corresponding averages of recent years, until the middle of 1936.

STORAGE STOCKS OF DRESSED POULTRY

Dressed poultry in storage at the peak of the 1934–35 storing season, which occurred on January 1, 1935, amounted to 132,000,000 pounds, the fourth largest peak stocks for any year since records became available. The light marketings of fresh-killed dressed poultry during the first half of 1935, however, afforded a good opportunity to move these heavy stocks into trade channels, so that when the low point for the 1935 season was reached on September 1, stocks in storage were, with the exception of 1932, the smallest for that date since 1924. Stocks of chickens were actually one of the lowest on record for any date, but were offset by continued heavy stocks of turkeys which were approximately 5,000,000 pounds larger than the 5-year (1930–34) average for September 1.

The net into-storage movement of dressed poultry in September amounted to about 5,500,000 pounds. Last year the net increase for that month was around 9,000,000 pounds, and for the 5-year average, 7,000,000 pounds. Total stocks on October 1 amounted to 39,500,000 pounds, compared with 55,300,000 pounds on the same date last year and 48,000,000 pounds for the 5-year average. Stocks by classes were smaller of everything except turkeys, which were more than double the stocks in storage on October 1 last year. Stocks of broilers were particularly small, amounting to 6,900,000 compared with 14,400,000 pounds on October 1 last year and 11,900,000 pounds for the 5-year average. Fowl were also much less than last year, amounting to 4,900,000 pounds, compared with 11,600,000 pounds a year earlier and 7,800,000 pounds for the 5-year average. Stocks of poultry in storage show a seasonal increase during the fall and early winter. Present indications point to a larger supply of roasters than the small supply of a year before, but the seasonal increase in stocks of all other classes will probably be considerably less than usual.

FOREIGN TRADE IN POULTRY

Imports of poultry, mostly turkeys, have declined from 5,800,000 pounds (dressed-weight equivalent) in 1931 to an average of about 500,000 pounds per year for 1932, 1933, and 1934. Rapidly falling turkey prices made the tariff unusually exclusive after 1931, and, although poultry prices have increased, the rise had not been enough to cause a material increase in imports during the first half of 1935.

Domestic exports and shipments of dressed poultry to Puerto Rico, Hawaii, and Alaska have been maintained at approximately 1931 levels and are not likely to be changed much in 1935.

Foreign trade in poultry, including shipments to Puerto Rico, Hawaii, and Alaska, resulted in an import balance of 1,200,000 pounds for 1931, but since that time there have been export balances, the largest of which amounted to 4,000,000 pounds in 1934, which is less than 0.5 percent of domestic supply.

WINTER BROILERS

The production of fall and winter broilers has become increasingly important during recent years in some areas. During the early part of 1935 increased production, coupled with unusually large storage stocks of broilers, resulted in unfavorable prices on this class of poultry. During January and February the highest grade of live broiler at New York City could be bought cheaper than a correspondingly high grade of live fowl, and during the early months of the year broiler prices were lower than they were during the same months in 1934 and only slightly higher than they were in 1933. But since July broiler prices have advanced over those of 1934.

Prices for broilers after the first of the year will be dependent on the commercial production of broilers, size of storage stocks, and the demand for this type of bird. With low storage stocks and an expected improvement in demand, prices during the first quarter of 1936 will probably be at a higher level than they were in 1935, unless an even larger increase in production occurs than that expected at this time (Nov. 1).

FEED SUPPLIES

Current estimates of feed-gain production combined with estimates of farm carry-over of feed grains on July 1 indicated that the supply or the current crop year was about 13 percent below the 1926–33 average. The number of units of

grain-consuming animals and poultry is expected to be about 14 percent below the average for the same years, indicating a slightly greater-than-average feed supply per unit of livestock. This represents only a moderate supply in comparison with the prospective demand since there is some evidence that farmers may use more than the average quantity of feed per livestock unit during the winter of 1935–36.

CONSUMPTION OF POULTRY

The estimated annual per-capita consumption of poultry meat in the United States declined from approximately 18 pounds dressed meat for the 5-year (1930–34) average to a little more than 15.5 pounds, estimated for the current year. As indicated by apparent trade output and receipts figures, the consumption of both live and dressed poultry has been curtailed considerably during 1935. The available supply of poultry during 1935 has been at a lower level than the supply of eggs because with relatively favorable egg prices a great deal of laying stock has been held on farms which otherwise might have been marketed for poultry meat. It is expected, however, that since a larger hatch is probable in 1936, the supply of poultry meat available will increase during the last half of the year.

POULTRY PRICES

The United States average farm price of chickens on August 15, 1934, was 11.4 cents per pound, at which level it was about equal to its pre-war average. Farm chicken prices did not decline during the fall as is usually the case, and the farm price for December 1934 was about 12 percent above its pre-war average. The rise of poultry prices during the fall of 1934 was due to small marketings. This advance in chicken prices continued into 1935, the February price being 20 percent, March 25 percent, and May 30 percent above prices in the pre-war years. Chicken prices usually decline after May, and in 1935 this decline was greater than usual until August, but in September prices rose again to 34 percent above the pre-war average. The general advance in poultry prices from February until June in 1935 was in line with the trend of meat prices during those months. During this time stocks of dressed poultry in cold storage were above average and receipts at the four leading markets were below average. During July, prices were lower and storage stocks were materially decreased, after which poultry prices again advanced.

The price of fresh-dressed poultry at wholesale at New York City did not rise relative to its pre-war level as much as farm prices during the fall of 1934. Since that time the course of wholesale prices has been very similar to that of farm prices.

Poultry prices during the remainder of 1935 and most of the first half of 1936 will probably be maintained at high levels relative to the corresponding pre-war averages, since there is little prospect for a material increase in supplies available in this period over those of a year earlier. Both marketings and storage stocks of poultry are likely to be below average up to July 1936. However, should the feed-egg ratio become less favorable to the producer, during this time, some increase in receipts is probable because of the sale of laying birds. In any event, heavier hatchings than in 1935 are probable. An increase in hatchings will, of course, tend to increase marketings and reduce prices after May 1936. This price-depressing tendency will probably be stronger than can be offset by expected improvements in general demand conditions.

LAYING BIRDS

For the first time since 1930 the October 1 number of hens and pullets of laying age, in farm flocks, exceeded that of the previous year. Although the October 1, 1935, average of 65.4 laying birds per farm flock was larger than the 64.5 reported for the same date in 1934, it was still much below the 69.4 average for the 5 years 1930–34. The increase, as compared with 1934, was general, occurring in all sections except the West North Central which was very slightly below the 1934 level. The increase was brought about by the inclusion of a larger than usual proportion of pullets in the farm laying flocks, the number of mature hens being 2.7 percent below the number on October 1, 1934. The proportion of pullets in the laying flock on October 1, 1935, was 35 percent as compared with 32 percent in 1934 and 33 percent for the 5-year (1930–34) average.

The gain in number of potential layers (hens and pullets of all ages) over numbers last year on October 1 was about 6 percent in the South Central States, 4 percent in the East North Central States, 3 percent in the North Atlantic States, and 1 percent in the other areas. Compared with 1934, potential numbers are about 2.5 percent higher but compared with the October average of the 5 years, 1930–34, numbers this year are about 4 percent lower.

WINTER AND SPRING LAYERS

The numbers of layers in farm flocks on January 1, 1936, will exceed that on January 1, 1935. Cullings of hens from January to September of this year were about average whereas in 1934 they were unusually heavy. As a result, numbers of hens, while not gaining in comparison with average seasonal numbers, did show a distinct recovery as the year progressed. Based on the average change in numbers of layers in farm flocks from October 1 to January 1 as indicated by the 10-year (1926–35) average, the number of layers in farm flocks on January 1, 1936, would be expected to exceed the number of layers on hand January 1, 1935, by 3.2 percent. With the present favorable prices for eggs, however, and with supplies of feedstuffs available to permit of rebuilding the depleted flocks in last year's drought areas, it is to be expected that more than the usual proportion of the hens and pullets on hand October 1, 1935, will be kept for winter layers, hence, the number of layers in farm flocks on January 1, 1936, may be expected to exceed that of January 1, 1935, by around 5 percent.

RECEIPTS OF EGGS

Receipts of eggs at the four markets, New York, Chicago, Boston, and Philadelphia, during the first 9 months of 1935 amounted to 11,100,000 cases, a decrease of 5.2 percent from the receipts for the same period last year. During this 9-month period, receipts from the West North Central States were 23.3 percent smaller than in 1934. The only other sections to show decreases in comparison with 1934 were the Mountain States, with 26.3 percent, and the Pacific Coast States, with 25.1 percent. Receipts from all other sections were larger than last year, ranging from an increase of 9.1 percent for the Middle Atlantic States to 47.8 percent for the South Central States. This reduction from 1934 occurred in the first 6 months, when receipts were 10.6 percent smaller than for the first 6 months of 1934 and were also the smallest for the period in a number of years. The chief cause for the exceptionally small receipts during the first half of the year was the situation in the West North Central States, where the 1934 drought and the lack of feed supplies had caused a sharp reduction in the size of farm flocks and an unusually small production during the winter months. Receipts from that section were 25 percent less than a year earlier during January, and 50 percent less in February and March. To some extent the sharp decrease for the West North Central States was offset by heavier receipts from States on the Atlantic seaboard; supplies being particularly large during the early months from the New England, Middle Atlantic, and South Atlantic States. After the spring peak in production was reached, the situation was reversed. Receipts from nearby eastern areas of production declined seasonally, but owing to relatively favorable production conditions in the Middle West shipments from that area showed considerably less than the usual seasonal decline.

EGG PRODUCTION

Throughout the first 9 months of 1935 the cost of the poultry ration has shown a small downward trend. At the same time egg prices did not take the full seasonal decline to June, although since then they have failed to take the full seasonal rise. The result of these changes in feed prices and in egg prices is that the feeling of chickens for egg production has been more profitable month by month. This has resulted in a tendency to increase the average farm laying flocks and to increase the rate of production per bird. As compared with average production per 100 hens and pullets for the 10 years, 1926–35, the rate during the first 3 months of 1935 was low, but since May the rate of production has been above average. Egg production per farm flock was smaller in 1935 than in 1934 during all the months from January to June,

but beginning with July the increased rate of production has offset the smaller number of layers in 1935. Total production for the year, however, will not come up to the 1934 production.

WINTER AND SPRING PRODUCTION OF EGGS

With larger farm flocks now in prospect, and with average or better-than-average production per hen, total egg production during the first half of 1936 will exceed that of the same period of 1935. But severe winter weather would limit the expected production of eggs and unusually mild winter weather would materially increase it. Owing to low production in January and February 1935, production in these months of 1936 is likely to be very much larger. Any considerable decline in egg prices as a result of such unusual production may be expected to change the favorable relationship between feed and egg prices which now exists, and stimulate culling of laying flocks for market. With egg and feed prices maintained at near their present levels relative to each other, production of eggs during the spring and summer of 1936 should exceed that of the same period in 1935 by at least the amount of the increase in the number of layers.

EGGS IN STORAGE

With the exception of 1932, stocks of shell eggs in storage August 1, which was the peak for this year, were the smallest for that date since 1921. Total stocks on August 1 amounted to 7,900,000 cases, which were 1,000,000 cases smaller than the stocks in storage on the same date last year, and 1,200,000 cases smaller than the 5-year 1930–34 average. In contrast, stocks of frozen eggs in storage were again large, at the peak on August 1 amounting to 116,300,000 pounds compared with 121,600,000 pounds on the same date last year and 111,900,000 pounds for the 5-year average. On a case-egg equivalent basis, combined stocks of shell and frozen eggs in storage on August 1 equaled 11,300,000 cases compared with 12,400,000 cases on August 1 last year and 12,300,000 cases for the 5-year average.

Strengthening effects of the small stocks of shell eggs in storage on egg prices this fall have been lessened by supplies of fresh eggs larger than expected. As a result, reduction in stocks of eggs in cold storage during August and September this year were 454,000 cases smaller than the reduction during the same months last year and 256,000 cases smaller than the 5-year average for that period. The decrease in storage stocks of frozen eggs during August and September were also less than a year earlier by 4,700,000 pounds, although 2,500,000 pounds larger than the 5-year average.

Stocks of shell eggs in storage on October 1 this year amounted to 6,300,000 cases compared with 6,800,000 cases on October 1 last year, and 7,300,000 cases for the 5 year average. Frozen eggs amounted to 99,300,000 pounds compared with 100,000,000 pounds a year earlier and 97,500,000 pounds for the 5-year average.

FOREIGN TRADE IN EGGS

Imports of shell eggs and egg products converted to shell-egg equivalents amounted to 44,400,000 dozen in 1930, but 22,700,000 dozen were exported or shipped to Hawaii, Puerto Rico, and Alaska, leaving an import balance of 21,700,000 dozen eggs, or about 2 eggs per capita. During the years following 1930, both imports and domestic exports of eggs and egg products declined rapidly, but shipments to Hawaii, Puerto Rico, and Alaska increased slightly. In 1934, imports were equivalent to 7,500,000 dozen, but domestic exports and shipments amounted to about 6,000,000 dozen, leaving an import balance of only 1,500,000 dozen or less than 0.2 of an egg per capita.

Imports of eggs, particularly dried eggs, increased sharply during the first half of 1935 as compared with those of the same period in 1934. Imports of shell eggs increased during the first 8 months of 1935 over the same period of 1934 from about 121,000 dozen to about 312,000 dozen, dried-egg imports in all classifications from about 1,674,000 pounds to 4,162,000 pounds, and frozen eggs from 270,000 pounds to 1,045,000 pounds. With continued higher levels of egg prices in prospect, imports will probably be maintained well above those of 1934 during the remainder of 1935 and the first half of 1936. Domestic exports and shipments of eggs have shown little change from their 1934 levels. Although the import balance in eggs and egg products is not likely to reach its 1930 level, by the end of 1935 it may reach or exceed one egg per capita.

CONSUMPTION OF EGGS

The estimated annual per-capita consumption of eggs in the United States reached a high level of nearly 22 dozen eggs during the years from 1927 through 1932. Since 1932 estimated egg consumption has declined annually and during the current year it is estimated that approximately 18 dozen eggs per capita will be consumed. The number of laying hens in farm flocks and storage holdings of shell eggs are still too small to permit consumers to obtain greatly increased quantities during the remainder of 1935. However, a decreased supply of eggs, improvements in business conditions, and high prices for meats and other foods have caused consumers to bid for eggs sufficiently so that prices, to the producer, have been at a relatively favorable level and this will probably encourage larger supplies in 1936.

Consumer demand for eggs during 1936 will depend on the level of consumers' income and upon the prices for these products in relation to prices for competitive foods. Although it is expected that the available supply of meat will be increased in 1936, there probably will be a sufficient increase in consumers' income to assure poultrymen of a demand for eggs somewhat greater than in 1935.

EGG PRICES

The United States average farm price of eggs on August 15, 1934, was 17.2 cents per dozen. During the fall of 1934 they made a fairly normal seasonal advance to a peak of 28.6 cents on November 15. Farm prices continued to follow their usual course at a level about 7 percent below pre-war averages into the winter. Heavy drought marketings of meats during the fall and early winter months of 1934–35 largely offset the effect on egg prices of the short supplies prevailing then and so prevented a more-than-seasonal rise in egg prices. These marketings declined after January 1935, and with this decline in distress marketings prices of most meats and animal products advanced to new levels. In stead of declining seasonally, the February 15, 1935, farm price was 25.6 cents per dozen as compared with 25.0 cents per dozen on January 15, 1935. This established a new level of prices for eggs which during 1935, has been maintained between 17 to 36 percent above pre-war averages. The farm price on May 15, 1935, was 21.4 cents per dozen. The September 15, 1935, price of 26.4 cents per dozen does not show the usual seasonal advance since May. Egg prices at wholesale followed a course similar to that of farm prices but on a lower level relative to pre-war averages during 1935.

At the higher level of prices which prevailed after February 1935, production of eggs has been stimulated. There has been a tendency for farmers to increase the size of the laying flock and the rate of production has been increased. This tendency received further stimulation by the decline in feed prices in the first 8 months of 1935.

The above-average rate of production and the increase in laying flocks has tended to prevent the average seasonal rise in prices during the late summer and early fall. The higher level of prices has stimulated imports of egg products, partly offsetting the effect of smaller storage stocks.

Egg prices in the winter of 1935–36 will continue to be affected in this way by these factors and some decline from the usual seasonal course of prices may occur unless generally adverse weather conditions curtail production. Both in the winter and in the spring improved demand conditions may limit this decline to a small amount.

Should the number of chicks hatched in the spring of 1936 be large, as is now expected, the inclusion of increased numbers of pullets in laying flocks in the fall of 1936 will further increase production and egg prices are likely to decline to lower levels.

TURKEYS

An increase in the number of turkeys raised in 1936 over numbers in 1935 is expected, owing to improved turkey prices and lower feed costs in 1935. The extent of the increase will depend on the prices received for the 1935 turkey crop. Turkeys will probably face greater competition in 1936 from larger supplies of chickens and other meats, but the anticipated improvement in consumer purchasing power should partly offset this and prices for the 1936 crop will probably be not greatly different from prices for 1935. The number

of turkeys raised this year is about 13 percent smaller than in 1934, but it is probable that heavier average weights will partly offset this decrease. Prices for the 1935 crop will probably be above those of 1934. The relationship between turkey prices and feed prices is more favorable to turkey producers this year than in 1934.

From a production of about 14,800,000 turkeys in 1927, numbers increased to a figure of 16,794,000 birds produced in 1929, as reported for that year by the Bureau of the Census. After a slight recession of 3 percent in 1930, numbers again increased up to a total of about 18,740,000 birds in 1932 and 1933. Throughout this period of increasing numbers, the price of turkeys continued to decrease, partly because of the increased supply, but partly owing to the falling general price level. Decreases in feed prices were greater than in turkey prices, however, so that heavy production continued even at the low prices received in 1930–33.

The farm price of 11.5 cents per pound received during the 1933 season, coupled with the increase in the price of grain, made turkey production so unprofitable to many growers that a decrease of 7 percent in numbers followed in 1934. The smaller turkey crop of 1934 brought improved prices, the average farm price of the birds sold being about 15 cents per pound. This increased price was not sufficient, however, to offset the greatly increased cost of feed. There were other difficulties in the way of production this year, such as the selling off of many entire flocks in the drought area last year, the shortage of hatching eggs this spring, and heavier-than-usual loss of poults. The reduction of 13 percent in numbers this year was due mainly to heavy decreases in the Central States, especially in the Plains area. Numbers fell 10 to 15 percent in the north-central area and 25 percent in the south-central, and decreased in the far West about 5 percent. In the northeastern and southeastern areas numbers increased slightly.

Farm prices of turkeys on September 15 this year averaged 14.4 cents per pound compared with 11.8 cents last year and with 10.7 cents in September of 1933. October prices were 15.9 cents compared with 12.7 cents last year. Prices last year increased, however, from the early low levels, to 14.6 cents in November, and to 16 cents in December and January. The sharp increase was in part owing to the fact that early marketings contained an unusually large proportion of light unfinished birds. This situation does not exist this year, as the quality and weight of early deliveries are above average for early birds. It appears probable that with the better early prices being received and the more abundant feed supplies available this year, the later marketings will contain an unusual proportion of heavyweight birds.

Early prices this year, although much more favorable than early prices in 1934, are about 4 percent below last season's average price. But when the 9-percent decrease in price of feed is considered, should these early turkey prices be merely maintained for later marketings, they would be more favorable than last year's average. The September 15 relation of farm turkey prices to farm feed prices this year was considerably above their pre-war relation, although still somewhat low compared with their relation during the years 1923 to 1927.

The heavy stocks of turkeys in cold storage were a drag on early price increases. Last year a large number of late marketed birds bought at farm prices around 16 cents could not be marketed at prices satisfactory to the holders; they piled up the largest midwinter stock of turkeys on record. Although more turkeys are eaten during the spring and summer than formerly and large stocks are justified, unusually heavy stocks remained on October 1, 1935, being then 3,392,000 pounds greater than a year earlier. Although this difference in holdings was equal to only about 2 percent of the total production, the presence of these birds on the market, awaiting disposal, was a price-depressing factor. The inability to move the extra-heavy carry-over from 1934 at remunerative prices may also tend to make potential buyers conservative about prices of late-marketed heavy birds.

On the other hand, several factors in addition to the shorter crop of turkeys should assist to bring higher average prices this year. The supply of chickens marketed has been much smaller than last year, and October 1 stocks of all poultry, including turkeys, are about 16,000,000 pounds, or 29 percent less than last year, and about 18 percent below the 5-year average. Supplies of other meats are also low. Consumer purchasing power has increased. Altogether, an increase over last year's average price is to be expected, but the extent

of the increase cannot now be closely predicted. Premiums will probably be obtained this year for well-finished birds of lighter weights, suitable for household use.

If prices received for turkeys during the present marketing season prove profitable to producers as is expected, there will be considerable recovery next year in the number of turkeys raised. The extent of the recovery will depend mainly on the prices received in 1935, on their relation to feed prices, and on the weather during the brooding period in 1936.

The price situation when the 1936 crop is marketed will be less favorable to turkey producers from the standpoint of total meat supplies. The supply of other poultry and of pork will both be considerably increased. Total supplies of meat will still be below average, however, and any improvement in demand conditions will at least partly offset the price-depressing effect of the expected increase in supplies of turkeys.

As the greatest reduction in numbers of turkeys has been in the Central and far Western States, and especially in the heavy-producing areas of the Plains States, a rapid increase there is to be expected with restoration of more normal feed supplies in those regions.

The present decrease in production of turkeys appears to be due mainly to fewer small flocks, and to reduction in the average size of these. Losses of poults are heavy in small flocks of turkeys raised with chickens. The proportion of crop correspondents reporting turkeys this year decreased almost 10 percent. The number of reports for flocks of large size showed no decrease, however, nor did the average size of such flocks diminish. The production of turkeys in large flocks gives better opportunity for the use of modern improved methods of production, especially sanitary measures to prevent losses of young birds. The number and relative importance of large flocks has been increasing for many years and the proportion of all turkeys produced in such flocks must now be rather large.

The production of turkey poults by commercial hatcheries has expanded greatly during recent years. According to reports from 189 hatcheries, 178 of which produced turkeys this year and 162 last year, the production of hatchery poults this year was more than one-third above that of last year. The increase in hatchery production of poults originated mainly in a demand from large commercial producers for turkey poults in large numbers. This year, owing to the drought conditions which continued well into the present year in much of the important western producing area, increased numbers of producers found it necessary to obtain their poults from hatcheries.

CLOVER SEED AND ALFALFA SEED

Supplies of red- and alsike-clover seed are much below normal, while those of alfalfa and sweetclover are close to normal. The production of red-clover and alfalfa seed in 1935 may be slightly less than that in 1934, whereas the production of alsike-clover seed is estimated to be slightly larger and that of sweetclover, about one-fourth larger than the 1934 production. Weather conditions during the summer of 1935 were less favorable for the production of seed of the clovers than of the grasses.

The prospective demand for clover and alfalfa seed is problematic. Doubtless the fact that current prices of them are about one-third lower than last year and about one-sixth lower than the 5-year (1928–32) average will tend to increase the quantities used. Demand may be stimulated through the replacement of cultivated crops by hay and pasture under the crop-adjustment program of the Agricultural Adjustment Administration. On the other hand, the good condition of meadows and pastures, the large supplies of timothy seed and soybeans, and the fairly large supply of Korean lespedeza seed, together with the relatively lower prices of the seeds of the grasses than of the clovers, will tend to decrease the demand for alfalfa and clover seed in many sections. The excellent condition of many meadows seeded in the fall of 1934 and the spring of 1935 suggests the possibility of a larger acreage of clover seed for harvest next year and lower prices.

Production of red-clover seed this year is estimated at approximately 45,000,000 pounds, compared with about 50,000,000 pounds in 1934, 67,000,000 pounds in 1933, and approximately 69,000,000, the 5-year (1928–32) average. In 1934 hay supplies and pastures were very short, which tended to decrease considerably the acreage of clover left for seed. That situation did not exist

in 1935, but the severe drought of 1934 greatly decreased the acreage from which seed might otherwise have been harvested in 1935. The smaller 1935 production in a few far Western and East Central States was expected to more than offset the increased production in several North Central and West Central States.

Imports and exports of red-clover seed have continued to be very small. During the fiscal year ended June 30, 1935, a total of 101,100 pounds was imported, compared with 11,000 pounds in the preceding fiscal year, none 2 years ago, and 5,435,680 pounds, the 5-year (1928–32) average. No red-clover seed has been imported since the last half of June. Exports for the 9 months ended September 1935 were 60,652 pounds, compared with 1,022,358 pounds in 1934, 523,859 pounds in 1933, and 327,885 pounds, the 5-year average for the corresponding period. Unless the present relationship between prices in this country and in Europe changes considerably, imports and exports of red-clover seed are likely to continue to be small. Current prices received by growers average about $13.35 per 100 pounds, basis clean seed, compared with about $18.50 last year, $9.75 in 1933, and $16.85, the 5-year average about October 15. The carry-over of red-clover seed, although smaller than usual, is in excess of what dealers expected it to be. The retail sales in pounds in the spring of 1935 were 20 percent smaller than in the spring of 1934.

Production of alsike-clover seed in 1935 is estimated at approximately 17,000,000 pounds, compared with about 16,000,000 pounds in 1934. 22,500,000 pounds in 1933, and 25,000,000, the 5-year average. Because of the severe drought in the spring and early summer of 1934, many of the seedings were lost. This was offset, however, by better yields this year than last year.

Although sales of alsike-clover seed in the spring of 1935 were 25 percent smaller than in the preceding spring, the carry-over was very small. Imports have been of little consequence for the last 5 years, averaging only 128,100 pounds, compared with 5,086,700 pounds, the 20-year (1911–30) average. The 1935 crop of alsike-clover seed in Canada, formerly the chief source for this country's imports, was nearly a failure. Current prices to growers average $15.25 per 100 pounds, compared with $21.80 last year, $11.20 in 1933, and $15.35, the 5-year average.

Although the 1934 sweetclover-seed crop turned out better than expected, the 1935 crop may exceed it by about 25 percent. The 1935 production is estimated at approximately 47,000,000 pounds, compared with about 38,000,000 pounds in 1934, 43,000,000 pounds in 1933, and 53,500,000 pounds, the 5-year average. The increase in 1935 over 1934 is attributed to the larger acreage cut for seed in most of the principal producing districts. Sales of sweetclover seed in the spring of 1935 were about 10 percent smaller than in the spring of 1934. The carry-over was larger than expected, but smaller than the average for the previous 5 years. Current prices to growers average about $3 per 100 pounds, compared with $6.25 last year, $2.80 in 1933, and $4.05, the 5-year average.

Because of rather favorable weather in September and belated killing frosts, the production of alfalfa seed may be larger than early forecasts indicated. It is estimated that approximately 48,000,000 pounds was produced, compared with 50,000,000 pounds last year, 61,500,000 pounds in 1933, and 49,400,000 pounds, the 5-year average. The production, however, in several of the more northern States was smaller than in 1934 despite the fact that the 1934 production in most of those States was below normal. The decrease in the production of Grimm in 1935 was greater than that of common alfalfa.

The sales of alfalfa seed in the spring of 1935 were 4 percent smaller than in the preceding spring. The carry-over, although somewhat larger than expected, was smaller than usual. Imports and exports of alfalfa seed have been small. None has been imported since the first half of May and only 123,500 pounds was imported during the fiscal year ended June 30, 1935. Exports for the 9 months ended September 1935 amounted to 243,982 pounds, compared with 807,587 pounds in 1934, 396,340 pounds in 1933, and 445,372 pounds, the 5-year average for the corresponding period.

Current prices to growers average about $10.75 per 100 pounds, basis clean seed, for common alfalfa, compared with $17 in 1934, $7.75 in 1933, and $13.50, the 5-year (1928–32) average on October 15. Prices to growers for Grimm alfalfa seed on that date ranged mostly from $13 to $15 in 1935, $24 to $27 in 1934, and $9 to $12 in 1933.

POTATOES

The present indications are that the programs likely to be put into effect under recent potato legislation may have a decided influence on both potato plantings and marketings in 1936. For that reason, an appraisal of potato prospects for 1936 must be based on considerations in addition to those elements which in the past were important factors in the potato outlook. If there were no potato-control measures in effect in 1936, the potato acreage probably would be reduced materially on account of the low prices prevailing during the last 2 years. On the other hand, an adjustment program probably will have the effect of preventing excessive decreases in the acreage planted in 1936. An excessive decrease in production might result in very high potato prices in 1936 but probably would not benefit potato growers in the long run. Although it is not possible under these circumstances to forecast very accurately the change in the total potato acreage to be expected, present indications are that it probably will be smaller than it has been since 1930. Early reports indicate that the commercial early and intermediate acreage in 1936 will be reduced about 4 percent below that harvested in 1935. If weather conditions during the growing season of 1936 are average, the smaller United States acreage would cause supplies of potatoes to be less than average and the prices and the total income received by potato growers probably would be materially higher than they were for the 1934 and 1935 crops.

If no control measures were in effect, potato supplies in 1936 probably would be the smallest in 10 years. The low prices received for the 1934 and 1935 crops would ordinarily cause growers to decrease their potato plantings in 1936 materially, which, with average yields, would result in a sharp reduction in production in 1936. A potato crop almost as small as that of 1925 would be in prospect for 1936 and, under prospective demand conditions, would return growers much higher prices and income than the relatively large crops of the last 2 years.

The sales allotment of potatoes for the country as a whole for the 1936 season has been set at 226,600,000 bushels, according to an announcement released on November 1, 1935. On the basis of past experience, this volume of sales would require a total production of potatoes in the United States of approximately 351,000,000 bushels. If potato growers adjust their plantings in 1936 so as to conform to the national sales allotment, on the basis of average yields they would plant about 3,191,000 acres in 1936. With demand conditions somewhat improved over those of the last several seasons and with the smaller production in 1936, it is probable that prices and incomes to potato growers will be considerably higher than in the last few years.

Prices in the early part of the 1935 season, in the important intermediate and late-producing States, averaged below those of a year ago. On October 15 the United States average price received by potato growers was only 46.1 cents per bushel, compared with 49 cents at the same time in 1934 and a 5-year (1909–13) October average of 65 cents per bushel. For the season of 1934–35 the United States average farm price of potatoes was about 47 cents per bushel, and for the 1933–34 season about 82 cents.

The distribution of the 1935 crop in the late States is quite different from that in 1934 in that the Eastern late States have a relatively small crop, while the Central and Western States have average or better crops. In 1934 the Western States had relatively short crops of potatoes, while the Eastern and Central States had very large supplies. It appears probable that potato prices in the eastern markets this year will average somewhat higher than last year. In the markets of the West and Central West prices may not average much higher than a year ago. The recently announced plan of the Agricultural Adjustment Administration of buying potatoes for diversion to feed or other byproducts may strengthen prices in some surplus areas distant from market. October 1935 cash-to-grower prices per 100 pounds for important areas, compared with those of October 1934, are as follows: Presque Isle, Maine, 56 cents, 25 cents; Rochester, N. Y., 65 cents, 33 cents; Michigan points, 52 cents, 37 cents; Waupaca, Wis., 42 cents, 39 cents; and Idaho Falls, Idaho, 43 cents, 48 cents.

Although the demand for potatoes is relatively inelastic (that is, small crops normally result in larger total returns to growers than do large crops), it appears that there might be some danger of too great a reduction in the acreage planted to potatoes in 1936. Sharp reduction of supplies in the coming year

might result in some shifting away from potatoes by consumers. Over a long period it seems apparent that potato growers would benefit—under present demand conditions—if they reduced their acreage about 5 percent below the acreage planted in 1935, and about 6 percent below the 1934 harvested acreage. This acreage, with yields varying from 100 to 120 bushels per acre and averaging about 110 bushels for the country as a whole, would produce an ample supply of potatoes for all domestic requirements and, at the same time, return growers a fairly high level of total income. Under these conditions, the total United States production would vary from 310,000,000 bushels in years of low yields to 372,000,000 bushels in years of bumper yields, and would average over a period of years around 341,000,000 bushels.

THE 1935 CROP

The October report of the Crop Reporting Board indicated a United States potato crop of approximately 366,000,000 bushels for 1935, compared with 385,000,000 in 1934 and a 5-year (1928–32) average of about 363,000,000 bushels. The total 1935 crop in the 11 early Southern States is estimated at 34,338,000 bushels, or about 5,000,000 less than their 1934 production. In the seven intermediate States this year's total crop is estimated at almost 37,700,000 bushels, an increase of about 4,000,000 over the 1934 production in that group of States.

The October forecast for the 30 late-potato States was approximately 294,000,000 bushels, or about 18,000,000 below their 1934 total. There is a very marked shift this year between the Eastern and Western States. In 1934 the Eastern late surplus-producing area, close to the large centers of consumption, had an exceptionally heavy crop, while the Western States had an extremely light production of potatoes. This season, the three Eastern late-surplus States are expected to have only 84,000,000 bushels, compared with the bumper crop of about 122,000,000 last year. The 5 Central surplus-producing States expect slightly over 97,000,000 bushels of potatoes, as against 96,000,000 in 1934, and the 10 Western States show a sharp increase to about 72,000,000 bushels, from the small crop of 54,000,000 bushels last season. Whereas in 1934 the Eastern surplus group had about 68,000,000 bushels more than the Western group, this year the Eastern excess over the Western production may be only 12,000,000 bushels. The 12 other late-potato States, which do not produce quantities sufficient for their own needs, are expected to have 41,000,000 bushels this season, as against 40,000,000 in 1934.

With the 18 late surplus States producing slightly greater than an average crop in 1935, the prospects are that stocks of potatoes carried into the late winter and spring marketing period will be relatively large, perhaps more than 100,000,000 bushels. These large supplies of old potatoes carried over are likely to have a depressing influence on the prices of early potatoes marketed from the South during the first half of 1936.

PROBABLE PRODUCTION IN 1936

Growers of commercial potatoes in the first section of early States (Florida and the lower valley of Texas) this year produced about 37 percent fewer potatoes than in 1934, but because of the heavy carry-over of old stock, they received an average of only $1.20 per bushel, or an increase of only 5 percent over their average price for the 1934 season. The October intentions-to-plant reports of the growers indicate that the commercial acreage of potatoes in 1936 in these earliest States may be about the same as in 1935. It is indicated that the acreage in south Florida will be increased 22 percent, while that in north Florida and the lower valley of Texas will be decreased 6 and 9 percent, respectively.

In the second section of the early commercial group (South Carolina, Georgia, Alabama, Mississippi, Louisiana, California, and Texas outside the lower valley) the 1935 crop was reduced about 8 percent below that of the preceding year, and the average price per bushel to growers held to about the same level as in 1934. Commercial acreage in this group of States was sharply reduced from that of 1934, but heavy yields per acre largely offset this cut in acreage. October reports point to acreage reduction in these States amounting to 6

percent, or about 4,000 acres, for the 1936 season. Most of this reduction is expected to occur in California, South Carolina, and Texas.

Greatly reduced commercial acreage and relatively light yields in the four second-early States (North Carolina, Tennessee, Arkansas, and Oklahoma) this year resulted in a crop 23 percent lighter than that of last year, but the average price to growers increased from 50 to only 58 cents per bushel, or only 16 percent over the 1934 average price. For the 1936 season, an acreage reduction of 2 percent is indicated by the October reports. North Carolina shows a decrease of 5 percent, while Arkansas and Oklahoma show increases of 10 and 2 percent, respectively.

The seven intermediate States (New Jersey, Maryland, Virginia, Kentucky, Kansas, Missouri, and Nebraska) had a commercial crop of 18,212,000 bushels this summer, compared with about 20,000,000 in 1934, due chiefly to reduced acreage in Virginia, Kansas, and Missouri. However, supplies of old potatoes continued to sell in many markets throughout June and early July, and the production in local and home gardens apparently was so heavy that prices of commercial intermediate-crop potatoes were unduly depressed and averaged only 40 cents per bushel to growers, compared with 50 cents in 1934, and were far below those of the 1929–33 period. The October reports of intentions to plant show a probable acreage reduction of about 4 percent for this group of States in 1936. Increases are indicated for Kansas, Missouri, and Nebraska, while all of the other States show slight decreases.

Although no reports on intentions have been received from the important late-potato States, the prospects are for a decrease in the acreage planted in 1936. The low prices received for the 1934 and 1935 crops would ordinarily cause growers to reduce their acreage materially. However, if an adjustment program is put into operation it is probable that growers will make adjustments in plantings to fit that program.

Because of the large 1934 crop of potatoes in the United States, imports of this product were sharply reduced during the fiscal year 1934–35 to about 532,000 bushels, compared with imports of 2,102,000 bushels in the preceding fiscal year. On the other hand, exports from the United States increased about 70 percent to a total of 1,218,000 bushels for the 12 months ended with June 1935.

SWEETPOTATOES

Prices of sweetpotatoes are expected to average slightly higher during the 1935–36 season than they did last season, although during recent months the general level of sweetpotato prices has been below that of the same time in 1934. A reduced production of potatoes and a generally higher level of consumer purchasing power should tend to strengthen the price situation for sweetpotatoes during the latter half of the season. However, the total acreage of sweetpotatoes for the 1936 season may not be much different from that of the present season, or around 757,000 acres.

Usually the acreage in the southern cotton States, comprising approximately 90 percent of the United States total, varies inversely with the returns from cotton. Although a heavier production of cotton is indicated for 1935, the total returns from the cotton crop (including rental and benefit payments) are expected to exceed slightly those of last season and this may tend to bring about a slight reduction in the 1936 sweetpotato acreage in the cotton-growing States. In the important commercial sweetpotato area from Virginia northward to New Jersey, growers of potatoes are planning to reduce their 1936 acreage of that crop by at least 5 percent, which may tend to throw a larger acreage into sweetpotatoes, but that section usually has only one-seventh of the total United States acreage of sweetpotatoes.

The sweetpotato acreage was reduced slightly in 1935, chiefly in the South Atlantic States and Alabama and Mississippi. Increased plantings, however, are reported in such important commercial States as Virginia, Tennessee, and Arkansas. The 1935 total of 757,000 acres is the smallest since the record high plantings of the 1932 season.

For the United States as a whole, the 1935 yield per acre of sweetpotatoes may be the highest in the last 6 years, the indicated (Oct. 1) average being slightly over 91 bushels per acre, chiefly because of the much larger yields in the Central and Eastern States. The commercial area from Virginia to New Jersey may average as high as 141 bushels. The Central sweetpotato States, which were hit by drought last season, may increase to an average

of 93 bushels per acre this year; the South Atlantic States expect an average of 91 bushels and other Southern States about 84 bushels per acre.

Total production of sweetpotatoes for 1935 was forecast on October 1 at approximately 69,000,000 bushels, a net increase of about 1,600,000 over the 1934 crop; 4,000,000 more than the 1933 crop, and 5,200,000 bushels above the average production for 1928–32. The Eastern States (Virginia to New Jersey) expect a crop of 8,455,000 bushels, most of which is intended for market shipment. This would be an increase for that area of nearly 1,000,000 bushels over their 1934 production. The North Central States and California may have 3,800,000 bushels, compared with only 3,000,000 last year. The production of South Atlantic States (North Carolina to Florida) may be reduced to 21,500,000 bushels this year, but that would still be nearly 2,000,000 bushels above their 5-year average. Other Southern States expect a slight increase to 35,250,000 bushels this season, or 3,000,000 above average.

The United States average price to growers of sweetpotatoes during the 1933–34 season was about 70 cents per bushel. Last year the average increased to nearly 81 cents, the highest level since 1930. On September 15 of the present season the price to growers averaged about 74 cents, compared with 88 cents at the same time in 1934 and 76 cents in September 1933, but a large part of the present season still lies ahead, and there is opportunity for seasonal advance in the price to growers.

During the last 3 years (1932–34) the average production of sweetpotatoes was a little over 70,000,000 bushels. Of that total, it is estimated that about 4 percent was used for seed, 5 percent was fed to livestock, 5 percent was considered loss, waste, and shrinkage, 30 percent was consumed as food on the farms where grown, and the remaining 56 percent was sold or available for sale. If 56 percent of the 1935 crop (as estimated in October) is sold during the 1935–36 season, it would mean the sale of about 38,500,000 bushels, as against 37,000,000 bushels estimated as sold from the 1934 crop. Largely because of rising prices, the cash income received from sweetpotatos increased from $23,408,000 in 1932 to $29,900,000 in 1934. With a larger volume of sales and slightly higher prices, it is probable that the cash income from sweetpotatoes in 1935 will be further increased.

TRUCK CROPS FOR MARKET

Producers of commercial truck crops for fresh-market shipment probably will be able to market a larger volume of vegetables in 1936 than they did in 1935 and at about the same level of prices as in 1935. As the general level of business activity is expected to be higher than in 1935, consumer buying power probably will improve. Food prices in general are likely to show some further advance, but vegetable prices may rise only slightly, as it is probable that production will be increased.

Because of the higher prices received for a large number of important truck crops in 1935 and the steady upward trend in consumption of vegetables in general, it is probable that the total acreage grown for fresh-market shipment will be further expanded in 1936. There are likely to be increases in the United States acreage of asparagus, snap beans, beets, cabbage, carrots, celery, cucumbers, lettuce, onions, peppers, spinach, tomatoes, and watermelons, all of which were sold this year at prices higher than those of 1934. Of course, general increases are not anticipated for all of these vegetables in each of the major producing areas, as some may be increased in one area and reduced in another area.

A continued small supply of such staple foods as meats, eggs, and wheat is in prospect and is a favorable factor in the competitive position of fresh vegetables. This is particularly true of early spring vegetables marketed in the first half of 1936. On the other hand, the commercial supply of late cabbage, onions, potatoes, and sweetpotatoes is relatively large, and the carry-over of the stored portions of these crops into the winter-marketing season is expected to offer considerable competition with the early 1936 spring-grown vegetables. In addition, the pack of nearly all varieties of commercially canned vegetables was unusually large in 1935 and a heavy supply is expected to be available for the winter- and spring-marketing period. In 1934 the drought cut sharply into the production of vegetables in a large area in the Central and Western States and reduced the quantity of home canning for use in the

winter and early spring of 1934–35. Production of vegetables in 1935 in all areas was greatly increased over that of 1934, and undoubtedly large quantities were home-canned and stored for the winter of 1935–36. This supply is likely to reduce the demand somewhat for both stored and early spring-grown vegetables in 1936 relative to the active demand prevailing in 1935.

The reports received to date from Florida, Texas, Arizona, California, and a few other early sections indicate that the combined acreage of 11 vegetables for harvest in the late fall and winter of 1935–36 will be about 40 percent larger than that harvested in these States in 1934–35, and 51 percent above the average for 1929–33. This sharp increase in acreage indicates that the rapid expansion in the production of vegetables for the winter market is continuing. In 1934 a considerable portion of the acreage of early snap beans, cabbage, and other early vegetables was completely wiped out by frost and freezes. The acreages planted for 1935–36 to these early vegetables, therefore, are considerably in excess of those remaining for harvest in 1934–35 after the freezes. Although the combined acreage of these 11 crops is small relative to the United States total, it might be an indication that the total acreage to be planted to vegetables for fresh-market shipment in 1936 will be larger than that harvested in 1935.

During the 1935 season the total production of 17 important vegetables for fresh-market shipment increased about 3 percent above the relatively large production of 1934 and set a new record high level for these crops. In terms of the 1924–29 average, production of these 17 vegetables this year is indicated to be 120.3 percent, compared with 116.5 percent in 1934, 106.7 percent in 1933, and 119.4 percent in 1932, the previous record high level. It appears that the steady expansion in the output of these crops, which has been in progress during the last 10 to 15 years, is continuing.

The increase in production of these vegetables in 1935 was due entirely to an increase of acreage, as the combined yield per acre was slightly below that of 1934. Although most of the large producing centers of these vegetables had good growing conditions this season, the earliest areas of Florida, Alabama, Mississippi, Louisiana, and Texas were hit hard by freezes in December 1934, and in February 1935, and yields were relatively low. The total acreage planted to the 17 important vegetables for fresh-market shipment in 1935 was about 4 percent larger than that of 1934 and was the largest acreage on record. It exceeded the previous high-record acreage of 1932 by about 3,000 acres or a fraction of 1 percent. During the last 15 years the trend of the acreage of these vegetables has been sharply upward, with the only major reversal occurring in 1933 after the disastrously low prices of 1932. It now appears that, with continued improvement in general demand conditions, the expansion process will continue, although at a slower rate than in the past. From 1923 to 1932 the average rate of increase was about 7 percent per year. There was a 10-percent reduction in 1933, and 6-percent and 4-percent increases, respectively, in 1934 and 1935.

In 1935, the preliminary estimates point to a total of 1,438,000 acres, compared with 1,380,000 in 1934, 1,304,000 in 1933, and 1,435,000 in 1932—the previous high record for these vegetables. The only major decreases in 1935 occurred in the case of snap beans, cabbage, lettuce, eggplant, and beets. There were substantial increases in acreage of practically all other vegetables.

Yields per acre of commercial truck crops for fresh-market shipment in 1935 were about 1 percent below those of 1934, and about 2 percent higher than in 1933, the lowest level of yields on record. Average yields per acre declined about 16 percent during the 10 years ended in 1931, but since 1931 the rate of the decline has been much slower and there is evidence that the rapid downward trend has been checked.

Prices of vegetables for fresh-market shipment advanced about 10 percent in 1935 over those of 1934 and were the highest received since 1930. In terms of the 1924–29 average, prices received by producers for the 17 vegetables combined are indicated to be 75 percent in 1935, compared with 67 percent in 1934, 65 percent in 1933, 61 percent in 1932, 74 percent in 1931, and 87 percent in 1930. The 1935 season marks the third successive season of price improvement since the low point reached in 1932. Although demand conditions in 1936 may be improved over those of the last several seasons, it is probable that production of these vegetables will be increased to the extent that prices will average no higher in 1936 than in 1935.

The average value per acre of vegetables for fresh-market shipment in 1935 probably was about 15 percent higher than that of 1934, and about 6 percent higher than in 1933, and 28 percent above the record low mark of 1932. Whereas, it was not uncommon for the average return per acre for these vegetables to exceed $175 during the predepression period, the sharp decline in prices since the depression brought down the average-per-acre returns to the low level of $96 in 1932. In 1933 the average was about $101, in 1934 about $107, and in 1935 the early indications are that the per-acre returns will average slightly above $120.

Imports of fresh, dried, and canned vegetables increased substantially in 1934–35 (July to June). Imports of all vegetables in 1934–35 totaled around 417,000,000 pounds, valued at $12,919,000, and were the largest since 1931–32. The increase was chiefly in green-top vegetables and dried legumes. Root and canned-vegetable imports showed little increase. Of the 417,000,000 pounds of vegetables imported in 1934–35, green-top vegetables accounted for 24 percent, root vegetables 35 percent, dried legumes 15 percent, and canned vegetables 26 percent.

Green-top vegetable imports during 1934–35 (July to June) amounted to 100,827,000 pounds, against 67,669,000 in 1933–34. The increase was largely due to the scarcity of winter-vegetable supplies in the United States occasioned by severe frost and freeze injury to the Florida and Texas crops. Practically all of the green-top vegetables were received from Cuba and Mex co during the so-called "winter-vegetable importing season", November to April. The outstanding item is tomatoes. Other important vegetables are green peas, beans, peppers, okra, cucumbers, and eggplant.

Since the 1934–35 vegetable season was more profitable to Cuban and Mexican growers than any season since the beginning of the depression, it is reasonable to assume that 1935 plantings will be as large as or larger than in 1934. Advices from Cuba indicate that, although the acreage is not expected to be much larger this season, yields will be greater due to the better care that growers are in a position to give their crops, but exports from Cuba probably will be no larger than in 1934–35, since only the higher grades will be allowed to clear for export. The Reciprocal Trade Agreement signed with Cuba in 1934, which allowed reductions on certain Cuban vegetables during the winter months when competition with similar American vegetables is at a low ebb, has been of distinct advantage to the Cuban vegetable industry and accounts for the fact that Cuba now exports larger quantities of winter vegetables to the United States than does Mexico.

Imports of root vegetables like turnips, rutabagas, potatoes, onions, and garlic in 1934–35 were of heavier volume than the green-top vegetables but were less valuable. About 143,400,000 pounds were imported in 1934–35, or a slight increase over 1933–34. These imports were valued at $1,485,000. Most of the turnips, rutabagas, and potatoes came from Canada. Dried onions were received from Chile, Italy, Spain, Greece, Egypt, and Canada. Garlic came largely from Chile, Italy, Mexico, and Spain.

CABBAGE

The smaller supply of cabbage for the 1935 season, coupled with a slightly improved demand, resulted in higher prices to growers than were received for the large 1934 crop. These higher prices are likely to cause growers in some sections to increase their plantings in 1936. Already reports on the fall and early spring plantings indicate material increases in acreage are in prospect in those areas. It now seems apparent that both the early and second-early States will repeat the experience of 1934 and produce more cabbage in 1936 than can be marketed. In the light of past experience, it appears probable that only moderate increases of acreage would result in about as large a cabbage crop as could be marketed at prices in line with the average of recent years.

The total United States commercial cabbage acreage of 137,610 acres in 1935, including that grown for sauerkraut, was about 22 percent less than that of 1934 but only 4 percent below the 1929–33 average. The small acreage harvested in 1935 is a direct result of the low prices received for the large

1934 crop and to freezes occurring last February in the early sections of the Southern States. Yields in 1935 were also slightly lower than those of 1934, which, on the smaller acreage, resulted in a 24-percent decrease in total production. October indications pointed to a crop of 932,600 tons for 1935, compared with 1,230,400 tons in 1934 and 963,800 tons the 1929–33 average. Prices to growers for the total United States cabbage crop averaged $12.73 per ton, compared with $8.59 in 1934 and $15.38 the average for the period 1929–33.

In the early States (California, Florida, Louisiana, and Texas), it is probable that the acreage planted to cabbage for the 1936 spring market will be increased materially over that harvested in 1935. On the basis of past experience, it seems probable that an acreage about one-third greater than the 24,000 acres harvested in 1935 would produce, with average yields, an early-cabbage crop as large as can be marketed at reasonably profitable prices to the more efficient growers. Prices to growers in 1935 averaged $30.90 per ton, against $9.65 in 1934 and $22.75 the 1929–33 average. The higher prices received in 1935 were a result of the sharp reduction in the crop occasioned by the severe February freezes in the Gulf Coast States and short supplies of other vegetables available at that time. Production in the early-cabbage States in 1935 totaled only 108,300 tons, compared with 326,000 tons in 1934 and 198,900 tons the 1929–33 average. After the freezes, only 24,000 acres remained for harvest, against 58,550 acres in 1934 and a 5-year average of 36,440 acres. Yields in the early States in 1935 were about 1 ton per acre below the 1934 average.

In the second-early States (Alabama, Georgia, Mississippi, North Carolina, South Carolina, and eastern Virginia), the prospects are for a substantial increase in acreage planted to cabbage in 1936 over that harvested in 1935, largely because of the relatively high prices received for the 1935 crop. With the prospect that the early acreage also will be increased in 1936, it appears that, with average growing conditions, only a moderate increase of acreage in the second-early States would be justified by probable market conditions at the time of harvest next spring. The second-early crop in 1935 totaled 83,100 tons, compared with 82,300 in 1934 and 77,700 tons the average for 1929–33. Owing to the short crop in the early States, which came on the market just ahead of the second-early crop, prices for the latter averaged $34.80 per ton, against $7.92 per ton in 1934 and $29.37 the 1929–33 average. The acreage grown in the second-early States in 1935 totaled 14,700 acres, or about 5 percent less than in 1934, but 9 percent more than the recent 5-year average.

Plantings in the intermediate States (Arkansas, Illinois, Iowa, Kentucky, Maryland, Missouri, New Jersey, New Mexico, Tennessee, Washington, southeastern Ohio, southwestern Virginia, and Long Island, N. Y.) in 1935 remained about the same as in 1934—24,280 acres—but, with the yields per acre averaging around 6.4 tons, production reached a high level of 154,900 tons, or 15 percent more than the 1934 crop and 7 percent above the average production for this group of States. As a result of this larger production, prices to growers in 1935 averaged only about $14.70 per ton, compared with $15.18 in 1934 and $19.50 the 1929–33 average. With the 1935 prices of intermediate cabbage about the lowest on record, the prospects are that the acreage planted in this group of States in 1936 will be reduced slightly. However, during the last decade the cabbage acreage in these States has not fluctuated more than 1,000 or 2,000 acres per year, even though prices to growers have varied considerably during this time.

The low prices received in 1935 for the late domestic-type cabbage (grown in Colorado, Indiana, Michigan, Minnesota, New York, Ohio, Oregon, Pennsylvania, Utah, and Wisconsin) are expected to cause growers to reduce further the acreage planted to this crop in 1936. The 1935 acreage in these States was reduced about 5 percent below that of 1934 to 38,220 acres. Yields in 1935 averaged slightly below those of 1934 and production totaled 317,500 tons, compared with 339,000 in 1934. The average production for 1929–33 was 271,800 tons. Although the supply of late domestic-type cabbage in 1935 was smaller than that of 1934, prices to growers averaged only $6.42 per ton, as against $7.75 in 1934 and $9.83 the 5-year average. The lower prices in 1935 were the result of heavy marketings from the intermediate States just preceding and partly overlapping this group, heavy supplies of cabbage produced in home and local gardens, and low demand for cabbage for sauerkraut.

Although preliminary reports indicate that the 1935 price to growers of late Danish-type cabbage (in Colorado, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin) will average slightly higher than that of

1934, it probably will not be high enough to encourage growers of this type of cabbage to increase their plantings in 1936. The acreage in 1935 was reduced about 6 percent to 35,010 acres, following the low prices received in 1934. Yields in 1935 averaged only 7.4 tons per acre, compared with 9.1 tons in 1934 and 7.7 tons the 1929–33 average. The smaller acreage and low yields in 1935 caused production to be reduced about 24 percent below that of 1934 and the preliminary estimate of the crop is only 258,000 tons. The 1935 production is also below the average crop of 263,700 tons in this group of States. Preliminary reports indicate that prices for the late Danish crop averaged $6.09 per ton in 1935, compared with $5.81 in 1934 and $10.88 the 1929–33 average.

TOMATOES

Owing to the low prices received for the record large crop of tomatoes for fresh-market shipment in the United States as a whole during 1935, the prospects are for reduced plantings in 1936, particularly in the areas producing the earliest or fall crop, the second spring crop, and the intermediate or summer supply. The acreages in the first spring area of Florida, in the second-early States, and in the late States may show slight increases.

The relatively high prices received for tomatoes in 1934 caused the 1935 United States acreage of this crop for fresh-market shipment to be increased 8 percent to 175,270 acres, or a record high level. This compares with 162,610 acres grown in 1934 and 153,650 acres, the 1929–33 average. For the country as a whole, yields per acre in 1935 averaged about the same as in 1934, or 113 bushels, which—on the large acreage—resulted in the largest production on record. Preliminary estimates indicate that 19,884,000 bushels of tomatoes were produced for the fresh market in 1935, compared with 18,279,000 in 1934 and 16,994,000 bushels, the 1929–33 average. Because of this heavy production, prices to growers declined to an average of $1.12 per bushel for the 1935 season from $1.28 in 1934, compared with $1.34, the recent 5-year average.

Low prices received for the fall crop of tomatoes in Florida and Texas in 1934 probably will result in some decrease of acreage for the fall and winter of 1935–36. The acreage grown in those States in the fall of 1934 for shipment to market during the autumn and winter months amounted to 8,500 acres, or almost double the acreage of the preceding year. Because of heavy frosts and freezes, yields in these areas averaged only 48 bushels per acre, compared with 78 bushels in 1933 and 61 bushels, the 1929–33 average. Production, however, was increased to 406,000 bushels in 1934, as against 334,000 in 1933 and 292,000 bushels, the recent 5-year average. The increase in production was due entirely to the larger acreage. The large crop forced prices to growers of these early tomatoes down to $1.07 per bushel, or the lowest level on record. Although plantings for the coming season of 1935–36 may be reduced as a result of these low prices, the general trend of acreage of tomatoes in these early areas is sharply upward, indicating that, over the long time, winter production of tomatoes can be expected to continue to expand.

The higher prices received for south-Florida spring-crop tomatoes in 1935 are likely to result in some increase of acreage in that area for the 1936 season. The early 1935 or spring-crop acreage in south Florida totaled 12,000 acres, or the same as in 1934, but owing to slightly reduced yields the production was only 1,800,000 bushels, compared with 2,040,000 bushels in 1934. However, this was still nearly 40 percent above the average for 1929–33. The slight reduction in the early-spring crop, compared with 1934, resulted in an advance of 10 cents per bushel to growers, or an average return of $2.70 per bushel. This was the highest price received for south-Florida tomatoes since 1930.

A decline of prices for early tomatoes in 1935 in other Florida areas, the lower valley of Texas, and the Imperial Valley of California combined, may tend to reduce slightly the 1936 early-spring acreage in this group of States. The 1935 acreage of spring-grown tomatoes in these areas totaled 22,300 acres, or about 5 percent less than that harvested in 1934 and about 16 percent below the 1929–33 average. In 1935 about one-half the tomato crop produced in Texas was sold for canning and thereby decreased the quantity available for fresh-market shipment. Considering all three of these States together, yields of the early spring crop averaged 68 bushels per acre, or slightly higher than in 1934 but somewhat below average of 1929–33. Production totaled only 1,506,000 bushels, compared with 1,566,000 in 1934 and 1,914,000 bushels, the 1929–33 average. Prices to growers averaged $2.12 per bushel in 1935, ranging from $1.25 in Texas to a high mark of $2.75 in Imperial Valley. This average

was somewhat lower than that of 1934 or the 5-year period, and may result in slightly reduced plantings for 1936.

Growers of tomatoes in the second-early States (Georgia, Louisiana, Mississippi, South Carolina, and other Texas) received higher prices in 1935 than in 1934, which probably will cause a slight increase of acreage in this group of States for the coming season. These second-early areas had just about as many acres in tomatoes in 1935 as they harvested in 1934, or 39,850 acres, but average yield per acre dropped sharply to only 77 bushels, so that the production totaled only 3,082,000 bushels, as against a high level of 4,120,000 in 1934 and an average of 3,396,000 bushels for 1929–33. Because of the smaller crop and the improved demand, prices to growers averaged $1.24 per bushel, compared with only 81 cents from the large crop of 1934 and $1.45, the recent 5-year average.

The intermediate tomato States (North Carolina, Virginia, Maryland, New Jersey, Ohio, southern Illinois, Tennessee, Arkansas, Missouri, and parts of California) reported very low prices for tomatoes in 1935, so that it is probable that acreage for 1936 in this group of States will be materially reduced. This group increased its tomato plantings very largely in 1935 and had a total of 49,300 acres. With favorable growing conditions, the yields averaged high at 141 bushels per acre, and a record crop of 6,971,000 bushels was produced in these States. Prices to growers consequently dropped to the extremely low level of 54 cents per bushel, compared with 92 cents in 1934 and an average of 98 cents for 1929–33. It appears rather certain that plantings in this group will be curtailed in 1936.

Although prices in the late States are reported to be slightly lower this season, a further expansion of acreage may be expected in the fall of 1936. The combined plantings of these 14 States in 1935 were 35,520 acres, according to preliminary reports. This is 6 percent more than they harvested in 1934 and 14 percent above their 1929–33 average. The average yield per acre increased to 144 bushels, and a very large crop of 5,128,000 bushels was estimated on the basis of September 1 conditions. The 1934 production in these States was 4,301,000 bushels and the recent 5-year average was 4,430,000 bushels. Prices to growers in 1935 are estimated to have declined to an average of 78 cents per bushel, against 82 cents last year and 89 cents, the 1929–33 average.

The southern district of California, which produces late tomatoes for the fall market, probably will increase its plantings of this crop in 1936, as a result of the very favorable returns estimated for the present season. About 7,800 acres were grown in southern California in 1935, but because the average yield per acre declined to 127 bushels the final outturn of the crop was expected to be only 991,000 bushels, or 5 percent less than in 1934. This would still be 22 percent above the recent 5-year average. Prices to growers are expected to average as high as $1.75 per bushel, compared with $1.62 in 1934 and $1.48 per bushel, the 1929–33 average.

Imports of tomatoes into the United States rose to 1,456,000 bushels during the fiscal year 1935, valued at $1,880,000, as against 873,000 bushels, valued at $1,088,000, in 1933–34. Imports were the largest since 1931–32. The recent sharp increase was due to the somewhat smaller crop of winter tomatoes produced in the United States in 1934–35. Disastrous frosts severely injured the Florida and Texas crops in December 1934 and February 1935. Imports from Cuba and Mexico probably would have been larger, if there had been larger quantities of good quality tomatoes available for export early in the winter.

Advices from Cuba indicate that plantings of tomatoes have been made earlier this year and will be slightly larger than in 1934, but exports are not expected to be any larger than in 1934–35, because of the strict grading regulations that have been established. The tomato season on the west coast of Mexico is later than that of Cuba, and no reports of planting intentions have been received as yet. There is evidence that growers in both countries made profits on the 1934–35 crops, so that it seems probable—barring storm and frost damage—that ample supplies of tomatoes will be available in both countries for export to the United States, if prevailing prices warrant shipments.

ONIONS

Higher prices received by growers for the 1935 onion crop are likely to cause a further expansion of onion acreage for the United States as a whole in 1936. The trend of consumption of onions in the United States during the last 15 years has been slightly upward, and apparently producers may continue to be

able to market increasing quantities at about the same level of prices as in recent years. However, a further considerable expansion of acreage in 1936 is likely to result in a crop so large that a substantial portion of it probably would not be marketed, even though demand should be somewhat improved.

The relatively high prices paid to growers in 1933 and 1934 encouraged them to increase their onion plantings in 1935, and, as a consequence, the United States commercial onion acreage reached a record high level of 99,230 acres, as against 84,720 in 1934 and 84,460 acres the average for 1929–33. Increases were common this year in all sections. Although yields per acre for the country as a whole averaged less in 1935 than in 1934—145 sacks of 100 pounds, compared with 153 sacks in 1934—the larger acreage resulted in a total production of 14,432,000 sacks, or the third largest crop on record. Despite this heavier supply, prices of onions to date have averaged well above those of the last 3 years, largely because of an improved demand for onions. The preliminary average price to growers this year is $1.40 per sack, as against $1.13 in 1934 and a recent 5-year average of $1.09 per sack.

The early States (Texas, California, and Louisiana), which grow Bermuda and Creole onions for the spring market, probably will expand their acreage for 1936, as a result of the high prices received in 1935. This group of States planted their largest acreage on record in 1935, or a total of 26,550 acres. Yields per acre, however, were the second lowest on record, or only 70 sacks of 100 pounds each, so that the production in 1935 totaled only 1,852,000 sacks. This was only 1 percent above their 1934 production and about 10 percent below the 1929–33 average. The relatively small crop, together with small supplies of old onions from the 1934 late crop and the improved demand conditions in the spring of 1935, resulted in the highest prices for early onions since 1927. Prices to growers averaged $2.72 per sack, compared with $1.16 in 1934 and $1.66 the average for 1929–33. If these early onion States greatly increase their acreage for 1936 and if they have average yields, prices during the coming season are likely to be very low. Unless unusual shrinkage develops, the prospects are that more old onions will be carried over into the early spring marketing period than was the case in 1935 and, owing to the expected plentiful supply of other vegetables, it is probable that the demand for early onions will not be as active in 1936 as it was in 1935.

Higher prices in 1935 for onions in the intermediate States (New Jersey, Virginia, Kentucky, Oklahoma, northern Texas, eastern Iowa, southern Washington, and California) are expected to encourage increased plantings in this group of States for the 1936 season. The intermediate States also had a record high of 15,100 acres of onions in 1935, or 22 percent more than their large plantings of 1934 and about 66 percent above their 1929–33 average. Yields per acre averaged 165 sacks of 100 pounds, or the highest since 1928, and, as a consequence, production in these States was the largest on record. The crop totaled 2,496,000 sacks, compared with 1,864,000 in 1934 and 1,381,000 sacks, the recent 5-year average. Despite the large supply of onions available in these intermediate States, prices to growers averaged $1.46 per sack, or the highest since 1929. Any considerable further increase of acreage in 1936 is likely to expand production beyond what can be marketed, even though demand should be somewhat improved. This is particularly true if the prospective increased production in the early States materializes.

In the late- or main-crop onion States, which usually produce about three-fourths of the United States total onion supply, the 1935 plantings exceeded those of any previous year and totaled 57,580 acres. However, with the indicated (October) yield per acre reduced to an average of 175 sacks, compared with 197 sacks in 1934 and a 5-year average of 185 sacks, the prospective production of late onions is only 10,084,000 sacks, or only 1 percent above the 1929–33 average and only 9 percent above the 1934 crop. Although the production in 1935 in the late States is larger than that of 1934, early season prices to growers have held to slightly higher levels than those of last season, largely because of improved demand conditions. In the eastern late States (Massachusetts, New York, and Pennsylvania) the 1935 production was indicated at 3,108,000 sacks of 100 pounds, or slightly less than the 1934 crop. Early season prices have averaged about $1.25 per sack to growers, compared with $1.11 in 1934 and $1.10, the 1929–33 average. In the Central States (Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, and Iowa) the 1935 late-onion crop totaled 3,731,000 sacks, according to October 1 prospects, or about 21 percent more than in 1934, but 12 percent less than average. Despite this larger pro-

duction, prices to growers in these States averaged about $1.26 per sack during the early part of the season, or 4 cents above the 1934 price and 37 cents higher than the recent 5-year average. In the Western States (Idaho, Colorado, Utah, Nevada, Washington, Oregon, and California) the 1935 production of late onions was forecast at 3,245,000 sacks, or about 13 percent more than in 1934 and about 5 percent above their 1929–33 average crop. Prices to growers in these Western States, according to early season reports, averaged 88 cents per sack, or practically the same as in 1934 and the same as the average.

In the light of past experience, the higher prices received for late onions during 1935 are likely to cause growers in these States to make further increases of plantings in 1936. It is probable that the increases will be fairly general throughout the late-producing area, with the eastern and central groups of States showing the greatest expansion. Although it is probable that demand conditions in late 1936 will be somewhat improved over those of late 1935, it seems probable that only a small increase in late-onion production can be marketed at prices as high as those of the last two seasons.

The 143,920 sacks of onions imported into the United States during the 1934–35 season (July to June) were the largest importations since 1931–32, when 378,790 sacks were imported, but much below the annual imports prior to the 1930 tariff. Imports in 1934–35 were valued at $325,000. The increase in imports was due to the relatively small onion crops produced in the United States and to the higher prices prevailing in 1934–35. The prospects are that onion imports will be small in the 1935–36 season, unless there is a small crop of Bermuda onions produced in Texas in the spring of 1936. The chief sources of imports in 1934–35 were Chile, Italy, Greece, Spain, and Canada. With the exception of those from Canada, the imports were of the mild varieties.

WATERMELONS

Although prices received by watermelon producers for the commercial watermelon crop of 1935 were slightly lower than in 1934 they were probably high enough to encourage further acreage expansion in 1936. This is particularly true of the Imperial Valley of California, the second-early, and the late States. In the light of past experience it is probable that production of watermelons in most areas in 1936 will be expanded to the extent that prices will decline further and producers may not be able to market the total crop, as was the case during the period 1930–32. The quantity that can be marketed in any given season depends largely on weather conditions in the consuming areas during the marketing period. As a general rule, cool, wet weather tends to retard the consumption of watermelons.

Encouraged by higher prices received during the 1934 season, growers increased their acreage in 1935 about 5 percent above that of 1934. This increase, along with more favorable growing conditions in many sections, resulted in the estimated production of 48,176,000 melons or approximately 18 percent more than in 1934, but about 16 percent less than the 5-year (1929–33) average. Prices received by growers showed a slight decline from an average of $108 per thousand melons in 1934 to $105 in 1935, or a decrease of about 3 percent. This price decline might have been greater had it not been for the marketing agreements in operation in Florida, Georgia, North Carolina, and South Carolina where shipments were restricted to U. S. No. 1 grade during most of the marketing season. In addition, a few shipping holidays were declared which may have had some effect in maintaining the price level.

The early acreage in Florida and the Imperial Valley of California was 26,500 in 1935 as compared with 31,500 in 1934, a decrease of 16 percent but about the same as the 5-year (1929–33) average. Yields per acre increased substantially in Florida, where especially favorable growing conditions prevailed. Production in these early areas amounted to 11,237,000 melons which was about 17 percent greater than the production in 1934 but about 21 percent below the 5-year average. Prices to growers in California amounted to an average of $180 for 1,000 melons as compared with $102 in 1934, but in Florida only an average of $110 was received as compared with $185 in 1934. Quality of the Florida crop was good but demand in the markets was apparently curtailed by cool weather.

Plantings in the second-early States (Alabama, Arizona, Georgia, Mississippi, North Carolina, South Carolina, and Texas) in 1935 totaled 134,100 acres which was 17 percent greater than the acreage in 1934, but about the same as the 5-year (1929–33) average. Most of the increase in acreage oc-

curred in Georgia and South Carolina, where 19,000 more acres were planted than during the previous season. Melons of excellent quality were produced in Georgia, and favorable growing conditions prevailed during the marketing season. Rainy weather in South Carolina and North Carolina prevented the shipment of several hundred cars of melons. Yields per acre in the second-early group of States were larger than in 1934 and total production was estimated to be 28,076,000 melons or 28 percent larger than production in 1934 but about 22 percent less than the 5-year average. Prices to growers averaged $94 per 1,000 melons or about 5 percent less than those received in 1934. Any further acreage expansion in the second-early producing States is very likely to result in a further decline in prices.

In the late group of States (Arkansas, California, Colorado, Delaware, Illinois, Indiana, Iowa, Maryland, Missouri, New Jersey, Oklahoma, Oregon, Virginia, and Washington) the 45,850 acres planted in 1935 was about 1 percent less than that planted in 1934 and about the same as the 5-year average. Yields were slightly larger than during the previous season and 17,202,000 melons were estimated to have been produced, which represents a 3-percent increase. The price which averaged $101 per 1,000 melons in 1934 declined to $98 in 1935 or a decrease of 3 percent. Further acreage expansion by the growers in the late-producing States may bring a further decline in prices.

TRUCK CROPS FOR COMMERCIAL MANUFACTURE

Judging from the usual effect of wholesale prices of canned vegetables on the acreage of commercial canning vegetables the following season, it appears that canners will contract smaller acreages of most of these canning vegetables in 1936 and that contract prices to growers may be somewhat lower than the 1935 prices. With 85 to 90 percent of the total acreage of commercial canning vegetables ordinarily grown on a contract basis, the total acreage of truck crops for manufacture in 1936 probably will be smaller than the record high acreage grown in 1935. Large supplies of the important canned vegetables are available for the 1935–36 marketing season and large carry-over stocks are in prospect at the end of this season. These facts indicate that a decrease in total acreage in 1936 of about 35 percent below plantings in 1935 would be necessary, under average growing conditions, to adjust supplies within probable market requirements in 1936–37 and leave an average carry-over at the end of the 1936–37 season. In the past, however, it has usually taken the industry 2 years to make the full adjustment in acreage following seasons of large supplies and low prices. If canners react to the present large supplies and low prices as they have in the past, the net decrease in the acreage planted in 1936 may not exceed 15 percent. In this event, a further decrease in acreage may be expected in 1937.

Current wholesale prices of canned vegetables are materially below those of the last two seasons and are but little higher than the low price level of 1932–33. Average prices to growers in 1935 were 5 percent higher than those of 1934 but were 20 percent below the prices to growers for the predepression period of 1924–29. This lower level is higher than the level of prices for all agricultural commodities combined but is lower than prices received by growers of vegetables for the fresh market. Lower prices to canners for canned vegetables during the late autumn and early winter months preceding the growing season are ordinarily reflected in lower contract prices to growers and smaller acreages for that season.

The combined acreage of 11 canning crops for harvest in 1935 was the largest on record and totaled about 1,487,000 acres, compared with 1,151,000 acres in 1934 and with the previous record of 1,381,000 acres of 1930. Growing conditions in general were more favorable than in the drought year of 1934, and production on this large acreage, as indicated by preliminary estimates, was about equal to the largest on record. The total pack in 1935 probably will be close to the record high pack of 1925. Although stocks of canned vegetables in canners' hands at the end of the 1934–35 marketing season were unusually small, the total supply (pack plus carry-over) will approach the large supplies of 1925–26 and 1930–31. The total supply of the four major canning vegetables—tomatoes, sweet corn, green peas, and snap beans—comprising 85 percent of the total acreage, is estimated at 84,700,000 cases, basis 24 no. 2 cans, compared with about 85,000,000 cases in 1930 and compared with an average of 61,740,000 cases for the 4-year period since 1930.

Disappearance of these four canned vegetables from canners' hands during the 1934–35 marketing season is estimated to have totaled 56,760,000 cases, basis 24 no. 2 cans, compared with 52,800,000 cases in 1933–34, 53,430,000 cases in 1932–33, 53,330,000 cases in 1931–32, and with 70,040,000 cases in 1930–31. The current supply is moving into trade channels at a lower price level than that prevailing during the early part of the 1930–31 season, when total supply was about the same as the 1935–36 supply. This situation, combined with an expected increase in consumer buying power in 1936, will tend to accelerate movement from canners' hands during the 1935–36 season. On the other hand, the larger supply of home-canned vegetables in 1935, especially in areas which experienced the severe drought of 1934, is a factor which may tend to restrict demand for commercial-canned vegetables somewhat in certain areas. Total disappearance of commercial-canned vegetables, however, probably will exceed that of 1934–35 by a considerable margin and may approach the large disappearance of 1930–31. Even should movement from canners' hands exceed that of 1934–35 by 20 percent and reach a total of 68,000,000 cases, stocks on hand at the end of the season would be much larger than stocks in any of the last three seasons and would equal the burdensome stocks on hand at the end of the 1930–31 and 1931–32 seasons. Stocks on hand at the end of the last three seasons averaged 4,653,000 cases compared with 14,900,000 cases in 1930–31 and 16,680,000 cases in 1931–32.

Following the peak acreage and large supplies of canned vegetables produced in 1930, canners reduced acreage in 1931 nearly 19 percent below the 1930 acreage. Although growing conditions in 1931 were less favorable than usual and total pack was reduced proportionately more than acreage, the carryover from the 1930 supply was excessive and total supply for the 1931–32 season was relatively large. As a result of this situation and the curtailment of consumer buying power, canners again reduced acreage contracted in 1932 to a point 30 percent below the 1931 acreage. With total supply at a more reasonable figure after the 1932 pack, canners expanded acreage in 1933 and in the 3 years following the low point of 1932, acreage increased from a total of 785,000 to 1,487,400 acres.

In past years the acreage of commercial-canning crops has tended to follow a 5-year cycle, with 3 years of expansion followed by 2 years of contraction in acreage. During the 3 years of expansion supplies are built up to a point at which they exceed market requirements. It appears to take 2 years of acreage reduction to adjust these supplies in line with consumption requirements.

SNAP BEANS FOR CANNING

Under average growing conditions, a planting of snap beans for manufacture of 42,000 acres, or 17 percent less than the 1935 acreage, would be sufficient for the probable consumption requirements of the 1936–37 marketing season and leave a normal carry-over in the hands of canners at the end of that season. Judging from the present low prices which canners are receiving for canned snap beans and the influence of the wholesale price of the canned product on acreage and on contract prices to growers the following season, it appears that canners will make contracts to growers at prices not in excess of those paid in 1935.

Wholesale prices of canned snap beans, if maintained near the current low levels for the remainder of this year, will establish an average for the 1935–36 marketing season near the same low levels that prevailed through the 1931–32 and 1932–33 seasons. Prices which canners contract to pay to growers are influenced by the level of wholesale prices of the canned product during the December and January preceding the growing season. Although the 1935 average contract price was about 3 percent higher than that of 1934 and 12 percent higher than the price paid for the 1932 crop, it was 32 percent below the predepression level of 1924–29.

On an acreage planted to snap beans for manufacture of 50,500 acres, or about 12 percent larger than that harvested in 1934 and 6 percent below the 5-year (1929–33) average, production in 1935 is indicated to be 21 percent larger than the production for 1934 and 13 percent larger than the 5-year average. The yield per acre in 1935 probably will exceed the 5-year average. The 1935 pack may total 7,400,000 cases of 24 no. 2 cans. In 1934 the pack reached a total of 6,300,000 cases, and for the 5-year period it averaged 6,421,000 cases. The available supply (pack plus carry-over) for 1935–36 is estimated

at 7,780,000 cases. For the previous season, it was about 7,000,000 cases; for 1933–34, about 6,232,000 cases; and for 1932–33, about 5,424,000 cases.

The rate of disappearance from packers' hands is influenced, to a large extent, by factors other than the size of supplies, such as changes in consumer buying power, prices of competing canned vegetables, and the production of snap beans for the fresh market. The intended acreage of fresh snap beans in the Southern States is about 35 percent larger than last year, and liberal supplies for winter consumption are expected unless there is a recurrence of the severe freeze of last winter. The disappearance from canners' hands during the 1934–35 season was probably around 6,720,000 cases; in the 1933–34 season, 5,500,000 cases; and in the 1932–33 season, 4,700,000 cases. The carry-over at the end of last season was probably around 380,000 cases; in 1933–34 and in 1932–33, 700,000 cases for each of those seasons.

The movement of 6,720,000 cases of snap beans during the 1934–35 season was about 20 percent greater than for the previous marketing season. A scarcity of fresh snap beans, induced by severe freezes in the southern vegetable shipping districts in January and February, stimulated the demand for the canned product. It appears that a consumption of 6,000,000 cases in 1935–36 would be about in line with previous seasons when the demand situations were nearer normal.

Assuming a total supply (pack plus carry-over) for the 1935–36 marketing season of 7,780,000 cases, and assuming, furthermore, 6,000,000 cases will be needed to meet consumption requirements for this season, 1,780,000 cases will be in the canners' hands as carry-over stocks into the 1936–37 season. Such a carry-over would exceed the quantities on hand at the end of any of the previous five seasons.

A pack not in excess of 5,000,000 cases in 1936 probably would be sufficient to meet consumption requirements in 1936–37 under the existing demand conditions and leave a carry-over in line with that of recent seasons. A total production of 54,500 tons would be required for this size pack. Assuming average yields, or 1.35 tons per acre, it will require a planting of approximately 42,000 acres to produce the 54,500 tons needed.

SWEET CORN FOR CANNING

With a near-record pack of canned corn in 1935, prices received by canners thus far in the 1935–36 marketing season are the lowest since 1932–33 and about 30 percent below those of last season. Under these conditions a substantial decrease in acreage is probable for 1936 but no marked reduction in the price paid to growers below the relatively low levels of the last few years is to be expected. Stocks in canners' hands at the end of the 1935–36 marketing season are expected to be in excess of 4,500,000 cases. With average yields, a planting 32 percent below the record acreage of 1935, together with this carry-over, would be sufficient in 1936 to meet consumption requirements about equal to those of the last 10 years and leave an average carry-over in 1937.

Prices paid growers for canning corn have been low since 1931, as compared with predepression years. During the last 4 years the price, which averaged $13.36 per ton in the 6-year period 1924–29, has ranged from $7.50 in 1932, to $8.96 in 1935. Prices received by canners for canned corn have also been low during most of the depression period, although the price in 1934–35 was the highest of the last 10 years. Following the large pack of 1931, the canners' price for 2 years averaged around 60 cents per dozen no. 2 cans of standard quality corn (f. o. b. Baltimore and New York) as compared with an average of about $1 for the predepression period, 1924–25 to 1929–30. As a result of three successive short packs it climbed to about $1 per dozen in 1934–35, only to fall again to about 70 cents in consequence of the large 1935 pack.

The 1935 pack of canned corn was estimated at 21,000,000 standard cases of 24 no. 2 cans. This may be compared with a pack of about 11,270,000 cases in 1934, and an average of around 14,430,000 cases for the 5-year (1929–33) period. Carry-over stocks of corn in the hands of canners were practically cleaned up as of August 1, 1935. The total available supply for the 1935–36 season is thus largely comprised of the 1935 pack, and is estimated at about 21,200,000 cases. This is the largest supply since 1931–32, and is greater by about 8,500,000 cases than the quantity available for the 1934–35 seasons.

The disappearance of corn from canners' hands has averaged around 15,200,000 cases annually during the last 10 years. During the 1934–35 marketing

season, with prices at about $1 per dozen cans as compared with 70 cents in the early part of the 1935–36 season, disappearance was estimated at about 12,400,000 cases. In view of the lower prices now prevailing for canned corn and the increased buying power of consumers, the disappearance in 1935–36 may be as much as 16,500,000 cases. Should it reach this figure, the carry-over into 1936–37 would be in excess of 4,500,000 cases. This is not by any means the largest carry-over on record, but it is above the 10-year average of about 3,825,000 cases.

If burdensome supplies are to be avoided during the next few years, a substantial reduction of the pack will be necessary in 1936. Assuming consumption requirements of 15,000,000 cases for 1936–37, a pack not in excess of 13,000,000 cases would seem to be adequate. With average yields, such a pack could be produced with a planting of about 275,000 acres, which is 32 percent below the planted acreage of 1935 and about 7 percent below the average of the 5-year (1930–34) period.

GREEN PEAS FOR CANNING

The 1935 pack of canned peas was the largest in the history of the industry, as a result of which prices being currently received by canners are the lowest on record and about 35 percent below those received for the 1935 pack. A substantial reduction in the contracted acreage of canning peas is therefore in prospect for 1936, and prices to growers are likely to be somewhat below those of 1935 which were comparatively high as a result of four successive short packs. The movement of canned peas at present low prices has been substantially heavier thus far in the 1935–36 marketing season than during the corresponding period of last year. But the available supply is such that an unusually heavy carry-over is in prospect for the spring of 1936. Even with yields equal to the low average of the last 5 years, a planting 40 percent less than the record acreage of 1935 would be sufficient in 1936 to meet expected consumption requirements and leave a normal carry-over in 1937.

The 1935 pack of green peas totaled 24,614,000 cases (basis 24 no. 2 cans), as compared with the previous record pack of 22,035 000 cases in 1930 and an average of only 13 072,000 cases during the intervening 4-year period 1931–34 inclusive. This exceptionally large pack resulted from a slightly higher-than-average yield on the largest acreage ever planted. In practically all of the pea-canning States the acreage was increased in 1935 over that of preceding years, but the increase was particularly marked in Minnesota, Maryland, Utah, and the new canning areas of Washington and Oregon.

Total available supplies of canned peas (current pack plus carry-over) for 1935–36 were estimated at around 25,400,000 cases as compared with about 16,640,000 cases for 1934–35, 15,400,000 cases for 1933–34, and 15,000,000 cases for 1932–33. With the exception of 1930–31 when the total available supply was approximately 25,500.000 cases, this is the largest quantity of canned peas with which the industry has ever begun a marketing season.

Largely as a consequence of this large available supply, prices being received for the 1935 pack are the lowest on record. During the past three months (August, September, and October 1935) the price to canners, f. o. b. Baltimore and New York, has averaged about 75 cents per dozen no. 2 cans of standard Alaskas. In the corresponding period of 1934 it averaged about $1.15; in 1933, $1.10; in 1932, $1; and in 1931, $1.05.

Consumption at these low prices will undoubtedly be larger than it has been during the preceding 4 marketing seasons, but there is little prospect that the industry can avoid a large carry-over into 1936–37. Total domestic disappearance during the last 12 years has ranged from as high as 19,535,000 cases in 1930–31 to as low as 12,465,000 cases in 1932–33. In 1934–35 it was estimated at about 15,840 000 cases. In view of the present low prices and somewhat improved demand conditions, disappearance in 1935–36 might be as much as 19,000,000 cases. Even so large a disappearance would leave a carry-over of 6,400,000 cases, which would be larger by about 400,000 cases than any the industry has yet had.

Assuming 16,500,000 cases as a normal consumption requirement for the 1936–37 season, the 1936 pack will have to be held down to around 12,000,000 cases if the prospective heavy carry-over from the 1935–36 season is to be moved into consumption and the industry left with an average carry-over in 1937. Given a yield equal to the average of the last 5 years (in 4 of which

growing conditions have been adverse), this pack could be produced with a planting of about 200,000 acres. Such a planting would be about 20 percent below the 5-year average of 1930–34, and 40 percent below the record planting of 1935. But canners are not likely to make such a sharp reduction, and there is a strong prospect that the industry will be faced with large supplies for the next two marketing seasons.

TOMATOES FOR CANNING

Under average growing conditions, an acreage of tomatoes for manufacture (canning and processing) in 1936, about 35 percent less than the record-high acreage planted in 1935, would provide a pack of canned tomatoes which, combined with the probable carry-over from the 1935–36 marketing season, would probably be sufficient for consumption requirements during the 1936–37 marketing season and leave an average carry-over at the end of that season. Should packers respond to the low prices received for the canned product as they have in the past, it appears that the contract acreage will be reduced to some extent in 1936 and that growers will not be able to contract at prices equal to those of 1935. Since 85 percent of the acreage for manufacture is ordinarily grown on a contract basis under the control of the packers, the total acreage for manufacture in 1936 probably will be smaller than was planted in 1935.

Following the large increase in acreage from 1932 to 1934, acreage was again expanded in 1935 and a total of 488,200 acres was planted, or an increase of 13 percent over the record-high acreage of 1934. In spite of unfavorable growing conditions, resulting in low yields per acre, total production of tomatoes for manufacture probably will exceed production of any year except that of 1925. Owing to the relatively high prices received by canners for canned tomatoes in December 1934 and in January 1935, contracts were made for this large production at a price 4 percent above the average of 1934 and 12 percent above the record-low price of 1932, but the contract price to growers in 1935 was 20 percent less than the average of 1924–29.

Ordinarily, a little more than 50 percent of the production of tomatoes for manufacture is packed as canned tomatoes; the remainder is packed as juice, pulp, puree, catsup, sauces, soups, etc. The percentage of production packed as canned tomatoes is influenced, to some extent, by the size of the crop in those States which utilize most of the production as canned tomatoes. In 1934, the failure of the crop from drought in Arkansas and Missouri, where practically the entire production is packed as canned tomatoes, reduced the percentage of this product to 46 percent of the total production for manufacture. An analysis by States of the 1935 production for manufacture indicates that the tonnage used for canned tomatoes may be a little less than 50 percent of production, and that the pack may be equivalent to a total of 29,000,000 cases, basis 24 no. 2 cans, or to 17,000,000 cases, basis 24 no. 3 cans. This pack would be about the same as the large pack of 1930, and would exceed the average of the 4 intervening years, 1931–34, by 46 percent. Although the carry-over stocks in canners' hands on August 1, 1935, were unusually small, the total supply of domestic canned tomatoes (pack plus carry-over) for the 1935–36 marketing season probably will exceed 30,000,000 cases, basis 24 no. 2 cans. This supply has been exceeded only in two seasons; in 1925–26, when it was about 36,000,000 cases, and in 1930–31, when 30,700,000 cases were available. During the four seasons following the large supply of 1930–31, the total supply of domestic canned tomatoes averaged 22,782,000 cases.

As a result of this large supply of canned tomatoes, prices received by canners are about 17 percent less than prices at this time last year and are about the same as the low prices in the autumns of 1930 and 1931, when they were 29 percent below the December and January price level of the previous 6 years. Since the level of contract prices to growers is determined to some extent by the prices received by canners 6 months prior to the planting season it appears that growers in 1936 will not be able to contract tonnage at prices equal to those of 1935.

Disappearance of canned tomatoes from canners' hands during the 1934–35 season probably was about 21,900,000 cases, compared with the average disappearance of 22,195,000 cases for the 10 previous seasons. In the 1930–31 season, when the supply was only slightly larger than estimated for the current season and prices to canners were little different from the present level, disappearance was 25,300,000 cases. Judging by the existing level of prices received by canners and assuming some increase in consumer-buying power

in 1936, movement of canned tomatoes into consumption channels may be somewhat larger than disappearance during last season and may reach 25,000,000 cases. In this event, stocks in canners' hands at the end of the 1935–36 season would be around 5,300,000 cases—the largest carry-over since the 5,400,000 cases on hand at the end of the 1930–31 season. Stocks on hand at the end of the last three seasons averaged less than 1,500,000 cases, and for the last 10 seasons about 3,200,000 cases.

Assuming that 22,000,000 cases of domestic tomatoes, which is near the 10-year average disapparance, may be marketed by canners in 1936–37 at a price in line with the average of the last two seasons, it appears that a pack not in excess of 20,000,000 cases, basis 24 no. 2 cans, would fill the consumption requirements of 1936–37 and leave an average carry-over at the end of the season. A production of 1,200,000 tons of tomatoes would provide for this pack and for the manufacture of the usual proportion of other tomato products. At the 5-year (1930–34) average yield of 4 tons per acre, it would require a planting of about 310,000 acres, or 35 percent less than plantings in 1935, to produce a pack of 20,000,000 cases, allowing about one-half of this acreage for the production of tomatoes for tomato juice, soups, sauces, catsup, and similar products.

Exports of canned tomatoes continued at a low level with only 69,000 cases, basis 24 no. 2 cans, exported from August 1, 1934, through July 31, 1935. Imports during the same period were also light and were the equivalent of 2,570,000 cases of 24 no. 2 cans, compared with 2,790,000 cases during the previous season. During August 1935 imports of canned tomatoes from Italy were much less than during the corresponding 1934 period. The Italian pack of canned tomatoes and other tomato products in 1935 is expected to be materially larger than that of last year. Prices of the packed product, however, are higher because of the high cost of raw tomatoes and heavy orders from the Italian Government. As a result of this situation, it is probable that imports during the 1935–36 season will be smaller than those of any recent year.

FRUITS

Combined production of fruits will probably continue to expand as new acreage comes into bearing and the young trees now in orchards increase in productive capacity. The combined acreage of fruits in the United States has been declining for the last 25 years. In spite of this decline in acreage there has been a steady increase in production. Primarily as a result of the rapid increase in citrus production, the combined production of fruit increased about 20 percent during the last 15 years; during the last 10 years the increase has averaged about 1 percent per year.

Although no definite information is available on the per-capita consumption of fruits, per-capita production indicates that there has been a slight increase in consumption of all fresh fruits combined during the decade ended with the period 1929–33. On a per-capita basis, production of all citrus fruits for the 5 years 1919–23 averaged 29 pounds, as compared with 42 pounds, the average for the period 1929–33. Orange production increased from 21 pounds per capita in the former period to 29 pounds in the latter period, grapefruit increased from 5 to 9 pounds, and lemons from 3 to 4 pounds. A similar comparison for other fruits shows that apple production declined from an average of 72 pounds per capita in the 1919–23 period to an average of 60 pounds in the 5 years 1929–33, whereas grapes increased slightly from 32 to 33 pounds. Per-capita production of peaches decreased from 21 to 20 pounds, and pears increased from 7 to 9 pounds, thus making a net increase in the per-capita production of these seven fruits from 161 to 164 pounds. Imports of bananas averaged 24 pounds per capita in the 1919–23 period, compared with 26 pounds in the 1929–33 period.

Prices paid producers have advanced somewhat from the low point reached in 1932, and orchardists generally feel more hopeful for the future. Well-located orchards in commercial areas are generally in good condition and are now receiving better care than during the period of low prices between 1930 and 1933. Some reduction in marketing costs have contributed to increased returns to growers. From practically all parts of the country growers report greater use of the motor truck in transporting fruits to market. Cheaper water transportation, where available, has been utilized to hold down transportation costs.

The decline in tree numbers accompanied by increased production is indicative of the character of the shift which has taken place in certain of the fruits, and is taking place at the present time in others. Heavy planting of apple trees between 1905 and 1912 was made in many localities ill adapted to commercial production. During the next 20 years many of these trees went out of production, and between 1910 and 1930 apple-tree numbers declined about 46 percent for the country as a whole. Plantings in favorable locations remained, however, and these, with additional plantings, have resulted in an increase in the average production per bearing tree of about 50 percent during the same 20-year period.

Some of the other fruits have passed through the same type of cycle. Planting of citrus fruits was heavy between 1920 and 1930. Many of these trees were planted under speculative and promotional influence, with results similar to those observed in the apple industry. The acreage of citrus is now at the point at which low-producing acreage is passing out of production and reduced acreage may be expected, although production will probably continue to increase for a number of years, even though no new plantings are made. Adjustments in the citrus acreage have been hastened by low prices and freeze injury. Many trees that were killed by the freezes of last winter will not be replaced.

Since the consumer demand for all fruits combined is such that small crops tend to result in about the same total gross income to producers as do large crops, changes in the total gross income for fruit production are dependent largely on changes in consumer buying power. Thus, as consumer buying power is expected to be higher in 1936 than in 1935, some increase in total gross income from fruit production may be expected.

During 1933–34 consumer buying power was about 22 percent higher than in 1932–33 and total gross income to fruit producers increased about 27 percent. During the next season, 1934–35, buying power increased about 19 percent and gross income to producers advanced 18 percent. Consumer buying power is expected to be about 10 percent higher during the coming season than during the one just passed.

The foreign fruit prospects for the current season are for smaller fruit crops generally. This appears to be favorable to the export trade in United States fruit during the remainder of the 1935 season. From the long-time standpoint, however, producers in this country are more interested in the fact that many of the European countries are making good progress in improving and expanding the home industry. This will mean that a larger proportion of the requirements of the European consumer will be supplied from home orchards. Fruit exports have been relatively well maintained throughout the depression and may be expected to benefit to some extent by improved economic conditions, but trade barriers will probably continue to be important factors restricting imports of these products, and in a number of countries it seems possible that still greater restrictions may have to be faced in the future.

CITRUS FRUITS

Although combined acreage of bearing and nonbearing round oranges and grapefruit in the United States will be slightly smaller in 1936 than in 1935, the bearing acreage will be slightly greater. The bearing acreage of both fruits is now at that point in the production cycle where larger total crops may be expected even though some reduction in total bearing trees were to take place. With only average weather conditions prevailing in the four principal producing areas the combined production of oranges and grapefruit from existing acreage may be expected to exceed 80,000,000 boxes, and in a favorable year may go close to 100,000,000 boxes. Unless new uses for citrus fruits or wider demand is developed, an appreciable portion of such large crops would probably be unmarketable.

The citrus industry as a whole is in that period of readjustment which usually follows rapid expansion of the promotional type, but in this case was hastened by the depression. From 1920 to 1930 the acreage of oranges and grapefruit expanded rapidly under the stimulus of high prices and various promotional schemes. Part of the increase took place either on unfavorably located lands or on lands the price of which was inflated to unnatural levels. Since 1930, values have been forced down, with considerable loss to owners and in some cases with complete loss of the property through foreclosure. Some of

the groves in poor locations have gone out of production, and others are now rapidly going out. Weather injury in other instances has not been repaired because of low prices for fruit, and trees have gone out of production because of neglect. Declining total acreage may be expected to continue in some areas but will be partially offset by additional plantings which are for the most part being made only after more careful study of location and probable price trends. More grove properties changed hands in 1935 than during 1934, and although prices were somewhat higher they were still well below those of the boom period prior to 1930.

This adjustment of acreage will probably leave the citrus industry as a whole in a sounder condition than it was prior to 1930, but there seems little likelihood that prices over the next decade will average as high as those of the 10 years 1919–29. During the last 5 years considerable reduction in production and marketing costs have tended to partially offset the effect of the lower prices of recent years.

Production of oranges and grapefruit, combined, increased from an average of 37,340,000 boxes in the period from 1919 to 1923, to 62,271,000 boxes in the period 1929 to 1933, which is a gain of about 60 percent. On a per-capita basis, however, the increase between these two periods amounted to about 45 percent. Indications now point to around 5 percent to 7 percent increase in population by 1945. Based upon trees now in groves and the probable trend in producing capacity, it appears that production during the next 10 years can easily average 15 to 20 percent above that of the last 10 years, and it is not improbable that it will average considerably higher. If production increases at an average rate 3 to 4 times as rapidly as population and the increase in production of other fruits continues at a much slower rate, it seems inevitable that unless consumer demand increases more rapidly than it did from 1919 to 1933, the retail prices of citrus fruits will have to decline to the relative level of other fruits if the larger crops are to be marketed.

ORANGES

The total acreage of oranges in the four principal producing sections now amounts to about 503,000 acres. The acreage in Alabama, Mississippi, and Louisiana is mostly of Satsuma, except for a small area of round oranges in the lower Mississippi Delta, south of New Orleans. The area in these States was estimated at only about 5,000 acres, but freezes during the last winter are reported to have destroyed most of the trees in this section.

Orange-tree numbers in California, Florida, Texas, and Arizona climbed from about 20,000,000 in 1920 to around 31,000,000 in 1930, and in 1935 reached 32,000,000. Of the total trees now in groves, about 13 percent are not of bearing age, while 27,897,000, or 87 percent, will be in bearing for the 1935–36 crop. Of the bearing trees now in groves, about 26 percent are from 4 to 10 years old, 18 percent are from 11 to 15 years old and therefore approaching full production, and 56 percent are more than 15 years old. With so large a proportion of the bearing trees still in that group where large increase in production per tree will take place, it seems inevitable that, barring unusual loss from abandonment or weather hazards, producing surface will increase materially during the next 5 years.

The present producing acreage is capable of yielding a crop in excess of 60,000,000 boxes even in years when conditions are slightly below average. With demand conditions as high as the 1928 level, a crop in that year of 54,659,000 boxes depressed average prices received by producers to $2 per packed box. In 1930 the crop of about 55,000,000 boxes was accompanied by an average price to growers of only $1.64 per box. Chiefly because of some reductions in marketing costs during recent years, a crop of 61,186,000 in 1934 averaged $1.72 per box. Previous to 1930 prices received by growers had averaged close to, or above, $3 per box. Supply-price studies indicate that the average price that may be expected for orange crops of 60,000,000 boxes would not go much higher than recent price levels, and a crop of 72,000,000 boxes, which might be reached in years of better-than-average conditions, would probably result in considerably lower prices.

The repeal of the eighteenth amendment has apparently opened up a new byproduct outlet for oranges in the form of wine, brandies, etc. However, most byproduct uses require low-priced fruit, and although this may be remunerative to the grower in disposing of low-grade fruit, it will increase

the prices of fruit for fresh use only indirectly. In years of exceptionally large crops this factor may not be sufficient to raise the average farm price to a significant extent.

Although exports are made throughout the year, the season is divided into two periods which correspond with the winter-orange season (November to April) and summer-orange season (May to October) in the United States. Exports during the winter season, which consist largely of California Washington Navel oranges and some Florida fruit, go mainly to Canada. During the summer season the movement comprises mostly California Valencia oranges and in some years a small quantity of Florida oranges. In addition to Canada, the United Kingdom is an important outlet during this period. Throughout the year small quantities of oranges are exported to a long list of countries in many parts of the world. Exports of oranges to Europe are light during the winter season because of the large volume of winter-orange exports from the Mediterranean countries and Palestine.

During the last 6 years exports have ranged from 6.4 to 8.9 percent of the crop, exceeding 7 percent in the last two seasons. The proportion of the summer crop exported is larger but more fluctuating than the movement during the winter months. Exports have ranged from 8.7 to 17.4 percent of the summer-orange crop during this period. Exports during the winter season range from 5.0 to 7.9 percent during the last 6 years. The proportion has held closely to 5 percent in the last 3 years, owing to somewhat smaller exports to Canada since the adoption of a duty of 35 cents per cubic foot (equivalent to 75 cents a box) on oranges by that country in 1931. The United Kingdom adopted a duty in the same year of 3s. 6d. per hundredweight (equivalent to 54 cents a box) effective from April 1 to November 30 and 10 percent ad valorem during the remainder of the year.

The outlook for the next decade is for increasing supplies of oranges in most exporting countries. Present world production is roughly 175,000,000 boxes. Ten years from now it will probably be over 200,000,000 boxes. In the older countries that export winter oranges, such as Spain and Italy, production is not increasing rapidly but attention is being paid to the improvement in quality of the fruit. Output is increasing very rapidly in Palestine. Among the summer-exporting countries, Brazil and South Africa offer the most competition to American oranges. Production in both of these countries is increasing.

Puerto Rico produces about 1,000,000 boxes of oranges annually but exports are important only in years of high prices in the United States. The United States is the chief market. The last year that shipments to the United States were made in quantity was in the 1929–30 season when the total was 221,000 boxes. A large proportion of the trees are in small holdings or are allowed to grow wild.

The long-time outlook therefore is for a continuation of the upward trend of supplies of oranges, both in this country and abroad. It seems certain that if trees now in groves in this and other countries reach full producing capacity, orange producers and prospective producers can expect to divert larger and larger proportions of their orange crop to byproduct plants or cull piles in order to maintain prices on the packaged fruit, or can expect that prices must be reduced to conform more closely to the prices of other fruits if the crop is to be marketed. In either case, it does not seem probable that average orange prices during the next decade will equal those of the pre-depression period.

For the 1935–36 season the outlook is for somewhat better prices because of reduced supplies and possibly a better demand situation. The freeze last winter in Florida and Texas reduced prospects in those States. In Florida, about 5 percent of the trees were killed back to the trunk and perhaps 30 percent suffered loss to budwood. The forecast of probable production for 1935 is placed at 15,000,000 boxes as compared with 17,600,000 boxes produced in 1934. The California Washington Navel orange crop is indicated at 15,192,000 boxes for 1935 as compared with 18,990,000 boxes produced in 1934. No forecast of the Valencia crop in California has been made. With a smaller crop in prospect for the 1935–36 season and the possibility of some improvement in domestic demand, the situation looks favorable for the 1935–36 marketing season.

The export outlook for the 1935–36 season also appears to be fairly favorable. The Spanish crop will be smaller than usual, which should permit some-

what better outlet for American oranges in Europe during the winter and an early start on the summer-orange exports. Somewhat improved business conditions in Canada should mean a better outlet there.

GRAPEFRUIT

There are about 192,000 acres of grapefruit now in the continental United States, nearly one-fifth of which have not yet reached producing age. Of the 155,300 acres in production, around 58 percent is from 4 to 10 years old, 18 percent from 11 to 15, and about 24 percent 16 years old and over. In Florida about one-fourth, and in Texas about two-thirds of the trees are from 4 to 10 years old. In actual numbers Texas has more grapefruit trees than Florida and in this young bearing group, from 4 to 10 years old, Texas has nearly three times as many trees as Florida. In Arizona three-fourths of the grapefruit trees are of bearing age, and of those in bearing practically all are less than 11 years old.

Grapefruit production has not moved upward as rapidly as the increased trees might indicate. This is partly because of the newness of the plantings and partly because of two tropical storms that reduced the Texas crop in each of the last 2 years far below that expected in the early season.

There seems to be less optimism among growers as to the outlook for grapefruit, and more abandonment and neglect of grapefruit planting has taken place than with oranges. In spite of this fact, a large proportion of the trees now in groves are young and increased production may be expected for a number of years if abandonment does not reach large proportions. Texas has had 2 unfavorable years and is now facing the third. However, it is estimated that the trees now in bearing in that State are capable of producing a crop as high as 5,000,000 boxes with average weather conditions, and with good conditions might exceed 6,000,000 boxes. A year of average conditions in all of the four States, Florida, Texas, Arizona, and California, at the same time, might mean a crop of nearly 23,000,000 boxes, and if conditions were good, or similar to that which existed in 1930, the crop could exceed 25,000,000 boxes. Based upon an average condition, it appears that grapefruit growers can expect crops in excess of 20,000,000 boxes to occur frequently over the next decade. Thus far the largest crop yet recorded was in 1934, when 20,957,000 boxes were produced with conditions somewhat below average. The average price received by producers for this crop was 92 cents per box, which was the lowest price except in the depression year of 1932, when the price dropped to 84 cents per box.

The 1934–35 Florida pack of canned grapefruit hearts and juice combined was the largest on record, being slightly more than 6,100,000 cases (equivalent 24 no. 2 cans) as compared with about 2,800,000 in the 1933–34 season and an average pack of about 1,500,000 cases for the 5 years 1927–28 to 1931–32. (Roughly, it takes 1 box of fruit to pack a case of no. 2 cans.) The larger part of the increase this year was in juice; 2,389,000 cases of juice were packed in 1934–35 as compared with about 610,000 in 1933–34. The pack of grapefruit sections in 1934–35 was 3,722,000 cases, which was an increase of about 1,500,000 cases over the pack of 1933–34. The demand for the canned product has apparently improved as the record pack of the 1934–35 season was reported to be about 80 percent sold in September at reasonably satisfactory prices. This is in contrast with earlier years, particularly 1930, when a pack of a little over 3,000,000 cases resulted in a heavy carry-over into the next season.

The United States and Puerto Rico together produce about four-fifths of the world crop. Palestine, South Africa, Cuba, and Jamaica are the chief competitors of the United States in foreign markets. All of these countries export a high proportion of their crops. Palestine and Jamaica export considerable quantities of grapefruit during the winter and spring months and South Africa and Brazil during the summer and fall months. The United States has relatively little competition in canned grapefruit.

Production of grapefruit in Puerto Rico in the 1934–35 season amounted to about 650,000 boxes, of which 215,000 boxes were shipped to the United States. In addition about 220,000 cases of canned grapefruit moved to the United States. The 1935–36 crop is expected to be about 800,000 boxes, somewhat less than half of which may be shipped as fresh fruit. Canneries will probably take about the same quantity as last season.

World grapefruit production averaged around 18,000,000 boxes a year for the last 4 years compared with the average of 15,400,000 boxes in the 5-year

period, 1926–27 to 1930–31. The trend will be sharply upward during the next decade. Whether the United States will continue to expand its foreign markets for grapefruit will depend mostly upon the extent of competition from other fruit and the stringency of trade barriers.

Trend of both domestic and foreign production of grapefruit is definitely upward. Thus far it appears that United States crops of around 20,000,000 boxes have been difficult to market and it further appears probable that crops of 20,000,000 boxes or more are likely to occur frequently.

With large crops of grapefruit in prospect for at least the next decade, it seems clear that growers cannot expect the restoration of prices to pre-depression levels.

For 1935–36, the price prospects appear to be fairly bright. The crop to be marketed will probably be smaller than in 1934–35 and with demand expected to be better in 1936 some price improvement can be expected.

LEMONS

The bearing acreage of lemons in California has changed little during recent years. There are now about 52,500 acres of lemons in California, of which about 42,000 acres are of bearing age and 10,500 acres not yet in bearing. The 1934 crop amounted to about 7,500,000 boxes, which was the largest crop since 1931 when 7,800,000 boxes were produced. The present relationship between bearing and nonbearing acreage would indicate that some increase in production may be anticipated beginning about 1937.

The seasonal average price paid producers was $1.95 per box for the 1931 crop. The price for the 1932 crop averaged $2.10 and for the 1933 crop $2.35. During the first 11 months of the 1934–35 season the price paid producers averaged about $1.88 per box, which is the lowest average price since 1922.

No forecasts of the 1935–36 lemon crop are yet available. However, conditions reported on October 1 were 71 percent compared with 78 percent at the same time in 1934 and 79 percent, the 10-year average condition on October 1. With only slight change taking place in bearing acreage it would appear that the lemon crop to be marketed between November 1935 and October 1936 will be below that of last year and perhaps somewhere near the crop of 1933, when 7,295,000 boxes were produced.

Foreign markets are of lesser importance to the American lemon industry than they are for oranges and grapefruit. Up to the present season, the only outlet of importance was Canada. Total exports in the 5-year period 1929–30 to 1933–34 averaged 215,000 boxes of which 76 percent went to Canada. Most important of the other markets were Japan, New Zealand, China, Philippines, Cuba, and Panama.

Owing to a rather short Italian crop in 1934 and pressure of supplies of the domestic market, the United States inaugurated lemon shipments to Europe on a large scale. In the first 10 months of the 1934–35 season total exports amounted to around 461,851 boxes, or the largest on record for that period. Exports during the remaining 2 months should carry the total for the season above 500,000 boxes. Out of the 461,851 boxes, Canada has taken 290,311 boxes, or considerably more than usual, the United Kingdom 97,853 boxes, and other European countries 20,247 boxes. Now that a start has been made in the trade with Europe it is possible that at least some exports will be made every year, particularly in the warmer months.

With the exception of the United States, lemon production in most countries is not showing much increase. Present world production is around 23,000,000 boxes. Italy, the United States, and Spain are the chief producers. Italy stands practically alone as an exporter. In years when Italy has a light crop, or exports lemons in small quantities (average export is around 8,000,000 boxes a year), the United States would probably find a market for some lemons in Europe.

APPLES

With average weather conditions, and average care of orchards, production of apples during the next 5 years probably will be slightly below the average production of the last 5 years. Smaller prospective crops and improvement in consumers' incomes, as economic conditions in the United States improve, indicate moderate improvement in average prices to growers during the next few years. Because of recent excessive damage from drought and cold weather,

and continued heavy deterioration and removal of small farm orchards, and generally unprofitable commercial orchards, accompanied by very little planting of trees during the last 6 years, moderate increases in replacements and plantings will be necessary if the average volume of production of the last few years, especially of late apples, is to be maintained 10 to 15 years from now.

Indications are that exporters of apples from the United States may expect increased competition in foreign markets, since foreign countries are working toward increased production and improved quality of apples. Recent tendencies of many countries to impose trade restrictions continue to be an unfavorable factor in the export outlook.

TREE REMOVALS AND PLANTINGS

From 1910 to 1925 there was a net decrease of 79,100,000 apple trees in the United States. From 1925 to 1930 there was another decrease of 21,700,000 trees, making a total decrease of 100,800,000 trees, or 46 percent in the 20-year period, 1910–30. It is estimated that since 1930 a further decrease of at least 20,000,000 trees has occurred, bringing the total of all apple trees in commercial and farm orchards down to about 96,000,000. This number is considerably less than one-half the number reported in the agricultural census of 1910, and about 70 percent of the number reported in 1925. Although this tremendous decrease in the number of apple trees has been due very largely to economic forces, the cold winters of 1933–34 and 1934–35, and the recent drought years, have taken their toll. Information available indicates that decreases from these causes have amounted to about 3,000,000 to 3,500,000 trees, or approximately 16 percent of the total net decrease during the last 5 years. Many others were so severely injured that their productiveness and life of usefulness may have been materially lessened. Perhaps 90 to 95 percent of the trees that were killed were of bearing age. Their removal from production, at average yields, would reduce future production of apples by 5,400,000 to 6,300,000 bushels per year, or 3.5 to 4 percent of the United States average production during the last 5 years. However, the actual reduction probably will be somewhat less than indicated above, since some of the trees that were killed by freezes and drought were old and neglected.

Because of the large number of trees in orchards that were set during the period 1905–12, a relatively large proportion of trees have reached maximum bearing capacity. It is probable that the producing capacity of the trees remaining from this planting will begin to decline about 1940. Tending to offset this decline is the production from another relatively important body of trees planted soon after the World War, which will be close to maximum bearing capacity about 10 years from now. Increased production from this younger group of trees probably will not offset decreased production from the older group 10 years from now, considering tree removals and plantings of the last 5 or 6 years.

Although no definite measure is available of apple-tree plantings during the last 5 years, it is apparent that they have not been sufficient to maintain the number of trees reported in 1930, and very likely not sufficient to maintain the number now in orchards. During the last 2 years a few indications of renewed interest in apple growing having been apparent. Instances of increased demand for good orchard land have been reported, and demand for nursery stock has increased somewhat over that of the previous 2 years, when sales were very low. Taken as a whole, however, new plantings and replacements during the last 2 years probably have been considerably less than tree removals and abandonment. Even allowing for a considerable decrease in the number of trees of bearing age because of winter killing in 1933–34, and some increase in plantings during the last 2 years, it is believed that the proportion of bearing trees has increased and is now about 80 percent of all apple trees as compared with approximately 75 percent in each of the 3 census years, 1920, 1925, and 1930.

With the exception of orchards that have been injured by cold weather and drought, those that have produced fair to good crops have been generally well cared for during the last 5 years and are in fairly good condition. Commercial orchards that have not produced well because of poor locations have deteriorated. Throughout the country, old farm orchards are deteriorating rapidly.

Such plantings as are being made are composed largely of McIntosh and of color strains of Delicious, Winesap, Jonathan, Stayman Winesap, and Rome Beauty. Of the young trees now in orchards, a relatively large proportion are of these varieties.

PRODUCTION AND PRICES

During the 5-year period, 1911–15, production of apples averaged about 216,000,000 bushels per year. This was 30 percent more than the average from 1917 to 1931, when, with the exception of variations from year to year, production was fairly stable at about 165,000,000 bushels.

During the 5 years 1930–34 production has averaged about 152,000,000 bushels per year, a decrease of 5.5 percent below the average of the previous 5 years. Only a part of this reduction was the result of decreased bearing capacity. Because of unusual drought conditions and the severe freeze of 1933–34, growing conditions were below average, whereas during the previous 5 years growing conditions were better than average. A relatively large crop of about 168,200,000 bushels is indicated for 1935. If the indicated production is realized, production for the last 5 years (1931–35) will average about 155,000,000 bushels, a decrease below the previous 5-year production of 3.8 percent. Average production of the last 5 crops is about what would have been realized with average growing conditions during each of the 5 years. The same is true for the previous 5-year period.

Although the number of apple trees of bearing age has decreased 20 to 25 percent during the last 10 years, potential producing capacity of all orchards has been nearly maintained by an increase in the average producing capacity per bearing tree of about 30 percent. Allowing for variations in growing conditions, average yield per bearing tree increased approximately 50 percent from 1910 to 1934, and during the last 5 years would average about 1.9 bushels per bearing tree, under average growing conditions. The actual yield during this period was probably about 1.8 bushels per bearing tree. These large increases in yields per bearing tree were due primarily to an increase in the bearing surface of trees as they increased in age, and to a greater concentration of orchards in the better-producing areas. Since many of the bearing trees now in orchards have reached, or soon will have reached, full-bearing capacity, and since a relatively small proportion of all trees are young, there is not likely to be much increase in yield per bearing tree during the next 5 years.

As the number of trees of bearing age may continue to decrease during the next several years, and as there is likely to be only a slight increase in yield per bearing tree, production may average somewhat less during the next 5 years than during the last 5 years.

Although average production for the last 10 years, of about 158,000,000 bushels, has been only 73 percent of the average crop of 1911–15, there has been, on the average, no shortage of apples. On the other hand, supplies were burdensome in years of good growing conditions throughout the apple country.

Producers of early apples have had considerable difficulty in marketing several of the crops produced during the last 6 or 7 years. A survey of commercial apple orchards, as of January 1, 1928, showed that approximately 40 percent of the apple trees of the early varieties in the 10 States leading in early-apple production were less than 9 years of age. Many of these young trees have come into fuller production since the survey and are capable of producing large quantities of fruit for several years. Because of low returns to producers of early apples, tree removals, abandonment, and neglect probably have reduced considerably the future producing capacity of early-apple orchards, but, even so, it is believed that early apples will continue plentiful for several years. The leading early-apple-producing States are California, Illinois, Delaware, Tennessee, and New Jersey.

Apple prices declined sharply from 1929 to 1932, largely because of declining consumer buying power. Prices advanced from an average of 62 cents per bushel to the grower for the 1932 crop to 78 cents for the 1933 crop, although there was little difference in supplies during the 2 years. Owing largely to a reduction in the crop of 1934, prices were still higher, averaging 90 cents. With the large crop of 1935, prices again receded. The United States farm price on October 15, 1935, averaged 64 cents per bushel, compared with 84

cents the year before. Lower prices in the fall of 1935 as compared with prices in the fall of 1934 are reported in most sections of the country. Apple prices to growers in the New England States averaged 95 cents per bushel on October 15, 1935, compared with $1.34 a year earlier; in the Middle Atlantic States, 65 cents as against 95 cents; in the East North Central States, 64 cents as compared with 92 cents; in the West North Central area, 70 cents as against $1.12; in the South Atlantic section, 60 as against 80 cents; in the East South Central States, 85 cents as compared with 84 cents; in the West South Central group, 80 cents as against 83 cents; in the Mountain States, 67 cents, compared with 84 cents; and in the Pacific Coast States, 59 cents as against 73 cents per bushel.

REGIONAL PROSPECTS

WESTERN STATES

During the last 5 years 1931–35 the 11 Pacific Coast and Rocky Mountain States produced 53,000,000 bushels of apples per year, or 34 percent of the United States total. They produce a higher proportion, about 42 percent, of the commercial crop of the country. During the last 4 years low returns have resulted in noticeable neglect and removal of trees in the poorer apple districts of these States. However, the better commercial orchards in the better districts of the Western States have been generally well cared for. Plantings have been light and removals have been confined largely to orchards on unprofitable locations, to trees of unpopular vareties, to old trees, and to trees that are too closely set, considering their present size.

For the region as a whole, production during the last 5 years (1931–35) has averaged 9 percent below average production for the previous 5 years. Increases in production from the younger trees in the 11 Western States have not been sufficient to offset decreases in production occasioned by tree removals and orchard neglect. The few plantings that have been made in the last few years are confined largely to Delicious and Winesap. Rome Beauty and Yellow Newtown (Albemarle Pippin) have been planted to some extent.

In Washington production of the Winesap, Stayman Winesap, and Rome Beauty is expected to show little change in the next few years, while production of Delicious will continue to increase for several years. Production of Jonathan and Spitzenburg, especially the latter, is declining. In California production of the Gravenstein appears to have about reached a high level from which some recession may take place during the next few years; production of late apples probably will continue to decline at a slow rate. In Oregon production probably will tend downward during the next several years. In the eight Mountain States, as a group, production is expected to decline.

In the 11 Western States as a whole, a relatively small percentage of the trees are yet to come into bearing, and a relatively large percentage of the acreage has reached, or soon will reach, full bearing capacity. Under average growing conditions the trend of production may be slightly downward during the next few years.

CENTRAL STATES

Production of apples in the Central States averaged about 38,000,000 bushels per year during the 5 years 1931–35, which was about 24 percent of the total United States crop. This was 8 percent more than average production during the previous 5 years. A part of this increase may be attributed to the relatively large indicated crop of 1935.

During the period of heavy plantings in the Northwest, 1905–12, many millions of trees were planted in the Central States. The region as a whole is subject to frequent frosts and freezes, and many of the early plantings were on unfavorable locations and have been removed. Thus, from 1910 to 1930 the decrease in the number of apple trees in the Central States amounted to about 73,000,000 trees, or 60 percent. Since 1930 there has probably been a further decline in tree numbers. However, many of the trees now in orchards in the Central States were planted since the World War. Consequently, a relatively large part of the trees are young. The newer orchards as a whole are more favorably located than were many of the early plantings. Renewed interest in the planting and care of commercial orchards in some districts has been apparent during the last 2 years. With average weather conditions, commercial production for the region as a whole can be

maintained, and probably increased, with moderate annual plantings, but this region contains a great many farm orchards that are being allowed to deteriorate rapidly. This tendency may offset any increased production from commercial orchards, until prices of apples become more attractive. The more recent plantings have been of the Delicious, Golden Delicious, Winesap, Jonathan, Stayman Winesap, and Yellow Transparent.

EASTERN STATES

During the last 5 years, 1931–35, the Eastern States—which include the New England, the Middle Atlantic, and the South Atlantic States—produced about 64,000,000 bushels of apples per year, or 41 percent of the total United States crop. Production during these 5 years was 5 percent less than the average for the previous 5 years.

At the beginning of the present depression the apple industry of this region was better equipped for economical production of fruit than at any time in many years. Many unproductive orchards had been removed and those that remained were generally well cared for, and were planted largely to such varieties as Delicious, McIntosh, Winesap, Stayman Winesap, Rome Beauty, Grimes Golden, York Imperial, Baldwin, Northern Spy, Rhode Island Greening, and some of the early varieties. The region as a whole contained a large proportion of trees that had not come into full bearing. During the last 3 or 4 years orchards that have not been generally profitable have received less than average care, but partly because of nearness to large consuming centers, many orchards have received very good care.

The unusual freeze during the winter of 1933–34 killed in the Eastern States, or injured so badly that they are expected to die, at least 2,600,000 trees and severely injured many more. Approximately 2,500,000 of these trees were in New York and the New England States. The cold winter of 1934–35 increased the injury of many of the trees that were weakened by the freeze of the previous winter. Largely as a result of cold weather during these two winters, production of apples in New York and the New England States averaged only 18,100,000 bushels during the 2 crop years 1934 and 1935 as compared with an annual production of 25,300 000 bushels during the 7 years 1927–33, a decrease of 7,200,000 bushels or 29 percent.

A large part of this decrease, perhaps 4,000,000 to 5,000,000 bushels, represents a permanent reduction in the potential bearing capacity of orchards in these States. Although the full extent of the damage to apple orchards during the last two winters cannot be accurately measured at this time, a reduction of 4.000,000 to 5,000,000 bushels amounts to 15 to 19 percent of average production in New York and the New England States during the 5 years previous to 1934. For the country as a whole these decreases would amount to 2.6 to 3.2 percent of average production during the last 5 years.

At best, it will be several years before trees can be brought into bearing to replace production of the killed trees. With comparable growing conditions, it is doubtful whether production of apples in the Eastern States will be maintained during the next few years at as high a level as during the last several years. From a longer viewpoint, the potential bearing capacity of orchards in the region may decline somewhat, since a relatively large part of the trees are nearing full bearing capacity. Because of the heavy mortality of Baldwin trees during the cold winter of 1933–34, supplies of this variety will be exceptionally low, at least for many years.

EXPORT MARKETS

Apples have been an agricultural export for over 100 years, assuming their greatest importance following the World War. As much as one-fifth of the commercial crop of the United States has been exported in some seasons. Exports have declined since the depression because of a combination of unfavorable factors. Probably the most important factor has been the raising of trade barriers in many countries. Other reasons for the decline have been small American apple crops, increasing competition from the fruit of other exporting countries, and reduced purchasing power in all importing countries.

Exports during the 1934–35 season (July–June) were the smallest in the last 12 years. The total amounted to about 8,100,000 bushels compared with 12,300,000 bushels in 1933–34 and 16,477,000 bushels in the 5–year period 1926–27

to 1930–31. The chief reason for the decline in exports was the virtual closing of the German market to American fruit. Other factors were the small United States apple crop, and the heavy competition from the large European and Canadian apple crops. Only 11 percent of the United States commercial apple crop of 1934 was exported.

More States engage in exporting apples than is true of any other fruit. Washington, Oregon, California, and Idaho in the West, and Virginia, West Virginia, Maryland, Pennsylvania, and New York in the East are especially interested. Other Eastern States, such as Delaware, Massachusetts, New Hampshire, and Maine, export some apples. Every State that produces apples is indirectly interested in apple exports, since the quantity sent abroad helps to reduce the supplies offered on the domestic markets.

The outlook for the 1935–36 season is for considerably larger exports than in 1934–35. The 1935 United States commercial apple crop of 97,000,000 bushels is large enough to supply an ample surplus for export. But of more importance are the small European crops. Exports up to the end of October are far ahead of those to the same date last season. In fact exports from July to October were so heavy that prices in the export markets declined to unprofitable levels. With a better regulated flow of exports some improvement in the export situation may be expected for the current season.

In addition to fresh apples a considerable quantity of apples are exported in the form of dried and canned apples, especially the former. About 3,700,000 bushels were so exported in 1934–35 (July–June), which was somewhat less than usual. Exports of dried apples amounted to 11,747 short tons in 1934–35 against 18,669 tons in 1933–34. The drop was largely due to the heavy decline in exports to Germany, the principal market. Other important outlets for dried apples are the Netherlands, Sweden, and France. Although exports declined, the export value was $183 per ton as compared with $172 in 1933–34. About 269,000 cases (50 pounds) of canned apples and sauce were exported in 1934–35 compared with 211,000 cases in 1933–34. The United Kingdom takes practically all of the exports of canned apples and sauce.

World apple production is increasing gradually, but of greater interest to American growers is the attempt on the part of many countries to produce a better product. Cultural practices are being improved in many European countries; better stock is being planted, and more attention is being paid to grading and packing and to the storage of fruit. The season for domestic apples in the United Kingdom and the Netherlands has been measurably lengthened in the last few years by the wider use of cold and gas storages.

Surplus-producing countries, particularly the United States, Canada, Australia, and New Zealand, and to a lesser extent Italy, the Netherlands, Switzerland, and Austria, are taking steps either directly or indirectly to improve the quality of their fruit exports. The United States, Canada, Australia, and New Zealand have adopted minimum export standards for apples. Indications are that returns to growers have been improved by restricting exports to the higher grades. Provision for establishing the minimum of quality for apple exports from the United States was given under the United States Apple and Pear Act of June 10, 1933. The 1935 apple crop is the first large crop to be produced in the United States since this law went into effect. It appears probable that, were it not for the restrictions contained in the act, the unrestricted flow of low-quality apples to foreign markets would have resulted in ruinous prices, not only for the low-quality fruit but for the high-quality stock as well.

As nearly as can be estimated, the world apple crop ranges from about 475,000,000 to 550,000,000 bushels a year, including cider fruit. There are roughly 442,000,000 apple trees, covering approximately 7,330,000 acres. About one-fourth of the plantings are in the United States.

Whether or not the United States will be able to continue to export a significant proportion of its apple crop will depend on the future extent of trade barriers, competition from foreign apples and competing fruits, relative business conditions at home and abroad, and maintenance of high standards of export in the United States. Exports of apples cannot be expected to expand much unless present trade barriers are modified.

PEACHES

Peach production in the United States during the next 5 years (1936–40) is likely to be near the quantity produced in the 5-year period 1931–35. The number of bearing trees may decline slightly in the next few years, but offset-

ting factors are that commercial orchards generally are receiving better care than they received a few years ago and growing conditions are likely to average slightly better than in 1931–35 since in 4 of these 5 seasons they were below the 10-year (1923–32) average. There was a moderate increase in plantings in 1935 in some States and further increases are anticipated during the next few years. For the United States as a whole, the present bearing capacity of orchards producing peaches for market as fresh fruit is not excessive and if there should be an improvement in demand, a moderate increase in production would not result in market surpluses in years of average growing conditions.

The 1935 crop of about 52,000,000 bushels was approximately equal to the average annual production in 1931–35 and was equivalent to about 20 pounds per capita. Exclusive of peaches used for commercial canning and drying, production in the 5-year period averaged about 13 pounds per capita.

In some districts of the South, a rather large proportion of the trees are past their prime. In other southern districts, there are large numbers of young trees, and these together with the better care that orchards are receiving will probably maintain production in the South in the next 5 years near the 1931–35 level. An increasing proportion of Hiley and earlier-maturing varieties in the South is indicated. In other areas as a whole, exclusive of California, the production of peaches for market as fresh fruit is likely to increase slightly. The trend of California production from the peak of a few years ago will probably continue slightly downward. The production of clingstone peaches in California in seasons of good growing conditions is likely to continue above the needs of the canning industry during the next few years.

Developments in the peach industry include a continuation of the increasing trend in marketing by motor truck and a tendency to plant early-maturing varieties in an effort to lengthen the marketing season. The decline in proportion of Elberta trees in some areas apparently offers relatively good opportunities for increased plantings of this variety.

The average of United States farm prices for peaches in 5 pre-depression years ended in 1929 was $1.17 per bushel. This compares with an average of 71 cents for the 5 years 1930–34. Annual production in each of the two periods averaged approximately 52,000,000 bushels. In 1935, with a crop of 52,000,000 bushels, the average price was about 85 cents per bushel.

Farm prices of peaches vary considerably among the different regions in accordance with the size of the crop available for market at different periods in the season, varieties grown, uses of the crop, and distance from market. The averages of farm prices per bushel by regions for 1930–34 were: North Atlantic, $1.19; North Central, $1.15; South Atlantic, 90 cents; South Central, 97 cents; Western, 51 cents. For the 1935 crop, average prices per bushel in these regions were approximately: North Atlantic, $1.16; North Central, 92 cents; South Atlantic, 91 cents; South Central, 93 cents; and Western, 70 cents.

REGIONAL PROSPECTS

A large part of the market supply of fresh peaches from June until about the middle of August is produced in seven Southern States (Georgia, North Carolina, South Carolina, Alabama, Tennessee, Arkansas, and Texas). With average growing conditions, a crop of about 15,000,000 bushels is likely to be produced in these States. A study of production and farm value indicates that a crop of approximately this size would result in a greater gross return to growers than a smaller crop.

In these seven Southern States, the number of bearing trees has declined during the last 4 or 5 years and a further slight decrease appears probable since a rather high proportion of the trees are now beyond the age of greatest productivity. However, southern orchards in general are receiving better care than a few years ago, and production may not decline proportionately. According to reports from nurseries and other sources, plantings increased somewhat in 1935 compared with 1934 and 1933. Assuming an average life of about 14 years for southern peach trees, at a constant rate of planting from year to year, it would require plantings of about 7 percent each year to maintain tree numbers. Indications are that the number of peach trees set out in Southern orchards during the last few years has averaged somewhat less than 7 percent of the present number of trees.

Georgia is the most important southern peach State and in the period 1931–35 produced an annual average of about 5,400,000 bushels, or 38 percent of the

production in the seven leading Southern States. A survey by the phony disease eradication field forces shows a decrease of 1,070,000 trees, or 12 percent, in Georgia commercial peach orchards from 1931 to 1934. Since the trees removed were mostly old or diseased, the producing capacity was not reduced to a corresponding degree. The survey showed that 56 percent of the Georgia trees were 10 years of age or more in 1934 and that about 25 percent of the trees were under 5 years old. The number of young trees is hardly sufficient to maintain the present number of trees.

The southern district of Georgia, which has about 42 percent of the commercial peach trees in the State, supplies a large part of the early shipments to market each season. In this district, 40 percent of the trees were under 5 years old in 1934 and nearly 40 percent were 10 years old or more. Indications are that crops as large as, or slightly larger than, the 1935 crop may be expected in southern Georgia during seasons of favorable growing conditions during the next 4 or 5 years. About 80 percent of the trees under 5 years old in 1934 in southern Georgia were Hiley and earlier ripening varieties.

In central Georgia, which has about 48 percent of the commercial peach trees of the State, 15 percent of the trees were under 5 years old in 1934, according to the survey, and 67 percent were 10 years old or older. A further decrease in number of bearing trees in this district is in prospect in the next 3 or 4 years. Although 60 percent of the trees in central Georgia in 1934 were Elberta, less than 30 percent of the trees under 5 years of age were of this variety. A large proportion of the young trees are Hiley, Early Rose, and earlier ripening varieties. Since the market demand for the early ripening varieties is limited and since these varieties will compete with shipments of later maturing varieties from south Georgia, further increases in their production may result in serious marketing difficulties.

A rapid expansion in peach acreage has occurred in western South Carolina during recent years. Some abandonment of old orchards in the sand-hill districts in the Carolinas has occurred. New plantings in South Carolina have been largely of the Hiley variety or of earlier ripening varieties. In Arkansas, marginal orchards are being gradually eliminated. Commercial orchards in good locations are receiving good care. Arkansas plantings in 1935 have been chiefly of varieties that ripen earlier than Elberta. In other Southern States, peach orchards on the better sites are generally in good condition although there is considerable neglect of the older orchards in poorer locations.

Reports from nurseries indicate slightly increased planting in 1935 over 1934 in West Virginia, Maryland, Delaware, and the Middle Atlantic States. There was a considerable reduction in trees in New York as a result of the freeze in the winter of 1933–34. Reports at present indicate that New York growers are rather optimistic as to the outlook for the industry and many new orchards were set in 1935. In New Jersey, Delaware, and Maryland, production during recent years has been below average, but commercial orchards in these States are generally in good condition.

New plantings in the Middle West are probably sufficient to replace trees going out of production. In Michigan, a continuation of the slight upward trend in the number of trees is indicated. It is expected that plantings in Illinois will increase during the next few years. Anticipated injury to trees from the 1934 drought has not materialized.

The Colorado crop in 1935 was slightly greater than the previous record crop of 1934. The quality of the crop and the prices received were such as to give some encouragement to growers. Producing capacity is expected to remain at the present level or possibly to increase slightly. No marked change in the number of bearing trees is anticipated in Utah and Idaho. New plantings in Washington and Oregon are limited in number, but most orchards are in fairly good condition and the average production is expected to continue at about the present level.

Peach production in California in 1935 was relatively light and prices were somewhat higher than in some recent years and it is not probable that there will be any considerable abandonment or neglect of peach trees during the next season. Orchards are generally in good condition. About two-thirds of the California production is clingstone varieties and one-third freestone varieties. Clingstone production, under average growing conditions, is still likely to be in excess of the demands of the canning industry. The trend of production of both clingstone and freestone varieties is slightly downward and new plantings during the last few years have not been large. Clingstone plantings included

mainly new varieties and the new freestone orchards are composed chiefly of varieties that are commonly used as fresh table peaches.

California peaches shipped out of the State during the 5 years 1931–35 averaged about 2,000 cars annually and amounted to about 5 percent of the California production. About one-sixth of these out-of-State shipments were reported as clingstone varieties and the remainder as freestone or unclassified varieties. California peaches are of considerable importance in the fresh peach supply on the larger eastern markets, particularly in years when the midseason crop in other States is light.

Peaches used for commercial canning are mostly California clingstone varieties and averaged about 9,000,000 bushels annually in 1933–35 compared with an average of about 10,800,000 bushels in 1925–29. In 1933–35, an annual average of about 5,400,000 bushels, mostly California freestone varieties, were dried compared with an average of about 4,800,000 bushels in 1925–29. Peaches used for canning and drying in the 3 years 1933–35 averaged about 30 percent of the United States production. About 16 percent each of the commercial production of canned peaches and dried peaches was exported during the five seasons ended in 1935. These exports represented about 4 percent of the United States peach production. Exports of both canned and dried peaches have held up fairly well during the depression. Exports of fresh peaches are relatively unimportant.

CHERRIES

The number of cherry trees now in orchards, in the 12 States of most importance in commercial production of cherries, is sufficient to at least maintain the present level of production during the next 5 years and probably sufficient to cause a continuation of the upward trend of production which has been in evidence during the last 6 years. With acreage at, or slightly below, its present level, years of favorable weather conditions have resulted in such large crops that prices have dropped below picking costs, and considerable quantities of fruit have been left unharvested. Even though there is no further expansion of acreage during the next several years, market supplies of cherries probably will continue burdensome in years of favorable growing conditions.

The total number of cherry trees in the 12 States decreased nearly 3 percent between 1910 and 1920 and then increased about 16 percent from 1920 to 1930. In 1910 the nonbearing trees were 37 percent of the total number of cherry trees in the 12 States. By 1920 the proportion had fallen to 22 percent, but it again reached 37 percent in 1930. Since 1930, plantings of new trees have been light in most sections. After making allowances for winter-freeze injury and losses from other natural causes, it has been estimated that there are now about 7,800,000 bearing cherry trees in the 12 States, which is nearly 32 percent more than in 1930.

From 1909 to 1919 production remained fairly stable, tending downward slightly. Beginning in 1919 the trend reversed, and by 1929 production was about at the level of 1919. From 1929 to 1934 the productive capacity of trees increased at an average rate of a little over 2 percent a year. This increase was checked in 1935 as a result of severe injury to trees during the winters of 1933–34 and 1934–35, particularly in the North Atlantic States.

Cherry production in the 12 States in the 1935 season is estimated at 117,025 tons, or nearly 3 percent above the crop of 1934 and slightly less than the 1933 crop, but 8 percent above the average production for the 5 years 1928–32.

SOUR CHERRIES

An accurate separation of the tree numbers into sweet and sour varieties is not possible for all States. Recent surveys made in several of the States indicate, however, that about 94 percent of the trees in Michigan, 90 percent in Pennsylvania, 88 percent in New York, 96 percent in Colorado, and practically all the trees in Wisconsin and Ohio are of sour varieties. Taking the production in these States as indicative of the trend in sour-cherry production, the productive capacity of orchards increased about 23 percent from 1929 to 1934, then declined about 5 percent in 1935. The decline was the result of the tree injury during the severe winters of 1933–34 and 1934–35.

In spite of some tree losses the number of sour-cherry trees now in orchards appears sufficient to continue producing burdensome surpluses under favorable

weather conditions, and further expansion in acreage does not seem advisable at this time.

Michigan, now the largest cherry-producing State in the country, had about 1,910,000 trees in commercial orchards on January 1, 1931; of these about 54 percent were nonbearing, 21 percent were between 7 and 11 years old, 13 percent between 12 and 18 years old, 9 percent between 19 and 25, and 3 percent were 26 years old or older. Plantings since 1930 have been negligible. Under present low-price conditions no extensive plantings are contemplated and some neglect has been reported. Total bearing capacity of cherry trees in Michigan increased about 31 percent during the period 1929–35, as a result of previous heavy plantings. This upward trend is expected to continue chiefly as a result of increased bearing capacity as the average age of bearing trees increases. The greater portion of the cherry orchards in New York are relatively young, and are mostly well cared for.

In New York, the production trend may have turned downward slightly during the last 2 years, because of tree losses from freezing, but production in this State has been so large in several recent years that abandonment of fruit has been wide-spread and trees remaining still appear ample to cause a recurrence of these difficulties in years of favorable growing conditions.

Some neglect of trees is reported in Wisconsin as a result of several years of low prices, which have not justified the repair of drought and winter injury. The upward trend of production may have been checked somewhat despite the probable increase from new trees coming into bearing.

In Colorado and Utah, growers appear to be discouraged over low prices in recent years and abandonment will probably increase if conditions do not improve. Winter injury in 1933 and successive years of drought in Colorado have caused some decline in tree numbers. In Washington, new plantings of sour cherries scarcely equal the number of trees removed.

The prices paid producers for sour cherries in the principal producing States have been declining steadily since 1929, largely because purchasing power of consumers has declined and production of cherries has increased. The production of 62,994 tons in 1935 was about 5 percent larger than the 1934 crop, and 11 percent larger than the average production during the 5 years 1928–32. Prices in 1935 declined to the lowest level on record, except for 1932 when abandonment of fruit on the trees reached nearly 6,700 tons in New York alone.

Production of canned and cold-pack cherries in 1935 will apparently approach the record pack of 1930 which resulted in heavy carry-over of supplies into the next season and led to a depressed situation in the cherry-canning industry for the following 3 years. Reports indicate that the pack of red pitted cherries is not moving rapidly and stocks on September 1 amounted to about 83 percent of the pack.

SWEET CHERRIES

In the States that produce the bulk of the sweet cherries the long-time production outlook is much the same as indicated for sour cherries. In 1930, California, Oregon, Washington, Utah, and Idaho had about 3,368,000 cherry trees, which represented an increase of about 56 percent from 1920. Only about 62 percent of the trees in orchards in these five States in 1930 were then of bearing age, compared with 75 percent of the 2,156,000 trees reported in the census of 1920. Plantings have been light since 1930 but the trees then reported as not of bearing age are now in bearing, which means that around 30 percent of the present acreage consists of trees that are 5 to 10 years old. Production in this group of young trees is increasing rapidly. The fact that such a large proportion of the bearing trees in orchards in 1930 consisted of plantings between 1920 and 1930 would indicate that another large block of trees now in orchards are not over 15 years old. For these reasons, production may be expected to increase, even though some reduction in total tree numbers may have taken place during the last 2 or 3 years.

In practically all States commercial orchards are in fairly good condition and are reasonably well cared for. Returns in recent years, however, have been relatively low and abandonment is expected to increase, if prices do not improve materially. In 1931 about 3,000 tons, in 1932 about 2,500 tons, and in 1933 about 500 tons of sweet cherries were not harvested in California because of low prices.

A short pack of Napoleon (Royal Anne) cherries in 1934 of only about 400,000 cases enabled the industry to clean up stocks prior to the 1935 season.

The larger pack in 1935 is therefore in good statistical position and although market conditions have been somewhat unsettled through September, the prospects are for a firmer market if the red-sour-cherry situation clears up. No information is now available regarding cherries in brine for maraschino manufacture.

PEARS

The trend of pear production in the United States, which has been decidedly upward for the last 30 years, is likely to continue upward for the next 10 years, provided no unusual reduction in tree numbers takes place. With an improvement in business conditions and in consumer purchasing power, some improvement in the market outlet for pears may be expected but in years of large crops considerable difficulty may be encountered in disposing of the entire crop. The United States should continue to be the dominant supplier of pears for export for at least a decade unless trade barriers prohibit.

In spite of a smaller crop, prices so far in the 1935–36 season have been somewhat below those of 1934–35. This is partly explained, at least, by the smaller quantity of pears used for canning from the 1935 crop. The outlook for fresh pears for the remainder of the season is favorable from the supply side but prices may be adversely affected by the large supplies of apples being offered both in the domestic and export markets. The reduced pack of canned pears will probably help to maintain prices for that product. The outlook for dried pears, despite a smaller pack, is not very encouraging because of the large proportion of the output normally exported to Germany. Currency restrictions in that country have greatly reduced fruit imports there.

TREES

For the country as a whole the number of pear trees of bearing age declined from about 15,172,000 in 1910 to 14,647,000 in 1920 and then advanced to 16,043,000 in 1930. During this period the development in the industry was characterized by the decline of the small farm orchard and by expansion in commercial areas, particularly in the Pacific coast region. In the Eastern States as a whole, tree numbers have shown a decline for the most part, since the turn of the century, whereas in the Western States they have shown a constant increase. In 1910 only about 16 percent of the pear trees in the country were located in Washington, Oregon, and California, but by 1930 over half of the trees were located in these States, and they accounted for about 67 percent of the production of the United States. The yield per tree for the country as a whole increased from less than half a bushel in 1910 to 1.2 bushels in 1930.

From 1930 to 1933 the rate of new plantings decreased but during last year the increased sales of nursery stock by companies reporting would indicate that plantings are increasing somewhat not only in the Pacific States but rather generally throughout the country. In Oregon and Washington apple trees have been replaced in some instances by pears. Purchases of nursery stock in California have been largely used to replace skips and dead trees. New plantings in the Pacific Northwest consist almost entirely of Bartlett and Anjou varieties. In addition to these two varieties California, which has lost a considerable number of trees from blight, is adding some Hardy trees. New York is planting Bartlett and Bosc and a few Clapp Favorite and Seçkel trees. In less important regions the Kieffer variety seems to be the most popular. Nursery supplies of good pear stock are reported by some companies to be rather low.

Somewhat higher prices were paid for pear orchards that changed hands in the Pacific Coast States during 1934–35 as compared with the last 3 years. Sales were few, however, and prices well below the values that prevailed prior to the depression. What little neglect has occurred in these States is largely due to the inability of growers to provide proper care.

There is evidence of some neglect to pear orchards in Michigan but the increase in the canning of Kieffer pears in the southwest part of the State has aided the industry. Neglect of orchards in Colorado is general. In Mesa County, the principal producing section, the removal of orchards has been common in recent years. These removals are due to low prices and the increasing difficulty of combating pests, primarily codling moth. Many growers are selling their entire crops to truckers. The outlook in Colorado is for a further decline in the commercial pear industry.

UTILIZATION OF THE CROP

During the 5-year period 1927–31 about 77 percent of the average pear crop of 22,300,000 bushels was utilized fresh, 17 percent was canned, 4 percent was dried, and 2 percent was unharvested. During the 1934–35 season 71 percent of the crop of 23,500,000 bushels was used fresh, 23 percent was canned, 4 percent dried, and 2 percent not harvested. The 1935 pear crop of about 21,300,000 bushels is smaller than usual. Of the total about 16,400,000 bushels will probably be used as fresh fruit, 3,900,000 bushels canned, and somewhat less than 1,000,000 bushels dried. The processed pears will probably make 3,900,000 cases of canned pears and 4,000 to 5,000 short tons of dried pears. Last year the output was around 5,500,000 cases of canned pears and 5,200 short tons of dried pears. The 1935 pack of canned pears was reduced because of the carry-over of around 1,200,000 cases of canned pears from the 1934 pack.

World production of dessert pears is on an upward trend, largely because of the increasing production in the United States, but also because of cultural and marketing improvements in the Netherlands, Belgium, Switzerland, and Canada. Although pear production in a number of European countries is large (in France, Belgium, the Netherlands and Switzerland), the output is mostly cider pears. The United States is by far the outstanding producer of dessert pears as well as canned and dried pears. The world pear crop, including cider pears, averaged roughly 140,000,000 bushels in the 5-year period 1929–33; strictly table fruit probably constituted less than one-third of this quantity. Little increase is expected in total world pear production during the next decade. Because of the dominant position of the United States as a world supplier of table pears, and canned and dried pears, American producers should be able to secure a moderate return during the next few years on exports of these products providing shipments are carefully regulated and the production of canned and dried pears is kept in line with market requirements.

The export outlet is significant in the case of pears. Taking fresh, canned, and dried pears together, the exports in 1934–35 (July to June) were equal to about 4,000,000 bushels, or over 17 percent of the harvested crop. In the previous season a record proportion of almost 24 percent of the harvested crop was exported. Exports of fresh pears amounted to 2,000,000 bushels, or slightly less than the exports in each of the two previous seasons. The 1,434,000 cases of canned pears exported were also slightly under the total of the previous season. Exports of dried pears declined to 2,843 short tons against 4,204 in 1933–34, because of the sharp restriction in imports by Germany, the principal outlet.

Prospects for fresh pears during the 1935–36 export season were favorable at the start of the season but have declined somewhat owing to the heavy exports of apples from North America. From the supply point of view, the pear position is strong. With smaller packs of canned and dried pears expected, exports will probably not be as high as last season. The export outlook for canned pears is better than that for the dried product because of the stringent currency restrictions in Germany. The United Kingdom takes most of the canned pears and buying power there is somewhat better than it was at this time last year. Fresh pears are exported to all parts of the globe but the United Kingdom and Canada are the chief outlets.

GRAPES

Although improved economic conditions during the next few years will bring about some increase in the demand for and consumption of grapes and grape products in the United States, it is questionable whether such improvement will be great enough in the next 2 or 3 years to remove the probability of excessive supplies of all classes of grapes whenever weather conditions result in yields that are near average. Moreover, foreign supplies of grapes and grape products will probably be so plentiful during the next few years that competition will continue to be keen in foreign markets. Foreign import duties and trade restrictions are also likely to be so great that export markets will continue to absorb only relatively small quantities of raisins, grapes, and wine produced in the United States.

Indicated United States production of all grapes for 1935 is 2,327,000 tons as of October 1, and the condition of the crop reported on that date is about 9 percent above the 10-year average for 1923 to 1932 and about 29 percent above

the average for 1934. Production of grapes in the United States was below average in 3 of the 5 years prior to 1935, largely because of unfavorable weather conditions and heavy insect infestations in California. Average national production for these 3 years, 1931, 1933, and 1934, was 1,821,000 tons. With average growing conditions during these years, crops from the present acreage probably would have been at least 2,000,000 tons. Crops about as large as this may be expected during the next few years whenever weather and other growing conditions are near average, since present bearing acreage is likely to be maintained or to decline but slowly.

TABLE GRAPES

As business conditions and purchasing power improve, the demand for table grapes may be expected to show a gradual upward trend. But supplies of table grapes will probably be sufficient to care for expected increases in consumption for several years. The present bearing acreage of table grapes in the United States is likely to remain about constant or to decrease very gradually.

Acreage data for table-grape varieties in California indicate a slight downward trend in the next few years. In New York, the severe freeze of 1933–34 killed about 9 percent of the vines of bearing age and 6 percent of those of nonbearing age, and caused injury to an additional 30 percent of bearing and 15 percent of nonbearing vines. Some replacements are reported, but this damage will tend to lower production during the next few years. In certain of the Midwestern and South Central States drought injury in 1934 tended to lessen the vigor of the vines, but did little permanent damage. Better growing conditions in the future will probably overcome this injury.

Indicated United States production of table-grape varieties for 1935 is 636,000 tons as of October 1, of which California will produce 362,000 tons and other States 274,000. This is approximately 12 percent greater than the productivity of the present acreage at average yields. Since repeal of the eighteenth amendment, considerable quantities of table-grape varieties have been used for the manufacture of commercial wine and brandy. As the market for table grapes improves, some of this tonnage will again be in demand for fresh table-grape consumption. Only a small part—10 to 20 percent—of the production of grapes in States other than California is ordinarily used for making wine, but a much larger percentage of California production of table varieties will probably continue to be used in the manufacture of wine and brandy. Approximately 40 percent of the 1933 and 1934 crops of California table-grape varieties was used in this way. The extent of the utilization of table varieties in this manner will depend, of course, on the quantity demanded by consumers and the price of fresh table grapes as compared with the supply and price of wine grapes.

Prices of table grapes increased both in 1933 and 1934 over the low point reached in 1932. Owing to the heavy crop in 1935, however, prices for California table varieties on the principal auction markets have dropped from 15 to 20 percent below the average of the previous year, while the price of New York Concords at New York City has been about 10 percent lower and the price of Michigan Concords at Chicago about 25 percent below the 1934 averages. The lateness of the 1935 growing season makes a final price comparison impossible at this time.

WINE GRAPES

In addition to supplying as great a tonnage of table grapes and raisins as has been consumed annually during the last 5 years, the present bearing acreage of grapes in the United States is sufficient, at normal yields per acre, to provide for as large a per capita consumption of wine and brandy in the United States as was used during the peak of consumption before 1919. Normally, not only large crops of the strictly wine-grape varieties, but also considerable quantities of raisin and table varieties—such as the Muscat varieties, Flame Tokay, and Malaga—will continue to be available for wine and brandy making in California.

Crops of wine-grape varieties in California, averaging 448,000 tons a year, were used in the commercial manufacture of wine and brandy in that State in the 2 years 1933 and 1934, in addition to an average of over 120,000 tons of table-grape varieties used for this purpose. Indicated production for 1935

is 523,000 tons on October 1, or 17 percent above the preceding 2-year average. Of the tonnage of wine grapes produced in 1933 and 1934, approximately 136,000 tons a year, or 30 percent, were shipped out of the State and used largely in home winemaking in the Eastern States. The remainder was all used within the State, very largely by commercial wineries and distilleries which also used about 85,000 tons of fresh raisin grapes a year in 1933 and 1934. Furthermore, an average of approximately 3,000 cars per year, or at least 40,000 tons, of raisin grapes was shipped out of the State for utilization by home winemakers. Practically all of these raisin grapes shipped east as juice stock were of the Muscat varieties, as were a large majority of the raisin grapes crushed within California.

Plantings of true wine-grape varieties made in California in the last 2 or 3 years are probably sufficient to maintain the present bearing acreage of this class of grapes. Although no general increase in grape acreage appears to be justified, some shift in wine-grape plantings may prove profitable in the case of particular varieties and localities. Since repeal of the eighteenth amendment, commercial fortified sweet wines have been much more popular than dry wines. The greater part of the dry wine consumed outside of California is now made by consumers themselves who appear to demand primarily a low-cost product. The outlook for the sections of California that produce low yields per acre of grapes that are adapted primarily to making dry wines, therefore, appears relatively unfavorable. Present indications are that it may take several years to revive as great a demand for good *commercial* dry wines in this country as existed before the World War. Plantings of grapes in those localities which produce dry-wine grapes of excellent quality but of low yields per acre should be made with caution until better indications are available regarding future demand for good commercial dry wines in the United States.

The prices of wine grapes in the principal eastern auction markets have held fairly well in the early part of the 1935 season in comparison with prices in 1934. Indicated prices to growers of wine grapes in California, however, are lower in 1935 than in the previous year.

RAISIN GRAPES

Although commercialization of wine and brandy production since repeal appears to have resulted in the use of an increased quantity of raisin grapes for this purpose, expansion of the present acreage does not appear justified, considering the poor demand for California raisins in both domestic and foreign markets in recent years, the prospects for large normal crops of raisins in foreign countries, and the high tariff duties and restrictions on imports of raisins into important foreign markets. Furthermore, the demand for California raisin grapes for the commercial manufacture of sweet wine and brandy may not continue to be great after stocks of these products have been built up to normal requirements. The higher prices prevailing for California raisins during the greater part of the crop years 1933–34 and 1934–35 were due in large part to the small tonnage dried and to control measures under a marketing agreement.

The indicated 1935 California raisin-grape crop on October 1 was 1,168,000 tons, or slightly larger than average crops which might be expected from the present acreage. Recent rains have damaged the crop both as to quantity and quality, and the extent of that damage is not known as yet. Three California raisin-grape crops in the previous 4 years have been abnormally small, averaging 874,000 tons a year (1931–34). These small crops were due largely to low yields per acre, resulting from scarcity of water, excessive summer heat, and damage from leaf hoppers. With normal weather conditions and reasonable control of insect pests and diseases, the present bearing acreage of raisin grapes in the State is capable of producing at least 1,000,000 tons of raisin grapes a year. Of this total tonnage, an average of about 70 percent of Sultanina (Thompson Seedless) may be expected, about 25 percent of Muscats, and somewhat less than 5 percent of other varieties.

Since the repeal of the eighteenth amendment diverted considerable tonnage of raisin grapes into wine and brandy manufacturing, approximately 10 percent of the raisin-grape crops of 1933 and 1934 was used for these purposes; another 10 percent was consumed for fresh table purposes, and the remainder of about 80 percent was dried. Raisin-grape production averaged 924,000 tons for these 2 years. The below-average crops in these 2 years, combined with the relatively good commercial demand for crushing, were largely responsible for the small tonnage dried. An average of 184,000 tons

of dried raisins was produced each year which is considerably less than might reasonably be expected to be dried from larger prospective crops.

Total consumption of California raisins during the last 2 marketing years beginning September 1, 1933, has averaged only a little over 190,000 tons a year. A carry-over in the State of at least 100,000 tons of old raisins on September 1, 1933, largely counterbalanced the effect of the small tonnage dried. About 75,000 tons of old raisins are estimated to have been available in the State on September 1, 1935. The consumption of California raisins during the last 4 years has been small, in both the domestic and the foreign markets, averaging 196,000 tons a year. United States consumption has been about 140,000 tons a year and exports approximately 56,000 tons. Domestic consumption, however, has remained fairly constant in contrast to a decline in exports (including Canada) to approximately 50,000 tons during the 1934–35 marketing season. The domestic demand for California raisins may be expected to recover somewhat as economic conditions improve, but it is probable that consumption of California raisins in foreign markets will increase rather slowly, if at all, during the next few years, considering the large competitive crops of foreign raisins and the severe restrictions on imports into the chief foreign markets. Even with low export prices for raisins, it probably will be difficult to expand sales to foreign countries.

Prices to growers of raisins in California started the 1935 season at $52.50 per ton, but few sales were made at this figure which is about 20 percent below the 1934 average. The damage to quality and size of the 1935 crop caused by heavy rains, with a consequent reduction in available raisins of standard quality, induced growers to hold for higher prices. The extent to which the crop has been damaged will affect the price, but as yet no definite indications of what this effect will be are in evidence. The reserve tonnage of raisins from the 1934 crop has been sold by the control board of the marketing agreement on the basis of $55 per ton for Sultanina (Thompson Seedless) at original weights and original grades.

STRAWBERRIES

The 1936 commercial strawberry acreage for picking is estimated to be 182,000 acres, which is only slightly above the 5-year (1930–34) average but is 11 percent larger than the acreage of 1935. Compared with the acreage for picking in 1932, 1933, and 1934, the probable acreage in 1936 will be, respectively, 3, 7, and 8 percent less. Except for the early-shipping States, where a decrease of 7 percent is expected, the acreages for harvest in 1936 will exceed those of 1935 in all marketing groups of States. It is expected that the acreage for picking in 1936 will consist of 59 percent new beds, 29 percent second-year beds, and 12 percent older beds. This proportion indicates an expansion in new-bed acreage over last year of about 14,000 acres. The average condition of all beds on October 1, 1935, was reported to be about 74 percent of normal compared with 71 percent a year earlier. The October 1 condition of first-year, second-year, and older beds was reported at 79, 69, and 58 percent, respectively, compared with 75, 69, and 57 percent on the same date last year.

It is not possible to forecast strawberry production several months in advance with any degree of accuracy, as weather factors—especially drought, frosts, and excessive rain—which seriously affect the size and quality of the crop, may change the production outlook suddenly. Over a longer period of time, the fluctuation of consumer buying power also tends to influence the price and consumption of berries. Based on average yield per acre during the 5-year (1929–33) period, the estimated 1936 production of strawberries would be 293,100,000 quarts, or approximately 3 percent above the production of the previous season. A crop of this size and of the same quality as in 1935 would probably bring returns to growers very similar to the prices received during 1935. Should the 1936 production fall 10 percent below average expectations, the average price which growers might then expect to receive probably would be increased by 30 percent. On the other hand, should the expected 1936 production be increased by heavy yields to an additional 10 percent, with the quality remaining about average, and, unless there is considerable improvement in the demand, strawberry prices in 1936 would tend to approach the very low record of 1933, when an average price of $1.70 per 24-quart crate was received by growers.

A preliminary estimate of commercial strawberry production in 1935 indicates that a crop of 285,504,000 quarts was produced, compared with 315,648,000 quarts in 1934, and a 5-year (1929–33) average production of 290,184,000 quarts. Strawberries were generally of better quality in all States except Alabama and Louisiana during the 1935 harvest periods, which accounts chiefly for the small loss in unharvested berries—less than 1 percent in 1935, compared with 7 percent in 1934. The average price per 24-quart crate received by growers was $1.70 in 1933, which represents the lowest price on record during the last two decades. Production that year was estimated to be 319,992,000 quarts. In 1934 production continued at about the same level, but the average price per crate was $1.94. The price improvement in 1934 was attributed chiefly to an increase in consumer buying power. Approximately 373,000 fewer crates of strawberries were harvested in 1935 than the previous year and the average price per crate rose to $2.33. It is rather early to measure accurately the acreage intention for new beds in 1937, but a representative sample for the country as a whole indicates that new-bed acreage will be increased another 10 percent in 1937. It is believed that part of this acreage increase will be offset by the elimination of older beds with a net increase of approximately 7 percent, which is about the same as recorded in 1933 (196,000 acres) when prices were the lowest on record.

Preliminary estimates in the early shipping States (Florida, Louisiana, Alabama, Mississippi, and Texas) indicate 37,540 acres for picking in 1936. This is the lowest acreage since 1928 and is 20 percent below the peak acreage of 1933. The condition of the first-year beds, which comprise about 96 percent of the acreage (the entire acreage in Florida, Louisiana, and Texas consists of first-year beds), was reported to be 88 percent of normal on October 1, 1935, compared with 78 percent a year earlier. The condition of second-year and older beds (in Alabama and Mississippi) was reported to be 65 and 51 percent, respectively, compared with 74 and 64 percent on October 1, 1934. There was a definite upward trend of acreage in this group of States, beginning in 1919 with 7,090 acres and apparently ending in 1933 with 46,760 acres. Since 1933, the acreage has decreased gradually each year, but according to reports of growers' 1937 intentions, the expected new-bed acreage for 1937 will be about the same as was planted for the 1936 crop. Prices to growers in these States in 1935 were 17 percent higher than in the year previous and were 48 percent higher than the low prices of 1933 but were about 5 percent below the 5-year (1929–33) average. Berries that were produced but not harvested amounted to 5,000,000 quarts in 1933; 4,000,000 quarts in 1934; and nearly 2,000,000 quarts in 1935. The greater portion of the unharvested crops in these 3 years was produced in Louisiana. A combination of low prices and unfavorable weather conditions was responsible for the unharvested berries.

In the second-early States (Arkansas, Georgia, North Carolina, South Carolina, Tennessee, and Virginia) the 1936 acreage for picking is expected to be 43,380 acres, which is 12 percent more than in 1935 but is 5 percent less than the 5-year (1929–33) average acreage. Growers' intentions-to-plant reports of new-bed acreage for 1937 indicate plans for a further acreage increase, to about 50,000 acres. The acreage for picking in 1936 is estimated to consist of 46 percent first-year beds, 35 percent second-year beds, and 18 percent older beds compared with 41, 38, and 21 percent, respectively, for 1935. Production in these States was 27 percent below 1934 but equal to the 5-year average production. However, in both 1933 and 1934, 10 percent of the yearly production was not harvested, chiefly on account of marketing conditions, while in 1935 practically the entire crop was harvested. Growers' prices improved 47 percent in 1935 over the year previous but were still about 5 percent below the 5-year average.

The 1936 acreage for picking in the intermediate States (Missouri, Kansas, Illinois, Oklahoma, Kentucky, Delaware, Maryland, and New Jersey) is expected to be 48,430 acres, or 29 percent larger than the harvested acreage in 1935, and 7 percent above the 5-year (1929–33) average. In Missouri, Kansas, and Oklahoma the picking acreage was reduced sharply, from 18,700 acres in 1934 to 8,000 acres in 1935. This reduction was principally caused by drought, but a substantial recovery is indicated for 1936, with 15,460 acres available for picking. For the entire intermediate group of States it is estimated that 54 percent will be first-year beds, 35 percent second-year beds, and 11 percent older beds compared with 46, 42, and 12 percent in 1935 and 48, 43, and 9 percent, respectively, of the 1934 harvested acreage. Condition of all beds was

reported on October 1, 1935, to be 69 percent compared with 65 percent a year earlier. Production in 1935 was 5 percent below that of the year previous but was 9 percent above the 5-year average.

In the eastern late States (Indiana, Iowa, Michigan, New York, Ohio, Pennsylvania, and Wisconsin) the estimated acreage for picking in 1936 is 10 percent larger than in 1935 and 16 percent larger than the 5-year (1929–33) average. It is estimated that 63 percent will be first-year beds, 31 percent second-year beds, and 6 percent older beds. The previous year indicated corresponding percentages of 49, 41, and 10 percent, respectively. The conditions of all beds, as reported on October 1, 1935, was 76 percent of normal compared with 73 percent a year earlier, and 73 percent in October 1933. The average price received by growers in 1935 was approximately 3 percent below the previous year average and was 25 percent below the 5-year average but was 24 percent above the average in 1933.

In the Pacific Coast and Mountain States (California, Washington, Oregon, and Utah), the picking acreage for 1936 is indicated to be 26,200 acres, or 12 percent increase over the 1935 acreage, and 20 percent above the 5-year (1929–33) average harvested acreage. The 1936 acreage will be approximately 33 percent first-year beds, 42 percent second-year beds, and 25 percent older beds. The condition of all beds on October 1, 1935, was 78 percent of normal compared with 80 percent a year earlier. The October 1935 condition of first-year beds was reported to be 82 percent, of second-year beds 82 percent, and of older beds 66 percent, compared with 87, 81, and 66 percent, respectively, in 1934. Production in 1935 was 5 percent above that of 1934 and about 6 percent higher than the 5-year average production. The average price received by growers was 11 percent more in 1935 than the previous year but was about 24 percent less than the 5-year average price.

TREE NUTS

GENERAL OUTLOOK

Aside from the expected higher level of consumers' income, the outstanding features in the outlook for tree nuts (nuts other than peanuts) appear to be: (1) A further increase in domestic production, (2) a further increase in the consumption of cashews, and (3) keener competition of pecans with other nuts, probably walnuts in particular. In addition, any changes in the duties on nuts imported into the United States, as well as the adoption of new types of import restrictions, would become important features of the nut outlook.

The production of tree nuts in the United States has been steadily increasing for many years. In the 5 years 1920–24 the combined production of walnuts, pecans, almonds, and filberts averaged 46,500 tons; in 1925–29, 75,400 tons; and in 1930–34, 79,800 tons. The indicated 1935 production of these nuts totals 107,000 tons. This is a record figure. It is 34 percent above the 1930–34 average, and 39 percent above the 1934 production of 77,100 tons.

Imports of tree nuts, on the other hand, have steadily declined. The following figures include walnuts, almonds, pecans, Brazil nuts, filberts, chestnuts, pignolias, pistachio nuts, and cashew nuts. In the 5 years 1920–21 to 1924–25, imports of these nuts, figured on an in-the-shell basis, amounted to 117,100 tons; in the 5 years 1925–26 to 1929–30, to 99,500 tons; and in 1930–31 to 1934–35, to 65,300 tons. These and the following figures on imports and consumption are calculated on the basis of a year beginning July 1.

After 1926–27, imports of tree nuts declined more rapidly than domestic production increased, and total consumption, as represented by domestic production plus net imports, declined. Except in the year 1920–21, consumption fluctuated around the same level from 1919–20 through 1926–27, averaging three pounds per capita. The average for the years 1927–28 and 1928–29, predepression years, was lower, at 2.8 pounds per capita. By 1929–30 to 1931–32 the level of consumption had dropped to 2.6 pounds per capita, and in the last 3 years, 1932–33 to 1934–35, it has been 2 pounds per capita, which also was the level in 1920–21.

As the last 6 years have been depression years, at least a part of the decline in the consumption of nuts during this period must be attributed to the decline in consumer income. Therefore, an increase in consumer income in the next few years may be expected to result in an increase in nut consumption over the 1932–33 to 1934–35 level, although it is possible that the predepression level may not be reached.

Barring unforeseen abandonment of acreage or pulling of trees, the total United States bearing acreage in tree nuts will increase considerably during the next few years, and a total production figure in the neighborhood of 100,000 tons may be expected to become typical rather than exceptional. Lower prices than in the past, at given levels of consumers' income, are to be expected, if the increased production is to be moved into consumption.

In 1934–35 total consumption of all nuts other than peanuts amounted to 129,000 tons, of which 60,000 tons, or 46 percent, were imported and 69,000 tons, or 54 percent, were produced in the United States. The total 1934–35 consumption was composed as follows: Walnuts, imported 5.2 percent, domestic 28.8 percent; pecans, practically all domestic, 16 percent; cashew nuts, imported, 13.9 percent; Brazil nuts, imported, 12.8 percent; almonds, imported, 3.9 percent, domestic, 8.4 percent; chestnuts, imported, 5.7 percent; filberts, imported, 2.7 percent, domestic, 0.8 percent; pignolias, pistachio nuts, and other edible nuts, all imported, 1.8 percent.

During the depression years part of the consumers' nut expenditure may have shifted to peanuts because of the lower price. In 1931–32 and 1932–33 the consumption of peanuts as edible nuts and in the form of peanut butter and the total quantity of peanuts gathered were both at a record high level. Consumption of peanuts in these forms averaged 400,000 tons for these 2 years, 24 percent above the 1927–28 to 1930–31 average of 323,000 tons. The tonnage gathered averaged 534,000 in 1931–32 and 1932–33, 25 percent above the 1927–28 to 1930–31 average of 428,000 tons. However, consumption dropped back to 357,000 tons in 1933–34 and in 1934–35 amounted to only 331,000 tons, even though the total gathered did not show a corresponding decrease. In these years an unusually large proportion of the nuts gathered were crushed for oil.

The price of peanuts has always been much lower than prices of other nuts, and peanut consumption much higher. The farm price of peanuts averaged 4.3 cents per pound over the period 1927–28 to 1930–31 and 2.4 cents during the years 1931–32 to 1934–35. In comparison, the average farm price of pecans, walnuts, and almonds (using production figures as weights) was 17.1 cents per pound in the earlier period and 9.35 cents per pound in the latter. The consumption of peanuts, shelled, unshelled, and in the form of peanut butter, averaged 1.96 times the total consumption of all other nuts in the seasons 1927–28 to 1930–31; 2.75 times in the years 1931–32 and 1932–33, and 2.66 times in 1933–34 and 1934–35.

Certain trends in the price and consumption data of tree nuts since 1919–20 are so striking as to claim attention.

(1) *A downward trend in almond consumption since 1919–20.*—Almond consumption steadily declined from an average of 46,200 tons in 1919–20 to 1921–22, to 18,900 tons in 1932–33 to 1934–35. In 1919–20 and 1920–21 almonds ranked first with 30 percent of total consumption; in 1934–35, only fifth, with 12.3 percent of total consumption.

(2) *An upward trend in pecan consumption since 1919–20.*—Pecan consumption, as indicated by the production estimates, has risen irregularly from 22,500 tons in 1919–20 to 1921–22, approximately 15 percent of total consumption, to an average of 26,200 tons in 1932–33 to 1934–35, or approximately 20 percent of total consumption. Pecan consumption is now exceeded only by walnut consumption.

(3) *A narrower spread, from 1931 on, between the price of improved pecans and the prices of walnuts and almonds.*—After the 1930–31 season, prices for improved pecans fell very sharply, with the result that the spread between the farm prices of improved pecans and of walnuts narrowed from 12.9 cents per pound, the 1927–28 to 1930–31 average, to 3.2 cents per pound, the 1931–32 to 1934–35 average. Similarly, the spread between the farm prices of improved pecans and almonds narrowed from 14.4 cents per pound to 5.1 cents per pound.

(4) *A very rapid increase in the consumption of cashew nuts.*—In 1929–30, the consumption of cashew nuts amounted to less than 0.33 percent of total nut consumption, exclusive of peanuts. In 1930–31, however, it amounted to approximately 5 percent and in 1931–32 to 8 percent. By 1934–35 it had reached 13.9 percent and was exceeded only by the consumption of walnuts and of pecans. It seems probable that the upward trend in cashew-nut consumption has not reached its limit.

Since imported nuts make up a large percentage of the nuts consumed in the United States, the import duties that must be paid on them are an important element in the determination of nut prices and consumption. Tariffs

on nuts have been raised twice since the World War. The Tariff Act of 1922 raised the average duty on imports of unshelled tree nuts from 1.6 cents per pound to 2.8 cents per pound, and on imports of shelled tree nuts, from 3.8 cents per pound to 11.5 cents per pound. The Tariff Act of 1930 again raised the duties, the average for unshelled nuts going to 3.9 cents per pound, and for shelled to 14.6 cents per pound.

PERSIAN (ENGLISH) WALNUTS

Important features of the long-time outlook for walnuts appear to be (1) the prospective high level of domestic walnut production, (2) the probability of keener competition from pecans than formerly, (3) the measures undertaken under the control program for walnuts, and (4) the probability of a further increase in consumers' income.

The total orchard-run production of English walnuts in the United States for 1935 is expected to amount to 52,600 tons, exceeding the record crop of 51,800 tons harvested in 1927 and topping the 1934 production of 45,000 tons by 17 percent and the 5-year average, 1930–34, of 37,600 tons by 40 percent.

A large production is in accordance with expectations, for bearing acreage has been increasing for many years. Following a rapid growth during the years of the World War, California bearing acreage amounted to approximately 59,000 acres in 1920 and reached 70,000 by 1925, 97,500 by 1930, and 117,500 by 1934. In Oregon production became significant commercially in the 1920's, and the Oregon bearing acreage in 1934 was estimated to be 15,000 acres. Nonbearing acreage in 1934 stood at 21,500 acres in California and 12,000 in Oregon.

There is reason to believe that in California the bearing acreage will have ceased to expand by 1940, but in Oregon it is still increasing rapidly, and during the next few years an expansion in the total appears certain, providing no wholesale abandonment or pulling of trees takes place. The rate of increase in total production that has taken place in the past may be judged from the following 5-year averages of orchard-run production: 1916–20, 20,100 tons; 1921–25, 27,200 tons; 1926–30, 33,000 tons; 1931–35, 41,800 tons. It appears probable that if yields average around normal, the 1935–39 average production will be in the neighborhood of 45,000 tons.

Chinese production of walnuts is an important factor in the American shell-nut market, as American imports of walnut meats in recent years have been drawn largely from China, and as imports amount to about half the total consumption of shelled walnuts. Unfortunately, no estimate of the probable size of the 1935 crop in China is available.

The 1935 European crop of walnuts in areas of commercial importance is expected to reach, in round terms, 75,000 tons, which is 25 percent under last year's production of 100,000 tons and 16 percent below the 6-year (1929–34) average of 89,000 tons. The relatively light crop in Europe places American producers in a more favorable position with regard to exports than in the 1934–35 season. In 1935, if the predicted crops are harvested both here and abroad, United States production plus carry-over will amount to 43 percent of the combined American and European supplies. In the 1934–35 season, when the American crop plus carry-over amounted to 32 percent of the total American and European supply, roughly 1,500 tons were exported; whereas in the 1933–34 season, when the percentage was 39, exports amounted, in round numbers, to 11,000 tons. It is doubtful, however, whether conditions in the 1935–36 season will be as favorable as they were in 1933–34, because in that year two important factors were helpful to American exports in addition to the size of the American supply in comparison with the European. They were (1), an abnormally short crop of filberts in Europe, which resulted in an unusually great demand in Europe for walnuts, and (2), a recent rapid rise in foreign exchange rates in terms of United States dollars. Both of these factors are missing in 1935.

The walnut industry has been operating under a marketing agreement since October 1933. Exports made since then have been part of the control program instituted under the agreement. Protection of the domestic unshelled-nut market has been the chief aim of the program, and it has been accomplished by diverting a portion of the merchantable crop into the export and the domestic shelled markets, sales in these markets being made at prices lower than those prevailing in the protected market.

ALMONDS

Domestic production of almonds is expected to be lower again in 1935, at 9,300 tons, as against 10,900 tons in 1934 and 13,200 tons for the period 1930–34. There has been a decline in production each year since 1931, probably due to an increasing degree of neglect and abandonment in areas of high-cost production. A large proportion of the existing bearing trees are so unfavorably situated, with respect to both soil and weather conditions, that even when prices were at their predepression level profitable yields could not be obtained. It is believed that large numbers of these trees have been going out of commercial bearing and will continue to do so during the next few years. An additional reason for anticipating a continuation of the downward trend in production is the fact that a long-continued decline in the acreage of trees under bearing age, although checked in 1934, has reduced the proportion of young trees to a point at which there will not be a sufficient number of them to replace bearing trees lost during the next 5 years from old age and disease. However, since production has already dropped 37 percent from its 1931 peak, it seems probable that the decline will be much less rapid in the future.

Per capita almond consumption, which has shown a downward trend ever since 1919–20, declined very rapidly after 1928–29. Per capita consumption in that year was approximately three-quarters of a pound; in 1934–35, one-quarter of a pound. Part of this decline will probably be recovered as consumers' income increases; but the fact that the consumption of almonds declined more between 1929–30 and 1934–35 than that of any other nut, and the fact that consumption of two nuts, Brazil nuts and cashew nuts, actually increased during the same period, seem to indicate that almond consumption will form a smaller proportion of total nut consumption than in the past.

Foreign production of both shelled and unshelled almonds is expected to be smaller in 1935 than in 1934. The indications are for a shelled production of 63,200 tons, as against 69,200 tons in 1934. The imports of unshelled almonds into the United States have been negligible since the 1929–30 season, when there was a near crop failure in this country. There is some chance, however, that with a higher level of consumer income in the 1935–36 season and with the short domestic crop, the price in American markets may be high enough to attract some imports of the unshelled nuts.

PECANS

The outstanding feature in recent pecan statistics is the narrower spread since 1931 between improved pecan prices and the prices of almonds and walnuts. As long as lower prices for pecans continue, wider markets for pecans and keener competition with other nuts may be expected. On the side of supply, the sharply lowered prices may lead to such neglect of orchards as to offset a large part of the increase in production anticipated from the large proportion of trees that were under bearing age in 1929.

On the basis of a survey of pecan-tree numbers and ages made in 1929, and with a liberal allowance for mortality among young trees, it has been estimated that there will be 20 to 25 percent more trees of bearing age in 1940 than in 1929. The resulting crop, with average growing conditions, would be in the neighborhood of from 33,500 to 35,000 tons. This may be compared with the average 1930–34 production of 28,400 tons. However, if orchards should receive good care, a crop as large as 50,000 or 55,000 tons is possible between now and 1940 if there should be a season of growing conditions as favorable as those that prevailed in the record year of 1927.

The survey revealed the prospect of a much greater percentage increase in the bearing acreage of improved varieties than of wild or seedling varieties.

It is possible that more recent information, if available, might show significant changes from the 1929 situation. It is believed that there has been considerable neglect of both bearing and nonbearing orchards in the improved-pecan area. In the native-pecan area, particularly in Texas and Oklahoma, considerable top-working of seedling trees with improved varieties has been carried on since 1920. However, in the absence of any comprehensive surveys since 1929, the extent of such changes is unknown.

The 1935 production of pecans is expected to amount to 44,200 tons. This figure is 119 percent over the 1934 production of 20,188 tons, and 56

percent over the 5-year (1930–34) average production of 28,400 tons. It is well above the large crop of 1931, which amounted to 38,350 tons, and second only to the tremendous 1926 crop of 47,000 tons. The indicated 1935 production in States east of the Mississippi River, where most of the improved pecans are produced, is 9,200 tons, 43 percent above 1934 and 19 percent above the 1930–34 average, whereas in the States west of the Mississippi, where the wild and seedling trees predominate, indicated 1935 production is 35,000 tons, 155 percent above 1934 and 69 percent above the 1930–34 average.

Although some of the wild and seedling pecans harvested each year are sold to consumers in the unshelled form, shelling is the main outlet for this type. The improved varieties are largely sold to consumers in the unshelled form.

PEANUTS

The 1935 crop of peanuts harvested for nuts will be the largest on record, according to the October estimate. But as the crushings of peanuts for oil during the 1935–36 season are expected to be the largest in more than a decade, the supply of peanuts to cleaners and shellers will probably not be burdensome. Although the relatively favorable prices that growers are receiving for the 1935 crop would normally result in increased plantings in 1936, the proposed 1936 contract which, it is expected, will be offered to growers by the Agricultural Adjustment Administration provides that contracting growers may be required to reduce their plantings from the base acreage. The marketing situation in the 1936–37 season will depend to a considerable extent on the demand for peanuts for crushing, and this outlet promises to continue to be important because of prospective relatively low supplies of edible oils and fats.

The October estimate indicates a crop of 1,240,000,000 pounds. This crop exceeds the large 1931 crop by about 13 percent, and the average yearly production for the 5 years ended with the 1934 crop by about 28 percent. Stocks of old-crop peanuts are reported to be light in Virginia and North Carolina, and negligible elsewhere. Largely because of the favorable outlet for peanuts for crushing, prices to growers for farmer-stock peanuts in October 1935 were slightly higher than a year earlier and considerably higher than for any other October since 1930.

The indicated 1935 crop is larger than could be marketed except at very low prices were it not for the light supply of edible oils and fats. The oil outlet for peanuts has not been an important factor during recent years except in the 1934–35 season, but it promises to be of increased importance in the present 1935–36 season. The market outlook for the 1936–37 season also will be largely determined by the supply situation of edible oils and fats. Present indications are that the carry-over of domestic edible oils and fats at the beginning of the 1936–37 peanut marketing season will be less than in the 1935–36 season. Lard production in the 1936–37 season is expected to increase considerably over that of 1935–36 and a further increase in soybean oil seems probable. On the whole, it seems probable that the supply of edible oils and fats for the 1936–37 season will still be relatively light and that the oil outlet for peanuts will continue important for the 1936 crop.

Supplies of edible fats and oils have been substantially reduced because of reduced hog marketings and the decreased supplies of cottonseed resulting from the relatively small crops of 1934 and 1935. A further stimulus to higher oil prices has been the increased duties on imported oil. Reflecting the reduced supplies of edible oils and fats, peanut-oil prices have increased sharply during the last 18 months. These improved peanut-oil prices have made it possible for crushers to pay more for peanuts. Further, plans of the Agricultural Adjustment Administration provide means whereby payments may be made for peanuts diverted to crushers during the 1935–36 season. A similar plan was followed in the 1934–35 season with the result that more than 200,000,000 pounds of peanuts were crushed as compared with an average yearly crushing of about 70,000,000 pounds for the 5 years that ended with the 1933 crop. With indicated supplies of peanuts appreciably larger than last season, and with the peanut-oil prices in October 1935 substantially higher than a year earlier, it appears that the quantity of peanuts crushed in the 1935–36 season will be larger than in the preceding season.

The September estimate indicates that 1,692,000 acres of peanuts will be harvested for nuts in 1935. This is the largest acreage on record and exceeds the previous record acreage of 1932 by about 85,000 acres, or 5 percent.

The indicated yield per acre in 1935 of 733 pounds is above average and is the highest since 1931. Yield per acre compared with 1934 was sharply increased in the Southwest, while relatively little change is indicated in the Southeast and in the Virginia-North Carolina section. Acreage increases in 1935 as compared with 1934 are indicated for most States but the bulk of the increase is in Georgia and Texas. The sharpest increase in production is indicated for the Southwest where the 1935 production is approximately double the small crop produced in these States in 1934 when the crop was greatly reduced by the drought.

Virginia, North Carolina, and Tennessee, which produce mainly the large-podded or Virginia-type peanuts, have an acreage about 5 percent larger than was harvested in 1934, according to preliminary estimates. Indicated yields in these States are about the same as last year and the indicated 1935 crop is about 4 percent larger than in the previous year. The carry-over of old-crop Virginia peanuts in all hands into the 1935–36 season will be small as was the case in the 1934–35 season. With the possibility of some increase in crushings of Virginia peanuts for oil, and with further improvement in consumer incomes, supplies of Virginia-type peanuts to cleaners and shellers are not expected to be excessive during the 1935–36 season.

In the Southeastern States of Georgia, Alabama, Florida, South Carolina, and Mississippi, where both Spanish and runner type peanuts are grown, both acreage and production according to early indications will be of record proportions. Acreage was increased in these States about 7 percent over 1934, but because of better yields per acre the indicated 1935 crop exceeds the 1934 crop by about 13 percent. Supplies of old-crop peanuts at the beginning of the 1935–36 season were negligible, as was the case in the preceding season. Present indications are that a substantial part of the Southeastern crop, especially of the runner type, will be crushed for oil.

In the Southwestern States of Texas, Oklahoma, Arkansas, and Louisiana, where Spanish-type peanuts are grown, the indicated 1935 acreage is 14 percent above the 1934 acreage, owing principally to increases in Texas. The yield per acre is above average and greatly improved over the low yield of the drought year of 1934 with the result that the indicated 1935 crop of about 178,000,000 pounds exceeds the small 1934 crop by 94 percent and the average production, 1929–33, by about 42 percent. Supplies of peanuts in these States have been relatively low and the present crop, should crushings of peanuts for oil increase somewhat, will not be burdensome.

DRY BEANS

The total supply of dry edible beans available for all uses during the 1935–36 season is the largest since 1930–31. It is probable that there will be some increase in consumption, but even then the surplus to be carried over into competition with the 1936 crop may exceed 2,500,000 bags, whereas the carry-over rarely exceeds 2,000,000 bags. Already the excess supply, caused largely by increased production of Pea beans and Pintos, is being reflected in declining prices to growers for the 1935 crop. A reduction of 15 percent in the total acreage planted in 1936 from that of 1935, with average yields and average abandonment, would result in a new-crop supply more closely in line with normal requirements. The adjustment in acreage that may be desirable will vary with varieties.

The indicated production of beans in 1935, based on crop conditions October 1, is 14,005,000 bags, which is larger than any previous bean crop on record. Production in 1934 was 10,369,000 bags; in 1933, 12,338,000; and for the 5-year average 1928–32, 11,858,000 bags. The abnormally heavy production this year is due mostly to an acreage 16 percent larger than the 5-year (1928–32) average, 21 percent larger than in 1933, and 46 percent larger than that harvested in 1934 when there was an unusually heavy abandonment. The estimated carry-over on September 1, 1935, although smaller than any year since 1930, was still sufficient to add materially to the total supply of beans. Based largely on trade estimates the carry-over was 1,150,000 bags, compared with 2,000,000 bags September 1934, 1,250,000 bags in 1933, and 1,230,000 average for the 5 years 1928–32.

After allowing for normal loss and waste, seed for 1936 plantings, home consumption on farms, exports, and shipments to noncontiguous territories, there will be available for domestic consumption in 1935–36 about 13,000,000

bags of beans. This compares with estimated domestic consumption of about 9,630,000 bags in 1934–35 and 1933–34, and an average for the 5 years 1928–29 to 1932–33 of about 10,200,000 bags. The short supplies and correspondingly high prices of meats, and the further improvement in prospect in the general demand conditions in 1935–36 should result in an increase in the consumption of beans, especially with relatively low prices of beans.

The average farm price of beans ranged from 50 to 75 cents per bag higher during the crop-marketing season of 1934–35 than during that of 1933–34. As the unusually large crop in 1935 became apparent during July and August, prices began to decline. The average farm price for October 15 was $2.89 per 100 pounds compared with $3.08 per 100 pounds in September, $3.26 per 100 pounds in August, $3.41 in July, and $3.54 in June. The price trend during these months in 1935 is the opposite from that which prevailed during the same period in 1934 when prices advanced because of the small crop then in prospect, from $2.74 per 100 pounds in June to $3.83 in October.

Most of the indicated increase in production in 1935 over 1934 is in Michigan, Colorado, and New Mexico. In Michigan, the total production in 1935 was estimated at 4,595,000 bags, mostly Pea beans, compared with 3,377,000 bags in 1934, 3,519,000 bags in 1933, and 3,244,000 bags average for 1928–32. Although the carry-over of old-crop Pea beans is estimated to be smaller than usual, the total supply made up of estimated production based upon October conditions in Michigan and New York, added to the carry-over, is about 1,200,000 bags more than the 5-year average annual disappearance of this class of beans for all purposes.

The total production of Great Northern beans based on crop conditions on October 1 in Montana, Idaho, Wyoming, and Nebraska is estimated to be 1,450,000 bags compared with 1,140,000 bags in 1934, 1,646,000 bags in 1933, and an average for 1928–32 of 1,545,000 bags. The carry-over on September 1 is reported to be 265,000 bags, which is 150,000 bags less than in 1934 and 85,000 bags less than in 1933.

Owing to virtually a crop failure in Colorado and New Mexico in 1934 the production of Pinto beans was only 502,000 bags. The total production of this class of beans in 1935 is estimated in October to be about 2,100,000 bags and although the carry-over from the 1934 crop is negligible, the total supply is about 300,000 bags more than the average annual disappearance for all purposes.

The production of all Lima beans, including standard Limas and Baby Limas, in 1935 is estimated at about 1,700,000 bags compared with 1,780,000 in 1934 and 1,573,000 bags average 1928–32. Carry-over on September 1 was 87,000 bags standard Limas and 116,000 bags Baby Limas. This is 38,000 bags less than in 1934 for Limas and 6,000 bags more for Baby Limas, and is somewhat higher than the average carry-over of these classes.

TOBACCO

The tobacco situation in general is that the outlook for prices in 1936 is favorable, although decreases in the production of flue-cured, Maryland, and fire-cured, are advisable until stocks are further reduced. Although it is true of many types that the carry-over continues to be larger than normal, the situation during the last year was improved to such an extent that with a continuation of production control the price outlook for the coming year may be considered favorable. Because of improving industrial and economic conditions abroad, increased consumption of tobacco and some increase in exports of American types are anticipated.

The trends of major significance in the tobacco industry relate to recovery from the depression and developments in the foreign markets. The increased consumption of cigars and cigarettes is not only a result of improved economic conditions but is one of the definite indications that recovery is in progress. Cigar consumption, which had been trending downward for many years and markedly so from 1929 to 1932, showed an increase of 4.5 percent during the January–September period in 1935 compared with that period in 1934. The climb in cigarette consumption, which was interrupted in 1931 and resumed in 1933, continues with indications that the total cigarettes consumed during 1935 will equal or exceed 132,000,000,000, compared with approximately 126,000,000,000 in 1934 and 120,000,000,000 in 1930. In 1932 the total fell to less than 104,000,000,000. This trend toward increased consumption of cigarettes is expected to continue and is a hopeful sign for flue-cured and burley tobacco.

Consumption of plug and scrap chewing, snuff, and smoking tobacco is decreasing, but the decrease in the last named is only moderate. Consumption of twist chewing has increased during the last 7 months. The decrease in the use of snuff affects the fire-cured types, of which snuff is by far the most important domestic outlet. Cigar types have been especially hard hit by the rapid decrease in the manufacture of scrap chewing. Decreases in pipe tobacco and plug chewing have affected numerous types, but mostly burley, and in regard to that type may be regarded as an offset to its increased use in cigarettes.

Exports for the last 12 months were substantially below those of any other similar period for a number of years. Prices at present are more favorable for exports than a year ago, but American tobaccos continue to meet with unfavorable trade restrictions and increased competition in foreign markets. A large quantity of the tobacco that was formerly purchased from the United States has been replaced by foreign tobaccos. The production of tobacco in seven countries which, before the World War, took approximately 45 percent of the leaf exported from the United States, increased from an average of 250,000,000 pounds for the 3 years 1918–20 to 455,000,000 pounds for the 3 years 1931–33. This resulted largely from high foreign tariffs, tobacco monopolies in foreign countries, and unfavorable exchange rates.

From 1919 to 1929 approximately 40 percent of the production of tobacco in the United States was exported. During the 12 months ended September 30, 1930, exports totaled 688,000,000 pounds (farm sales weight), from which level they dropped successively to 640,000,000 pounds for the crop year 1930–31, 480,000,000 pounds for 1931–32, and 437,000,000 pounds for 1932–33. From this level exports increased to 520,000,000 pounds in 1933–34 and then dropped to 400,000,000 pounds for 1934–35. During the 1933–34 and 1934–35 marketing years exports were less than 35 percent of the production of the previous year.

Of particular significance is the decline in exports to China. Exports to that country declined from 144,000,000 pounds in 1930–31 to about 77,000,000 pounds each in 1931–32 and 1932–33. After increasing to 87,000,000 pounds in 1933–34, exports dropped to 29,000,000 pounds in 1934–35. Consumption of tobacco in China and the Orient is believed to have increased during the same period. The decreased use of the American tobacco has been due to increased domestic production, the inauguration, especially in China, of higher tax rates on grades of cigarettes in which American tobacco is used, and more recently (1934–35), to the higher prices on our auction markets. In China, as in continental Europe, withdrawals of American flue-cured tobacco for consumption during the 1934–35 marketing season seem to have exceeded imports, and with the lower prices now prevailing some increase in purchases is anticipated. Whether the depletion of foreign stocks of American tobacco will have a bearing on the 1936 marketing situation will depend on the degree to which replenishment is accomplished out of the 1935 crop.

Production of flue-cured tobacco in foreign countries has increased. In Canada, China, and Southern Rhodesia production was increased from 111,000,000 pounds in 1930 to about 200,000,000 pounds in 1933. Production in 1934 declined to about 176,000,000 pounds, but early estimates indicate that the crop in these countries in 1935 will be about 190,000,000 pounds. The increase in China has enabled that country to make small shipments to Europe in competition with United States flue-cured. Present prices on auction markets will probably restrict this tendency but will not altogether remove the possibility.

The probabilities are that, unless prevented by war developments, further improvements in general industrial production and business conditions in Europe, as a whole, may reasonably be expected in the 1935–36 season. In view of this it is probable that total consumption of tobacco products in continental Europe may show an increase during 1936. If this proves to be true, some improvement may occur in the demand for United States tobacco, particularly if satisfactory arrangements for international transactions can be made.

In the fire-cured types, continuance of production in excess of consumption has resulted in increased domestic stocks and an unfavorable outlook, the only remedy for which appears to be less production in 1936.

Maryland tobacco has benefited by a temporary increase in domestic use resulting from the movement of accumulated stocks of the lower grades into consumption. With the anticipated slackening in the rate of domestic consump-

tion of this type and the sharp curtailment of exports now in progress, the outlook is less favorable than a year ago.

In the dark air-cured types, disappearance increased somewhat during the last year, stocks are lower, and the outlook is more favorable than a year ago.

The position of the cigar types is mixed; for most types it is more favorable to increased production than it was a year ago. Substantial progress has been made in disposing of the excessive stocks of 2 years ago. The consumption of cigars is increasing but with increasing emphasis laid on the 5-cent and 2-for-5 brands. On the other hand, the consumption of scrap chewing, the major outlet for low-grade cigar leaf, is declining steadily.

FLUE-CURED TOBACCO, TYPES 11, 12, 13, AND 14

With a moderate decrease in production of flue-cured tobacco in 1936, the outlook is for favorable prices. Domestic and foreign stocks on July 1 were lower this year than last, and, although this shortage has been more than offset by the large crop of 1935, domestic consumption is increasing, and export buying to replenish foreign stocks has been active, so that the 1935 crop has moved at prices equal to or greater than parity. Record yields were obtained in the 1935 season and the surplus tobacco that resulted will probably replenish stocks to a point that will make some slight curtailment in 1936 desirable. With such an adjustment there would be good reason to expect favorable prices.

Stocks of flue-cured tobacco in the United States on July 1, 1935, totaled 752,600,000 pounds (farm sales weight) as compared with 763,000,000 pounds a year earlier and 675,800,000 pounds in 1933. The total supply in the United States on July 1, 1935, was larger than that of last year by about 175,000,000 pounds, or 13 percent, and, although foreign stocks are believed to have been substantially reduced, the total world supply is probably larger now than it was a year ago.

Domestic consumption of flue-cured tobacco is increasing. For the 12 months ended with September, the consumption of cigarettes, which accounted for more than 75 percent of the domestic use of flue-cured tobacco, totaled 131,000,000,000. This is 9 percent higher than for the previous year and substantially higher than for any other 12-month period. The increased use of flue-cured tobacco in cigarettes was offset to a minor extent by declines in smoking and chewing tobacco. The quantity of leaf tobacco retained for home consumption in the United Kingdom for the 12-month period ended with July 1935 reached the record total of 160,000,000 pounds, mostly American flue-cured.

This is about 10 percent higher than the average quantity retained for consumption for the 2 previous years. Comprehensive data regarding the consumption for other countries are not available, but there are indications that, as a whole, further declines have occurred in products in which this tobacco is used and that additional quantities of United States flue-cured tobacco have been replaced by foreign-grown tobacco. The increases in consumption that occurred in the United States and the United Kingdom more than offset the declines in other countries. Many foreign countries are reported to have used more United States flue-cured tobacco than they bought during the year, thereby reducing their stocks a comparable amount.

In view of the activity shown on the 1935 markets by export buyers, it is probable that during the next year foreign stocks of American flue-cured tobacco will be replenished and that increases in consumption in some countries may occur. Production of flue-cured tobacco in Canada, China, and Southern Rhodesia increased from 111,000,000 pounds in 1930–31 to 200,000,000 pounds in 1933–34 and decreased to 176,000,000 pounds in 1934–35. Early estimates indicate that the crop in these three countries in 1935–36 will be about 190,000,000 pounds.

In view of all these varying trends, the conclusion seems warranted that a moderately reduced production in 1936 is desirable.

Exports of flue-cured tobacco to China from the 1934 crops were the lowest in more than a decade. The factors in the reduction were the high prices for the tobacco, low exchange rates, increased production in China, and taxation policies in China which have discouraged the use of American tobacco. Some of these factors continue to operate, but it appears that exports to China from the 1935 crop may be somewhat larger than those of last year. But in view of the present tendencies toward acreage expansion in China, there seems little prospect that our leaf will return to the high levels of 1928–29 to 1930–31.

Production in China has shown a definite tendency to increase during the last 2 years and a further increase in 1936 is expected owing to favorable prices of tobacco compared with other crops. The crop of Chinese flue-cured tobacco is now estimated at 155,000,000 pounds compared with about 130,000,000 pounds last year. Earlier expectations were for a crop of 180,000,000 pounds, but unfavorable weather cut the production. A movement is now under way to improve quality and it is reported that important quantities of seed were imported from the United States during last year for that purpose. Some interest in the possibility of export of Chinese leaf to Europe has arisen during the last 2 years. The drop in price of American leaf this year will probably restrict this tendency but will not altogether remove the possibility.

There was a tendency to increase consumption of tobacco in cigarettes in China until 1933, when increases in taxes and the development of depressed economic conditions halted the upward trend. There has not been any significant decline in total consumption of flue-cured tobacco, but there has been a decrease in the use of manufactured cigarettes in favor of low-priced hand-rolled cigarettes in which no American tobacco is used. This type of cigarettes to a large extent escapes taxation. Owing to conditions with respect to taxation of manufactured cigarettes, in which American flue-cured is used, and the tendency to increase production of Chinese leaf, it seems doubtful that the consumption of American leaf in the next few years will materially exceed 50,000,000 pounds and may drop as low as 20,000,000 if prices of imported leaf show a material rise from present levels.

The tendency during recent years in Japan has been to produce as much of its tobacco requirements as possible, but the climate and soil are not suitable for producing a very high quality leaf as a substitute for American leaf. Conditions for producing a substitute for American leaf are much more favorable in Chosen and north China, and Japan has been drawing on these sources as much as possible. If the efforts to increase production and improve quality of leaf in China are successful, there will be a demand for this product in Japan which will replace some American.

FIRE-CURED TOBACCO, TYPES 21, 22, 23, AND 24

The outlook for fire-cured tobacco continues to be relatively unfavorable. Both foreign and domestic consumption continues to decline; production, although relatively low, exceeds consumption, and a further slight increase in stocks by October 1, 1936, seems to be indicated.

Production of United States fire-cured tobacco in 1935, according to early October estimates, will be about 122,000,000 pounds, which would be the second smallest crop since 1909, and about 4,434,000 pounds less than the average of the three crops ended with that of 1934. Domestic stocks of fire-cured tobacco on October 1, 1935, are expected to be about 225,000,000 pounds, farm sales weight. The indicated 1935 crop is slightly greater than estimated consumption for the 1934–35 season and stocks a year ago are therefore expected to show an increase.

Present indications are that for the 12 months ended September 30, 1935, both foreign and domestic consumption of United States fire-cured types was less than for any similar period for which data are available. Over a period of years about 70 percent of the production of these types has been exported and the remainder used principally by domestic snuff manufacturers. Domestic snuff production for the first 8 months of 1935 was about 5 percent less than in the same months of 1934. Exports of fire-cured tobacco have been declining for more than a decade. For the 12 months ended September 30, 1935, they amounted to 70,545,000 pounds compared with 74,995,928 pounds for the same months a year earlier, and only about 58 percent of average yearly exports for the 5-year period ended with September 30, 1929. It is possible that recent developments in Europe may result in some increase in takings of American fire-cured tobacco in the 1935–36 season, but the evidence at this time is not sufficiently tangible to offset the conclusion that the foreign situation continues favorable.

BURLEY TOBACCO, TYPE 31

The outlook for burley tobacco continues to be dominated by large stocks in the hands of domestic dealers and manufacturers. The October 1, 1934, stocks totaled 820,300,000 pounds (farm sales weight). The 1934 crop was

approximately 50,000,000 pounds below consumption, and stocks on October 1, 1935 (not yet tabulated), are expected to total about 770,000,000 pounds (farm sales weight). These stocks are smaller than the October 1934 stocks, but substantially larger than the October stocks for any other year, being 40 percent above the 1929–33 5-year average.

On October 1 the 1935 crop was estimated at 248,863,000 pounds. This compares with 233,827,000 pounds sold in 1934 and the 5-year (1928–32) average sales of 342,542,000 pounds. Disregarding possible limitations on sales this season, this crop together with the stocks indicated for October 1 make a total supply of approximately 1,019,000,000 pounds. This is smaller than the 1933–34 supply of 1,096,000,000 pounds and the 1934–35 supply of 1,054,000,000 pounds, but is larger than for any other period on record. The indicated 1935–36 supply is equivalent to more than 3.5 years' consumption as compared with an average of 2.8 years' supply during the 10-year period 1920–29. It is estimated that the present rate of production if continued for 4 years would reduce stocks to normal.

Total disappearance of burley tobacco during the 1934–35 period amounted to approximately 284,000,000 pounds. This compares with 274,500,000 pounds for the previous marketing year and 269,000,000 pounds for the second preceding marketing year. Exports for the 12 months ended with September 1935 totaled 12,030,000 pounds, as compared with 13,943,000 pounds for the previous year and 10,356,000 pounds for the second preceding year.

In view of the present burdensome supply and the fact that, in the immediate future, consumption of burley tobacco will increase but little, it appears that plantings in 1936 should not be larger than in 1935.

MARYLAND TOBACCO, TYPE 32

Supplies of Maryland tobacco continue to be large. Exports for the year ended with September 1935 were the lowest on record, and a decline in domestic consumption appears probable. Stocks on July 1 totaled 29,305,000 pounds. This is slightly smaller than July 1, 1934, stocks of 29,597,000 pounds, but larger than July 1 stocks of any other year. The 1935 crop was estimated on October 1 at 25,188,000 pounds. This is 7.5 percent larger than the 1934 crop and 5 percent larger than the 5-year (1928–32) average production.

During recent years considerable quantities of low-grade tobacco have accumulated in public warehouses. Last year much of this moved into the hands of the trade and is being used in manufacture. This has resulted in an increase in domestic consumption of Maryland tobacco, but the situation is believed to be temporary. Exports for 1934–35 totaled only 5,164,000 pounds as compared with 9,605,000 pounds the preceding year. During last year there was an increase in the domestic consumption which about offset the decline in exports, but it is not believed that this increase in domestic consumption will be maintained.

DARK AIR-CURED TOBACCO, TYPES 35, 36, AND 37

Some further improvement in the general situation for dark air-cured tobacco is indicated. Production since 1932 has been greatly reduced and is less than the average annual disappearance, with the result that stocks have declined steadily since the 1932–33 marketing season. October estimates point to a 1935 crop of 37,360,000 pounds, which is about 5,000,000 pounds less than the estimated disappearance for the 1934–35 season. Thus it is probable that stocks a year hence will show a further decline.

Disappearance of these tobaccos, which has declined about 50 percent during the last decade, improved slightly in 1934–35 over the low level of the previous season. The increased disappearance resulted both from increased consumption of twist chewing and from increased foreign purchases. Present indications are that there will be no marked change in the rate of consumption during the 1935–36 season.

CIGAR-LEAF TOBACCO

The outlook for cigar tobacco has improved materially over that of last year. However, excess supplies and restricted outlets for the stemming grades are still a serious problem. Although the production of certain types of cigar tobacco in 1936 should be increased over that of 1935, in comparison with the

10-year period prior to 1931, production of all types of cigar tobacco appears to be on a permanently lower basis.

Tax-paid withdrawals of cigars for the 9-month period ended September 1935 were about 4.5 percent larger than for the same period in 1934; but still about 26 percent below the average for the same months of the 5-year period 1926–30. The trend in the consumption of cigars has been toward cheaper brands. During the period 1926–30, 53 percent of the cigars were made to retail at 5 cents and less, compared with 86 percent in 1934 and 89 percent for the first 9 months in 1935.

The consumption of scrap chewing tobacco continued to decline throughout the first 7 months of 1935. During the year ended June 30, 1935, the decreased use of cigar tobacco for the manufacture of scrap chewing offset about one-third of the increased use in the manufacture of cigars.

The production of domestic cigar tobacco in 1934 was materially less than consumption, resulting in a corresponding reduction in stocks, including farm stocks, held on October 1, in 1935, compared with 1934. Estimates of production and consumption for 1935 indicate that stocks will be further reduced by October 1, 1936.

On October 1, 1933, the total supply of cigar tobacco was equal to approximately 5 years' consumption, whereas the normal supply on October 1 is equal to about 3 years' consumption. On October 1, 1935, the total supply of cigar tobacco was probably only slightly above the normal of 3 years' consumption requirements. In 1933, 1934, and 1935 the average annual production of cigar tobacco was equal to about one-half year's consumption. As a result of the reduced production of the last 3 years the total supply of cigar tobacco has been greatly reduced, and increased production in some types now seems advisable.

As compared with the normal relationship of stocks to consumption, present stocks of types 54 and 55 cigar tobacco are still excessive. In other types stocks are about normal.

October 1 estimates indicate a 1935 crop of cigar tobacco of 79,547,000 pounds, about one-half the average production for the 10-year period prior to 1932. Production of filler types for 1935 is estimated at 39,626,000 pounds, which is apparently somewhat less than consumption. Production of binder types 51, 52, and 53 for 1935 is estimated to be 15,235,000 pounds, compared with estimated consumption of these types of 30,000,000 pounds. Production of wrapper types in 1935 is estimated at 8,172,000 pounds compared with an estimated consumption of 8,600,000. In view of the fact that stocks are approximately normal, a crop of the above types in 1936 about equal to consumption would tend to maintain normal supplies. Production of binder types 54 and 55 should not be increased until present excessive stocks have been reduced.

Tobacco plantings in Puerto Rico for the 1935–36 crop are expected to be slightly larger than those of 1934–35 which will maintain the supply-consumption relationship for this type at about normal.

BROOMCORN

Prospective commercial requirements for broomcorn in 1936 do not justify so large an acreage as that harvested in 1935. The short crops for the years 1932–34 depleted reserve supplies to the extent that there was a very small carry-over into 1935. During those years the United States crop was below domestic requirements and substantial quantities were imported during the 1934–35 season. This situation, together with high prices which prevailed for the 1933 and 1934 crops, and an active demand for broomcorn this season, may encourage growers to plant a larger acreage of broomcorn in 1936 than is justified, especially in view of the expansion occurring outside of established districts.

The use of broomcorn is almost entirely limited to the making of brooms, and since the requirements for domestic use and export have been satisfied in recent years at about 45,000 tons, a supply much greater or smaller than this quantity has usually resulted in a decided change in the price received. Should plantings in 1936 be as large as in 1935 and should the yields be average, the resulting crop would probably be larger than could be marketed at profitable prices.

The present outlook, based on the condition of the crop, is for a production in 1935 of approximately 54,000 tons. This is about 72 percent more broom-

corn than was produced in 1934, and materially above the requirements of domestic use and usual exports. The acreage in 1935 is about 68 percent larger than in 1934 and 59 percent larger than the 1928–32 average. Owing to an unfavorable growing season, the yield per acre in 1935 is the second lowest yield in the last 18 years.

A total of 330,000 acres of broomcorn in 1936 (which is about 35 percent lower than the indicated acreage in 1935) with the 1923–32 average yield of approximately 300 pounds per acre, would produce a crop of approximately 50,000 tons. This, with the expected moderate carry-over from the 1935 crop, would probably be sufficient for next season's domestic use and exports, and for a somewhat larger carry-over into 1937.

As buyers usually visit only the established districts, producers of broomcorn outside of these districts, unless they have a local market, are at a material disadvantage in marketing their crop. Moreover, broomcorn production requires special equipment and unless a grower has had experience in growing and handling the crop, he is likely to produce a product of low quality which will not command a good price.

RICE

Somewhat broader market outlets are in prospect for United States rice during 1935–36 than prevailed in 1934–35. Supplies are below a year ago with the slight increase in production more than offset by the reduction in stocks carried over from the previous crops. From present indications, domestic utilization may be slightly below that of 1934–35, whereas exports may be larger, influenced by the rebate of the processing tax which places American exporters in a more favorable position to compete with foreign rices, particularly in Cuba. The carry-over at the close of the 1935–36 season will probably be small. The acreage to be seeded in 1936 will follow closely the allotments by the Agricultural Adjustment Administration since the loss of benefit payments through noncompliance discourages seeding outside of the plan.

SUPPLIES FOR 1935–36

Supplies of United States rice for the 1935–36 season appear to be about 8 percent under those for 1934–35. The slight increase in the 1935 production is more than offset by the smaller stocks carried over from previous crops. The reduction in supplies is relatively greater in California than in the Southern States.

SOUTH

The 1935–36 supplies of southern (Arkansas, Louisiana, and Texas) rice are somewhat smaller than in 1934–35 and total approximately 9,500,000 barrels. Stocks of rough rice on farms and in country warehouses in the Southern States, August 1, 1935, amounted to only 40,000 barrels compared with 202,000 barrels a year earlier.

Stocks of rough rice in southern mills on the same date totaled only 51,000 barrels while mill stocks of milled rice were equivalent to about 332,000 barrels, making a total carry-over on farms, in country warehouses, and in mills of around 423,000 barrels, in terms of rough rice. Stocks in these positions, August 1, 1934, totaled 1,468,000 barrels. The 1935 southern rough-rice crop was (Oct. 1 estimate) 9,129,000 barrels compared with the 1934 outturn of 8,509,000 barrels. The crop and carry-over make a total supply of 9,552,000 barrels for the 1935–36 season against a similarly calculated supply of 9,977,000 barrels for 1934–35.

Although weather conditions delayed harvesting of the southern crop southern-mill receipts of rough rice for the first 2 months of the 1935–36 season of 1,202,000 barrels exceeded those for the same period in the 1934–35 season by nearly 125,000 barrels. With farm supplies of southern rough rice for the current season slightly above those of last year, southern-mill receipts in 1935–36 will probably be larger than in 1934–35.

CALIFORNIA

The largest percentage reduction in rice supplies this season occurred in California, where unfavorable weather prevented the seeding of an acreage as large as intended. The 1935 California rice crop was estimated October 1 at 1,681,000 barrels (2,723,000 bags of 100 pounds each) compared with the slightly larger-than-average 1934 harvest of 2,129,000 barrels (3,449,000 bags).

Stocks in country warehouses, August 1, 1935, totaled 77,000 barrels (125,000 bags) and mill stocks of rough and milled rice amounted to 281,000 barrels (445,000 bags), which when added to the crop give a total 1935–36 supply of 2,039,000 barrels (3,303,000 bags) compared with the calculated supply of 2,575,000 barrels (4,172,000 bags) for 1934–35.

Taking into account the warehouse stocks August 1 this year and the crop minus seed requirements, approximately 1,684,000 barrels (2,728,000 bags) of California rice will be available for milling or carry-over during 1935–36. A similar computation suggested that 2,183,000 barrels (3,536,000 bags) were available for 1934–35. However, California mill receipts, August 1934–July 1935, totaled 2,280,000 barrels (3,693,000 bags) and 77,000 barrels (125,000 bags) were in country warehouses, August 1, indicating a commercial supply of 2,357,000 barrels (3,818,000 bags).

DEMAND

DOMESTIC

The amendment of the Agricultural Adjustment Act (DeRouen amendment Pub., No. 20, 74th Cong., approved Mar. 18, 1935) materially altered the market outlets for United States rice in the last 4 months of the 1934–35 season. A continuation of this influence may be expected in 1935–36. The DeRouen amendment eliminated many of the difficulties experienced under the marketing-agreement approach to rice-crop control. The maintenance of a high domestic price level for rice through the marketing agreements and licenses reduced exports and increased competition from foreign rices. The DeRouen amendment provided for a processing tax at the rate of 1 cent per pound of rough rice, effective April 1, 1935 (although the marketing year is designated at beginning Aug. 1), to be continued until July 31, 1936, the elimination of a floor-stocks tax on all rice products, and tax-payment warrants to be used in payment of the tax on rough rice of the 1933 and 1934 crops purchased in accordance with the marketing agreements and licenses issued by the Secretary of Agriculture for the rice industry. In addition, the amendment made it possible to export the surpluses from previous crops while maintaining domestic prices at relatively high levels.

Fixed minimum prices under the marketing agreement tended to reduce the accumulation of commercial and wholesalers' stocks in domestic and insular markets. With the proposal to shift to a processing tax, domestic, insular, and foreign demand increased sharply not only to build up previously depleted inventories, but also in anticipation of prospective price advances. Shipments of rice from mills into trade channels, February through July 1935, were 34 percent larger than in the same months of 1934.

Movement of the 1935–36 United States supplies of milled rice into trade channels has been slowed up by the heavy purchases in the latter part of the 1934–35 season. Shipments of southern rice in the 2 months, August and September 1935, totaled 92,200,000 pounds compared with 130,200,000 in the same period of 1934 and were the smallest for these months since 1924–25 when the southern crop was small.

Movement of United States rice into consumption during the remainder of the 1935–36 season, particularly after accumulated supplies are reduced toward normal proportions, will probably be larger than early in the season. Domestic utilization of southern rice, including seed requirements for the season, will probably be about average and total around 600,000,000 to 625,000,000 pounds. Puerto Rico may take 165,000,000 to 175,000,000 pounds, leaving around 160,000,000 to 195,000,000 pounds of southern rice for export and carry-over. United States exports will be principally of southern rice. California may be expected to ship about the same quantity as last season to Hawaii—80,000,000 to 85,000,000 pounds—but less to Puerto Rico. Local utilization in California may also be below last season. Carry-over stocks of both southern and California rice at the close of 1935–36 are expected to be small.

FOREIGN SITUATION

The export outlet for United States rice was unusually small in the first 8 months of the 1934–35 season, but a sharp expansion occurred in the last 4 months. The processing tax, effective April 1, 1935, was or will be refunded on that portion of the rice exported, which in the case of milled rice, other than brewers' rice, amounts to $1.45 per 100 pounds. This payment stimulated

exports, particularly to those countries having no trade restrictions and those purchasing low-grade United States rice.

Exports of head rice during the first 8 months of the 1934–35 season (August 1934 through March 1935) totaled only 36,286,000 pounds compared with 63,211,000 pounds in the same period of 1933–34 and 154,615,000 pounds in the same months of the previous 5 (1928–29 to 1932–33) years. Exports in the remaining 4 months April–June 1935) were larger than in the previous 8, and brought the seasonal total for 1934–35 to 117,334,000 pounds compared with 86,168,000 pounds in 1933–34 and 223,698,000 pounds, the annual average for the 5 years 1928 to 1933. Compared with 1933–34, about the same quantity of United States rice was exported to Belgium, the Netherlands, and the United Kingdom. However, Germany took only about one-third as much. Trade restrictions of various kinds limited sales in most European countries. Exports to South American countries remained below average, reflecting increased local production and larger utilization of foreign rice. Cuba, which in the 5-year period 1928–33 purchased on the average only about 10,000,000 pounds annually, or 5 percent of the United States exports of rice grain, took 29 percent, or 33,995,000 pounds, in the 1934–35 season. A trade agreement between the United States and Cuba permits imports of hulled and semihulled rice from the United States at a tariff rate 50 percent below the rate applied to rice from other countries. The duty and the consumption tax on United States rice is 84 cents while for other countries it is $1.68 per 100 pounds.

United States exports to the West Indies and Central America consist largely of low-grade rice. The average price (computed from exports and value of exports) of the rice shipped to Cuba in 1934–35 was $2.69, to Honduras $2.43, to Jamaica $2.68, to Guatemala $2.09 per 100 pounds. The average price of exports to all countries was $3.13 per 100 pounds. For the 1935–36 season as a whole, exports to Cuba may be larger than for 1934–35. Exports to Europe and South America may also be somewhat greater.

The processing tax, which acted as an increase in the tariff, reduced imports of foreign rice into United States sharply after April 1. Because of relegalization of fermented malt-liquor production, demand for foreign brewers' rice increased significantly during 1933–34 and in the first 8 months of the 1934–35 season. Imports of rice meal, rice flour, and broken rice, August 1934 through March 1935, amounted to 35,602,000 pounds compared with 9,233,000 pounds in the like months of 1933–34 and only about 600,000 pounds on the average in the same period during the 5 years 1928–29 to 1932–33. The compensating tax on imported brewers' rice was $1.44 per 100 pounds from April 1 to July 31, and was lowered to 75 cents per 100 pounds on August 1. Despite the lower compensating tax, imports of brewers' rice during 1935–36 will be reduced toward more normal proportions considering the larger demand, since prices of brewers' rice will probably be relatively high compared with prospective prices of brewers' corn grits.

Imports of foreign cleaned rice other than Patna after April 1 were also restricted to below-average proportions. Imports of duty-free Philippine rice became important in April 1934 and from this date through March 1935, about 19,000,000 pounds of Philippine rice were received, but from April through August this source has supplied only about 1,000,000 pounds. The 1935 Philippine crop is reported to be small. Imports of duty-free Patna rice continued large after April 1 compared with previous years, but remained small compared with the imports of the other types of cleaned rice.

Information regarding foreign rice acreage and production is not generally available at this time of year, but such reports as have been received point toward larger crops in foreign countries. The total Brazilian crop is slightly larger than the 1934 harvest. Larger rice crops were harvested in Spain and Italy. The Japanese rice crop was officially estimated at 19,027,000,000 pounds compared with 16,279,000,000 pounds in 1934, but is slightly under average. The carry-over on October 1, 1936, was officially forecast at 3,694,000,000 pounds or 8.5 percent larger than the October 1, 1935, carry-over. With a larger supply in Japan and a smaller supply in California, prospects of the exportation of California rice to Japan continue poor.

PRICES

The December 1, 1934, farm price of southern rough rice was $2.82 per barrel and of California rough $2.66, or about the same as a year earlier. The 1934 price included adjustment payments from the trust funds provided in the

marketing agreements. The termination of the marketing agreements and the imposition of a processing tax on April 1, caused the United States farm price to rise to $3.24 per barrel by June 15, which included the value of the tax-payment warrant of $1.62 per barrel with which the millers might pay the tax. The United States farm price on September 15, 1935, was $1.74 per barrel and on October 15, $2.06 per barrel. In addition to the current market price co-operating rice farmers receive an adjustment payment.

Fancy Blue Rose at New Orleans averaged $3.71 per 100 pounds in 1934–35 compared with $3.77 for 1933–34. The average price for October was $4.27. Extra fancy California Japan at San Francisco averaged $4.48 for October.

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