UNITED STATES TARIFF COMMISSION

# SUMMARIES OF TRADE AND TARIFF INFORMATION

**Prepared in Terms of the Tariff Schedules of the United States (TSUS)**

Schedule 1

Animal and Vegetable Products
(In 14 volumes)

Volume 12

Animal and Vegetable Fats and Oils

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SUMMARIES OF TRADE AND TARIFF INFORMATION
BY SCHEDULES

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# FOREWORD

In an address delivered in Boston on May 18, 1917, Frank W. Taussig, distinguished first chairman of the Tariff Commission, delineated the responsibility of the newly established Commission to operate as a source of objective, factual information on tariffs and trade. He stated that the Commission was already preparing a catalog of tariff information--

> designed to have on hand, in compact and simple form, all available data on the growth, development and location of industries affected by the tariff, on the extent of domestic production, on the extent of imports, on the conditions of competition between domestic and foreign products.

The first such report was issued in 1920. Subsequently three series of summaries of tariff information on commodities were published--in 1921, 1929, and 1948-50. The current series, entitled Summaries of Trade and Tariff Information, presents the information in terms of the tariff items provided for in the eight tariff schedules of the Tariff Schedules of the United States (abbreviated to TSUS in these volumes), which on August 31, 1963, replaced the 16 schedules of the Tariff Act of 1930.

Through its professional staff of commodity specialists, economists, lawyers, statisticians, and accountants, the Commission follows the movement of thousands of articles in international commodity trade, and during the years of its existence, has built up a reservoir of knowledge and understanding, not only with respect to imports but also regarding products and their uses, techniques of manufacturing and processing, commercial practices, and markets. Accordingly, the Commission believes that, when completed, the current series of summaries will be the most comprehensive publication of its kind and will present benchmark information that will serve many interests. This project, although encyclopedic, attempts to conform with Chairman Taussig's admonition to be "exhaustive in inquiry, and at the same time brief and discriminating in statement."

This series is being published in 62 volumes of summaries, each volume to be issued as soon as completed. Although the order of publication may not follow the numerical sequence of the items in the TSUS, all items are to be covered. As far as practicable, each volume reflects the most recent developments affecting U.S. foreign trade in the commodities included.

SUMMARIES OF TRADE AND TARIFF INFORMATION

SCHEDULE 1

Volume 12

C O N T E N T S

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## Numerical List of TSUS Items in This Volume

This volume covers the summaries on oil-bearing vegetable materials as well as the vegetable and animal (including fish) fats and oils provided for in part 14 of schedule 1 of the Tariff Schedules of the United States (TSUS); it does not cover butter and butter substitutes (items 116.00-116.30), which are provided for in part 4 of schedule 1.

Fats and oils are an essential part of the diet of man; they also have important industrial uses. In general, the distinction between fats and oils is a physical one; fats are solid and oils are liquid at ordinary temperatures.

On the basis of worldwide production, the most important oils are soybean, peanut, coconut, cottonseed, and sunflower oils; the most important fats (except butter) are lard and tallow. In 1967 aggregate world production of these seven fats and oils accounted for almost 80 percent of the estimated total world output of about 70 billion pounds (oil equivalent) for all animal and vegetable fats and oils (except butter).

The United States is the major world producer and exporter of fats and oils. U.S. production in 1967 was close to 20 billion pounds (oil equivalent) of which about 7.6 billion pounds were exported, largely in the form of soybeans, soybean oil, and tallow and grease. The United States is also a substantial importer, but primarily of types not produced in significant volume in the United States. In 1967 imports totaled about 1.2 billion pounds (oil equivalent), most of which consisted of the lauric acid type oils--coconut and palm kernel oil--and of palm oil, castor oil, olive oil, and sperm whale oil. In terms of value, U.S. exports in 1967 of products included in this volume were about seven times as large as imports. Exports were valued at about $1,150 million, whereas imports totaled $175 million.

In 1966 about 68 percent of total U.S. consumption of the fats and oils covered in this volume was in food uses, about 7 percent each in the production of soap and fatty acids, 6 percent in the manufacture of livestock feeds, and 3 percent in paints and varnishes. The remainder was used in a large number of other applications, including the manufacture of leather, textiles, pharmaceuticals, and candles, and the production of lubricating oils and greases. The following table shows the factory consumption of the more important fats and oils, by major kinds and uses, in 1966:

Principal fats and oils: U.S. consumption, by major uses, 1966

(In millions of pounds)

| Commodity | Food | Soap | Paint and varnish | Fatty acids 1/ | Other 2/ | Total |
|---|---|---|---|---|---|---|
| Vegetable oils: | | | | | | |
| Soybean | 4,936 | 3/ | 93 | 3/ | 3/ | 5,210 |
| Cottonseed | 1,248 | - | 3/ | 3/ | 3/ | 1,258 |
| Coconut | 333 | 150 | 3/ | 60 | 3/ | 783 |
| Corn | 4/ 386 | - | - | 4/ 1 | 4/ 1 | 388 |
| Linseed | - | - | 161 | 3/ | 3/ | 234 |
| Peanut | 143 | 3/ | - | 3/ | 4 | 148 |
| Castor | - | 3/ | 13 | 3/ | 3/ | 135 |
| Safflower | 62 | 3/ | 12 | 3/ | 3/ | 80 |
| Palm kernel | 4/ 70 | - | - | 4/ 1 | - | 71 |
| Palm | 3/ | 3/ | - | 3/ | 3/ | 66 |
| Olive | 4/ 49 | 4/ 1 | - | - | 4/ 1 | 4/ 51 |
| Tung | - | - | 22 | - | 10 | 32 |
| Other 5/ | 3/ | 3/ | 6 | 3/ | 3/ | 71 |
| Foots 6/ | - | 3/ | 3/ | 79 | 3/ | 108 |
| Animal fats and oils: | | | | | | |
| Inedible tallow and grease | - | 667 | - | 583 | 7/ 1,214 | 2,464 |
| Lard | 576 | - | - | - | 25 | 601 |
| Edible tallow | 505 | 4/ 1 | - | 4/ 1 | 4/ 9 | 516 |
| Fish | - | - | 3/ | 3/ | 3/ | 43 |
| Sperm whale | - | - | - | - | 29 | 29 |
| Wool grease | - | - | - | - | 4/ 14 | 4/ 14 |
| Total | 8,369 | 832 | 322 | 778 | 2,001 | 8/ 12,302 |

1/ Fatty acids are used in the production of soaps, surface-active agents, lubricants, alkyd resins, in rubber compounding, and in the manufacture of many other industrial products.

2/ Consists of a large variety of uses including ingredients for livestock feed, resins and plastics, lubricants, pharmaceuticals, processing of leather, textiles, and other inedible products.

3/ Figures withheld to avoid disclosing operations of individual concerns.

4/ Estimated.

5/ Includes oiticica, rape, babassu, walnut and various other vegetable oils.

6/ Oil foots are the fatty acids and other materials separated from crude oils in the process of refining. Official statistics include "foots" not necessarily within this summary.

7/ Includes 893 million pounds for livestock feed.

8/ Tabulations of U.S. consumption of fats and oils generally include butter and tall oil, thus resulting in a somewhat higher total than here shown.

Source: Compiled from official statistics of the U.S. Bureau of the Census, except as noted.

In the United States, certain fats and oils, such as cottonseed oil, corn oil, and lard, are consumed almost exclusively for food. Others, such as soybean, coconut, and fish oils, are used in a variety of applications.

The proportions accounted for by the major classes of use (food, soap, paint, etc.) have varied somewhat from year to year. Greater variation has occurred in the proportion of the particular kinds of fats and oils going into each of the principal categories of consumption, owing largely to the fact that certain fats and oils, especially those used principally in food and soap, are to a considerable extent competitive with each other. For some of them, the tendency to a common price level is strong, and for any of these a change in price relative to the prices of other oils that might be substituted for it frequently affects its use.

An important factor in the domestic output of some fats and oils is the extent to which the product is obtained jointly with other commodities of greater financial importance to the producers. The soybean meal obtained in the crushing of soybeans is customarily of greater value than the soybean oil. Lard and tallow are relatively minor sources of income to meatpacking concerns. Cottonseed oil bears a similar relationship to cotton lint. Corn oil is a byproduct obtained in the wet processing of corn in the production of corn starch, syrup, and other products. For these fats and oils, the volume of production is influenced primarily by factors other than the prices of the fats and oils themselves.

For some vegetable oils, production has been influenced by Government agricultural support programs. Support prices, which are established annually by the Secretary of Agriculture, are maintained by the Commodity Credit Corporation by way of loans and purchase agreements. Oil seeds which have been eligible for support were peanuts and tung nuts (and tung oil) for which support was mandatory, and soybeans, cottonseed, flaxseed, and castor beans, for which support was permissive. With the exception of peanuts, there were no acreage or marketing restrictions on these products, although indirectly the acreage restrictions on cotton acted as a restriction on cottonseed.

Production of some of the vegetable oils may have been stimulated by the acreage diversion programs conducted by the Department of Agriculture in connection with the price-support programs for feed grains, wheat, and cotton. The acreage diversion programs were designed to reduce farm surpluses while maintaining or raising farm incomes. The programs have provided in some years that certain oil crops may be grown with benefit of full or partial support payments on some of the acreage diverted from the production of feed grains, wheat, or cotton. To participate in the programs, farmers agree to take out of production a certain percentage of their acreage devoted to these farm products.

If farmers take out more than the required percentage, this additional diverted acreage can then be devoted to the growing of authorized alternate crops such as oilseeds that are not likely to be in surplus, as determined by the Secretary of Agriculture. In exchange for this diversion, producers are eligible for acreage diversion payments based on specified percentages of the price-support payment rates on the commodities for which the acreage was reduced. Oil-bearing crops that have been authorized on such additional diverted acreage include sesame, sunflower, safflower, castor beans, crambe, and flaxseed. In addition, in certain years the growing of soybeans has been permitted on corn-sorghum and cotton acreage (except on the diverted acreage) without loss of price-support payments.

The Agricultural Trade Development and Assistance Act of 1954 (Public Law 480, 83d Cong.) provides the basis for the principal Government programs that have assisted exports of fats and oils. Public Law 480 provides for sales for foreign currencies, famine relief and donations, barter of farm products for strategic and other materials, and long-term credit sales. Most of the U.S. exports of oilseeds and fats and oils have been commercial exports not benefiting from Government programs. Export assistance has been substantial, however, for soybean oil, cottonseed oil and butter oil.

Appendix A to this volume reproduces pertinent segments of the Tariff Schedules of the United States Annotated (TSUSA-1968) relating to the items covered by this volume. It includes the general headnotes to the TSUS and part 14 of schedule 1. Appendix A also gives the rates of duty applicable to the individual TSUS items, including the staged annual rate modifications that resulted from concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Notes in the appendix also document changes in the legal text of the tariff schedules after these schedules went into effect on August 31, 1963 and in the statistical annotations of items.

Appendix B to this volume provides data on the value of the U.S. imports in 1967 by TSUS items included in the individual summaries of this volume. Data also show the percentage changes in imports from 1966 and the three principal countries which supplied imports in 1967.

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| Commodity | TSUS item |
|---|---|
| Apricot and peach kernels | 175.03 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Domestic producers ordinarily supply the bulk of the apricot kernels consumed in the United States. In most recent years the United States has been a net exporter of such kernels. There is no trade in peach kernels.

## Description and uses

Apricot and peach kernels are byproducts of fruit-drying, canning, and freezing. As far as is known, there is little or no trade in peach kernels, and this summary is concerned principally with apricot kernels. Some of the apricot kernels are used in the production of an oil for pharmaceutical preparations which is similar to almond oil; the larger quantity by far, however, is used for other edible purposes..

Apricot kernels, depending on the variety of fruit, are of two types, sweet and bitter. All of the domestic output and practically all of the imports consist of bitter kernels containing hydrocyanic acid (a poisonous material). This acid is readily removed in processing, leaving a product with little or no bitterness. Bitter kernels are used primarily to make kernel paste--consisting of apricot kernels and sugar--and macaroon paste--consisting of apricot kernels, almonds, and sugar--(see summary on item 145.60). Both of these pastes are lower-priced substitutes for almond paste (see summary on item 145.41) and are used, as is almond paste, in pastries, macaroons, and marzipan confectionery. Apricot kernels generally sell at about half the price of unselected almonds. Sweet kernels are naturally free of hydrocyanic acid and are used principally as a substitute for almonds in topping Chinese-style almond cookies.

U.S. tariff treatment and other regulations

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 of the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 175.03 | Apricot and peach kernels | 3¢ per lb. | 2.7¢ per lb. | 1.5¢ per lb. |

The above tabulation shows the column 1 rate of duty in effect prior to January 1, 1968, and modifications therein as a result of a concession granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

A concession amounting to a reduction of 50 percent in duty was granted by the United States on apricot and peach kernels (item 175.03); the concession is being put into effect in five annual stages.

The average ad valorem equivalent of the specific rate of duty in effect on December 31, 1967, on item 175.03, based on dutiable imports during 1966, was 13.9 percent. No imports entered in 1967.

Pursuant to the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 381) apricot kernels containing hydrocyanic acid must be entered under bond for removal of such acid.

U.S. consumption and production

Consumption of apricot kernels in recent years is estimated to be about 3 million pounds annually (table 1). The year to year consumption of apricot kernels is believed to vary considerably less than production. Major changes in production tend to be reflected in a change in exports.

Domestically produced apricot kernels are virtually all salvaged at California fruit-processing plants which also crack the pits.

Apricot kernels account for about 1 percent of the weight and 3 percent of the value of the fresh apricots from which they are obtained. Information from trade sources indicates that two firms account for most of the output.

Estimated annual domestic production of apricot kernels ranged from about 3.1 million to 4.6 million pounds and averaged 4.1 million pounds in 1963-67.

U.S. exports

Exports of apricot kernels, tending to be highest in years of large domestic crops and quite small in years of short crops, have fluctuated greatly from year to year. In 1964, the most recent year for which export data are available, they amounted to 756,000 pounds, valued at $211,000. Sweden and the Netherlands have been the principal market (table 2). Formerly Communist China was the chief source of apricot kernels for Northern Europe, but supplies from that country have not been forthcoming in recent years.

U.S. imports

Imports of apricot kernels have similarly fluctuated from year to year and in recent years are believed to have been substantially less than exports. During 1963-67, annual imports averaged 140,000 pounds, valued at close to $40,000. The Republic of South Africa, Turkey, and Iran have been the principal suppliers (table 3). Except for a small amount of sweet apricot kernels from Iran, imports consisted entirely of bitter kernels similar to those produced domestically.

Table 1.--Apricot kernels: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1963-67

| Year | Production 1/ | Imports 2/ | Exports 2/ | Apparent consumption | Ratio of imports to consumption |
|---|---|---|---|---|---|
| | 1,000 pounds | 1,000 pounds | 1,000 pounds | 1,000 pounds | Percent |
| 1963 | 4,180 | 175 | 1,342 | 3,013 | 5.8 |
| 1964 | 4,560 | 145 | 756 | 3,949 | 3.7 |
| 1965 | 4,600 | 371 | 3/ | 3/ | 3/ |
| 1966 | 4,000 | 7 | 3/ | 3/ | 3/ |
| 1967 | 4/ 3,080 | - | 3/ | 3/ | 3/ |

1/ Estimated on the basis of a yield of 1 ton of apricot kernels (shelled weight) for 85 tons of frozen, dried, and canned apricots (fresh-weight basis) as reported by the U.S. Department of Agriculture.

2/ The statistical class includes peach kernels, however, available information from the trade indicates that imports and exports consist solely of apricot kernels.

3/ Not available.

4/ Estimated on the basis of preliminary production reports.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table 2.--Apricot kernels: U.S. exports of domestic merchandise, by principal markets, 1961-64 1/

| Market | 1961 | 1962 | 1963 | 1964 |
|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | |
| Sweden | 507 | 245 | 420 | 506 |
| Netherlands | 361 | 80 | 231 | 99 |
| Canada | - | 29 | 20 | 55 |
| United Kingdom | 66 | 16 | 22 | 54 |
| West Germany | 453 | 22 | 487 | - |
| Denmark | 147 | 70 | 129 | - |
| All other | 235 | 119 | 33 | 42 |
| Total | 1,769 | 581 | 1,342 | 756 |
| | Value (1,000 dollars) | | | |
| Sweden | 128 | 104 | 115 | 144 |
| Netherlands | 106 | 36 | 68 | 28 |
| Canada | - | 9 | 9 | 16 |
| United Kingdom | 19 | 6 | 6 | 16 |
| West Germany | 130 | 10 | 139 | - |
| Denmark | 45 | 22 | 34 | - |
| All other | 43 | 26 | 10 | 7 |
| Total | 471 | 213 | 381 | 211 |
| | Unit value (cents per pound) | | | |
| Average, all countries | 26.6 | 36.7 | 28.4 | 27.9 |

1/ Trade information indicates that exports consist solely of apricot kernels. Data not available after 1964.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Apricot kernels: U.S. imports for consumption, by principal sources, 1963-67 1/

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Iran | 95 | - | 12 | 6 | - |
| Republic of South Africa | 46 | 42 | 337 | - | - |
| Turkey | - | - | 22 | - | - |
| Lebanon | - | 72 | - | - | - |
| Australia | - | 24 | - | - | - |
| India | 18 | - | - | - | - |
| All other | 16 | 7 | - | 1 | - |
| Total | 175 | 145 | 371 | 7 | - |
| | Value (1,000 dollars) | | | | |
| Iran | 37 | - | 2 | 1 | - |
| Republic of South Africa | 17 | 14 | 86 | - | - |
| Turkey | - | - | 4 | - | - |
| Lebanon | - | 20 | - | - | - |
| Australia | - | 6 | - | - | - |
| India | 7 | - | - | - | - |
| All other | 7 | 3 | - | 1 | - |
| Total | 68 | 43 | 92 | 2 | - |
| | Unit value (cents per pound) 2/ | | | | |
| Average, all countries | 38.6 | 29.8 | 24.9 | 21.6 | - |

1/ Trade information indicates that imports consist solely of apricot kernels.

2/ Calculated on unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce.

| Commodity | TSUS item |
|---|---|
| Castor beans | 175.06 |
| Castor oil, valued not over 11.5¢ per pound | 176.01 |
| Castor oil, valued over 11.5¢ per pound | 176.02 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968). The above commodity descriptions for castor oil are applicable only during 1968. See the TSUSA-1968 for descriptions in subsequent years.

## U.S. trade position

The United States depends upon imports for most of its requirements of castor oil. U.S. production of castor beans has in recent years supplied only the equivalent of about one-eighth of the domestic consumption of castor oil. Exports are small.

## Description and uses

Castor beans are the seed of the castor plant (Ricinus communis) which is a perennial in the tropics and subtropics and an annual in temperate areas where it is easily killed by frost. In the United States the castor plant is an annual. It is utilized almost entirely as the source for castor oil. Castor oil constitutes about 45 percent of the weight of the beans and is obtained by pressure and solvent extraction. The beans contain the poison ricin. The residue or oil cake (pomace) left after the oil is extracted retains this poisonous substance. Most of the cake is used for fertilizer because additional processing is required to make it suitable for use as animal feed.

Two basic grades of castor oil are produced in the United States--No. 1, obtained by pressing or crushing the beans to remove about two-thirds of the oil, and No. 3, which is obtained by a second pressing or by solvent extraction. A small amount of the No. 1 oil is used for medicinal purposes. The remainder of the No. 1 oil and nearly all of the No. 3 are combined into one grade for industrial use. Outside the United States castor oil is generally produced by a single crushing of the beans, which removes 96 percent of the oil. This product is comparable to a mixture of domestic No. 1 and No. 3 oil.

Castor oil has a specific gravity and viscosity higher than most fats and oils. One of the best known uses of castor oil is medicinal, but its various industrial applications are far more important. Its principal uses are in the manufacture of paint, varnish, plastics, and resins. Although castor oil in its natural state is not a drying oil, the chemically modified product known as dehydrated castor oil finds

an important outlet in quick-drying and water-resistant paints, varnishes, and other protective coatings; in these uses it competes with tung oil and other drying oils. Castor oil is also used in various other applications, such as the manufacture of artificial leather and leather dressing, surfactants, cosmetics, pharmaceuticals, hydraulic fluids, and printing ink.

The following tabulation shows the amounts of castor oil domestically consumed in 1967 by major uses as estimated by the U.S. Department of Agriculture:

| Use | Million pounds |
|---|---|
| Paint and varnish | 37 |
| Resins and plastics | 32 |
| Fatty acids | 31 |
| Drying oils other than paint and varnish | 9 |
| Lubricants | 7 |
| Other | 32 |
| Total | 148 |

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 175.06 | Castor beans | 0.25¢ per lb. | 0.2¢ per lb. | Free |
| 176.01 | Castor oil: 1/ | | | |
| | Valued not over 20 cents per pound (final stage). | 1.5¢ per lb. | 2/ | 7.5% ad val. |
| 176.02 | Valued over 20 cents per pound (final stage). | 1.5¢ per lb. | 3/ | 3/ |

1/ The specified value in the commodity description changes at each stage of duty reduction. See the TSUSA-1968 for description at other stages.

2/ 13 percent ad valorem if valued at not over 11.5 cents per pound. Otherwise, 1.5 cents per pound under item 176.02.

3/ Duty status not affected by the trade conference.

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. For all of the stages of the annual rate modifications see the TSUSA-1968.

A concession placing castor beans (item 175.06) on the free list, and a concession amounting to a duty reduction of up to 50 percent on that castor oil valued under 20 cents per pound were granted by the United States; the concessions are being put into effect in five annual stages.

The present TSUS items 176.01 and 176.02 were established on January 1, 1968, to effectuate the trade agreement of June 30, 1967; the previous provision for all castor oil was item 176.02. (Babassu oil was previously item 176.01 but is now item 176.00).

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 175.06 | 2.5 |
| 176.01 | 11.3 |
| 176.02 | 11.3 |

## U.S. consumption

Annual U.S. consumption of castor oil has fluctuated within narrow limits in recent years and during 1963-67 averaged about 148 million pounds. Imports, predominantly in the form of oil rather than beans, have supplied the bulk of the domestic demand.

Castor oil has been stockpiled by the U.S. Government because it is used in the preparation of dioctyl sebacate, a lubricant used in turbines and jet-engines. At its peak in 1962, the national stockpile of castor oil amounted to about 222 million pounds. In September 1961, the Office of Civil and Defense Mobilization found that the size of the national stockpile of castor oil was in excess of mobilization requirements for this material (26 F.R. 8577, Sept. 13, 1961). Pursuant to this determination, Congress, by House Concurrent Resolution 473, 87th Cong., 2d Sess., (76 Stat. 1420), authorized the sale by the General Services Administration of about 156 million pounds of stockpile castor oil. From August 1962, when the first sale occurred, through December 1967, about 125 million pounds had been sold. In August 1967, the Congress was requested to grant authority for the release of an additional 46 million pounds from the stockpile. If approved, this would leave 22 million pounds in the strategic reserve.

## U.S. production

The decline in domestic production of castor beans after 1963 is not attributed so much to the releases of castor oil from stockpile as it is to a generally low level of world castor oil prices from 1963 to 1966 and to better prices to the farmers for grain sorghum under the feed grain price-support program. Since 1961, farmers participating in the feed grain price-support program have been permitted by the U.S. Department of Agriculture to plant castor beans on acreage diverted from feed grains (in excess of minimum required diversion for participation); beginning in 1966 such crops could be grown also on acreage diverted from the production of cotton. In such cases, producers receive a percentage of the price-support payment rates on the commodities (feed grains and cotton) for which the acreage is reduced.

In recent years castor oil has been produced in the United States predominantly from domestically grown beans. Thus the annual oil output has generally fluctuated with changes in the domestic castor bean crop. During 1963-67, annual production of castor oil averaged 24 million pounds.

On January 22, 1968, the U.S. Department of Agriculture announced a limited price-support program intended to encourage production in the United States of about one-fifth of domestic consumption. The 1968 crop castor beans will be supported at about $5\frac{1}{2}$ cents per pound up to a limit of 30 million pounds. Growers received about 5 cents per pound for 1966 crop castor beans and 6 cents for 1967 crop castor beans.

## U.S. exports

The United States regularly exports relatively small amounts of castor oil (less than a million pounds annually), largely to Canada, Mexico, and the United Kingdom.

## U.S. imports

Although the wide differential between the duty on castor oil and castor beans would seem to favor the latter, imports of the oil have greatly exceeded those of the beans in all recent years. During 1963-67, annual imports of castor beans have ranged from virtually none to 5 million pounds. Ecuador and Haiti have been the principal sources of supply.

Imports of castor oil have been much larger than domestic production. During 1963-67, they averaged 105 million pounds a year. Brazil has been the chief source, accounting in most years, through 1965, for more than 90 percent of total imports. Japan has been the second most important supplier, and in 1967 increased its share of total imports to 20 percent.

The predominance of castor oil rather than castor beans in U.S. imports represents a complete reversal of the trade as it existed before and shortly after World War II. This reversal was to a large extent brought about by a change in policy of Brazil, which for more than 30 years has been the chief source of U.S. imports. To achieve greater industrialization, and thus effect greater diversification, the Government of Brazil has encouraged the establishment of crushing mills for the production of castor oil and has prohibited the exportation of beans. There have been no exports of castor beans from Brazil since 1961.

Foreign production and trade

Castor beans are produced in most tropical and subtropical countries, where the castor bean plant is a perennial. In all of these areas the beans are harvested and cleaned by hand, producing a cleaner seed than is possible in the United States where harvesting is done by machine.

Brazil is the world's largest producer of castor beans followed by India, the U.S.S.R., and Thailand. Aggregate production of these four countries accounted for about 65 percent and 60 percent of estimated total world output in 1966 and 1967, respectively.

Production of castor beans in Brazil steadily increased from about 452 million pounds in 1961 to an all-time high of 880 million pounds in 1964; it declined to 430 million pounds in 1967. Exports are all in the form of the oil as the Government no longer permits exports of the beans. Generally, Brazil exports over 80 percent of its castor oil output of which ordinarily over one-third is shipped to the United States.

Castor bean production in India was at a reduced level of about 175 million pounds in 1966 and in 1967. India also prohibits the exportation of beans and they are processed into oil locally. Most of the Indian exports of castor oil in recent years through 1967 went to the U.S.S.R., but during 1966-67 Ceylon was the principal receiver.

Thailand is the world's leading exporter of castor beans. In 1966 production of castor beans amounted to about 100 million pounds, most of which were exported to Japan.

Table 1.--Castor beans: U.S. production, imports for consumption, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | | Apparent consumption | Ratio of imports to consumption |
|---|---|---|---|---|---|
| | | Quantity | Value | | |
| | 1,000 pounds | 1,000 pounds | 1,000 dollars | 1,000 pounds | Percent |
| 1963 | 64,390 | 5,059 | 250 | 69,449 | 7.3 |
| 1964 | 60,000 | 34 | 2 | 60,034 | .1 |
| 1965 | 57,000 | 1,130 | 65 | 58,130 | 1.9 |
| 1966 | 48,000 | 1,889 | 112 | 49,889 | 3.8 |
| 1967 | 30,000 | 20 | 2 | 30,020 | .1 |

1/ Production data for 1963 supplied to U.S. Department of Agriculture by Baker Castor Oil Co.; 1964-67 estimated. Value data are not available.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Note.--Exports, if any, are believed to be negligible.

Table 2.--Castor oil: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks and apparent consumption, 1963-67

(Quantity in thousands of pounds; value in thousands of dollars)

| Year | Production 1/ | Imports | Exports 2/ | Beginning stocks | Apparent consumption 3/ | Ratio (percent of imports to consumption |
|---|---|---|---|---|---|---|
| | Quantity | | | | | |
| 1963 | 32,000 | 97,561 | 568 | 245,000 | 150,392 | 64.9 |
| 1964 | 28,000 | 96,394 | 829 | 223,600 | 140,865 | 68.4 |
| 1965 | 27,000 | 129,475 | 4/ 750 | 206,300 | 150,725 | 85.9 |
| 1966 | 19,000 | 104,121 | 4/ 750 | 211,300 | 152,671 | 68.2 |
| 1967 | 15,000 | 97,139 | 4/ 750 | 181,000 | 147,389 | 65.9 |
| | Value | | | | | |
| 1963 | 6,400 | 10,575 | 182 | 5/ | 5/ | 5/ |
| 1964 | 4,872 | 9,755 | 271 | 5/ | 5/ | 5/ |
| 1965 | 4,158 | 11,295 | 5/ | 5/ | 5/ | 5/ |
| 1966 | 3,116 | 11,075 | 5/ | 5/ | 5/ | 5/ |
| 1967 | 2,505 | 12,887 | 5/ | 5/ | 5/ | 5/ |
| | Unit value (cents per pound) | | | | | |
| 1963 | 20.0 | 10.8 | 32.0 | 5/ | 5/ | 5/ |
| 1964 | 17.4 | 10.1 | 32.7 | 5/ | 5/ | 5/ |
| 1965 | 15.4 | 8.7 | 5/ | 5/ | 5/ | 5/ |
| 1966 | 16.4 | 10.6 | 5/ | 5/ | 5/ | 5/ |
| 1967 | 16.7 | 13.3 | 5/ | 5/ | 5/ | 5/ |

1/ Unit value represents prices of No. 1 castor oil, f.o.b. New Jersey mills. Value calculated from price and quantity.

2/ Includes small amounts of medicinal castor oil, converted to pounds at 8.0 pounds per gallon.

3/ Apparent consumption takes into account both beginning and ending stocks. Ending stocks for 1967 were 145,000 thousand pounds.

4/ Estimated.

5/ Not available.

Source: Production and beginning stocks compiled from official statistics of the U.S. Department of Agriculture; imports and exports compiled from official statistics of the U.S. Department of Commerce, except as noted.

| Commodity | TSUS item |
|---|---|
| Copra | 175.09, -.10, -.11, -.12 |
| Coconut oil | 176.04, -.05, -.06, -.07, -.08, -.09, -.10, -.11, -.12, -.13 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States imports about one-fourth of the world exports of copra and coconut oil. There is no domestic production of copra but there is substantial domestic production of coconut oil from imported copra.

## Description and uses

Copra is the dried meat kernel of the coconut from which coconut oil is expressed. The average yield of oil is about 64 percent of the weight of the copra; the byproduct cake or meal remaining after extracting the oil is used in livestock feeds. Coconut oil is the most important of the lauric acid oils which also include palm-kernel oil (items 176.32 and 176.33), babassu oil (item 176.00), and a number of other tropical palm oils. For most uses coconut oil and palm-kernel oil are interchangeable.

Coconut oil is a light-colored oil having a high melting point (about 76° F) and good keeping qualities. It is widely used in many nonfood and food products. Nonfood uses, which account for over half of total consumption, include the manufacture of quick-lathering soaps, cosmetics, fatty acids, hydraulic brake fluid, detergents, plasticizers, and insecticides. The major food uses are in confectionery, baked goods, shortening, margarine, ice-cream-bar coatings, and as a substitute for butterfat in various products.

## U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 of the TSUSA-1968 in appendix A) are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| | Copra: | |
| 175.09 | Entered during period of special proclamation (see headnote 1 to schedule 1, part 14, TSUS) or after July 3, 1974. | Free |
| 175.10 | Entered on or before July 3, 1974, when no special proclamation is in effect. | 1.25¢ per lb. |
| 175.11 | If product of the Philippines or the Trust Territory. | Free |
| 175.12 | Produced elsewhere from materials grown in the Philippines or the Trust Territory. | Free |
| | Coconut oil: | |
| 176.04 | Entered during special proclamation or after July 3, 1974. | 1¢ per lb. |
| 176.05 | If product of the Philippines within tariff quota, or product of the Trust Territory entered on or before July 3, 1974. | Free |
| 176.06 | If product of the Philippines over tariff quota or if product of the Trust Territory entered after July 3, 1974. | 1¢ per lb. |
| | Entered on or before July 3, 1974 when when no special proclamation is in effect: | |
| 176.07 | Crude---------- | 3¢ per lb. |
| 176.08 | If Philippine article within quota or product of the Trust Territory. | Free |
| 176.09 | If Philippine over quota---------- | 1¢ per lb. |
| 176.10 | If produced elsewhere from materials grown in the Philippines or the Trust Territory. | 1¢ per lb. |
| 176.11 | Other than crude---------- | 1¢ per lb. |
| 176.12 | If Philippine article within quota or product of the Trust Territory. | Free |
| 176.13 | If Philippine over quota---------- | 1¢ per lb. |

The existing rates of duty are not ones on which the United States gave concessions in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT).

The average ad valorem equivalents of the applicable specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 175.10 | 1/ |
| 176.07 | 2/ 17.9 |
| 176.09 | 8.9 |
| 176.10 | 3.2 |
| 176.11 | 2/ 6.1 |
| 176.13 | 3/ 4.3 |

1/ No imports.
2/ Based on imports in 1966, the most recent year of importation.
3/ Based on imports in 1965, the most recent year of importation.

Prior to the effective date of the TSUS, copra entered free of duty and coconut oil was subject to duty at a concession rate of 1 cent per pound, granted by the United States in the GATT, and in effect since 1948. Coconut oil, the product of the Philippines, was duty-free within quota limits specified in the Philippine Trade Agreement Revision Act of 1955. The quotas were incorporated in the TSUS in subpart B of part 14 of schedule 1 (see appendix A). The duty-free quota for each of the three years 1968-70 is 179.2 million pounds; for the years 1971-73 it is 89.6 million pounds. The duty-free quota ceases, beginning in 1974.

Before the TSUS became effective coconut oil, whether imported as oil or pressed from imported copra, was subject to a tax on its first domestic processing. The tax on oil extracted from copra imported from the Philippines or coconut oil imported from the Philippines was 3 cents per pound. Oil extracted from copra imported from other sources or coconut oil imported from other sources was subject to the 3-cent tax plus an additional tax of 2 cents per pound (IRC sections 4511, 4512, and 4513). The 3-cent tax was suspended continuously from October 1, 1957 (Public Laws 85-235, 86-432, and 87-859) until April 12, 1966. Effective April 13, 1966 (Public Law 89-388), the temporary suspension was made permanent. Under the TSUS, the former processing taxes on coconut oil were incorporated in the duties on coconut oil and copra with the suspension applying to that portion of the duty that had been the 3-cent tax.

## U.S. consumption

Consumption of coconut oil has shown an upward trend in the 15 years since 1953. Between 1963 and 1967 it increased almost steadily from 763 million pounds to 877 million pounds, and averaged about 800 million pounds during the 5-year period. Imports have accounted for

an increasing share of domestic consumption and since 1964 have been equal to more than half of total consumption. The rest consisted of oil produced domestically from imported copra (table 1).

The rise in consumption of coconut oil since 1963 reflects primarily its increased application in food uses, particularly in nationally distributed packaged cookies, crackers, and snacks. The lauric acid oils, of which coconut oil is predominant, prolong shelf life for these products. In 1967, food uses accounted for 42 percent of consumption; soap accounted for 17 percent; and a wide variety of other nonfood uses, including detergents, accounted for the remaining 41 percent. Because of their special characteristics, prices of the lauric acid oils tend to advance in a period of shortage even if supplies of other fats and oils are large and prices low. Coconut oil was classified as a strategic and critical material and as such was stockpiled by the U.S. Government following World War II. At its peak the national stockpile amounted to about 265 million pounds. In June 1959 the Office of Civil Defense Mobilization made a determination that, because of obsolescence of coconut oil for use in time of war, there was no longer any need for stockpiling this material. 1/ In consequence, the General Service Administration during 1960-64 sold its entire stockpile of coconut oil.

## U.S. producers and production

Copra is not produced commercially in the United States; however, coconut oil is produced domestically from imported copra. Four plants, all in California, are engaged in the crushing of copra to produce crude coconut oil. All of the firms process and distribute a variety of other fats and oils. The crude coconut oil is refined by a number of vegetable oil refineries throughout the country.

U.S. production of coconut oil trended downward in the period 1947-63 but has been quite stable at an average of 350 million pounds annually in the period 1963-67.

The lower annual domestic coconut oil output since 1963, compared with earlier years, is due to a decline in copra imports from the Philippines, virtually the sole U.S. source of supply. With the return of more stable conditions and consequent economic recovery in that country, new modern copra crushing and refining mills have been built in the islands close to the sources of copra. This development has resulted in improved methods of production and an increasing trend towards Philippine exports of coconut oil despite the overquota duty of 1 cent per pound on Philippine coconut oil.

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1/ 24 F.R. 5127.

U.S. exports and imports

Exports of copra have been negligible and sporadic and exports of coconut oil have usually been less than 1 percent of available domestic supply.

Annual imports of coconut oil (as oil or copra) increased steadily from about 706 million pounds in 1963 to 896 million pounds in 1967 and averaged 800 million pounds during the 5-year period (table 2). Whereas imports of copra (in terms of oil) formerly accounted for the major share of total oil imports, since 1963 more than half of the total has consisted of coconut oil (table 3).

The reversal of the relative position of copra and coconut oil in the U.S. import trade is largely due to developments in the Philippines which, except during World War II, has been the primary, and in recent years, the only source of supply. The position of the Philippines in supplying virtually 100 percent of the U.S. supply of copra and coconut oil derives to a large extent from the favored position accorded that country with respect to the import duties on this material. Part of the postwar rehabilitation of the Philippine copra industry consisted of an expansion and modernization of its copra crushing facilities. As a result, fresh and higher quality copra is being crushed in the Philippines. The resulting oil is lower in free fatty acids than coconut oil processed domestically and is preferred by many U.S. consumers. Furthermore, freight charges are less for oil shipped directly to U.S. east coast ports from the Philippines than from the west coast of the United States.

The decreasing duty-free quota for coconut oil has been filled in all years beginning with 1963. In 1966 and 1967 Philippine coconut oil entering at the 1-cent-per-pound duty rate was about equal to that entering duty free. Virtually all of the imports have been of crude coconut oil even though the duty status of the Philippine article is the same whether it enters in crude or refined form.

Foreign production and trade

The coconut palm is found in most tropical regions, particularly in coastal areas. Annual world production of coconut oil is estimated at almost 5 billion pounds; about two-fifths is consumed locally in the producing countries, and three-fifths exported either as copra or coconut oil. Of the world exports during 1963-67--equivalent to almost 3 billion pounds of oil annually--oil constituted about 33 percent and the oil equivalent of copra, 67 percent. There is a trend toward shipment of a larger portion of the total in the form of coconut oil.

The principal exporters of copra are the Philippine Republic, Indonesia, Ceylon, and New Guinea. These four countries together supplied about four-fifths of the total world exports during 1963-67. The Philippines, Ceylon, Netherlands, Malaya and Singapore, New Guinea and Fiji are the chief exporters of coconut oil. The exports of coconut oil from the Netherlands and Singapore are derived from imported copra.

The Philippine Republic is by far the world's leading producer and exporter of copra. In recent years it has accounted for about two-fifths of the world output of copra and over three-fifths of the world exports of copra and coconut oil. Philippine exports, either as copra or coconut oil, during 1963-67 averaged about 1.8 billion pounds (oil equivalent), equal to about four-fifths of total output, and accounted for about three-fifths of total world exports. Philippine exports of coconut oil have virtually all gone to the United States, whereas the United States has received only about one-quarter of the Philippine exports of copra in recent years.

Table 1.--Coconut oil: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

(Quantity in millions of pounds; value in millions of dollars)

| Year | Production from imported copra (crude) | Imports (mostly crude) | Beginning stocks (mostly crude) | Exports, crude and refined | Apparent consumption | Ratio (percent) of imports to consumption |
|---|---|---|---|---|---|---|
| | Quantity | | | | | |
| 1963 | 348 | 372 | 1/ 203 | 5 | 763 | 49 |
| 1964 | 328 | 397 | 1/ 155 | 2 | 790 | 50 |
| 1965 | 365 | 402 | 88 | 2 | 780 | 52 |
| 1966 | 358 | 2/ 499 | 73 | 5 | 835 | 60 |
| 1967 | 353 | 2/ 506 | 90 | 4 | 877 | 58 |
| | Value | | | | | |
| 1963 | 41 | 39 | 3/ | 1 | 3/ | 3/ |
| 1964 | 44 | 47 | 3/ | 4/ | 3/ | 3/ |
| 1965 | 58 | 52 | 3/ | 4/ | 3/ | 3/ |
| 1966 | 47 | 2/ 59 | 3/ | 1 | 3/ | 3/ |
| 1967 | 55 | 2/ 55 | 3/ | 1 | 3/ | 3/ |
| | Unit value (cents per pound) 5/ | | | | | |
| 1963 | 11.8 | 10.5 | 3/ | 11.6 | 3/ | 3/ |
| 1964 | 13.4 | 11.9 | 3/ | 17.3 | 3/ | 3/ |
| 1965 | 15.9 | 12.9 | 3/ | 16.3 | 3/ | 3/ |
| 1966 | 13.2 | 11.8 | 3/ | 14.4 | 3/ | 3/ |
| 1967 | 14.5 | 11.0 | 3/ | 14.7 | 3/ | 3/ |

1/ Estimated. Data not reported prior to October 1964.
2/ Adjusted for Bureau of Census revisions.
3/ Not available.
4/ Less than $500,000.
5/ Calculated on unrounded figures. Unit value of production is price for crude coconut oil, tank cars, f.o.b. Pacific Mills.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table 2.--Coconut oil and oil equivalent of copra: U.S. imports for consumption, 1963-67

| Year | Coconut oil | Copra, oil equivalent 1/ | Total oil and copra as oil | Ratio (percent) of oil to total 2/ |
|---|---|---|---|---|
| | Million pounds | Million pounds | Million pounds | Percent |
| 1963 | 372 | 333 | 705 | 53 |
| 1964 | 397 | 350 | 747 | 53 |
| 1965 | 402 | 394 | 796 | 51 |
| 1966 | 3/ 499 | 343 | 842 | 59 |
| 1967 | 3/ 506 | 390 | 896 | 56 |

1/ Copra converted to oil on the basis of 64 percent oil yield.
2/ Total refers to total of oil and copra as oil.
3/ Adjusted for Bureau of Census revisions.

Table 3.--Copra and coconut oil: U.S. imports for consumption, 1963-67

| Item | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (million pounds) | | | | |
| Copra | 521 | 548 | 615 | 536 | 610 |
| Coconut oil | 372 | 397 | 402 | 499 | 506 |
| | Value (million dollars) | | | | |
| Copra | 38 | 43 | 55 | 42 | 46 |
| Coconut oil | 39 | 47 | 52 | 59 | 55 |
| | Unit value (cents per pound) 1/ | | | | |
| Copra | 7.3 | 7.9 | 8.9 | 7.8 | 7.5 |
| Coconut oil | 10.5 | 11.9 | 12.9 | 11.8 | 11.0 |

1/ Calculated from unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--All imports of copra and all commercial imports of coconut oil were from the Philippines. Virtually all imports of oil have been crude oil.

| Commodity | TSUS item |
|---|---|
| Cottonseed | 175.15 |
| Cottonseed oil | 176.18 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

In years prior to the short cotton crops in 1966 and 1967 the United States was the world's largest producer of cottonseed, accounting for about 25 percent of world production. Imports of both cottonseed and cottonseed oil are almost negligible. Exports of cottonseed have been confined to relatively small shipments for seed purposes, whereas exports of cottonseed oil have been substantial even during the two recent years of short crops.

## Description and uses

Cottonseed is a byproduct of cotton ginning. About 95 percent of the domestic output of cottonseed is used for oil, the remainder is used for planting, feed, and fertilizer. Cottonseed when pressed yields 16 to 17 percent of its weight as cottonseed oil; the remainder consists of oilcake, linters, and hulls. Since cottonseed is bulky and perishable, most of the crop is crushed before the new cotton harvest. (For cottonseed oilcake see summary on item 184.52; for cotton and cotton linters see summaries on items 300.10 to 300.50).

Cottonseed oil is one of the principal oils used as a salad or cooking oil and in the manufacture of shortening and margarine. In these uses it is outranked only by soybean oil. Cottonseed oil also competes with corn oil, lard, and peanut oil. Lower grade cottonseed oil is used in the manufacture of soap, lubricants, and other industrial products.

## U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| 175.15 | Cottonseed | 1/3¢ per lb. |
| 176.18 | Cottonseed oil | 3¢ per lb. |

These rates were originally provided for in the Tariff Act of 1930, and are not trade-agreement concession rates.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 175.15------- | 1/ 20.8 |
| 176.18------- | 27.0 |

1/ Based on imports in 1963, the most recent year of importation.

Imports of cottonseed are subject to quarantine regulations as indicated in the section on U.S. imports.

## U.S. consumption

As indicated, virtually all of the U.S. supply of cottonseed is crushed for oil before the new cotton harvest; hence, consumption is almost synonymous with production on a crop-year basis as distinguished from a calendar year.

Annual apparent consumption of cottonseed oil during the calendar years 1963-67 varied from a high of 1.7 billion pounds in 1965 to a low of 1.2 billion pounds in 1967. Variations in consumption reflect primarily variations in cotton production. Approximately 60 percent of the total consumption in 1966 was utilized in cooking and salad oils, 30 percent in shortening, 8 percent in margarine, and the remainder in the manufacture of miscellaneous products, mostly edible. Almost all the cottonseed oil consumed was obtained from domestic sources as there are few imports of either cottonseed oil or of cottonseed.

## U.S. producers

In 1966 about 4,500 cotton ginning plants, all located in the cotton-growing States, separated cottonseed from cotton. Texas, Mississippi, and California together account for over half of total domestic output of cottonseed. In some areas cotton gins are mostly owner-operated, whereas in other areas a substantial number are run as cooperatives.

Slightly less than 200 oil mills in the cotton-growing areas are engaged in the crushing of cottonseed. Some of the mills are owned jointly by oil producers and cotton ginners. In addition to the

crushing mills, there are about 50 oil refineries, mostly located in the oil consuming centers of the United States. As a rule, these refineries process other vegetable oils in addition to cottonseed oil. Most of them use cottonseed oil in the manufacture of finished vegetable production.

U.S. production and stocks

The quantity of cottonseed produced depends upon the output of cotton, of which cottonseed is a byproduct. U.S. production of cottonseed in the 3-year period 1963-65 averaged 12.3 billion pounds. Production declined sharply in 1966 and 1967, reaching a low of 6.3 billion pounds in 1967 (table 1). The sharp decline in cotton (and cottonseed) production was due to a change in the Government price programs for cotton beginning in 1966 plus adverse weather conditions in 1967.

Domestic production of cottonseed oil depends almost entirely upon the availability of domestically produced cottonseed. As with cottonseed, annual output of cottonseed oil in the United States was quite stable at an average level of 1.9 billion pounds in the years 1963-65, but declined to 1.7 billion pounds in 1966 and to 1.1 billion pounds in 1967 (table 2).

Stocks of cottonseed at the beginning of the calendar year at oil mills declined from 5.8 billion pounds in 1965 to 1.3 billion pounds in 1968. January 1 stocks of cottonseed oil held by producers, factory consumers, and in public storage have fluctuated greatly from year to year. During 1963-67 they ranged from 694 million pounds in 1964 to 300 million pounds in 1966. January 1 stocks of cottonseed oil during 1963-67 were equivalent to about 28 percent of average annual domestic production.

Price-support operations

The U.S. Government is currently required by law to support the price of cottonseed at a level comparable to the support price of soybeans in order to enable the two oil seeds to compete on equal terms in the market. The Commodity Credit Corporation (CCC) may purchase cottonseed directly from producers at the support price. However, because cottonseed is subject to overheating when stored for any length of time, support is usually maintained by means of a purchase program for cottonseed oil and other mill products (cake, linters, and hulls) from oil mills. For oil mills to be eligible to sell cottonseed oil to the CCC, the mills must have paid not less than the support price for cottonseed as determined by the Department of Agriculture. The CCC will enter into a purchase agreement to buy cottonseed oil and other mill products when the aggregate value of the products derived from a given quantity of

cottonseed, based on prevailing market prices, is below cost of production with due allowance for ginning fees and a minimum profit margin.

In the period 1963-67 the annual average support rate ranged between $43 and $48 per ton of cottonseed. Market prices have been above the support level in all years except 1963 in which year the CCC acquired almost 200 million pounds of cottonseed oil. In addition to the price-support program, in all years for over a decade the Government has promoted exports of cottonseed oil under various Government financed programs, particularly Public Law 480, the Trade Assistance and Development Act of 1954.

U.S. exports

Cottonseed, as a rule, is not shipped long distances; it is bulky and perishable, especially during warm weather. The U.S. exports consist almost entirely of selected and expensive cottonseed for planting. The unit value of exports is consistently several times that of domestic marketing, most of which is for crushing (table 1). During 1963-67 annual exports ranged from 9.2 to 19.2 million pounds and averaged 13.6 million pounds, equal to about one-eighth of 1 percent of production. Exports have gone principally to Mexico, Guatemala, and Spain.

As distinct from cottonseed, annual U.S. exports of cottonseed oil have been large. During 1963-67 they declined from a high of 600 million pounds in 1964 to a low of 72 million pounds in 1967. The 1964 exports equaled about 30 percent of domestic production. Exports have gone to many countries; the principal destinations have been West Germany, Egypt, the Netherlands, Iran, Canada, Venezuela, and Mexico.

In recent years, with the exception of 1967, about half of the cottonseed oil exports have been shipped under various Government export programs. These programs are designed to promote foreign demand and to reduce surplus stocks.

U.S. imports

Imports of cottonseed have been negligible. Imports are subject to quarantine restrictions but in most years would probably be small even in the absence of these restrictions. The quarantine was imposed in 1912 to prevent the entry of the pink bollworm, and applies to all imports of cottonseed into the United States, except shipments from border areas in Mexico. The Department of Agriculture, however, may issue permits for importation from other areas and small quantities of cottonseed have at times entered from sources other than Mexico. Almost all of the imports in 1963 of 1.1 million pounds consisted of a shipment from Honduras originally destined for Japan. The shipment was

allowed entry for oil extraction after a ship collision off the California coast had caused water damage to the cargo.

There have been no imports of cottonseed oil in recent years except in 1966 and 1967 when U.S. production was sharply reduced. It is probable that the 18 million pounds imported in this 2-year period were used in products for export with benefit of drawback of the 3-cent-per-pound import duty.

## World production and trade

The estimated annual world production of cottonseed during 1963-65 averaged about 50 billion pounds, which was about 15 percent more than the average in the period 1957-60. The United States, the leading producing country until 1966, accounted for about one-fourth of the total. The sharp decline in U.S. output in 1966 and 1967 was reflected in a decline in world output to about 45 billion pounds. The principal foreign producers are the Soviet Union, China, India, and Mexico. In recent years these four countries plus the United States accounted for about two-thirds of total world cottonseed output.

World production of cottonseed oil is increasing relative to output of cottonseed due to increased crushing for oil as compared to use as feed or fuel. It is believed that the major portion of the world's output is now crushed except that of India and some of the minor producing countries where some of the seed is still discarded or used directly as feed or fuel. World output of oil in 1964-66 averaged about 5.4 billion pounds; the United States, the Soviet Union, and China accounted for over half the total.

International trade in oil is several times greater than in seed; however, international trade in both is small relative to production. The principal exporting countries for cottonseed are Nicaragua, Nigeria, Sudan, and Syria. The United Kingdom and Japan have been the chief importing countries. The United States is the only significant exporter of cottonseed oil. As previously indicated, U.S. exports go to many countries.

Table 1.--Cottonseed: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production | Imports | Exports | Beginning mill stocks 1/ | Apparent consumption |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| 1963 | 12,384,000 | 1,129 | 11,607 | 5,000,800 | 12,153,522 |
| 1964 | 12,474,000 | 3 | 17,348 | 5,220,800 | 11,902,255 |
| 1965 | 12,174,000 | - | 10,611 | 5,775,200 | 12,860,589 |
| 1966 | 7,920,000 | - | 19,198 | 5,078,000 | 9,403,802 |
| 1967 | 6,266,000 | - | 9,174 | 3,575,000 | 8,556,926 |
| | Value (1,000 dollars) | | | | |
| 1963 | 314,219 | 18 | 1,395 | 2/ | 2/ |
| 1964 | 293,838 | 3/ | 1,991 | 2/ | 2/ |
| 1965 | 284,412 | - | 1,137 | 2/ | 2/ |
| 1966 | 260,936 | - | 2,114 | 2/ | 2/ |
| 1967 | 172,686 | - | 1,470 | 2/ | 2/ |
| | Unit value (cents per pound) | | | | |
| 1963 | 2.5 | 1.6 | 12.0 | 2/ | 2/ |
| 1964 | 2.4 | 1.7 | 11.5 | 2/ | 2/ |
| 1965 | 2.3 | - | 10.7 | 2/ | 2/ |
| 1966 | 3.3 | - | 11.0 | 2/ | 2/ |
| 1967 | 2.8 | - | 16.0 | 2/ | 2/ |

1/ Beginning mill stocks in 1968 were 1,274,900 thousand pounds.
2/ Not available.
3/ Less than $500.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; imports, exports, and stocks compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Cottonseed oil: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | Exports 2/ | Beginning stocks 3/ | Apparent consumption |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| 1963 | 1,917,000 | - | 365,269 | 530,000 | 1,387,731 |
| 1964 | 1,932,800 | - | 599,713 | 694,000 | 1,521,087 |
| 1965 | 1,974,200 | - | 518,438 | 506,000 | 1,678,362 |
| 1966 | 1,674,600 | 1,041 | 177,141 | 300,100 | 1,416,800 |
| 1967 | 1,107,500 | 17,454 | 72,000 | 381,800 | 1,182,654 |
| | Value (1,000 dollars) | | | | |
| 1963 | 199,368 | - | 44,572 | 4/ | 4/ |
| 1964 | 199,078 | - | 68,927 | 4/ | 4/ |
| 1965 | 230,981 | - | 67,057 | 4/ | 4/ |
| 1966 | 239,468 | 141 | 24,489 | 4/ | 4/ |
| 1967 | 131,239 | 1,936 | 9,980 | 4/ | 4/ |
| | Unit value (cents per pound) | | | | |
| 1963 | 10.4 | - | 12.2 | 4/ | 4/ |
| 1964 | 10.3 | - | 11.5 | 4/ | 4/ |
| 1965 | 11.7 | - | 12.9 | 4/ | 4/ |
| 1966 | 14.3 | 13.5 | 13.8 | 4/ | 4/ |
| 1967 | 11.8 | 11.1 | 13.9 | 4/ | 4/ |

1/ Value and unit value based on price of crude oil in tanks, f.o.b. Southeastern mills.

2/ Includes some refined and further processed oil with materially higher unit values than for crude oil.

3/ Beginning stocks were 252,100 thousand pounds in 1968.

4/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

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| Commodity | TSUS item |
|---|---|
| Flaxseed (linseed) | 175.18 |
| Linseed or flaxseed oil | 176.26 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States is a leading producer and exporter of flaxseed and the oil derived from it--linseed oil. In most years exports have been with benefit of Government assistance. Imports have been negligible.

## Description and uses

Flaxseed is obtained from a type of flax with short straw and a large yield of seed. Flax grown for fiber is a different type and is not suitable for oilseed production owing to its low seed yield. In the United States little or no flax is grown for fiber.

Virtually all the flaxseed produced (except that used for seeding) is used for extracting oil. The seed yields about 36 percent of its weight in oil. Linseed oil is obtained from flaxseed by first pressing out about half of the oil and then removing the remainder by solvent extraction. The residual linseed cake or meal is used for feeding livestock. The value of the oil obtained from flaxseed represents about two-thirds of the total value of both oil and meal.

Linseed oil, the most widely used of the drying oils, is employed principally in the manufacture of paints and varnishes. In 1966 linseed oil accounted for 47 percent of all oils used in the United States in paints and varnishes. Other uses include the manufacture of linoleum and oilcloth, printing inks, synthetic resins, lubricants, and fatty acids. A more recent development is the use of linseed oil as a component in antispalling compounds for protective coatings on concrete roads and bridges.

The oils principally competitive with linseed oil are soybean oil, castor oil, tall oil, fish oils, and tung oil. Of even more importance than the competition from other oils is the increased use of synthetic resins in water soluble paints, which has greatly reduced the use of linseed oil.

## U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| 175.18 | Flaxseed | 50¢ per bushel of 56 lbs. |
| 176.26 | Linseed oil | 4.5¢ per lb. |

The rate on flaxseed, in effect since June 30, 1949, reflects a concession granted by the United States in an earlier bilateral trade agreement with Argentina. The rate on linseed oil was originally provided for in the Tariff Act of 1930; it is not a trade-agreement rate.

For 1967 imports, the specific duties on flaxseed and linseed oil were equivalent to ad valorem rates of 10.4 percent and 12.4 percent, respectively. Neither of these rates are typical for usual commercial transactions. They are based on small volume entries of high-priced flaxseed for use as seed and expensive imports of linseed oil, probably in retail-size containers.

## U.S. consumption

In recent years about four-fifths of the annual U.S. flaxseed crop has been converted into linseed oil; the remainder has been either exported or placed in storage (table 1).

Annual apparent consumption of linseed oil averaged about 344 million pounds during 1963-67 (table 2). It was about 13 percent lower than the average for the preceding 5-year period 1958-62. The bulk of the linseed oil consumed was used in the manufacture of paints and varnishes. This use accounted for 69 percent of total domestic consumption in 1966. The decline in consumption of linseed oil in this period, which is a continuation of a downtrend for over two decades, reflects largely the increased use of synthetic resins in paints and varnishes.

## U.S. producers

Flaxseed was produced on 42,000 farms in 1964. The number of growers was probably materially lower in 1967 both because of the trend toward fewer and larger farms and the downtrend in flaxseed production. In 1967 flax was harvested for the seed on 2.0 million acres. Production is centered in the Red River Valley area of North Dakota, South Dakota, and Minnesota, where about 90 percent of the crop is

grown. Most of the remainder is produced in Montana and as a winter crop in Texas and California. All of the farms also produce other crops, especially grains.

Flaxseed crushing is centered in Minnesota. Seven mills are engaged in the crushing of flaxseed; most of the plants also crush other oilseeds.

## U.S. production and stocks

In the period 1963-67 annual U.S. production of flaxseed averaged 1.5 billion pounds, valued at $76 million. Production in the period averaged about 7 percent less than in the preceding 5-year period and continued a downtrend of more than two decades duration. Flaxseed is a dryland crop for which the yield per acre varies considerably from year to year due to moisture conditions; hence production varies considerably more than does acreage.

Annual domestic production of linseed oil averaged 414 million pounds during 1963-67, which was 3 percent less than the average for the preceding 5-year period. All of the oil was produced from domestic material as there have been virtually no imports of flaxseed for oil extraction since 1950.

Mill stocks of flaxseed held at the beginning of the calendar year have varied from 15 to 25 percent of the previous year's crop in recent years. While flaxseed stores well and is crushed throughout the year, the months of September and October, right after harvest, tend to be the months of heaviest crushing. January 1 stocks of linseed oil ranged from 123 million pounds in 1963 to 208 million pounds in 1967. January 1, 1967 stocks were equivalent to 46 percent of 1966 production. Oil stocks include those at factory consumer as well as producer locations and for January 1, 1965-67, they include 80 million pounds of Commodity Credit Corporation (CCC) oil acquired through a toll crush program for 1963 crop flaxseed.

## Price-support operations

A nonmandatory price-support program is maintained for flaxseed, but there is no program as such for linseed oil. In effect, however, the price of linseed oil is supported by the price-support operations on the flaxseed from which it is extracted.

Official price support for flaxseed was begun in 1941 and has been continued to the present time. Under the program, which is administered by the CCC, flaxseed growers may borrow money from the CCC with their crops as collateral, and may surrender this collateral whenever the price of flaxseed goes below the "loan rate" or support price (nonrecourse loans). Alternatively, growers may contract with the CCC to sell their crop to the Corporation at the support price if they are unable to obtain a higher price elsewhere.

In the period 1962-68 the loan rate was $2.90 per bushel in all years. From 1962 to 1966 the average price received by farmers was slightly below support rates. The CCC acquired flaxseed in all of these years and the program was effective in maintaining farm prices at near the support level. Inasmuch as the average price received by producers in 1967 was above the loan, little flaxseed was delivered to the Government. In 1962-66 the quantity of flaxseed delivered to the Government by producers ranged from 627 million pounds in 1963 (equivalent to 36 percent of the output in that year) to 39 million pounds in 1966 (equivalent to 3 percent of production).

Flaxseed has been one of the oil-bearing crops which could be planted on acreage that is voluntarily diverted in excess of the required minimum diversion under the Government feed grain, wheat, and cotton programs in some of the years since 1961. However, little flaxseed has been grown on voluntarily diverted acreages as is indicated by the fact that the acreage harvested for flaxseed in recent years has declined.

U.S. exports

Following Argentina and Canada, the United States is one of the three important exporters of flaxseed and linseed oil. During 1963-67, annual U.S. exports of flaxseed ranged from 191 million pounds to 389 million pounds and averaged 302 million pounds, equivalent to about 20 percent of domestic production. The Netherlands and West Germany have been the principal foreign markets.

Annual exports of linseed oil have fluctuated greatly in recent years. They ranged from a low of 16 million pounds in 1963 to a high of 126 million pounds in 1966 and averaged 50 million pounds annually during the 5-year period 1963-67, equivalent to 12 percent of domestic production. The Netherlands has been the chief foreign outlet.

Exports of both flaxseed and linseed oil have, in most years, been made with benefit of Government assistance, either by sales for export of CCC stocks or through export subsidy payments. The Flaxseed and Linseed Oil Export Program, which provided subsidy payments, was suspended in June 1967 because of the small 1967 crop.

U.S. imports

Imports of both flaxseed and linseed oil have been negligible compared with domestic production and exports. Imports of flaxseed during 1963-67 averaged 62,000 pounds annually and consisted of high-priced seed probably all for planting. Canada has been the chief source of supply. Imports of linseed oil during 1963-67 averaged 24,000 pounds annually and consisted of a high-priced specialty product. The United Kingdom has been the principal supplier.

During the period August 9, 1951, to June 30, 1953, imports of flaxseed (except imports of seed for planting) and linseed oil were embargoed under the provisions of section 104 of the Defense Production Act of 1950, as amended. In an investigation made in 1953 under the provisions of section 22 of the Agricultural Adjustment Act, as amended (7 U.S.C. 624), the U.S. Tariff Commission determined that flaxseed and linseed oil were practically certain to be imported under such conditions and in such quantities as to interfere with the Government's price-support program for flaxseed. After consideration of the Commission's findings, the President, on June 8, 1953, issued Proclamation No. 3019 (3 CFR, 1949-1953 Comp., p. 189), establishing a fee of 50 percent ad valorem, effective July 1, 1953, in addition to the existing duties, on imports of both flaxseed and linseed oil. The import fee was terminated by Presidential Proclamation No. 3402 (3 CFR, 1959-63 Comp., p. 118), effective May 5, 1961, pursuant to an investigation by the U.S. Tariff Commission under the provisions of section 22 of the Agricultural Adjustment Act, as amended.

Foreign production and trade

Annual world production of flaxseed declined in recent years from 8.2 billion pounds in 1965 to 5.5 billion pounds in 1967, reflecting reduced output in each of the major producing countries except the U.S.S.R. The U.S.S.R., United States, Argentina, India, and Canada are the most important producing countries and together accounted for 83 percent of the world output in 1967.

There are only three important exporters of flaxseed and linseed oil--Argentina, Canada, and the United States. U.S. exports are considerably less than those of either Argentina or Canada. Argentine exports are all in the form of oil; exports of seed are restricted to protect domestic crushers.

The Argentine Government's encouragement of exports of oil has depressed the unprotected world market price of oil as compared to flaxseed and, generally, made the market for Canadian and U.S. exports of flaxseed more attractive than for exports of oil. Most of the Canadian and U.S. exports are in the form of seed. The United Kingdom, Western European countries, Japan, and Russia have been the principal markets.

Table 1.--Flaxseed: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| | Production | Imports | Exports | Beginning mill stocks | Apparent consumption |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| 1963 | 1,738,296 | 83 | 190,865 | 242,200 | 1,577,714 |
| 1964 | 1,366,456 | 73 | 389,028 | 212,000 | 908,301 |
| 1965 | 1,982,512 | 8 | 219,777 | 281,200 | 1,765,543 |
| 1966 | 1,309,840 | - | 373,105 | 278,400 | 890,935 |
| 1967 | 1,116,136 | 148 | 337,642 | 324,200 | 1/ 746,342 |
| | Value (1,000 dollars) | | | | |
| 1963 | 85,702 | 9 | 10,011 | 2/ | 2/ |
| 1964 | 68,901 | 7 | 20,037 | 2/ | 2/ |
| 1965 | 99,168 | 1 | 11,732 | 2/ | 2/ |
| 1966 | 67,620 | - | 19,475 | 2/ | 2/ |
| 1967 | 58,818 | 13 | 18,273 | 2/ | 2/ |
| | Unit value (cents per pound) 3/ | | | | |
| 1963 | 4.9 | 10.2 | 5.2 | 2/ | 2/ |
| 1964 | 5.0 | 9.1 | 5.2 | 2/ | 2/ |
| 1965 | 5.0 | 9.5 | 5.3 | 2/ | 2/ |
| 1966 | 5.2 | - | 5.2 | 2/ | 2/ |
| 1967 | 5.3 | 8.6 | 5.4 | 2/ | 2/ |

1/ Ending stocks were 356,500 thousand pounds in 1967.
2/ Not available.
3/ Unit value of imports computed on unrounded figures.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; imports, exports, and stocks compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Linseed oil: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | Exports | | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|---|
| | | | Advanced | Crude | | |
| | Quantity (1,000 pounds) | | | | | |
| 1963 | 399,100 | 7 | 1,420 | 14,943 | 123,400 | 394,344 |
| 1964 | 443,600 | 27 | 1,864 | 17,241 | 111,800 | 350,822 |
| 1965 | 410,100 | 41 | 1,532 | 40,204 | 185,500 | 340,405 |
| 1966 | 454,200 | 32 | 1,478 | 124,624 | 213,500 | 333,230 |
| 1967 | 365,800 | 12 | 1,296 | 44,064 | 208,400 | 2/ 303,152 |
| | Value (1,000 dollars) | | | | | |
| 1963 | 50,686 | 3 | 321 | 1,349 | 3/ | 3/ |
| 1964 | 59,442 | 9 | 435 | 1,607 | 3/ | 3/ |
| 1965 | 54,953 | 31 | 358 | 3,616 | 3/ | 3/ |
| 1966 | 58,138 | 11 | 343 | 11,811 | 3/ | 3/ |
| 1967 | 47,188 | 4 | 305 | 4,276 | 3/ | 3/ |
| | Unit value (cents per pound) 4/ | | | | | |
| 1963 | 12.7 | 47.3 | 22.6 | 9.0 | 3/ | 3/ |
| 1964 | 13.4 | 34.1 | 23.3 | 9.3 | 3/ | 3/ |
| 1965 | 13.4 | 75.0 | 23.4 | 9.0 | 3/ | 3/ |
| 1966 | 12.8 | 33.3 | 23.2 | 9.5 | 3/ | 3/ |
| 1967 | 12.9 | 36.3 | 23.5 | 9.7 | 3/ | 3/ |

1/ Unit value is average price of raw linseed oil, in tank cars in Minneapolis. Value of production computed by multiplying quantity by average price.

2/ Ending stocks were 225,700 thousand pounds in 1967.

3/ Not available.

4/ Unit values computed on unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

| Commodity | TSUS item |
|---|---|
| Hempseed | 175.21 |
| Hempseed oil | 176.22 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Neither hempseed nor hempseed oil are produced commercially in the United States. Relatively small amounts of hempseed are imported for use as bird feed.

## Comment

Hempseed is obtained from the fibrous hemp plant, Cannabis sativa, which is grown mostly for its fiber. Hempseed is the source of an oil which resembles linseed oil and is used principally as a drying oil in paints and varnishes. In the United States hempseed is not ordinarily crushed for oil, but is used in bird-feed mixtures. In some countries both hempseed and hempseed oil are used for edible purposes.

Because of the narcotic, marihuana, contained in its leaves and flowers, the Federal Government and many States have laws and regulations prohibiting, controlling, or licensing the growing or handling of hemp in any form or for any purpose.

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1971 |
| 175.21 | Hempseed | 0.62¢ per lb. | 0.55¢ per lb. | 0.46¢ per lb. |
| 176.22 | Hempseed oil | 6¢ per lb. | 1/ | 1/ |

1/ Duty status not affected by the trade conference.

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The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT). Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

A concession amounting to a reduction of about 26 percent in duty was granted by the United States on hempseed (item 175.21); the concession is being put into effect in three stages--the final reduction going into effect on January 1, 1971.

The rates of duty in effect prior to January 1, 1968, were established by the TSUS on August 31, 1963. Before that date imports of hempseed had been duty free under the provisions of paragraph 1727 of the Tariff Act of 1930, but had been subject to an import tax under the Internal Revenue Code, which provision was repealed when the TSUS became effective. The rate of 0.62 cents per pound was equivalent to an import tax that became effective in October 1951, pursuant to a concession granted by the United States in the GATT.

Imports of hempseed oil were dutiable at 1.5 cents per pound under the provisions of paragraph 53 of the Tariff Act of 1930, and were also subject to an import tax under the Internal Revenue Code. The current rate of 6 cents per pound carried forward both the regular import duty imposed under the tariff act and the former import tax; it is not a trade-agreement rate.

The average ad valorem equivalent of the specific rate of duty on hempseed in effect on December 31, 1967, based on dutiable imports during 1967, was 7.3 percent. There have been no imports of hempseed oil in recent years.

Domestic consumption of hempseed approximates imports. There is no production or consumption of hempseed oil in the United States. Hempseed is not produced commercially in the United States, except in connection with small quantities of hemp grown under license for medicinal purposes.

Annual imports of hempseed have shown a downward trend and averaged 147,000 pounds during 1963-67 (see accompanying table). None of the seed was imported for crushing; all was used for bird seed. Seed so used must be sterilized before being sold. Turkey, Kenya, and Chile have been the only sources of supply in recent years.

Hempseed: U.S. imports for consumption, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Turkey | 99 | 142 | 55 | 44 | 66 |
| Chile | 77 | 44 | 164 | - | - |
| Kenya | - | - | - | - | 46 |
| Total | 176 | 186 | 219 | 44 | 112 |
| | Value (1,000 dollars) | | | | |
| Turkey | 20 | 25 | 7 | 4 | 6 |
| Chile | 16 | 6 | 20 | - | - |
| Kenya | - | - | - | - | 4 |
| Total | 36 | 31 | 27 | 4 | 10 |
| | Unit value (cents per pound) 1/ | | | | |
| Average | 20.6 | 16.4 | 12.1 | 10.0 | 8.5 |

1/ Calculated on unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--Production of hempseed in the United States is negligible and there are no exports. There is neither production nor imports of hempseed oil.

| Commodity | TSUS item |
|---|---|
| Kapok seed | 175.24 |
| Kapok oil | 176.24 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Kapok seed is not produced in the United States. There have been no imports of kapok seed or kapok oil in recent years.

## Comment

Kapok seed is obtained from the fiber producing kapok tree which grows wild in many tropical countries of both the Eastern and Western Hemispheres and is cultivated in the Far East, particularly in Indonesia. Kapok fiber is the primary product obtained from the tree, and the seeds are a byproduct of fiber processing. The seed yields an oil closely resembling cottonseed oil.

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 175.24 | Kapok seed | 1¢ per lb. | Free | Free |
| 176.24 | Kapok oil | 2.25¢ per lb. plus 10% ad val. | 2¢ per lb. plus 9% ad val. | 1.125¢ per lb. plus 5% ad val. |

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT). Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

Kapok seed (item 175.24) became duty-free on January 1, 1968, as a trade-agreement concession granted by the United States. A concession amounting to a reduction of 50 percent in duty was granted by the United States on kapok oil (item 176.24); the concession is being put into effect in five annual stages.

The rates of duty in effect prior to January 1, 1968, were established by the TSUS on August 31, 1963. Before that date imports of kapok seed had been duty-free under the provisions of paragraph 1727 of the Tariff Act of 1930, but had been subject to an import tax under the Internal Revenue Code. The rate of 1 cent per pound was equivalent to the import tax that became effective in November 1951, pursuant to a concession granted by the United States in the GATT.

The compound rate for kapok oil in the TSUS prior to January 1, 1968, reflects concessions in effect since January 1948 that were granted by the United States in the GATT. The specific component of the prior rate--2.25 cents per pound--was derived from the import tax previously imposed under the Internal Revenue Code, as modified, whereas the ad valorem component--10 percent--carried forward the trade agreement rate of duty under paragraph 53 of the Tariff Act of 1930, as modified.

Kapok seed is not produced in the United States and there have been no significant imports of either the seed or the oil since before World War II.

Indonesia, Thailand, and Cambodia are the only countries which export kapok seed, virtually all of which goes to Japan. Very little, if any, kapok oil enters international commerce.

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| Commodity | TSUS item |
|---|---|
| Palm-nut kernels and palm nuts | 175.28 |
| Palm-kernel oil, inedible | 176.32 |
| Palm-kernel oil, edible | 176.33 |
| Palm oil | 176.34 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States depends upon imports for its requirements of the palm products included in this summary.

## Description and uses

Palm nuts and palm-nut kernels are products of the oil palm, Elaeis guineensis, which grows wild throughout equatorial Africa, to a lesser extent in the equatorial Americas, and is cultivated extensively in the Congo, Indonesia, and Malaysia. The fruit of this palm consists of a large endocarp or nut with a thin pericarp or outer pulp. The pericarp, when pressed, yields palm oil equal to 40 percent of its weight, whereas palm-kernel oil is derived from the kernels of the nut, the yield being equal to about 47 percent by weight. The remaining palm-kernel meal yields a cattle feed similar to copra meal.

Palm oil, a semisolid fat, is somewhat similar to tallow. It is produced only in the countries where the palm is grown because of the perishability of the fruit. Palm oil is widely used in the production of soap, shortening, and as a coating to prevent oxidation in the manufacture of tin and terneplate. In the production of soap, palm oil competes chiefly with tallow; and in shortening it competes with a large number of fats and oils, notably soybean oil, cottonseed oil, lard, and tallow. Tallow is also the principal competing material in the manufacture of tin and terneplate.

Palm-kernel oil is produced not only in palm-growing countries but also in oil-consuming countries--in that the kernels from which the oil is extracted enter international trade. Palm-kernel oil, unlike palm oil, is a lauric acid oil very similar to, and usually interchangeable with, coconut and babassu oils. The edible grade is used principally in the production of confectionery, biscuits, and crackers. Palm-kernel oil (and other lauric acid oils) has a high resistance to rancidity and a melting point that permits products coated with it to remain solid at room temperatures. The inedible grade is used principally in the manufacture of fatty acids and soap to which it imparts high-lathering and sudsing properties.

## U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| 175.28 | Palm-nut kernels and palm nuts | Free |
| 176.32 | Palm-kernel oil, inedible | Free |
| 176.33 | Palm-kernel oil, edible | 0.5¢ per lb. |
| 176.34 | Palm oil | Free |

The existing rates of duty are not ones on which the United States granted concessions in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. The average ad valorem equivalent of the specific rate of duty in effect on December 31, 1967, based on dutiable imports during 1967, was 4.1 percent on edible palm-kernel oil (item 176.33). Prior to April 13, 1966, there was an additional duty of 3 cents per pound on each of the oils covered by this summary, of 0.35 cents per pound on palm nuts, and 1.35 cents per pound on palm-nut kernels. These additional duties, which were in suspension, stemmed from taxes originally imposed under the Revenue Act of 1934. The taxes, and subsequent duties, had been suspended since July 1, 1959, and on April 13, 1966, the suspension was made permanent (Public Law 89-388).

## U.S. consumption, production, and trade

Domestic consumption of palm oil and palm-kernel oil approximates imports. Palm nuts are not produced in the United States and, as indicated, do not enter international trade. There were no imports of palm-nut kernels in recent years until 1967, when 28,000 pounds, valued at $563 were imported from Ceylon.

Palm oil was stockpiled by the U.S. Government as a strategic and critical material. At its peak in the early 1950's the stockpile amounted to about 37.6 million pounds. In May 1960 the Office of Civil and Defense Mobilization found that palm oil was obsolescent for use in time of war and that there was no longer any need for stockpiling this material. 1/ Accordingly, the General Services Administration, during 1960-65, sold the entire Government stockpile of palm oil.

U.S. imports of palm-kernel oil, which have been trending upward, averaged 93 million pounds a year during the period 1963-67 (table 1). Imports consisted predominantly of the edible grade. The Congo and

1/ 25 F.R. 4782.

the Netherlands have been the principal sources of supply (table 2). Palm-kernel oil from the Netherlands is produced in that country from imported kernels.

Imports of palm oil were relatively low during the period of liquidation of the Government stockpile, but in 1966 and 1967 increased to an annual average of 70 million pounds (table 1). Indonesia and Malaysia have been the principal supplying countries (table 3).

## Foreign production and trade

West equatorial African countries (principally Nigeria, Congo, Sierra Leone, and Dahomey) along with Indonesia and Malaysia are the leading producers of oil palm products. Mexico is the only significant producer in the Western Hemisphere although new plantings are being made in Brazil, Honduras, and other countries. The fruit grown in Africa has a thin outer pulp producing very little palm oil but has a large kernel. Conversely, the Southeast Asian tree has a fruit with a heavy outer pulp and a small kernel. Consequently, most of the palm nuts yielding palm-kernel oil are produced in Africa. Malaysia and Indonesia, however, produce about half of the world supply of palm oil.

About 80 percent of the world commercial output of palm oil (about 1.5 billion pounds annually in recent years) is exported. In addition to commercial production, there are large quantities of palm oil (perhaps amounting to as much as commercial production) crudely separated from the fruit by simple boiling operations for local consumption. In contrast, the pressing of palm-kernel oil requires sophisticated equipment. All of the production is commercial and practically all of that (a little below 1 billion pounds oil equivalent annually in recent years) is exported--about three-fourths in the form of kernels and one-fourth as palm-kernel oil. Most of the palm-nut kernels exported go to the United Kingdom and countries of the European Economic Community (EEC), particularly the Netherlands. The United States and West Germany are the principal importers of palm-kernel oil, together taking about 70 percent of world exports of this oil in recent years. The United Kingdom and member countries of the EEC import most of the palm oil entering international trade.

Table 1.--Palm-kernel oil and palm oil: U.S. imports for consumption, 1963-67

| Year | Palm-kernel oil | | Palm oil |
|---|---|---|---|
| | Edible | Inedible | |
| | Quantity (1,000 pounds) | | |
| 1963 | 83,313 | 166 | 23,529 |
| 1964 | 83,701 | 1,427 | 6,257 |
| 1965 | 83,097 | - | 6,557 |
| 1966 | 109,352 | 6 | 75,887 |
| 1967 | 104,342 | - | 64,261 |
| | Value (1,000 dollars) | | |
| 1963 | 10,044 | 21 | 2,108 |
| 1964 | 10,368 | 132 | 628 |
| 1965 | 12,381 | - | 720 |
| 1966 | 14,749 | 1 | 7,775 |
| 1967 | 12,757 | - | 6,450 |
| | Unit value (cents per pound) | | |
| 1963 | 12.1 | 12.7 | 9.0 |
| 1964 | 12.4 | 9.3 | 10.0 |
| 1965 | 14.9 | - | 11.0 |
| 1966 | 13.5 | 16.7 | 10.2 |
| 1967 | 12.2 | - | 10.0 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Palm-kernel oil, edible: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Netherlands | 21,391 | 23,861 | 36,535 | 32,962 | 28,070 |
| Congo | 35,114 | 48,667 | 23,390 | 36,780 | 31,890 |
| Other West Africa | - | - | 1,937 | 7,208 | 31,293 |
| Nigeria | - | - | - | 10,840 | 4,480 |
| West Germany | 3,371 | 6,714 | 13,575 | 2,205 | 3,870 |
| Denmark | 1,306 | 132 | 44 | 1,906 | 2,234 |
| All other | 1/ 22,131 | 4,327 | 7,616 | 17,451 | 2,505 |
| Total | 83,313 | 83,701 | 83,097 | 109,352 | 104,342 |
| | Value (1,000 dollars) | | | | |
| Netherlands | 2,902 | 3,089 | 5,641 | 4,828 | 3,951 |
| Congo | 3,933 | 5,897 | 3,193 | 4,684 | 3,552 |
| Other West Africa | - | - | 297 | 881 | 3,511 |
| Nigeria | - | - | - | 1,384 | 510 |
| West Germany | 402 | 816 | 2,103 | 263 | 458 |
| Denmark | 182 | 31 | 11 | 419 | 457 |
| All other | 1/ 2,625 | 535 | 1,136 | 2,290 | 318 |
| Total | 10,044 | 10,368 | 12,381 | 14,749 | 12,757 |
| | Unit value (cents per pound) | | | | |
| Average | 12.1 | 12.4 | 14.9 | 13.5 | 12.2 |

1/ Includes 17,774 thousand pounds, valued at 2,121 thousand dollars from United Kingdom

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Palm oil: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Indonesia | 5,691 | 1,456 | 4,016 | 47,130 | 40,826 |
| Malaysia | - | - | - | 19,357 | 17,127 |
| Nigeria | 5,282 | - | - | 6,207 | 2,584 |
| Netherlands | - | - | - | - | 2,214 |
| Congo | 12,232 | 4,677 | 2,341 | 2,974 | 700 |
| Belgium and Luxembourg | 321 | 124 | - | 198 | - |
| All other | 3 | - | 1/200 | 21 | 1/ 810 |
| Total | 23,529 | 6,257 | 6,557 | 75,887 | 64,261 |
| | Value (1,000 dollars) | | | | |
| Indonesia | 483 | 129 | 424 | 4,876 | 4,112 |
| Malaysia | - | - | - | 1,961 | 1,711 |
| Nigeria | 484 | - | - | 621 | 239 |
| Netherlands | - | - | - | - | 227 |
| Congo | 1,099 | 482 | 261 | 285 | 73 |
| Belgium and Luxembourg | 41 | 17 | - | 28 | - |
| All other | 1 | - | 1/ 35 | 4 | 1/ 88 |
| Total | 2,108 | 628 | 720 | 7,775 | 6,450 |
| | Unit value (cents per pound) | | | | |
| Average | 9.0 | 10.0 | 11.0 | 10.2 | 10.0 |

1/ All from Canada in 1965, and all from "other West Africa" in 1967.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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| Commodity | TSUS item |
|---|---|
| Perilla seed | 175.33 |
| Perilla oil | 176.40 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Neither perilla seed nor perilla oil is produced in the United States. There have been no imports of either the seed or the oil since the end of World War II.

## Comment

The perilla plant is a member of the mint family. The seed yields a high-grade drying oil (equivalent to about 37 percent of the seed by weight) that is somewhat similar to linseed oil. Perilla oil is more unsaturated than linseed oil and, because of its high drying properties, it is blended with oils of lower drying power, (e.g., soybean or fish oils) for use in paint, varnish, and other products in which drying oils are utilized.

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| 175.33 | Perilla seed | 1.38¢ per lb. |
| 176.40 | Perilla oil | 4.5¢ per lb. |

These rates of duty were established by the TSUS on August 31, 1963. Before that date imports of perilla seed and perilla oil had been duty-free under the provisions of paragraphs 1727 and 1732, respectively, of the Tariff Act of 1930, but had been subject to import taxes under the Internal Revenue Code which were repealed when the TSUS became effective. The current rates are equivalent to the former import taxes and are not trade-agreement rates.

There has been no significant domestic consumption of perilla seed or oil since World War II. The seed has never been produced commercially in the United States, although experimental plantings of perilla have been made in some Southern States. The seeds shatter too readily to permit mechanical harvesting.

Total world production of perilla seed before World War II was estimated at about 200,000 tons annually. It is considerably less at the present time. Nearly all of the world supply has been grown in Asia, principally in Manchuria. Formerly, exports of the seed went largely to Japan and those of the oil largely to the United States.

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| Commodity | TSUS item |
|---|---|
| Poppyseed | 175.36 |
| Poppyseed oil | 176.42 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Imports supply all the U.S. needs for poppyseed and poppyseed oil.

## Comment

Poppyseed is obtained from two varieties of the opium poppy plant. White poppyseed is a product of the white poppy plant, grown in India and other Asian countries, primarily for the opium contained in its stems, leaves, and pods (the seeds contain no opium). Black poppyseed is a product of the black poppy plant grown in central and southern Europe for its seed. In western countries, poppyseed is used as a condiment for sprinkling on bakery products, and in the United States this is virtually the only use for poppyseed except for a small quantity used in bird feed. None is believed to be crushed for oil in the United States.

Poppyseeds contain about 40 percent by weight of oil. The oil obtained from the white seeds is considered superior to that derived from black seeds. In producing countries, poppyseed oil is used for edible purposes. In the United States the oil is used primarily in artist's paints.

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 175.36 | Poppyseed---------- | 8¢ per 100 lbs. | 7¢ per 100 lbs. | 6¢ per 100 lbs. 1/ |
| 176.42 | Poppyseed oil------- | 1¢ per lb. | 0.9¢ per lb. | 0.75¢ per lb. 2/ |

1/ Final rate, effective January 1, 1970, at the third stage.
2/ Final rate, effective January 1, 1969, at the second stage.

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages). Concessions amounting to a reduction of 25 percent in duties were granted by the United States on both items. The concessions are being put into effect in two stages, with the final reduction on poppyseed oil (item 176.42) going into effect on January 1, 1969, and that on poppyseed (item 175.36) going into effect on January 1, 1970.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 175.36---------- | 0.4 |
| 176.42---------- | 2.2 |

Domestic consumption of poppyseed and poppyseed oil in the United States approximates imports as there is no domestic production. Production in the United States of the opium poppy plant is prohibited, except by license, under the Opium Poppy Control Act of 1942; no licenses have been issued.

U.S. imports of poppyseed, which have fluctuated within narrow limits in recent years, averaged about 8.4 million pounds annually during 1963-67 (table 1). The Netherlands and Poland have been the leading suppliers for many years. The Netherlands does not produce

poppyseed and exports from that country represent reshipments of seed grown in other countries, probably mostly from Poland.

During the period 1963-67 imports of poppyseed oil were at an average annual level of 18,000 pounds. Belgium and West Germany have been the only supplying countries (table 2).

Table 1.--Poppyseed: U.S. imports for consumption, by principal sources, 1963-67

| Country | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Netherlands | 3,458 | 5,244 | 3,136 | 7,283 | 1,889 |
| Poland | 2,546 | 2,394 | 983 | 3,218 | 1,687 |
| Turkey | - | 681 | 1,186 | 1,832 | 1,016 |
| Czechoslovakia | 109 | 142 | 249 | - | - |
| Denmark | 207 | 33 | - | 45 | - |
| All other | 427 | 22 | 672 | 1,416 | 1/ 2,073 |
| Total | 6,747 | 8,516 | 6,226 | 13,794 | 6,665 |
| | Foreign value (1,000 dollars) | | | | |
| Netherlands | 329 | 673 | 726 | 621 | 366 |
| Poland | 228 | 245 | 222 | 282 | 313 |
| Turkey | - | 101 | 232 | 341 | 153 |
| Czechoslovakia | 10 | 15 | 25 | - | - |
| Denmark | 16 | 3 | - | 11 | - |
| All other | 29 | 3 | 119 | 326 | 1/ 359 |
| Total | 612 | 1,040 | 1,324 | 1,581 | 1,191 |
| | Unit value (cents per pound) 2/ | | | | |
| Netherlands | 9.5 | 12.8 | 23.2 | 8.5 | 19.4 |
| Poland | 8.9 | 10.2 | 22.5 | 8.8 | 18.5 |
| Turkey | - | 14.8 | 19.5 | 18.6 | 15.0 |
| Czechoslovakia | 9.4 | 10.2 | 10.2 | - | - |
| Denmark | 7.9 | 8.9 | - | 25.0 | - |
| All other | 6.7 | 14.8 | 17.6 | 23.0 | 1/ 16.6 |
| Average | 9.1 | 12.2 | 21.3 | 11.5 | 17.9 |

1/ Includes 1,882 thousand pounds, valued at 328 thousand dollars, from Rumania. The unit value is 17.4 cents per pound.

2/ Unit values based on unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 2.--Poppyseed oil: U.S. imports for consumption, by principal sources, 1963-67

| Country | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (pounds) | | | | |
| West Germany | - | 7,293 | 6,638 | - | 11,419 |
| Belgium | 12,903 | 8,937 | 7,777 | 23,935 | 10,685 |
| Total | 12,903 | 16,230 | 14,415 | 23,935 | 22,104 |
| | Foreign value (dollars) | | | | |
| West Germany | - | 1,964 | 2,077 | - | 5,029 |
| Belgium | 3,860 | 2,766 | 2,821 | 13,039 | 4,819 |
| Total | 3,860 | 4,730 | 4,898 | 13,039 | 9,848 |
| | Unit value (cents per pound) | | | | |
| West Germany | - | 26.9 | 31.3 | - | 44.0 |
| Belgium | 29.9 | 30.9 | 36.3 | 54.5 | 45.1 |
| Average | 29.9 | 29.1 | 34.0 | 54.5 | 44.6 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

| Commodity | TSUS item |
|---|---|
| Rapeseed | 175.39 |
| Rapeseed oil: | |
| Rendered unfit for use as food: | |
| Imported to be used in the manufacture of rubber substitutes or lubricating oil | 176.44 |
| Other | 176.45 |
| Other: | |
| Imported to be used in the manufacture of rubber substitutes or lubricating oil | 176.46 |
| Other | 176.47 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Rapeseed and rapeseed oil are of minor commercial importance in the United States relative to other oilseeds and oils. Although some rapeseed is grown in the United States, part of domestic requirements for the seed and virtually all for the oil are supplied by imports.

## Description and uses

Rapeseed and colza are the names often used for seed obtained from several species of the genus Brassica, which also includes mustard, turnips, and cabbage. The oils extracted from the various species of seed are so similar in composition and characteristics that they are not easily distinguishable from each other in commerce. Rapeseed, as sold domestically, often consists of a mixture of related seeds including mustard seed; commercial rapeseed oil, accordingly, often consists of a mixture of oils extracted from such seeds.

In the United States, rapeseed is used primarily in bird feed and, to a lesser extent as a seed to grow rape for forage. In a number of producing countries, rapeseed is one of the major oilseeds.

Rapeseed, when pressed, typically yields about 40 percent of its weight in rapeseed oil. The crude oil is dark yellow and has a mustardlike odor which can be removed. Rapeseed oil is notable for its high erucic acid content (40-55 percent). This makes it more viscous than most vegetable oils and enables it to be mixed with mineral oil and emulsify with water in the manufacture of special lubricating

oils and greases. In the United States this is the principal use of rapeseed oil. The next most important use is in the compounding of factice, a rubber substitute used primarily in making erasers. Over 90 percent of the rapeseed oil consumed in the United States is used in the production of lubricants and rubber substitutes. The remainder is used in the manufacture of plastics, pharmaceuticals, and cosmetics. Mineral oils may be substituted for rapeseed oil in the manufacture of lubricants; other oils, notably soybean oil, may be substituted for it in the making of factice and in some other uses.

In Europe and Asia, rapeseed oil is used mainly as a salad oil and in shortening and margarine in competition with other edible vegetable oils. Rapeseed oil is not processed for edible use in the United States mainly because it cannot compete pricewise with soybean oil.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1970 |
| 175.39 | Rapeseed | 1¢ per lb. | 1/ | 1/ |
| | Rapeseed oil: | | | |
| | Rendered unfit for use as food: | | | |
| 176.44 | Imported to be used in the manufacture of rubber substitutes or lubricating oil. | Free | 1/ | 1/ |
| 176.45 | Other | 1.8¢ per lb. | 1/ | 1/ |
| | Other: | | | |
| 176.46 | Imported to be used in the manufacture of rubber substitutes or lubricating oil. | 0.6¢ per lb. | 0.55¢ per lb. | 0.45¢ per lb. |
| 176.47 | Other | 2.4¢ per lb. | 1/ | 1/ |

1/ Duty status not affected by the trade conference.

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT). Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

A concession amounting to a reduction of 25 percent in duty was granted by the United States on rapeseed oil, not rendered unfit for use as food, imported to be used in the manufacture of rubber substitutes or lubricating oil; the concession is being put into effect in

three annual stages--the final reduction going into effect on January 1, 1970. The existing rates of duty for items 175.39, 176.44, 176.45, and 176.47 are not ones on which the United States gave a concession in the sixth round of trade negotiations under the GATT, however, the rates are concession rates under the GATT.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 175.39------- | 13.9 |
| 176.45------- 1/ | 13.2 |
| 176.46------- | 5.2 |
| 176.47------- | 22.6 |

1/ Based on imports in 1966. No imports in 1967.

U.S. consumption

Annual domestic consumption of rapeseed oil during recent years was probably in the order of 7 or 8 million pounds annually. Consumption of rapeseed oil fluctuates in response to its price relationship to lower-priced substitute products such as domestically produced vegetable oils and synthetic petroleum-based emulsifiers.

U.S. producers and production

The only significant domestic production of rapeseed is in Idaho. The Census of Agriculture reported U.S. production at 3.7 million pounds in 1959 and 5.4 million pounds in 1964. The output of rapeseed in 1964 was valued at 4 cents per pound for the 5.4 million pounds produced that year; the gross farm value was equivalent to $216,000 (table 1). It is believed that only a small part of the imports of rapeseed, but a substantial part of the domestic production, is crushed for oil. The meal contains compounds which, under certain circumstances, are toxic to some livestock; there are no problems in feeding it when properly used.

U.S. exports and imports

Exports of rapeseed and rapeseed oil are not reported in official statistics. They probably are nil or negligible.

Imports of rapeseed have fluctuated greatly in recent years between a low of about 600,000 pounds in 1966 and a high of 1.7 million

pounds in 1963 (table 1). The Netherlands and Canada have been the principal sources of supply. With a duty of 1 cent per pound on rapeseed, equal to about 2-1/2 cents per pound of oil content, there has been no incentive to import the seed for crushing.

During 1963-67 annual imports of rapeseed oil ranged from a low of about 3 million pounds in 1963 to a high of 8.6 million pounds in 1967 (table 2) and averaged 5.8 million pounds. Sweden, Switzerland, and West Germany were the chief suppliers.

Imports consisted almost entirely of oil for use in the manufacture of rubber substitutes and lubricants, most of which was of the type rendered unfit for use as food, which is duty-free. In 1967, however, imports of edible oil in item 176.47 amounted to 1,292,000 pounds, valued at $137,000. Shipments entered predominantly from Sweden and Canada (table 3). It may be that this oil was used in products for export, with benefit of drawback of the 2.4 cents per pound duty, since there would seem to be little incentive to pay this duty for a product to be used in competition with cheaper domestic soybean oil.

## Foreign production and trade

The world production of rapeseed reached an estimated record high of 10.7 billion pounds in 1967. Rapeseed is the fifth largest oilseed crop. The principal producers are India, China, Poland, Canada, and France. The largest exporters of rapeseed are Canada and France; the largest exporters of rapeseed oil are France and China.

Table 1.--Rapeseed: U.S. imports for consumption, by countries, 1963-67

| Country | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Canada | 732 | 210 | 318 | 159 | 496 |
| Netherlands | 706 | 583 | 709 | 393 | 184 |
| Argentina | - | - | - | - | 79 |
| Denmark | 260 | 130 | 197 | 65 | 22 |
| Total | 1,698 | 923 | 1,224 | 617 | 781 |
| | Value (1,000 dollars) | | | | |
| Canada | 34 | 13 | 25 | 13 | 35 |
| Netherlands | 42 | 38 | 53 | 27 | 15 |
| Argentina | - | - | - | - | 5 |
| Denmark | 14 | 7 | 10 | 4 | 1 |
| Total | 90 | 58 | 88 | 44 | 56 |
| | Unit value (cents per pound) 1/ | | | | |
| Canada | 4.6 | 6.2 | 7.7 | 8.2 | 7.2 |
| Netherlands | 6.0 | 6.5 | 7.5 | 6.9 | 8.1 |
| Argentina | - | - | - | - | 5.8 |
| Denmark | 5.4 | 5.1 | 5.1 | 6.1 | 5.4 |
| Average | 5.3 | 6.3 | 7.2 | 7.1 | 7.2 |

1/ Unit value based on unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--Domestic production of rapeseed, almost all of which is in Idaho, is reported in the Census of Agriculture as follows:

| Year | Farms | Production (million pounds) | Value | Unit value |
|---|---|---|---|---|
| 1959--- | 59 | 3.7 | $177,717 | 5¢ per lb. |
| 1964--- | 72 | 5.4 | 216,000 | 4¢ per lb. |

Table 2.--Rapeseed oil: U.S. imports for consumption, by TSUS number, 1963-67

| Year | Denatured | | Not denatured | |
|---|---|---|---|---|
| | For use in rubber or lubricating oil (176.44) | Other (176.45) | For use in rubber or lubricating oil (176.46) | Other (176.47) |
| | Quantity (1,000 pounds) | | | |
| 1963 | 2,577 | - | 452 | - |
| 1964 | 4,343 | - | 1,429 | - |
| 1965 | 3,934 | - | 454 | 2 |
| 1966 | 7,261 | 15 | - | 216 |
| 1967 | 7,093 | - | 199 | 1,292 |
| | Value (1,000 dollars) | | | |
| 1963 | 275 | - | 48 | - |
| 1964 | 517 | - | 301 | - |
| 1965 | 490 | - | 56 | 1/ |
| 1966 | 906 | 2 | - | 28 |
| 1967 | 813 | - | 23 | 137 |
| | Unit value (cents per pound) | | | |
| 1963 | 10.7 | - | 10.6 | - |
| 1964 | 11.9 | - | 21.1 | - |
| 1965 | 12.5 | - | 12.3 | 16.4 |
| 1966 | 12.5 | 13.3 | - | 13.0 |
| 1967 | 11.5 | - | 11.6 | 10.6 |

1/ Less than $500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--It is believed that domestic production of rapeseed oil has been in the order of 1 or 2 million pounds annually in recent years.

Table 3.--Rapeseed oil: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Sweden | 2,849 | 3,717 | 3,458 | 4,604 | 3,492 |
| Switzerland | - | - | - | - | 2,688 |
| West Germany | - | 1,664 | 928 | 2,884 | 1,825 |
| Canada | 180 | 391 | 2 | 4 | 578 |
| All other | - | - | 2 | - | - |
| Total | 3,029 | 5,772 | 4,390 | 7,492 | 8,583 |
| | Value (1,000 dollars) | | | | |
| Sweden | 304 | 435 | 428 | 570 | 408 |
| Switzerland | - | - | - | - | 279 |
| West Germany | - | 333 | 118 | 365 | 235 |
| Canada | 19 | 50 | 1/ | 1 | 51 |
| All other | - | - | 1 | - | - |
| Total | 323 | 818 | 547 | 936 | 973 |
| | Unit value (cents per pound) | | | | |
| Sweden | 10.7 | 11.7 | 12.4 | 12.4 | 11.7 |
| Switzerland | - | - | - | - | 10.4 |
| West Germany | - | 20.0 | 12.7 | 12.7 | 12.9 |
| Canada | 10.6 | 12.8 | 16.4 | 17.9 | 8.8 |
| All other | - | - | 32.5 | - | - |
| Average | 10.7 | 14.2 | 12.5 | 12.5 | 11.3 |

1/ Less than $500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

| Commodity | TSUS item |
|---|---|
| Rubber seed | 175.42 |
| Oil-bearing nuts and seeds, not elsewhere enumerated | 175.57 |
| Babassu oil | 176.00 |
| Croton oil | 176.20 |
| Sweet almond oil | 176.58 |
| Expressed or extracted vegetable oils, not elsewhere enumerated: | |
| Nut oils | 176.64 |
| Other | 176.70 |
| Vegetable tallow | 176.90 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

U.S. trade position

Nearly all of the small domestic consumption of the oil-bearing seeds and nuts and vegetable oils included here consists of domestically produced safflower oil and imported babassu and oiticica oil.

Comment

This summary covers a large variety of oil-bearing nuts and seeds, various vegetable oils, and vegetable tallow. Most of the materials herein discussed are of minor commercial importance.

Rubber seed (item 175.42).--This seed, obtained from the rubber tree grown in Brazil and Southeast Asia, is the source of semidrying oil used for paint and soap. Rubber seed has not been important commercially because the seed is difficult to gather and has poor keeping qualities.

Oil-bearing nuts and seeds, not elsewhere enumerated (item 175.57).--Included in this classification are many different nuts and seeds. Among the more important ones are: Safflower seed (obtained from an annual plant grown principally in the United States, Mexico, India, and the Middle East), crambe seed (obtained in the United States principally from the domestic production of an annual plant related to rape), babassu, tucum, ouricuri, murumuru, and oiticica kernels (the products of tropical trees grown in Brazil), and areca nuts (from a palm tree native to Ceylon).

Babassu oil (item 176.00).--Babassu oil, produced from babassu kernels, is one of the lauric acid oils quite similar to palm-kernel

and coconut oils in characteristics and uses. It is used in confectionery and bakery products and in the production of soap.

Croton oil (item 176.20).--Croton oil, obtained from the seeds of a small tropical, evergreen tree grown in Southeast Asia, is used almost exclusively for medicinal purposes.

Sweet almond oil (item 176.58).--Sweet almond oil is a fatty oil derived from sweet or bitter almonds. It is distinct from "oil of bitter almond," an essential oil (item 452.02). Sweet almond oil is used primarily for cosmetic and pharmaceutical purposes.

Nut oils, not elsewhere enumerated (item 176.64).--This category includes a large number of different nut oils. Oiticica oil, the principal oil in this category, is used mainly in the manufacture of paints and varnishes. Of lesser commercial importance are: Apricot kernel oil--produced from apricot kernels (see summary on item 175.03) and used for cosmetic and pharmaceutical purposes; walnut oil--produced from kernels of the walnut and used as an edible oil or as a drying oil; ouricuri, tucum, and murumuru oil--lauric acid oils obtained from kernels of tropical palm nuts and used in confectionery and bakery products; cashew nut kernel oil--obtained from the kernel of the cashew nut and used as an edible oil; and tea-seed oil--obtained from the tea-plant seed and used as an edible oil.

Vegetable oils not elsewhere enumerated, other than nut oils (item 176.70).--Included in this class are a variety of vegetable oils (except nut oils) not elsewhere enumerated in the TSUS. The principal domestic material in this group is safflower oil, obtained from safflower seed, and used in salad or cooking oil and in paints. The principal imported material is rice-bran oil, obtained in the rice-growing areas of Asia from rice bran, a byproduct of polished rice. The better grades of such oil are used for food and the poorer grades for the manufacture of soap.

Vegetable tallow (item 176.90).--Vegetable tallow, obtained from the seed of the Chinese tallow tree--grown principally in China--is used in the manufacture of soap and candles.

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 175.42 | Rubber seed | Free | 1/ | 1/ |
| 175.57 | Oil-bearing nuts and seeds, not elsewhere enumerated. | Free | 1/ | 1/ |
| 176.00 | Babassu oil | Free | 2/ | 2/ |
| 176.20 | Croton oil | Free | 2/ | 2/ |
| 176.58 | Sweet almond oil | Free | 1/ | 1/ |
| | Expressed or extracted vegetable oils, not elsewhere enumerated: | | | |
| 176.64 | Nut oils | Free | 1/ | 1/ |
| 176.70 | Other | 10% ad val. | 9% ad val. | 5% ad val. |
| 176.90 | Vegetable tallow | Free | 1/ | 1/ |

1/ Duty-free status not affected by the trade conference.
2/ Duty-free status bound by the trade conference.

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

The duty-free status of babassu oil (item 176.01) and croton oil (item 176.20), was bound against increase. A concession amounting to a reduction of 50 percent in duty was granted by the United States on expressed or extracted vegetable oils, not elsewhere enumerated, other than nut oils (item 176.70); the concession is being put into effect in five annual stages.

Safflower seed and oil account for by far the largest portion of domestic production, consumption, and exports of materials covered by this summary. In addition, there is a long history of substantial imports of oiticica oil under nut oils, not elsewhere enumerated (item 176.64) and there is a sporadic history of imports of babassu oil (item 176.00). Production and imports are relatively small for the other seeds, nuts, and oils covered by this summary.

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Annual domestic production of safflower seed averaged 664 million pounds a year during 1963-67, production having grown rapidly from a start less than two decades earlier. Output is concentrated in California but the crop is also produced in a number of other Western States. About half the crop was exported during 1963-67, largely to Japan, and the remainder, amounting to about 332 million pounds annually, was crushed domestically for oil. The crop is largely grown under contract to one company which also does most of the exporting and crushing. While data are not reported on domestic oil production, it can be assumed (based on an oil yield of 35 percent) that in the 1963-67 period production of crude oil averaged about 116 million pounds annually.

Data on exports of safflower seed oil are included with those for a large variety of vegetable oils, including most of the oils in this summary, as well as castor oil and various lauric acid oils other than coconut oil. Total exports in the class averaged 39 million pounds annually during 1965-67. The average unit value was 16.4¢ per pound. A significant portion of the total, perhaps as much as one-fourth, is believed to be safflower oil. Of reported domestic consumption of 80 million pounds of safflower oil in 1966, over three-fourths was used for edible purposes, mainly in margarine and in cooking and salad oils. Most of the remainder was used as a drying oil in paints.

The largest portion of imports of nut oils, not elsewhere enumerated (item 176.64) is believed to be oiticica oil. During 1963-67, imports under this item averaged 6.4 million pounds annually (see accompanying table). The sporadic imports of babassu oil (item 176.00) during this period averaged 3.4 million pounds. Brazil is the only supplier of both oiticica and babassu. Available information indicates that the small volume of imports of oil-bearing seeds and nuts not elsewhere enumerated (item 175.57) consisted mainly of areca nuts and that the entries of vegetable oils, not elsewhere enumerated (item 176.70) were in significant part rice-bran oil. Imports of croton oil (item 176.20) have been very small (see accompanying table). There were no imports in recent years of sweet almond oil (item 176.58) or vegetable tallow (item 176.90) until 1967, when 1,000 pounds of sweet almond oil, valued at $1,000, was imported from Spain, and 3,579 thousand pounds of vegetable tallow, valued at $390,000, was imported from the Philippine Republic.

Miscellaneous oil-bearing nuts and seeds and miscellaneous vegetable oils and fats: U.S. imports for consumption, by TSUS items, 1963-67 1/

| Year | Oil-bearing nuts and seeds, n.e.c. (175.57) | Babassu oil (176.00) | Croton oil (176.20) | Sweet almond oil (176.58) | Nut oils, n.e.c. (176.64) | Vegetable oils, n.e.c. (176.70) | Vegetable tallow (176.90) |
|---|---|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | | | |
| 1963 | 248 | 5,432 | 64 | - | 4,518 | 841 | - |
| 1964 | 428 | - | 53 | - | 9,917 | 424 | - |
| 1965 | 41 | 9,312 | 48 | - | 8,416 | 1,195 | - |
| 1966 | 56 | 2,241 | 11 | - | 7,618 | 27 | - |
| 1967 | - | - | 2/ | 1 | 1,448 | 23 | 3,579 |
| | Value (1,000 dollars) | | | | | | |
| 1963 | 28 | 525 | 8 | - | 907 | 81 | - |
| 1964 | 64 | - | 11 | - | 1,341 | 46 | - |
| 1965 | 5 | 1,343 | 18 | - | 1,238 | 187 | - |
| 1966 | 5 | 250 | 4 | - | 1,066 | 10 | - |
| 1967 | - | - | 2 | 1 | 197 | 5 | 390 |
| | Unit value (cents per pound) | | | | | | |
| 1963 | 11.3 | 9.7 | 12.5 | - | 20.1 | 9.6 | - |
| 1964 | 15.0 | - | 20.8 | - | 13.5 | 10.8 | - |
| 1965 | 12.2 | 14.4 | 37.5 | - | 14.7 | 15.6 | - |
| 1966 | 8.9 | 11.2 | 36.4 | - | 14.0 | 37.0 | - |
| 1967 | - | - | 573.1 | 62.0 | 13.6 | 21.7 | 10.9 |

1/ There were no imports of rubber seed (item 175.42) in the period covered.

2/ Less than 500 pounds.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--Except for safflower seed and oil, there has been no significant domestic production in recent years of the material covered by this summary.

| Commodity | TSUS item |
|---|---|
| Sesame seed | 175.45 |
| Sesame oil: | |
| Rendered unfit for use as food | 176.49 |
| Other | 176.50 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States depends upon imports for virtually all its requirements of sesame seed and sesame oil. Domestic production of sesame seed is very small and that of sesame oil is negligible.

## Description and uses

Sesame seed is one of the oldest cultivated oilseed crops. The plant is especially adapted to warm climates and can usually be grown wherever cotton is found. Harvesting of sesame seed requires a considerable amount of hand labor because the seed pods ripen unevenly and because of the tendency of the ripe pods to shatter and lose their seeds. Adaptation of mechanical equipment to the harvesting of sesame seed has not been very successful and nonshattering varieties of sesame which have been developed produce a low yield of inferior quality seed. Because of the harvesting difficulty, sesame is grown chiefly in countries with an abundant labor supply.

Sesame is used either as whole seed or is crushed for its oil and meal. The whole seed is used primarily as a topping for bakery products, principally in competition with poppyseed, and as a filling in pastry and candy. In the United States, some low-grade seed is also used for birdseed.

When crushed, sesame seed yields an exceptionally high proportion of superior quality oil (about 47 percent) that is very resistant to turning rancid. In the United States edible sesame oil is almost exclusively used in health food. Lesser quantities are used as a carrier for fat soluble substances in pharmaceuticals. Inedible oil is used chiefly as a fixative in perfumes and as an ingredient in insect sprays. In Central and South America, Asia, and the Mediterranean countries sesame oil is widely used as a salad and cooking oil. The coproduct meal, being very rich in protein, is used in these areas both as livestock feed and as human food.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final Stage, effective Jan. 1, 1972 |
| 175.45 | Sesame seed | 0.59¢ per lb. | 0.45¢ per lb. | Free |
| | Sesame oil: | | | |
| 176.49 | Rendered unfit for use as food. | 4.5¢ per lb. | 4¢ per lb. | 2.2¢ per lb. |
| 176.50 | Other | 1.5¢ per lb. | 1.3¢ per lb. | 0.7¢ per lb. |

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT). Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

Sesame seed (item 175.45) becomes duty-free on January 1, 1972. Concessions amounting to a reduction of about 50 percent in duties were granted by the United States on sesame oil (items 176.49 and 176.50). The concessions are being put into effect in five annual stages.

The rates prior to January 1, 1968 on sesame seed (item 175.45) and inedible sesame oil (item 176.49) were established by the TSUS on August 31, 1963. Before that date imports of both materials had been duty-free under the provisions of paragraphs 1727 and 1732, respectively, of the Tariff Act of 1930, but had been subject to an import tax under the Internal Revenue Code. The rate on sesame seed reflected a concession granted by the United States in the GATT. The rate prior to January 1, 1968 on edible sesame oil (item 176.50) was derived from paragraph 54 of the Tariff Act of 1930 and reflected a concession granted by the United States in the GATT.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 175.45 | 4.2 |
| 176.49 | 1/ |
| 176.50 | 5.3 |

1/ No imports in recent years.

## U.S. consumption

Apparent U.S. consumption of sesame seed averaged about 28 million pounds annually during 1963-67 and was supplied almost entirely by imports (table 1). Over 90 percent of the total quantity consumed during this period was used as a topping for bakery products. The remainder was used in other food products or possibly was crushed for oil.

Annual consumption of sesame oil approximates imports. It ranged from 1.1 million pounds to 1.9 million pounds and averaged 1.4 million pounds annually during 1963-67 (table 2).

## U.S. producers and production

U.S. production of sesame seed is limited to a negligible amount grown in western Texas.

The U.S. Bureau of the Census reported U.S. production of sesame seed at 7.6 million pounds in 1959 and 1.1 million pounds in 1964. Production continued to decline after 1964 despite the fact that sesame has been included among the oil-bearing materials that can be produced in some years on acreage that is voluntarily diverted in excess of the required minimum diversion under the Government feed grain, wheat, and cotton programs. There is no significant domestic production of sesame oil.

## U.S. exports and imports

Neither sesame seed nor sesame oil is reported separately in U.S. export statistics. It is known that small quantities of seed grown in Texas have been shipped in recent years to Venezuela. U.S. exports of sesame oil are believed to be negligible or nil.

Imports of sesame seed average 28 million pounds annually during 1963-67. Nicaragua was the leading supplier with Mexico, Ethiopia, Guatemala, and El Salvador also supplying significant quantities in most years.

Imports of sesame oil averaged about 1.4 million pounds annually during 1963-67 and consisted almost entirely of edible oil. The much lower duty (currently 1.3 cents per pound) on edible sesame oil makes it uneconomical to import the inedible grade, on which the duty is currently 4 cents per pound. Imports of edible sesame oil entered mostly from Japan, Denmark, and Mexico (table 3). Insignificant quantities of inedible oil entered from Japan in 1963.

## Foreign production and trade

World sesame seed production totaled about 3.2 billion pounds in 1966. India, Mainland China, Mexico, and Sudan were the major producing countries, accounting for about two-thirds of total world output. Practically all of the world's sesame trade is in the form of seed and is small in relation to world production. World exports of approximately 395 million pounds in 1966 were only a little more than one-tenth of total world sesame seed production. Sudan and Nigeria were the leading exporters of sesame seed during 1963-66. India and Mainland China, as well as most other sesame growing countries, consume the bulk of the crop domestically. Italy and Japan were the major sesame seed importing nations during 1963-66, taking 40 percent of total world imports.

World trade in sesame oil is relatively negligible.

Table 1.--Sesame seed: U.S. imports for consumption by principal sources, 1963-67

| Country | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Nicaragua | 11,211 | 12,407 | 10,457 | 9,971 | 8,748 |
| Mexico | 5,092 | 3,406 | 544 | 1,774 | 11,035 |
| Guatemala | 2,625 | 2,468 | 2,592 | 1,000 | 4,966 |
| El Salvador | 1,050 | 1,584 | 951 | 4,438 | 246 |
| Ethiopia | 2,456 | 4,300 | 7,893 | 12,891 | 3,244 |
| Sudan | - | - | 2,421 | 1,851 | 3,049 |
| All other | 2,886 | 650 | 633 | 469 | 374 |
| Total | 25,320 | 24,815 | 25,491 | 28,202 | 35,854 |
| | Value (1,000 dollars) | | | | |
| Nicaragua | 2,181 | 2,256 | 1,959 | 2,068 | 1,811 |
| Mexico | 439 | 270 | 46 | 729 | 1,212 |
| Guatemala | 318 | 291 | 306 | 124 | 635 |
| El Salvador | 125 | 196 | 109 | 34 | 595 |
| Ethiopia | 269 | 476 | 784 | 1,436 | 348 |
| Sudan | - | - | 216 | 176 | 346 |
| All other | 362 | 113 | 79 | 71 | 54 |
| Total | 3,694 | 3,602 | 3,499 | 4,638 | 5,001 |
| | Unit value (cents per pound) | | | | |
| Nicaragua | 19.5 | 18.2 | 18.7 | 20.7 | 20.7 |
| Mexico | 8.6 | 7.9 | 8.5 | 41.1 | 11.0 |
| Guatemala | 12.1 | 11.8 | 11.8 | 12.4 | 12.8 |
| El Salvador | 11.9 | 12.4 | 11.5 | 13.8 | 13.4 |
| Ethiopia | 11.0 | 11.1 | 9.9 | 11.1 | 10.7 |
| Sudan | - | - | 8.9 | 9.5 | 11.3 |
| All other | 12.5 | 17.4 | 12.5 | 15.1 | 14.4 |
| Average | 14.6 | 14.5 | 13.7 | 16.4 | 13.9 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--The Census of Agriculture, U.S. Department of Commerce, reported a U.S. production of 1.1 million pounds in 1964. It is believed that domestic production declined considerably since then.

Table 2.--Sesame oil: U.S. imports for consumption, by type, 1963-67

| Year | Quantity | | Value | | Unit value | |
|---|---|---|---|---|---|---|
| | Edible | Inedible | Edible | Inedible | Edible | Inedible |
| | 1,000 pounds | 1,000 pounds | 1,000 dollars | 1,000 dollars | Cents per pound | Cents per pound |
| 1963 | 1,120 | 7 | 288 | 2 | 25.7 | 28.6 |
| 1964 | 1,386 | - | 337 | - | 24.3 | - |
| 1965 | 1,162 | - | 306 | - | 26.3 | - |
| 1966 | 1,404 | - | 365 | - | 26.0 | - |
| 1967 | 1,871 | - | 527 | - | 28.2 | - |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--Statistics are not available for production or exports of sesame oil; both are believed to have been negligible.

Table 3.--Sesame oil, edible (TSUS 176,50): U.S. imports for consumption, by principal sources, 1963-67

| Country | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Japan | 473 | 566 | 722 | 567 | 624 |
| Denmark | 503 | 383 | 429 | 832 | 691 |
| Mexico | 142 | 437 | - | - | 556 |
| All other | 2 | - | 11 | 5 | - |
| Total | 1,120 | 1,386 | 1,162 | 1,404 | 1,871 |
| | Value (1,000 dollars) | | | | |
| Japan | 137 | 164 | 197 | 164 | 205 |
| Denmark | 128 | 95 | 105 | 200 | 196 |
| Mexico | 23 | 78 | - | - | 126 |
| All other | 1/ | - | 4 | 1 | - |
| Total | 288 | 337 | 306 | 365 | 527 |
| | Unit value (cents per pound) | | | | |
| Japan | 29.0 | 29.0 | 27.3 | 28.9 | 32.9 |
| Denmark | 25.4 | 24.8 | 24.5 | 24.0 | 28.4 |
| Mexico | 16.2 | 17.8 | - | - | 22.7 |
| All other | 21.6 | - | 36.4 | 20.0 | - |
| Average | 25.7 | 24.3 | 26.3 | 26.0 | 28.2 |

1/ Less than $500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

| Commodity | TSUS item |
|---|---|
| Soybeans: | |
| Certified seed | 175.48 |
| Other | 175.49 |
| Soybean oil | 176.52 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States is the world's largest producer of soybeans, accounting in 1967 for about three-fourths of the total world output. In recent years over 25 percent of the domestic soybean crop and approximately 20 percent of the output of soybean oil was exported. Imports of soybeans and soybean oil are negligible.

## Description and uses

Soybeans, the seeds of an annual legume, rank along with corn as the major cash crops in the United States. The plant is cultivated in this country chiefly for the seed, the source of soybean oil and meal, although in a few areas it is planted for use as a hay crop. In countries of the Far East soybeans are consumed in large volume in the form of bean curd and sauce for human consumption.

Certified seed consists of quality seed of superior varieties grown and distributed to insure genetic identity and purity. In the United States the production of such seed is controlled by crop improvement associations composed of farmers and the staffs of State agricultural experiment stations. For imported seed to be classified as certified, the seed must have been verified by a responsible officer of the foreign government as having been grown and approved especially for use as seed.

Soybean oil is obtained from the seed of the soybean, mostly by solvent extraction. On the average, the seed yields about 18 percent of its weight in oil and 79 percent in soybean meal. The value of the oil obtained from a given quantity of soybeans usually represents less than half of the total value of both oil and meal. Soybean meal is used principally as a livestock feed (see summary on item 184.52).

Soybean oil is used principally in cooking and salad oils, shortening, and margarine. Lesser quantities are used primarily in the production of resins, plastics, paints, and varnishes. When used as a drying oil, it is generally mixed with oils of superior drying power.

In 1966 soybean oil accounted for 63 percent of all oils used in the United States in salad and cooking oils, 54 percent of all fats and oils used in shortening, and 76 percent of all fats and oils used in the production of margarine. In its various food uses soybean oil competes chiefly with cottonseed, corn, peanut, and safflower oils and lard. Soybean oil usually sells at a slightly lower price than these competing oils and a slightly higher price than lard and is available in much larger volume. It also competes to some extent with linseed, tung, fish, and safflower oils as a drying oil.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| | Soybeans: | | | |
| 175.48 | Certified seed | 1.4¢ per lb. | 1.3¢ per lb. | 1¢ per lb. |
| 175.49 | Other | 2¢ per lb. | 1.8¢ per lb. | 1¢ per lb. |
| 176.52 | Soybean oil | 45% ad val. | 40% ad val. | 22.5% ad val. |

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages). Concessions amounting to a reduction of about 30 percent in duty on item 175.48 and reductions amounting to 50 percent in duties were granted on items 175.49 and 176.52 by the United States; the concessions are being put into effect in five annual stages.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 175.48 | 7.2 |
| 175.49 | 7.4 |

Imports of soybeans under both classes have been confined to small shipments of special varieties, probably to be used for seed. Based on prevailing prices for commercial soybeans in the United States, the ad valorem equivalents of the duties would be much higher.

U.S. consumption

Annual domestic consumption of soybeans reached an alltime high of about 39 billion pounds in 1967 (table 1) and averaged 33 billion pounds during 1963-67. This was about twice as large as the annual average in the comparable 5-year period 1953-57. Aside from approximately 5 percent of the crop which is used for seed, virtually all of the domestic consumption of soybeans is crushed for oil and meal. Direct edible use and feeding to livestock are negligible outlets.

Consumption of soybean oil has similarly increased sharply during the past decade. Annual domestic consumption reached a peak of 4.8 billion pounds in 1966 (table 2), and during 1963-67 averaged 4.3 billion pounds. This represented an increase of about 70 percent over the average for the 5-year period a decade earlier. Of the total consumption of soybean oil during 1966, about 36 percent was used in cooking and salad oil, 33 percent in shortening, 25 percent in the manufacture of margarine, and most of the remainder in the manufacture of resins, plastics, and paint.

The large increase in the domestic consumption of soybean oil during the past decade is attributable entirely to an expansion of consumption for edible uses, especially cooking and salad oils. Important reasons for this were the availability of adequate supplies of soybean oil at low prices relative to those of the principal competing edible oils--cottonseed, corn, and peanut oils--and improvements made in recent years in refining techniques resulting in a better quality of soybean oil. In addition, there was little room for expansion into the field of inedible products because of new products that had been introduced to replace vegetable oils.

U.S. producers

In 1967 soybeans were harvested from 40 million acres in 30 States. The majority of the producers are located in Illinois, Iowa, Indiana, Missouri, and Arkansas. In 1967 aggregate production in these States accounted for about 60 percent of total U.S. soybean output.

Soybean oil is produced by about 133 oil mills, located principally in the Mississippi Valley. In addition, there are 67 oil refineries located mostly in the major metropolitan areas. As a rule, these refineries are operated in connection with plants producing shortening, margarine, and cooking and salad oils.

U.S. production and stocks

In the period 1963-67 annual U.S. production of soybeans averaged 49.8 billion pounds, valued at $2.1 billion. The average output during this period was more than twice as large as the average during the comparable 5-year period a decade earlier. The average number of acres from which soybeans were harvested during 1963-67 increased by 85 percent over the average in 1953-57 and the average yield per acre increased by about 20 percent. In 1967 the area harvested (about 40 million acres) and the output (over 58 billion pounds) were at record levels.

Annual domestic production of soybean oil averaged 5.4 billion pounds, valued at $550 million, during 1963-67. It was nearly twice as large as the average for the period 1953-57. All of the oil has been produced from domestic beans as there have been no imports of soybeans for oil extraction.

Stocks of soybeans as of the beginning of the year have increased from 32 billion pounds in 1963 to 44 billion pounds in 1967. The January 1, 1967, stocks were equivalent to three-fourths of production in 1966. Beginning of the year stocks of soybean oil reached a high of 1,024 million pounds in 1964, but declined to half that amount (511 million pounds) in 1967, equal to 9 percent of production in 1966.

Price-support operations

A price-support program is maintained for soybeans, though there is no such program for soybean oil. In effect, however, the market price of soybean oil (and meal) is supported by the price-support operations on the bean. A floor on the price of soybeans provides a floor on the price of products below which it becomes unprofitable to crush soybeans.

Under the price-support program, which is administered by the Commodity Credit Corporation (CCC), soybean growers may borrow money from the CCC with their crop as collateral, and may surrender the collateral whenever the market price of soybeans goes below the "loan rate," or support price. Alternatively, growers may contract with the CCC to sell their crop to the Corporation at the support price if they are unable to obtain a higher price elsewhere.

In the period 1963-65 the annual average loan rate was $2.25 per bushel (of 60 pounds), and in 1966-67 it was $2.50 per bushel. On the average, 11 percent of the soybean crop marketed during these five years was placed under price support--primarily under loan. During this period farmers redeemed virtually all of the beans placed under loan and sold them in the open market. CCC acquisition during 1963-67 amounted to less than one-half of one percent of the 1962-66 crops and no losses were sustained by CCC in disposing of these small acquisitions. The average prices received by farmers were significantly above the support rate for the crops of 1962-66. The average price received by farmers for the record 1967 crop was right at support level for the period September 1967-March 1968.

As of February 29, 1968, about one-fifth of the 1967 crop was under price-support loan--a substantially larger quantity than in any previous year.

In addition to the price-support program, substantial Government assistance has been afforded soybean growers through the export program for soybean oil as indicated in the following section on exports.

## U.S. exports

Soybeans are one of the United States' major agricultural exports. Annual exports of soybeans steadily increased from 10.5 billion pounds in 1963, valued at $472 million, to an alltime high of 15.8 billion pounds in 1967, valued at $772 million, and averaged 13.5 billion pounds, valued at $644 million, during the 5-year period. Exports in 1967 were equal to 27 percent of domestic production and were more than three times as large as in 1967.

The unusually large growth in U.S. exports of soybeans was due in part to the failure of Mainland China, the world's only other major soybean producer, to expand exports as the world demand for soybeans increased. U.S. exports have gone to many different countries; the principal destinations have been Japan, Canada, and Western European nations (table 3). In most importing countries, especially those of Western Europe, soybeans are as much in demand for their meal as for their oil.

Annual exports of soybean oil during 1963-67 ranged from 853 million pounds, valued at close to $126 million, to 1.2 billion pounds, valued at $163 million, and averaged 1.1 billion pounds, valued at $138 million. Annual average exports during this period were about 30 percent larger than the average for the preceeding 5-year period. The expansion of soybean oil exports was due largely to increased shipments under various Government programs to stimulate exports--primarily under Public Law 83-480, the Trade Development and Assistance Act of 1954, as amended. Of total exports of soybean oil during 1963-67, about 65 percent consisted of shipments under Government programs. Exports have gone to many countries; the principal markets were India, Pakistan, Tunisia, and Yugoslavia (table 4).

## U.S. imports

Imports of both soybeans and soybean oil have been negligible. The small shipments of soybeans in recent years consisted almost entirely of expensive seed and other special types of beans from various countries, including Japan, Nicaragua, and Canada. A negligible volume of imports recorded as soybean oil entered from Sweden in 1964, and from Canada in 1966 and 1967 (table 2).

## World production and trade

World production of soybeans amounted to about 84 billion pounds in 1966 and was one-fourth larger than the annual average output during 1960-65. The United States and Mainland China have long been the main producers and also dominate world trade. The United States has outranked China as a producer of soybeans since 1954, and the U.S. share in total world output has steadily increased to about three-fourths in 1967. In contrast, estimated soybean production of China has remained relatively stable in recent years and the share of China in world output has decreased from about half for the period 1950-54 to one-fifth in 1967.

The United States and China together have long accounted for about 98 percent of world exports and the proportion of the total supplied by the United States has been increasing. In 1965 the United States accounted for about 90 percent of the total. The United States has an equally dominant position in exports of soybean oil. China exports virtually no soybean oil, and the less than 10 percent of world exports accounted for by countries other than the United States are largely by countries that import U.S. soybeans for crushing.

Table 1.--Soybeans: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | | Exports 2/ | Beginning stocks 3/ | Apparent consumption |
|---|---|---|---|---|---|---|
| | | Certified seed | Other | | | |
| | Quantity (1,000 pounds) | | | | | |
| 1963-- | 41,950,000 | - | 27 | 10,482,000 | 31,752,000 | 29,744,000 |
| 1964-- | 42,055,000 | - | 23 | 12,570,000 | 33,476,000 | 31,428,000 |
| 1965-- | 50,736,000 | 4 | 10 | 13,660,000 | 31,533,000 | 31,478,000 |
| 1966-- | 55,709,000 | 13 | 20 | 14,743,000 | 37,132,000 | 34,659,000 |
| 1967-- | 58,362,000 | 36 | 16 | 15,805,000 | 44,438,000 | 39,063,000 |
| | Value (1,000 dollars) | | | | | |
| 1963-- | 1,755,000 | - | 4 | 472,000 | 4/ | 4/ |
| 1964-- | 1,836,000 | - | 4 | 567,000 | 4/ | 4/ |
| 1965-- | 2,151,000 | 5/ | 4 | 650,000 | 4/ | 4/ |
| 1966-- | 2,553,000 | 1 | 6 | 760,000 | 4/ | 4/ |
| 1967-- | 2,426,000 | 7 | 4 | 772,000 | 4/ | 4/ |
| | Unit value (cents per pound) | | | | | |
| 1963-- | 4.2 | - | 15.4 | 4.5 | 4/ | 4/ |
| 1964-- | 4.4 | - | 17.0 | 4.5 | 4/ | 4/ |
| 1965-- | 4.2 | 6.7 | 38.9 | 4.8 | 4/ | 4/ |
| 1966-- | 4.6 | 8.8 | 29.0 | 5.2 | 4/ | 4/ |
| 1967-- | 4.2 | 19.5 | 27.0 | 4.9 | 4/ | 4/ |

1/ Converted to pounds at 60 pounds per bushel.
2/ Does not include canned or prepared or preserved soybeans.
3/ Includes both "on" and "off" farm stocks.
4/ Not available.
5/ Less than $500.

Source: Production and stocks compiled from official statistics, U.S. Department of Agriculture; imports and exports compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Soybean oil: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | Exports | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| 1963 | 5,053,000 | - | 1,105,000 | 734,000 | 3,658,000 |
| 1964 | 4,944,000 | 2/ | 1,273,000 | 1,024,000 | 4,150,000 |
| 1965 | 5,236,000 | - | 1,202,000 | 544,000 | 4,203,000 |
| 1966 | 5,811,000 | 3 | 853,000 | 375,000 | 4,822,000 |
| 1967 | 5,992,000 | 5 | 1,129,000 | 511,000 | 4,720,000 |
| | Value (1,000 dollars) | | | | |
| 1963 | 450,000 | - | 120,000 | 3/ | 3/ |
| 1964 | 455,000 | 4/ | 140,000 | 3/ | 3/ |
| 1965 | 586,000 | - | 162,000 | 3/ | 3/ |
| 1966 | 680,000 | 4/ | 126,000 | 3/ | 3/ |
| 1967 | 576,000 | 1 | 143,000 | 3/ | 3/ |
| | Unit value (cents per pound) | | | | |
| 1963 | 8.9 | - | 10.9 | 3/ | 3/ |
| 1964 | 9.2 | 264.5 | 11.0 | 3/ | 3/ |
| 1965 | 11.2 | - | 13.5 | 3/ | 3/ |
| 1966 | 11.7 | 13.4 | 14.7 | 3/ | 3/ |
| 1967 | 9.6 | 14.7 | 12.7 | 3/ | 3/ |

1/ Value of production estimated by multiplying production by annual average price for crude oil in tanks at midwestern mills.
2/ Less than 500 pounds.
3/ Not available.
4/ Less than $500.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table 3.--Soybeans: U.S. exports of domestic merchandise by principal markets, 1963-67

| Market | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Japan | 2,781,759 | 2,836,985 | 3,142,188 | 3,882,489 | 3,600,850 |
| Netherlands | 1,100,493 | 1,623,489 | 1,739,336 | 2,100,509 | 2,308,001 |
| West Germany | 1,359,858 | 1,751,894 | 1,583,030 | 1,967,784 | 2,032,810 |
| Spain | 49,987 | 225,250 | 637,220 | 1,214,769 | 1,725,512 |
| Canada | 1,684,068 | 2,147,630 | 1,991,241 | 1,621,250 | 1,361,768 |
| Italy | 616,292 | 720,662 | 924,268 | 811,760 | 1,046,232 |
| Denmark | 831,377 | 547,702 | 798,216 | 777,674 | 901,009 |
| All other | 2,058,357 | 2,716,815 | 2,844,114 | 2,367,170 | 2,829,204 |
| Total | 10,482,191 | 12,570,425 | 13,659,614 | 14,743,405 | 15,805,086 |
| | Value (1,000 dollars) | | | | |
| Japan | 126,123 | 129,460 | 152,976 | 207,514 | 177,396 |
| Netherlands | 48,653 | 72,269 | 81,897 | 107,424 | 110,996 |
| West Germany | 60,207 | 78,033 | 75,636 | 99,181 | 98,992 |
| Spain | 2,112 | 10,354 | 31,020 | 61,206 | 85,668 |
| Canada | 74,950 | 94,609 | 91,602 | 85,426 | 63,091 |
| Italy | 28,052 | 31,974 | 42,899 | 40,365 | 50,892 |
| Denmark | 37,180 | 25,028 | 38,163 | 38,703 | 44,568 |
| All other | 94,242 | 125,165 | 135,873 | 120,086 | 139,951 |
| Total | 471,519 | 566,892 | 650,066 | 759,905 | 771,554 |
| | Unit value (cents per pound) | | | | |
| Average, all countries | 4.5 | 4.5 | 4.8 | 5.2 | 4.9 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 4.--Soybean oil: U.S. exports of domestic merchandise, by principal markets, 1963-67

| Market | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| India | 215 | 184 | 137,224 | 93,510 | 319,909 |
| Pakistan | 207,611 | 167,851 | 210,399 | 59,340 | 183,745 |
| Yugoslavia | 63,708 | 113,130 | 79,666 | 35,193 | 90,031 |
| Tunisia | 37,177 | 42,599 | 48,934 | 53,998 | 94,689 |
| South Vietnam | 7,106 | 9,204 | 3,255 | 24,523 | 32,145 |
| Brazil | 18 | 11,546 | 30,077 | 29,044 | 33,296 |
| Israel | 44,249 | 32,989 | 41,662 | 23,402 | 39,916 |
| Canada | 27,850 | 32,190 | 37,322 | 31,166 | 21,496 |
| Turkey | 121,614 | 108,404 | 4,575 | 19,715 | 8,115 |
| Spain | 253,122 | 111,376 | 128,251 | 8,743 | 6,288 |
| Iran | 40,281 | 86,034 | 80,781 | 74,982 | 5,568 |
| All other | 301,913 | 557,670 | 399,575 | 399,067 | 293,568 |
| Total | 1,104,864 | 1,273,177 | 1,201,721 | 852,683 | 1,128,766 |
| | Value (1,000 dollars) | | | | |
| India | 30 | 22 | 16,949 | 13,635 | 38,781 |
| Pakistan | 24,914 | 21,440 | 28,636 | 8,435 | 21,524 |
| Yugoslavia | 6,226 | 10,769 | 9,260 | 4,697 | 10,634 |
| Tunisia | 3,682 | 3,975 | 5,855 | 6,844 | 10,440 |
| South Vietnam | 1,211 | 1,412 | 604 | 4,579 | 5,462 |
| Brazil | 3 | 1,121 | 5,640 | 5,304 | 5,402 |
| Israel | 4,350 | 3,778 | 5,113 | 2,788 | 4,250 |
| Canada | 3,133 | 3,598 | 5,588 | 4,799 | 2,505 |
| Turkey | 14,288 | 12,753 | 823 | 2,788 | 1,315 |
| Spain | 24,640 | 13,219 | 16,284 | 1,608 | 1,094 |
| Iran | 4,213 | 8,702 | 9,857 | 8,865 | 706 |
| All other | 33,530 | 59,299 | 57,222 | 61,173 | 40,718 |
| Total | 120,220 | 140,088 | 161,831 | 125,515 | 142,831 |
| | Unit value (cents per pound) | | | | |
| Average, all countries | 10.9 | 11.0 | 13.5 | 14.7 | 12.7 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

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| Commodity | TSUS item |
|---|---|
| Sunflower seed | 175.51 |
| Sunflower oil: | |
| Rendered unfit for use as food | 176.54 |
| Other | 176.55 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA).

## U.S. trade position

The United States is neither a primary consumer nor a primary producer of sunflower seed or oil. Most of the domestic consumption of the seed is obtained from domestic sources, whereas, prior to 1967, that of sunflower oil had been supplied largely by imports. In 1967 there was a large expansion in domestic production of both seed and oil. There are no exports of either the seed or the oil.

## Description and uses

Sunflower seed is one of the world's major oil-bearing seeds. It is obtained from the sunflower, a hardy, drought-resistant plant that is well suited to areas where many other oil crops cannot be grown. Although primarily used as a source of oil, sunflower seed is also eaten as a nut in many countries. In the United States, prior to 1967, it was used largely for bird feed and human consumption. The varieties of sunflower seeds grown in the United States for bird feed and human food have a larger kernel than those grown for oil.

Typical varieties of sunflower seed formerly yielded about 28 percent oil, but plant improvement through hybrid breeding has increased oil yield to 40 percent and higher of the weight of the kernel and hull. Sunflower oil is used primarily as a salad or cooking oil and in the manufacture of margarine and shortening in competition with soybean, cottonseed, corn, and safflower oils. Denatured oil (rendered unfit for use as food) could be used in the manufacture of soap and as a drying oil, however, denatured oil is not known to be an article of commerce in the United States.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 175.51 | Sunflower seeds | 0.8¢ per lb. | 0.7¢ per lb. | 0.4¢ per lb. |
| | Sunflower oil: | | | |
| 176.54 | Rendered unfit for use as food. | 1.8¢ per lb. | 1.6¢ per lb. | 0.9¢ per lb. |
| 176.55 | Other | 1.8¢ per lb. + 8% ad val. | 1.6¢ per lb. + 7% ad val. | 0.9¢ per lb. + 4% ad val. |

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968 and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT). Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

The rate prior to January 1, 1968 on sunflower seed (item 175.51), effective since July 1, 1963, reflects a concession granted by the United States in the GATT. The rate prior to January 1, 1968 on denatured sunflower oil (item 176.54) was established by the TSUS on August 31, 1963. Before that date imports of denatured sunflower oil had been free of duty under the provisions of paragraph 1732 of the Tariff Act of 1930 but had been subject to an import tax under the Internal Revenue Code. The prior rate of 1.8 cents per pound, effective beginning July 1, 1963, was equivalent to the reduced import tax previously imposed and reflects a concession granted by the United States in the GATT. The compound rate for edible sunflower oil (item 176.55), effective from July 1, 1963 through December 31, 1967, reflected a concession granted by the United States in the GATT. The specific component of that rate--1.8 cents per pound--was derived from the import tax previously imposed under the Internal Revenue Code, whereas the ad valorem component--8 percent--carried forward the import duty imposed under paragraph 53 of the Tariff Act of 1930.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 175.51--------- | 8.8 |
| 176.54--------- | 1/ 11.4 |
| 176.55--------- | 18.6 |

1/ Based on imports in 1962, the most recent year of importation.

U.S. consumption

During 1963-67, estimated annual consumption of sunflower seed fluctuated between 33 million and 219 million pounds, reaching a peak in 1967 (table 1). The level of consumption during this period was more than twice as high as during the late 1950's. The rise in consumption was due to increased usage of sunflower seed for human consumption, to increased use as bird feed and, beginning in 1967, to use in crushing for oil and meal. Domestically-grown sunflower seed has supplied an increasing share of consumption in recent years. The proportion supplied by imports declined from 19 percent in 1963 to 4 percent in 1967.

Until 1967 annual consumption of sunflower oil approximated the relatively small volume of imports and probably was never in excess of one-half million pounds in the period 1963-66. With a big domestic production of oil in the 1967-68 marketing year, consumption probably soared to over 40 million pounds.

U.S. producers and production

Sunflower seed is grown in many States but commercial production is confined largely to the Red River Valley in North Dakota and Minnesota. The Census of Agriculture reported that 627 farms produced sunflower seed on 25,732 acres in 1959, and 707 farms produced sunflower seed on 38,745 acres in 1964. On the basis of State data from North Dakota and Minnesota, it is estimated that about 250,000 acres were devoted to sunflower seed in the United States in 1967. With a yield conservatively estimated at 840 pounds per acre, output of sunflower seed in 1967 was probably about 210 million pounds (table 1). This represented a large increase over previous years and is attributable to the planting of new high-oil varieties for crushing. About half of the 1967 output consisted of seeds for oil, and the output of oil from 3 crushing firms in Minnesota and North Dakota was probably in the order

of 40 to 50 million pounds. It is believed that domestic production of oil was nil or negligible in recent prior years.

U.S. exports and imports

Statistics on U.S. exports of sunflower seed and sunflower oil are not separately reported, but it is believed that exports of both have been negligible or nil.

During 1963-67 imports of sunflower seed fluctuated between 5.8 million pounds in 1964 and 15.7 million pounds in 1966. Most of the imported seed entered from Canada, although several African nations also supplied significant quantities in some years (table 2). Sunflower seed is not imported for crushing as the demand for sunflower oil is not sufficient to support the cost of the duty on seed.

Annual imports of sunflower oil have declined from 389,000 pounds in 1963 to 30,000 pounds in 1967. Imports have consisted almost exclusively of edible oil in retail-size packages. The Netherlands and Canada have been the principal sources of supply (table 3). Except for 21,000 pounds in 1962, there have been no imports of sunflower oil rendered unfit for use as food (denatured) in recent years.

Foreign production and trade

World production of sunflower seed has shown an upward trend during the 1960's. It increased irregularly from about 13 billion pounds in 1960 to 22 billion pounds in 1967. The Soviet Union has been the most important producing country, accounting for about two-thirds of total world output; Argentina and Eastern European countries accounted for most of the remainder.

Only about 3 percent of total world output of sunflower seed entered world trade in the form of seed during 1963-66. The Soviet Union and Bulgaria have been the principal exporting countries; together they accounted for 70 percent of total world exports. Italy, East Germany, West Germany, and Czechoslovakia have been the chief importing countries.

Annual world exports of sunflower oil averaged 723 million pounds during 1963-66 of which the Soviet Union accounted for two-thirds and other Eastern European countries and Argentina most of the rest. East Germany, West Germany, Italy, and Czechoslovakia have been the principal importers of sunflower seed. East Germany, West Germany, Spain, and Cuba have been the principal importers of sunflower seed oil. In 1966 and 1967 world market prices for sunflower seed and oil declined in response to increased supplies and sunflower seed and oil entered new markets in competition with U.S. exports of soybeans and soybean oil.

Table 1.--Sunflower seed: U.S. production, imports for consumption, and apparent consumption, 1963-67

(Quantity in thousands of pounds; value in thousands of dollars)

| Year | Production 1/ | Imports | Apparent consumption | Ratio (percent) of imports to consumption |
|---|---|---|---|---|
| | Quantity | | | |
| 1963 | 64,000 | 15,366 | 79,366 | 19 |
| 1964 | 27,718 | 5,788 | 33,506 | 17 |
| 1965 | 53,000 | 6,832 | 59,832 | 11 |
| 1966 | 80,000 | 15,696 | 95,696 | 16 |
| 1967 | 210,000 | 9,256 | 219,256 | 4 |
| | Value | | | |
| 1963 | 2,600 | 1,132 | 2/ | 2/ |
| 1964 | 1,202 | 530 | 2/ | 2/ |
| 1965 | 2,500 | 579 | 2/ | 2/ |
| 1966 | 4,400 | 1,333 | 2/ | 2/ |
| 1967 | 10,500 | 837 | 2/ | 2/ |
| | Unit value (cents per pound) | | | |
| 1963 | 4.2 | 7.4 | 2/ | 2/ |
| 1964 | 4.3 | 9.2 | 2/ | 2/ |
| 1965 | 4.8 | 8.5 | 2/ | 2/ |
| 1966 | 5.5 | 8.5 | 2/ | 2/ |
| 1967 | 5.0 | 9.0 | 2/ | 2/ |

1/ Estimated on basis of State data for Minnesota and North Dakota except 1964 which is from the Census of Agriculture.

2/ Not available on a meaningful basis since unit values of imports and production not comparable.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Note.--Exports were nil.

Table 2.--Sunflower seed: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Canada | 9,312 | 4,872 | 5,297 | 13,784 | 5,630 |
| Republic of South Africa | 3,780 | 716 | 484 | 1,394 | 2,224 |
| Kenya | 1/ 1,270 | 200 | 928 | 322 | 530 |
| Mozambique | 861 | - | - | - | 706 |
| Greece | 108 | - | - | - | - |
| All other | 35 | - | 123 | 196 | 166 |
| Total | 15,366 | 5,788 | 6,832 | 15,696 | 9,256 |
| | Value (1,000 dollars) | | | | |
| Canada | 808 | 463 | 482 | 1,171 | 553 |
| Republic of South Africa | 218 | 53 | 35 | 125 | 183 |
| Kenya | 1/ 63 | 14 | 55 | 27 | 49 |
| Mozambique | 35 | - | - | - | 40 |
| Greece | 6 | - | - | - | - |
| All other | 2 | - | 7 | 10 | 12 |
| Total | 1,132 | 530 | 579 | 1,333 | 837 |
| | Unit value (cents per pound) | | | | |
| Canada | 8.7 | 9.5 | 9.1 | 8.5 | 9.8 |
| Republic of South Africa | 5.8 | 7.4 | 7.2 | 9.0 | 8.2 |
| Kenya | 1/ 5.0 | 7.0 | 5.9 | 8.4 | 9.2 |
| Mozambique | 4.1 | - | - | - | 5.7 |
| Greece | 5.6 | - | - | - | - |
| All other | 5.7 | - | 5.7 | 5.1 | 6.7 |
| Average | 7.4 | 9.2 | 8.5 | 8.5 | 9.0 |

1/ Data for British East Africa.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Sunflower oil, edible: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Netherlands | 21 | - | 24 | 13 | 20 |
| Canada | 367 | 10 | 39 | 94 | 5 |
| Uruguay | - | 350 | - | - | - |
| West Germany | 1 | 2 | 1/ | 2 | 1 |
| Argentina | - | - | - | - | 4 |
| Total | 389 | 362 | 63 | 109 | 30 |
| | Value (1,000 dollars) | | | | |
| Netherlands | 3 | - | 4 | 2 | 2 |
| Canada | 54 | 2 | 8 | 19 | 1 |
| Uruguay | - | 41 | - | - | - |
| West Germany | 2/ | 1 | 2/ | 1 | 1 |
| Argentina | - | - | - | - | 1 |
| Total | 57 | 44 | 12 | 22 | 5 |
| | Unit value (cents per pound) 3/ | | | | |
| Netherlands | 12.8 | - | 17.4 | 15.4 | 13.3 |
| Canada | 14.8 | 16.7 | 20.6 | 20.3 | 25.5 |
| Uruguay | - | 11.8 | - | - | - |
| West Germany | 48.3 | 48.3 | 51.8 | 57.3 | 52.3 |
| Argentina | - | - | - | - | 15.4 |
| Average | 14.7 | 12.1 | 19.5 | 20.2 | 17.0 |

1/ Less than 500 pounds.
2/ Less than $500.
3/ Calculated on the unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--It is believed that there were no exports of sunflower oil during this period, and domestic production of oil was nil or negligible until the 1967-68 season when output was very large and in the order of 40 to 50 million pounds. There were no imports of inedible sunflower oil during this period.

| Commodity | TSUS item |
|---|---|
| Tung nuts | 175.54 |
| Tung oil | 176.60 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Tung nuts are produced in the United States in insufficient volume to meet the domestic demand for tung oil. The larger part of the domestic consumption of tung oil has been supplied by imports. Exports of domestic tung oil have been less than 1 million pounds annually in recent years.

## Description and uses

Tung nuts, which are used solely as the source of tung oil, are the fruit of either of two species of deciduous semitropical trees native to China (Aleurites fordi and A. montana). The nuts, usually about 2 inches in diameter, consist of a hull enclosing about five triangular thin-shelled seeds. The yield of oil from the nuts averages from 15 to 18 percent by weight, but may range up to 22 percent. The hulls and presscake, or pomace, from crushing are used as fertilizer.

Tung oil is a drying oil used principally in the manufacture of paint and varnish, particularly in products that require a quick drying and water-resistant base. Tung oil is also used in synthetic resins, printing ink, linoleum, linings for food and beverage containers and tank cars, automobile brakes and gaskets, insulation for electrical coils, synthetic fabrics, and wallboard. Tung oil is not suitable for use in food products.

Other important oils competitive with tung oil are linseed oil, soybean oil, fish oils, dehydrated castor oil, oiticica oil, and tall oil. The various drying oils, however, are not completely interchangeable. Drying oils are also often blended, modified, or used in conjunction with synthetic resins. The price of tung oil has generally been higher than the prices of the principal competing oils and synthetic resins.

## U.S. tariff treatment

The rates of duty applicable to imports are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| 175.54 | Tung nuts | Free |
| 176.60 | Tung oil | Free |

The duty-free treatment of imports of tung nuts and tung oil was originally provided for in the Tariff Act of 1930 and has not been bound in a trade agreement.

## U.S. consumption

Annual consumption of tung oil dropped markedly over a 15-year period following World War II. The average consumption of 33 million pounds annually in the years 1963-67 was but a third of that in the 5 years following World War II. The long-term decline in consumption of tung oil reflects largely the use of lower-priced drying oils and synthetic resins rather than tung oil in the manufacture of paints and varnishes. Fluctuating supplies and unstable prices have adversely affected tung oil usage. During the period 1963-67 the long-term decline in consumption was checked and consumption increased slightly from year to year stimulated by sharp declines in import and market prices (table 2).

In 1966, 70 percent of the tung oil was used in paints and varnishes, 18 percent in synthetic resins, and the remainder in the manufacture of a variety of other products.

## U.S. producers

Production of tung nuts in the United States is confined largely to an area about 100 miles wide, bordering the Gulf of Mexico and extending from eastern Texas to the Atlantic Ocean. In 1964, tung nuts were grown on about 1,500 farms primarily in Mississippi, Louisiana, and Florida. About 50 growers account for half of the output. The bulk of the tung nut crop is produced on these and other large specialized farms in conjunction with the production of livestock; on such farms tung nuts usually provide the principal source of income.

Virtually all tung nuts are crushed in the areas where they are grown. About a dozen growers, a few of them organized as corporations, operate mills for this purpose. Other growers depend on these mills for crushing on a custom basis.

U.S. production and stocks

Annual U.S. production of tung nuts in 1963-67 fluctuated widely from year to year. It ranged from 67 million pounds, valued at $2.0 million to 247 million pounds, valued at $7.6 million and averaged 147 million pounds, valued at $4.5 million (table 1). Production in this period averaged about 16 percent less than in the 5-year period immediately preceding. The wide variation in the annual output of tung nuts is caused primarily by periodic frost damage.

Domestic production of tung oil depends almost entirely on the availability of domestically grown tung nuts; nuts are seldom imported and virtually all those grown domestically are crushed for oil. Hence, the output of tung oil in the United States closely parallels production of the nuts. Annual production of tung oil during 1963-67 ranged from a low of 11.8 million pounds, valued at $4.4 million to 26.7 million pounds, valued at $6.9 million and averaged 20.5 million pounds, valued at $5.4 million (table 2). This was almost 30 percent less than the average for the preceding 5-year period.

Stocks of tung oil as of January 1 have been increasing in recent years, reflecting increased acquisitions by the Government in connection with the price-support program for domestic tung growers. Beginning stocks increased from 17.4 million pounds in 1963 to a record 63.7 million pounds in 1967 (table 2). Beginning stocks in 1968 show a further increase to 70.7 million pounds, most of which was domestic oil owned or controlled by the Government.

Price-support operations

During most of the years since 1942, the Government has maintained programs to support prices for domestically grown tung nuts and the tung oil derived therefrom. Since 1949, price support has been mandatory. Support may be maintained by means of purchases, loans, or other operations through the facilities of the Commodity Credit Corporation (CCC).

Under ordinary circumstances, the value of tung nuts is determined largely by the value of the end product, tung oil. It is more feasible to store the oil than the nuts. Growers of tung nuts may borrow money from the CCC with tung oil as collateral, and may surrender this collateral whenever the price of tung oil goes below the "loan rate" or support price. Alternatively, growers may enter into a purchase agreement with the CCC to sell a quantity of tung nuts, not in excess of a designated maximum, at the support price. No use has been made of such agreements in recent years.

In the years 1963-67 the annual loan rate has remained unchanged at 24 cents per pound of tung oil or $63.34 per ton of tung nuts. For several years prior to mid-1964, the average market price received for domestically produced tung oil exceeded the support price maintained by the Department of Agriculture and little tung oil was delivered to the Government. Beginning in mid-1964, import prices depressed domestic market prices below the support level and about three-fourths of the production in 1964 and 1965 passed into Government hands. In 1966 and 1967 virtually all of the output went into Government hands. The growers received 24 cents per pound in the latter 2 years while the CCC sold oil in the market competitively with imports at prices sometimes less than half the support price.

U.S. exports

No tung nuts have been exported from the United States; exports of tung oil have been relatively small in recent years (table 2). A substantial part, and in some years the major part, of exports consisted of reshipments of foreign merchandise. During 1963-67, reshipments accounted for 56 percent of the total exports. Canada has been the principal foreign market for U.S. exports.

U.S. imports

There have been no imports of tung nuts since 1956. On the other hand, imports of tung oil have been substantial and in 3 of the 5 years during 1963-67 imports were larger than domestic production. Annual imports in this period averaged 24 million pounds, valued at $5.2 million. Argentina has been the principal source of supply, with Paraguay and Brazil accounting for nearly all of the remainder.

Since December 17, 1950, imports of tung nuts and tung oil as well as all other products from Communist China and North Korea have been excluded from entry under the Foreign Assets Control Regulations of the Treasury Department (31 C.F.R., Part 500). On three occasions imports of tung oil and/or tung nuts have been restricted by means of quotas imposed by the U.S. Government. The first of these occurred during the period April 8 through June 30, 1953, when the United States imposed an import quota under the authority of section 104 of the Defense Production Act of 1950. Section 104 expired June 30, 1953. In investigations made in 1957, 1958, and 1960, under the provisions of section 22 of the Agricultural Adjustment Act, as amended (7 U.S.C. 624), the U.S. Tariff Commission determined in effect that tung oil and tung nuts were practically certain to be imported under such conditions and in such quantities as to interfere with the Government's price-support program for tung nuts and tung oil. After consideration of the Commission's

findings in those investigations, the President issued Proclomations Nos. 3200, 3236, and 3378, respectively, (22 F.R. 7265; 23 F.R. 2959; 25 F.R. 10449), establishing absolute quotas on U.S. imports of tung nuts and tung oil. 1/ The quotas were removed, effective May 2, 1962, by Presidential Proclamation No. 3471 (27 F.R. 4271).

## Foreign production and trade

No statistics are available on world production of tung nuts. Estimated annual world production of tung oil during 1963-67 ranged from 250 million to 319 million pounds and averaged 295 million pounds. China is the major producer, usually accounting for over two-thirds of total world output. Argentina, the United States, and Paraguay are the only other important producers. China, Argentina, and Paraguay provide most of the tung oil entering international trade.

Table 1.--Tung nuts: U.S. production, 1963-67

| Year | Quantity | Value | Unit value |
|---|---|---|---|
| | Million pounds | 1,000 dollars | Cents per pound |
| 1963 | 147 | 4,814 | 3.3 |
| 1964 | 247 | 7,607 | 3.1 |
| 1965 | 67 | 2,016 | 3.1 |
| 1966 | 166 | 4,804 | 3.0 |
| 1967 | 106 | 3,168 | 3.0 |

Source: Compiled from official statistics of the U.S. Department of Agriculture.

Note.--Exports and imports are nil.

1/ The Commission also made an investigation in 1954 in which it found that tung oil and tung nuts were practically certain to be imported under such conditions and in such quantities as to interfere with the Government's price-support program for tung nuts and tung oil. The President took no action on the 1954 recommendations of the Commission.

Table 2.--Tung oil: U.S. production, imports for consumption, exports of domestic and foreign merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | Exports | | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|---|
| | | | Domestic merchandise | Foreign merchandise | | |
| | Quantity (1,000 pounds) | | | | | |
| 1963 | 11,800 | 19,466 | 657 | 2,046 | 17,400 | 30,700 |
| 1964 | 24,500 | 29,149 | 939 | 1,019 | 15,300 | 31,300 |
| 1965 | 26,700 | 23,266 | 715 | 272 | 35,700 | 32,300 |
| 1966 | 14,300 | 30,373 | 553 | 249 | 52,400 | 32,600 |
| 1967 | 25,400 | 19,934 | 627 | 941 | 63,700 | 36,766 |
| | Value (1,000 dollars) | | | | | |
| 1963 | 4,354 | 6,280 | 226 | 731 | 2/ | 2/ |
| 1964 | 6,248 | 6,329 | 256 | 260 | 2/ | 2/ |
| 1965 | 6,915 | 5,270 | 191 | 73 | 2/ | 2/ |
| 1966 | 3,432 | 5,697 | 110 | 60 | 2/ | 2/ |
| 1967 | 6,096 | 2,302 | 93 | 143 | 2/ | 2/ |
| | Unit value (cents per pound) | | | | | |
| 1963 | 36.9 | 32.3 | 34.4 | 35.7 | 2/ | 2/ |
| 1964 | 25.5 | 25.8 | 27.3 | 25.5 | 2/ | 2/ |
| 1965 | 25.9 | 22.7 | 26.7 | 26.8 | 2/ | 2/ |
| 1966 | 3/ 24.0 | 18.8 | 19.9 | 24.1 | 2/ | 2/ |
| 1967 | 3/ 24.0 | 11.5 | 14.8 | 15.2 | 2/ | 2/ |

1/ Value of production estimated on basis of average price per pound in tanks, f.o.b., mills.

2/ Not available.

3/ Government support price. The actual market price is close to the unit value of imports.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

| Commodity | TSUS item |
|---|---|
| Corn oil | 176.03 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

U.S. requirements for corn oil are ordinarily met from domestic supplies. Imports have been relatively small in recent years; exports have been larger than imports.

## Comment

Corn oil, which is expressed from the germ of the corn kernel, is used mainly as a salad and cooking oil and in the manufacture of margarine. It competes principally with soybean, cottonseed, peanut, and safflower oils.

The column 1 (trade-agreement) rate of duty applicable to imports (see general headnote 3 in the TSUSA-1968) is as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| 176.03 | Corn oil | 10% ad val. |

This rate, in effect since June 6, 1951, reflects a concession granted by the United States in the General Agreement on Tariffs and Trade.

Annual domestic consumption of corn oil increased in recent years from about 377 million pounds in 1963 to 450 million pounds in 1967; consumption averaged 422 million pounds annually for the 5-year period (see table). There has been a strong demand for corn oil during recent years because it is relatively high in polyunsaturated fatty acids, a characteristic which has been sought by the diet-conscious consumer. In 1966 about 56 percent of the corn oil consumed in the United States was used in the manufacture of salad or cooking oils and about 40 percent was used in margarine.

Corn oil is a byproduct of the corn milling and distilling industries. It is produced by "wet" millers, or corn refiners, who manufacture starch, sirup, sugar, and feed; "dry" millers, who make breakfast

foods, cornmeal, hominy, flour, and feed; and distillers, who make whiskey, industrial alcohol, and feed. Wet millers have produced about 85 percent of the total supply in recent years. About 8 wet-milling companies produce corn oil in the United States in plants all located in the Midwestern States.

Domestic production of corn oil has shown an upward trend similar to consumption. A peak was reached in 1966, however, and then the volume dropped slightly in 1967.

Exports of corn oil were separately reported for the first time in official statistics for the year 1967, when they amounted to 12 million pounds. Available information indicates that exports had been somewhat larger during 1964-66. Canada has been the chief export market.

U.S. imports of corn oil reached a postwar high of about 25 million pounds in 1962. Imports were much less in subsequent years; none entered during 1964 or 1965. West Germany and the Netherlands have been the principal foreign suppliers. Since the domestic production of corn oil depends upon the output of corn starch, etc., temporary shortages in the domestic supply may at times occur owing to curtailments in the production of the main products or to a sudden increase in the demand. Imports help alleviate such shortages; they have come from countries where some of the producing plants are affiliated with an American company. It is probable that much of the imported corn oil originated in those plants.

The United States is by far the most important producer of corn oil and much of the output outside of the United States is by foreign affiliates of U.S. wet-milling firms in Western Europe, Argentina, and Brazil.

Corn oil.--U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | Exports | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| 1963 | 390,500 | 12,573 | 2/ 6,000 | 44,900 | 377,173 |
| 1964 | 413,900 | - | 3/ 15,000 | 64,800 | 423,600 |
| 1965 | 445,900 | - | 3/ 13,000 | 40,100 | 446,900 |
| 1966 | 446,600 | 10,665 | 3/ 16,000 | 26,100 | 413,865 |
| 1967 | 444,000 | 1,432 | 11,616 | 53,500 | 449,616 |
| | Value (1,000 dollars) | | | | |
| 1963 | 47,250 | 1,433 | 4/ | 4/ | 4/ |
| 1964 | 45,943 | - | 4/ | 4/ | 4/ |
| 1965 | 62,426 | - | 4/ | 4/ | 4/ |
| 1966 | 71,903 | 1,715 | 4/ | 4/ | 4/ |
| 1967 | 55,056 | 177 | 2,138 | 4/ | 4/ |
| | Unit value (cents per pound) | | | | |
| 1963 | 12.1 | 11.4 | 4/ | 4/ | 4/ |
| 1964 | 11.1 | - | 4/ | 4/ | 4/ |
| 1965 | 14.0 | - | 4/ | 4/ | 4/ |
| 1966 | 16.1 | 16.1 | 4/ | 4/ | 4/ |
| 1967 | 12.4 | 12.4 | 18.4 | 4/ | 4/ |

1/ Unit value and value based on average price for crude oil f.o.b. Midwestern mills as published by U.S. Department of Agriculture.

2/ Estimated.

3/ Based on imports of U.S. corn oil by Canada--the primary recipient country.

4/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

| Commodity | TSUS item |
|---|---|
| Olive oil: | |
| Rendered unfit for use as food | 176.28 |
| Other: | |
| Weighing with the immediate container under 40 pounds | 176.29 |
| Other | 176.30 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States imports almost all the olive oil it consumes, as only a relatively small part of the annual domestic olive crop is crushed for oil.

## Description and uses

Olive oil is obtained from ripe olives which, when crushed, yield from 15 to 20 percent of oil by weight. A first pressing yields virgin olive oil, a high-quality edible oil which needs no further refining. Additional pressings yield a lower grade oil that is also edible but requires further refining. The press cake remaining, when subjected to solvent extraction, yields an inedible olive oil known as "sulfur olive oil" or olive oil foots. The term sulfur olive oil originated because formerly carbon bisulfide was commonly employed as the solvent. The term "foots," as applied to olive oil, thus refers to a low-grade oil and has a different meaning than when applied to other oils where foots ordinarily are byproduct residues from refining. Olive oil foots is mostly sold for industrial uses, although some of it is refined, bleached, and deodorized and blended with higher-grade olive oil for edible use.

Edible olive oil is used principally as a salad and cooking oil. For such purposes it is preferred by many consumers although its price is high relative to competing oils (principally soybean, cottonseed, and corn oils). Inedible olive oil, which includes olive oil foots, low-grade oil which has been denatured, and oil pressed from unsound olives, is used mostly in the manufacture of castile and other toilet soaps and in wool combing.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| | Olive oil: | |
| 176.28 | Rendered unfit for use as food---------- | Free |
| | Other: | |
| 176.29 | Weighing with the immediate container under 40 pounds. | 3.8¢ per lb. on contents and container |
| 176.30 | Other---------- | 2.6¢ per lb. |

The duty-free treatment of imports of inedible olive oil (item 176.28) was originally provided for in the Tariff Act of 1930 and was bound, effective March 9, 1950, as a concession granted by the United States in the General Agreement on Tariffs and Trade (GATT). The rate on olive oil imported in small containers (item 176.29), in effect since July 1, 1963, reflects a concession granted by the United States in the GATT. The concession became operative in two annual stages. The rate on olive oil imported in bulk (item 176.30), effective January 1, 1964, reflects a concession granted by the United States in the GATT. The existing rates of duty are not ones on which the United States gave concessions in the sixth round of trade negotiations under the GATT.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 176.29------- | 10.7 |
| 176.30------- | 8.9 |

U.S. consumption

Annual apparent consumption of olive oil during 1963-67 ranged from 36 million to 69 million pounds and averaged 52 million pounds. (table 1). Imports supplied about 97 percent of total consumption. Virtually all of the olive oil consumed was for edible use.

Despite an expanding population, the average annual level of consumption of olive oil has been relatively stable since 1950. In large

part, this is attributable to the high price of olive oil relative to prices of competing oils such as soybean, cottonseed, and corn oils.

U.S. producers and production

Olive oil is produced by 4 or 5 mills located in California in the olive-growing areas of the Sacramento and San Joaquin Valleys. Only one of these mills carries processing beyond the first-pressing stage. The other mills sell their press cake for extraction of oil for soap. One mill also produces canned olives. In contrast to the Mediterranean area, where most of the olives are crushed for oil, crushing of olives in the United States is limited to cull, damaged, and surplus olives. During 1963-67 about 10 percent of the domestic olive crop was crushed for oil; the remainder was marketed as canned olives or as fresh olives for pickling. Prices received by growers for olives used for canning have been substantially higher than those received for olives used for crushing. In 1966 the average return to growers for olives used for canning was around $250 per ton, whereas that for olives used for crushing was $53 per ton.

Annual U.S. production of olive oil has fluctuated between 100,000 and 2.2 million pounds annually during 1963-67, and averaged 1.3 million pounds. This was about one-half of the average during the preceding 5-year period. The lower level of production during 1963-67 compared with this earlier period was a continuation of the downward trend that began shortly after World War II as imports of olive oil returned to near prewar levels.

U.S. exports and imports

Export statistics for olive oil are not separately reported, but exports are known to be nil or negligible.

Imports of olive oil ranged from 34 million to 67 million pounds annually during 1963-67 and averaged 51 million pounds. Imports are subject to wide fluctuations because of variations in the olive crop from year to year. Olive trees tend to bear heavily every other season and, in addition, may be greatly affected by unfavorable weather.

Virtually all of the imports consisted of edible oil; imports of inedible oil accounted for only 2 percent of the total entered during 1963-67. Over half of the edible oil entered in bulk containers weighing 40 pounds or more; the remainder entered in containers weighing under 40 pounds (table 2). Olive oil imported in bulk containers was supplied principally by Spain (table 3). Such oil was repackaged in retail-size containers under domestic brands by 20 to 30 firms located mostly in the

New York City area. Imports of olive oil in smaller containers entered in retail-size packages, chiefly from Italy and Spain. Imports of inedible olive oil, which averaged only 773,000 pounds during 1963-67, came mostly from Portugal, Spain, and other Mediterranean countries.

Foreign production and trade

World production of olive oil ranged from 2.0 billion to 3.8 billion pounds annually during 1963-67. The peak was reached during the 1963-64 crop year. Spain, Italy, and Greece are the leading olive oil producers, accounting for over three-fourths of total world production in 1966 and 1967. Most of the other Mediterranean Basin countries also produce significant quantities of olive oil but did not usually approach the levels of the three leading producers.

Most olive oil is consumed in the countries in which it is produced; only about 15 percent entered international trade in 1963-66. Spain, Tunisia, Turkey, Italy, and Portugal were the leading exporters. Italy, although a leading exporter, imports more than she exports and is the world's major olive oil importer, accounting for a little less than half of total world imports in 1963-66. France, the United States, and Brazil have accounted for much of the remainder.

Table 1.--Olive oil: U.S. production, imports for consumption, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | | | | Apparent consumption |
|---|---|---|---|---|---|---|
| | | Edible | | Inedible | Total | |
| | | In packages less than 40 pounds | In packages 40 pounds or more | | | |
| | Quantity (1,000 pounds) | | | | | |
| 1963 | 2,250 | 16,653 | 16,285 | 702 | 33,640 | 35,890 |
| 1964 | 1,860 | 25,537 | 41,383 | 158 | 67,078 | 68,938 |
| 1965 | 1,140 | 18,250 | 26,220 | 962 | 45,432 | 46,572 |
| 1966 | 1,200 | 21,913 | 26,690 | 817 | 49,420 | 50,620 |
| 1967 | 2/ 100 | 25,230 | 30,779 | 1,228 | 57,237 | 57,337 |
| | Value (1,000 dollars) | | | | | |
| 1963 | 845 | 6,703 | 5,846 | 124 | 12,613 | 3/ |
| 1964 | 603 | 8,181 | 9,681 | 38 | 17,900 | 3/ |
| 1965 | 420 | 6,325 | 7,234 | 126 | 13,685 | 3/ |
| 1966 | 460 | 7,493 | 7,544 | 136 | 15,173 | 3/ |
| 1967 | 2/ 38 | 8,946 | 8,978 | 153 | 18,077 | 3/ |
| | Unit value (cents per pound) | | | | | |
| 1963 | 37.6 | 40.3 | 35.9 | 17.7 | 37.5 | 3/ |
| 1964 | 32.4 | 32.0 | 23.4 | 24.1 | 26.7 | 3/ |
| 1965 | 36.8 | 34.7 | 27.6 | 13.1 | 30.1 | 3/ |
| 1966 | 38.3 | 34.2 | 28.3 | 16.6 | 30.7 | 3/ |
| 1967 | 38.1 | 35.5 | 29.2 | 12.5 | 31.6 | 3/ |

1/ Consists entirely of edible olive oil. Production of inedible olive oil in the United States has been negligible. Quantity of production calculated assuming 15 percent oil yield from olives crushed as reported by the U.S. Department of Agriculture. Value of production estimated by applying New York wholesale price of imported olive oil in drums to calculated production.

2/ Preliminary estimate.

3/ Not meaningful.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Note.--Domestic exports are known to be small. The ratio (percent) of total quantity of imports to consumption during this period was as follows: 1963, 93.7; 1964, 97.3; 1965, 97.6; 1966, 97.2, and 1967, 97.4.

Table 2.--Olive oil, edible, in packages weighing less than 40 pounds: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Italy | 10,515 | 17,908 | 13,173 | 15,174 | 17,440 |
| Spain | 5,528 | 7,023 | 4,467 | 5,989 | 6,719 |
| Portugal | 114 | 218 | 123 | 267 | 430 |
| Greece | 325 | 211 | 330 | 289 | 474 |
| France | 114 | 150 | 113 | 177 | 132 |
| All other | 57 | 27 | 44 | 17 | 35 |
| Total | 16,653 | 25,537 | 18,250 | 21,913 | 25,230 |
| | Value (1,000 dollars) | | | | |
| Italy | 4,509 | 5,974 | 4,623 | 5,427 | 6,436 |
| Spain | 1,961 | 1,992 | 1,478 | 1,800 | 2,136 |
| Portugal | 40 | 76 | 49 | 102 | 165 |
| Greece | 125 | 77 | 120 | 98 | 154 |
| France | 45 | 50 | 40 | 60 | 42 |
| All other | 23 | 12 | 15 | 6 | 13 |
| Total | 6,703 | 8,181 | 6,325 | 7,493 | 8,946 |
| | Unit value (cents per pound) | | | | |
| Italy | 42.9 | 33.4 | 35.1 | 35.8 | 36.9 |
| Spain | 35.5 | 28.4 | 33.1 | 30.1 | 31.8 |
| Portugal | 35.1 | 34.9 | 39.8 | 38.2 | 38.4 |
| Greece | 38.5 | 36.5 | 36.4 | 33.9 | 32.5 |
| France | 39.5 | 33.3 | 35.4 | 33.9 | 31.8 |
| All other | 40.4 | 44.4 | 34.1 | 52.3 | 37.1 |
| Average | 40.3 | 32.0 | 34.7 | 34.2 | 35.4 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Olive oil, edible, in packages of 40 pounds or more: U.S. imports for consumption, by principal sources, 1963-67

| Country | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Spain | 9,912 | 36,461 | 12,556 | 22,647 | 24,094 |
| Tunisia | 1,825 | 2,377 | 5,966 | 1,357 | 3,648 |
| Italy | 503 | 1,051 | 2,966 | 1,450 | 1,265 |
| Turkey | 228 | 935 | 3,065 | 48 | 1,020 |
| France | 134 | 190 | 383 | 185 | 209 |
| Argentina | 984 | - | - | - | 37 |
| Greece | 2,561 | 189 | 466 | 29 | 1 |
| All other | 138 | 178 | 818 | 1/ 974 | 2/ 505 |
| Total | 16,285 | 41,383 | 26,220 | 26,690 | 30,779 |
| | Value (1,000 dollars) | | | | |
| Spain | 3,544 | 8,416 | 3,569 | 6,373 | 7,080 |
| Tunisia | 699 | 554 | 1,503 | 366 | 1,029 |
| Italy | 243 | 326 | 883 | 442 | 407 |
| Turkey | 79 | 225 | 822 | 14 | 284 |
| France | 120 | 71 | 128 | 62 | 66 |
| Argentina | 303 | - | - | - | 8 |
| Greece | 798 | 44 | 110 | 7 | 3/ |
| All other | 60 | 45 | 219 | 1/ 280 | 2/ 104 |
| Total | 5,846 | 9,681 | 7,234 | 7,544 | 8,978 |
| | Unit value (cents per pound) | | | | |
| Spain | 35.8 | 23.1 | 28.4 | 28.1 | 29.4 |
| Tunisia | 38.3 | 23.3 | 25.2 | 27.0 | 28.2 |
| Italy | 48.3 | 31.0 | 29.8 | 30.5 | 32.2 |
| Turkey | 34.6 | 24.1 | 26.8 | 29.2 | 27.8 |
| France | 89.6 | 37.4 | 33.4 | 29.8 | 31.6 |
| Argentina | 30.8 | - | - | - | 21.6 |
| Greece | 31.2 | 23.3 | 23.6 | 24.1 | 37.9 |
| All other | 43.5 | 25.3 | 26.8 | 28.7 | 20.6 |
| Average | 35.9 | 23.4 | 27.6 | 28.3 | 29.2 |

1/ Includes 815 thousand pounds, valued at 236 thousand dollars from Israel.

2/ Includes 220 thousand pounds, valued at 58 thousand dollars from Tanzania.

3/ Less than $500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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| Commodity | TSUS item |
|---|---|
| Peanut oil | 176.38 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Virtually all U.S. consumption of peanut oil is supplied by domestic production. Imports have been nil or negligible except in years of short domestic peanut crops. Exports of peanut oil have been substantial. The trade position of the United States with respect to peanut oil reflects largely the availability of Government surplus peanuts as a raw material.

## Description and uses

Peanut oil (also called groundnut oil) is obtained by crushing peanuts (items 145.20 and 145.48). Peanut-oil cake and meal, obtained as byproducts, are used as livestock feed. In the United States, peanut oil is produced from low-grade or "cull" peanuts, and from peanuts acquired by the Government under its price-support program for peanuts and diverted by the Commodity Credit Corporation (CCC) to oil crushers.

Peanut oil is used primarily as a cooking or salad oil. Lesser quantities are used, after hydrogenation, in shortening and margarine. Small quantities of inedible grades are used in soap making. Peanut oil enjoys a certain consumer preference because of its characteristic odor and its freedom from nonoil substances, but soybean, cottonseed, and corn oil can be utilized in nearly all of its uses.

## U.S. tariff treatment

The column 1 (trade-agreement) rate of duty applicable to imports (see general headnote 3 in the TSUSA-1968) is as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| 176.38 | Peanut oil | 4¢ per lb. |

This rate was provided for in the Tariff Act of 1930 under the provisions of paragraph 54; it is not a trade-agreement rate. The existing rate of duty is not one on which the United States gave a concession in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. On the basis of imports in 1962 (in

more recent years imports, if any, have been much smaller) the 4-cent rate was equivalent to 29.2 percent ad valorem.

U.S. consumption

Consumption of peanut oil ranged from 64 million to 172 million pounds annually during 1963-67 (see table). The average annual consumption during this period was 104 million pounds. Over two-thirds of the total was utilized as a salad or cooking oil.

U.S. producers and production

Peanut oil is produced in the United States by 17 peanut crushers, most of whom produce the oil incidental to their operation as shellers of peanuts for the edible nut trade. The crushers are mostly located in the peanut growing areas located in the Southeastern States, Texas, and Oklahoma.

Domestic production of peanut oil in each year during 1963-67 was larger than in the preceding year. Output reached a peak of 176 million pounds in 1967 and averaged 141 million pounds annually during the 5-year period. Peanut oil is obtained in the United States entirely from domestic peanuts. During the crop years beginning August 1, 1963-66, on the average, 18 percent of the oil was produced from off-grade nuts and 82 percent from nuts diverted to oil crushers by the Government under its price-support program for peanuts.

Under existing legislation, price support for peanuts is mandatory (see summary on item 145.20). There is no price-support program for peanut oil. During the crop years beginning August 1, 1963-66, the CCC acquired about 25 percent of the domestic production of peanuts which it has sold both in the United States for crushing and abroad. The quantity sold to domestic crushers averaged 378 million pounds (farmers' stock basis) annually during the 4-year period. Such sales have been made with competitive bidding by crushers and/or exporters at prices close to those for cull peanuts which, being suitable only for crushing, command a price substantially lower than the support price for regular peanuts. In 1966 the CCC sold surplus peanuts to domestic crushers at $106 per ton compared with a support price for average grade farmers' stock peanuts of $227.

U.S. exports

During the years 1963-67 exports of peanut oil fluctuated between 6 million and 81 million pounds annually with the low being in 1967.

The large exports in 1964 and 1965 were a response to the prevailing attractive prices for peanut oil in the export market. There were also large quantities of Government-owned surplus peanuts released for crushing in those years. The Dominican Republic, the United Kingdom, and the Netherlands have been the principal markets.

U.S. imports

U.S. imports of peanut oil have been relatively unimportant except in years of a short domestic crop of peanuts because of drought, or because of an exceptionally large demand for the oil. The latter was the cause for imports of 1.3 million pounds in 1961 and the relatively short domestic peanut crop in 1961 was the reason for imports of 4.3 million pounds in 1962. In 1962 the principal sources of supply were the Republic of South Africa, Nigeria, and Argentina. In all other recent years imports of peanut oil have been either nil or negligible. The small imports of a few thousand pounds in 1964-67 consisted of high-priced oil packaged in consumer-size tins from France.

Between June 1953 and April 1961, a fee of 25 percent ad valorem was imposed on imports of peanut oil in excess of 80 million pounds per year. In an investigation made in 1953 under the provisions of section 22 of the Agricultural Adjustment Act, as amended (7 U.S.C. 624), the U.S. Tariff Commission determined that peanut oil was practically certain to be imported under such conditions and in such quantities as to interfere materially with the Government's price-support program for peanuts. After consideration of the Commission's findings, the President, on June 8, 1953, issued Proclamation No. 3019 (3 C.F.R. 1949-1953 Comp. p. 189) establishing the fee. The import fee was never operative, for in no subsequent years did imports even approach the fee quota. The import fee was subsequently terminated by Presidential Proclamation No. 3402, dated April 5, 1961 (26 F.R. 2959), following an investigation made by the U.S. Tariff Commission under the provisions of section 22 of the Agricultural Adjustment Act, as amended.

Foreign production and trade

Peanuts are grown throughout the tropical and milder portions of the temperate zones. Next to soybeans they are the second most important source of vegetable oil. In contrast to the primary use of peanuts as food in the United States, in most countries the nuts are used predominantly for the production of oil. Estimated annual world production of peanut oil averaged about 6.4 billion pounds during 1964-66. India, China, Nigeria, and Senegal have been the leading foreign producing countries.

World exports of peanut oil averaged almost 800 million pounds during 1964 and 1965. Senegal and Nigeria were by far the leading exporting countries and together in 1965 accounted for three-fifths of total world exports. France, the United Kingdom, and the Netherlands were the leading importing countries.

Exports of peanuts for crushing (in oil equivalent) exceed the exports of peanut oil. European countries, particularly France, are the major importers of peanuts for crushing.

Peanut oil.--U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | Exports | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| 1963 | 99,100 | - | 9,145 | 12,000 | 71,855 |
| 1964 | 123,300 | 1 | 81,328 | 30,100 | 64,073 |
| 1965 | 138,500 | 2 | 61,125 | 8,000 | 64,377 |
| 1966 | 166,800 | 4 | 14,995 | 21,000 | 148,909 |
| 1967 | 176,400 | 4 | 5,942 | 23,900 | 171,662 |
| | Value (1,000 dollars) | | | | |
| 1963 | 11,496 | - | 1,121 | 2/ | 2/ |
| 1964 | 15,906 | 1 | 10,009 | 2/ | 2/ |
| 1965 | 18,698 | 1 | 9,620 | 2/ | 2/ |
| 1966 | 22,852 | 1 | 2,388 | 2/ | 2/ |
| 1967 | 20,992 | 1 | 829 | 2/ | 2/ |
| | Unit value (cents per pound) 3/ | | | | |
| 1963 | 11.6 | - | 12.3 | 2/ | 2/ |
| 1964 | 12.9 | 58.9 | 12.3 | 2/ | 2/ |
| 1965 | 13.5 | 29.1 | 15.7 | 2/ | 2/ |
| 1966 | 13.7 | 24.9 | 15.9 | 2/ | 2/ |
| 1967 | 11.9 | 23.4 | 14.0 | 2/ | 2/ |

1/ Unit values are prices for crude peanut oil, tank cars, f.o.b. Southeastern mills and values are calculated from price and quantity.
2/ Not available.
3/ Unit value of imports calculated on unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

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| Commodity | TSUS item |
|---|---|
| Fish-liver oils: | |
| Cod | 177.02 |
| Other | 177.04 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

U.S. consumption of fish-liver oils is supplied almost entirely by imports. There is no domestic production of cod-liver oil and the output of other fish-liver oils is small.

## Description and uses

This summary covers fish-liver oils as distinct from fish oils (see summary on items 177.12 to 177.26). Fish-liver oils are obtained from the fresh livers of various species of fish and are a source of vitamins A and D. Until the development of synthetic vitamin A after World War II, fish livers were virtually the only source of raw material for the manufacture of this vitamin. Fish-liver oils continue to be a competitive source of vitamin A, but synthetic vitamin D can be produced so cheaply that there is no demand for fish-liver oil for this purpose.

Cod-liver oil (item 177.02) includes liver oils from fish of the family Gadidae, including cod, pollock, haddock, hake, and cusk. All other fish-liver oils are classed in TSUS item 177.04

Cod-liver oil and walleye pollock-liver oil, which together comprise virtually all imports under item 177.02, are the most important fish-liver oils in the United States. These oils are somewhat similar and are used as a nutritional supplement in animal feeds and as a pharmaceutical for humans. Pharmaceutical-grade oil has been further refined to remove undesirable fatty acids and to obtain acceptable taste and color. "Other fish-liver oils" (item 177.04) includes mainly high-potency shark-liver oils for animal-feed supplements.

Fish-liver oils vary greatly in their vitamin A content and the price of the oil varies accordingly. Among the ones having low potency are those from the livers of cod and walleye pollock, whereas among those having a high potency are those from the livers of certain sharks. The average value per pound of the low-potency oils in item 177.02 is much less than for the generally high-potency oils in item 177.04. For example, in 1967 the average unit value of entries

of cod-liver oil was 14.1 cents per pound compared with a unit value of $1.51 per pound for other fish-liver oils. Synthetic high-potency vitamins have virtually taken over the market formerly held by high-potency fish-liver oils. The small volume of high-potency oils entered under item 177.04 are generally diluted after they enter the United States and used as low-potency oils.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| | Fish-liver oils: | | | |
| 177.02 | Cod | Free | 1/ | 1/ |
| 177.04 | Other | 5% ad val. | 4% ad val. | 2.5% ad val. |

1/ Duty-free status not affected by the trade conference.

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT). Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

The duty-free treatment of cod-liver oil (item 177.02), which was originally provided in the Tariff Act of 1930, was bound in a concession granted by the United States in the GATT, effective January 1, 1948. A concession amounting to a reduction of 50 percent was granted by the United States on other fish-liver oils (item 177.04); the duty is being reduced in three stages, with the final reduction going into effect on January 1, 1972.

Before August 31, 1963, "other" fish-liver oils were classified for duty purposes under various paragraphs of the Tariff Act of 1930, depending upon whether or not they were drugs. If classified as "drugs in a crude state not advanced in condition or value," imports of "other" fish-liver oils were duty-free under the provisions of paragraph 1669 of the original Tariff Act of 1930. If classified as

"drugs advanced in condition or value," they were dutiable under the provisions of paragraph 34 of the 1930 act. Halibut-liver oil was dutiable at 5 percent ad valorem and fish-liver oils other than halibut were dutiable at 4 percent ad valorem. If not classified as drugs, they were dutiable under the provisions of paragraph 52 of the Tariff Act of 1930 at 10 percent ad valorem. All fish-liver oils, except cod-liver and halibut-liver oils, when imported were also subject to an import tax under the Internal Revenue Code. The import tax amounted to 0.85 cents (0.75 cents if product of Cuba) for imports of shark-liver oil, 1.25 cents (1.2 cents if product of Cuba) per pound for imports of fish-liver oils other than shark-liver oil classifiable under paragraphs 1669 and 34, and 3 cents per pound for imports classifiable under paragraph 52. Under the TSUS the various rates, including the preferential ones for Cuba, were merged into a single rate of 5 percent ad valorem.

U.S. consumption, production, and trade

U.S. consumption of fish-liver oils has greatly declined since the 1940's when synthetic vitamins became commercially available (synthetic vitamins are discussed in the summary on items 437.82 to 437.86. Consumption averaged about 5.4 million pounds annually during 1963-67 and was virtually all supplied by imports. The U.S. fishing industry has discontinued the sale of livers to oil processors.

In 1967 two plants processed fish-liver oils in the United States, compared with 22 such plants in 1949. One of the plants is located in New York and the other in Massachusetts. These firms import fish-liver oils and further refine them. For both plants, the sale of fish-liver oils represents only a minor part of their income.

Annual domestic production of fish-liver oil declined from 52,000 pounds in 1961 to less than half that amount (23,000 pounds) in 1964, the last year that production data was published. There are virtually no exports of fish-liver oils.

U.S. imports of fish-liver oils decreased steadily during the period 1963-67 and in 1967 amounted to about 3 million pounds, almost 50 percent less than average annual imports of the preceding 4-year period (see accompanying table). Imports of cod-liver oil in recent years have been supplied principally by Norway, Iceland, Japan, and Portugal. Imports of other fish-liver oils have entered almost entirely from Japan.

Fish-liver oils: U.S. imports for consumption, by principal sources, 1963-67

(Quantity in thousands of pounds; value in thousands of dollars)

| Year and Kind | Quantity | Value | |
|---|---|---|---|
| | | Total | By principal sources |
| 1963: | | | |
| Cod-liver oil | 7,386 | 869 | Japan, 389; Norway, 155; Iceland, 142; Portugal, 97. |
| Other fish-liver oils 1/ | 176 | 349 | Japan, 339; Norway, 3. |
| 1964: | | | |
| Cod-liver oil | 7,197 | 857 | Japan, 302; Norway, 157; Canada, 127; Portugal, 110; Iceland, 102. |
| Other fish-liver oils | 145 | 279 | Japan, 274; Canada, 5. |
| 1965: | | | |
| Cod-liver oil | 4,550 | 545 | Portugal, 131; Iceland, 102; Japan, 99; Norway, 96. |
| Other fish-liver oils | 100 | 83 | Japan, 79; Canada, 4. |
| 1966: | | | |
| Cod-liver oil | 4,170 | 518 | Portugal, 115; Norway, 111; Japan, 81. |
| Other fish-liver oils | 88 | 133 | Japan, 130; Canada, 3. |
| 1967: | | | |
| Cod-liver oil | 2,910 | 410 | Norway, 165; Iceland, 141; Japan, 55. |
| Other fish-liver oils | 115 | 174 | Japan, 167; Canada, 5. |

1/ Includes undetermined amounts of fish oil other than fish-liver oil.

Source: Compiled from official statistics of the U.S. Department of Commerce.

| Commodity | TSUS item |
|---|---|
| Fish oils other than liver oils: | |
| Anchovy oil | 177.12 |
| Cod oil | 177.14 |
| Shark oil | 177.16 |
| Eulachon oil | 177.20 |
| Herring oil | 177.22 |
| Menhaden oil | 177.24 |
| Other | 177.26 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

Based on volume of production and imports, the only important fish oils herein covered are menhaden oil, herring oil, and cod oil. The United States is the world's only source of menhaden oil; exports of menhaden oil during 1965-67 averaged 62 percent of domestic output. For herring oil the United States depends in part upon imports. Domestic consumption of cod oil is entirely supplied by imports.

## Description and uses

This summary covers all fish oils except oils from fresh fish livers (see summary on items 177.02 to 177.04). Fish oils considered herein are obtained from the whole bodies of fish caught primarily for oil and from the trimmings and viscera of fish caught for edible use. The coproducts of fish oil--fish meal and solubles--are used in animal feed (see summary on item 184.55).

Anchovy oil (item 177.12) is obtained mainly from the anchovy caught off California. Anchoveta oil, a major fish oil in international trade from Peru (commercially known to the U.S. trade as anchovy oil) would enter the United States under this class if imported.

Cod oil (item 177.14) is obtained from the decomposed or slightly decomposed livers of the cod and related species of fish. It is used principally in the processing of leather where it competes with various other marine animal oils.

Shark oil (item 177.16) is derived from the bodies and decomposed livers of various species of shark. The oil is used for industrial purposes.

Eulachon oil (item 177.20) is obtained from the eulachon or candlefish of the North Pacific and inflowing streams. It is believed to be a minor food item of some Indians.

Herring oil (item 177.22) is obtained in the United States from the sea herring of Alaska and Maine. It also includes pilchard or sardine oil which is obtained from the pilchard caught principally off the coast of California. Herring and sardine oils are consumed principally in the manufacture of paints and varnishes, soap (after hydrogenation), and in a number of miscellaneous industrial products. Herring and sardine oils compete principally with other fish oils and with inedible tallow and greases.

Menhaden oil (item 177.24) is derived from the menhaden, a fish not generally considered suitable for human consumption. Almost all of the menhaden caught is reduced to oil, meal, and solubles. In the United States the oil is consumed primarily in the manufacture of paint, linoleum, leather, and other miscellaneous products. In Europe and Canada it also is used in the production of margarine in competition with other edible oils. In the United States, in compliance with food laws, fish oils are not included in margarine or other edible products containing vegetable or animal oils.

Other fish oils (item 177.26) include the oils of various species of fish, such as tuna, salmon, mackerel, and redfish (ocean perch). For the most part they are byproducts of food fish processing and are produced from fish trimmings and viscera. The oils are used in industrial products, such as lubricants and paints.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| | Fish oils other than liver oils: | | | |
| 177.12 | Anchovy oil | 1.5¢ per lb. + 10% ad val. | 1.3¢ per lb. + 9% ad val. | 0.75¢ per lb. + 5% ad val. |
| 177.14 | Cod oil | Free | 1/ | 1/ |
| 177.16 | Shark oil | 0.85¢ per lb. + 4% ad val. | 0.75¢ per lb. + 3.5% ad val. | 0.4¢ per lb. + 2% ad val. |
| 177.20 | Eulachon oil | 1.5¢ per lb. | 1¢ per lb. | 0.7¢ per lb. 2/ |
| 177.22 | Herring oil | 0.92¢ per lb. | 0.8¢ per lb. | 0.46¢ per lb. |
| 177.24 | Menhaden oil | 3-1/3¢ per lb. | 3¢ per lb. | 1.7¢ per lb. |
| 177.26 | Other | 1.5¢ per lb. + 10% ad val. | 1.3¢ per lb. + 9% ad val. | 0.7¢ per lb. + 5% ad val. |

1/ Duty-free status not affected by the trade conference.
2/ The final rate for this item will become effective Jan. 1, 1971, at the fourth stage.

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT). Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

The duty-free treatment of imports of cod oil (item 177.14) was provided for in the original Tariff Act of 1930 and has been bound since January 1, 1948, in a concession granted by the United States in

the GATT. Concessions amounting to a reduction of about 50 percent in duties were granted by the United States on all other items; the concessions are being put into effect in five annual stages for all items except item 177.20 which is being reduced in two stages--the final reduction going into effect on January 1, 1971.

The rates in existence prior to January 1, 1968, for the fish oils, other than cod oil, covered by this summary were established by the TSUS on August 31, 1963. Before August 31, 1963, the fish oils were classified for duty purposes under paragraphs 1730 and 52 1/ of the previous tariff schedules and had also been subject to import taxes under the Internal Revenue Code. The revised compound rates on anchovy oil (item 177.12), shark oil (item 177.16), and other fish oils (item 177.26) were the same rates that existed before August 31, 1963; the specific parts of the duty corresponded to the import taxes formerly imposed and the ad valorem parts carried forward the regular duties. The revised rate on eulachon oil (item 177.20) corresponded to the former import tax. The revised rates on herring oil (item 177.22) and menhaden oil (item 177.24) were equivalent to the combined taxes and duties except that the unit of measure became the pound whereas formerly the duty was based on the gallon.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 177.12 | 1/ |
| 177.16 | 1/ |
| 177.20 | 2/ 1.9 |
| 177.22 | 16.6 |
| 177.24 | 1/ |
| 177.26 | 3/ 20.3 |

1/ No imports in recent years.
2/ Based on imports in 1965, the most recent year of importation.
3/ Based on imports in 1966, the most recent year of importation. The entry reported for this item in 1967 was a misclassification.

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1/ Fish oils classifiable as drugs were formerly entered under par. 1669 of the Tariff Act of 1930 if "drugs in a crude stage not advanced in condition or value," and under par. 34 of the 1930 act if "drugs advanced in condition or value."

U.S. consumption

Except for menhaden, herring, and cod oils, the fish oils covered by this summary are of minor commercial importance in the United States. Annual domestic consumption of the oils here covered is estimated at about 75 million pounds in recent years. Consumption consisted predominantly (two-thirds) of menhaden oil, much of the remainder having been cod and herring oils. All of the menhaden oil and most of the herring oil were supplied from domestic sources whereas all of the cod oil consumed was imported.

U.S. producers and production

In 1967 fish oils were produced in the United States and its outlying possessions in 68 plants, of which 30 produced menhaden oil. All of the menhaden oil producing plants were located on the east and gulf coasts, where the fish are caught. Of the other fish oil producing plants, 12 (including 1 which also produces menhaden oil) were located on the east and gulf coasts, 17 on the Pacific coast, 4 in the Midwest, 3 in Puerto Rico, and 2 were located in American Samoa. The plants on the east coast recover oil from various whole fish not readily marketed as food fish and from fish trimmings from filleting plants. The plants on the Pacific coast produce oil from fish viscera left over from the canning of tuna, mackerel, and salmon; and produce oil and meal from whole anchovies, herring, and silver hake. The plants in the Midwest produce alewife and carp oil in small meal-and-oil operations. The plants in Puerto Rico and American Samoa produce tuna oil from cannery trimmings.

Aggregate domestic production of fish oils declined from a record high of 255 million pounds in 1961 to 120 million pounds in 1967. The bulk of the domestic output consisted of menhaden oil which, during 1963-67, accounted for about 90 percent of total fish oil production (table 1). Menhaden oil is produced in commercial quantities only in the United States. Annual output during 1963-67 ranged from 101 million to 175 million pounds and averaged 149 million pounds, representing a decrease of about 20 percent compared with the average for the preceding 5-year period 1958-62.

Among the other fish oils produced in the United States herring oil, as a rule, exceeds all others in volume. The remainder of the domestic output consisted mostly of tuna and mackerel oils.

Fish oil is a major source of income for the processors of meal and oil from menhaden and herring, accounting for roughly 30 percent and 25 percent of the total end-product value respectively, although the proportion varies considerably from year to year depending on relative prices for oil and meal.

Inasmuch as fish oil is a byproduct or coproduct, production varies because of factors other than the demand for fish oil--chief among these is the demand for fish meal. With menhaden and herring, another major factor is the natural supply of fish in the sea. In 1967 the catches of menhaden and herring were down because of an apparent shortage of fish available. The menhaden industry as a whole is geared for catching and processing that species only. In the case of herring, some of the fishing operations are shifted to food fish when that becomes more profitable. Some herring oil processors use imported as well as domestic raw herring and thus tend to stabilize production.

## U.S. exports and imports

U.S. exports of fish oil consist almost entirely of menhaden oil. Statistics do not separately report exports of other fish oils, which are probably negligible. Exports of menhaden oil during 1965-67 averaged about 84 million pounds a year and were equal to 62 percent of domestic output. Exports of menhaden oil were unusually large in 1963 and 1964 following a substantial price decline that had been brought on by a record output of the oil in 1961 and the accumulation of large inventories. The reduced price made menhaden oil more competitive with other edible oils and encouraged European manufacturers of margarine to shift to a greater use of menhaden oil. The Netherlands, Sweden, the United Kingdom, and West Germany have been the major export markets for U.S. menhaden oil (table 2).

Imports of the fish oils herein covered have greatly fluctuated from year to year during 1963-67. They averaged 9 million pounds annually in the 5-year period. Imports have consisted mostly of cod oil which in 1963-67 accounted for about two-thirds of total imports (table 3). The only other fish oil that has regularly been imported is herring oil. Canada has been the principal foreign supplier of both cod oil and herring oil (table 4).

Imports of anchovy (or anchoveta) oil ceased in 1963 following a change in classification which resulted in a higher rate of duty. Anchovy oil was originally entered as herring oil but pursuant to a ruling by the Bureau of Customs was subsequently classified as anchovy oil, whereupon imports ceased. When classed as herring oil, at a lower rate of duty, anchovy oil from Peru was entering California in competition with menhaden oil from the east coast mainly because of lower shipping costs from Peru.

## World production and trade

Estimated aggregate annual world output of fish oils other than fish-liver oils increased almost steadily from 1.2 billion pounds in

1963 to 1.8 billion pounds in 1966. Norway, Peru, Iceland, and the United States were the principal producing countries, accounting for over two-thirds of total world production of fish oils in 1966.

Almost three-fifths of the world output of fish oils other than fish-liver oils entered international trade. Peru, Iceland, Norway, and the United States, the major exporting countries, together accounted for about three-fourths of total world exports in 1966. Western Europe was the principal market.

Table 1.--Fish oils other than fish-liver oils: U.S. production, imports for consumption, and exports of domestic merchandise 1963-67

| Year | Production | | | | Imports 1/ | Exports 2/ |
|---|---|---|---|---|---|---|
| | Total | Menhaden oil | Herring oil | Other fish oils | | |
| | Quantity (1,000 pounds) | | | | | |
| 1963 | 183,673 | 167,635 | 5,709 | 10,329 | 8,116 | 262,342 |
| 1964 | 177,015 | 157,730 | 10,354 | 8,931 | 11,347 | 151,469 |
| 1965 | 192,773 | 175,204 | 8,528 | 9,041 | 5,539 | 101,116 |
| 1966 | 162,660 | 144,198 | 7,962 | 10,500 | 12,320 | 76,518 |
| 1967 | 119,623 | 101,384 | 5,676 | 14,899 | 6,526 | 76,386 |
| | Value (1,000 dollars) | | | | | |
| 1963 | 10,676 | 9,853 | 293 | 530 | 467 | 15,636 |
| 1964 | 13,077 | 11,735 | 785 | 557 | 829 | 13,096 |
| 1965 | 14,683 | 13,241 | 748 | 694 | 534 | 8,966 |
| 1966 | 12,496 | 11,037 | 589 | 827 | 974 | 7,289 |
| 1967 | 7,335 | 4,618 | 309 | 730 | 495 | 4,560 |
| | Unit value (cents per pound) | | | | | |
| 1963 | 5.8 | 5.9 | 5.1 | 5.1 | 5.8 | 6.0 |
| 1964 | 7.4 | 7.4 | 7.6 | 6.2 | 7.3 | 8.6 |
| 1965 | 7.6 | 7.6 | 8.8 | 7.7 | 9.6 | 8.9 |
| 1966 | 7.7 | 7.7 | 7.4 | 7.9 | 7.9 | 9.5 |
| 1967 | 6.1 | 4.6 | 5.4 | 4.9 | 7.6 | 6.0 |

1/ Imports consist mostly of cod and herring oils.

2/ Figures for 1965-67 represent menhaden oil only; data for previous years include small amounts of other fish oils and fish-liver oils.

Source: Production compiled from official statistics of the U.S. Department of Interior; imports and exports compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Menhaden oil: U.S. exports of domestic merchandise, by principal markets, 1963-67 1/

| Market | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Netherlands | 25,847 | 31,452 | 16,803 | 24,465 | 37,076 |
| Sweden | 73,559 | 70,948 | 45,186 | 6,600 | 20,415 |
| United Kingdom | 86,709 | 2,284 | 12,253 | 14,330 | 6,614 |
| West Germany | 39,456 | 25,832 | 12,436 | 9,375 | 8,135 |
| Belgium | 33 | - | 3,222 | 5,001 | 2,860 |
| Norway | 23,744 | 11,499 | 4,519 | 11,448 | - |
| All other | 12,994 | 9,454 | 6,697 | 5,299 | 1,286 |
| Total | 262,342 | 151,469 | 101,116 | 76,518 | 76,386 |
| | Value (1,000 dollars) | | | | |
| Netherlands | 1,644 | 2,853 | 1,470 | 2,243 | 2,177 |
| Sweden | 4,121 | 5,901 | 4,066 | 594 | 1,182 |
| United Kingdom | 5,142 | 214 | 1,063 | 1,364 | 500 |
| West Germany | 2,293 | 2,179 | 1,086 | 1,006 | 477 |
| Belgium | 4 | - | 286 | 422 | 135 |
| Norway | 1,508 | 1,026 | 395 | 1,168 | - |
| All other | 924 | 923 | 600 | 492 | 89 |
| Total | 15,636 | 13,096 | 8,966 | 7,289 | 4,560 |
| | Unit value (cents per pound) | | | | |
| Netherlands | 6.4 | 9.1 | 8.7 | 9.2 | 5.9 |
| Sweden | 5.6 | 8.3 | 9.0 | 9.0 | 5.8 |
| United Kingdom | 5.9 | 9.4 | 8.7 | 9.5 | 7.6 |
| West Germany | 5.8 | 8.4 | 8.7 | 10.7 | 5.9 |
| Belgium | 13.3 | - | 8.9 | 8.4 | 4.7 |
| Norway | 6.4 | 8.9 | 8.7 | 10.2 | - |
| All other | 7.1 | 9.8 | 9.0 | 9.3 | 6.9 |
| Average | 6.0 | 8.6 | 8.9 | 9.5 | 6.0 |

1/ Before 1965, exports include small amounts of other fish oils and fish-liver oils. Data for 1965-67 is for menhaden oil only.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Anchovy, cod, herring, and other fish oils: U.S. imports for consumption, 1963-67

| Year | Anchovy 1/ | Cod | Herring | Other fish oils | Total |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| 1963 | 2,022 | 5,369 | 270 | 455 | 8,116 |
| 1964 | - | 7,438 | 3,909 | - | 11,347 |
| 1965 | - | 4,766 | 771 | 2 | 5,539 |
| 1966 | - | 4,903 | 7,415 | 2 | 12,320 |
| 1967 | - | 6,100 | 426 | - | 6,526 |
| | Value (1,000 dollars) | | | | |
| 1963 | 93 | 343 | 15 | 16 | 467 |
| 1964 | - | 495 | 334 | - | 829 |
| 1965 | - | 456 | 78 | 2/ | 534 |
| 1966 | - | 455 | 519 | 2/ | 974 |
| 1967 | - | 471 | 24 | - | 495 |
| | Unit value (cents per pound) | | | | |
| 1963 | 4.6 | 6.4 | 5.6 | 3.5 | 5.8 |
| 1964 | - | 6.7 | 8.5 | - | 7.3 |
| 1965 | - | 9.6 | 10.1 | 25.7 | 9.6 |
| 1966 | - | 9.3 | 7.0 | 14.6 | 7.9 |
| 1967 | - | 7.7 | 5.6 | - | 7.6 |

1/ Consists of imports from Peru recorded as herring oil in official statistics. The Bureau of Customs ruled in January 1963 that such oil was anchovy oil classifiable as fish oil, n.s.p.f.
2/ Less than $500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--The only imports of eulachon oil for the years shown were in 1965 when 413 pounds, valued at $323 entered from Canada.

Table 4.--Cod oil and herring oil: U.S. imports for consumption, by principal sources, 1964-67

| Kind | Quantity (1,000 pounds) | Value (1,000 dollars) | |
|---|---|---|---|
| | | Total | By principal sources |
| | | 1964 | |
| Cod oil | 7,438 | 495 | Canada, 443; Norway, 32; Iceland, 6. |
| Herring oil | 3,909 | 334 | Canada, 334. |
| | | 1965 | |
| Cod oil | 4,766 | 456 | Canada, 389; Iceland, 21; Norway, 21. |
| Herring oil | 771 | 78 | Canada, 78. |
| | | 1966 | |
| Cod oil | 4,903 | 455 | Canada, 370; Norway, 37; Iceland, 18. |
| Herring oil | 7,415 | 519 | Iceland, 447; Canada, 71. |
| | | 1967 | |
| Cod oil | 6,101 | 472 | Canada, 391; Poland, 44; Norway, 22. |
| Herring oil | 426 | 24 | Canada, 23; Mexico 1. |

Source: Compiled from official statistics of the U.S. Department of Commerce.

| Commodity | TSUS item |
|---|---|
| Seal oil | 177.30 |
| Marine animal oils, other | 177.40 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

There has been no U.S. production or importation of seal oil since 1962. Both production and imports of "marine animal oils, other" have been insignificant in recent years.

## Description and uses

Seal oil is obtained from the blubber of seals. It is similar to cod oil in characteristics, and like cod oil, has been used in the United States, largely in leather processing. In Europe and Canada seal oil also has been used in making soap.

The oils covered by "other marine animal oils" are those from marine mammals other than whales and seals (see summary on items 177.32, 177.34, and 177.36). The only item of commercial significance is believed to be sea turtle oil; it is used in cosmetics.

## U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 177.30 | Seal oil | 1.9¢ per lb. | 1.7¢ per lb. | 0.95¢ per lb. |
| 177.40 | Marine animal oils, other. | 1.5¢ per lb. + 10% ad val. | 1.35¢ per lb. + 9% ad val. | 0.75¢ per lb. + 5% ad val. |

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

The rates in effect prior to January 1, 1968, were established by the TSUS on August 31, 1963. Before that date, imports of both seal oil and other marine oils had been dutiable under the provisions of paragraph 52 of the Tariff Act of 1930 and had been subject to import taxes under the Internal Revenue Code. The rates established by the TSUS in 1963 were derived from both the import taxes and the regular duties imposed under the tariff act.

The ad valorem equivalent of the duty on seal oil, based on imports entered in 1962, the most recent year of such imports, was 42.5 percent. The ad valorem equivalent of the duty on other marine animal oils entered in 1967 was 12.3 percent. 1/

Comment

The marine animal oils included in this summary are of minor commercial importance. Until 1962, domestic seal oil was obtained from one Government-operated plant at the fur seal breeding grounds in the Pribilof Islands of Alaska, where there is Government-supervised killing of the protected seal herds. This plant discontinued its byproduct oil and meal operation in 1962 and there has been no domestic production of seal oil since. Except for a minute output of turtle oil by one firm in New Jersey, there has been no domestic production of other marine animal oils, nor have there been any exports of the oils included in this summary.

Imports of seal oil have been small and irregular. The most recent imports consisted of 54,000 pounds, valued at $2,000, in 1960 and of 6,000 pounds, valued at less than $500, in 1962. Both shipments came from Canada.

The only U.S. imports of "other marine animal oils" reported in recent years were 65,000 pounds, valued at $5,000 in 1965, and 53,000 pounds, valued at $6,000, in 1967. Research shows, however, that a sizeable share of the total consisted of cod and shark oil, and it also shows that some turtle oil had been included in statistics for fish oils. It is believed that during 1963-67 "other marine animal oils," consisting primarily of turtle oil, entered only in 1967, and amounted to about 15,000 pounds, valued at $10,000. In terms of value, the United Kingdom was the principal supplier, with Mexico accounting for most of the remainder.

1/ Estimated on the basis of reconstructed statistics on imports of turtle oil.

| Commodity | TSUS item |
|---|---|
| Sperm oil: | |
| Crude | 177.32 |
| Other than crude | 177.34 |
| Whale oil (except sperm) | 177.36 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States depends upon imports for the bulk of domestic sperm oil requirements. Domestic production of crude sperm oil is small relative to imports and a predominant part of the domestic output of refined sperm oil is derived from imported crude oil. Other whale oils are of minor commercial importance in the United States and consumption is virtually all supplied from domestic sources. Some of the refined sperm oil derived from imported crude oil is regularly exported.

## Description and uses

Whale oils are of two major types--sperm oil and whale oil other than sperm oil. The latter is hereafter referred to as whale oil or other whale oil. They differ in that sperm oil consists cheifly of inedible liquid waxes, whereas whale oil generally is a true fat which may be used for edible purposes. A minor distinct type of whale oil--blackfish-head oil--is an exception; it has chemical characteristics somewhat similar to sperm oil which preclude it from being an edible product.

Crude sperm oil is obtained from the head cavities, blubber, meat, and bones of the sperm whale. The crude oil has little or no use as such, but ordinarily is processed to produce refined sperm oil and stearin in the ratio of about 85 percent refined oil to 15 percent stearin by volume. The stearin is a byproduct--a good deal of which is exported at less than the price of crude sperm oil. Some of the stearin is further processed in this country into spermaceti wax (see summary on item 494.06).

Refined sperm oil is predominantly a liquid wax, consisting of two-thirds wax and one-third glycerides. Consequently, it differs from other fats and oils. It is valued because of its freedom from gumming; its stability, in that it absorbs very little oxygen from the atmosphere; and its wide tolerance for variations in temperature. The major uses of sperm oil in the United States are as an ingredient in automatic transmission oils, and in the processing of leather. It

also has many minor uses such as in lubricants, buffing compounds, and in metals manufacture. Sperm oil is not competitive to any great extent with other fats and oils in any of its applications and there are no substitutes for most of its uses.

Whale oil is obtained from the blubber and body tissues of the baleen whales, a group which includes virtually all whales of commercial significance except the sperm whale and blackfish whale. It is nearly pure glyceride and therefore has no value as a lubricating oil; neither is it usable as a drying oil. The principal uses of whale oil in the United States are in animal feed and in soap, in competition with tallow, whereas most of that consumed in Europe goes into margarine and shortening.

Also classified as whale oil is blackfish-head oil, which is obtained from the head cavity and jaw glands of the blackfish or pilot whale. It is a high-priced oil, unique in its chemical composition. Blackfish-head oil is used principally in combination with other specialized oils as a lubricant for precision instruments, especially for those which are exposed to extreme cold temperatures or which must stand idle for long periods of time. These desirable, unique properties are found to a lesser degree in the head oils of various other whales, porpoises, and dolphins; but commercial usage in the United States is generally confined to oil from the blackfish found in the waters around Newfoundland.

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| | Sperm oil: | | | |
| 177.32 | Crude | 0.065¢ per lb. | 0.03¢ per lb. | 0.03¢ per lb. |
| 177.34 | Other | 0.47¢ per lb. | 0.4¢ per lb. | 0.2¢ per lb. |
| 177.36 | Whale oil (except sperm). | 1.26¢ per lb. | 1¢ per lb. | 0.6¢ per lb. 1/ |

1/ The final rate for this item will become effective Jan. 1, 1970.

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1:12

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

Concessions amounting to a reduction of about 50 percent in duties were granted by the United States on all items included in this summary; the concession on crude sperm oil (item 177.32) became effective January 1, 1968; the concession on other sperm oil (item 177.34) is being put into effect in five annual stages; and the concession on whale oil (except sperm) (item 177.36) is being reduced in two stages--the final reduction going into effect on January 1, 1970.

The rates prior to January 1, 1968, were established by the TSUS on August 31, 1963. Before that date the rates on the oils covered by this summary were in terms of cents per gallon under the provisions of paragraph 52 of the Tariff Act of 1930, and imports of whale oil (item 177.36) had also been subject to an import tax under the Internal Revenue Code.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 177.32 | 0.9 |
| 177.34 | 5.3 |
| 177.36 | 1.2 |

U.S. consumption

Annual apparent domestic consumption of sperm oil during 1963-67 ranged from 43 million to 80 million pounds and averaged 56 million pounds (table 1). Consumption of sperm oil depends to a large extent upon the manufacture of automatic transmissions for motor vehicles and on the manufacture of good-quality leather--the two principal uses. Domestic requirements for sperm oil were supplied almost entirely by imports, as domestic production of crude oil during 1963-67 was equal to only 1 percent of apparent consumption. The major part of the imports, however, consisted of crude oil, all of which was refined in the United States.

Annual domestic consumption of other whale oils during 1963-67 ranged between 0.9 million and 2.8 million pounds and averaged 1.6 million pounds, virtually all of which was obtained from domestic sources (table 2).

Sperm oil has been classified as a strategic and critical material and as such has been stockpiled by the U.S. Government. At the end of 1967 the national stockpile amounted to about 23 million pounds.

## U.S. producers and production

In 1967 crude sperm and whale oil was produced in the United States by one firm located in California. Whaling vessels hunt off the Pacific coast and tow the carcasses to shore for processing, in contrast to the large-scale, high-seas whaling and processing operations undertaken by the major foreign producers.

About five domestic firms refine sperm oil, mostly from imported crude sperm oil. All of these firms process various other oils, sperm oil generally accounting for only a minor portion of their income. One of these firms also refines blackfish-head oil which it imports, primarily from Canada.

Annual domestic production of crude sperm oil during 1963-67 averaged 724,000 pounds, and that of whale oil averaged 1.6 million pounds.

## U.S. exports

Official statistics do not separately show exports of sperm oil and other whale oil, but it is known that reported exports consist predominantly or entirely of sperm oil stearin and refined sperm oil. Annual exports during 1963-67 averaged 5 million pounds. It is probable that in 1963-65, when the unit value of exports was about equal to the unit value of imports of crude sperm oil, exports consisted in large part of stearin. Exports have gone mostly to Western European countries.

## U.S. imports

During 1963-67 annual imports of sperm oil ranged from about 51 million to 77 million pounds and averaged 62 million pounds; crude sperm oil accounted for 85 percent of total imports. The Netherlands, U.S.S.R., Japan, and Peru have been the principal suppliers (table 3). Imports of refined sperm oil have come chiefly from the United Kingdom, the Republic of South Africa, West Germany, and Norway.

Annual imports of other whale oil have been small. They have amounted to about one or two thousand pounds annually and consisted almost entirely of blackfish-head oil from Canada.

Foreign production and trade

Annual world production of sperm oil has been higher in recent years than in the early 1960's; output in 1966 equaled the 1963-66 average of 322 million pounds. The major producing countries were the Soviet Union and Japan. In 1966 the Soviet Union accounted for over half of total world production of sperm oil, and that country together with Japan accounted for three-fourths of the total.

Annual world production of other whale oils has declined from 589 million pounds in 1963 to 253 million pounds in 1966 and averaged 444 million pounds in the 4-year period. Whaling fleets of the Soviet Union, Norway, and Japan accounted for nearly 90 percent of total world output in 1966; Japan alone accounted for almost 50 percent.

About half of the world output of whale oil, including sperm oil, enters international trade. Japan and Norway are the principal exporters and Western European countries, chiefly the Netherlands, the United Kingdom, and West Germany are the principal importers. The United States is the world's largest importer of sperm oil.

In order to prevent depletion of breeding stock, whaling nations entered into an agreement in 1937 and again in 1946 to limit their catch in the waters of the Antarctic where most of the world's whaling is done. The agreement does not cover other areas; it is in the other areas, particularly in the Pacific Ocean, where there has been an increase in the catch of sperm whales. Although no longer a leading whaling nation, the United States is a party to the agreement.

Table 1.--Sperm oil: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production of crude | Imports | | Exports 1/ | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|---|
| | | Crude | Other | | | |
| | Quantity (1,000 pounds) | | | | | |
| 1963 | 700 | 60,485 | 5,444 | 5,591 | 56,500 | 46,038 |
| 1964 | 401 | 46,726 | 12,147 | 5,565 | 71,500 | 56,209 |
| 1965 | 1,106 | 63,353 | 13,754 | 5,928 | 69,000 | 56,385 |
| 1966 | 449 | 50,464 | 7,702 | 4,355 | 84,900 | 80,060 |
| 1967 | 964 | 43,421 | 7,896 | 1,785 | 59,100 | 43,296 |
| | Value (1,000 dollars) | | | | | |
| 1963 | 58 | 5,752 | 710 | 457 | 2/ | 2/ |
| 1964 | 26 | 3,792 | 1,483 | 395 | 2/ | 2/ |
| 1965 | 78 | 4,423 | 1,336 | 422 | 2/ | 2/ |
| 1966 | 26 | 3,890 | 764 | 470 | 2/ | 2/ |
| 1967 | 57 | 3,018 | 699 | 273 | 2/ | 2/ |
| | Unit value (cents per pound) | | | | | |
| 1963 | 8.3 | 9.5 | 13.0 | 8.2 | 2/ | 2/ |
| 1964 | 6.4 | 8.1 | 12.2 | 7.1 | 2/ | 2/ |
| 1965 | 7.1 | 7.0 | 9.7 | 7.1 | 2/ | 2/ |
| 1966 | 5.7 | 7.7 | 9.9 | 10.8 | 2/ | 2/ |
| 1967 | 5.9 | 7.0 | 8.9 | 15.3 | 2/ | 2/ |

1/ Reported in official statistics as sperm and whale oil, but believed to consist entirely of sperm oil stearin and refined sperm oil.
2/ Not available.

Source: Production compiled from official statistics of the U.S. Department of Interior; imports, exports, and beginning stocks compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Whale oils (except sperm): U.S. production and imports for consumption, 1963-67

| Year | Production | | | Imports 1/ | | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Unit Value | Quantity | Value | Unit Value |
| | 1,000 pounds | 1,000 dollars | Per pound | 1,000 pounds | 1,000 dollars | Per pound |
| 1963 | 1,429 | 90 | $0.06 | - | - | - |
| 1964 | 2,759 | 170 | .06 | 1 | 1 | $1.00 |
| 1965 | 1,607 | 119 | .07 | 1 | 1 | .80 |
| 1966 | 936 | 56 | .06 | 2 | 2 | 1.09 |
| 1967 | 1,519 | 90 | .06 | 2 | 3 | 1.06 |

1/ Imports for years shown entered chiefly from Canada and probably consisted almost entirely of blackfish-head oil. The figures for 1967 exclude a large shipment of another commodity which inadvertently was reported in this class. Unit values are calculated from unrounded figures.

Source: Production compiled from official statistics of the U.S. Department of the Interior; imports compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table 3.--Sperm oil, crude: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Netherlands | 14,591 | 5,640 | - | - | 20,366 |
| U.S.S.R | - | - | - | - | 5,510 |
| Japan | 17,489 | 25,867 | 45,441 | 26,405 | 5,971 |
| Peru | 19,888 | 8,033 | 11,644 | 6,479 | 7,000 |
| Republic of South Africa | 1,636 | - | - | 17,580 | - |
| Norway | 5,599 | 6,951 | 6,095 | - | - |
| Chile | 1,231 | - | - | - | - |
| All other | 51 | 1/ 235 | 1/ 173 | - | 4,574 |
| Total | 60,485 | 46,726 | 63,353 | 50,464 | 43,421 |
| | Value (1,000 dollars) | | | | |
| Netherlands | 1,541 | 404 | - | - | 1,620 |
| U.S.S.R | - | - | - | - | 461 |
| Japan | 1,776 | 2,236 | 3,219 | 2,151 | 344 |
| Peru | 1,476 | 510 | 739 | 470 | 309 |
| Republic of South Africa | 244 | - | - | 1,269 | - |
| Norway | 590 | 626 | 446 | - | - |
| Chile | 120 | - | - | - | - |
| All other | 5 | 1/ 16 | 1/ 19 | - | 284 |
| Total | 5,752 | 3,792 | 4,423 | 3,890 | 3,018 |
| | Unit value (cents per pound) | | | | |
| Average, all countries | 9.5 | 8.1 | 7.0 | 7.7 | 7.0 |

1/ All from Canada.

Source: Compiled from official statistics of the U.S. Department of Commerce.

| Commodity | TSUS item |
|---|---|
| Lard | 177.50 |
| Hydrogenated or hardened oils, fats, and grease; and lard substitutes whether or not containing lard | 178.10 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States is the world's leading producer and exporter of lard and is also the major producer of shortenings. Exports of lard have declined in recent years and in 1966 and 1967 were equal to less than 10 percent of production. The large domestic output of shortenings and other hydrogenated fats and oils is virtually all consumed domestically. Imports of both lard and hydrogenated fats and oils have been extremely small relative to production and exports.

## Description and uses

Lard is an edible product rendered from hog fat. It is obtained primarily from outside body tissues. Rendered edible fat is also obtained from the edible organs and certain other parts of the hog. Under the Meat Inspection Regulations of the U.S. Department of Agriculture (9 C.F.R., part 317), however, the latter cannot be labeled "lard;" it must be labeled "rendered pork fat." For the purposes of this report, lard includes such rendered pork fat; there is no information of any imports.

The most widely used method of production of lard is by steam rendering, consisting of the injection of steam into a tank of hog fat to break up and release the fat globules. The typical yield of lard in the United States in recent years has been 10-12 pounds per 100 pounds live weight of hogs slaughtered as compared with yields of 13-14 pounds in the 1950's. This lower yield reflects the continuing trend toward breeding for leaner hogs.

Lard is used directly as a shortening and frying fat and, to an increasingly greater extent, as an ingredient in blended shortenings and margarine. It is more or less interchangeable with the other edible fats and oils used in shortening and margarine and it competes with them on a price basis.

Hydrogenation is the process whereby hydrogen is introduced under controlled conditions into points of unsaturation in the fatty acids of fats and oils. Fats and oils so treated are referred to as hydrogenated or hardened fats and oils. Hydrogenation is performed for two purposes: to improve the stability of the oils against oxidation changes (rancidity), and to convert some fats from liquid to semisolid or solid form for culinary and other uses. Soybean oil is the most widely used oil in hydrogenating, although cottonseed, corn, palm, coconut, and other oils or fats are widely used. Shortenings and margarines are two principal products prepared from hydrogenated fats and oils. Substantial quantities of soybean oil are lightly hydrogenated in the preparation of salad and cooking oils. Animal fats and vegetable oils are also hydrogenated for use in the production of inedible products such as soaps, detergents, and plastics. Hydrogenated oils used in shortening and margarine compete with lard and butter and when used in soap they compete with animal tallow.

Lard substitutes include lard compounds (i.e., mixtures of lard, other animal fats, and vegetable oils) and preparations resembling but not containing lard composed of vegetable oils and sometimes animal fats. Both types of products are shortenings and as such compete with lard, butter, and margarine.

## U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| 177.50 | Lard | 3¢ per lb. |
| 178.10 | Hydrogenated or hardened oils, fats, and greases; and lard substitutes whether or not containing lard. | 5¢ per lb. |

The existing rates of duty are not ones on which the United States gave concessions in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade (GATT). The rate on item 177.50 is not a trade-agreement rate. The rate on item 178.10 has been bound since January 1, 1966 in a concession granted by the United States in the GATT.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 177.50------- | 11.5 |
| 178.10------- | 10.6 |

U.S. consumption

Annual domestic consumption of lard during 1963-67 has fluctuated within relatively narrow limits. It ranged from about 1.7 billion to 1.9 billion pounds and averaged 1.8 billion pounds for this 5-year period (table 1). The average was about 10 percent lower than for 1958-62. The overall decline in consumption is a composite of increasing use in shortening and margarine and a more than compensating decline in direct use. Per capita consumption of lard for direct use has declined from 12.6 pounds in 1950 to 5.6 pounds in 1966. During the same period annual per capita use of lard in shortening and margarine has increased from 1.5 pounds to 3.1 pounds. Shortenings have to a large extent displaced lard for household use even though usually more costly because of (1) the convenience of the package, and the fact that shortenings need no refrigeration under ordinary conditions, (2) the uniformity of the product, and (3) the effective advertising programs of the producers. Of the total domestic lard consumption in 1966, about 61 percent was used directly, 30 percent went into the manufacture of shortenings, 7 percent into margarine, and the remaining 2 percent into miscellaneous nonfood uses.

Annual domestic consumption of hydrogenated oils and fats in baking and frying fats increased almost steadily from 2.6 billion pounds in 1963 to 3.1 billion pounds in 1967 (table 2). Consumption averaged about 2.9 billion pounds annually in 1963-67, or over 25 percent larger than the average for the preceding 5-year period. The general trend in the consumption of these products reflects the increased use of shortenings. There has been a proportional increase in use of hydrogenated oils in margarine (see summary item 116.30).

Whereas lard was formerly the principal household fat used in the United States, since 1953 consumption of shortenings has regularly exceeded the direct use of lard with which they are substantially interchangeable. In the period 1963-67, average annual domestic consumption of shortenings was almost 2-1/2 times that of the direct use of lard.

U.S. producers

There are about 300 meat packing plants in the United States which render lard. Shortening and salad or cooking oils are produced by approximately 120 plants operated by about 50 companies. Most of the shortening and salad or cooking oil plants hydrogenate fats and oils; these same plants do most of the hydrogenating of fats and oils for nonfood uses. Among the companies producing shortening are all of the larger meat packing firms.

U.S. production

Annual domestic production of lard averaged 2.1 billion pounds during 1963-67 and was about 20 percent less than in the preceding 5-year period. Production in 1966 was at its lowest level since the mid-1930's due to a reduction in the number of hogs slaughtered. The production of lard, however, depends on a combination of factors in addition to the number of hogs slaughtered. These factors include the price of pork and the yield of lard per hog. The yield of lard per hog slaughtered has declined from 33 pounds in 1955 to 26 pounds in 1966 due to a trend toward the production of a leaner meat-type hog. There has been little change in the average live weight per hog slaughtered during this period.

Annual domestic production of shortenings has shown a pronounced upward trend and increased from about 2.6 billion pounds in 1963 to 3.2 billion pounds in 1967. It averaged 2.9 billion pounds in that 5-year period and was about 25 percent larger than the average during 1958-62. The production of shortenings during 1963-67 exceeded that of lard by about 40 percent.

Factory and warehouse stocks of lard, as well as those of shortenings, have consistently been small compared with production. In the period 1963-67, January 1 stocks of lard averaged 107 million pounds and those of shortenings averaged 128 million pounds. In both cases they were equal to about 5 percent of average annual domestic production in the 5-year period.

U.S. exports

Lard has been an important export product for the United States. Exports increased from 537 million pounds in 1963 to 682 million pounds in 1964 (table 1). They dropped to 158 million pounds in 1966 and increased but slightly in 1967. Annual exports in the 5-year period averaged 363 million pounds and were equal to 17 percent of domestic production. In recent years the United Kingdom has been the

principal foreign market, accounting for close to 80 percent of total exports.

Exports of shortenings and hydrogenated vegetable oils have been of less importance than those of lard. Such exports during 1965-67 ranged from 49 million to 71 million pounds. A little over half has consisted of shortenings and the remainder of hydrogenated vegetable oils other than shortenings. Exports of shortenings were equal to 1 percent of domestic production. Canada and the United Kingdom have been the major destinations.

U.S. imports

Imports of lard and hydrogenated fats and oils into the United States have always been extremely small relative to both domestic production and exports. Imports of lard in recent years averaged less than 1,000 pounds annually, mostly from Canada. Annual imports of hydrogenated fats and oils during 1963-67 ranged from 109,000 to 326,000 pounds and averaged 220,000 pounds. Imports have consisted largely of hydrogenated coconut and palm kernel stearins used in confectioners' coatings plus a variety of high-priced specialty hydrogenated fats and oils probably used for inedible purposes.

World production and trade

Lard ranks third behind soybean oil and butter in world production and consumption of edible animal and vegetable fats and oils. Estimated average annual world output of lard in 1963-67 amounted to about 8 billion pounds. Lard is produced in virtually every country in the world but in all of them annual production is considerably less than it is in the United States. During 1963-67 lard production in the United States accounted for over 25 percent of total world output. As a rule less than 10 percent of world output enters international trade. In recent years the United States accounted for over half of world exports.

No statistics on world production of shortenings are regularly published, but it is probable that output in many industrialized countries is rapidly increasing as it has been in the United States.

Table 1.--Lard: U.S. production, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Exports | Beginning stocks | Apparent consumption |
|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | |
| 1963 | 2,373,000 | 537,674 | 128,400 | 1,844,326 |
| 1964 | 2,388,000 | 682,001 | 119,400 | 1,698,299 |
| 1965 | 1,982,000 | 250,872 | 127,100 | 1,796,528 |
| 1966 | 1,900,000 | 157,621 | 61,700 | 1,703,779 |
| 1967 | 2,049,000 | 188,581 | 100,300 | 1,809,319 |
| | Value (1,000 dollars) | | | |
| 1963 | 206,451 | 48,531 | 2/ | 2/ |
| 1964 | 231,636 | 69,810 | 2/ | 2/ |
| 1965 | 231,894 | 30,214 | 2/ | 2/ |
| 1966 | 212,800 | 19,595 | 2/ | 2/ |
| 1967 | 159,822 | 18,633 | 2/ | 2/ |
| | Unit value (cents per pound) | | | |
| 1963 | 8.7 | 9.0 | 2/ | 2/ |
| 1964 | 9.7 | 10.2 | 2/ | 2/ |
| 1965 | 11.7 | 12.0 | 2/ | 2/ |
| 1966 | 11.2 | 12.4 | 2/ | 2/ |
| 1967 | 7.8 | 9.9 | 2/ | 2/ |

1/ Does not include lard from farm slaughter of hogs. Value computed on basis of annual average prices of lard "prime steam, in tierces," at Chicago.

2/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Note.--Imports have been negligible.

Table 2.--Hydrogenated or hardened oils, fats, greases; and lard substitutes whether or not containing lard: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

| Year | Production 1/ | Imports | Exports 2/ | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| 1963 | 2,584,300 | 109 | 14,237 | 164,900 | 2,615,772 |
| 1964 | 2,664,100 | 150 | 16,048 | 119,300 | 2,646,402 |
| 1965 | 2,792,500 | 215 | 71,021 | 121,100 | 2,726,194 |
| 1966 | 3,189,500 | 326 | 55,664 | 116,600 | 3,132,162 |
| 1967 | 3,207,700 | 303 | 49,270 | 118,600 | 3,138,133 |
| | Value (1,000 dollars) | | | | |
| 1963 | 524,612 | 21 | 3,071 | 3/ | 3/ |
| 1964 | 572,781 | 40 | 3,201 | 3/ | 3/ |
| 1965 | 650,652 | 140 | 11,491 | 3/ | 3/ |
| 1966 | 695,311 | 266 | 9,980 | 3/ | 3/ |
| 1967 | 663,994 | 142 | 8,519 | 3/ | 3/ |
| | Unit value (cents per pound) | | | | |
| 1963 | 20.3 | 19.3 | 21.6 | 3/ | 3/ |
| 1964 | 21.5 | 26.7 | 19.9 | 3/ | 3/ |
| 1965 | 23.3 | 65.1 | 16.2 | 3/ | 3/ |
| 1966 | 21.8 | 81.6 | 17.9 | 3/ | 3/ |
| 1967 | 20.7 | 46.9 | 17.3 | 3/ | 3/ |

1/ Baking and frying fats only; does not include hydrogenated oils for cooking and salad oils or for margarine; value computed on basis of annual average prices of all-vegetable shortening, hydrogenated, 440-pound drum lots, New York.

2/ Beginning with 1965 includes data for hydrogenated soybean, cottonseed, and other oils; such data was not available prior to 1965.

3/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

| Commodity | TSUS item |
|---|---|
| Oleo oil and oleo stearin | 177.52 |
| Tallow | 177.56 |
| Animal oils, fats, and greases not elsewhere enumerated: | |
| Edible: | |
| Derived from milk (butter oil) | 177.67 |
| Other | 177.69 |
| Not edible | 177.72 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States is the world's leading producer and exporter of most of the animal oils and fats covered by this summary. U.S. consumption is virtually all supplied from domestic materials as imports are negligible compared with production. Exports of inedible tallow and grease are substantial and, in recent years, were equal to close to 45 percent of domestic production. Exports of the other animal oils and fats covered by this summary are relatively small, but greatly exceed imports.

## Description and uses

This summary covers animal fats, oils, and greases except marine animal oils (see summaries on items 177.02 to 177.40), wool grease (see summary on items 177.58 and 177.62), lard and hydrogenated products (see summary on items 177.50 and 178.10), and mixtures (see summary on items 178.05, 178.25, and 178.30). For the most part, the animal fats, oils, and greases covered here are obtained as byproducts of meat packing and meat trimming or as products of rendering plants. Of the products included in this summary, tallow is the most important in terms of volume as well as value of production.

Tallow (item 177.56) is the rendered fat obtained chiefly from cattle and, to a lesser extent, from sheep and goats. It is marketed as both an edible and inedible product. Edible tallow is rendered from the clean, fresh, internal fat of beef carcasses. It is used either directly in shortening or is processed into oleo oil and oleo stearin. Inedible tallow is rendered from inedible slaughterhouse and lockerplant byproducts, from fat trimmings collected from retail butchers and institutions, and from dead or condemned animals. Inedible tallow is used mostly in the manufacture of animal feed, soap,

and fatty acids; the latter are further processed into a variety of products (see summaries on items 490.10 to 491.00).

Oleo oil and oleo stearin (item 177.52) are products obtained by the separation of edible tallow into soft and hard fat components. Oleo oil is used primarily as a shortening by the biscuit and cracker industry, and oleo stearin is used largely as an ingredient in commercial margarine used by bakers.

The butter oil (item 177.67) which is the usual article of commerce is virtually pure butterfat. Such product may be made by centrifuging heated cream, milk, or butter so as to obtain an oil containing almost all butterfat (some imported products have had 99.9 percent butterfat, almost all the moisture having been removed). It is also known as dehydrated butter and anhydrous milk fat. Because it keeps well without refrigeration, it is used in countries such as India, where the climate is warm and refrigeration facilities are limited. In the United States butter oil has been used principally in making ice cream, but is also used in place of cocoa butter in the manufacture of confectionery coatings.

The most important of the unenumerated edible animal oils and fats (item 177.69) are chicken fat and edible lard oil. Unenumerated inedible animal oils and fats (item 177.72) consist principally of neat's-foot oil, inedible lard oil, tallow oil, inedible animal stearin, and animal greases (largely inedible hog fat, but also including inedible chicken fat and reclaimed cooking fats and oils, the latter of which are largely converted to grease). They are produced mostly as byproducts of meat packing, except for grease which is produced largely by independent renderers. The usual distinction between inedible tallow and grease is on the basis of their hardness rather than their origin, with tallow being the harder fat. Hog fat, being soft, is the major source of grease.

Neat's-foot oil is produced from the feet and shin bones of cattle, and is used principally in the treatment of leather; inedible lard oil, tallow oil, and inedible animal stearin are used primarily in the preparation of lubricants. Inedible stearin is also used in soap, livestock feed, and fat splitting (the hydrolysis of fats and oils into their component glycerine and fatty acids). Animal greases are used mainly in the manufacture of soap and fatty acids and in the preparation of lubricants and machine-cutting oils. Neat's-foot oil encounters little competition from other oils. The other oils and greases compete largely with inedible tallow and certain marine animal oils.

U.S. tariff treatment and other restrictions on imports

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 177.52 | Oleo oil and oleo stearin. | 2¢ per lb. | 1/ | 1/ |
| 177.56 | Tallow | 0.875¢ per lb. | 0.78¢ per lb. | 0.43¢ per lb. |
| | Animal oils, fats, and greases not elsewhere enumerated: | | | |
| | Edible: | | | |
| 177.67 2/ | Derived from milk. | 10% ad val. | 3/ | 3/ |
| 177.69 2/ | Other | 10% ad val. | 9% ad val. | 5% ad val. |
| 177.72 | Not edible | 1.5¢ per lb. + 10% ad val. | 1.3¢ per lb. + 9% ad val. | 0.75¢ per lb. + 5% ad val. |

1/ 2¢ per pound rate bound against increase.
2/ Prior to Jan. 1, 1968, the one number 177.70 covered the two new items 177.67 and 177.69.
3/ Duty status not affected by the trade conference.

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages).

Concessions amounting to a reduction of about 50 percent in duties were granted by the United States on tallow (item 177.56) and on animal oils and fats not elsewhere enumerated (except butter oil) (items 177.69 and 177.72)); the concessions are being put into effect in five annual stages.

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The average ad valorem equivalents of the specific or compound rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 177.52 | 1/ 11.0 |
| 177.56 | 25.4 |
| 177.72 | 47.9 |

1/ Based on imports in 1965, the most recent year of importation.

Butter oil is classified under item 177.67 as an edible animal oil, not elsewhere enumerated, derived from milk (Note C.D. 2351 of July 3, 1962). It is the only product known to enter under this provision. In an investigation in March 1957 under the provisions of section 22 of the Agricultural Adjustment Act, as amended (7 U.S.C. 624), the U.S. Tariff Commission determined in effect that butter oil and butter substitutes containing over 45 percent butterfat were practically certain to be imported under such conditions and in such quantity as to interfere materially with the Government's price-support program for whole milk and butterfat. After consideration of the Commission's findings, the President on April 15, 1957, issued Proclamation No. 3178 (22 F.R. 2701) establishing an absolute annual import quota of 1.8 million pounds for such butter substitutes and butter oil for 1957 and of 1.2 million pounds thereafter (see item 950.06).

## U.S. consumption

Of the products covered by this summary, statistics on consumption are available only for edible tallow and inedible tallow and grease. The bulk of the consumption has consisted of inedible tallow and grease, the consumption of which averaged 2.5 billion pounds annually in 1963-67 (table 1), or about 35 percent higher than during 1958-62. Most of the increased consumption of inedible tallow and grease is attributable to the rise in its use in the manufacture of animal feed and fatty acids. The consumption of inedible tallow and grease in animal feed increased from 550 million pounds in 1958 to 893 million pounds in 1966 and the quantity used in fatty acids rose from 256 million pounds to 583 million pounds in this same period. In contrast, the consumption of inedible tallow and grease in the manufacture of soap declined from about 740 million pounds in 1958 to 667 million pounds in 1966, with the result that animal feeds have become the principal outlet for inedible tallow and grease. Of total consumption of inedible tallow and grease in 1966, 36 percent was used in

animal feed, 27 percent in soap, 24 percent in fatty acids, and the remainder in miscellaneous industrial applications.

Domestic consumption of edible tallow increased from 521 million pounds in 1963 to 550 million pounds in 1967. Annual consumption during this 5-year period averaged 538 million pounds, or 50 percent greater than during 1958-62. Over four-fifths of the edible tallow consumed in 1963-67 was used in shortening, with the remainder used in miscellaneous applications, including the production of edible oleo oil and oleo stearin.

Consumption of both edible and inedible tallow and of grease was virtually all supplied from domestic sources as imports were very small. Consumption of butter oil is approximately equal to the 1.2 million pound import quota; virtually all of the domestic production is from Commodity Credit Corporation (CCC) stocks of butter and is exported.

## U.S. producers

Edible tallow is rendered by about 300 of the larger meat packing plants; a small part of the production is further processed into oleo oil and oleo stearin by comparatively few of these plants. Inedible tallow and grease are rendered by essentially the same 300 meat packing plants but predominantly produced by about 500 independent rendering plants throughout the country. Tallow and grease account for only a small portion of the total production of the meatpacking firms, whereas they are coproducts along with meat and bone scrap for feed and fertilizer in the rendering plants.

## U.S. production and stocks

Official statistics combine the production of inedible tallow with that of grease. It is believed that inedible tallow accounts for about four-fifths of the total. During 1963-67 inedible tallow and grease accounted for over 85 percent of the total production of products covered by this summary. Annual output of inedible tallow and grease reached a high of about 4.8 billion pounds in 1967, and for the period 1963-67 averaged 4.4 billion pounds (table 1).

Annual production of edible tallow rose irregularly from 528 million pounds in 1963 to 578 million pounds in 1967 (table 2). During 1963-67 it averaged 551 million pounds. The production of tallow and grease depends largely upon the number and weight of animals slaughtered and, to a lesser extent, on the price of tallow and grease. All available tallow and grease tends to be recovered as a disposal operation regardless of price.

No statistics are available on domestic production of the other animal fats and oils covered by this summary. Butter oil is produced primarily on contract for the CCC from Government-owned stocks of butter. Volume of production and exports reflect Government butter surplus disposal operations. Virtually all of the production has been exported.

Producer's January 1 stocks of tallow and grease fluctuated within narrow limits during 1963-67 and were equal to about one month's production.

U.S. exports

The United States is the world's major exporter of inedible tallow and grease. Exports during 1963-67 averaged over 1.9 billion pounds a year (table 3), equal to about 45 percent of domestic production. Annual average exports in 1963-67 were about 20 percent larger than the average for the preceding 5-year period. A substantial part of the exports during 1963-67 consisted of shipments under varying Government export programs (Public Law 480) designed to reduce surplus stocks. Such shipments accounted for 18 percent of total exports in 1963-66. Exports of inedible tallow went to a large number of countries throughout the world. Among the principal destinations in recent years were Japan, the Netherlands, Spain, and Italy (table 4).

Annual U.S. exports of edible tallow went mostly to Canada and averaged about 4.5 million pounds during 1963-67. They were equal to only about 1 percent of total domestic output. Exports of both edible and inedible oil and stearin from tallow and lard were somewhat larger than the exports of edible tallow itself.

As previously indicated, the erratic exports of butter oil primarily reflect Government butter surplus disposal actions. In the period 1963-67 exports ranged from 25 million pounds in 1964 to 2 million pounds in 1967. Shipments out of the United States are somewhat larger than the exports shown in table 3 in that part of the shipments were to overseas military installations and charitable agencies not uniformly included in export statistics.

Exports of other animal oils and fats averaged about 18 million pounds annually in the period 1965-67. They are believed to have consisted in substantial part of edible poultry fat, oleo stock, and a variety of inedible animal fats and oils, including wool grease and lanolin which are covered in a separate summary for items 177.58 and 177.62.

## U.S. imports

Imports of animal oils and fats covered by this summary have been very small compared with domestic production and exports. Annual imports of tallow during 1963-67 averaged 2.1 million pounds (table 5). They consisted almost entirely of inedible tallow and came mostly from Canada. The only imports of oleo and oleo stearin in recent years were 15,000 pounds from Italy in 1965. The annual import quota of 1.2 million pounds for butter oil has been filled on the opening day in most years. Butter oil has come from Australia, New Zealand, a number of European countries, and Canada. Annual imports of other inedible animal oils and fats during 1963-67 ranged from 174,000 pounds to 1.5 million pounds and averaged 560,000 pounds. They consisted mostly of hog grease from Canada.

## World production

Annual world production of tallow and greases averaged about 8.6 billion pounds during 1964-66. The United States, by far the major producing country, accounted for almost 60 percent of total world output. The other major beef producing countries supply most of the remaining world output of tallow and grease. Only a few nations produce enough tallow and grease to meet domestic requirements. Most countries must import tallow and grease to supplement domestic production.

No statistics are available on world production and trade of the other animal oils and fats covered by this summary.

Table 1.--Inedible tallow and grease: U.S. production, stocks, im imports for consumption, exports of domestic merchandise, and apparent consumption, 1963-67

(Quantity in thousands of pounds)

| Year | Production | Imports 1/ | Exports | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|
| 1963 | 4,156,500 | 1,615 | 1,629,077 | 396,700 | 2,548,638 |
| 1964 | 4,565,700 | 1,285 | 2,111,449 | 377,100 | 2,466,236 |
| 1965 | 4,302,500 | 1,430 | 1,997,966 | 366,400 | 2,258,564 |
| 1966 | 4,466,900 | 1,100 | 1,826,491 | 413,800 | 2,607,909 |
| 1967 | 4,753,000 | 5,138 | 2,071,437 | 447,400 | 2,709,501 |

1/ Beginning August 31, 1963, includes edible tallow.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Edible tallow: U.S. production, imports for consumption, exports of domestic merchandise, beginning stocks, and apparent consumption, 1963-67

(Quantity in thousands of pounds)

| Year | Production | Imports | Exports | Beginning stocks | Apparent consumption |
|---|---|---|---|---|---|
| 1963 | 527,900 | 1/ 74 | 4,612 | 33,000 | 520,762 |
| 1964 | 553,200 | 1/ | 5,102 | 35,600 | 541,998 |
| 1965 | 530,100 | 1/ | 3,908 | 41,700 | 536,792 |
| 1966 | 566,700 | 1/ | 3,896 | 31,100 | 543,004 |
| 1967 | 577,800 | 1/ | 5,211 | 50,900 | 550,289 |

1/ Beginning August 31, 1963, import data for edible tallow are combined with those for inedible tallow. It is believed that most imports have been inedible.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Tallow, oleo oil, oleo stearin, butteroil, and animal oils, fats, and greases not elsewhere enumerated: U.S. exports of domestic merchandise, 1963-67

| Year | Tallow, edible | Tallow and grease, inedible | Oil and stearin of lard, tallow, and oleo stock | | Butter oil | Other 1/ |
|---|---|---|---|---|---|---|
| | | | Edible | Inedible | | |
| | Quantity (1,000 pounds) | | | | | |
| 1963 | 4,612 | 1,629,077 | 4,001 | 2/ | 15,589 | 242,618 |
| 1964 | 5,102 | 2,111,449 | 5,076 | 2/ | 25,324 | 287,597 |
| 1965 | 3,908 | 1,997,966 | 10,264 | 12,581 | 15,831 | 17,802 |
| 1966 | 3,896 | 1,826,491 | 12,542 | 10,915 | 9,053 | 16,889 |
| 1967 | 5,211 | 2,071,437 | 11,857 | 9,895 | 2,108 | 19,112 |
| | Value (1,000 dollars) | | | | | |
| 1963 | 445 | 104,059 | 574 | 2/ | 8,333 | 17,303 |
| 1964 | 656 | 153,824 | 693 | 2/ | 13,066 | 22,907 |
| 1965 | 517 | 178,628 | 1,462 | 1,201 | 10,198 | 3,860 |
| 1966 | 503 | 153,429 | 1,519 | 1,180 | 7,084 | 3,915 |
| 1967 | 490 | 144,076 | 1,732 | 897 | 1,789 | 3,752 |
| | Unit value (cents per pound) | | | | | |
| 1963 | 9.6 | 6.4 | 14.3 | 2/ | 53.5 | 7.1 |
| 1964 | 12.9 | 7.3 | 13.6 | 2/ | 51.6 | 8.0 |
| 1965 | 13.2 | 8.9 | 14.2 | 9.5 | 64.4 | 21.7 |
| 1966 | 12.9 | 8.4 | 12.1 | 10.8 | 78.3 | 23.2 |
| 1967 | 9.4 | 7.0 | 14.6 | 9.1 | 84.8 | 19.6 |

1/ Includes wool grease, poultry fat, horse fat, neat's-foot oil, etc. The large exports for 1963 and 1964 are believed to be primarily hog grease which is reported with inedible tallow, beginning in 1965. Also includes inedible oil and stearin of lard and tallow.

2/ Included in "other" before January 1, 1965.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 4.--Inedible tallow: U.S. exports of domestic merchandise, by principal markets, 1963-67

| Market | 1963 | 1964 | 1965 1/ | 1966 1/ | 1967 1/ |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Japan | 298,034 | 371,303 | 396,422 | 427,312 | 473,323 |
| India | 617 | 561 | 90,816 | 27,642 | 257,700 |
| Netherlands | 139,501 | 169,676 | 199,122 | 161,217 | 177,661 |
| Egypt | 117,572 | 117,304 | 79,731 | 92,728 | 128,719 |
| Pakistan | 58,148 | 60,586 | 33,256 | 35,110 | 88,151 |
| Italy | 173,514 | 178,938 | 113,397 | 146,479 | 111,726 |
| Spain | 100,800 | 86,277 | 91,572 | 119,864 | 107,204 |
| United Kingdom | 20,452 | 58,021 | 81,227 | 60,403 | 55,777 |
| Taiwan | 51,855 | 51,532 | 38,565 | 48,052 | 50,666 |
| West Germany | 83,886 | 97,965 | 69,803 | 75,071 | 49,460 |
| Poland | 77,283 | 121,967 | 94,964 | 37,093 | 31,905 |
| U.S.S.R. | 33,400 | 121,690 | 185,503 | 82,472 | - |
| All other | 474,015 | 675,629 | 523,588 | 513,048 | 539,145 |
| Total | 1,629,077 | 2,111,449 | 1,997,966 | 1,826,491 | 2,071,437 |
| | Value (1,000 dollars) | | | | |
| Japan | 18,540 | 25,573 | 34,298 | 35,132 | 33,872 |
| India | 46 | 47 | 9,161 | 2,098 | 18,214 |
| Netherlands | 8,321 | 11,614 | 16,992 | 12,779 | 11,253 |
| Egypt | 8,217 | 8,844 | 7,524 | 7,889 | 8,984 |
| Pakistan | 4,181 | 5,619 | 3,067 | 3,530 | 8,143 |
| Italy | 10,604 | 12,212 | 9,443 | 11,877 | 7,251 |
| Spain | 6,060 | 6,403 | 8,030 | 9,758 | 6,741 |
| United Kingdom | 1,312 | 4,274 | 7,298 | 5,046 | 3,712 |
| Taiwan | 3,288 | 3,942 | 3,758 | 4,052 | 3,359 |
| West Germany | 5,004 | 6,312 | 6,055 | 6,107 | 3,168 |
| Poland | 4,561 | 8,574 | 8,500 | 3,151 | 2,080 |
| U.S.S.R. | 2,066 | 8,250 | 16,719 | 7,599 | - |
| All other | 31,859 | 52,160 | 47,783 | 44,411 | 37,299 |
| Total | 104,059 | 153,824 | 178,628 | 153,429 | 144,076 |

1/ Beginning in 1965, includes data for grease (primarily inedible hog fat).

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 5.--Tallow, oleo oil, oleo stearin, butter oil, and animal oils and fats, not specially provided for: U.S. imports for consumption, 1963-67

| Years | Tallow | Oleo oil and oleo stearin | Other | | |
|---|---|---|---|---|---|
| | | | Edible 1/ | | Not edible |
| | | | Butter oil | other | |
| | Quantity (1,000 pounds) | | | | |
| 1963 | 1,689 | - | 1,200 | 31 | 1,536 |
| 1964 | 1,285 | - | 1,200 | 3 | 526 |
| 1965 | 1,430 | 15 | 1,017 | - | 202 |
| 1966 | 1,100 | - | 1,177 | - | 174 |
| 1967 | 5,138 | - | 1,200 | 78 | 440 |
| | Value (1,000 dollars) | | | | |
| 1963 | 35 | - | 624 | | 39 |
| 1964 | 48 | - | 480 | | 21 |
| 1965 | 49 | 3 | 561 | | 22 |
| 1966 | 53 | - | 459 | | 20 |
| 1967 | 177 | - | 460 | | 17 |
| | Unit value (cents per pound) 2/ | | | | |
| 1963 | 2.1 | - | 50.7 | | 2.6 |
| 1964 | 3.8 | - | 39.9 | | 4.0 |
| 1965 | 3.5 | 18.2 | 55.2 | | 10.8 |
| 1966 | 4.8 | - | 39.0 | | 11.6 |
| 1967 | 3.4 | - | 36.0 | | 4.0 |

1/ Breakdown of quantity between butter oil and "other" is estimated. Data not separately available before January 1, 1968.

2/ Based on unrounded figures.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

| Commodity | TSUS item |
|---|---|
| Wool grease: | |
| Conforming to the specifications for wool fat (including hydrous wool fat) appearing in the U.S. Pharmacopoeia, 15th revision----- | 177.58 |
| Other---------- | 177.62 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The United States imports a substantial part of its wool grease requirements.

## Description and uses

Wool grease is a byproduct of the scouring of raw wool. Chemically, it is a wax rather than a fat and is valued for its resistance to oxidation and rancidity. Its outstanding property is its ability to form highly stable emulsions of the water-in-oil type.

Wool grease is marketed in three grades: (1) Crude or degras, including acid degras and the lower grades of centrifugal wool grease; (2) the partly refined grade, known as neutral wool grease or technical lanolin; and (3) a highly refined product that meets the specifications in the U.S. Pharmacopoeia (U.S.P.), known as lanolin. Lanolin is available in both hydrous (25-30 percent water) and anhydrous forms. Acid degras is obtained by treating wool-scouring waste with sulfuric acid; centrifugal wool grease is obtained by centrifuging wool-scouring waste. Acid degras contains a relatively high percentage of free fatty acids and must be treated with an alkali (saponified) and washed before refining. For this reason, little acid degras is presently produced. Most of the degras production consists of the centrifugal product. Neutral wool grease or technical lanolin is generally produced from centrifugal wool grease. Medicinal lanolin is produced by further refining neutral wool grease or technical lanolin.

Crude and neutral wool grease are used in the manufacture of cordage, in leather and fur dressings, metal cutting compounds, lubricants, and rust and corrosion preventatives. Medicinal lanolin (lanolin conforming to U.S.P. specifications) is used largely in cosmetic and pharmaceutical preparations. It is self-emulsifying, and when added to oils, enables them to absorb many times their own weight in water. This property enables water-soluble medicines mixed with

lanolin to be held in contact with the skin until they can be absorbed. Because of their distinctive properties, wool grease and lanolin meet little or no competition from other fats and oils in their various uses.

## U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate of duty |
|---|---|---|
| | Wool grease: | |
| 177.58 | Conforming to the specifications for wool fat (including hydrous wool fat) appearing in the U.S. Pharmacopoeia, 15th revision. | 5¢ per lb. |
| 177.62 | Other | 2.65¢ per lb. |

These rates were established by the TSUS on August 31, 1963, and are bound in a concession granted by the United States in the General Agreement on Tariffs and Trade (GATT); however, the existing rates of duty are not ones on which the United States gave concessions in the sixth round of trade negotiations under the GATT. Before August 31, 1963, imports of wool grease were dutiable under the provisions of paragraph 52 of the Tariff Act of 1930, and were also subject to import taxes under the Internal Revenue Code. The existing rates are a combination and simplification of the former tariff and import tax provisions.

The average ad valorem equivalents of the specific rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 177.58 | 19.2 |
| 177.62 | 35.3 |

## U.S. consumption

Domestic consumption of wool grease amounted to 10.5 million pounds in 1958 and 12.9 million pounds in 1963, the most recent years for which complete data are available (table 1). About half of the domestic demand for wool grease was supplied by imports. The greater consumption in 1963 compared with 1958 reflects largely the increased

use of lanolin in cosmetics, which has become one of the major outlets of wool grease in the past decade.

## U.S. producers and production

The 1963 Census of Manufacturers lists 69 wool scouring and combing plants in the United States; probably less than half of them recover wool grease. About half of the total output of crude wool grease is accounted for by two firms. Crude wool grease is processed by about six refiners, two of which account for about three-fourths of total domestic production. Less than half of the total output consists of medicinal lanolin but virtually all domestic and imported wool grease undergoes some improvement.

Domestic production of crude wool grease amounted to 7.6 million pounds in 1963, or about 70 percent larger than the 4.5 million pounds reported in 1958. No statistics are available on production of the different grades of wool grease. The output of wool grease depends on the quantity of wool scoured, prices received for wool grease, and enactment and enforcement of laws against stream pollution. The treatment of wool scouring wastes results in the recovery of wool grease. There has been an increasing tendency in some States towards the enactment of laws prohibiting the dumping of untreated waste from wool scouring plants into streams.

## U.S. exports and imports

Exports of wool grease are included with a miscellany of minor nonmarine animal fats and oils in official statistics. They are believed to be small relative to imports and to consist mostly of medicinal lanolin.

U.S. imports of wool grease increased irregularly from about 4.4 million pounds in 1961 to 9.2 million pounds in 1967. Imports consisted predominantly of crude and semirefined wool grease. Medicinal or U.S.P. grade lanolin accounted for less than 5 percent of the quantity and less than 10 percent of the value of total imports during 1963-67. The United Kingdom has been the main supplier of medicinal lanolin (table 2). Australia, Japan, and the United Kingdom have been the principal sources for crude and semirefined wool grease (table 3).

## Foreign production and trade

Wool grease is produced in all major wool scouring countries. It is produced in substantial volume in the United Kingdom, continental Europe, Australia, and Japan. In many countries, especially in Western Europe, many scourers recover wool grease only to comply with laws forbidding water pollution. Great Britain and Australia are the major wool grease exporting nations; the United States is the major importing nation.

Table 1.--Wool grease: U.S. production, imports for consumption, and apparent consumption, 1958 and 1961-67

| Year | Production 1/ | Imports 2/ | Apparent consumption |
|---|---|---|---|
| | Quantity (1,000 pounds) | | |
| 1958 | 4,460 | 6,002 | 10,462 |
| 1961 | 3/ | 4,363 | 3/ |
| 1962 | 3/ | 3,907 | 3/ |
| 1963 | 7,643 | 5,328 | 12,971 |
| 1964 | 3/ | 7,463 | 3/ |
| 1965 | 3/ | 7,540 | 3/ |
| 1966 | 3/ | 5,996 | 3/ |
| 1967 | 3/ | 9,176 | 3/ |
| | Value (1,000 dollars) | | |
| 1958 | 450 | 523 | 973 |
| 1961 | 3/ | 381 | 3/ |
| 1962 | 3/ | 338 | 3/ |
| 1963 | 757 | 512 | 1,691 |
| 1964 | 3/ | 934 | 3/ |
| 1965 | 3/ | 1,348 | 3/ |
| 1966 | 3/ | 639 | 3/ |
| 1967 | 3/ | 710 | 3/ |

1/ Crude grease recovered by wool scourers (anhydrous basis). Value based on unit value of total shipments, including interplant transfers.
2/ Data include imports of both U.S.P. grade and "other".
3/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table 2.--Wool grease conforming to specifications for wool fat in the U.S. Pharmacopoeia (TSUS 177.58): U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| United Kingdom | 133 | 284 | 252 | 223 | 81 |
| Australia | 12 | 21 | 16 | 44 | 16 |
| West Germany | 2 | 3 | 8 | 3 | 9 |
| France | - | - | 7 | 6 | - |
| Belgium | 86 | 54 | 27 | - | 4 |
| All other | - | 16 | 70 | - | - |
| Total | 233 | 378 | 380 | 276 | 110 |
| | Value (1,000 dollars) | | | | |
| United Kingdom | 31 | 78 | 84 | 73 | 18 |
| Australia | 2 | 5 | 6 | 10 | 3 |
| West Germany | 2 | 2 | 6 | 3 | 6 |
| France | - | - | 2 | 2 | - |
| Belgium | 14 | 13 | 7 | - | 2 |
| All other | - | 3 | 19 | - | - |
| Total | 49 | 101 | 124 | 88 | 29 |
| | Unit value (cents per pound) | | | | |
| Average, all countries | 21 | 27 | 33 | 32 | 26 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Wool grease, other (TSUS 177.62): U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Australia | 1,726 | 2,035 | 2,068 | 1,638 | 1,958 |
| Japan | 1,484 | 2,030 | 2,209 | 2,373 | 4,219 |
| United Kingdom | 676 | 1,052 | 888 | 869 | 523 |
| Belgium | 379 | 489 | 601 | 418 | 577 |
| Italy | 38 | 361 | 543 | 198 | 1,404 |
| West Germany | 474 | 615 | 376 | 114 | 203 |
| All other | 318 | 503 | 385 | 110 | 182 |
| Total | 5,095 | 7,085 | 7,070 | 5,720 | 9,066 |
| | Value (1,000 dollars) | | | | |
| Australia | 176 | 263 | 423 | 181 | 156 |
| Japan | 129 | 250 | 387 | 181 | 292 |
| United Kingdom | 53 | 73 | 59 | 65 | 45 |
| Belgium | 38 | 79 | 108 | 57 | 48 |
| Italy | 4 | 58 | 120 | 29 | 107 |
| West Germany | 47 | 70 | 67 | 21 | 18 |
| All other | 16 | 40 | 60 | 17 | 15 |
| Total | 463 | 833 | 1,224 | 551 | 681 |
| | Unit value (cents per pound) | | | | |
| Average, all countries | 9 | 12 | 17 | 10 | 8 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

# SOD OIL AND ARTIFICIAL MIXTURES OF TWO OR MORE OILS, FATS, OR GREASES

| Commodity | TSUS item |
|---|---|
| Sod oil | 178.05 |
| Artificial mixtures of two or more vegetable or animal oils, fats, or greases: | |
| In chief value of linseed oil or flaxseed oil | 178.25 |
| Other | 178.30 |

Note.--For the statutory description, see the Tariff Schedules of the United States Annotated (TSUSA-1968).

## U.S. trade position

The articles covered by this summary are of little importance in commerce. Imports are small and exports are probably negligible.

## Description and uses

Sod oil is a product recovered from hides and skins which have been saturated with cod oil or other marine-animal oils in the process of converting them into leather. It is used in dressing and softening previously tanned leather. Thus, sod oil is consumed largely in the plants where it is produced.

Artificial mixtures of two or more vegetable or animal oils, fats, or greases in chief value of linseed oil (flaxseed oil) as a rule are not articles of commerce. Linseed oil is sometimes mixed with other oils in connection with the manufacture of paints and other products requiring drying oils.

In soap, shortening, and margarine plants artificial mixtures of two or more vegetable or animal oils, fats, or greases are frequently made in connection with the production of articles in those plants. Such mixtures entering commerce are limited to a variety of specialty products such as special lubricants and printers' pastes.

# SOD OIL AND ARTIFICIAL MIXTURES OF TWO OR MORE OILS, FATS, OR GREASES

U.S. tariff treatment

The column 1 (trade-agreement) rates of duty applicable to imports (see general headnote 3 in the TSUSA-1968) are as follows:

| TSUS item | Commodity | Rate prior to Jan. 1, 1968 | U.S. concessions granted in 1964-67 trade conference (Kennedy Round) | |
|---|---|---|---|---|
| | | | First stage, effective Jan. 1, 1968 | Final stage, effective Jan. 1, 1972 |
| 178.05 | Sod oil | 1.9¢ per lb. | 1.7¢ per lb. | 0.95¢ per lb. |
| | Artificial mixtures of two or more vegetable or animal oils, fats, or greases: | | | |
| 178.25 | In chief value of linseed or flaxseed oil. | 4.5¢ per lb. | 1/ | 1/ |
| 178.30 | Other | 20% ad val. but not less than the rate applicable to component material subject to the highest rate of duty | 18% ad val. but not less than the rate applicable to component material subject to the highest rate of duty | 10% ad val. but not less than the rate applicable to component material subject to the highest rate of duty |

1/ Duty status not affected by the trade conference.

The above tabulation shows the column 1 rates of duty in effect prior to January 1, 1968, and modifications therein as a result of concessions granted by the United States in the sixth round of trade negotiations under the General Agreement on Tariffs and Trade. Only the first and final stages of the annual rate modifications are shown above (see the TSUSA-1968 for the intermediate stages). Concessions amounting

to a reduction of 50 percent in duties were granted by the United States on sod oil (item 178.05) and on artificial mixtures of two or more vegetable or animal oils, fats, or greases, not in chief value of linseed oil or flaxseed oil (item 178.30); the concessions are to be put into effect in five annual stages.

The average ad valorem equivalents of the rates of duty in effect on December 31, 1967, based on dutiable imports during 1967, were as follows:

| TSUS item | Percent |
|---|---|
| 178.05------- | 37.8 |
| 178.25------- | 1/ 4.6 |
| 178.30------- | 20.0 |

1/ Based on imports in 1965, the most recent year of importation.

U.S. consumption, production, and trade

Many of the approximately 540 leather tanning and finishing establishments in the United States recover and reuse sod oil in their operations. Statistics on domestic production and exports are not available. Production is known to greatly exceed imports. Annual imports of sod oil during 1963-67 averaged 375,000 pounds, with an average value of $16,000, most of which came from the United Kingdom (table 1). Exports of sod oil are probably negligible.

Statistics are not available on U.S. output or exports of the artificial mixtures of vegetable or animal oils covered by this summary. Official statistics for 1965 show small imports of "mixtures in chief value of linseed oil" amounting to 230 pounds, valued at $227, the first such entry in more than 20 years. There were no imports in either 1966 or 1967. Imports of other artificial mixtures during 1963-67 averaged 59,000 pounds annually, valued at $18,000 (table 2). The wide variations in unit values of individual shipments from year to year reflect the diversity of the products imported. Small shipments have come from various countries in Northern Europe.

Exports of mixtures have probably been negligible.

Table 1.--Sod oil: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Netherlands | - | - | 110 | 133 | 188 |
| United Kingdom | 288 | 482 | 275 | 152 | 121 |
| France | - | - | - | - | 67 |
| Italy | - | - | - | 60 | - |
| Total | 288 | 482 | 385 | 345 | 376 |
| | Value (1,000 dollars) | | | | |
| Netherlands | - | - | 4 | 7 | 9 |
| United Kingdom | 11 | 16 | 13 | 8 | 7 |
| France | - | - | - | - | 3 |
| Italy | - | - | - | 3 | - |
| Total | 11 | 16 | 17 | 18 | 19 |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Other artificial mixtures of two or more vegetable or animal oils, fats, or greases: U.S. imports for consumption, by principal sources, 1963-67

| Source | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|
| | Quantity (1,000 pounds) | | | | |
| Spain | - | - | - | 22 | 88 |
| France | 1 | 1/ | 2 | 1 | - |
| Switzerland | 2 | 1/ | 1 | 1/ | - |
| West Germany | 16 | 1/ | 9 | - | 1/ |
| United Kingdom | 10 | 52 | 9 | - | - |
| All other | 3 | 76 | - | 1/ | - |
| Total | 32 | 128 | 21 | 23 | 89 |
| | Value (1,000 dollars) | | | | |
| Spain | - | - | - | 6 | 24 |
| France | 3 | 1 | 2 | 2 | - |
| Switzerland | 4 | 1 | 2 | 1 | - |
| West Germany | 11 | 1 | 3 | - | 1 |
| United Kingdom | 4 | 14 | 2 | - | - |
| All other | 1 | 6 | - | 1 | - |
| Total | 23 | 23 | 9 | 10 | 25 |

1/ Less than 500 pounds.

Source: Compiled from official statistics of the U.S. Department of Commerce.

# A P P E N D I X  A

Tariff Schedules of the United States Annotated (1968): General headnotes and rules of interpretation, and excerpts relating to the items included in this volume.

NOTE: The shaded areas in this appendix cover headnotes and TSUS items not included in the summaries in this volume.

## GENERAL HEADNOTES AND RULES OF INTERPRETATION



1. Tariff Treatment of Imported Articles. All articles imported into the customs territory of the United States from outside thereof are subject to duty or exempt therefrom as prescribed in general headnote 3.

2. Customs Territory of the United States. The term "customs territory of the United States", as used in the schedules, includes only the States, the District of Columbia, and Puerto Rico.

3. Rates of Duty. The rates of duty in the "Rates of Duty" columns numbered 1 and 2 of the schedules apply to articles imported into the customs territory of the United States as hereinafter provided in this headnote:

(a) Products of Insular Possessions.

(i) Except as provided in headnote 6 of schedule 7, part 2, subpart E, [and] except as provided in headnote 4 of schedule 7, part 7, subpart A, articles imported from insular possessions of the United States which are outside the customs territory of the United States are subject to the rates of duty set forth in column numbered 1 of the schedules, except that all such articles the growth or product of any such possession, or manufactured or produced in any such possession from materials the growth, product, or manufacture of any such possession or of the customs territory of the United States, or of both, which do not contain foreign materials to the value of more than 50 percent of their total value, coming to the customs territory of the United States directly from any such possession, and all articles previously imported into the customs territory of the United States with payment of all applicable duties and taxes imposed upon or by reason of importation which were shipped from the United States, without remission, refund, or drawback of such duties or taxes, directly to the possession from which they are being returned by direct shipment, are exempt from duty.

(ii) In determining whether an article produced or manufactured in any such insular possession contains foreign materials to the value of more than 50 percent, no material shall be considered foreign which, at the time such article is entered, may be imported into the customs territory from a foreign country, other than Cuba or the Philippine Republic, and entered free of duty.

(b) Products of Cuba. Products of Cuba imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty set forth in column numbered 1 of the schedules. Preferential rates of duty for such products apply only as shown in the said column 1. 1/

(c) Products of the Philippine Republic.

(i) Products of the Philippine Republic imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty which are set forth in column numbered 1 of the schedules or to fractional parts of the rates in the said column 1, as hereinafter prescribed in subdivisions (c)(ii) and (c)(iii) of this headnote.

(ii) Except as otherwise prescribed in the schedules, a Philippine article, as defined in subdivision (c)(iv) of this headnote, imported into the customs territory of the United States and entered on or before July 3, 1974, is subject to that rate which results from the application of the following percentages to the most favorable rate of duty (i.e., including a preferential rate prescribed for any product of Cuba) set forth in column numbered 1 of the schedules:

(A) 20 percent, during calendar years 1963 through 1964,

(B) 40 percent, during calendar years 1965 through 1967,

(C) 60 percent, during calendar years 1968 through 1970,

(D) 80 percent, during calendar years 1971 through 1973,

(E) 100 percent, during the period from January 1, 1974, through July 3, 1974.

(iii) Except as otherwise prescribed in the schedules, products of the Philippine Republic, other than Philippine articles, are subject to the rates of duty (except any preferential rates prescribed for products of Cuba) set forth in column numbered 1 of the schedules.

(iv) The term "Philippine article", as used in the schedules, means an article which is the product of the Philippines, but does not include any article produced with the use of materials imported into the Philippines which are products of any foreign country (except materials produced within the customs territory of the United States) if the aggregate value of such imported materials when landed at the Philippine port of entry, exclusive of any landing cost and Philippine duty, was more than 20 percent of the appraised customs value of the article imported into the customs territory of the United States.

(d) Products of Canada.

(i) Products of Canada imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty set forth in column numbered 1 of the schedules. The rates of duty for a Canadian article, as defined in subdivision (d)(ii) of this headnote, apply only as shown in the said column numbered 1.

(ii) The term "Canadian article", as used in the schedules, means an article which is the product of Canada, but does not include any article produced with the use of materials imported into Canada which are products of any foreign country (except materials produced within the customs territory of the United States), if the aggregate value of such imported materials when landed at the Canadian port of entry (that is, the actual purchase price, or if not purchased, the export value, of such materials, plus, if not included therein, the cost of transporting such materials to Canada but exclusive of any landing cost and Canadian duty) was --

(A) with regard to any motor vehicle or automobile truck tractor entered on or before December 31, 1967, more than 60 percent of the appraised value of the article imported into the customs territory of the United States; and

(B) with regard to any other article (including any motor vehicle or automobile truck tractor entered after December 31, 1967), more than 50 percent of the appraised value of the article imported into the customs territory of the United States.

1/ By virtue of section 401 of the Tariff Classification Act of 1962, the application to products of Cuba of either a preferential or other reduced rate of duty in column 1 is suspended. See general headnote 3(e), infra. The provisions for preferential Cuban rates continue to be reflected in the schedules because, under section 401, the rates therefor in column 1 still form the bases for determining the rates of duty applicable to certain products, including "Philippine articles".

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(e) Products of Communist Countries. Notwithstanding any of the foregoing provisions of this headnote, the rates of duty shown in column numbered 2 shall apply to products, whether imported directly or indirectly, of the following countries and areas pursuant to section 401 of the Tariff Classification Act of 1962, to section 231 or 257(e)(2) of the Trade Expansion Act of 1962, or to action taken by the President thereunder:

Albania
Bulgaria
China (any part of which may be under Communist domination or control)
Cuba 1/
Czechoslovakia
Estonia
Germany (the Soviet zone and the Soviet sector of Berlin)
Hungary
Indochina (any part of Cambodia, Laos, or Vietnam which may be under Communist domination or control)
Korea (any part of which may be under Communist domination or control)
Kurile Islands
Latvia
Lithuania
Outer Mongolia
Rumania
Southern Sakhalin
Tanna Tuva
Tibet
Union of Soviet Socialist Republics and the area in East Prussia under the provisional administration of the Union of Soviet Socialist Republics.

(f) Products of All Other Countries. Products of all countries not previously mentioned in this headnote imported into the customs territory of the United States are subject to the rates of duty set forth in column numbered 1 of the schedules.

(g) Effective Date; Exceptions - Staged Rates of Duty. Except as specified below or as may be specified elsewhere, pursuant to section 501(a) of the Tariff Classification Act of 1962 (P.L. 87-456, approved May 24, 1962), the rates of duty in columns numbered 1 and 2 become effective with respect to articles entered on or after the 10th day following the date of the President's proclamation provided for in section 102 of the said Act. If, in column numbered 1, any rate of duty or part thereof is set forth in parenthesis, the effective date shall be governed as follows:

(i) If the rate in column numbered 1 has only one part (i.e., 8¢ (10¢) per lb.), the parenthetical rate (viz., 10¢ per lb.) shall be effective as to articles entered before July 1, 1964, and the other rate (viz., 8¢ per lb.) shall be effective as to articles entered on or after July 1, 1964.

(ii) If the rate in column numbered 1 has two or more parts (i.e., 5¢ per lb. + 50% ad val.) and has a parenthetical rate for either or both parts, each part of the rate shall be governed as if it were a one-part rate. For example, if a rate is expressed as "4¢ (4.5¢) per lb. + 8% (9%) ad val.", the rate applicable to articles entered before July 1, 1964, would be "4.5¢ per lb. + 9% ad val."; the rate applicable to articles entered on or after July 1, 1964, would be "4¢ per lb. + 8% ad val.".

(iii) If the rate in column numbered 1 is marked with an asterisk (*), the foregoing provisions of (i) and (ii) shall apply except that "January 1, 1964" shall be substituted for "July 1, 1964", wherever this latter date appears.

1/ In Proclamation 3447, dated February 3, 1962, the President, acting under authority of section 620(a) of the Foreign Assistance Act of 1961 (75 Stat. 445), as amended, prohibited the importation into the United States of all goods of Cuban origin and all goods imported from or through Cuba, subject to such exceptions as the Secretary of the Treasury determines to be consistent with the effective operation of the embargo.

4. Modification or Amendment of Rates of Duty. Except as otherwise provided in the Appendix to the Tariff Schedules --

(a) a statutory rate of duty supersedes and terminates the existing rates of duty in both column numbered 1 and column numbered 2 unless otherwise specified in the amending statute;

(b) a rate of duty proclaimed pursuant to a concession granted in a trade agreement shall be reflected in column numbered 1 and, if higher than the then existing rate in column numbered 2, also in the latter column, and shall supersede but not terminate the then existing rate (or rates) in such column (or columns);

(c) a rate of duty proclaimed pursuant to section 336 of the Tariff Act of 1930 shall be reflected in both column numbered 1 and column numbered 2 and shall supersede but not terminate the then existing rates in such columns; and

(d) whenever a proclaimed rate is terminated or suspended, the rate shall revert, unless otherwise provided, to the next intervening proclaimed rate previously superseded but not terminated or, if none, to the statutory rate.

5. Intangibles. For the purposes of headnote 1 --

(a) corpses, together with their coffins and accompanying flowers,
(b) currency (metal or paper) in current circulation in any country and imported for monetary purposes,
(c) electricity,
(d) securities and similar evidences of value, and
(e) vessels which are not "yachts or pleasure boats" within the purview of subpart D, part 6, of schedule 6,

are not articles subject to the provisions of these schedules.

6. Containers or Holders for Imported Merchandise. For the purposes of the tariff schedules, containers or holders are subject to tariff treatment as follows:

(a) Imported Empty: Containers or holders if imported empty are subject to tariff treatment as imported articles and as such are subject to duty unless they are within the purview of a provision which specifically exempts them from duty.

(b) Not Imported Empty: Containers or holders if imported containing or holding articles are subject to tariff treatment as follows:

(i) The usual or ordinary types of shipping or transportation containers or holders, if not designed for, or capable of, reuse, and containers of usual types ordinarily sold at retail with their contents, are not subject to treatment as imported articles. Their cost, however, is, under section 402 or section 402a of the tariff act, a part of the value of their contents and if their contents are subject to an ad valorem rate of duty such containers or holders are, in effect, dutiable at the same rate as their contents, except that their cost is deductible from dutiable value upon submission of satisfactory proof that they are products of the United States which are being returned without having been advanced in value or improved in condition by any means while abroad.

(ii) The usual or ordinary types of shipping or transportation containers or holders, if designed for, or capable of, reuse, are subject to treatment as imported articles separate and distinct from their contents. Such holders or containers are not part of the dutiable value of their contents and are separately subject to duty upon each and every importation into the customs territory of the United States unless within the scope of a provision specifically exempting them from duty.

(iii) In the absence of context which requires otherwise, all other containers or holders are subject to the same treatment as specified in (ii) above for usual or ordinary types of shipping or transportation containers or holders designed for, or capable of, reuse.

7. Commingling of Articles. (a) Whenever articles subject to different rates of duty are so packed together or mingled that the quantity or value of each class of articles cannot be readily ascertained by customs officers (without physical segregation of the shipment or the contents of any entire package thereof), by one or more of the following means:

(i) sampling,

(ii) verification of packing lists or other documents filed at the time of entry, or

(iii) evidence showing performance of commercial settlement tests generally accepted in the trade and filed in such time and manner as may be prescribed by regulations of the Secretary of the Treasury,

the commingled articles shall be subject to the highest rate of duty applicable to any part thereof unless the consignee or his agent segregates the articles pursuant to subdivision (b) hereof.

(b) Every segregation of articles made pursuant to this headnote shall be accomplished by the consignee or his agent at the risk and expense of the consignee within 30 days (unless the Secretary authorizes in writing a longer time) after the date of personal delivery or mailing, by such employee as the Secretary of the Treasury shall designate, of written notice to the consignee that the articles are commingled and that the quantity or value of each class of articles cannot be readily ascertained by customs officers. Every such segregation shall be accomplished under customs supervision, and the compensation and expenses of the supervising customs officers shall be reimbursed to the Government by the consignee under such regulations as the Secretary of the Treasury may prescribe.

(c) The foregoing provisions of this headnote do not apply with respect to any part of a shipment if the consignee or his agent furnishes, in such time and manner as may be prescribed by regulations of the Secretary of the Treasury, satisfactory proof --

(i) that such part (A) is commercially negligible, (B) is not capable of segregation without excessive cost, and (C) will not be segregated prior to its use in a manufacturing process or otherwise, and

(ii) that the commingling was not intended to avoid the payment of lawful duties.

Any article with respect to which such proof is furnished shall be considered for all customs purposes as a part of the article, subject to the next lower rate of duty, with which it is commingled.

(d) The foregoing provisions of this headnote do not apply with respect to any shipment if the consignee or his agent shall furnish, in such time and manner as may be prescribed by regulations of the Secretary of the Treasury, satisfactory proof --

(i) that the value of the commingled articles is less than the aggregate value would be if the shipment were segregated;

(ii) that the shipment is not capable of segregation without excessive cost and will not be segregated prior to its use in a manufacturing process or otherwise; and

(iii) that the commingling was not intended to avoid the payment of lawful duties.

Any merchandise with respect to which such proof is furnished shall be considered for all customs purposes to be dutiable at the rate applicable to the material present in greater quantity than any other material.

(e) The provisions of this headnote shall apply only in cases where the schedules do not expressly provide a particular tariff treatment for commingled articles.

8. Abbreviations. In the schedules the following symbols and abbreviations are used with the meanings respectively indicated below:

| | | |
|---|---|---|
| $ | - | dollars |
| ¢ | - | cents |
| % | - | percent |
| + | - | plus |
| ad val. | - | ad valorem |
| bu. | - | bushel |
| cu. | - | cubic |
| doz. | - | dozen |
| ft. | - | feet |
| gal. | - | gallon |
| in. | - | inches |
| lb. | - | pounds |
| oz. | - | ounces |
| sq. | - | square |
| wt. | - | weight |
| yd. | - | yard |
| pcs. | - | pieces |
| prs. | - | pairs |
| lin. | - | linear |
| I.R.C. | - | Internal Revenue Code |

9. Definitions. For the purposes of the schedules, unless the context otherwise requires --

(a) the term "entered" means entered, or withdrawn from warehouse, for consumption in the customs territory of the United States;

(b) the term "entered for consumption" does not include withdrawals from warehouse for consumption;

(c) the term "withdrawn for consumption" means withdrawn from warehouse for consumption and does not include articles entered for consumption;

(d) the term "rate of duty" includes a free rate of duty; rates of duty proclaimed by the President shall be referred to as "proclaimed" rates of duty; rates of duty enacted by the Congress shall be referred to as "statutory" rates of duty; and the rates of duty in column numbered 2 at the time the schedules become effective shall be referred to as "original statutory" rates of duty;

(e) the term "ton" means 2,240 pounds, and the term "short ton" means 2,000 pounds;

(f) the terms "of", "wholly of", "almost wholly of", "in part of" and "containing", when used between the description of an article and a material (e.g., "furniture of wood", "woven fabrics, wholly of cotton", etc.), have the following meanings:

(i) "of" means that the article is wholly or in chief value of the named material;

(ii) "wholly of" means that the article is, except for negligible or insignificant quantities of some other material or materials, composed completely of the named material;

(iii) "almost wholly of" means that the essential character of the article is imparted by the named material, notwithstanding the fact that significant quantities of some other material or materials may be present; and

(iv) "in part of" or "containing" mean that the article contains a significant quantity of the named material.

With regard to the application of the quantitative concepts specified in subparagraphs (ii) and (iv) above, it is intended that the de minimis rule apply.

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10. General Interpretative Rules. For the purposes of these schedules --

(a) the general, schedule, part, and subpart headnotes, and the provisions describing the classes of imported articles and specifying the rates of duty or other import restrictions to be imposed thereon are subject to the rules of interpretation set forth herein and to such other rules of statutory interpretation, not inconsistent therewith, as have been or may be developed under administrative or judicial rulings;

(b) the titles of the various schedules, parts, and subparts and the footnotes therein are intended for convenience in reference only and have no legal or interpretative significance;

(c) an imported article which is described in two or more provisions of the schedules is classifiable in the provision which most specifically describes it; but, in applying this rule of interpretation, the following considerations shall govern:

(i) a superior heading cannot be enlarged by inferior headings indented under it but can be limited thereby;

(ii) comparisons are to be made only between provisions of coordinate or equal status, i.e., between the primary or main superior headings of the schedules or between coordinate inferior headings which are subordinate to the same superior heading;

(d) if two or more tariff descriptions are equally applicable to an article, such article shall be subject to duty under the description for which the original statutory rate is highest, and, should the highest original statutory rate be applicable to two or more of such descriptions, the article shall be subject to duty under that one of such descriptions which first appears in the schedules;

(e) in the absence of special language or context which otherwise requires --

(i) a tariff classification controlled by use (other than actual use) is to be determined in accordance with the use in the United States at, or immediately prior to, the date of importation, of articles of that class or kind to which the imported articles belong, and the controlling use is the chief use, i.e., the use which exceeds all other uses (if any) combined;

(ii) a tariff classification controlled by the actual use to which an imported article is put in the United States is satisfied only if such use is intended at the time of importation, the article is so used, and proof thereof is furnished within 3 years after the date the article is entered;

(f) an article is in chief value of a material if such material exceeds in value each other single component material of the article;

(g) a headnote provision which enumerates articles not included in a schedule, part, or subpart is not necessarily exhaustive, and the absence of a particular article from such headnote provision shall not be given weight in determining the relative specificity of competing provisions which describe such article;

(h) unless the context requires otherwise, a tariff description for an article covers such article, whether assembled or not assembled, and whether finished or not finished;

(ij) a provision for "parts" of an article covers a product solely or chiefly used as a part of such article, but does not prevail over a specific provision for such part.

11. Issuance of Rules and Regulations. The Secretary of the Treasury is hereby authorized to issue rules and regulations governing the admission of articles under the provisions of the schedules. The allowance of an importer's claim for classification, under any of the provisions of the schedules which provide for total or partial relief from duty or other import restrictions on the basis of facts which are not determinable from an examination of the article itself in its condition as imported, is dependent upon his complying with any rules or regulations which may be issued pursuant to this headnote.

12. The Secretary of the Treasury is authorized to prescribe methods of analyzing, testing, sampling, weighing, gauging, measuring, or other methods of ascertainment whenever he finds that such methods are necessary to determine the physical, chemical, or other properties or characteristics of articles for purposes of any law administered by the Customs Service.

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*General statistical headnotes:*

*1. Statistical Requirements for Imported Articles. Persons making customs entry or withdrawal of articles imported into the customs territory of the United States shall complete the entry or withdrawal forms, as provided herein and in regulations issued pursuant to law, to provide for statistical purposes information as follows:*

*(a) the number of the Customs district and of the port where the articles are being entered for consumption or warehouse, as shown in Statistical Annex A of these schedules;*

*(b) the name of the carrier or the means of transportation by which the articles were transported to the first port of unloading in the United States;*

*(c) the foreign port of lading;*

*(d) the United States port of unlading;*

*(e) the date of importation;*

*(f) the country of origin of the articles expressed in terms of the designation therefor in Statistical Annex B of these schedules;*

*(g) a description of the articles in sufficient detail to permit the classification thereof under the proper statistical reporting number in these schedules;*

*(h) the statistical reporting number under which the articles are classifiable;*

*(ij) gross weight in pounds for the articles covered by each reporting number when imported in vessels or aircraft;*

*(k) the net quantity in the units specified herein for the classification involved;*

*(l) the U.S. dollar value in accordance with the definition in Section 402 or 402a of the Tariff Act of 1930, as amended, for all merchandise including that free of duty or dutiable at specific rates; and*

*(m) such other information with respect to the imported articles as is provided for elsewhere in these schedules.*

3. Statistical Annotations. (a) The statistical annotations to the Tariff Schedules of the United States consist of --

(i) the 2-digit statistical suffixes,
(ii) the indicated units of quantity,
(iii) the statistical headnotes and annexes, and
(iv) the italicized article descriptions.

(b) The legal text of the Tariff Schedules of the United States consists of the remaining text as more specifically identified in headnote 10(a) of the general headnotes and rules of interpretation.

(c) The statistical annotations are subordinate to the provisions of the legal text and cannot change their scope.

3. Statistical Reporting Number. (a) General Rule: Except as provided in paragraph (b) of this headnote, and in the absence of specific instructions to the contrary elsewhere, the statistical reporting number for an article consists of the 7-digit number formed by combining the 5-digit item number with the appropriate 2-digit statistical suffix. Thus, the statistical reporting number for live monkeys dutiable under item 100.95 is "100.9520".

(b) Wherever in the tariff schedules an article is classifiable under a provision which derives its rate of duty from a different provision, the statistical reporting number is, in the absence of specific instructions to the contrary elsewhere, the 7-digit number for the basic provision followed by the item number of the provision from which the rate is derived. Thus, the statistical reporting number of mixed apple and grape juices, not containing over 1.0 percent of ethyl alcohol by volume, is "165.6500-165.40".

4. Abbreviations. (a) The following symbols and abbreviations are used with the meanings respectively indicated below:

| | | |
|---|---|---|
| s. ton | - | short ton |
| C. | - | one hundred |
| Cwt. | - | 100 lbs. |
| mg. | - | milligram |
| M. | - | 1,000 |
| bd. ft. | - | board feet |
| M. bd. ft. | - | 1,000 board feet |
| mc. | - | millicurie |
| cord | - | 128 cubic feet |
| square | - | amount to cover 100 square feet of surface |
| sup. ft. | - | superficial foot |
| oz. | - | ounces avoirdupois |
| fl. oz. | - | fluid ounce |
| oz. troy | - | troy ounce |
| pf. gal. | - | proof gallon |

(b) An "X" appearing in the column for units of quantity means that no quantity (other than gross weight) is to be reported.

(c) Whenever two separate units of quantity are shown for the same article, the "v" following one of such units means that the value of the article is to be reported with that quantity.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

HISTORICAL NOTES

Notes p. 1
General
Headnotes

Amendments and Modifications

| PROVISIONS | |
|---|---|
| Gen Hdnte--3(a)(i) | Language "Except as provided in headnote 6 of schedule 7, part 2, subpart E," added; language "except that all articles" deleted and language "except that all such articles" inserted in lieu thereof. Pub. L. 89-805, Secs. 1(a), (c), Nov. 10, 1966, 80 Stat. 1521, 1522, effective date Jan. 1, 1967.<br>Language "Except as provided in headnote 4 of schedule 7, part 7, subpart A," added. Pub. L. 89-806, Secs. 2(b), (c), Nov. 10, 1966, 80 Stat. 1523, effective date March 11, 1967. |
| Gen Hdnte--3(d), (e), (f) and (g) | Headnotes 3(d), (e), and (f) redesignated as headnotes 3(e), (f), and (g), respectively, and new headnote 3(d) added. Pub. L. 89-283, Secs. 401(a), 403, Oct. 21, 1965, 79 Stat. 1021, 1022; entered into force Oct. 22, 1965, by Pres. Proc. 3682, Oct. 21, 1965, 3 CFR, 1965 Supp., p. 68. |
| Gen Hdnte--6(b)(i) | Language "and containers of usual types ordinarily sold at retail with their contents," added. Pub. L. 89-241, Secs. 2(a), 4, Oct. 7, 1965, 79 Stat. 933, 934, effective date Dec. 7, 1965. |

## SCHEDULE I. - ANIMAL AND VEGETABLE PRODUCTS

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

## SCHEDULE 1. - ANIMAL AND VEGETABLE PRODUCTS

Part 1 - Live Animals

Part 2 - Meats
- A. Bird Meat
- B. Meats Other Than Bird Meat

Part 3 - Fish and Shellfish
- A. Fish, Fresh, Chilled, or Frozen
- B. Fish, Dried, Salted, Pickled, Smoked, or Kippered
- C. Fish in Airtight Containers
- D. Other Fish Products
- E. Shellfish

Part 4 - Dairy Products; Birds' Eggs
- A. Milk and Cream
- B. Butter, Oleomargarine, and Butter Substitutes
- C. Cheeses
- D. Other Milk Products
- E. Poultry and Other Birds' Eggs

Part 5 - Hides, Skins, and Leather; Furskins
- A. Hides, Skins, and Leather
- B. Furskins

Part 6 - Live Plants; Seeds
- A. Live Plants
- B. Seeds

Part 7 - Cereal Grains; Milled Grain Products, and Malts and Starches
- A. Grains
- B. Milled Grain Products
- C. Malts and Starches

Part 8 - Vegetables
- A. Vegetables, Fresh, Chilled, or Frozen
- B. Vegetables, Dried, Desiccated, or Dehydrated
- C. Vegetables, Packed in Salt, in Brine, Pickled, or Otherwise Prepared or Preserved
- D. Mushrooms and Truffles

Part 9 - Edible Nuts and Fruits
- A. Edible Nuts
- B. Edible Fruits
- C. Fruit Pieces, Peels, Pastes, Pulps, Jellies, Jams, Marmalades, and Butters
- D. Glacé Nuts, Fruits, and Other Vegetable Substances

Part 10 - Sugar, Cocoa, Confectionery
- A. Sugars, Syrups, and Molasses
- B. Cocoa
- C. Confectionery

Part 11 - Coffee, Tea, Mate, and Spices
- A. Coffee and Coffee Substitutes, Tea, Maté
- B. Spices and Spice Seeds

Part 12 - Beverages
- A. Fruit Juices
- B. Non-Alcoholic Beverages
- C. Fermented Alcoholic Beverages
- D. Spirits, Spirituous Beverages and Beverage Preparations

Part 13 - Tobacco and Tobacco Products

Part 14 - Animal and Vegetable Oils, Fats and Greases
- A. Oil-Bearing Vegetable Materials
- B. Vegetable Oils, Crude or Refined
- C. Animal Oils, Fats, and Greases, Crude or Refined
- D. Hardened Oils, Fats, and Greases; Mixtures

Part 15 - Other Animal and Vegetable Products
- A. Products of American Fisheries
- B. Edible Preparations
- C. Animal Feeds
- D. Feathers, Downs, Bristles, and Hair
- E. Shellac and Other Lacs; Natural Gums, Gum Resins, Resins, and Balsams; Turpentine and Rosin
- F. Miscellaneous Animal Products
- G. Miscellaneous Vegetable Products

| Item | Stat. Suf-fix | Articles | Units of Quantity | Rates of Duty | |
|---|---|---|---|---|---|
| | | | | 1 | 2 |
| | | **PART 14. - ANIMAL AND VEGETABLE OILS, FATS, AND GREASES** | | | |
| | | Part 14 headnotes: | | | |
| | | 1. If, at any time prior to July 4, 1974, the President, after consultation with the President of the Philippine Republic, finds that adequate supplies of neither copra nor coconut oil, the product of the Philippines, are readily available for processing in the United States, he shall issue a special proclamation so proclaiming, and the provisions of items 175.10 through 175.12 of subpart A and of items 176.07 through 176.13 of subpart B of this part shall become inoperative with respect to products entered after the date of such proclamation and before the expiration of 30 days after he proclaims that, after consultation with the President of the Philippine Republic, he finds that adequate supplies of such copra or coconut oil are readily available for processing in the United States. | | | |
| | | 2. Copra the product of the Trust Territory of the Pacific Islands, 61 Stat. 397, (hereinafter referred to in this part as the Trust Territory) or produced wholly from materials the growth or production thereof (items 175.11 and 175.12) and coconut oil, the product of the Trust Territory, or produced wholly from materials the growth or production thereof, (items 176.08, 176.09, 176.10, 176.12 and 176.13) shall be subject to additional duties of 1.25¢ per pound and 2¢ per pound, respectively, to such extent, and at such time after the date of the applicable proclamation, as the President, after taking into account the responsibilities of the United States with respect to the economy of the Trust Territory, shall determine and proclaim to be justified to prevent substantial injury or the threat thereof to the competitive trade of any country of the free world. | | | |
| | | 3. For the purposes of the exclusive trade agreement between the United States and the Republic of the Philippines, the rates of duty in subpart A on copra shall be deemed to be an "internal tax" rather than an "ordinary customs duty". | | | |
| | | **Subpart A. - Oil-Bearing Vegetable Materials** | | | |
| | | Subpart A headnote: | | | |
| | | 1. This subpart covers oil-bearing seeds and other oil-bearing vegetable materials. | | | |
| 175.03 | 00 | Apricot and peach kernels | Lb. | 2.7¢ per lb. | 3¢ per lb. |
| 175.06 | 00 | Castor beans | Lb. | 0.2¢ per lb. | 0.5¢ per lb. |

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)



SCHEDULE 1. - ANIMAL AND VEGETABLE PRODUCTS
Part 14. - Animal and Vegetable Oils, Fats, and Greases



| Item | Stat. Suffix | Articles | Units of Quantity | Rates of Duty 1 | Rates of Duty 2 |
|---|---|---|---|---|---|
| | | Copra: | | | |
| 175.09 | 00 | Entered during the effective period of special proclamation issued pursuant to headnote 1 of this part, or entered after July 3, 1974.... | Lb..... | Free | Free |
| 175.10 | 00 | Entered on or before July 3, 1974, when no such special proclamation is in effect..... | Lb..... | 1.25¢ per lb. | 1.25¢ per lb. |
| 175.11 | 00 | If product of the Philippines or of the Trust Territory..... | Lb..... | Free | |
| 175.12 | 00 | If produced elsewhere than in the Philippines or the Trust Territory wholly of materials the growth or production thereof..... | Lb..... | Free | Free |
| 175.15 | 00 | Cottonseed..... | Lb..... | 1/3¢ per lb. | 1/3¢ per lb. |
| 175.18 | 00 | Flaxseed (Linseed)..... | Lb..... | 50¢ per bu. of 56 lb. | 65¢ per bu. of 56 lb. |
| 175.21 | 00 | Hempseed..... | Lb..... | 0.55¢ per lb. | 1.24¢ per lb. |
| 175.24 | 00 | Kapok seed..... | Lb..... | Free | 2¢ per lb. |
| 175.28 | 00 | Palm-nut kernels and palm nuts..... | Lb..... | Free | Free |
| 175.33 | 00 | Perilla seed..... | Lb..... | 1.38¢ per lb. | 1.38¢ per lb. |
| 175.36 | 00 | Poppy seed..... | Cwt.... | 7¢ per 100 lbs. | 32¢ per 100 lbs. |
| 175.39 | 00 | Rapeseed..... | Lb..... | 1¢ per lb. | 2¢ per lb. |
| 175.42 | 00 | Rubber seed..... | Lb..... | Free | Free |
| 175.45 | 00 | Sesame seed..... | Lb..... | 0.45¢ per lb. | 1.18¢ per lb. |
| | | Soy beans: | | | |
| 175.48 | 00 | Certified by a responsible officer or agency of a foreign government in accordance with the official rules and regulations of that government to have been grown and approved especially for use as seed, in containers marked with the foreign government's official certified seed soybean tags..... | Lb..... | 1.3¢ per lb. | 2¢ per lb. |
| 175.49 | 00 | Other..... | Lb..... | 1.8¢ per lb. | 2¢ per lb. |
| 175.51 | 00 | Sunflower seed..... | Lb..... | 0.7¢ per lb. | 2¢ per lb. |
| 175.54 | 00 | Tung nuts..... | Lb..... | Free | Free |
| 175.57 | 00 | Oil-bearing nuts and seeds, not specially provided for..... | Lb..... | Free | Free |

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)



SCHEDULE 1. - ANIMAL AND VEGETABLE PRODUCTS
Part 14. - Animal and Vegetable Oils, Fats, and Greases



| Item | Stat. Suf-fix | Articles | Units of Quantity | Rates of Duty 1 | Rates of Duty 2 |
|---|---|---|---|---|---|
| | | **Subpart B. - Vegetable Oils, Crude or Refined** | | | |
| | | Subpart B headnotes: | | | |
| | | 1. This subpart covers all expressed or extracted vegetable oils, whether crude or subjected to refining processes, but does not cover any of such products which have been artificially mixed or which have been sulfonated, sulfated, hydrogenated, or processed otherwise than by refining. This subpart also covers vegetable tallow. | | | |
| | | 2. Coconut oil, which is a Philippine article, is entitled to the preferential rates of duty prescribed in items 176.05, 176.08 and 176.12 of this subpart if entered on or before December 31, 1973, but the total aggregate quantity entered under these items during each calendar year shall not exceed -- (a) 160,000 tons during calendar years 1963 through 1964, (b) 120,000 tons during calendar years 1965 1/ through 1967, (c) 80,000 tons during calendar years 1968 through 1970, and (d) 40,000 tons during calendar years 1971 through 1973. | | | |
| 176.00 | 00 | Babassu oil | Lb. | Free | Free |
| | | Castor oil: | | | |
| 176.01 | 00 | Valued not over 11.5¢ per pound | Lb. | 13% ad val. | 3¢ per lb. |
| 176.02 | 00 | Valued over 11.5¢ per pound | Lb. | 1.5¢ per lb. | 3¢ per lb. |
| 176.03 | 00 | Corn oil | Lb. | 10% ad val. | 20% ad val. |
| | | Coconut oil: | | | |
| 176.04 | 00 | Entered during the effective period of special proclamation issued pursuant to headnote 1 of this part, or entered after July 3, 1974 | Lb. | 1¢ per lb. | 2¢ per lb. |
| | | If product of the Philippines or of the Trust Territory: | | | |
| 176.05 | 00 | If Philippine article within tariff-rate quota (see headnote 2 of this subpart), or if Trust Territory article, entered on or before July 3, 1974 | Lb. | Free | |
| 176.06 | 00 | Other | Lb. | 1¢ per lb. | |

1/ Quota for 1965 increased by 28,308,955 pounds. (Sec. 3, P.L. 89-388)

| Item | Stat. Suffix | Articles | Units of Quantity | Rates of Duty 1 | Rates of Duty 2 |
|---|---|---|---|---|---|
| | | Coconut oil (con.): | | | |
| | | Entered on or before July 3, 1974, when no special proclamation issued pursuant to headnote 1 is in effect: | | | |
| 176.07 | 00 | Crude | Lb. | 3¢ per lb. | 4¢ per lb. |
| | | If product of the Philippines or of the Trust Territory: | | | |
| 176.08 | 00 | If Philippine article within tariff-rate quota (see headnote 2 of this subpart), or if Trust Territory article | Lb. | Free | |
| 176.09 | 00 | Other | Lb. | 1¢ per lb. | |
| 176.10 | 00 | If produced elsewhere than in the Philippines or the Trust Territory wholly from materials the growth or production thereof | Lb. | 1¢ per lb. | 2¢ per lb. |
| 176.11 | 00 | Other than crude | Lb. | 1¢ per lb. | 2¢ per lb. |
| | | If product of the Philippines or of the Trust Territory: | | | |
| 176.12 | 00 | If Philippine article within tariff-rate quota (see headnote 2 of this subpart), or if Trust Territory article | Lb. | Free | |
| 176.13 | 00 | Other | Lb. | 1¢ per lb. | |
| 176.18 | 00 | Cottonseed oil | Lb. | 3¢ per lb. | 3¢ per lb. |
| 176.20 | 00 | Croton oil | Lb. | Free | Free |
| 176.22 | 00 | Hempseed oil | Lb. | 6¢ per lb. | 6¢ per lb. |
| 176.24 | 00 | Kapok oil | Lb. | 2¢ per lb. + 9% ad val. | 4.5¢ per lb. + 20% ad val. |
| 176.26 | 00 | Linseed or flaxseed oil | Lb. | 4.5¢ per lb. | 4.5¢ per lb. |
| | | Olive oil: | | | |
| 176.28 | 00 | Rendered unfit for use as food | Lb. | Free | Free |
| | | Other: | | | |
| 176.29 | 00 | Weighing with the immediate container under 40 pounds | Lb. | 3.8¢ per lb. on contents and container | 8¢ per lb. on contents and container |
| 176.30 | 00 | Other | Lb. | 2.6¢ (2.9¢) per lb.* | 6.5¢ per lb. |
| | | Palm-kernel oil: | | | |
| 176.32 | 00 | Rendered unfit for use as food | Lb. | Free | Free |
| 176.33 | 00 | Other | Lb. | 0.5¢ per lb. | 1¢ per lb. |
| 176.34 | 00 | Palm oil | Lb. | Free | Free |
| 176.38 | 00 | Peanut oil | Lb. | 4¢ per lb. | 4¢ per lb. |
| 176.40 | 00 | Perilla oil | Lb. | 4.5¢ per lb. | 4.5¢ per lb. |
| 176.42 | 00 | Poppy seed oil | Lb. | 0.9¢ per lb. | 2¢ per lb. |

*See general headnote 3(g)(iii).

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)



SCHEDULE 1. - ANIMAL AND VEGETABLE PRODUCTS
Part 14. - Animal and Vegetable Oils, Fats, and Greases



| Item | Stat. Suf-fix | Articles | Units of Quantity | Rates of Duty 1 | Rates of Duty 2 |
|---|---|---|---|---|---|
| | | Rapeseed oil: | | | |
| | | Rendered unfit for use as food: | | | |
| 176.44 | 00 | Imported to be used in the manufacture of rubber substitutes or lubricating oil..... | Lb..... | Free | Free |
| 176.45 | 00 | Other..... | Lb..... | 1.8¢ per lb. | 4.5¢ per lb. |
| | | Other: | | | |
| 176.46 | 00 | Imported to be used in the manufacture of rubber substitutes or lubricating oil.. | Lb..... | 0.55¢ per lb. | 0.8¢ per lb. |
| 176.47 | 00 | Other..... | Lb..... | 2.4¢ per lb. | 5.3¢ per lb. |
| | | Sesame oil: | | | |
| 176.49 | 00 | Rendered unfit for use as food..... | Lb..... | 4¢ per lb. | 4.5¢ per lb. |
| 176.50 | 00 | Other..... | Lb..... | 1.3¢ per lb. | 3¢ per lb. |
| 176.52 | 00 | Soybean oil..... | Lb..... | 40% ad val. | 45% ad val. |
| | | Sunflower oil: | | | |
| 176.54 | 00 | Rendered unfit for use as food..... | Lb..... | 1.6¢ per lb. | 4.5¢ per lb. |
| 176.55 | 00 | Other..... | Lb..... | 1.6¢ per lb. + 7% ad val. | 4.5¢ per lb. + 20% ad val. |
| 176.58 | 00 | Sweet almond oil..... | Lb..... | Free | Free |
| 176.60 | 00 | Tung oil..... | Lb..... | Free | Free |
| | | Expressed or extracted vegetable oils, not specially provided for: | | | |
| 176.64 | 00 | Nut oils..... | Lb..... | Free | Free |
| 176.70 | 00 | Other..... | Lb..... | 9% ad val. | 20% ad val. |
| 176.90 | 00 | Vegetable tallow..... | Lb..... | Free | Free |
| | | **Subpart C. - Animal Oils, Fats, and Greases, Crude or Refined** | | | |
| | | Subpart C headnotes: | | | |
| | | 1. This subpart covers animal oils, fats, and greases, whether crude or subjected to refining processes, but does not cover any of such products which have been artificially mixed or which have been sulfonated, sulfated, hydrogenated, or processed otherwise than by refining. The fish oils described in this subpart are classifiable hereunder even if they are deemed to be vitamins or drugs within the meaning of those terms in part 3 of schedule 4. | | | |
| | | 2. This subpart does not cover products of American fisheries (see part 15A of schedule 1). | | | |
| | | Marine-animal oils: | | | |
| | | Fish-liver oils: | | | |
| 177.02 | 00 | Cod..... | Lb..... | Free | Free |
| 177.04 | 00 | Other..... | Lb..... | 4% ad val. | 3¢ per lb. + 10% ad val. |
| | | Fish oils other than liver oils: | | | |
| 177.12 | 00 | Anchovy..... | Lb..... | 1.3¢ per lb. + 9% ad val. | 3¢ per lb. + 20% ad val. |
| 177.14 | 00 | Cod..... | Lb..... | Free | Free |
| 177.16 | 00 | Shark..... | Lb..... | 0.75¢ per lb. + 3.5% ad val. | 3¢ per lb. + 20% ad val. |
| 177.20 | 00 | Eulachon..... | Lb..... | 1¢ per lb. | 3¢ per lb. |
| 177.22 | 00 | Herring..... | Lb..... | 0.8¢ per lb. | 3-2/3¢ per lb. |
| 177.24 | 00 | Menhaden..... | Lb..... | 3¢ per lb. | 3-2/3¢ per lb. |
| 177.26 | 00 | Other..... | Lb..... | 1.3¢ per lb. + 9% ad val. | 3¢ per lb. + 20% ad val. |

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)



SCHEDULE 1. - ANIMAL AND VEGETABLE PRODUCTS
Part 14. - Animal and Vegetable Oils, Fats, and Greases

| Item | Stat. Suf-fix | Articles | Units of Quantity | Rates of Duty 1 | Rates of Duty 2 |
|---|---|---|---|---|---|
| | | Marine-animal oils (con.): | | | |
| | | Other marine-animal oils: | | | |
| 177.30 | 00 | Seal | Lb..... | 1.7¢ per lb. | 3.8¢ per lb. |
| | | Sperm: | | | |
| 177.32 | 00 | Crude | Lb..... | 0.03¢ per lb. | 0.67¢ per lb. |
| 177.34 | 00 | Other than crude | Lb..... | 0.4¢ per lb. | 1.87¢ per lb. |
| 177.36 | 00 | Whale (except sperm) | Lb..... | 1¢ per lb. | 3.8¢ per lb. |
| 177.40 | 00 | Other | Lb..... | 1.35¢ per lb. + 9% ad val. | 3¢ per lb. + 20% ad val. |
| | | Other animal oils, fats, and greases: | | | |
| 177.50 | 00 | Lard | Lb..... | 3¢ per lb. | 3¢ per lb. |
| 177.52 | 00 | Oleo oil and oleo stearin | Lb..... | 2¢ per lb. | 4¢ per lb. |
| 177.56 | 00 | Tallow | Lb..... | 0.78¢ per lb. | 3.5¢ per lb. |
| | | Wool grease: | | | |
| 177.58 | 00 | Conforming to the specifications for wool fat (including hydrous wool fat) appearing in the U.S. Pharmacopoeia, 15th revision | Lb..... | 5¢ per lb. | 6¢ per lb. |
| 177.62 | 00 | Other | Lb..... | 2.65¢ per lb. | 4.3¢ per lb. |
| | | Other: | | | |
| | | Edible: | | | |
| 177.67 | 00 | Derived from milk | Lb..... | 10% ad val. | 20% ad val. |
| 177.69 | 00 | Other | Lb..... | 9% ad val. | 20% ad val. |
| 177.72 | 00 | Not edible | Lb..... | 1.3¢ per lb. + 9% ad val. | 3¢ per lb. + 20% ad val. |
| | | **Subpart D. - Hardened Oils, Fats, and Greases; Mixtures** | | | |
| 178.05 | 00 | Sod oil | Lb..... | 1.7¢ per lb. | 3-2/3¢ per lb. |
| 178.10 | 00 | Hydrogenated or hardened oils, fats, and greases; and lard substitutes whether or not containing lard | Lb..... | 5¢ per lb. | 5¢ per lb. |
| | | Artificial mixtures of two or more of the products provided for in subparts B and C of this part: | | | |
| 178.25 | 00 | In chief value of linseed or flaxseed oil | Lb..... | 4.5¢ per lb. | 4.5¢ per lb. |
| 178.30 | 00 | Other | Lb..... | 18% ad val., but not less than the rate applicable to component material subject to the highest rate of duty | 25% ad val., but not less than the rate applicable to component material subject to the highest rate of duty |

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

STAGED RATES AND HISTORICAL NOTES

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Part 14

Staged Rates

Modifications of column 1 rates of duty by Pres. Proc. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002:

| TSUS item | Prior rate | Rate of duty, effective with respect to articles entered on and after January 1 -- | | | | |
|---|---|---|---|---|---|---|
| | | 1968 | 1969 | 1970 | 1971 | 1972 |
| 175.03 | 3¢ per lb. | 2.7¢ per lb. | 2.4¢ per lb. | 2¢ per lb. | 1.8¢ per lb. | 1.5¢ per lb. |
| 175.06 | 0.25¢ per lb. | 0.2¢ per lb. | 0.15¢ per lb. | 0.1¢ per lb. | 0.05¢ per lb. | Free |
| 175.21 | 0.62¢ per lb. | 0.55¢ per lb. | 0.5¢ per lb. | 0.5¢ per lb. | 0.46¢ per lb. | 0.46¢ per lb. |
| 175.24 | 1¢ per lb. | Free | Free | Free | Free | Free |
| 175.36 | 8¢ per 100 lbs. | 7¢ per 100 lbs. | 7¢ per 100 lbs. | 6¢ per 100 lbs. | 6¢ per 100 lbs. | 6¢ per 100 lbs. |
| 175.45 | 0.59¢ per lb. | 0.45¢ per lb. | 0.3¢ per lb. | 0.2¢ per lb. | 0.1¢ per lb. | Free |
| 175.48 | 1.4¢ per lb. | 1.3¢ per lb. | 1.24¢ per lb. | 1.15¢ per lb. | 1.05¢ per lb. | 1¢ per lb. |
| 175.49 | 2¢ per lb. | 1.8¢ per lb. | 1.5¢ per lb. | 1.4¢ per lb. | 1.2¢ per lb. | 1¢ per lb. |
| 175.51 | 0.8¢ per lb. | 0.7¢ per lb. | 0.6¢ per lb. | 0.55¢ per lb. | 0.45¢ per lb. | 0.4¢ per lb. |
| 176.01 1/ | 1.5¢ per lb. | 13% ad val. | 12% ad val. | 10% ad val. | 9% ad val. | 7.5% ad val. |
| 176.24 | 2.25¢ per lb. + 10% ad val. | 2¢ per lb. + 9% ad val. | 1.8¢ per lb. + 8% ad val. | 1.55¢ per lb. + 7% ad val. | 1.3¢ per lb. + 6% ad val. | 1.125¢ per lb. + 5% ad val. |
| 176.42 | 1¢ per lb. | 0.9¢ per lb. | 0.75¢ per lb. | 0.75¢ per lb. | 0.75¢ per lb. | 0.75¢ per lb. |
| 176.46 | 0.6¢ per lb. | 0.55¢ per lb. | 0.5¢ per lb. | 0.45¢ per lb. | 0.45¢ per lb. | 0.45¢ per lb. |
| 176.49 | 4.5¢ per lb. | 4¢ per lb. | 3.5¢ per lb. | 3¢ per lb. | 2.7¢ per lb. | 2.2¢ per lb. |
| 176.50 | 1.5¢ per lb. | 1.3¢ per lb. | 1.2¢ per lb. | 1¢ per lb. | 0.9¢ per lb. | 0.7¢ per lb. |
| 176.52 | 45% ad val. | 40% ad val. | 36% ad val. | 31% ad val. | 27% ad val. | 22.5% ad val. |
| 176.54 | 1.8¢ per lb. | 1.6¢ per lb. | 1.4¢ per lb. | 1.2¢ per lb. | 1.05¢ per lb. | 0.9¢ per lb. |
| 176.55 | 1.8¢ per lb. + 8% ad val. | 1.6¢ per lb. + 7% ad val. | 1.4¢ per lb. + 6.4% ad val. | 1.2¢ per lb. + 5.5% ad val. | 1.05¢ per lb. + 4.5% ad val. | 0.9¢ per lb. + 4% ad val. |
| 176.70 | 10% ad val. | 9% ad val. | 8% ad val. | 7% ad val. | 6% ad val. | 5% ad val. |
| 177.04 | 5% ad val. | 4% ad val. | 4% ad val. | 3% ad val. | 3% ad val. | 2.5% ad val. |
| 177.12 | 1.5¢ per lb. + 10% ad val. | 1.3¢ per lb. + 9% ad val. | 1.2¢ per lb. + 8% ad val. | 1¢ per lb. + 7% ad val. | 0.9¢ per lb. + 6% ad val. | 0.75¢ per lb. + 5% ad val. |
| 177.16 | 0.85¢ per lb. + 4% ad val. | 0.75¢ per lb. + 3.5% ad val. | 0.68¢ per lb. + 3% ad val. | 0.59¢ per lb. + 2.5% ad val. | 0.51¢ per lb. + 2% ad val. | 0.4¢ per lb. + 2% ad val. |
| 177.20 | 1.5¢ per lb. | 1¢ per lb. | 1¢ per lb. | 1¢ per lb. | 0.7¢ per lb. | 0.7¢ per lb. |
| 177.22 | 0.92¢ per lb. | 0.8¢ per lb. | 0.7¢ per lb. | 0.6¢ per lb. | 0.55¢ per lb. | 0.46¢ per lb. |
| 177.24 | 3-1/3¢ per lb. | 3¢ per lb. | 2.65¢ per lb. | 2.35¢ per lb. | 2¢ per lb. | 1.7¢ per lb. |
| 177.26 | 1.5¢ per lb. + 10% ad val. | 1.3¢ per lb. + 9% ad val. | 1.2¢ per lb. + 8% ad val. | 1¢ per lb. + 7% ad val. | 0.9¢ per lb. + 6% ad val. | 0.7¢ per lb. + 5% ad val. |
| 177.30 | 1.9¢ per lb. | 1.7¢ per lb. | 1.5¢ per lb. | 1.3¢ per lb. | 1.1¢ per lb. | 0.95¢ per lb. |
| 177.32 | 0.065¢ per lb. | 0.03¢ per lb. | 0.03¢ per lb. | 0.03¢ per lb. | 0.03¢ per lb. | 0.03¢ per lb. |
| 177.34 | 0.47¢ per lb. | 0.4¢ per lb. | 0.35¢ per lb. | 0.3¢ per lb. | 0.25¢ per lb. | 0.2¢ per lb. |
| 177.36 | 1.26¢ per lb. | 1¢ per lb. | 1¢ per lb. | 0.6¢ per lb. | 0.6¢ per lb. | 0.6¢ per lb. |
| 177.40 | 1.5¢ per lb. + 10% ad val. | 1.35¢ per lb. + 9% ad val. | 1.2¢ per lb. + 8% ad val. | 1.05¢ per lb. + 7% ad val. | 0.9¢ per lb. + 6% ad val. | 0.75¢ per lb. + 5% ad val. |
| 177.56 | 0.875¢ per lb. | 0.78¢ per lb. | 0.7¢ per lb. | 0.6¢ per lb. | 0.52¢ per lb. | 0.43¢ per lb. |
| 177.69 | 10% ad val. | 9% ad val. | 8% ad val. | 7% ad val. | 6% ad val. | 5% ad val. |
| 177.72 | 1.5¢ per lb. + 10% ad val. | 1.3¢ per lb. + 9% ad val. | 1.2¢ per lb. + 8% ad val. | 1¢ per lb. + 7% ad val. | 0.9¢ per lb. + 6% ad val. | 0.75¢ per lb. + 5% ad val. |
| 178.05 | 1.9¢ per lb. | 1.7¢ per lb. | 1.5¢ per lb. | 1.33¢ per lb. | 1.14¢ per lb. | 0.95¢ per lb. |
| 178.30 | 20% ad val., but not less than the rate applicable to component material subject to highest rate of duty | 18% ad val., but not less than the rate applicable to component material subject to highest rate of duty | 16% ad val., but not less than the rate applicable to component material subject to highest rate of duty | 14% ad val., but not less than the rate applicable to component material subject to highest rate of duty | 12% ad val., but not less than the rate applicable to component material subject to highest rate of duty | 10% ad val., but not less than the rate applicable to component material subject to highest rate of duty |

1/ The value specified in the description for this item and related item 176.02 varies with the staging of the rate of duty as follows: in 1968, the value specified is 11.5¢; in 1969, 12.5¢; in 1970, 15¢; in 1971, 16.7¢; and after 1971, 20¢.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1968)

STAGED RATES AND HISTORICAL NOTES

Notes p. 2
Schedule 1,
Part 14

Other Amendments and Modifications

| PROVISION | |
|---|---|
| Part 14--Language ", palm-kernel nuts and palm nuts, and a 3-cent | |
| hdnte 3 | part of each of the rates of duty in subpart B on coconut oil, palm-kernel oil and palm oil" following "copra" deleted. Pub. L. 89-388, Secs. 1(f)(1), 2, April 13, 1966, 80 Stat. 110, effective date April 13, 1966. |
| 175.09--Column 1 and 2 rate of duty of 1.87¢ per lb. for items 175.09 | |
| 175.10 | and 175.12 and column 1 rate of duty of 1.87¢ per lb. for |
| 175.11 | item 175.11 terminated and column 1 and 2 rate of duty of |
| 175.12 | 3.12¢ per lb. for item 175.10 reduced to 1.25¢ per lb. Pub. L. 89-388, Secs. 1(a), 2, April 13, 1966, 80 Stat. 109, 110, effective date April 13, 1966. The rates of duty (except for item 175.09) had been temporarily suspended or reduced by former items 903.30, 903.31, and 903.32. |
| 175.27--Item 175.27 for palm-nut kernels (column 1 and 2 rate--1.35¢ | |
| 175.28 | per lb.) and item 175.30 for palm nuts (column 1 and 2 |
| 175.30 | rate--0.35¢ per lb.) deleted and palm-nut kernels and palm nuts made free of duty under new item 175.28. Pub. L. 89-388, Secs. 1(b), 2, April 13, 1966, 80 Stat. 109, 110, effective date April 13, 1966. The rates of duty had been temporarily suspended by former item 903.40. |
| Subpt B--Quota for calendar year 1965 increased by 28,308,955 pounds. | |
| hdnte 2(b) | Pub. L. 89-388, Sec. 3, April 13, 1966, 80 Stat. 110. |
| 176.00--Original item 176.01 redesignated as item 176.00. | |
| 176.01 | Pres. Proc. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002, effective date Jan. 1, 1968. |
| 176.01--Item 176.02 (column 1 rate--1.5¢ per lb.; column 2 rate--3¢ | |
| 176.02 | per lb.) deleted and new items 176.01 and 176.02 and heading immediately preceding item 176.01 added in lieu thereof. Pres. Proc. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002, effective date Jan. 1, 1968. |

| PROVISION | |
|---|---|
| 176.04--Rates of duty for items 176.04 (column 1--4¢ per | |
| 176.05 | lb.; column 2--5¢ per lb.), 176.05 (3¢ per lb.), |
| 176.06 | 176.06 (4¢ per lb.), 176.07 (column 1--6¢ per lb.; |
| 176.07 | column 2--7¢ per lb.), 176.08 (3¢ per lb.), |
| 176.08 | 176.09 (4¢ per lb.), 176.10 (column 1--4¢ per lb.; |
| 176.09 | column 2--5¢ per lb.), 176.11 (column 1--4¢ per |
| 176.10 | lb.; column 2--5¢ per lb.), 176.12 (3¢ per lb.), |
| 176.11 | and 176.13 (4¢ per lb.) reduced by 3¢ per lb. |
| 176.12 | Pub. L. 89-388, Secs. 1(c), 2, April 13, 1966, 80 |
| 176.13 | Stat. 109, 110, effective date April 13, 1966. The rates of duty for these items (except items 176.04, 176.05, and 176.06) had been temporarily reduced by 3¢ per lb. by former items 903.43, 903.44, 903.45, 903.46, 903.47, 903.48, and 903.49. |
| 176.32--Rates of duty for items 176.32 (column 1 and 2--3¢ | |
| 176.33 | per lb.) and 176.33 (column 1--3.5¢ per lb.; column 2--4¢ per lb.) reduced by 3¢ per lb. Pub. L. 89-388, Secs. 1(d), 2, April 13, 1966, 80 Stat. 109, 110, effective date April 13, 1966. The rates of duty for these items had been temporarily reduced by 3¢ per lb. by former items 903.60 and 903.61. |
| 176.34--Item 176.35 (free) and item 176.36 (column 1 and 2 | |
| 176.35 | rate--3¢ per lb.) deleted and duty-free treatment |
| 176.36 | provided for all palm oil under new item 176.34. Pub. L. 89-388, Secs. 1(d), 2, April 13, 1966, 80 Stat. 109, 110, effective date April 13, 1966. The rate of duty of 3¢ per lb. had been temporarily suspended by former item 903.65. |
| 177.67--Item 177.70 (column 1 rate--10% ad val.; column 2 | |
| 177.69 | rate--20% ad val.) deleted and items 177.67 and |
| 177.70 | 177.69 and heading immediately preceding item 177.67 added in lieu thereof. Pres. Proc. 3822 (Kennedy Round), Dec. 16, 1967, 32 F.R. 19002, effective date Jan. 1, 1968. |

Statistical Notes

| PROVISION | Effective date |
|---|---|
| *175.09--See Other Amendments and Modifications* | |
| *175.10--See Other Amendments and Modifications* | |
| *175.11--See Other Amendments and Modifications* | |
| *175.12--See Other Amendments and Modifications* | |
| *175.27--See Other Amendments and Modifications* | |
| *00--Disc. (transfered to 175.2800)* | *Apr. 13, 1966* |
| *175.28--See Other Amendments and Modifications* | |
| *00--Estab. (transferred from 175.2700 & 175.3000)* | *Apr. 13, 1966* |
| *175.30--See Other Amendments and Modifications* | |
| *00--Disc. (transferred to 175.2800)* | *Apr. 13, 1966* |
| *Subpt. B--See Other Amendments and Modifications for changes in rates of duty covering items 176.04-176.13, 176.32 & 176.33.* | |
| *176.00--See Other Amendments and Modifications* | |
| *00--Estab. (transferred from 176.0100)* | *Jan. 1, 1968* |

| PROVISION | Effective date |
|---|---|
| *176.01--See Other Amendments and Modifications* | |
| *00--Babassu oil transferred to 176.0000; certain castor oil transferred from 176.0200* | *Jan. 1, 1968* |
| *176.02--See Other Amendments and Modifications* | |
| *00--Certain castor oil transferred to 176.0100* | *Jan. 1, 1968* |
| *176.34--See Other Amendments and Modifications* | |
| *00--Estab. (transferred from 176.3500 & 176.3600)* | *Apr. 13, 1966* |
| *176.35--See Other Amendments and Modifications* | |
| *00--Disc. (transferred to 176.3400)* | *Apr. 13, 1966* |
| *176.36--See Other Amendments and Modifications* | |
| *00--Disc. (transferred to 176.3400)* | *Apr. 13, 1966* |
| *177.67--See Other Amendments and Modifications* | |
| *00--Estab. (transferred from 177.7000pt)* | *Jan. 1, 1968* |
| *177.69--See Other Amendments and Modifications* | |
| *00--Estab. (transferred from 177.7000pt)* | *Jan. 1, 1968* |
| *177.70--See Other Amendments and Modifications* | |
| *00--Disc. (transferred to 177.6700 & 177.6900)* | *Jan. 1, 1968* |

# APPENDIX B

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1967

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1967

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

| Summary title and page; TSUS item | All countries | | First supplier | | Second supplier | | Third supplier | |
|---|---|---|---|---|---|---|---|---|
| | Amount in 1967 | Percent change from 1966 | Country | Value | Country | Value | Country | Value |
| Apricot and peach kernels (p. 5) | | | | | | | | |
| 175.03 | - | -100 | - | - | - | - | - | - |
| Castor beans and castor oil (p. 11) | | | | | | | | |
| 175.06 | 2 | -98 | Haiti | 2 | - | - | - | - |
| 176.01 | - | - | - | - | - | - | - | - |
| 176.02 | 12,887 | 16 | Brazil | 10,249 | Japan | 2,537 | Paraguay | 56 |
| Copra and coconut oil (p. 19) | | | | | | | | |
| 175.09 | - | - | - | - | - | - | - | - |
| 175.10 | - | - | - | - | - | - | - | - |
| 175.11 | 45,492 | 9 | Phil. Rep. | 45,926 | - | - | - | - |
| 175.12 | - | - | - | - | - | - | - | - |
| 176.04 | - | - | - | - | - | - | - | - |
| 176.05 | - | - | - | - | - | - | - | - |
| 176.06 | - | - | - | - | - | - | - | - |
| 176.07 | - | -100 | - | - | - | - | - | - |
| 176.08 | 27,600 | -11 | Phil. Rep. | 27,600 | - | - | - | - |
| 176.09 | 27,809 | -3 | Phil. Rep. | 27,809 | - | - | - | - |
| 176.10 | 2 | -78 | Denmark | 1 | Haiti | 1/ | - | - |
| 176.11 | - | -100 | - | - | - | - | - | - |
| 176.12 | - | - | - | - | - | - | - | - |
| 176.13 | - | - | - | - | - | - | - | - |
| Cottonseed and cottonseed oil (p. 29) | | | | | | | | |
| 175.15 | 2/ - | - | - | - | - | - | - | - |
| 176.18 | 1,936 | 3/ | U.S.S.R. | 1,523 | Nicaragua | 413 | - | - |
| Flaxseed (linseed) and linseed or flaxseed oil (p. 37) | | | | | | | | |
| 175.18 | 13 | 4/ | Canada | 13 | - | - | - | - |
| 176.26 | 4 | -61 | W. Germany | 2 | Denmark | 1 | U.K. | 1 |
| Hempseed and hempseed oil (p. 45) | | | | | | | | |
| 175.21 | 10 | 119 | Turkey | 6 | Kenya | 4 | - | - |
| 176.22 | - | - | - | - | - | - | - | - |
| Kapok seed and kapok oil (p. 49) | | | | | | | | |
| 175.24 | - | - | - | - | - | - | - | - |
| 176.24 | - | - | - | - | - | - | - | - |
| Palm-nuts, palm-nut kernels, palm oil, and palm-kernel oil (p. 51) | | | | | | | | |
| 175.28 | 1 | 4/ | Ceylon | 1 | - | - | - | - |
| 176.32 | - | -100 | - | - | - | - | - | - |
| 176.33 | 12,757 | -14 | Netherlands | 3,951 | Congo | 3,552 | Other W. Af. | 3,512 |
| 176.34 | 6,450 | -17 | Indonesia | 4,112 | Malaysia | 1,711 | Nigeria | 239 |
| Perilla seed and perilla oil (p. 57) | | | | | | | | |
| 175.33 | - | - | - | - | - | - | - | - |
| 176.40 | - | - | - | - | - | - | - | - |

See footnotes at end of table.

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1967

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

| Summary title and page; TSUS item | All countries | | First supplier | | Second supplier | | Third supplier | |
|---|---|---|---|---|---|---|---|---|
| | Amount in 1967 | Percent change from 1966 | Country | Value | Country | Value | Country | Value |
| **Poppy seed and poppy seed oil (p. 59)** | | | | | | | | |
| 175.36 | 1,191 | -25 | Netherlands | 366 | Rumania | 328 | Poland | 313 |
| 176.42 | 10 | -24 | W. Germany | 5 | Belgium | 5 | - | - |
| **Rapeseed and rapeseed oil (p. 63)** | | | | | | | | |
| 175.39 | 56 | 28 | Canada | 36 | Netherlands | 15 | Argentina | 5 |
| 176.44 | 813 | -10 | Sweden | 308 | Switzerland | 272 | W. Germany | 233 |
| 176.45 | - | -100 | - | - | - | - | - | - |
| 176.46 | 23 | 4/ | Canada | 13 | Switzerland | 7 | W. Germany | 3 |
| 176.47 | 137 | 389 | Sweden | 100 | Canada | 37 | - | - |
| **Miscellaneous oil-bearing nuts and seeds; vegetable tallow, and miscellaneous vegetable oils (p. 71)** | | | | | | | | |
| 175.42 | - | - | - | - | - | - | - | - |
| 175.57 | - | -100 | - | - | - | - | - | - |
| 176.00 | - | -100 | - | - | - | - | - | - |
| 176.20 | 2 | -38 | W. Germany | 2 | - | - | - | - |
| 176.58 | 1 | 4/ | Spain | 1 | - | - | - | - |
| 176.64 | 197 | -82 | Brazil | 195 | France | 1 | - | - |
| 176.70 | 5 | -47 | Japan | 3 | W. Germany | 2 | - | - |
| 176.90 | 390 | 4/ | Phil. Rep. | 390 | - | - | - | - |
| **Sesame seed and sesame oil (p. 77)** | | | | | | | | |
| 175.45 | 5,001 | 8 | Nicaragua | 1,811 | Mexico | 1,212 | Guatamala | 635 |
| 176.49 | - | - | - | - | - | - | - | - |
| 176.50 | 527 | 44 | Japan | 205 | Denmark | 196 | Mexico | 126 |
| **Soy beans and soybean oil (p. 85)** | | | | | | | | |
| 175.48 | 7 | 500 | Nicaragua | 6 | Canada | 1 | - | - |
| 175.49 | 4 | -24 | Japan | 4 | Korea Rep. | 1/ | - | - |
| 176.52 | 1 | 99 | Canada | 1 | - | - | - | - |
| **Sunflower seed and sunflower oil (p. 95)** | | | | | | | | |
| 175.51 | 837 | -37 | Canada | 553 | Rep. S. Af. | 183 | Kenya | 49 |
| 176.54 | - | - | - | - | - | - | - | - |
| 176.55 | 5 | -77 | Netherlands | 3 | Canada | 1 | Argentina | 1 |
| **Tung nuts and tung oil (p. 103)** | | | | | | | | |
| 175.54 | - | - | - | - | - | - | - | - |
| 176.60 | 2,302 | -60 | Paraguay | 1,173 | Argentina | 1,074 | Uruguay | 51 |
| **Corn oil (p. 109)** | | | | | | | | |
| 176.03 | 177 | -90 | France | 171 | Phil. Rep. | 6 | - | - |
| **Olive oil (p. 113)** | | | | | | | | |
| 176.28 | 153 | 13 | Portugal | 76 | Spain | 44 | Turkey | 13 |
| 176.29 | 8,946 | 19 | Italy | 6,436 | Spain | 2,136 | Portugal | 165 |
| 176.30 | 8,978 | 19 | Spain | 7,080 | Tunisia | 1,029 | Italy | 407 |
| **Peanut oil (p. 121)** | | | | | | | | |
| 176.38 | 1 | -7 | France | 1 | - | - | - | - |

See footnotes at end of table.

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1967

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

| Summary title and page; TSUS item | All countries | | First supplier | | Second supplier | | Third supplier | |
|---|---|---|---|---|---|---|---|---|
| | Amount in 1967 | Percent change from 1966 | Country | Value | Country | Value | Country | Value |
| **Fish-liver oils (p. 125)** | | | | | | | | |
| 177.02 | 410 | -21 | Norway | 165 | Iceland | 141 | Japan | 55 |
| 177.04 | 174 | 30 | Japan | 167 | Canada | 5 | Taiwan | 2 |
| **Fish oils (p. 129)** | | | | | | | | |
| 177.12 | - | - | - | - | - | - | - | - |
| 177.14 | 472 | 4 | Canada | 391 | Poland | 44 | Norway | 22 |
| 177.16 | - | | - | - | - | - | - | - |
| 177.20 | - | | - | - | - | - | - | - |
| 177.22 | 24 | -95 | Canada | 23 | Mexico | 1 | - | - |
| 177.24 | - | | - | - | - | - | - | - |
| 177.26 | - | 100 | - | - | - | - | - | - |
| **Marine-animal oils except fish and whale (p. 141)** | | | | | | | | |
| 177.30 | - | - | - | - | - | - | - | - |
| 177.40 | 6 | 4/ | Norway | 2 | Mexico | 1 | France | 1 |
| **Whale oil (p. 143)** | | | | | | | | |
| 177.32 | 3,018 | -22 | Netherlands | 1,620 | U.S.S.R. | 461 | Japan | 344 |
| 177.34 | 699 | -9 | U.K. | 242 | Rep. S. Af. | 200 | W. Germany | 164 |
| 177.36 | 5/ 3 | 12 | Canada | 2 | Leeward & Windward Is. | 1 | Denmark | 1/ |
| **Lard, lard substitutes, and hydrogenated oils, fats, and greases (p. 151)** | | | | | | | | |
| 177.50 | 1/ | 4/ | Canada | 1/ | - | - | - | - |
| 178.10 | 142 | -47 | Italy | 79 | Netherlands | 24 | W. Germany | 16 |
| **Tallow, oleo oil, oleo stearin, and animal oils, fats, and greases not elsewhere enumerated (p. 159)** | | | | | | | | |
| 177.52 | - | - | - | - | - | - | - | - |
| 177.56 | 177 | 234 | Canada | 174 | Australia | 2 | Japan | 1 |
| 177.67) 6/ 177.69) | 460 | - | Denmark | 116 | New Zealand | 91 | Canada | 76 |
| 177.72 | 17 | -13 | Canada | 17 | W. Germany | 1/ | - | - |
| **Wool grease (p. 171)** | | | | | | | | |
| 177.58 | 29 | -67 | U.K. | 18 | W. Germany | 6 | Australia | 3 |
| 177.62 | 681 | 24 | Japan | 292 | Australia | 156 | Italy | 107 |
| **Sod oil and artificial mixtures of two or more oils, fats, or greases (p. 177)** | | | | | | | | |
| 178.05 | 19 | 8 | Netherlands | 9 | U.K. | 6 | France | 3 |
| 178.25 | - | - | - | - | - | - | - | - |
| 178.30 | 25 | 158 | Spain | 24 | W. Germany | 1 | - | - |

1/ Less than $500.
2/ Entry from Canada excluded; known to be misclassified.
3/ More than 1,000 percent.
4/ No imports in 1966.
5/ Entry from Sudan excluded; known to be misclassified.
6/ Formerly reported as TSUS item 177.70.