

largest crop since 1940-1941 in Argentina, and an above-average crop in Australia. Minor exporting countries such as Turkey, France, and French North Africa also reported gains. Those increases in supplies of wheat available for export, together with an easier supply position in many important deficit areas, resulted in a decline in total world trade in wheat in 1952-1953 of about 8 percent from the record level of more than a billion bushels in 1951-1952.

In the future our wheat exports will depend largely on the outcome of world harvests and international conditions. Continued large exports will also depend upon finding some method (such as the International Wheat Agreement) of bridging the price gap and competing effectively whenever domestic price-support programs hold prices in this country above those prevailing in world markets. However, if international tensions do not increase, it is not to be expected that exports in the future will average as high as in the years following the war.

To meet the extraordinary demands during the war and rehabilitation following the war, wheat production in this country was greatly increased. Thus with average or better weather, our farmers in 1954 found themselves with a very large productive capacity, geared to a large export market. With that market declining, there is need to make adjustments to meet the changed situation. (*Robert E. Post, Edward J. Murphy.*)

On June 22, 1954, the Secretary of Agriculture announced a national wheat acreage allotment of 55 million acres for 1955 (the level specified in the controlling legislation under conditions of excessive supply); and announced that in 1955 wheat growers and others would have to comply with all acreage allotments established for a farm in order to be eligible for price support on any crop produced on the farm. Estimates then were that about 1,900 million bushels of wheat would be available for the 1954-1955 marketing year.

Fruits and Vegetables

Among fruits and vegetables we include more than 200 separate farm commodities and their products. Most of them are perishable, seasonal in production, subject to use in a number of different ways, and variable in the markets they have.

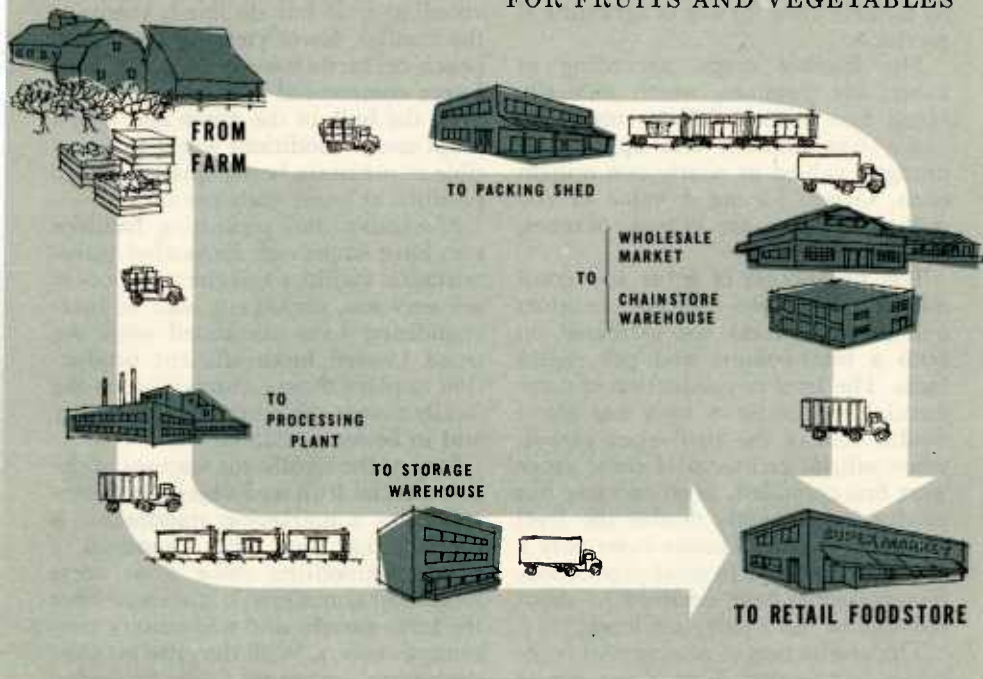
Some of the fruits and vegetables are quickly maturing annuals, such as green beans, spinach, and radishes. Some, like tree fruits, are perennials, requiring several years after planting time before they produce a crop. Production ranges from highly specialized crops to those grown as a part of general farming. Marketing practices also vary widely. The degree of perishability differs and determines whether the crops must be marketed within a few days after harvest or can be stored for several months. Because of perishability, the balance between supply and consumption must be maintained on a current basis, and there is little opportunity, except in the case of processed products, to balance supplies from one season to the next.

The basic characteristics of fruits and vegetables are not altered very much between the producer and the consumer. Fresh apples and lettuce as purchased by the consumer are in the same form as when they were harvested. Even a processed product such as quick-frozen green peas is not basically changed.

From the consumer's viewpoint, many fruits can be substituted readily for one another; various vegetables likewise tend to be substituted for one another. Also, among many, such as

Principal Marketing Channels

FOR FRUITS AND VEGETABLES



oranges, broccoli, or green beans, there is a high degree of competition between the fresh and processed forms of the same commodity. The consumers' demand for individual fruits and vegetables therefore tends to be more elastic than for a great many other farm products.

Relatively high costs for packing, containers, transportation, and handling, particularly for products from areas distant from consuming centers, make for high marketing margins and prices to consumers that are relatively unresponsive to changes in the farm prices.

A sharp increase in per capita consumption of fruits and vegetables in the past several decades reflects changed habits of eating which have resulted, in part, from rising incomes and recognition of the importance of these foods in

the diet. The increase has not been uniform. In fact, the per capita consumption of such products as apples, potatoes, and sweetpotatoes actually has declined, but the use of citrus fruits has tripled, that of carrots has quadrupled, and that of lettuce has nearly doubled.

Total production of fruits, tree nuts, commercial vegetables, potatoes, and sweetpotatoes in 1951 and 1952 averaged about 46 million tons, valued at 3.1 billion dollars. Fruits and tree nuts accounted for 17 million tons and 37 percent of the value, all commercial vegetables 18 million tons and 41 percent of the value, potatoes and sweetpotatoes 11 million tons and 22 percent of the value. Most of the value is in the form of cash income, although for some crops a part is the value of produce used on farms where it was

produced. Cash income from fruits and vegetables amounts to about 9 percent of total cash income received by farmers from the sale of agricultural products.

The leading crops, according to value, are potatoes, worth annually about 600 million dollars; tomatoes, nearly 250 million; and apples and oranges, valued at nearly 200 million each. Others having a value of 100 million or more are grapes, peaches, and lettuce.

The production of fruits and commercial vegetables (except potatoes and sweetpotatoes) has increased on both a total-volume and per capita basis. The level of production of commercial vegetables in 1952 was about double that of the 1918-1922 period, when official estimates of these crops were first compiled. Fruit and tree nut production is nearly double the level of 30 years ago. Potatoes show only a moderate increase in total production. Sweetpotatoes have declined to about one-half of the 1918-1922 level.

The production of commercial vegetables has increased on a per capita basis about 50 percent; that of fruits and tree nuts, 30 percent. Potatoes have declined about one-fifth. The per capita production of sweetpotatoes is only about a third of the 1918-1922 level. The level of per capita production in 1948-1952 was about 225 pounds of commercial vegetables, 150 pounds of potatoes, 14 pounds of sweetpotatoes, 225 pounds of fruits, and 2.5 pounds of almonds, filberts, pecans, and English walnuts combined.

Increased demand is the basic reason for the increased output, but a combination of factors made possible the expansion: The greater acreages of many crops, higher yields, greater use of fertilizer and lime, more effective pest controls, more irrigation, and the development of better varieties. For some crops, such as potatoes, shifts to higher yielding areas have helped to raise the average yield. Primarily because of the marked upward trend in acreage of citrus fruits, which produce

relatively high yields per acre compared with other fruits, total fruit production has increased, while the acreage devoted to fruit has declined; many of the smaller, lower yielding apple and peach orchards have been pulled out. Large commercial orchards now produce the bulk of the apple and peach crops under conditions where it is possible to maintain better quality and to produce at lower costs per unit.

Marketing and processing facilities also have improved. Expanded transportation facilities and the advances in refrigeration, packaging, and in merchandising have combined with the trend toward more efficient production to place these commodities on the family dinner table in greater quantity and in better condition.

One of the significant features of the commercial fruit and vegetable industry, from a marketing standpoint, is the fact that such large quantities of these commodities come from areas located at considerable distances from the large eastern and midwestern consuming centers. With the growth of the processing industries and expanded transportation facilities, especially in the field of truck transportation—better roads and more trucks—and with the increased use of refrigeration in both rail and truck transportation, such factors as climate and soil largely have determined the location of commercial producing areas.

More than half of the fruit tonnage of the United States is produced in the 11 Pacific Coast and Rocky Mountain States; 45 percent is produced in California alone. About 40 percent of the total is produced in the Atlantic Coast States. Citrus fruit grown in Florida accounts for 30 percent of the national output for all fruits. Less than a tenth comes from the Central States. Washington, the leading apple State, ranks third in total fruit production, followed by New York, Michigan, and Virginia.

Fruit growers in the Central and Eastern States are nearer the big markets, but their fruit crops are more vul-

Marketing of Vegetables and Fruits

(Fresh)

(Processed)

PERCENT OF TOTAL
SALES IN MILLIONS OF TONS . . .

1934-36

1949-51

1 2 3 4 5 6 7 8 9 10 11 12

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

VEGETABLES

74% 26%

66% 34%

FRUITS

62% 38%

47% 53%

Citrus

86%
14%

52% 48%

Noncitrus

52% 48%

42% 58%

1 2 3 4 5 6 7 8 9 10 11 12

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

nerable to damage from frosts, freezes, poor pollination weather, storms, hurricanes, and droughts than are those in the West. They usually are not produced under irrigation and must depend upon natural rainfall. Yields per acre are lower.

The western part of the country produces more than two-fifths of the Nation's total tonnage of vegetables. Farmers in the Atlantic Coast States grow nearly a third of the total. Those in the Central States grow about one-fourth. California grows about 30 percent of the Nation's total. Other leaders are Florida, New York, Texas, Wisconsin, New Jersey, Arizona, Michigan, and Indiana. Florida, California, Arizona, and Texas specialize in the growing of fresh vegetables for the winter market. Wisconsin, Indiana, Illinois, Minnesota, and Maryland specialize in producing vegetables for commercial processing. Large producers of vegetables for both fresh market and commercial processing are California, New York, and New Jersey.

Potato harvest is under way somewhere in every month of the year. It starts in Florida and Texas about the first of the year. The States south of Virginia and from the Atlantic to the Pacific (including the southern half of California) produce the early potato crop, which is harvested and marketed from January through June. The States from the New Jersey-Delaware-Maryland-Virginia area westward through Kansas supply an intermediate crop, which is harvested mostly from July through September. The commercial production in the early and intermediate States has more than doubled during the past 30 years and is an important part of the total crop.

The late potato crop is produced in the Northern States and California and is harvested mostly in October and November. Late potatoes make up about four-fifths of the total annual production. Most of them are placed in storage and are the chief source of supply in winter. The chief late-producing States, in order of importance,

are Maine, Idaho, New York, Colorado, and North Dakota.

The important sweetpotato-producing areas embrace the South Central States, the Atlantic coast as far north as New Jersey, and parts of California. Louisiana accounted for about one-fourth of the crop in 1952.

Of the 26 million acres under irrigation in the United States in 1949, nearly 80 percent was in the Pacific Coast and Rocky Mountain States; 25 percent was in California. Irrigation has enabled growers to take advantage of the favorable soil and climate in these States to make the growing of fruits and vegetables one of the leading industries of the West.

The dried fruit industry in California is an example. Hot, dry weather is essential to the development, harvesting, and drying of those crops. If rain occurred in summer and early fall, California growers could not produce raisins and dates, and dried prunes, apricots, figs, peaches, and pears.

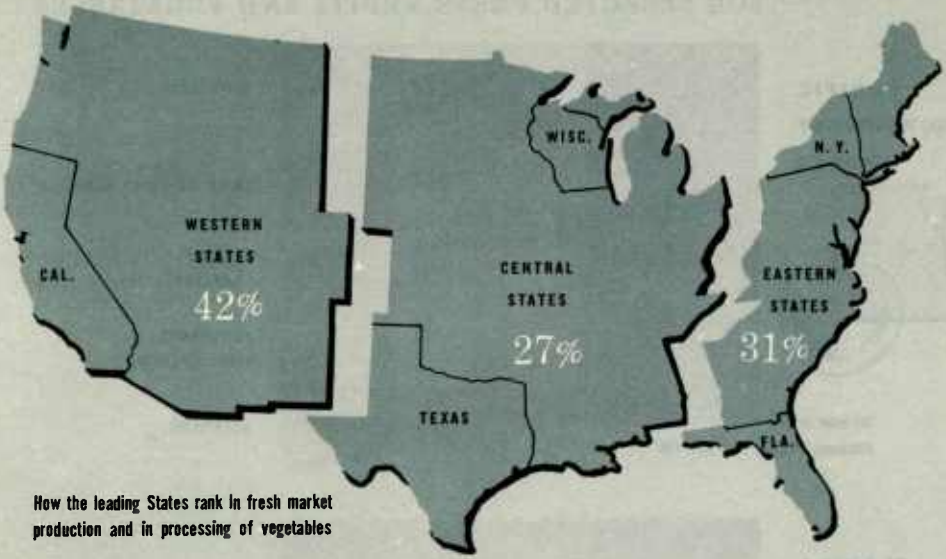
Consequently, those industries have grown up in areas which are practically devoid of rainfall in summer and fall. Irrigation supplies the needed soil moisture.

About three-fifths of our fruits and tree nuts, one-half of our commercial vegetables, and one-third of the potato crop are grown on irrigated land.

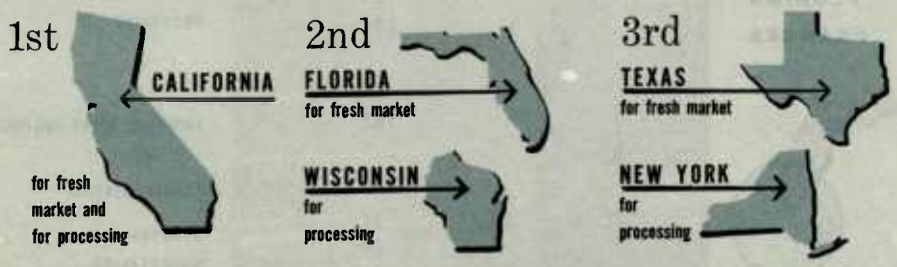
Of tremendous importance in the marketing of the country's large output of fruits, vegetables, and tree nuts is the variety of forms in which those products are made available. Large quantities move to market as fresh produce. A sizable portion of many reaches the foodstore in processed form—canned, dried, and frozen. Some crops—peaches, cherries, strawberries, and asparagus, for example—are plentiful in fresh form for only short periods each year; but since large segments of these crops go to processors, these commodities are available on a year-around basis.

About 45 percent—nearly 3,300,000 tons—of the 1951-1952 citrus crop was processed. More than half of the

Regional Contributions to Commercial Vegetable Crop



How the leading States rank in fresh market production and in processing of vegetables



Florida citrus harvest was used for canning and freezing. Of the orange crop in Florida, about 40 percent was used for frozen juice concentrate and 20 percent for other processing, mostly canned juice. About 40 percent of the 1951-1952 crop of Florida grapefruit was processed.

About 27 percent of the citrus production in California in 1951-1952 was processed—nearly a fourth of the oranges and about a third of the lemon crop. Processing of grapefruit in California is relatively unimportant.

Nearly 60 percent of noncitrus fruit production in 1951 was processed—17 percent was canned, 18 percent was dried, and 17 percent consisted of California grapes crushed for making wine and brandy. About half of the peaches and pears produced in 1951 was processed, mostly canned. One-fourth of the commercial apple crop was used for canned, dried, and frozen apples and for cider, vinegar, and apple juice. Nearly two-fifths of the strawberry crop was processed—mostly frozen. About 85 percent of the 1951

Where the Consumer's Dollar Goes

FOR SELECTED FRESH FRUITS AND VEGETABLES

PACIFIC NORTHWEST APPLES



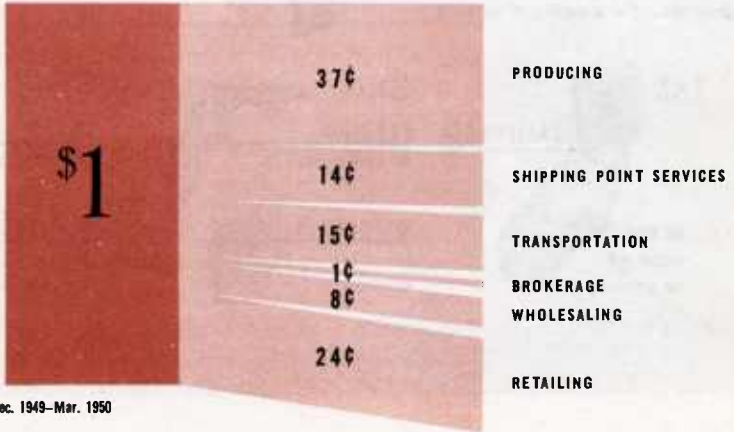
Marketed in
Pittsburgh, Pa., Dec. 1949-Mar. 1950



FLORIDA ORANGES



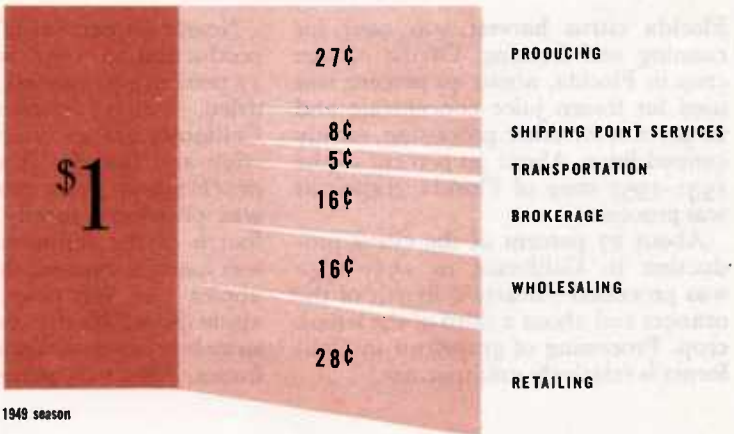
Marketed in
Pittsburgh, Pa., Dec. 1949-Mar. 1950



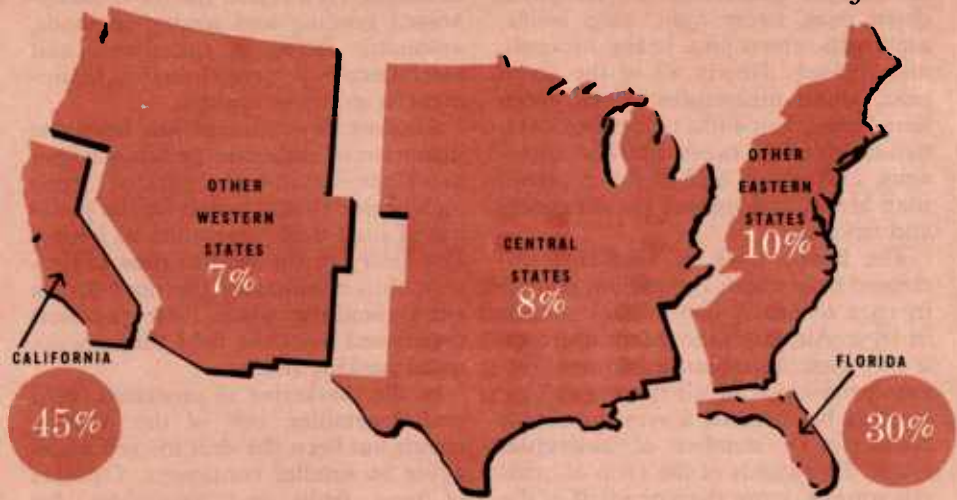
SOUTH CAROLINA TOMATOES



Marketed in
Jacksonville, Fla., 1949 season



Where the Nation's Fruit Production Comes from



crop of sour cherries was marketed as canned and frozen cherries.

Dried fruits are produced chiefly in California. Fruits used for drying, including fruit from areas outside California, comprised more than one-sixth of the total production of non-citrus fruits on a fresh equivalent basis in 1951. Total production of dried fruit was nearly 500,000 tons. About half was raisins.

Since the mid-1930's the sales of noncitrus fruits, on a tonnage basis, have increased about a fifth—the rate of the increase of population. But during the same period a change occurred in the marketing pattern. The amounts marketed through processors increased about 40 percent, but sales on the fresh market declined slightly. Canners in 1953 handled twice as much fruit as in 1934-1936; the amount used for juice, wine, jellies, and preserves has almost doubled.

The freezing industry has become a major outlet in marketing strawberries and sour cherries, but the freezing of other noncitrus fruits has not yet achieved major proportions. The ton-

nage of noncitrus fruits used for drying has declined moderately, but dried fruits still are important in the overall fruit marketing picture.

More than 35 percent of the 1951 crop of English walnuts and about 75 percent of the pecans were marketed as shelled nuts.

While our population was increasing about 40 percent between 1920 and 1950, the production of commercial vegetables for the fresh market nearly doubled and the tonnage marketed through commercial processors for canning and freezing about tripled. Before the Second World War, about two-thirds of the production of commercial vegetables was sold on the fresh market, and one-third was processed. Wartime conditions stimulated the demand for both fresh and processed vegetables. During the war more than two-fifths of the total production of commercial vegetables was canned or frozen. This ratio dropped slightly in the years immediately following the war, but in 1951 and 1952 the ratio again exceeded two-fifths of the total.

The leading vegetables grown for commercial processing are tomatoes, green peas, sweet corn, snap beans, asparagus, green lima beans, broccoli, and spinach. Nearly all of the green peas, about nine-tenths of the green lima beans, four-fifths of the tomatoes, two-thirds of the sweet corn and asparagus, and about half of the broccoli, snap beans, and spinach go to canners and freezers.

The frozen pack of vegetables increased from about 150 million pounds in 1942 to nearly 900 million pounds in 1952. Although the quantity frozen is only a small percentage of the aggregate production of all the vegetables, freezing has become a very important outlet for a number of individual crops. Two-thirds of the crop of Brussels sprouts, more than one-half of the green lima beans and broccoli, one-fourth of the cauliflower, green pea, and spinach crops, and one-tenth of the asparagus production were frozen in 1952.

As production has shifted to specialized areas, often at considerable distances from markets, a greater proportion of the consumer's dollar has been used to pay the costs of marketing, including greater transportation and handling charges. Also, as the products have been subjected to more processing or preparation before sale to the consumer, the proportionate costs of marketing have increased. Thus, today the producer receives, on the average, a little more than one-third of each dollar spent by the consumer for fruits and vegetables.

In preparing fruits and vegetables for the fresh market, practically all of the grading or sorting, much of the packing, and a considerable amount of the handling in packinghouses have required extensive hand labor. Growers and shippers—acutely aware of the need for reducing the cost of preparing and packaging their products if prices are not to rise to levels that will discourage consumption—are giving increasing attention to development of cheaper and improved containers and

more efficient methods of packing and handling. As a result, the use of mechanized grading and sorting methods, automatic filling of containers, and mechanically powered handling equipment is growing rapidly.

Another development has been the invention of elaborate mobile packing machines—small-scale packing sheds on wheels—that are used for the packing of such fresh vegetables as lettuce and celery in the field at time of harvest, thus eliminating the need for an extra handling when these products are moved from the field through the usual packing sheds.

In the marketing of processed fruits and vegetables, one of the notable trends has been the shift toward packaging in smaller containers. Canners of most fruits and vegetables, for example, are putting up a major part of their packs for retail sale in cans that are smaller than formerly were considered standard. A similar development has been taking place in the packaging of frozen fruits and vegetables. The reasons given for this shift to smaller sizes are better adaptation to consumer needs and less consumer resistance to the unit prices at which they are sold.

Only a relatively few of the many kinds of fresh and processed fruits and vegetables produced in this country are important in international trade. In the years just before the Second World War, slightly more than one-tenth of our fruit production was exported. In the years since, the exports have averaged well under one-tenth of our production. In the prewar period, more than one-third of our dried fruit production was exported, about one-seventh of our canned fruit packs, and about one-twelfth of our fresh fruit.

Imports of fruits just before the Second World War amounted to about one-seventh of domestic production and since then have declined to about one-tenth. Bananas represent the bulk of the imports. Although imports of all other fruits are small in

total, the imports of such commodities as dates and dried figs are large in relation to domestic production.

Western Europe, particularly the United Kingdom, in the period prior to the war, was the main export market for many of our fruits and fruit products. Certain varieties and sizes of apples and winter pears and a portion of the dried and canned fruit packs were produced especially for the European markets.

Fresh apples and pears were exported principally to the United Kingdom; that trade, disrupted during the war, has shown little recovery since. Canned fruits, such as fruits for salad, peaches, pears, and apricots, were exported in considerable volume, especially to the United Kingdom, before the war, but this outlet has disappeared almost entirely. Since the war there has been a slight increase in exports to non-European countries but the volume is relatively small. Large amounts of raisins and dried prunes, together with smaller amounts of dried apricots, peaches, pears, and apples were exported before the war, principally to Europe. In the years since the war exports of raisins and dried prunes have been maintained near pre-war levels but only because of Government export subsidies. Exports of other dried fruits have declined sharply.

CITRUS FRUITS and products were exported in sizable volume, especially to Canada before the war, and this trade has continued to grow in the years since the war. The United Kingdom took a considerable volume of our exports of citrus fruit and products before the war. This market has disappeared almost entirely, but there has been some increase in exports to other European countries, such as Belgium and the Netherlands, and to non-European countries.

Imports of tree nuts before the war amounted to almost as large a volume as was produced in this country, but now, because of increased domestic production, they represent a smaller

percentage, although the volume imported is about the same. Cashews and Brazil nuts are the two most important imports. We export few tree nuts.

Foreign trade in vegetables is much less important than for fruits. Exports of canned vegetables represent only a small part of production. Exports of fresh vegetables have increased sharply. Almost all of this volume goes to Canada, principally during the winter and spring months. Canada, in turn, ships us both certified seed and table-stock potatoes, rutabagas, and some summer vegetables. In winter we import tomatoes, green peppers, and cucumbers from Mexico and Cuba. Onions, garlic, and cabbage are imported from overseas in years of limited domestic production and relatively high prices. (*Reginald Royston, Arthur E. Browne.*)

Sugar

Each person in the United States consumes an average of about 95 pounds of cane and beet sugar each year. The major use of sugar is to sweeten foods such as ice cream, baked goods, beverages, and candy. A small amount of sugar is consumed directly as such.

The total annual consumption of refined sugar in the United States amounts to about 7.6 million tons. The sources are the sugar beet regions of the Midwest and West, the sugarcane areas of Louisiana, Florida, Puerto Rico, and Hawaii, and the foreign sugarcane areas, principally Cuba and the Philippines. Continental and off-shore domestic areas supply about 53 percent of total consumption; the rest is imported.