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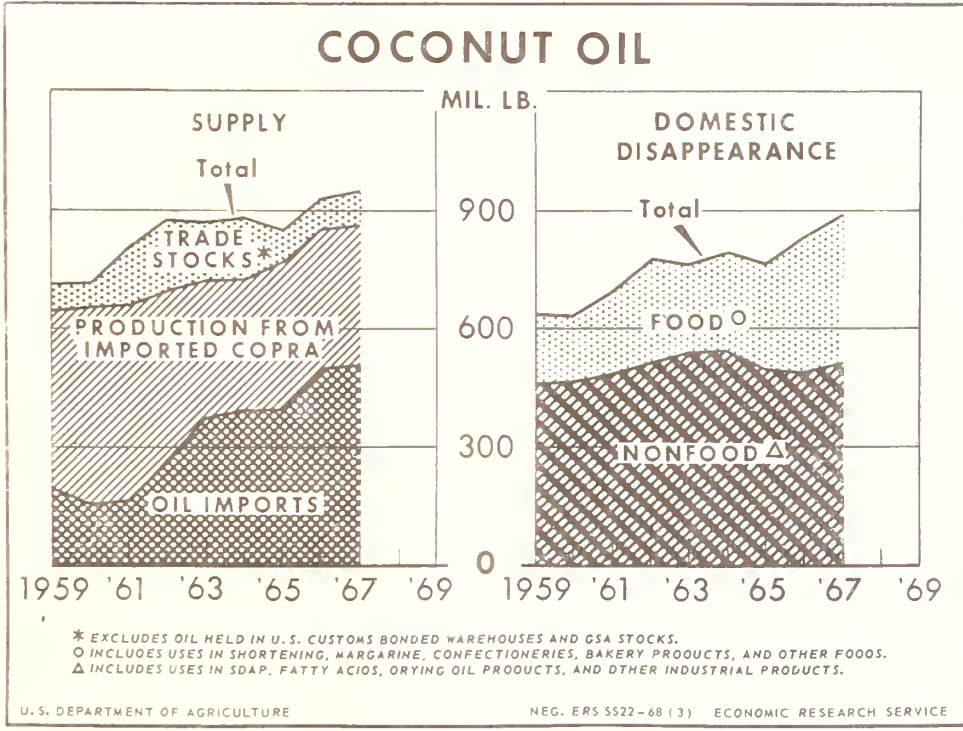
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# THE U.S. COCONUT OIL SITUATION

By

George W. Kromer



U.S. coconut oil supplies (all imported) trended upward to about 950 million pounds in 1967, an increase of one-third over 1959. Oil imports (practically all from the Philippines) rose sharply during this period to more than offset the decline in oil produced domestically from crush of imported copra. In 1967, oil imports comprised nearly 60% of the combined total, compared

with just 30% in 1959. Increased domestic disappearance of coconut oil has gone mostly into food products.

Because of reduced world supplies and continuing strong demand, coconut oil prices in 1968 probably will average at the highest level since 1959. (See page 26.)

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## THE U.S. COCONUT OIL SITUATION

By George W. Kromer

Domestic use of coconut oil in the United States has trended upward from 627 million pounds annually in 1957-59 to a record 869 million pounds in 1967. The increase has been chiefly in the food category, which is now approaching half of the total coconut oil consumed in this country. (See cover chart.) Coconut oil requirements recently have increased at a greater rate than supplies, resulting in a sharp rise in domestic prices. Coconut oil stocks (crude and refined) on January 1, 1968, totaled 134 million pounds (including 66 million crude oil stored under U.S. Customs Bond), sharply below the year before and the lowest since 1960.

Monthly coconut oil prices (crude, tanks, Pacific Coast) have increased steadily from 12¢ per pound in September 1966 to 21¢ in March 1968--with the sharpest increases occurring in the past few months. Current prices are about 60% above a year ago and at the highest level since 1959. Copra prices (c.i.f., Pacific ports) have shown a similar trend, rising from \$155 per short ton in November 1966 to \$242 in March 1968--\$75 above March 1967.

Copra and coconut oil prices tend to vary with world supplies. There is no commercial production of copra in the United States. Coconut oil produced domestically is obtained by the crushing of imported copra, the dried meats of coconuts. The only domestic copra crushing mills are the 4 located in California. The price processors pay for copra is directly related to the oil price, since the oil fraction represents about 90% of the total value of products obtained from copra. A short ton of copra yields around 1,280 pounds (64%) of crude coconut oil and 700 pounds (35%) of cake and meal. Copra meal is used in mixed feeds for cattle. Currently, copra meal (20% protein, bulk, Los Angeles) is selling for about \$84 per ton. Oil yields appar-

ently were off in 1967, as domestic crushers produced 353 million pounds of crude coconut oil from an estimated crush of about 290,000 tons of copra--a 61% out-turn.

Coconut oil has a high lauric acid content, useful in the manufacture of many food and nonfood products. The United States does not grow any oil-bearing crops containing lauric acid. Coconut oil, with lauric acid and other short-chained fatty acids, has some of the properties similar to butterfat. In specialty products (such as confectionery, bakery goods, and popcorn) that require the inherent characteristics of lauric acid oils, the demand for coconut oil is relatively inelastic. The only other major competitor in these specialty products is palm kernel oil--another imported oil. U.S. imports of palm kernel oil in 1967 totaled 104 million pounds.

### United States is Leading Importer

During 1967, about 60% of the U.S. requirements were imported as coconut oil and the remainder as copra. The United States is the world's largest single importer of coconut oil and copra, accounting for over one-fourth of the total volume moving in world trade.

The Philippine Republic is the world's largest producer and exporter of these commodities, representing 2/5 of the world output and nearly 2/3 of the total world exports. U.S. imports of coconut oil and copra (in terms of oil) comprise about half of Philippine exports.

The Philippine Republic is usually the only supplier of copra and coconut oil in the United States because of special tax advantages. A duty of 2¢ per pound is levied on all coconut oil, imported as oil or copra, not wholly a product of the Philippines or U.S. Trust Territories of the Pacific Islands. This preferential tariff is bound in the Philippine-American

Table 17.--Coconut oil: U.S. supply, disposition and price, 1947-68

| Calendar year | Supply                         |          |                |                   |          |          | Disposition                              |                                 |                            | Price                             |         |          |
|---------------|--------------------------------|----------|----------------|-------------------|----------|----------|--|---------------------------------|----------------------------|-----------------------------------|---------|----------|
|               | Production from imported copra | Imports  | Stocks, Jan. 1 |                   |          | Total    | Exports (incl. re-exports and shipments) | Apparent domestic disappearance | Per ton Pacific ports: CIF | Crude coconut oil, tanks, per lb. |         |          |
|               |                                |          | Total          | U.S. Customs Bond | Trade    |          |  |                                 |                            | Coast (incl. import duty)         | Pacific | New York |
|               | Mil. lb.                       | Mil. lb. | Mil. lb.       | Mil. lb.          | Mil. lb. | Mil. lb. | Mil. lb.                                 | Dollars                         | Cents                      | Cents                             |         |          |
| 1947          | 1/ 801                         | 24       | 102            | ---               | ---      | 926      | 58                                       | 784                             | 120                        | 20.7                              | 21.6    |          |
| 1948          | 1/ 557                         | 109      | 81             | ---               | ---      | 748      | 19                                       | 667                             | 201                        | 26.3                              | 27.2    |          |
| 1949          | 543                            | 115      | 61             | ---               | ---      | 719      | 18                                       | 2/ 551                          | 280                        | 17.4                              | 18.6    |          |
| 1950          | 562                            | 138      | 150            | ---               | ---      | 850      | 25                                       | 2/ 730                          | 175                        | 18.4                              | 19.4    |          |
| 1951          | 516                            | 113      | 95             | ---               | ---      | 724      | 40                                       | 2/ 583                          | 202                        | 18.5                              | 19.5    |          |
| 1952          | 435                            | 119      | 101            | ---               | ---      | 654      | 38                                       | 561                             | 208                        | 13.6                              | 14.8    |          |
| 1953          | 422                            | 138      | 55             | ---               | ---      | 615      | 13                                       | 521                             | 211                        | 19.0                              | 20.3    |          |
| 1954          | 432                            | 138      | 81             | ---               | ---      | 651      | 11                                       | 561                             | 177                        | 16.2                              | 17.2    |          |
| 1955          | 431                            | 149      | 79             | ---               | ---      | 659      | 9  | 561                             | 159                        | 14.5                              | 15.6    |          |
| 1956          | 422                            | 197      | 89             | ---               | ---      | 708      | 10                                       | 612                             | 154                        | 14.2                              | 15.4    |          |
| 1957          | 425                            | 184      | 86             | ---               | ---      | 695      | 10                                       | 616                             | 158                        | 3/ 14.2                           | 3/ 15.2 |          |
| 1958          | 412                            | 217      | 69             | ---               | ---      | 698      | 7  | 628                             | 196                        | 14.6                              | 15.8    |          |
| 1959          | 447                            | 197      | 63             | ---               | ---      | 706      | 8  | 638                             | 242                        | 18.3                              | 19.9    |          |
| 1960          | 495                            | 156      | 2/ 326         | ---               | ---      | 978      | 7  | 632                             | 193                        | 14.3                              | 16.1    |          |
| 1961          | 499                            | 163      | 2/ 339         | ---               | ---      | 1,001    | 3  | 4/ 691                          | 157                        | 11.5                              | 12.7    |          |
| 1962          | 429                            | 266      | 2/ 219         | ---               | ---      | 1,014    | 2  | 770                             | 152                        | 10.8                              | 11.8    |          |
| 1963          | 348                            | 372      | 2/ 243         | ---               | ---      | 963      | 10                                       | 4/ 758                          | 170                        | 11.8                              | 12.6    |          |
| 1964          | 328                            | 397      | 2/ 200         | 5/ 42             | 5/ 155   | 925      | 2  | 6/ 793                          | 179                        | 13.4                              | 13.8    |          |
| 1965          | 365                            | 397      | 154            | 66                | 88       | 916      | 12                                       | 6/ 765                          | 203                        | 15.9                              | 15.9    |          |
| 1966          | 358                            | 7/ 499   | 154            | 81                | 73       | 1,011    | 9  | 6/ 831                          | 169                        | 13.2                              | 13.3    |          |
| 1967          | 8/ 353                         | 7/ 506   | 224            | 134               | 90       | 1,083    | 12                                       | 6/ 869                          | 182                        | 14.5                              | 14.5    |          |
| 1968          |                                |          | 134            | 66                | 68       |          |  |                                 | 9/ 237                     | 9/ 20.0                           |         |          |

1/ Apparent production based on factory consumption, net foreign trade, and change in trade stocks. 2/ Includes Government stockpile. 3/ Excludes 3-cent processing tax which has been suspended since October 1957. 4/ Factory consumption figures used for years in which reported factory consumption exceeds calculated domestic disappearance. 5/ Estimate. Data not reported prior to October 1964. 6/ Calculation based on trade stocks rather than total stocks which include oil held in U.S. Customs bonded warehouses. 7/ Adjusted for Census unpublished revisions, due to duplications in data--coconut oil reported as imports for "consumption" rather than "warehouse" entries. This oil was included again when withdrawn from the bonded warehouses. The quantity double counted in 1966 was 11.5 million pounds and in 1967 it was 19.2 million pounds. 8/ Preliminary. 9/ January-March average.

Table 18.--Coconut oil: U.S. utilization, by products, 1947-67

| Calendar year | Food uses  |           |       |       | Nonfood uses |                     |                |             |       |       | Apparent domestic disappearance |
|---------------|------------|-----------|-------|-------|--------------|---------------------|----------------|-------------|-------|-------|---------------------------------|
|               | Shortening | Margarine | Other | Total | Soap         | Drying oil products | Foots and loss | Fatty acids | Other | Total |                                 |
|               |            |           |       |       |              |                     |                |             |       |       |                                 |
| 1947          | 87         | 21        | 15    | 123   | 511          | 1                   | 54             |             | 96    | 661   | 784                             |
| 1948          | 48         | 5         | 78    | 132   | 417          | 1                   | 23             |             | 94    | 535   | 667                             |
| 1949          | 20         | 1/ 0      | 110   | 130   | 282          | 7                   | 28             |             | 81    | 398   | 2/ 551                          |
| 1950          | 0          |           | 129   | 129   | 257          | 4                   | 32             |             | 136   | 428   | 2/ 730                          |
| 1951          | 20         | 1         | 121   | 142   | 197          | 4                   | 35             |             | 144   | 380   | 2/ 583                          |
| 1952          | 33         | 0         | 158   | 191   | 204          | 4                   | 36             |             | 126   | 370   | 561                             |
| 1953          | 12         | 7         | 165   | 183   | 175          | 5                   | 28             |             | 131   | 339   | 521                             |
| 1954          | 15         | 5         | 184   | 204   | 175          | 5                   | 28             |             | 149   | 357   | 561                             |
| 1955          | 4          | 6         | 184   | 194   | 173          | 7                   | 25             |             | 162   | 367   | 561                             |
| 1956          | 5          | 8         | 213   | 226   | 177          | 6                   | 27             |             | 177   | 387   | 612                             |
| 1957          | 8          | 5         | 220   | 233   | 173          | 6                   | 27             |             | 177   | 383   | 616                             |
| 1958          | 12         | 4         | 237   | 253   | 161          | 4                   | 26             |             | 185   | 376   | 628                             |
| 1959          | 20         | 4         | 156   | 180   | 144          | 13                  | 26             |             |       | 458   | 638                             |
| 1960          | 10         | 4         | 158   | 172   | 145          | 7                   | 30             |             | 83    | 195   | 632                             |
| 1961          | 26         | 3         | 177   | 206   | 140          | 6                   | 38             |             | 74    | 485   | 3/ 691                          |
| 1962          | 27         | 5         | 235   | 267   | 141          | 9                   | 39             |             | 56    | 503   | 770                             |
| 1963          | 19         | 4         | 201   | 224   | 152          | 10                  | 32             |             | 51    | 289   | 3/ 758                          |
| 1964          | 18         | 6         | 230   | 254   | 158          | 7                   | 26             |             | 54    | 294   | 4/ 793                          |
| 1965          | 20         | 5         | 247   | 272   | 145          | 4                   | 28             |             | 54    | 262   | 4/ 765                          |
| 1966          | 38         | 13        | 295   | 346   | 150          | 1                   | 36             |             | 60    | 238   | 4/ 831                          |
| 1967          | 5/ 40      | 15        | 306   | 361   | 146          | 5                   | 36             |             | 55    | 266   | 4/ 869                          |
| 1968          |            |           |       |       |              |                     |                |             |       |       |                                 |

1/ Less than 500,000 pounds. 2/ Includes Government stockpiling. 3/ Factory consumption figures used for years in which reported factory consumption exceeds calculated domestic disappearance. 4/ Calculation based on changes in trade stocks (shown in table 17 above) rather than total stocks which include oil held in U.S. Customs bonded warehouses. 5/ Preliminary.

Table 19.--Copra and Coconut oil (oil equivalent): Exports by major exporting countries and estimated world total, average 1960-64, annual 1962-67

| Country                                     | Average<br>1960-64     | 1962                   | 1963                   | 1964                   | 1965                   | 1966 <sup>1/</sup>     | 1967 <sup>1/</sup>     |
|---|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|   | 1,000<br>short<br>tons | 1,000<br>short<br>tons | 1,000<br>short<br>tons | 1,000<br>short<br>tons | 1,000<br>short<br>tons | 1,000<br>short<br>tons | 1,000<br>short<br>tons |
| Philippines <sup>2/</sup> .....             | 810.7                  | 782.1                  | 907.8                  | 837.4                  | 878.9                  | 994.4                  | 802.4                  |
| Indonesia <sup>2/</sup> .....               | 149.1                  | 126.2                  | 99.9                   | 139.9                  | 99.7                   | 110.8                  | <sup>3/</sup> 128.1    |
| Ceylon.....                                 | 137.4                  | 166.5                  | 121.7                  | 173.4                  | 126.7                  | 96.7                   | 88.4                   |
| Papau-New Guinea.....                       | 76.3                   | 78.2                   | 74.7                   | 78.6                   | 86.9                   | 79.9                   | <sup>3/</sup> 79.0     |
| Malaysia <sup>4/</sup> .....                | 40.8                   | 26.7                   | 34.5                   | 23.9                   | 31.6                   | 51.5                   | <sup>3/</sup> 55.4     |
| Mozambique.....                             | 40.1                   | 40.9                   | 43.3                   | 40.2                   | 27.3                   | 29.2                   | 32.0                   |
| Fiji.....                                   | 27.0                   | 25.3                   | 26.7                   | 30.5                   | 21.2                   | 17.7                   | 18.7                   |
| Others.....                                 | 128.8                  | 123.3                  | 141.6                  | 138.0                  | 114.7                  | 118.0                  | 118.5                  |
| World total.....                            | 1,410.2                | 1,369.2                | 1,450.2                | 1,461.9                | 1,387.0                | 1,498.2                | 1,322.5                |
| Percent exported as<br>coconut oil as such: | 25                     | 27                     | 30                     | 32                     | 31                     | 35                     | 33                     |

<sup>1/</sup> Preliminary. <sup>2/</sup> Includes estimates of unregistered shipments. <sup>3/</sup> Estimated. <sup>4/</sup> Net exports from West Malaysia and Singapore.

Foreign Agricultural Service.

Table 20.--Copra and Coconut oil: U.S. imports by country of origin, average 1960-64, annual 1962-67

| Country of origin   | Average<br>1960-64 | 1962          | 1963          | 1964          | 1965          | 1966              | 1967 <sup>1/</sup> |
|---|--------------------|---------------|---------------|---------------|---------------|-------------------|--------------------|
|   | Mil.<br>lb.        | Mil.<br>lb.   | Mil.<br>lb.   | Mil.<br>lb.   | Mil.<br>lb.   | Mil.<br>lb.       | Mil.<br>lb.        |
| <b>Copra</b>  |                    |               |               |               |               |                   |                    |
| Philippines   | 656                | 706           | 521           | 548           | 615           | 536               | 610                |
| Other   | 10                 | 9             | ---           | ---           | ---           | ---               | ---                |
| Total   | 666                | 715           | 521           | 548           | 615           | 536               | 610                |
| <b>Coconut oil</b>  |                    |               |               |               |               |                   |                    |
| Ceylon  | <sup>2/</sup>      | ---           | <sup>2/</sup> | <sup>2/</sup> | <sup>2/</sup> | ---               | ---                |
| Philippines   | 271                | 266           | 372           | 397           | 397           | <sup>3/</sup> 499 | <sup>3/</sup> 506  |
| Other   | <sup>2/</sup>      | <sup>2/</sup> | ---           | ---           | <sup>2/</sup> | ---               | ---                |
| Total   | 271                | 266           | 372           | 397           | 397           | 499               | 506                |
| <b>Copra and coconut oil<br/>(oil equivalent) <sup>4/</sup></b> |                    |               |               |               |               |                   |                    |
| Ceylon  | <sup>2/</sup>      | ---           | <sup>2/</sup> | <sup>2/</sup> | <sup>2/</sup> | ---               | ---                |
| Philippines   | 690                | 718           | 705           | 748           | 791           | 842               | 896                |
| Other   | 6                  | 6             | ---           | ---           | <sup>2/</sup> | ---               | ---                |
| Total   | 697                | 724           | 705           | 748           | 791           | 842               | 896                |

<sup>1/</sup> Preliminary. <sup>2/</sup> Less than 500,000 pounds. <sup>3/</sup> Adjusted for Census unpublished revisions, due to duplications in data--coconut oil reported as imports for "consumption" rather than "warehouse" entries. This oil was included again when withdrawn from the bonded warehouses. The quantity double counted in 1966 was 11.5 million pounds and in 1967 it was 19.2 million pounds. <sup>4/</sup> Oil equivalent of copra is 64%.

Trade Agreement until 1974. In addition, specified quantities of coconut oil from the Philippines enter duty free under the Philippines Trade Revision Act of 1955 (P.L. 84-196).

Under this agreement, Philippine coconut oil has been subject to progressively declining duty free quotas. Imports over and above the quota are subject to a 1-cent-per-pound duty. During calendar years 1968 through 1970 the duty-free quota is 80,000 long tons (179.2 million pounds). During the 1971-73 period, the annual preferential quota will drop to 40,000 tons. On January 1, 1974, all preferential tariff treatment of Philippine coconut oil is scheduled to terminate. Thereafter coconut oil from any non-Communist origin may be imported on a nondiscriminatory basis after payment of the 1-cent-per-pound duty. The 1968 coconut oil quota was filled in February. Imports in 1967 exceeded the 120,000 long-ton-quota (269 million pounds) by 106,000 long tons (237 million pounds) and were subject to a duty of 1¢ per pound.

Coconut oil processing taxes were first imposed in 1934 for the protection of domestically produced fats and oils. Prior to October 1957, coconut oil from any source was subject to a general processing tax of 3¢ per pound upon the first domestic processing. This tax was suspended on October 1, 1957, and repealed on April 13, 1966 (P.L. 89-388). The regular duty on coconut oil--1.0¢ per pound since 1948--remained in effect throughout the period of suspension of processing taxes, except for imports from the Philippines within specified quotas. Coconut oil from the Trust Territories is free, but the amount they ship is negligible.

After dropping from 825 million pounds in 1947 to 554 million in 1952, U.S. imports of coconut oil and copra (oil equivalent) have steadily increased to nearly 900 million pounds in 1967. At the same time, the proportion imported as coconut oil increased from 3% of the combined total in 1947 (following the destruction of the Philippine oil

mills in World War II) to about 60% in 1967. This trend probably will continue upward. It has been helped by the Philippine foreign exchange decontrol action of January 1962 and the continuing suspension of the U.S. 3¢ processing tax on coconut oil since October 1957.

The foreign exchange decontrol program made it possible for oil millers in the Philippines to offer attractive prices for copra for crushing in relation to the returns which traders could obtain by exporting this copra. Also, modern crushing and refining facilities have been built in the Islands close to the source of copra production. As a result, high-quality copra is being crushed and the oil exported to the United States.

#### Domestic Use Climbs

The domestic use of coconut oil has increased, contributing to greater imports. Apparent disappearance has increased from a postwar low of 521 million pounds in 1953 to 869 million in 1967 (table 17). About 42% of the coconut oil consumed in 1967 was in edible products, compared with less than 1/4 of the coconut oil during 1947-51. The remainder of use has been in nonfood products.

An important development that helped boost U.S. consumption of coconut oil was the removal of the 3-cent tax on the first domestic processing. This made coconut oil more competitive with domestically produced fats and oils. Another factor was the orderly liquidation of GSA stockpile coconut oil (266 million pounds were sold from January 1960 through January 1964) which provided price stability to the domestic oil market at relatively low levels (the 1960-63 price of crude coconut oil on the Pacific Coast was at a postwar low, averaging 12.1¢ per pound).

Coconut oil is consumed in a wide range of products for which little detailed data are available. In general, the main nonfood uses are as a raw material in the manufacture of quick-lathering toilet soaps, synthetic detergents, cosmetics, oil additives, hydraulic

Table 21.--Copra and Coconut oil: U.S. import duties applicable to country of origin by specified time periods, effective from July 1, 1966 (Cents per pound)

| Period                              | Country of source                                  |                       | Most Favored Nation countries 2/ |
|-------------------------------------|--|-----------------------|----------------------------------|
|                                     | Philippines 1/                                     |                       |                                  |
|                                     | Within tariff-<br>rate quota 3/                    | In excess<br>of quota |                                  |
| 1. <u>July 1, 1966-July 3, 1974</u> |  |                       |                                  |
| Copra 4/                            | Free   | Free                  | 1.25                             |
| Oil (crude)                         | Free   | 1.0                   | 3.0                              |
| Oil (other than crude)              | Free   | 1.0                   | 1.0                              |
|                                     | Quota discontinued as of<br><u>January 1, 1974</u> |                       |                                  |
| 2. <u>July 4, 1974 and after</u>    |  |                       |                                  |
| Copra                               | Free   |                       | Free                             |
| Oil (crude)                         | 1.0  |                       | 1.0                              |
| Oil (other than crude)              | 1.0  |                       | 1.0                              |

1/ Coconut oil from the U.S. Trust Territories of the Pacific Islands is free regardless of whether the Philippine quota is filled or not. 2/ Includes copra and/or coconut oil produced elsewhere than in the Philippines or the Trust Territory wholly of materials the growth or production thereof. The rates for communist countries are designated in column 2 of the Tariff Schedules of the United States. 3/ According to the Philippine Trade Agreement Revision Act of 1955 (P.L. 84-196), Philippine coconut oil is entitled to the preferential rates of duty if entered on or before December 31, 1973, as long as the quantity entered shall not exceed:

- a. 200,000 long tons during calendar years prior to 1963;
- b. 160,000 long tons during calendar years 1963 through 1964;
- c. 120,000 long tons during calendar years 1965 through 1967;
- d. 80,000 long tons during calendar years 1968 through 1970; and
- e. 40,000 long tons during calendar years 1971 through 1973.

4/ No quota on copra, regardless of source.

NOTE: In the event of a proclamation by the President that adequate supplies of copra and coconut oil are not available, all copra will enter free and coconut oil will be dutiable as provided under Tariff items 176.04-176.06.

Table 22.--Coconut oil: U.S. supply, reported factory consumption, and price, by months, calendar years, 1959-68

| Year               | Production from imported copra                             |             |             |             |             |             |             |             |             |             |             |             | Total<br>or<br>average |
|--------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------|
|                    | Jan.   | Feb.        | Mar.        | Apr.        | May         | June        | July        | Aug.        | Sept.       | Oct.        | Nov.        | Dec.        |                        |
|                    | Mil.<br>lb.  | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb. | Mil.<br>lb.            |
| 1959               | 35   | 29          | 29          | 38          | 36          | 41          | 34          | 42          | 38          | 44          | 44          | 35          | 447                    |
| 1960               | 34   | 30          | 40          | 44          | 44          | 39          | 45          | 48          | 36          | 46          | 45          | 45          | 495                    |
| 1961               | 51   | 37          | 34          | 30          | 44          | 38          | 46          | 47          | 45          | 46          | 43          | 39          | 499                    |
| 1962               | 38   | 39          | 42          | 32          | 28          | 30          | 36          | 30          | 38          | 44          | 43          | 30          | 429                    |
| 1963               | 39   | 23          | 21          | 25          | 22          | 23          | 34          | 26          | 31          | 34          | 39          | 30          | 348                    |
| 1964               | 30   | 30          | 21          | 19          | 20          | 25          | 33          | 29          | 28          | 32          | 38          | 24          | 328                    |
| 1965               | 37   | 32          | 34          | 28          | 32          | 24          | 25          | 31          | 20          | 29          | 38          | 37          | 365                    |
| 1966               | 28   | 21          | 25          | *(25)       | 32          | 36          | 42          | 38          | 33          | *(30)       | *(25)       | *(23)       | 358                    |
| 1967 <sup>1/</sup> | 2/   | 2/          | 2/          | 2/          | 2/          | 2/          | 2/          | 2/          | 2/          | 2/          | 2/          | 2/          | 353                    |
| 1968 <sup>1/</sup> | 32   | 21          |             |             |             |             |             |             |             |             |             |             |                        |
|                    | Imports  |             |             |             |             |             |             |             |             |             |             |             |                        |
| 1959               | 14   | 9           | 17          | 23          | 21          | 15          | 18          | 14          | 17          | 18          | 21          | 10          | 197                    |
| 1960               | 11   | 6           | 14          | 13          | 12          | 18          | 8           | 9           | 17          | 16          | 16          | 16          | 156                    |
| 1961               | 14   | 12          | 7           | 7           | 11          | 5           | 17          | 16          | 12          | 22          | 21          | 19          | 163                    |
| 1962               | 22   | 8           | 15          | 18          | 19          | 16          | 16          | 26          | 16          | 38          | 31          | 41          | 266                    |
| 1963               | 45   | 38          | 40          | 30          | 31          | 20          | 39          | 46          | 35          | 39          | 8           | 0           | 372                    |
| 1964               | 61   | 42          | 46          | 35          | 28          | 36          | 35          | 69          | 9           | 15          | 14          | 6           | 397                    |
| 1965               | 72   | 64          | 50          | 52          | 39          | 18          | 8           | 7           | 25          | 34          | 19          | 10          | 397                    |
| 1966               | 121  | 44          | 87          | 11          | 31          | 47          | 9           | 52          | 35          | 23          | 30          | 9           | 499                    |
| 1967 <sup>1/</sup> | 197  | 80          | 18          | 20          | 15          | 26          | 24          | 19          | 31          | 30          | 30          | 16          | 506                    |
| 1968 <sup>1/</sup> | 116  | 60          |             |             |             |             |             |             |             |             |             |             |                        |
|                    | Stocks, first of month <sup>3/</sup>                       |             |             |             |             |             |             |             |             |             |             |             |                        |
| 1959               | 63   | 59          | 47          | 47          | 48          | 44          | 40          | 49          | 44          | 43          | 51          | 67          |                        |
| 1960               | 61   | 62          | 51          | 55          | 317         | 315         | 306         | 322         | 327         | 323         | 321         | 328         |                        |
| 1961               | 339  | 358         | 340         | 340         | 317         | 306         | 289         | 296         | 294         | 301         | 295         | 308         |                        |
| 1962               | 319  | 308         | 292         | 286         | 270         | 245         | 219         | 221         | 209         | 206         | 203         | 220         |                        |
| 1963               | 243  | 240         | 255         | 255         | 241         | 233         | 211         | 228         | 217         | 227         | 222         | 214         |                        |
| 1964               | 200  | 196         | 196         | 186         | 168         | 160         | 155         | 166         | 178         | 162         | 132         | 147         |                        |
| 1965               | 154  | 148         | 151         | 171         | 173         | 184         | 156         | 138         | 124         | 115         | 107         | 127         |                        |
| 1966               | 154  | 132         | 146         | 176         | 155         | 144         | 147         | 150         | 191         | 189         | 192         | 188         |                        |
| 1967 <sup>1/</sup> | 224  | 194         | 207         | 188         | 192         | 184         | 146         | 114         | 108         | 108         | 94          | 100         |                        |
| 1968 <sup>1/</sup> | 134  | 148         | 144         |             |             |             |             |             |             |             |             |             |                        |
|                    | Reported factory consumption <sup>4/</sup>                 |             |             |             |             |             |             |             |             |             |             |             |                        |
| 1959               | 42   | 46          | 56          | 63          | 56          | 59          | 46          | 58          | 52          | 49          | 53          | 46          | 626                    |
| 1960               | 48   | 49          | 56          | 55          | 61          | 58          | 38          | 58          | 51          | 49          | 50          | 49          | 622                    |
| 1961               | 48   | 47          | 55          | 57          | 66          | 65          | 54          | 67          | 54          | 63          | 56          | 58          | 691                    |
| 1962               | 58   | 54          | 65          | 65          | 63          | 66          | 52          | 68          | 61          | 64          | 57          | 55          | 730                    |
| 1963               | 58   | 57          | 62          | 64          | 69          | 65          | 60          | 68          | 63          | 70          | 60          | 63          | 758                    |
| 1964               | 61   | 61          | 64          | 69          | 68          | 61          | 63          | 72          | 68          | 76          | 64          | 65          | 792                    |
| 1965               | 66   | 65          | 68          | 62          | 66          | 66          | 46          | 66          | 62          | 63          | 59          | 62          | 752                    |
| 1966               | 68   | 62          | 73          | 64          | 74          | 77          | 60          | 72          | 74          | 70          | 62          | 64          | 819                    |
| 1967 <sup>1/</sup> | 69   | 59          | 65          | 68          | 72          | 72          | 67          | 73          | 67          | 71          | 64          | 53          | 801                    |
| 1968 <sup>1/</sup> | 61   | 56          |             |             |             |             |             |             |             |             |             |             |                        |
|                    | Price per pound, crude, tanks, Pacific Coast <sup>5/</sup> |             |             |             |             |             |             |             |             |             |             |             |                        |
|                    | Cents  | Cents       | Cents       | Cents       | Cents       | Cents       | Cents       | Cents       | Cents       | Cents       | Cents       | Cents       | Cents                  |
| 1959               | 18.1   | 19.3        | 19.8        | 20.2        | 20.4        | 19.1        | 16.2        | 15.9        | 17.8        | 18.8        | 16.8        | 17.2        | 18.3                   |
| 1960               | 18.0   | 17.5        | 16.8        | 15.4        | 14.7        | 13.6        | 13.0        | 13.0        | 12.2        | 12.4        | 12.8        | 11.7        | 14.3                   |
| 1961               | 11.9   | 12.3        | 11.7        | 11.7        | 11.7        | 11.4        | 11.7        | 11.5        | 11.6        | 11.1        | 11.0        | 10.7        | 11.5                   |
| 1962               | 10.6   | 10.2        | 10.4        | 10.7        | 10.8        | 10.4        | 10.8        | 10.8        | 10.8        | 11.1        | 11.2        | 11.7        | 10.8                   |
| 1963               | 11.7   | 11.2        | 11.3        | 12.0        | 11.6        | 11.2        | 11.4        | 11.8        | 11.9        | 12.3        | 12.8        | 12.6        | 11.8                   |
| 1964               | 12.3   | 11.9        | 12.3        | 12.9        | 13.2        | 13.6        | 13.6        | 13.6        | 14.0        | 14.0        | 14.3        | 14.7        | 13.4                   |
| 1965               | 15.3   | 16.0        | 16.3        | 17.5        | 18.3        | 17.6        | 15.4        | 14.5        | 14.9        | 15.3        | 15.2        | 14.5        | 15.9                   |
| 1966               | 14.9   | 14.5        | 13.8        | 13.2        | 12.7        | 12.8        | 13.0        | 13.2        | 12.3        | 12.5        | 12.5        | 13.0        | 13.2                   |
| 1967 <sup>1/</sup> | 13.0   | 12.8        | 12.9        | 12.7        | 12.9        | 13.5        | 13.9        | 14.1        | 15.0        | 16.2        | 18.6        | 18.3        | 14.5                   |
| 1968 <sup>1/</sup> | 18.6   | 20.3        | 21.0        |             |             |             |             |             |             |             |             |             |                        |

<sup>1/</sup> Preliminary. <sup>2/</sup> Census disclosures. <sup>3/</sup> From May 1960 through December 1965 includes stocks held by the General Services Administration. <sup>4/</sup> Census reported factory consumption in most years is somewhat lower than the ERS computed annual domestic disappearance shown in table 17. ERS allocates the unreported disappearance to "other" food and nonfood categories. <sup>5/</sup> Includes 1 cent import duty. \* Figures in bracket are estimates based on Census annual total.

brake fluids for airplanes, fatty acids, glycerine, chemicals, and in products such as surface coatings, plasticizers, and insecticides. The main food uses of coconut oil are in confectionery and baked products (such as hard butter for cookie fillers), shortening and margarine. Unfortunately, about 2/3 of the Census end-use data fall into the catch-all categories--"other inedible products" and "other edible products"--which are meaningless when attempting to trace product consumption trends (table 18).

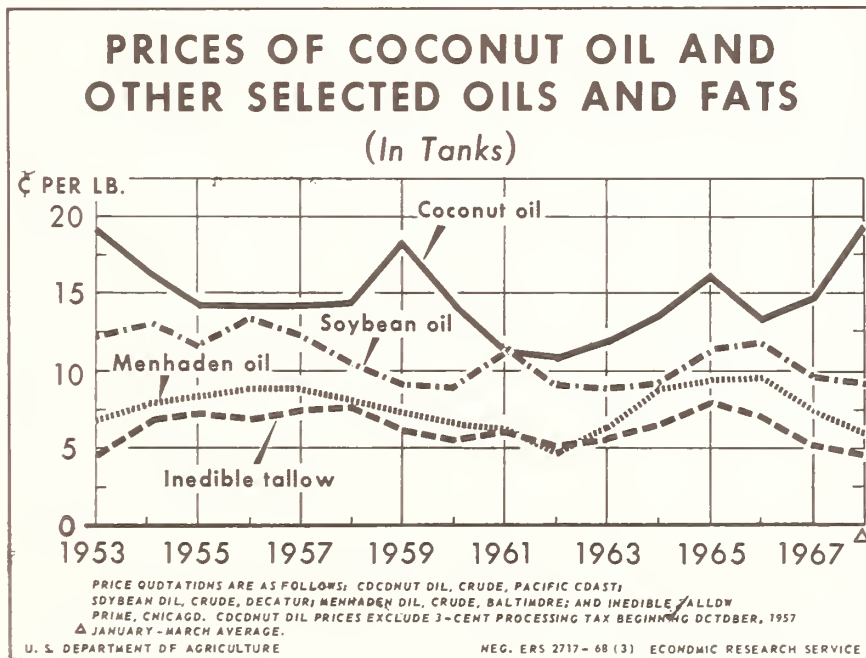
A relatively new use of coconut oil has been in filled milk products, or fluid milk substitutes. In these products the vegetable fat (usually coconut oil) replaces the butterfat in milk. Regular skim milk is homogenized with the vegetable fat. Refined coconut oil has physical characteristics similar to butterfat--it changes abruptly from a relatively hard and brittle solid to a clear oil within a temperature change of a few degrees, and the transition occurs in the range of ordinary room temperature. The basic reason for substitution is the cost difference between vegetable fat and butterfat. While there are no general

standards of identity for the filled milk or imitation products at the present time, most products of this type have a fat content of about 3%. Data are not available on the amount of coconut oil now being used in filled milk products, but the present volume is believed to be relatively small. More recently, several vegetable oil products, some relatively high in polyunsaturated fatty acids, has reportedly replaced the coconut oil usually used in the imitation products.

Prices Trend Upward Since Fall of 1966

Annual average coconut oil prices have fluctuated widely since World War II--from a high of 26.3¢ per pound (crude, tanks, Pacific Coast) in 1948 to a low of 10.8¢ in 1962. Prices during 1963-67 ranged between 12¢ and 16¢ per pound.

Because of declining world supplies and continuing strong demand, monthly average prices of coconut oil have been generally rising over the past 18 months--from 12¢ per pound in September 1966 to 21¢ in March 1968 (table 22). Prices during



January-March 1968 average 20¢ per pound, about 7¢ above the first quarter of 1967.

As may be seen in chart on page 32, coconut oil in the United States consistently sells at a higher price than soybean oil (the leading food oil) or inedible tallow and menhaden oil (leading nonfood fats and oils). Also, coconut oil prices often move independently of competing edible and inedible fats and oils, mainly because of its inherent high lauric characteristics. In 1967, the price premium of crude coconut oil (Pacific Coast) averaged about 5¢ per pound over soybean oil (Decatur), about 7¢ per pound over menhaden oil (Baltimore), and nearly 10¢ over inedible tallow (Chicago).

#### Outlook

The present world shortage of copra and coconut oil supplies is expected to continue during 1968. Because of typhoon damage last fall in the Philippines, production of copra and coconut oil in 1968

may be significantly below that of 1967--perhaps as much as 20%. Typhoon "Welming," which hit the East Central Philippines last November caused heavy loss of trees in Laguna, Quezon, Mindoro, and Marinduque. This will cut production for some time to come, according to The Philippine Coconut Administration.

Demand for coconut oil in the United States is expected to continue strong. With the decline in world production, prices are at the highest level since 1959. Prices likely will average sharply above the 14.5¢ per pound (crude, Pacific Coast) level of 1967. As soybean oil prices are expected to average a little lower than last year, the coconut oil price premium will widen in 1968. Substitution of lower-priced edible fats and oils will be encouraged in food uses wherever feasible. In the nonfood area, the relatively high and unstable price for coconut oil tends to increase the demand for competing synthetic raw materials. Supplies of synthetic materials are relatively stable, and prices are lower at steady levels.

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