

UNITED STATES TARIFF COMMISSION

UNITED STATES IMPORTS FROM JAPAN
and
Their Relation to the Defense Program
and to the
Economy of the Country

WASHINGTON
September 1941

UNITED STATES TARIFF COMMISSION

UNITED STATES IMPORTS FROM JAPAN
AND
THEIR RELATION TO THE DEFENSE PROGRAM
AND TO THE
ECONOMY OF THE COUNTRY



Washington
September 1941

UNITED STATES TARIFF COMMISSION

RAYMOND B. STEVENS, *Chairman*

OSCAR B. RYDER, *Vice Chairman*

EDGAR B. BROSSARD

E. DANA DURAND

EBEN M. WHITCOMB, *Acting Secretary*



Address All Communications

United States Tariff Commission
Washington, D. C.

ACKNOWLEDGMENT

In the preparation of this report, the Commission had the services of Ben Dorfman, Samuel Lipkowitz, the specialists in the various commodity divisions, and others of the Commission's staff.

Contents

Page

Part I

Introduction	3
Summary	5
Conclusions	21

Part II

Frozen swordfish, whole, filleted, boned, etc.	25
Tuna fish, packed in oil	30
Salmon, canned	35
Crab meat, crab sauce, and crab paste	39
Seed oysters	44
Fish scrap and fish meal	47
Cod and cod-liver oils	52
Fish livers	57
Fish-liver oils, other than cod and cod-liver	62
Mother-of-pearl shells, crude	66
Mink fur skins, undressed	69
Lily bulbs	72
Bristles, sorted, bunched, or prepared	75
Sauces, n.s.p.f.	79
Vegetables, prepared or preserved, n.s.p.f.	82
Ajinomoto	85
Pineapples, prepared or preserved, n.s.p.f.	87
Mandarin oranges, canned	93
Tea, n.s.p.f.	96
Pyrethrum or insect flowers, crude	105
Rapeseed oil (denatured)	108
Japan wax	111
Perilla oil	113
Agar-agar	116
Dead or creosote oil	120
Menthol	124
Camphor, crude and refined	127
Cotton manufactures, n.s.p.f.	131
Cotton cloth, bleached, plain	133
Plainback cotton velveteens	138
Cotton table damask, and manufactures thereof	141
Table and bureau covers, etc., of plain-woven cotton cloth, n.s.p.f.	148

Contents—continued

Page

Part II—continued

Cotton floor coverings	151
Cotton rags, including wiping rags, except for paper making	154
Cotton fish nets and netting	157
Raw silk	159
Silk waste	181
Habutai and other plain-woven silk fabrics	186
Rayon staple fiber	191
Pedaline hat braid and unfinished paper hat bodies	194
Sticks of bamboo	198
Manufactures of paper, n.e.s.	200
Pottery, household table and kitchen articles, decorated, colored, etc.	203
Pottery, nonhousehold ware, decorated, colored, etc.	209
Slide fasteners	215
Incandescent electric lamps, metal filament, other than miniature	218
Incandescent electric lamps, metal filament, miniature	222
Cultured pearls and parts, and solid imitation pearls	226
Miscellaneous pyroxylin articles	230

Appendix

Table showing principal commodities imported into the United States from Japan, 1939 and 1940, and January-May 1940 and 1941	235
--	-----

PART 1

UNITED STATES IMPORTS FROM JAPAN AND THEIR RELATION TO THE
DEFENSE PROGRAM AND TO THE ECONOMY OF THE COUNTRY

Introduction.

Recent developments bearing on the trade relations between the United States and Japan have already resulted in a sharp reduction of imports from that country. This situation has given rise to the question of what effect a complete cessation of imports from Japan, if it should for any reason occur, would have on the defense program of the nation and on the general economy of the country. This report reviews the principal individual commodities in the import trade with Japan from this point of view.

The articles covered in this report comprise 59 import classifications. All imports of commodities or classes of commodities from Japan which amounted to as much as \$250,000 in 1940 or \$500,000 in the preceding year are included, and in addition a number of minor imports which either are intimately related to the above or are important for other reasons such as for national defense. The final compilation, as shown in the table in the appendix of this report, accounts for commodities which represented 90.5 percent of all imports from Japan in 1940 and 88.9 percent in the first 5 months of 1941. (These same classifications accounted for 90.2 percent of the imports in 1939.) The commodities are, with only a few exceptions,^{1/} discussed in the order in which they appear in the classification of imports used by the Department of Commerce.

^{1/} For example, fish scrap and fish meal are used both for feed and for fertilizer, and imports for each use enter under different classifications. In this report, however, the two classes are discussed in the same section.

Each commodity or class of commodities listed in the appendix table, with only a few exceptions, is treated in a separate section in Part II of this report. The exceptions are certain groups of commodities which have closely related uses or origins; in such instances, the group is treated as a separate section. Each section gives a description of the product or products under review and a statement concerning principal defense and civilian uses. The competitive situation is briefly described and the principal economic data bearing on the problems which would be created by a stoppage of imports from Japan are presented. The classes of domestic interests (importers, manufacturers, workers, consumers, and defense industries) which would likely be affected by such a stoppage are indicated. Emphasis, however, is placed on the probable effects on the economy of the country as a whole. Where vital interests of substantial sections of the population would likely be affected, even though no great injury appeared in prospect for the country as a whole - as in the case of elimination of imports of raw silk - appropriate space is devoted to a discussion of the manner in which particular groups would be affected.

At the end of each section are tables showing United States imports for consumption of the commodity under review, both from Japan and from each of the other important suppliers, by years from 1937 through 1940, and by months for the period January 1940 through

May 1941. All statistics of imports were compiled from published or unpublished statistics of the United States Department of Commerce. Summary.

The imports from Japan which are separately analyzed in Part II of this report are summarized in the following table.

Table 1. - United States imports for consumption from Japan, by principal commodity groups, 1940 and January-May 1940 and 1941

Commodity group	Value ^{1/}			Proportion of total value of imports from Japan		
	1,000 dollars			Percent		
	1940	January-May		1940	January-May	
	1940	1941		1940	1941	
Silk and silk products	106,588	36,526	34,538	67.9	63.6	65.8
Fish and fish products	8,776	4,990	1,533	5.6	8.7	2.9
Cotton goods	6,452	2,498	3,206	4.1	4.3	6.1
Chemicals and industrial oils	3,475	1,807	1,176	2.2	3.1	2.3
China, porcelain, and earthenware	3,461	1,164	985	2.2	2.0	1.9
Teas	3,190	708	718	2.0	1.2	1.4
Pedaline braid and un- finished paper hat bodies	1,506	872	794	1.0	1.5	1.5
Canned fruits	1,185	109	387	.8	.2	.7
Rayon staple fiber	1,033	501	487	.7	.9	.9
Vegetables, sauces, and other food preparations	941	387	302	.6	.7	.6
Electric lamps	924	258	163	.6	.4	.3
Mink furs	898	506	917	.6	.9	1.7
Lily bulbs	845	30	35	.5	.1	.1
Pearls, cultured and solid imitation	585	218	418	.4	.4	.8
Slide fasteners	526	205	196	.3	.4	.4
Bristles	515	274	256	.3	.5	.5
Bamboo sticks	355	140	168	.2	.2	.3
Miscellaneous pyroxylin articles	287	111	50	.2	.2	.1
Paper manufactures, n.s.p.f.	266	91	83	.2	.2	.2
Pearl shells	171	133	216	.1	.2	.4
Total imports enumerated above	141,979	51,528	46,628	90.5	89.7	88.9
All others ^{2/}	14,954	5,912	5,833	9.5	10.3	11.1
Total	156,933	57,440	52,461	100.0	100.0	100.0

^{1/} The values given do not necessarily show the values of total imports from Japan within each of the classes indicated; instead, they show the total of only the imports which are separately listed in the appendix table. For example, the value of all fish and fish products from Japan was in excess of \$8,776,000 in 1940, but that sum represents the total value of those fish and fish products which are separately analyzed in this report.

^{2/} Includes imports valued at about \$8,000 in 1940 of optical glass, unmanufactured mica, and platinum grains, nuggets, sponge, and scrap, which classes are designated as "critical" or "strategic" materials. No other materials, except silk, which were designated by the Army and Navy Munitions Board as "critical" or "strategic," were imported from Japan in 1940.

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

Silk and silk products. - A complete stoppage of imports of silk and silk products from Japan, which in recent years have accounted for about two-thirds of the total value of imports from Japan, would create much the greater part of the difficulties which would be associated with a cessation of all imports from that country.

For military purposes, raw silk is used principally in the manufacture of parachute cloth. Data on United States requirements for this purpose and on the existing stocks on hand of finished materials and materials in process are not available for publication. However, domestic warehouse stocks of silk (which may now be used only under Government license) are themselves sufficient for making about one-half million parachutes of the average size used for military purposes. There are also available substitutes for silk in making parachutes, notably nylon.

The only other silk material which is of military importance is "silk waste." China has been much the most important supplier of imports of silk waste since 1937; imports from Japan have been negligible since the beginning of 1940. There is also some domestic production of silk waste recovered in textile manufacturing processes.

The only indispensable military use of waste silk is in the production of lacing twine and tie straps for the assembly of propelling charges and in the fabrication of cartridge igniter cloth and gun-powder bag cloth for high caliber ordnance. Cloth for such uses must burn quickly and completely without leaving a hard smoldering

residue, and silk has been generally believed to be the only fiber possessing that combination of characteristics. But it is significant that the United States Army publicly announced early in August that it was no longer dependent on silk for most powder bags and parachutes. Powder bags for small calibers are successfully made of cotton, wool, and mohair.

Data on United States military requirements for waste silk, and the stocks of silk powder bags completed and in process are not available for publication. But even if there were no stocks of such on hand, the available domestic supplies of silk and silk waste (which are now under mandatory priority control by the Government) would suffice for all indispensable military purposes for at least the immediate future.

As regards the civilian uses of silk, it may be observed that 80 percent or more of the imports of Japanese silk into the United States in recent years have entered into the manufacture of hosiery. A cessation of imports would therefore affect principally the hosiery manufacturers, the silk throwsters and their employees, and the great number of women who wear silk hosiery, particularly full-fashioned hosiery.

Substitute yarns for silk, particularly for use in making very sheer hosiery (corresponding to 1-, 2-, and 3-thread silk), will not likely be available in nearly as large quantities as silk has been. Nylon, now the most acceptable substitute insofar as physical

characteristics are concerned, will not be immediately available in sufficient volume to supply yarn for the manufacture of more than 25 to 30 percent of the number of pairs of full-fashioned silk and nylon hosiery which were made in 1940. However, this percentage will likely be about doubled when the new nylon plant at Martinsville, Va., now nearing completion, attains full output, which is expected by the end of 1942.

Full-fashioned hosiery made of cotton and of rayon could in some degree also be used to replace silk hosiery. In 1940, however, only 1 percent of the production of full-fashioned hosiery was of cotton, rayon, or mixtures.

Production and employment in the silk hosiery and silk throwing industries were already reduced in mid-August and will probably be reduced still further in the next several months. The extent and duration of the curtailment is indeterminate; it will depend principally on the availability of yarns which can be substituted for silk and on how quickly volume production of acceptable hosiery made from them can be got under way. Rayon yarn plants are already operating at full capacity so that increases in the supply of rayon for hosiery will necessitate diversion from its other present uses, some of which are for defense. Productive capacity for cotton yarn sufficiently fine to make sheer hose is very limited; a substantial immediate increase in supplies of fine cotton or rayon yarn could be available if imports from Great Britain were increased. Only if

very much larger amounts of hosiery were made of rayon or cotton yarn could production and employment in the hosiery industry be maintained at the levels which prevailed in 1940.

The hosiery industry produced about 500 million pairs of full-fashioned hosiery in 1940. If nylon is to supply material for no more than 150 million pairs per year by the end of 1941 and no more than 300 million pairs per year by the end of 1942 (as has been estimated in this report), then hosiery of other yarns will initially have to make up a deficiency of at least 350 million pairs per year in order that output, and presumably employment, in the hosiery industry be maintained at the 1940 level. Production of full-fashioned rayon and cotton hosiery in 1940 amounted to only 5.4 million pairs. Sharp reduction in both the output and employment in the hosiery and the silk throwing industries appears inevitable for at least the immediate future. The impact of curtailment in production of hosiery will be felt principally in the States of Pennsylvania and North Carolina, which accounted for approximately 60 percent of all full-fashioned hosiery produced in the United States in 1940.^{1/}

The manufacturers and users of woven silk fabrics made of imported silk would be little affected by a stoppage of imports of raw silk from Japan, inasmuch as rayon and other available fibers are acceptable substitutes, having in fact already largely displaced silk for most woven fabrics. Plants and workers now devoted to the production of woven silk fabrics could readily be employed in the production of woven fabrics of other fibers.

^{1/} Quarterly Statistical Bulletin of the Hosiery Industry, National Association of Hosiery Manufacturers, Aug. 1941, p. 41.

Insofar as civilian requirements for waste silk are concerned, spun rayon (made from rayon staple fiber and rayon waste) and continuous filament rayon are satisfactory substitutes in most uses. Some of the equipment and part of the labor supply in the spun-silk industry could be employed in making spun-rayon yarn and novelty mixture yarns.

Fish and fish products. - Of the total value of fish and fish products (including seed oysters) imported from Japan in 1940, canned crab meat accounted for almost 70 percent. In recent years imports of this product from Japan have been exceeded only by those of silk. A stoppage of imports of Japanese crab meat would no doubt compel an almost immediate curtailment in the domestic consumption of canned crab meat since the deficiency could not quickly be made up by increased domestic production or increased imports from Soviet Russia, the only other source. The incidence, however, would be principally on consumers of "luxury" seafoods. Much the same situation would likely prevail for swordfish. A stoppage of other fish food products from Japan, such as canned tuna and salmon, would not likely have an important effect, because large supplies of these and other fish products are available from domestic and other sources in the Western Hemisphere. Any resulting increase in the domestic fish catch would have the incidental effect of increasing somewhat the supply of fish livers, which could be utilized to reduce the United States shortage of the vitamin materials derived from them.

There already exists a shortage of natural vitamin A and D materials in the United States. Vitamin A is used in the prevention of night-blindness, and vitamin D, in the prevention of rickets. The imports of fish livers and fish-liver oils from Japan have been valued principally for their content of vitamin D although they have also been important for their content of A.

The principal users of vitamin oils derived from fish livers from Japan have been the producers of poultry feed. Manufacturers of vitamin oils for human consumption, however, have also been important users. With supplies of cod-liver oil no longer available from Europe, poultry raisers are now substituting sardine oil fortified with tuna-liver oil and shark-liver oil. The tuna-liver oil makes up the deficiency in the vitamin D potency of the sardine oil, and the shark-liver oil, the deficiency in vitamin A.

Under present conditions, a stoppage of imports of fish livers, cod-liver oil, and other vitamin materials from Japan would aggravate still further the shortage of supplies of natural vitamins A and D in the United States. This need not, however, have serious repercussions on the country as a whole. Adequate supplies of synthetic vitamin D can be obtained from domestic sources, and some natural vitamin A in the form of carotene (made from carrots and other materials) also can be obtained from domestic sources. In addition there exists the possibility of increasing imports of liver oils high in vitamin A and D from foreign sources other than Japan. The public interest might

require, however, that domestic manufacturers of the synthetic substitutes for vitamin D (which are made under patented processes) not take advantage of the reduced availability of the natural vitamin D.

A stoppage of imports of seed oysters would seriously injure, within a year or so, a segment of the domestic oyster industry located principally in the State of Washington. Except for a small crop of Olympia oysters, the Pacific coast has no native oysters. Prior to the use of Japanese seed in that area, some seed from the Atlantic coast was used, but the business was never large because the Atlantic oyster takes from 3 to 5 years to attain marketable size in Pacific waters as compared with only 12 to 28 months for the species grown from the Japanese seed. There is very little propagation of Japanese oysters in Pacific coast waters.

A discontinuance of imports of fish scrap and fish meal from Japan would not be serious, in view of the substantial imports of similar materials from Canada and the availability of larger domestic supplies of other feed and fertilizer materials. Imports from Japan in the first five months of 1941 were negligible.

Cotton goods. - A stoppage of imports of Japanese cotton goods would probably attract little domestic notice except from the present users of Japanese fish nets and netting. United States production of cotton manufactures is the largest in the world, and the domestic industry could probably make up most of any likely deficiency in volume arising from a stoppage of imports from Japan. Such a stoppage,

however, would reduce the supply of certain classes of inexpensive bleached cotton cloth, tablecloths and napkins, damask, and floor coverings. Substitutes would, in many instances, be less satisfactory or more costly. A cessation of imports of fish nets and nettings would probably be important in raising the costs of certain domestic fishing operations. The largest domestic producer of netting also produces most of the seine twine used in the manufacture of netting by other manufacturers. Domestic productive capacity of these materials is probably sufficient to meet all domestic requirements.

Chemicals and industrial oils. - The importance to the United States of its imports of chemicals and industrial oils from Japan varies from product to product. Japan (including Kwantung) is the major foreign supplier of agar-agar, camphor, perilla oil, rapeseed oil, and Japan wax. The principal effect of a stoppage of such imports would be the greater resort to substitutes, satisfactory supplies of which are now available for most.

The sole domestic producer of agar-agar, whose raw material now comes from Mexico, could probably, in his present plant, supply the country's essential military and civilian requirements. Plant capacity could quickly be expanded with little outlay. There are numerous substitutes based on domestic raw materials which could be used to replace agar-agar in many of its most important uses. Domestic capacity for output of synthetic camphor, which is interchangeable in use with natural camphor, would have to be increased about 25 percent to supply all domestic requirements, and such expansion of plant would require about 6 months.

Perilla oil is a drying oil preferred in making certain specialties. Domestic consumption is supplied entirely by imports, practically all of which come from Japan (including Kwantung). However, for practically all uses satisfactory substitutes (linseed oil, dehydrated castor oil, fish and soybean oils) are available from domestic sources and from foreign sources other than Japan. Rapeseed oil came principally from Japan prior to 1941 but is now being imported principally from Argentina. Japan wax comes only from Japan, but domestic substitutes, such as paraffin, are available.

The United States is much less dependent on Japan for pyrethrum, creosote oil, and menthol. Any deficiency in pyrethrum could easily be made up by increased imports from British areas. (Imports of pyrethrum from British East Africa (Kenya) were over five times those from Japan in 1940.) Domestic and Canadian production of creosote oil also could easily be expanded, but transport costs to the West coast, where Japanese imports have been entered and consumed would be high. A stoppage of imports of menthol, which now comes principally from China, would no doubt compel a reduction in its consumption, particularly in such products as salves and cigarettes. Domestic production of synthetic menthol is small and that of natural menthol, negligible; and rapid expansion in the production of either is unlikely.

China, porcelain, and earthenware. - Because of the stoppage of imports of such materials from continental Europe, Japan has become practically the sole foreign supplier of inexpensive earthenware and of both the inexpensive and medium-priced china and porcelain dinnerware. A discontinuance of imports from Japan at this time would compel a sharp reduction in the domestic consumption of such articles and a considerable amount of substitution, mostly at higher prices. However, domestic earthenware and, to some extent, machine-made glassware, could largely replace the cheap grades of Japanese china and earthenware.

Tea. - Most of the domestic consumption of tea is supplied by imports from Ceylon, India, and the Netherlands Indies, neither Japan nor China being particularly important in this trade. A stoppage of imports from Japan would affect principally those few users of oolong tea who would not find other teas acceptable.

Pedaline braid and unfinished paper hat bodies. - A discontinuance of imports of pedaline hat braid and paper hat bodies (toyos) would reduce the availability of materials now popular for use in low-priced men's and women's "straw" hats. Consumers would consequently be obliged to curtail their purchases or to seek substitutes. The effect on employment would depend largely on the adjustments made in the hat industry, an industry whose prosperity rests largely on the vagaries of style.

Canned fruits. - Imports from Japan consist of canned pineapple and canned mandarin oranges. The imports have been small, and a stoppage of the trade would cause little difficulty. Capacity for producing domestic canned pineapple (principally in Hawaii) is more than sufficient to meet all requirements, and a variety of substitutes exist for canned mandarin oranges, a "luxury" salad fruit not produced domestically.

Rayon staple fiber. - A stoppage of imports from Japan would not have any appreciable effects. Domestic production of staple fiber has been growing very rapidly, and a large new plant is scheduled to begin production before the end of this year (1941). For many uses, there are adequate supplies of substitutes, such as rayon waste.

Food preparations, vegetables, and sauces. - These consist largely of articles consumed in the United States by persons of oriental descent and by others who patronize restaurants which serve oriental dishes. Most of the consumption is in Hawaii and on the Pacific coast. A stoppage of imports from Japan would necessitate a sharp curtailment in consumption in the United States. Increased imports from other areas and increased domestic production, however, could make up at least part of the deficiency in some classes.

Electric lamps. - A stoppage of imports of electric lamps would not likely have any important effect. Domestic plant capacity is sufficient to supply any likely demand for lamps. The domestic products are more costly than the comparable product from Japan, but are generally of superior quality.

Mink furs. - Mink furs from Japan, although inferior in quality and lower in price than those of other origins, are "luxury" articles for which adequate substitutes are available. Other species of furs from domestic and from other foreign sources are available and, if need be, the output of minks on fur farms in both the United States and Canada could be increased after a period of 1 to 2 years.

Lily bulbs. - The imports from Japan, of which United States stocks are sufficient for requirements in 1941, could not be replaced quickly by domestic production of lily bulbs or by imports from other countries. Substitute floral decorations would therefore have to be used.

Pearls, cultured and solid imitation. - A discontinuance of imports from Japan would necessitate the substitution of other materials for use as costume jewelry. A wide variety of materials for such jewelry can be obtained from both domestic and foreign sources other than Japan.

Slide fasteners. - Domestic slide fasteners sell at higher prices than the Japanese product but are generally of higher quality. Adequate capacity exists in the United States to supply all domestic consumption of slide fasteners. Moreover, domestic substitutes are available at no higher prices than prevail for the Japanese slide fastener.

Bristles. - A cessation of imports of bristles from Japan would not adversely affect the United States to any appreciable extent

because Japan is only a minor supplier. A stoppage of imports from the Japanese-controlled areas in China, however, would in a short time compel a reduction in the United States consumption of paint brushes. No wholly satisfactory substitute for imported hog bristles is available for making such brushes, but for certain purposes paint can be applied with spray guns. Present stocks of hog bristles are sufficient for making a 6-months' supply of all brushes or an 8- or 9-months' supply of paint brushes alone. Tooth, other toilet, industrial, and household brushes are now being made in considerable amounts from nylon and other materials. There is also a fairly large stock of finished brushes in the hands of manufacturers and dealers in the United States.

Bamboo sticks. - A stoppage of imports from Japan would have but little effect, inasmuch as imports from other foreign sources could be increased, and for many uses a number of substitutes are available.

Pyroxylin articles, and paper manufactures. - A stoppage of imports of these Japanese specialties would reduce the variety of low-priced celluloid and paper novelties sold principally by 5- and 10-cent stores in the United States. There would be available, however, a supply of similar and substitute articles of domestic and other foreign origins.

Pearl shells. - Inasmuch as United States imports of pearl shells come principally from Australia and the Netherlands Indies, a cessation of imports from Japan would not be particularly important. Imports

from non-Japanese sources could be increased and there exist in this country large supplies of mussel shells from which fresh-water pearl buttons and novelties may be manufactured.

Other imports. - The classes of imports from Japan not discussed in the preceding paragraphs accounted in the aggregate for less than 15 million dollars in 1940, or for 9-1/2 percent of United States total imports from Japan in that year.^{1/} These imports consisted of a large variety of miscellaneous articles, only three of which are in categories classified by the Army and Navy Munitions Board as "critical" or "strategic" - platinum (in various forms), optical glass, and mica. The imports of platinum amounted to \$6,000 and those of the other two articles to about \$1,000 each. None of the mica was of "strategic" quality and it is doubtful that any of the optical glass was.

Shipping.

A cessation of imports from Japan would have little effect on the volume or value of cargo carried into the United States on American vessels. According to a recent report issued by the United States Maritime Commission, 86 percent of the tonnage of imports into the United States from Japan in 1939 was transported on Japanese vessels, 12 percent by vessels of other foreign nationalities, and less than 2 percent on United States vessels. Participation in this trade by American vessels has declined since that year. In fact, very few vessels of American registry were calling at Japanese ports in 1941 even prior to the Presidential order of July 26, 1941, "freezing" all Japanese assets in the United States.

^{1/} These same classes accounted for 11 percent of the total in the first 5 months of 1941.

Conclusions.

The principal economic effects on the United States which would likely follow from a cessation of imports from Japan may be summarized as follows:

1. The aggregate effect on the economy of the country as a whole would be slight.

2. United States defense program would not be interfered with to any appreciable degree.

3. The health of the population of the United States would not be affected.

4. Certain domestic industries which have been using imported materials (notably the full-fashioned hosiery industry) would be adversely affected; but certain other domestic industries producing articles competitive with imports from Japan (the fish canneries and the manufacturers of electric lamps, for example) would be benefited. Most of the unemployment in the industries adversely affected would probably be short-lived because of the large and increasing demand for workers in other industries.

5. The public interest might require that the Federal Government take measures both to facilitate readjustments in the few industries which would be most seriously affected, and to prevent any unwarranted increase of prices by those domestic interests which are in a position to profit from a stoppage of imports from Japan, either in consequence of having accumulated stocks of imported goods or because they control the production or supply of substitute materials.

6. Present users of silk hosiery would be the principal consumer interests affected. For at least a limited time, aggregate consumption of full-fashioned hosiery would have to be sharply reduced. However, after necessary readjustments were made by the hosiery industry and by the suppliers of yarn (which would probably require a year or so) domestic production of hosiery of fibers other than silk would probably be sufficient to supply the great bulk of the country's requirements.

7. Consumers of such semiluxury Japanese products as crab meat, swordfish, and mink furs, constitute only a small fraction of the population and a group whose income would permit substitution of other articles without appreciable hardship.

8. Consumers of low-priced Japanese manufactured articles (cotton manufactures, hat bodies, slide fasteners, chinaware, electric lamps, etc.) would generally be obliged either to curtail their consumption of such goods ~~or~~ to purchase higher-priced substitutes, or to do both. Purchases of such Japanese articles, however, do not account for an important part of the total expenditures of even those in the very low income brackets. Moreover, the substitution of higher priced articles would, in a number of instances, prove beneficial because of their superior quality.

9. The extent and rapidity with which domestic substitutes could replace certain imports from Japan would depend on the domestic availability of materials some of which are now subject to priorities.

PART 2

FROZEN SWORDFISH, WHOLE, FILLETED, BONED, ETC.

General information.

Frozen swordfish of domestic origin is put up principally in New England during the summer fishing season mainly for consumption in winter when there is no fresh swordfish. Imports, practically all from Japan, are also sold mainly during the winter season. Boston, Mass. is the principal point of domestic production, as well as the principal port of entry for imports, New England being the center of consumption for both fresh and frozen swordfish. The swordfish from Japan is generally transported in Japanese steamers and is sold mainly through American owned and operated commission houses at Boston.

In 1936 the duty on frozen swordfish was raised from 2 to 3 cents per pound under section 336 of the Tariff Act of 1930. Since then, the tendency has been to enter imports in the form of fillets, chunks, etc., at a duty of $2\frac{1}{2}$ cents per pound rather than as whole fish at the rate of 3 cents per pound.

The following table shows United States production, imports, and exports of frozen swordfish for the years 1937-40. These data are for the whole fish, fillets, chunks, etc. Statistics of imports for each class are separately shown in the last two tables of this section.

**Frozen swordfish: United States production, imports,
and exports, 1937-40**

	: 1937	: 1938	: 1939	: 1940
	:	:	:	:
	: Quantity (1,000 pounds)			
Production	1,851	1,776	1,397	1,781
	:	:	:	:
Imports (practically all from Japan):	:	:	:	:
Whole	5,236	2,966	1,639	902
Filleted ^{1/}	1,740	1,982	3,166	3,016
Total	6,976	4,948	4,805	3,918
	:	:	:	:
Exports ^{2/}	-	-	-	-
	:	:	:	:
	: Value (1,000 dollars)			
Production ^{3/}	330	320	250	320
	:	:	:	:
Imports (practically all from Japan):	:	:	:	:
Whole	419	223	153	105
Filleted ^{1/}	154	176	317	384
Total	573	399	470	489
	:	:	:	:
Exports ^{2/}	-	-	-	-
	:	:	:	:

^{1/} Imports from Japan of "Fish, filleted, skinned, boned, etc." believed to be almost entirely swordfish fillets.

^{2/} Not separately reported in official statistics.

^{3/} Estimated.

Source: Production data from Fish and Wildlife Service, U. S. Department of Interior; import data compiled from official statistics of the United States Department of Commerce.

Imports from Japan during the first five months of 1941 were 824,000 pounds compared with 2,167,000 pounds for the corresponding period of 1940.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports from Japan would operate, in the absence of counter measures, to cause a sharp rise in the price of swordfish, again placing that product in the semiluxury class of seafood.

Both domestic production and imports of fresh swordfish from Canada would probably increase and would thus benefit the United States and Canadian fishery industries which suffered somewhat several years ago when imports from Japan became large. In 1939 the United States consumption of fresh swordfish amounted to 4.2 million pounds, of which 1.5 million pounds were imported from Canada and 2.7 million pounds were produced domestically.

UNITED STATES IMPORTS OF SWORDFISH FROZEN (NATURALLY OR ARTIFICIALLY), Class 0055.5
 WHOLE, OR BEHEADED, OR EVisCERATED OR BOTH

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000		\$1,000
All countries, total	5,236	419	2,966	223	1,639	153	902	105		
Japan -----	5,216	417	2,953	222	1,605	148	870	100		
Canada -----	20	2	13	1	34	5	32	5		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	Canada			Japan	Canada		
January-----	387	140	45	140	-			44	1		
February-----	194	106	14	103	3			14	-		
March-----	233	176	7	175	1			7	-		
April-----	228	102	22	102	-			22	-		
May-----	151	103	47	103	-			47	-		
June-----	173	105		104	1						
July-----	24	16		16	-						
August-----	140	9		9	-						
September-----	8	44		44	-						
October-----	37	22		22	-						
November-----	1	48		22	26						
December-----	63	31		30	1						
Total 12 mos.	1,639	902		870	32						

UNITED STATES IMPORTS OF FISH: OTHER THAN COD, HADDOC, HAKE, POLLOCK, CUSK AND ROSEFISH: FRESH OR FROZEN; FILLETED, SKINNED, BONED, SLICED OR DIVIDED, N.S.P.F. 1/ Class 0060.5.

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
		\$1,000		\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000		\$1,000
All countries, total ^{2/}					6,223	774	6,046	851		
Japan					3,166	317	3,016	384		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Japan			Japan		
January	553	1,086	573	685			362		
February	733	430	297	150			85		
March	718	530	269	314			12		
April	592	311	311	159			143		
May	316	446	225	236			88		
June	324	338		200					
July	161	333		177					
August	442	326		175					
September	599	503		207					
October	495	409		84					
November	492	572		212					
December	798	762		417					
Total, 12 mos.	6,223	6,046		3,016					

1/ Not separately classified prior to Jan. 1, 1939.

2/ Inasmuch as only a small part of the imports under this classification from countries other than Japan are comparable with those from Japan, no data are presented for other countries.

TUNA FISH, PACKED IN OIL

General information.

Imports from Japan consist of the albacore species of tuna packed in cottonseed oil in tins. Other species of tuna are available in Japan for canning, but, for several years past, exports from Japan to the United States have been limited to albacore. That species was not caught in appreciable quantities in United States waters during the period 1925-37.

The consumption of fresh and salted tuna in Japan is large. The preference there is for the darker meat species, especially bluefin, whereas in the United States the preference is for the white and light meat varieties, such as albacore and yellowfin. The United States is the only substantial foreign market for Japan's exportable surplus of albacore.

At present the following species of tuna are canned in the United States: (1) Albacore, or long-fin tuna; (2) bluefin or leaping tuna; (3) yellowfin tuna; and (4) striped tuna or skipjack. "White meat tuna," prepared from albacore, commands the highest price. "Light meat tuna" is prepared from all other varieties. About 90 percent of the domestic pack is put up in cottonseed oil. The remainder is put up in the Italian way - heavily salted and packed principally in olive oil.

Production of canned tuna in the United States has increased irregularly, from 19 million pounds in 1923 to 100 million pounds in 1940. Of the output of canned tuna in 1940, albacore accounted for 9

million pounds and other species for 91 million pounds. Although the albacore sells for slightly more than the other species, there is competition between all varieties.

Only negligible quantities of tuna packed in oil are exported from the United States. Imports prior to 1932 were not an important factor in the domestic market. The peak of imports was 14 million pounds in 1933. Imports then declined steadily; in 1940 they were only 7-3/4 million pounds. Japan is by far the principal source, having supplied 72 percent of the total in 1940. Imports from Japan in the first 5 months of 1941 were 877,000 pounds as compared with 3,000,000 pounds in the same period in 1940.

Imports from Japan are transported on Japanese steamers and most importing agencies are Japanese owned or controlled. United States offices of these agencies have only a few employees, mostly Japanese. Almost all of the wholesale and retail distribution of the imported product is in the hands of non-Japanese.

Although imports from Japan have been relatively small in the last few years (they represented only 5 percent of the consumption of all kinds of tuna in 1940), they have an important influence on the packing of the albacore species in Oregon and Washington, notably by the Columbia River Packers' Association and others at Astoria.

The importation of frozen tuna from Japan and elsewhere for canning in the United States has been practiced for a number of years. In 1937 such imports from Japan amounted to 11 million pounds, but in 1940 they amounted to only 1 1/2 million pounds.

The following table shows production, and imports of canned tuna for the years 1937-40; the table at the end of this section gives detailed statistics for imports in the same years.

Tuna, packed in oil, or in oil and other substances:
Summary of United States production and imports,
1937-40 ^{1/}

Kind of tuna	1937	1938	1939	1940 ^{2/}
Quantity (1,000 pounds)				
Albacore:				
Production -----	2,369	8,009	11,803	9,213
Imports ^{3/} -----	9,802	4,872	7,764	5,538
Other tuna:				
Production -----	67,935	52,287	70,206	91,268
Imports -----	1,251	2,320	2,362	2,140
Total:				
Production -----	70,304	60,296	82,009	100,481
Imports -----	11,053	7,192	10,126	7,678
Value (1,000 dollars)				
Albacore:				
Production -----	723	2,085	2,939	2,368
Imports ^{3/} -----	1,913	960	1,314	958
Other tuna:				
Production -----	17,192	12,058	16,208	21,346
Imports -----	121	292	355	308
Total:				
Production -----	17,915	14,143	19,147	23,714
Imports -----	2,034	1,252	1,669	1,266

^{1/} Exports are not separately reported but are believed to be negligible

^{2/} Preliminary.

^{3/} Imports from Japan, believed to be albacore only.

Source: Production from Fish and Wildlife Service, U. S. Department of the Interior; imports from official statistics of the U. S. Department of Commerce.

Probable economic effects of a cessation of imports from Japan.

Domestic fishermen and packers have adequate facilities to supply all military and civilian requirements as now estimated. The domestic catch of albacore is increasing and domestic yellowfin (a species of almost equal quality and one which has always been the chief factor in determining the price of albacore) is available in substantial amounts. A cessation of imports of canned tuna from Japan would therefore not likely have more than a small and possibly temporary effect on the price of canned tuna sold in the United States. Domestic employment in tuna fishing and canning would be increased somewhat if imports from Japan ceased.

UNITED STATES IMPORTS OF TUNA FISH, IN OIL OR IN OIL AND OTHER SUBSTANCES

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	11,053	2,034	7,192	1,252	10,126	1,669	7,678	1,266		
Japan -----	9,802	1,913	4,872	960	7,764	1,314	5,538	958		
Philippine Islands (Free) -----	106	17	565	122	991	178	970	168		
British Malaya ----	169	27	464	69	716	102	655	102		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Japan	Phil. Islands	British Malaya	Japan	Phil. Islands	British Malaya
January -----	696	2,281	199	2,155	64	52	174	24	-
February -----	517	938	322	471	54	237	228	55	-
March -----	970	219	227	85	93	6	37	188	-
April -----	716	316	242	139	21	57	149	93	-
May -----	1,204	343	440	150	95	28	289	109	-
June -----	647	294		125	86	15			
July -----	819	485		290	103	51			
August -----	923	684		518	134	30			
September -----	1,127	544		386	84	71			
October -----	927	469		366	80	15			
November -----	919	589		499	84	6			
December -----	591	516		354	72	86			
Total, 12 mos. -----	10,126	7,678		5,538	970	655			

SALMON, CANNED

(Reported as Salmon, not in oil or in oil and other substances, in airtight containers weighing with contents, not over 15 pounds each)

General information.

Total imports of canned salmon in the last 10 years were largest in 1937 when 6-3/4 million pounds were entered. Of that amount Canada supplied 81 percent and Japan 11 percent. In 1940 imports amounted to only 215,000 pounds, almost entirely from Japan and entered for consumption in Hawaii. Early in 1941 Japanese packers planned to send some 33 million pounds to the United States during the year because the United Kingdom, formerly Japan's principal market, was no longer buying the Japanese product. The species which Japan expected to ship to the United States was red salmon, the most expensive grade; at least 85 percent of United States exports, most of which go to the United Kingdom, consists of this grade. United States imports from Japan in the first 5 months of 1941, however, amounted to only 122,000 pounds compared with 70,000 pounds in the corresponding period of 1940.

Production of all kinds of canned salmon in the United States in 1940 was 269 million pounds valued at 38 million dollars, of which 51 million pounds valued at 11 million dollars were red salmon. Exports in the same year, consisting mainly of red salmon, were 56 million pounds, of which the United Kingdom took 52 million pounds. In consequence, stocks of red salmon were greatly reduced in 1940. In 1940 production in Japan (including that by Japanese canneries in

Kamchatka) amounted to 92 million pounds of all grades, of which 30 million pounds were red salmon. Japan's exports in the previous year (1939) were 80 million pounds, of which Europe, mainly the United Kingdom, received 64 million pounds, half of which was red and half mostly pink. Having been denied the British market, Japan attempted to find a new foreign outlet for at least its pack of reds.

Under the defense program the United States Government is to take for its own use and for shipment to the United Kingdom and other countries under the Lend-Lease program, 53 million pounds of the 1941 domestic pack divided as follows: Red 21; pink 17; silver 10; and chum 5 million pounds. This program is designed to remove all silver salmon from the market, draw heavily on the red pack, and leave the pink and chum packs almost untouched.

Table 1 shows United States production, imports, and exports of canned salmon and the table appended to this section gives detailed statistics of imports.

Table 1. - Salmon, in airtight containers, not in oil: United States production, imports, and exports, 1937-40

Kind of salmon	1937	1938	1939	1940
Quantity (1,000 pounds)				
Red or sockeye salmon:				
Production	104,492	128,227	96,725	50,697
Imports ^{1/}	-	-	-	-
Exports ^{2/3/}	33,308	42,351	35,752	49,294
Other salmon:				
Production	258,150	221,199	190,896	218,343
Imports ^{4/}	6,713	698	928	215
Exports ^{2/}	4,671	5,940	5,014	6,918
Total:				
Production	362,642	349,426	287,621	269,040
Imports	6,713	698	928	215
Exports	37,979	48,291	40,766	56,212
Value (1,000 dollars)				
Red or sockeye salmon:				
Production	22,476	21,708	18,853	10,789
Imports ^{1/}	-	-	-	-
Exports ^{2/3/}	6,116	6,680	5,993	9,295
Other salmon:				
Production	30,458	20,658	22,928	27,261
Imports ^{4/}	411	68	81	32
Exports ^{2/}	539	589	528	820
Total:				
Production	52,934	42,366	41,781	38,050
Imports	411	68	81	32
Exports	6,655	7,269	6,521	10,115

^{1/} Negligible. Not separately reported in official statistics, included in this table with "other salmon."

^{2/} Estimated.

^{3/} May include some other species.

^{4/} Mainly silver, chum, and pink salmon but includes some red salmon.

Sources: Production from Fish and Wildlife Service, U. S. Department of the Interior; imports and exports from official statistics of the U. S. Department of Commerce.

Probable effects of a cessation of imports from Japan.

Imports from Japan have never in the past been more than a negligible factor; hence a cessation would not likely bring about any new developments. The domestic industry is capable of meeting, at substantially present prices, all domestic requirements and of still supplying large quantities for export.

Class 0067.1

UNITED STATES IMPORTS OF SALMON, NOT IN OIL OR IN OIL AND OTHER SUBSTANCES, IN AIRTIGHT
CONTAINERS WEIGHING WITH CONTENTS, NOT OVER 15 POUNDS EACH

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	6,715	411	698	68	928	81	215	32		
Japan	762	69	366	46	350	45	208	30		
Canada	5,478	311	331	21	577	35	4	1/		

By months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan			Japan			
January	55	18	24	18			24			
February	15	16	11	16			11			
March	46	14	48	14			48			
April	23	5	3	5			3			
May	610	17	36	17			36			
June	16	13		13						
July	7	16		14						
August	17	-		-						
September	16	66		64						
October	21	15		15						
November	41	6		6						
December	61	29		26						
Total, 12 mos.	928	215		208						

1/ Less than 500.

CRAB MEAT, CRAB SAUCE, AND CRAB PASTE

General information.

Imports of the products under this classification consist almost entirely of canned king or deep-sea, and Korean crab meat, from Japan and the Soviet Union. Japan usually supplies about 78 percent of the total and the Soviet Union about 21 percent, but in the first 5 months of 1941 imports from the Soviet Union were negligible. Annual imports in recent years have averaged about 11 million pounds, valued at about $3\frac{1}{2}$ million dollars. Unusually large imports for consumption were reported for 1939 and the early part of 1940, but this increase over previous years was due mainly to heavy withdrawals from bonded warehouses, probably in anticipation of some restriction on imports following notice on July 26, 1939, of abrogation of the American-Japanese Treaty of Commerce and Navigation. The large warehouse withdrawals in 1939 and early 1940 account for the small imports in the latter part of 1940 and the first 5 months of 1941 as compared with the years immediately preceding.

Imports into the United States arrive on Japanese steamers consigned principally to Japanese-owned companies employing mainly Japanese nationals. Subsequent distribution is by American brokers, wholesale and retail grocers, and chain stores.

The United States production of canned crab meat in 1939 was three-quarters of a million pounds, valued at one-quarter of a million dollars, and consisted almost entirely of dungeness and blue crab meat. The domestic pack of king crab meat (the principal species imported) is

almost nil. American and imported canned crab products generally sell at about the same price and are used for the same purpose.

In addition to the domestic pack of canned meat there is a much larger domestic production of fresh-cooked crab meat put up in unsealed tins. Production of this perishable product in 1939 was 10 million pounds, valued at slightly more than 3 million dollars. The bulk of this output, which was produced on the Atlantic and Gulf coasts, was blue crab; the production on the Pacific coast was dungeness.

In response to Senate Resolution 200 of the 76th Congress, 3d session, the United States Tariff Commission, on October 3, 1940, ordered an investigation under Section 336 of the Tariff Act of 1930, of the differences in costs of production of domestic and imported crab meat. A report on this investigation was made to the President of the United States. He approved the report and on August 22, 1941, issued a proclamation increasing the duty on canned crab meat from 15 percent ad valorem to 22½ percent ad valorem, effective September 21, 1941.

The following table shows production, imports, and exports of crab meat, and the table at the end of this section gives detailed statistics of imports.

Crab meat: United States production, imports, and exports,
1937-40

Type of pack	1937	1938	1939	1940
Quantity (1,000 pounds)				
Canned:				
Production	655	658	640	1/
Imports 2/	11,157	7,814	13,507	11,861
Exports	3/	3/	3/	3/
Fresh-cooked crab meat:				
Dungeness, blue and rock -				
Production	8,300	9,356	10,085	1/
Imports	3/	3/	3/	3/
Exports	3/	3/	3/	3/
Value (1,000 dollars)				
Canned:				
Production	269	260	260	1/
Imports 2/	3,676	2,741	4,582	3,597
Exports	3/	3/	3/	3/
Fresh-cooked crab meat:				
Dungeness, blue and rock -				
Production	2,822	2,873	3,191	1/
Imports	3/	3/	3/	3/
Exports	3/	3/	3/	3/

1/ Not available.

2/ Includes small quantities of crab paste and crab sauce.

3/ Negligible. Not separately classified in official statistics.

Sources: Production compiled from official statistics of Fish and Wildlife Service, U. S. Department of the Interior; imports and exports compiled from official statistics of the U. S. Department of Commerce.

Probable economic effects of a cessation of imports from Japan.

Inasmuch as Japan supplies the great bulk of the canned crab consumed in the United States, a stoppage of imports from that country would at least temporarily compel a restriction in domestic consumption. An increase in imports from the Soviet Union might make up some of the deficiency (provided such imports continue to arrive) but any likely increase could not approximate the present level of imports from Japan for at least several years. The same may be said in regard to the domestic production of crab, fresh or canned.

Any decline in domestic employment resulting from a cessation of imports from Japan would be confined largely to employees of importers, most of whom are Japanese nationals. There would no doubt be an increase in employment in the domestic fishing and canning industries, production in which would be greatly stimulated. Employment in distribution would not likely be affected.

UNITED STATES IMPORTS OF CRAB MEAT, CRAB SAUCE, AND CRAB PASTE

Country	By Principal Countries									
	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	11,157	3,676	7,814	2,741	13,507	4,582	11,861	3,597		
Japan	8,103	2,909	5,974	2,213	10,719	3,767	10,709	3,269		
U.S.S.R.	2,850	698	1,817	522	2,750	803	1,054	300		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	U.S.S.R.			Japan	U.S.S.R.		
January	978	6,879	239	6,762	117			238	-		
February	970	1,828	124	1,626	143			121	2		
March	1,053	230	327	157	72			327	-		
April	600	131	441	79	48			437	-		
May	711	43	557	13	30			553	-		
June	793	630		453	177						
July	979	365		235	130						
August	1,025	680		494	173						
September	1,124	500		355	120						
October	1,699	355		331	24						
November	2,460	186		171	15						
December	1,115	34		33	-						
Total, 12 mos.	13,507	11,861		10,709	1,054						

SEED OYSTERS

General information.

The value of imports of seed oysters, all from Japan, amounted to \$67,000 in 1937, but declined to \$28,000 in 1940. Imports from Japan in the first 5 months of 1941 were larger than for the entire year 1940, in both quantity and value. Imported seed oysters are used entirely by the domestic oyster industry of the Pacific coast which, except for the very small crop of Olympia oysters, has no native oysters.

The planting of Japanese oysters on privately-owned beds along the Pacific coast, mainly in Washington, was begun in 1928. In 1939 the production of marketable oysters from these beds, in terms of oyster meat, was 9 million pounds, valued at one-half million dollars.

The imported seed oysters grow to marketable size in 12 to 28 months. Except in a very few Pacific coast areas, where conditions are most favorable, the mature oysters grown from planted seed will not propagate, and the beds must be reseeded after each harvest. Prior to the use of Japanese seed on the Pacific coast there were some shipments of Atlantic seed to that area, but the business was never large because the Atlantic oyster takes from 3 to 5 years in Pacific waters to reach marketable size.

Production of "eastern" seed oysters on our Atlantic and Gulf coasts is large, and some Atlantic coast companies specialize in maintaining seed beds but all of their production is sold locally. Until the present European war there were some exports of immature oysters (not strictly seed oysters) from our Atlantic coast to England. These oysters mature to market size in English waters, but they never propagate there.

Domestic production of all eastern seed oysters was 3-1/3 million bushels, valued at 1¼ million dollars, in 1938. There are no exports. All of the imports have been from Japan, and these were as follows for the years 1937-40.

Year	Quantity	Value
	<u>1,000 pounds</u>	<u>1,000 dollars</u>
1937	2,460	67
1938	1,636	41
1939	1,516	37
1940	1,201	28

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

Probable economic effects of a cessation of imports from Japan.

Most of the Pacific coast's "Japanese" oyster industry would have to be abandoned if imports of Japanese seed were discontinued. About 40 companies are engaged in shucking and canning oysters, and these companies, together with others engaged exclusively in operating oyster beds, employ about 700 men, most of whom could probably find work in other fisheries or other branches of industry. The present investment in beds, vessels, and in shucking and canning plants probably totals about 2 million dollars. The oyster beds, constituting the larger part of the investment, would be of no value for other purposes.

UNITED STATES IMPORTS OF OYSTERS, NOT IN AIRTIGHT CONTAINERS, SEED OYSTERS AND
OTHER THAN FRESH OR FROZEN^{1/}

Class 0087.6

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000		
All countries, total	2,552	103	1,812	76	1,596	75	1,264	48		
Japan -----	2,460	67	1,636	41	1,516	37	1,201	28		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan			Japan			
January -----	16	10	13	-			2/			
February -----	13	14	11	2			-			
March -----	145	82	1,159	70			1,153			
April -----	1,389	755	83	748			72			
May -----	9	368	7	366			-			
June -----	2	5		-						
July -----	2	4		-						
August -----	1	1		-						
September -----	1	2		-						
October -----	3	2		-						
November -----	4	3		-						
December -----	11	18		15						
Total, 12 mos. -----	1,596	1,264		1,201						

^{1/} Inasmuch as none of the imports under this classification from countries other than Japan are comparable with those from Japan, no data are presented for other countries.

^{2/} Less than 500.

FISH SCRAP AND FISH MEAL

General information.

In some localities the term "fish scrap" refers only to unground fish meal, but the trade terminology is not uniform; the term "fish meal" as used here refers to both ground and unground fish meal. Fish meal is produced mainly in conjunction with the extraction of fish oil from whole fish (mainly pilchards, menhaden, and herring) and from fish processing waste. The fish material is cooked, pressed to extract the oil, and then dried. This dried material, consisting of fish flesh and bone, is sold principally to feed dealers who mix it with grain and other materials to produce mixed feed for poultry and other animals. At least two-thirds of the consumption of fish meal in the United States is used for this purpose and the remainder goes into mixed fertilizers.

United States annual production amounts to about 170,000 long tons, valued at about 8 million dollars. Imports fluctuate widely, having ranged from 40,000 to 93,000 tons annually in recent years. The annual imports in the 4 years 1937-40 averaged 60,000 tons, of which Japan supplied 37,000 tons and Canada 18,000 tons. In 1940 imports were 46,000 tons, of which Japan supplied 18,000 tons and Canada 25,000 tons. Between June 1940 and May 1941 imports from Japan were negligible. Imports from Japan have consisted of about 27 percent low-grade meal suitable only for fertilizer, whereas imports from Canada have been almost entirely of a higher grade suitable for feed.

Exports are negligible at present, but formerly they were large. In 1934 they amounted to 30,500 tons and consisted mainly of "whitefish" meal, produced from cod and haddock filleting waste. These exports went mainly to Europe. This product sells for the highest price because it contains no oil. Because of its high cost, Europe practically discontinued buying it even before the present war.

The following table shows production, imports, and exports, and the next table gives imports by principal supplying countries.

Fish scrap and fish meal: United States production, imports, and exports, 1937-40

	1937	1938	1939	1940
Quantity (long tons)				
Production ^{1/}	168,080	163,784	185,445	157,269
Imports	92,772	39,887	61,401	46,133
Exports	1,051	1,431	335	2/
Value (1,000 dollars)				
Production ^{1/}	6,940	6,999	8,683	7,538
Imports	3,357	1,506	2,565	2,221
Exports	43	65	16	2/
Value per ton (dollars)				
Production ^{1/}	41	43	47	48
Imports	36	38	42	48
Exports	41	45	48	2/

^{1/} Does not include acidulated scrap.

^{2/} Not available.

Sources: Production, Fish and Wildlife Service, U. S. Department of the Interior; imports and exports compiled from official statistics of the U. S. Department of Commerce.

Fish scrap and fish meal: Imports into the United States,
by principal countries, 1937-40^{1/}

Country	1937	1938	1939	1940
Quantity (long tons)				
All countries	92,772	39,887	61,401	46,133
Japan	66,768	23,590	39,570	18,162
Canada	18,387	12,891	15,173	25,131
Value (1,000 dollars)				
All countries	3,357	1,506	2,565	2,221
Japan	2,327	851	1,583	787
Canada	725	526	686	1,303
Value per ton (dollars)				
All countries	36	38	42	48
Japan	35	36	40	43
Canada	39	41	45	52

^{1/} Official statistics show imports under tariff paragraph 1685 covering substances used chiefly for fertilizer and under tariff paragraph 1780 covering fish scrap and fish meal unfit for human consumption. In this table the two classes have been combined.

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

Probable economic effects of a cessation of imports from Japan.

Imports of fish meal from Japan in recent years have represented only a negligible proportion of the protein material entering into animal feeds and a still smaller fraction of the nitrogenous material entering into fertilizers consumed in the United States. A continuance of the stoppage of such imports from Japan would, therefore, have little effect in the United States. It is even doubtful that such action would influence appreciably the price of fish meal, since that is determined not only by the supply of fish meal but also by the supply of other feed and fertilizer materials. The effect which a cessation of imports would have on producers of mixed feeds and fertilizers would likewise be negligible.

UNITED STATES IMPORTS OF FISH SCRAP AND FISH MEAL, NITROGENOUS FERTILIZER MATERIALS

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	Long tons	\$1,000	Long tons	\$1,000	Long tons	\$1,000	Long tons	\$1,000	Long tons	\$1,000
All countries, total	24,568	843	6,965	253	12,024	467	6,900	311		
Japan	19,316	632	5,579	205	10,577	418	5,308	233		
Argentina	316	11	240	8	857	28	173	7		
Mexico	302	9	297	7	442	13	294	10		
Canada	4,068	169	849	33	138	7	137	8		
Iceland	-	-	-	-	-	-	943	50		

By Months and by Principal Countries - Quantity (Long tons)

Month	1939	1940	1941 ^{1/}	Principal countries of origin					
				1940			1941 ^{1/}		
				Japan	Argentina	Mexico	Japan	Argentina	Mexico
January	2,454	1,982	208	1,967	10	5	-	142	66
February	385	1,748	3	1,472	124	-	-	-	3
March	311	558	79	558	-	-	-	-	-
April	335	401	-	328	39	34	-	-	-
May	132	34	-	-	-	4	-	-	-
June	543	991	-	983	-	8	-	-	-
July	104	37	-	-	-	37	-	-	-
August	284	61	-	-	-	61	-	-	-
September	303	113	-	-	-	113	-	-	-
October	159	32	-	-	-	32	-	-	-
November	1,174	-	-	-	-	-	-	-	-
December	5,840	943	-	-	-	-	-	-	-
Total, 12 mos.	12,024	6,900		5,308	173	294			

^{1/} Converted to long tons from tons of 2,000 pounds.

UNITED STATES IMPORTS OF FISH SCRAP AND FISH MEAL (NOT FERTILIZER)

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	Long tons	\$1,000	Long tons	\$1,000	Long tons	\$1,000	Long tons	\$1,000	Long tons	\$1,000
All countries, total	68,204	2,514	32,922	1,253	49,377	2,098	39,233	1,910		
Japan -----	47,452	1,695	18,011	646	28,993	1,165	12,854	554		
Canada -----	14,319	556	12,042	493	15,035	679	24,994	1,295		
Argentina -----	2,535	82	1,095	37	1,048	38	699	31		

By Months end by Principal Countries - Quantity (Long tons)

Month	1939	1940	1941 ^{1/}	Principal countries of origin							
				1940				1941 ^{1/}			
				Japan	Canada	Argentina		Japan	Canada	Argentina	
January -----	5,342	8,419	3,412	5,391	2,889	39		-	1,871	240	
February -----	4,129	4,179	2,388	986	2,830	67		-	2,071	316	
March -----	6,882	8,208	4,071	4,094	3,812	122		2/	1,654	148	
April -----	5,574	4,261	2,175	1,994	2,112	155		-	1,419	233	
May -----	4,885	3,336	822	100	3,044	192		-	773	49	
June -----	1,563	1,557		289	1,202	51					
July -----	738	808		-	763	-					
August -----	2,747	1,226		2/	1,163	63					
September -----	1,300	1,264		-	1,204	10					
October -----	2,152	2,401		-	2,401	-					
November -----	6,508	713		2/	713	-					
December -----	7,557	2,861		2/	2,861	-					
Total, 12 mos.	49,377	39,233		12,854	24,994	699					

^{1/} Converted to long tons from tons of 2,000 pounds.^{2/} Less than 500.

COD AND COD-LIVER OILS

General information.

Cod oil and cod-liver oil are both obtained from the livers of the cod fish. Cod oil is of a grade suitable only for industrial purposes, chiefly in the leather industry, whereas cod-liver oil, which is obtained from fresh livers, is used principally for medicinal purposes, chiefly in animal and human nutrition.

Norway was for many years the principal source of both cod and cod-liver oil consumed in the United States. In 1940, Newfoundland and Labrador, and Canada were the principal sources of the diminishing imports of cod oil. Japan ranked third that year but supplied none in the first 5 months of 1941. Iceland was the principal source of the reduced imports of cod-liver oil in 1940 and in the first part of 1941, Japan ranking second. Domestic production is far from sufficient to satisfy domestic requirements. Factory and warehouse stocks of cod oil and cod-liver oil combined (not reported separately) declined from the relatively high figure of 4,487,000 gallons at the end of 1939 to 1,923,000 gallons on June 30, 1941. Consumption in the period 1936-39 averaged about 9 million gallons annually. Exports, for which official statistics are not available, are probably negligible.

Substitutes for cod oil are whale oil, fish oils, lard oil, tallow, and wool grease. Substitutes for the natural vitamins A and D contained in cod-liver oil are the natural vitamins contained in other fish-liver oils, both domestic and imported. Natural vitamin A can also be obtained from carotene (made from carrots and other materials) and synthetic vitamin D products are made domestically.^{1/}

^{1/} For a further discussion of vitamins A and D, see the section following on fish livers.

The poultry industry until recently took the major part of the supply of cod-liver oil, but now most of the reduced supplies are being used for human nutrition. A large part, if not the major part, of the requirements for human consumption is now supplied by other liver oils and synthetic vitamin D. The principal substitutes for cod-liver oil in poultry nutrition is sardine oil fortified with natural vitamins A and D derived from other fish liver oils. Synthetic vitamin D is also used to some extent in conjunction with mixed feeds.

Most of the imports of cod and cod-liver oils from Japan have been shipped in Japanese vessels. The selling agencies in the United States are largely under American control and the employees are mostly American nationals.

Cod oil is processed by leather and textile supply companies and by the leather companies themselves. Most imported cod-liver oil is either rebottled in the United States or sold as imported. The number of employees engaged in handling the imported products is small.

Detailed statistics of United States imports of cod oil and cod-liver oil in recent years are shown in the table at the end of this section.

Probable economic effects of a cessation of imports from Japan.

In 1940, Japan supplied less than 10 percent of the reduced imports of cod oil and slightly more than 10 percent of the lowered imports of cod-liver oil. In the first five months of 1941, it supplied 35 percent of the small imports of cod-liver oil and none of the cod oil. Consequently, if imports of cod-liver oil from Japan were also to cease,

the effect in the United States would probably be slight. Stoppage of imports from Japan could probably be made up by increased output of liver oils from both domestic and other foreign sources, and from increased production of synthetic vitamin D. Plant facilities formerly used for treating imported cod oil are now being used for treating other oils. Few plant facilities, apart from bottling works, were used for cod-liver oil.

UNITED STATES IMPORTS OF COD OIL

Class 0804.0

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000		\$1,000
All countries, total	2,954	1,189	3,058	939	2,162	602	480	267		
Norway	1,595	592	1,661	443	1,046	273	24	12		
Japan	226	106	398	150	422	126	46	24		
Newfoundland and Labrador	211	90	435	125	400	121	275	152		
Canada	141	66	218	73	167	47	100	52		
Iceland	49	21	73	26	17	5	35	26		

By Months and by Principal Countries - Quantity (1,000 gallons)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	Newfoundland and Labrador	Canada	Iceland	Japan	Newfoundland and Labrador	Canada	Iceland
January	240	103	62	37	52	3	-	-	37	20	5
February	233	26	27	-	16	8	-	-	15	6	3
March	133	16	36	-	5	6	5	-	22	6	8
April	230	61	60	-	33	2	15	-	53	6	-
May	148	17	122	-	2	-	15	-	37	22	62
June	146	17	-	-	6	11	-	-	-	-	-
July	128	25	-	-	13	12	-	-	-	-	-
August	206	20	-	-	15	5	-	-	-	-	-
September	169	32	-	-	24	8	-	-	-	-	-
October	183	50	-	-	42	8	-	-	-	-	-
November	306	60	-	-	37	23	-	-	-	-	-
December	40	53	-	9	30	14	-	-	-	-	-
Total, 12 mos.	2,162	480		46	275	100	35				

UNITED STATES IMPORTS OF COD-LIVER OIL

Class 0805.0

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000
All countries, total—	5,916	3,867	5,229	3,326	6,670	3,731	2,114	2,521		
Norway—	2,858	1,911	1,725	1,083	2,360	1,492	224	212		
Iceland—	1,037	773	1,103	876	1,771	1,094	1,395	1,790		
United Kingdom—	1,432	822	631	384	926	445	18	33		
Germany 1/—	131	76	930	488	1,180	436	—	—		
Japan—	212	157	416	325	139	61	263	278		
Denmark—	28	27	51	36	90	62	39	49		
Miq. & St. Pierre Is.—	1	27	—	—	—	—	65	56		
Newfd. & Labrador—	89	52	217	126	107	59	56	55		
Canada—	72	46	155	87	144	67	55	48		

By Months and by Principal Countries - Quantity (1,000 gallons)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Iceland	Japan	Newfound-land and Labrador	Canada	Iceland	Japan	Newfound-land and Labrador	Canada
January—	453	92	190	12	4	—	10	125	50	6	9
February—	227	121	175	28	—	—	2/	41	111	—	19
March—	302	163	159	115	6	15	1	115	41	2	2/
April—	254	243	61	155	6	21	7	2/	30	24	7
May—	984	296	151	279	8	—	7	121	25	2/	5
June—	597	275	—	256	16	2/	2	—	—	—	—
July—	530	141	—	103	34	2/	2/	—	—	—	—
August—	931	74	—	66	—	2	—	—	—	—	—
September—	1,069	99	—	49	11	—	2/	—	—	—	—
October—	708	213	—	163	32	7	11	—	—	—	—
November—	265	171	—	94	39	—	6	—	—	—	—
December—	161	226	—	75	107	11	11	—	—	—	—
Total, 12 mos.	6,670	2,114		1,395	263	56	55				

1/ Includes Austria beginning 1938. 2/ Less than 500.

FISH LIVERS

General information.

In recent years there has been a large increase in imports of fish livers, largely because of the increased demand in this country for vitamin D (the rickets prevention vitamin) and vitamin A (the night-blindness prevention vitamin). Prior to the present war in Europe, the United States annually consumed special vitamin materials containing about 5,360 billion units of vitamin D, of which 4,700 billion units, or 88 percent of the total, was supplied by imports. About 3,000 billion units entered in the form of cod-liver oil imported mainly from Norway and 1,700 billion units in the form of frozen fish livers (mainly tuna livers) imported almost entirely from Japan. Since the outbreak of the European war, imports of cod-liver oil have fallen sharply and prices have about doubled. This situation, together with the growing demand for vitamin D materials other than cod-liver oil, has greatly stimulated imports of fish livers from Japan. Canada, formerly a minor supplier, now prohibits the export of fish livers and fish-liver oils except under license.

In 1940, total United States imports of fish livers amounted to $8\frac{1}{2}$ million pounds valued at $2\frac{1}{2}$ million dollars, of which Japan supplied $6\frac{1}{4}$ million pounds valued at 2 million dollars, or approximately 80 percent of the total in terms of value. In the first 5 months of 1941, total imports decreased about 3 percent in quantity, to 2,126,000 pounds, of which Japan shipped 65 percent, Canada and Mexico supplying most of the remainder. Statistics of imports of fish livers are shown in the table at the end of this section.

The content of vitamins A and D in fish livers varies with several factors but principally with the species of fish from which they are taken and the value of each species of liver is determined by its vitamin A and D potency. Japan supplies mainly frozen tuna livers. These are high in both vitamin A and vitamin D, especially D; and D is the more valuable of the two. The principal importers are California sardine (pilchard) oil producers who use the oil extracted from tuna livers in fortifying their sardine oil which they then sell as a substitute for cod-liver oil in poultry feed. Other large importers are drug companies engaged in the production of vitamin concentrates for human consumption.

The frozen livers from Japan are stored in the United States under refrigeration until needed. To extract the liver oil, which serves as a vehicle for the vitamins, the frozen livers are thawed and digested with an alkali. This process requires little expense and little labor, the principal cost being the investment in large stocks of livers and in finished products.

Domestic production of so-called high-vitamin fish livers is about 5 million pounds valued at 1 million dollars annually, of which 1 million pounds valued at $\frac{1}{4}$ million dollars are tuna livers. Production fluctuates with the pack of canned tuna, the livers being a byproduct of the tuna-canning industry. The estimated United States production of fish livers is shown in the following table.

Fish livers: Estimated United States production, 1938-39

Kind of livers	Year	Quantity	Value	
			Total	Per pound
		<u>1,000 pounds</u>	<u>1,000 dollars</u>	<u>Cents</u>
Low vitamin:				
Cod (Atlantic) -----	1939	8,468	169	2.0
High vitamin:				
Halibut:				
Atlantic -----	1938	40	16	40.0
Pacific -----	1939	746	373	50.0
Total halibut -----		786	389	-
Lingcod (Pacific) -----	1938	114	46	40.0
Sablefish (Pacific) -----	1938	253	89	35.0
Shark (mainly Pacific) -----	1939	2,560	256	10.0
Swordfish:				
Atlantic -----	1938	64	16	25.0
Pacific -----	1938	22	6	25.0
Total swordfish -----		86	22	-
Tuna:				
Atlantic -----	1938	14	4	25.0
Pacific -----	1938	1,023	256	25.0
Total tuna -----		1,037	260	-
Grand total -----		13,304	1,231	-

Source: Estimated by the U. S. Tariff Commission on basis of catch of fish, weight of liver, and yield of oil as reported in official statistics of Fish and Wildlife Service, U. S. Department of the Interior.

The principal domestic consumers of oil produced from fish livers from Japan are the producers of poultry feeds; manufacturers of vitamin oils for human consumption are also important users. Inasmuch as supplies of cod-liver oil have been sharply reduced, poultry raisers are now largely substituting sardine oil fortified with tuna-liver oil and shark-liver oil. Tuna-liver oil makes up the deficiency of the sardine oil in vitamin D, and shark-liver oil, the deficiency in vitamin A.

If supplies of natural vitamin D oils for human nutrition should be insufficient, irradiated ergosterol in oil could be substituted in larger amounts than at present. There are adequate supplies of irradiated ergosterol in the United States for all human requirements, but production is controlled under patents. Irradiated ergosterol is not suitable for poultry nutrition but irradiated cholesterol, a synthetic product recently placed in the market, is claimed by its manufacturer to be equal for this purpose to the natural D. There are no synthetic substitutes for vitamin A, but a natural vitamin A is available in the form of carotene. Production of this is limited at present and the price is about double that of the vitamin A obtained from fish livers. Carotene is made principally from carrots, alfalfa meal, and nettles.

Probable economic effect of a cessation of imports from Japan.

Poultry raisers and the mixed feed producers who supply them would be the principal domestic interests adversely affected by a cessation of imports of fish livers from Japan. Prices of the vitamin materials used in poultry feeds have already risen about 100 percent since imports of cod-liver oil practically ceased with the extension of the European war to the Scandinavian countries. A stoppage of imports of fish livers would operate to restrict still further the availability of natural vitamin materials used in feeds, with the probable result that poultry raisers would be obliged to use more of the synthetic substitutes. Prices of these at present are not much different from those of the natural vitamin oils.

Requirements of vitamin D for human consumption probably would not be seriously affected by a cessation of imports from Japan. Synthetic vitamin D would be available in sufficient amount to meet all requirements for human consumption, probably at no increase in price to consumers.

UNITED STATES IMPORTS OF FISH LIVERS

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	2,474	421	4,932	658	6,255	1,718	8,444	2,462		
Japan	1,595	136	2,466	282	5,321	1,434	6,293	2,080		
Canada	754	224	1,937	291	664	257	520	202		
Mexico	18	1	27	2	176	11	523	49		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Japan	Canada	Mexico	Japan	Canada	Mexico
January	160	329	551	302	11	14	359	82	54
February	262	198	319	110	12	18	230	13	71
March	243	375	393	312	3	40	292	16	61
April	322	416	302	301	36	15	207	20	73
May	411	863	561	421	74	50	303	26	175
June	792	1,106		920	78	81			
July	887	1,739		1,466	49	116			
August	1,029	784		675	20	53			
September	765	706		596	51	5			
October	658	647		495	48	33			
November	465	628		475	66	27			
December	261	653		220	72	71			
Total, 12 mos.	6,255	8,444		6,293	520	523			

FISH-LIVER OILS, OTHER THAN COD AND COD-LIVER

(Reported as "Vegetable or Animal Drugs, Advanced in Value, N.E.S.")

General information.

United States imports of fish-liver oils, other than cod and cod-liver oils, are not separately classified but are entered as "vegetable or animal drugs, advanced in value, not elsewhere classified." These imports of fish-liver oils are valued principally for their content of vitamin D and to a lesser degree for that of vitamin A. Most of these imported oils are obtained from livers of the various species of tuna fish, the remainder being from swordfish and other fish, whose livers are of high potency in either vitamin A or D. These liver oils are used as an ingredient in poultry feed mixtures and for human consumption (see section on Fish Livers).

The domestic production of so-called high vitamin A and D fish-liver oil, i.e. all fish-liver oils except cod and shark, comparable with imports from Japan, was 227,000 gallons valued at \$2,832,000 in 1940. This production was obtained principally from imported fish livers, also largely from Japan. Only one-fifth or less of the domestic output is from fish livers of the domestic catch.

United States imports of fish-liver oils from Japan were negligible prior to 1939 but increased from 70,000 pounds valued at \$197,000 in that year to 198,000 pounds valued at \$338,000 in 1940. Imports from Japan in the first 5 months of 1941 were negligible. Imports from countries other than Japan, being largely botanical drugs (advanced in value beyond the crude state) are not comparable with the imports from

Japan. Consequently, statistics of imports from these other countries are not separately shown in the table at the end of this section. United States exports of fish-liver oils are not reported but are probably small.

Production of high vitamin fish-liver oils from the domestic catch of fish provide considerably less than one-half of United States requirements; any additional supplies of vitamin liver oils must be imported either as finished oils or as fish livers from which the oil can be extracted.

Synthetic substitutes for vitamin D of these fish-liver oils are available, the most important of which are irradiated cholesterol and ergosterol. Limited quantities of these synthetic products now sell on a competitive basis with the vitamin D obtained from liver oils. No synthetic vitamin A is available, but natural vitamin A can be obtained from carotene.^{1/}

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports from Japan would curtail still further the supply of high vitamin liver oils, particularly those high in vitamin A and D. However, the deficiency could be made up in part by increased imports from other areas, or, as far as vitamin D is concerned, by greater use of synthetic substitutes. Synthetic vitamin D for human consumption (irradiated ergosterol) could be supplied in sufficient quantity at no increase in price over the natural D. Synthetic D for

^{1/} For a further discussion of vitamins A and D, see the section on Fish Livers.

poultry (irradiated cholesterol) would, according to claims made by its manufacturer, also be available in sufficient quantity to supply any deficiency. The decrease in vitamin A supplies which would result from a stoppage of imports from Japan would be less serious but nevertheless of some importance.

UNITED STATES IMPORTS OF VEGETABLE OR ANIMAL DRUGS, ADVANCED
IN VALUE, NOT ELSEWHERE SPECIFIED^{1/}

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	685	181	539	249	734	512	674	1,125		
Japan	13	2	2	1	70	197	198	838		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin									
				1940				1941					
				Japan				Japan					
January	90	42	40	2/					2/				
February	60	64	16	47					2/				
March	47	15	28	4					2/				
April	143	35	41	6					2/				
May	95	61	24	23					2/				
June	31	118		23									
July	28	104		20									
August	41	76		27									
September	47	33		4									
October	67	36		15									
November	60	47		19									
December	25	43		10									
Total, 12 mos.	734	674		198									

^{1/} Inasmuch as only a small part of the imports under this classification from countries other than Japan are comparable with those from Japan, no data are presented for the other countries.

^{2/} Less than 500.

MOTHER-OF-PEARL SHELLS, CRUDE

General information.

Imported mother-of-pearl shells are used in the United States principally in making ocean-pearl buttons. A small quantity of these shells and parts of shells are also used in making novelties. Much larger quantities of domestic fresh-water pearl buttons and novelties are manufactured from mussel shells obtained in the Mississippi Valley. These domestic products are generally lower in price and quality than like products made from the imported shells. There is no reported domestic production of mother-of-pearl shells.

About 90 percent of the United States imports since 1935 have come from Australia, Japan, and the Netherlands Indies. Although the quality of like imported shells is about the same, the Japanese product has generally been lowest in price. Most of the mother-of-pearl shells imported from Japan are believed to be gathered in waters near Australia. Exports of certain types of pearl shell from Australia are prohibited by a customs proclamation issued November 27, 1940, except with the consent of the Minister for Trade and Customs. Shipments to the United States have continued in 1941, although at a lesser rate than in 1940.

In 1932-35, Japan supplied none of the mother-of-pearl shells imported into the United States, but in 1936 supplied 17 percent of the quantity imported, in 1937 almost 44 percent, in 1938 about 50 percent, and in 1939 47 percent. Australia, the principal source for many years prior to 1937, again became chief supplier in 1940, accounting for 58 percent of the total quantity, while imports from Japan

decreased to less than 18 percent. Imports from Japan in the first 5 months of 1941 amounted to 1,375,000 pounds, valued at \$216,000, as compared with 1,124,000 pounds, valued at \$133,000, in the corresponding period of 1940.

Probable economic effects of a cessation of imports from Japan.

A cessation of imports of mother-of-pearl shells from Japan would have little, if any, effect on domestic industry, labor, or consumers. There would possibly be some increase in the price of buttons made from imported shells but such increase would have only a negligible effect on the price of the finished articles to which buttons are applied.

Concerns now using mother-of-pearl shells may still obtain them from the Netherlands Indies, Australia (under license), and possibly other foreign countries. There are also large domestic supplies of mussel shells from which larger quantities of fresh-water pearl buttons and novelties may be manufactured.

UNITED STATES IMPORTS OF MOTHER-OF-PEARL SHELLS, UNMANUFACTURED

Class 0961.0

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	10,143	2,231	8,046	1,274	10,595	1,480	8,152	1,129		
Australia -----	3,963	1,014	1,866	391	4,675	810	4,745	736		
Japan -----	4,414	812	4,031	559	4,963	531	1,443	171		
Netherlands Indies	1,366	341	739	146	798	119	1,430	190		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Australia	Japan	Neth. Indies	Australia	Japan	Neth. Indies
January -----	750	816	1,237	517	159	81	310	771	122
February -----	895	843	361	243	365	202	346	-	15
March -----	683	1,269	1,053	642	257	275	387	252	179
April -----	672	963	552	664	-	260	207	279	35
May -----	542	385	558	-	343	43	11	73	34
June -----	556	353		118	223	12			
July -----	1,167	445		220	96	129			
August -----	857	644		596	-	20			
September -----	747	741		391	-	260			
October -----	760	501		447	-	16			
November -----	1,582	281		179	-	32			
December -----	1,384	911		728	-	100			
Total, 12 mos. -----	10,595	8,152		4,745	1,443	1,430			

MINK FUR SKINS, UNDRESSED

General information.

The mink furs imported from Japan are much lower in quality and lighter in color than either those imported from other countries or those produced in the United States. All of the mink furs imported from Japan are raw furs; they are dressed and dyed in this country. Most other mink furs - domestic and imported - are used in their natural color, requiring only dressing to preserve the pelt. Japanese mink furs are used as material for fur coats and for trimming both cloth and fur coats.

As a source of United States imports of mink furs Japan ranks first on the basis of quantity; Canada, the only other important supplier, ranks first on the basis of value. (See table at end of this section.) Domestic production of mink furs amounts to about 450,000 pelts annually. Exports of undressed mink furs amounted to 273,000 pelts in 1938, to 153,000 in 1939, and to 80,000 in 1940. At present stocks are lower than they have been for several years.

Japanese mink furs are purchased and imported by American fur dealers who also import other furs. The skins from Japan are transported in both American and foreign ships; most of these skins are entered at the port of New York. The dealers sell these furs direct to manufacturers of fur goods who have them dressed and dyed before making them into finished goods.

Data on the number of establishments and the number of wage earners engaged in dressing and dyeing mink furs from Japan and in manufacturing them into fur goods are not available. It is known,

however, that mink furs from Japan account for a negligible proportion of all furs processed in the United States.

Probable economic effects of a cessation of imports from Japan.

Stoppage of imports from Japan would have only negligible effect on the domestic fur-goods manufacturing and fur-dressing and dyeing industries. Concerns now engaged in processing mink furs from Japan could easily adjust their plants to the processing of other furs, and the few employees now working principally on mink furs from Japan could readily be shifted to work on other furs. In 1940 the value of all undressed furs consumed in the United States is estimated to have exceeded \$100,000,000; imports of mink furs from Japan during the same year were valued at \$898,000, or at less than 1 percent of the total.

A cessation of imports of mink furs from Japan would not cause a shortage of furs for civilian use as there are other competitive imported furs, such as kolinsky, weasel, and Persian lamb, which could be substituted. The production of ranch mink furs in Canada and the United States could not immediately be increased, however, because 1 or 2 years would be required to build up additional breeding stock.

UNITED STATES IMPORTS OF UNDRESSED MINK FUR SKINS

Class 0714.0

Country	By Principal Countries									
	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000		
All countries, total	780	3,233	761	2,508	1,000	3,210	1,032	4,744		
Canada -----	88	1,210	144	1,663	218	2,072	396	3,656		
Japan -----	641	1,538	597	737	744	984	571	898		
United Kingdom ---	34	358	6	46	2	14	3	29		

By Months and by Principal Countries - Quantity (number in thousands)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Canada	Japan			Canada	Japan		
January -----	36	81	108	66	15			72	36		
February -----	39	62	228	53	6			35	181		
March -----	77	59	224	16	38			21	189		
April -----	142	93	57	9	81			13	43		
May -----	185	166	38	8	158			7	31		
June -----	152	116		12	102						
July -----	80	33		12	20						
August -----	28	45		24	16						
September -----	10	38		11	22						
October -----	73	80		1	64						
November -----	62	93		44	26						
December -----	116	166		140	23						
Total, 12 mos. -----	1,000	1,032		396	571						

LILY BULBS

General information.

Most of the lily bulbs consumed in the United States are Easter lilies, used for "forcing" in greenhouses. Nearly all of the United States consumption is supplied by imports, which come almost exclusively from Japan.

Imports usually enter during the fall months, the bulbs being held in cold storage for use throughout the year. As the normal quantity was imported in 1940 and the first 5 months of 1941, it may be assumed that present stocks are adequate to last through the fall of 1941. Imports probably amount to about 7,500 short tons annually (equivalent to 26 million bulbs), and usually enter in small lots - in 1938 only 10 per cent arrived in lots of 10 tons or more. Most of the imported bulbs are transported in Japanese ships, and the remainder largely in ships of other foreign registries. Nearly all of the few American firms importing lily bulbs handle also many other kinds of bulbs and horticultural products, both domestic and imported. The importing firms distribute the bulbs without further processing directly to the florists. Statistics of imports for the years 1937-40 and the first 5 months of 1941 are shown in the following table.

United States production of lily bulbs now supplies less than 5 per cent of the domestic consumption. Recent experiments by the United States Department of Agriculture indicate that commercial production of bulbs of better quality than those imported from Japan is feasible. The new strains, having been developed from seed through which disease is not

transmitted, are free from mosaic. This disease, with which many Japanese bulbs are infected, causes total or partial nonflowering, or defective or imperfect flowers.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports of lily bulbs from Japan would not be likely to cause any important injury to the economy of the United States. The immediate effects would be a sharp diminution in the consumption of lily bulbs and flowers. Stocks of Japanese bulbs on hand are sufficient to meet domestic consumption at the present rate through the fall of 1941, when imports of the new crop of bulbs would ordinarily enter.

At least two years would be required to develop sources of production in the United States adequate to supply the present volume of domestic consumption. In the interval imports of bulbs from Bermuda would probably increase materially, even though the Bermuda variety is at present not held in high favor in the United States. Meanwhile, also, domestic greenhouse operators and florists might lose part of their total sales, since there is no flower which would be as acceptable as lilies for use during the Easter season, and for floral decorations at weddings and funerals throughout the year. American firms which import Japanese bulbs would also be injured. The import business of such firms has, in many instances, already been cut considerably by the cessation of imports from Europe, formerly the sole source of the other kinds of bulbs normally imported.

UNITED STATES IMPORTS OF LILY BULBS

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000		\$1,000
All countries, total	26,226	700	23,437	619	24,305	631	26,376	890		
Japan -----	23,464	585	21,098	525	22,089	539	25,295	845		
Netherlands -----	1,581	54	1,607	56	1,478	52	484	9		
France -----	572	32	403	16	513	22	-	-		
Bermuda -----	316	21	221	18	211	17	242	21		

By Months and by Principal Countries - Quantity (Number in thousands)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	Nether-lands	Bermuda		Japan	Nether-lands	Bermuda	
January -----	250	527	516	412	115	-		516	-	-	
February -----	375	717	188	538	179	-		188	-	-	
March -----	203	510	133	356	152	-		132	-	-	
April -----	72	110	170	84	20	-		169	-	-	
May -----	14	31	108	12	18	-		108	-	-	
June -----	-	1		-	-	-					
July -----	134	58		35	-	23					
August -----	3,077	2,000		1,790	-	209					
September -----	8,314	5,540		5,531	-	6					
October -----	7,390	9,863		9,531	-	4					
November -----	2,929	5,483		5,470	-	-					
December -----	1,547	1,536		1,536	-	-					
Total, 12 mos.	24,305	26,376		25,295	484	242					

BRISTLES, SORTED, BUNCHED, OR PREPARED

General information.

Bristles are the coarse stiff hairs of the hog. Their only use is in the production of paint, tooth and other toilet, industrial, and household brushes. No hog bristles are produced commercially in the United States, the hairs from domestic hogs not being sufficiently coarse or stiff to be used for brushes.

China, the source of most of the world supply of bristles, has for many years been the outstanding supplier of United States imports. Most of the Chinese bristles come from areas now occupied by Japan. Japan, usually the second supplier of United States imports, was in 1940 the source of about 4 percent of the total, as compared with 91 percent from China. Imports from Japan consist entirely of bristles of Chinese origin.

United States imports of bristles from all sources in the period 1931-38 averaged about 4.5 million pounds a year, of which 4.1 million pounds were consumed in the domestic brush industry, the remainder being reexported. Imports increased substantially after 1938, having amounted to 5.2 million pounds in 1939 and to 5.6 million pounds in 1940. Imports in the first five months of 1941 were 2,124,000 pounds as compared with 1,688,000 pounds in the same period of 1940. Reexports of bristles, chiefly to the United Kingdom and Canada, amounted to about 10 percent of the imports in the 1931-38 period, 15 percent in 1939, 18 percent in 1940, and 15 percent in the first five months of 1941.

Stocks of bristles in the United States customarily have been sufficient for 4 months' production of brushes of all types. At this writing stocks are above normal, being sufficient for about 6 months at current high rates of brush production. Most of the stocks of bristles are held by manufacturers of brushes. It is estimated that although the present stocks of brushes in the hands of manufacturers are sufficient for only 1 or 2 months, a much larger than usual supply is held by dealers.

Bristles are imported into the United States by about 15 firms, 4 of which are Japanese. Most of the imported bristles are brought in by 4 or 5 American companies. Japanese firms control the export of bristles not only from Japan but also from the Japanese-occupied sections of China. The Chungking area was formerly an important source of white bristles (for tooth brushes) but transport difficulties have greatly reduced American imports from that source. Most of the bristles imported into the United States are transported in Japanese boats.

Probable economic effects of a cessation of imports from Japan.

A stoppage of the small imports of bristles from Japan alone would not adversely affect the United States to any significant extent. A cessation of imports from Japanese-controlled areas in China, however, would have a serious effect upon the domestic production and consumption of paint brushes and less effect on the production and consumption of brushes of other types. There is no satisfactory substitute for hog bristles in making paint brushes.

Present domestic stocks of hog bristles could probably be increased from 6 months' supply to 8 or 9 months' supply by: Diverting to paint brushes supplies of bristles that would otherwise be used in tooth and other toilet, industrial, and household brushes; the use of greater quantities of horsehair or vegetable brush fibers with bristles and by increased use of paint spray guns.

About 35 companies, employing about 700 workers, are engaged primarily in the production of paint brushes. The machinery and skill of this industry could be adapted to the production of some other types of brushes.

There are satisfactory substitutes for hog bristles in the manufacture of other types of brushes, such as tooth, toilet, industrial, and household brushes, but most of the substitute materials are more costly. The cessation of imports of hog bristles might result in some decline in output of these brushes and in some deterioration in quality, but on the whole neither producers nor consumers would be seriously affected except as regards paint brushes.

UNITED STATES IMPORTS OF BRISTLES, SORTED, BUNCHED, OR PREPARED

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total-	4,825	9,955	3,209	5,431	5,163	7,338	5,640	9,684		
China -----	3,734	6,737	2,860	4,564	4,632	6,116	5,078	8,419		
Japan -----	372	1,063	96	314	155	405	223	515		
U.S.S.R. -----	164	692	57	99	140	333	191	261		
Poland and Danzig-	107	212	59	131	44	56	-	-		
Kwangtung -----	54	117	11	15	18	28	17	29		
Lithuania -----	1	3	1/	2	1	3	7	20		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				China	Japan	U.S.S.R.	Kwangtung	China	Japan	U.S.S.R.	Kwangtung
January -----	301	509	500	433	31	25	-	437	48	4	-
February -----	416	267	581	216	35	4	-	545	25	1/	-
March -----	350	263	451	221	30	2	-	422	13	4	-
April -----	351	254	496	233	10	6	-	332	25	136	-
May -----	251	395	496	332	16	19	17	434	15	27	-
June -----	350	574		524	10	34	-				
July -----	423	493		452	22	13	-				
August -----	506	672		635	7	25	-				
September -----	604	526		505	9	3	-				
October -----	422	691		662	11	2	-				
November -----	515	402		345	15	30	-				
December -----	674	594		520	27	28	-				
Total, 12 mos.	5,163	5,640		5,078	223	191	17				

1/ Less than 500.

SAUCES, N.S.P.F.

General information.

Imports of sauces, n.s.p.f., are of two main classes: (1) A large variety of high-priced bottled sauces ready for table use, mostly from the United Kingdom and British India; and (2) a sauce, known as soy, mostly shipped in bulk from Japan, China, and Hongkong. Soy is a clear dark brown liquid made from soybeans, with the addition of wheat or barley meal, by a somewhat complicated and prolonged process of boiling and fermentation. Soy may be either thick or thin. Thick soy, principally from China, is a semimanufactured product used by the Chinese in cooking and by occidentals as a base for other sauces, among them Worcestershire. Thin soy, a finished product mainly from Japan, is used mostly as a sauce on Chinese and Japanese tables. The soy embraced in the classification "Sauces, n.s.p.f." is thin soy; thick soy is classified elsewhere. Soy is manufactured throughout Japan and China, principally in small establishments.

Imports of sauces in the 4-year period 1937-40 averaged 13 million pounds annually, of which about 93 percent came from the Far East and consisted mostly of thin soy. Japan supplied two-thirds of the thin soy annually imported during this period. Imports are handled principally by Japanese firms and shipped principally in Japanese boats.

Imports from principal sources by months are shown in the table at the end of this section.

The sauces produced in the United States are principally those having a tomato base, whereas the imported consist either of soy or of sauces with a soy base. The United States output of miscellaneous

sauces in 1939 (which excludes the two big volume articles, tomato ketchup and tomato chili) was valued at over 4 million dollars.

Although the manufacture of soy (mostly thin soy) in the United States is a very recent industry, there are now at least five manufacturing plants in or near the central western soybean belt in Michigan, Indiana, and Illinois. Present annual output is estimated at 200,000 gallons or approximately 1.6 million pounds as compared with imports of about 12 million pounds. Thus, domestic production supplies only about 12 percent of consumption in the United States and outlying territories, but probably as much as 20 percent of the consumption on the United States mainland.

Undoubtedly most of the imported thin soy is used as a sauce by Chinese and Japanese nationals and by patrons of Chinese and Japanese restaurants, inasmuch as approximately half of the imports are entered at Hawaii.

Probable economic effects of a cessation of imports from Japan.

Stoppage of imports would provide a direct stimulus to domestic manufacture. The Japanese method of manufacture requires a period of from 12 to 14 months, but American manufacturers have devised a process requiring one month or less. It would, therefore, be possible quickly to expand production.

UNITED STATES IMPORTS OF SAUCES, NOT SPECIALLY PROVIDED FOR

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	14,892	542	10,739	429	13,773	504	12,942	599		
Japan -----	9,093	309	7,960	279	8,931	297	7,107	268		
China -----	1,424	40	1,444	43	2,796	70	2,763	67		
United Kingdom ---	286	52	197	40	237	44	465	82		
British India ----	1/127	1/24	169	29	176	31	176	28		
Hong Kong -----	3,819	97	791	25	1,283	31	1,233	33		
Italy -----	93	12	153	9	277	22	95	8		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	China	United Kingdom	Hong Kong	Japan	China	United Kingdom	Hong Kong
January -----	1,216	1,017	1,013	639	178	54	114	377	162	50	420
February -----	855	843	690	656	102	14	41	374	157	2	129
March -----	1,161	902	870	428	228	90	56	382	293	5	157
April -----	865	512	1,288	287	101	41	71	455	570	7	226
May -----	810	732	1,084	364	195	75	83	511	366	10	181
June -----	904	842		451	276	24	76				
July -----	738	1,107		606	203	49	224				
August -----	885	1,115		396	525	47	124				
September ----	1,187	1,031		631	241	9	145				
October -----	1,754	1,537		768	188	52	76				
November -----	1,551	1,791		947	133	2	101				
December -----	1,847	1,513		934	393	8	122				
Total 12 mos. --	13,773	12,942		7,107	2,763	465	1,233				

1/ Includes Burma.

VEGETABLES, PREPARED OR PRESERVED, N.S.P.F.

General information.

The above import classification includes all vegetables prepared or preserved in any manner other than tomatoes, mushrooms, beans, peas chickpeas, pimientos, and pickled vegetables. About 40 percent of the value of the imports from Japan usually consist of canned bamboo shoot about 10 percent of dried vegetables, and the remainder of an assortment of vegetables specially prepared for use by Japanese nationals residing in the United States.

Imports of prepared vegetables, n.s.p.f. in the four-year period 1937-40 averaged \$665,000, of which about 40 percent were received from Japan. In the same period China and Hong Kong also supplied about 40 percent, and Italy and Greece most of the remainder. The products from China and Hong Kong are similar to those from Japan and are imported for use mostly by Chinese nationals.

United States production of canned vegetables alone in 1939 was valued at 256 million dollars, but almost none of the products were directly comparable with the imports from the Far East.

Most of the prepared vegetables imported from Japan are handled by Japanese houses, are shipped in Japanese bottoms, and enter at Hawaii and Pacific Coast ports.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports would affect principally Japanese importing firms in the United States and the consumers of these specialty products, most of whom are people of Japanese descent. (Nearly 50 percent of the

imports from Japan are usually entered at Hawaii). Imports of similar materials from China and Hong Kong, together with domestic production might, to a limited extent, provide substitute sources should imports from Japan cease.

Class 1249.9

UNITED STATES IMPORTS OF VEGETABLES, INCLUDING HORSE RADISH, CUT, SLICED, PARCHED, ROASTED, REDUCED TO FLOUR,
PACKED IN OIL, OR PREPARED, NOT SPECIALLY PROVIDED FOR
By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	11,128	791	6,780	550	7,836	662	7,039	657		
Japan -----	3,898	249	2,904	218	3,053	273	2,578	283		
China -----	1,268	88	1,690	136	2,211	184	2,679	223		
Hong Kong -----	2,826	238	876	76	1,025	81	1,296	108		
Italy -----	1,104	100	811	75	624	52	287	26		
Mexico -----	12	1	23	2	12	1	60	3		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin									
				1940					1941				
				Japan	China	Hong Kong	Italy	Mexico	Japan	China	Hong Kong	Italy	Mexico
January -----	729	717	477	210	244	142	35	47	82	248	146	1/	-
February -----	383	562	425	258	178	91	6	-	108	249	61	-	1/
March -----	393	462	450	123	203	111	21	1	119	242	77	-	2
April -----	505	566	748	198	239	88	21	1	92	461	189	-	5
May -----	512	521	501	165	163	70	102	1/	133	252	105	-	4
June -----	1,180	895		474	207	123	81	1					
July -----	627	544		331	118	76	7	5					
August -----	529	603		176	330	81	12	-					
September -----	565	542		137	165	236	-	4					
October -----	885	611		158	325	123	-	1					
November -----	745	528		210	257	55	-	-					
December -----	773	488		138	250	100	-	-					
Total, 12 mos.	7,836	7,039		2,578	2,679	1,296	287	60					

1/ Less than 500 pounds.

AJINOMOTO

General information.

Adjinomoto is the trade name of a Japanese condiment having a characteristic meat flavor and consisting for the most part of monosodium glutamate. This and a number of similar products are imported also from China under a variety of names, all of which are generally referred to as "vegetable essential powder."

These preparations are derived principally from wheat gluten, the starch remaining as a byproduct. In China and Japan they are usually made from imported wheat flour, and the starch is reexported. There is a large market for ajinomoto in the Far East among Buddhist vegetarians.

Monosodium glutamate products are manufactured in the United States in moderate quantities. Statistics of output and of exports, however, are not available. In the 4-year period 1937-40 imports of adjinomoto averaged 724,000 pounds annually, of which 70 percent came from Japan, and the remainder from China and Hong Kong. About 25 percent of the imports enter Hawaii where they are consumed principally by the oriental residents.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports would have little effect in this country. Domestic plant capacity is probably sufficient to supply the entire domestic market.

UNITED STATES IMPORTS OF AJINOMOTO AND OTHER MONOSODIUM - GLUTAMATE PREPARATIONS

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	911	793	542	513	780	689	662	558		
Japan -----	722	597	403	367	503	429	440	390		
China -----	129	131	123	129	195	178	184	137		
Hong Kong -----	60	65	16	17	81	81	38	31		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Japan	China	Hong Kong	Japan	China	Hong Kong
January -----	53	62	60	43	16	3	29	30	1
February -----	59	90	41	79	6	5	23	18	1/
March -----	54	33	50	22	10	1	32	18	-
April -----	38	55	61	41	4	10	35	23	3
May -----	65	47	75	34	7	6	54	21	1/
June -----	67	50		36	9	5			
July -----	45	39		30	9	1/			
August -----	44	66		38	27	1			
September -----	76	59		31	25	3			
October -----	74	38		15	23	-			
November -----	113	57		32	25	1/			
December -----	82	66		39	23	4			
Total, 12 mos.	780	662		440	184	38			

1/ Less than 500.

PINEAPPLES, PREPARED OR PRESERVED, N.S.P.F.

General information.

Imports of prepared or preserved pineapples consist principally of canned pineapples. These are used mainly for dessert, but appreciable quantities are also used as an ingredient of soda-fountain preparations and bakery products and in the production of candied pineapple. The combined quantity of canned pineapples and canned pineapple juice consumed in the United States has in the past few years exceeded that of any other single canned fruit by almost 50 percent.

Production of canned pineapples in continental United States is negligible. There is a plant in Texas that has for several years been canning limited quantities of pineapples imported from Mexico, and there has been also some intermittent canning of imported pineapples at Key West, Fla., Baltimore, Md., and around New York City. The off-shore areas of the United States produce an abundant supply of both canned and fresh pineapples. Hawaii now produces about 65 percent of the world's pack and could expand its output materially, while the Philippine Islands, which started commercial production in the late twenties, could expand its output to surpass that of Hawaii.

Domestic consumption of canned pineapple is supplied by shipments from Hawaii and Puerto Rico, duty-free imports from the Philippine Islands, and dutiable imports from Cuba, Japan, and British Malaya.

Since 1931, consumption of canned pineapples in continental United States (measured in terms of combined shipments and imports) has ranged between 400 million pounds in 1932 and 645 million pounds in 1937.

Hawaii furnished about 98 percent of United States total consumption in most years until 1935. Since then Hawaii's share has declined somewhat, largely because of increased imports from the Philippine Islands. The principal operating company in the Philippine Islands is an American-owned firm, which also cans pineapple in Hawaii. Puerto Rico has never supplied as much as 1 percent of United States consumption; and dutiable imports never amounted to as much as 3 percent of United States consumption until 1939 when they were about 5 percent. In 1940 they amounted to 7 percent of the total. (The duty on canned pineapple was reduced from 2 to $1\frac{1}{2}$ cents per pound under the trade agreement with the United Kingdom effective January 1, 1939.)

Japan supplied 16 million pounds in 1939 and 21 million pounds in 1940 (about 3 percent of United States consumption in those years); Cuba supplied in those years 12 million pounds and 14 million pounds, respectively; and British Malaya, 1.8 and 1.1 million pounds, respectively.

The table below shows shipments and imports of canned pineapple into the United States since 1931. The table at the end of this section shows imports by country of origin for the period 1937 through May 1941.

Pineapples, canned: Summary showing quantity of United States receipts and imports, 1931-40

Year:	Shipments from -		Duty-free	Dutiable		Total
	Hawaii	Puerto Rico	imports 1/ from	imports	Other	receipts in continental United States
		Philippine Islands	Cuba			
Quantity (1,000 pounds)						
1931	484,276	2,580	3,289	2,954	599	493,698
1932	388,069	606	5,310	1,669	1,924	397,578
1933	434,884	185	3,368	2,041	1,143	441,621
1934	540,936	1,326	4,197	1,611	2,471	550,541
1935	436,801	2,180	6,695	1,736	4,513	451,925
1936	571,957	2,379	8,156	2,240	9,475	594,207
1937	595,792	4,382	26,559	7,081	11,657	645,471
1938	393,536	3,348	21,425	6,587	3,472	428,368
1939	536,327	3,371	44,632	12,249	18,011	614,590
1940	434,426	3,066	48,279	14,296	22,363	522,430
Percent of total quantity						
1931	98.1	0.5	0.7	0.6	0.1	100.0
1932	97.6	.2	1.3	.4	.5	100.0
1933	98.5	2/	.8	.5	.2	100.0
1934	98.3	.2	.8	.3	.4	100.0
1935	96.6	.5	1.5	.4	1.0	100.0
1936	96.2	.4	1.4	.4	1.6	100.0
1937	92.3	.7	4.1	1.1	1.8	100.0
1938	91.9	.8	5.0	1.5	.3	100.0
1939	87.3	.5	7.3	2.0	2.9	100.0
1940	83.2	.6	9.2	2.7	4.3	100.0

1/ Classified as duty-free imports since 1936.

2/ Less than one-twentieth of 1 percent.

Source: Foreign Commerce and Navigation of the United States.

United States exports of canned pineapples, almost wholly from Hawaii, have been distributed among many countries but have gone in greatest volume to Europe, where the United Kingdom, Germany, France, Sweden, and Denmark have been the principal markets. Exports, as shown in the following table, declined from a peak of over 54 million pounds in 1928 to 17 million pounds in 1932; they increased slightly for the next few years, but fell to 6-2/3 million pounds in 1940, the decrease being largely the result of war conditions in Europe.

Canned pineapples: United States exports,
by years, 1928-40

Year	Quantity	Year	Quantity
	1,000 pounds		1,000 pounds
1928	54,394	1935	21,982
1929	46,153	1936	23,962
1930	37,790	1937	29,428
1931	24,473	1938	18,436
1932	17,389	1939	23,350
1933	20,424	1940	6,669
1934	20,386		

Source: Foreign Commerce and Navigation of the United States.

Canned pineapples from Japan are available in most of the leading markets in the United States. They are customarily handled by American brokers who sell to both the wholesale and the processing trade. The 40- and 60-pound net fruit, drained-weight, packs, are water-packed and are sold to manufacturers of candied pineapple; the 7 to 9-ounce tins in cases are packed in sirup and are sold to retailers for direct consumer trade.

Probable economic effects of cessation of imports from Japan.

The discontinuance of imports from Japan would have only negligible adverse effect on any domestic interest. American-owned canneries in Hawaii and in the Philippines could easily increase their output to supply consumers now using the Japanese products.

UNITED STATES IMPORTS OF PREPARED OR PRESERVED PINEAPPLES, N.S.P.F.

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total -	45,298	2,241	31,484	1,524	74,393	2,985	84,952	4,288		
Philippine Islands	26,559	1,287	21,425	943	44,632	1,672	48,279	2,612		
Cuba -----	7,081	452	6,587	423	12,249	680	14,296	821		
Japan -----	4,615	220	447	18	16,189	555	21,240	792		
British Malaya ----	6,891	272	2,989	132	1,766	74	1,123	62		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Phil. Islands	Cuba	Japan	British Malaya	Phil. Islands	Cuba	Japan	British Malaya
January -----	3,753	7,634	2,991	5,355	267	1,955	55	-	538	2,236	216
February -----	1,039	661	2,036	-	311	252	98	-	433	1,544	59
March -----	3,276	750	5,807	-	425	181	144	2,568	638	2,491	110
April -----	1,958	466	5,750	-	298	104	64	3,182	529	2,019	19
May -----	10,079	5,330	3,825	4,907	264	50	102	1,386	1,238	1,028	173
June -----	7,459	10,841		9,245	1,183	185	227				
July -----	11,383	6,045		2,419	3,385	109	129				
August -----	8,412	9,602		6,830	2,498	228	45				
September ----	14,575	7,900		4,317	1,821	1,668	93				
October -----	5,620	18,346		9,165	1,520	7,631	29				
November ----	3,923	12,191		6,040	1,425	4,725	-				
December ----	3,416	5,186		-	898	4,152	137				
Total, 12 mos.	74,893	84,952		48,279	14,296	21,240	1,123				

MANDARIN ORANGES, CANNED

General information.

The mandarin is a sweet orange similar to the tangerine grown in this country. Its skin is glove-thin, making it easy to peel, and its segments are readily separable. The Japanese mandarin is reported to have more flavor than the domestic tangerine.

In Japan the mandarin is sold both fresh and as a canned fruit. The canning process is to treat the inner skin of the segments in a chemical solution which loosens the skin without breaking the cells and permits the skin to be readily removed by hand. The skinned segments are then packed in a sweetened sirup in small cans. Less than 10 percent of the mandarins produced in Japan are canned, the remainder being sold fresh in either the domestic or export markets. Those selected for canning must be seedless, of medium size, and contain only a small number of segments.

The United States imports both fresh and canned mandarins, but the canned has in recent years accounted for about four-fifths of the total, on the basis of weight of fresh fruit. Fresh mandarins are imported principally for the holiday trade. Canned mandarins are imported throughout the year. They find a market principally as a fruit specialty, largely for salads. Canned mandarins are dutiable at the same specific rate as fresh oranges.

Imports of canned mandarins, all of Japanese origin, averaged, during the period 1937-40, 3.5 million pounds valued at \$200,000. These imports represent the equivalent of less than 100,000 boxes of fresh fruit.

In recent years the United States production of oranges of all types has averaged over 75 million boxes. The principal producing States are California, Florida, and Texas. There is no canning industry in the United States which prepares oranges in a manner similar to those imported from Japan. United States exports of oranges in 1938 and 1939 averaged more than 7 million boxes, or about 20 times as much as the imports of fresh and canned oranges combined.

Production of oranges in Japan has increased somewhat during recent years. The reported production for 1937 and 1938 averaged 15 million boxes, nearly 80 percent of which consisted of mandarins. The most important producing district is in the middle of the main island.

Official Japanese statistics no longer give exports by country of destination. In 1936, however, the British Isles were reported to have taken 82 percent of the total exports of canned mandarin oranges; the United States was second, with 8 percent. According to unofficial reports the exports in 1937 also went largely to Great Britain. It is estimated that about 20 percent of the production of canned mandarins, principally of the lower grades, is consumed in Japan.

Probable economic effects of a cessation of imports from Japan.

Imported mandarins, both fresh and canned, are not only a luxury on the United States market, but they represent less than one-half of 1 percent of the United States consumption of oranges. Consequently a stoppage of imports would have only a negligible effect upon United States economy. Whatever inconvenience might result from a cessation of imports would be felt by only a limited number of consumers.

UNITED STATES IMPORTS OF MANDARIN ORANGES, CANNED

By Principal Countries

Country	1937		1938		1939		1940(prel.)		1941(prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total-	4,867	240	1,633	74	1,655	97	5,611	393		
Japan -----	4,867	240	1,633	74	1,655	97	5,610	393		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin								
				1940				1941				
				Japan				Japan				
January -----	63	267	139	266					139			
February -----	85	7	76	7					76			
March -----	177	25	69	25					69			
April -----	135	24	18	24					18			
May -----	81	239	7	239					7			
June -----	139	1,273		1,273								
July -----	174	698		698								
August -----	184	618		618								
September -----	128	47		47								
October -----	37	184		184								
November -----	208	1,234		1,234								
December -----	244	995		995								
Total, 12 mos.	1,655	5,611		5,610								

TEA, N.S.P.F.

General information.

The tea of commerce consists of the dried or otherwise prepared leaves of the tea plant; a shrub or small tree cultivated in tropical or subtropical regions. There are three main types of tea, resulting from different methods of processing-- (1) green, or unfermented, (2) black, or fermented, and (3) oolong, an intermediate type which is semifermented.

China and Japan produce mostly green tea; very little equipment is required and the culture of tea is suited to the Chinese and Japanese type of farming. British India, Ceylon, and the Netherlands Indies produce almost wholly black tea; this is grown on plantations and requires expensive machinery and other production equipment. The Japanese island of Taiwan (Formosa) produces most of the oolong of commerce, but China produces small quantities.

About one-half of the world production is in China, but only about 10 percent of China's output is exported. Japan exports about 40 percent of its production. About 85 percent of the tea entering foreign trade is black tea from the British and Dutch possessions, nearly 70 percent coming from the British possessions alone. These countries grow tea almost entirely for export. The United Kingdom and its possessions take 70 percent of the tea entering world trade, whereas the entire Western Hemisphere takes less than 10 percent.

United States imports of tea averaged 87 million pounds annually during the period 1935-39 (fiscal years). Considerable quantities

were formerly received from other than producing countries (as much as 18 million pounds from the United Kingdom in 1936 and 1 million from the Netherlands), but since 1937 most of the imports have come direct from the producing areas. By original sources the average during the 5-year period 1935-39, in percentage of total United States imports, was: India and Ceylon 43.4, Japan, including Taiwan, 25.2, the Netherlands Indies 23.0, and China 7.9 percent. During the same period, imports from British and Dutch possessions, all black tea, amounted to about 66 percent of the total, including black tea from China, Japan, and Formosa; black tea imported from all countries amounted to 72.6 percent of all teas. Imports of oolong from Taiwan amounted to 6.4 percent, and green tea from all sources to 18.4 percent.

Japan (including Taiwan) has been supplying 80 percent of the green tea, all of the oolong, and about 3 percent of the black tea. The United States is Japan's best customer, having taken in the last decade 54.4 percent of its tea exports (the Soviet Union took 23.1 and Canada 7.7 percent).

Statistics of United States imports by countries from which the tea is received (but not in all cases the countries in which it is produced) are shown in the table at the end of this section.

Tea: United States imports from original sources, 1935-40
and 5-year average 1935-39

Original source	Fiscal year ending June 30						
	Five-year average : 1935-39	1935	1936	1937	1938	1939	1940
	Quantity (1,000 pounds)						
Ceylon and India	37,658	36,005	36,781	39,915	34,167	41,420	44,417
China	6,822	8,574	6,128	7,569	7,371	4,470	5,103
Japan and Taiwan	21,818	22,974	21,245	23,186	22,941	18,744	23,346
Netherlands Indies	19,939	16,534	19,589	20,203	20,649	22,721	29,537
Africa and Azores	122	44	123	217	49	176	185
All other	360	92	325	473	412	497	75
Total	86,719	84,223	84,191	91,563	85,589	88,028	102,663
	Percent of total quantity						
Ceylon and India	43.4	47.7	43.7	43.6	39.9	47.0	43.2
China	7.9	7.1	7.3	8.3	8.6	5.1	5.0
Japan and Taiwan	25.2	25.5	25.2	25.3	26.8	21.3	22.7
Netherlands Indies	23.0	19.7	23.3	22.1	24.1	25.8	28.8
Africa and Azores	.1	1/	.1	.2	.1	.2	.2
All other	.4	1/	.4	.5	.5	.6	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Less than one-twentieth of 1 percent.

Source: Food and Drug Administration, U. S. Department of Agriculture.

Tea: United States imports classified by source and type,
5-year average, 1935-39, and annually, 1935-40

Type and source	Fiscal year ending June 30						
	Five-year						
	average	1935	1936	1937	1938	1939	1940
	1935-39						
Black	Percent of total imports ^{1/}						
India and Ceylon	42.9	42.5	43.1	42.9	39.4	46.6	43.0
Java and Sumatra	23.0	19.6	23.3	22.0	24.1	25.9	28.8
China (Cingou)	3.5	5.1	3.7	3.4	3.2	2.0	2.5
Japan	.9	1.0	1.2	1.3	1.2	-	-
Taiwan (Formosa)	2.3	2.3	-	2.2	5.2	1.9	4.4
Total black	72.6	70.5	71.3	71.8	73.1	76.4	78.7
Oolong							
Taiwan (Formosa)	6.4	7.7	8.6	5.7	4.2	5.8	4.5
Green							
China (Ping suey)	3.4	4.3	2.4	3.8	4.3	2.1	1.6
Japan	12.4	13.8	11.5	13.1	13.7	10.1	10.7
Japan (dust and powdered)	2.6	2.4	2.8	2.7	2.4	2.5	2.2
Total green	18.4	20.5	16.7	19.6	20.4	14.7	14.5
Japan and Taiwan (summary)							
Black	3.2	3.3	1.2	3.5	6.4	1.9	4.4
Oolong	6.4	7.7	8.6	5.7	4.2	5.8	4.5
Green	15.0	16.2	14.3	15.8	16.1	12.6	12.9
Total Japan and Taiwan	24.6	27.2	24.1	25.0	26.7	20.3	21.8
	Total imported (1,000 pounds)						
	86,719	84,223	84,191	91,563	85,589	88,028	102,663

^{1/} Over 97 percent of tea imported. About 40 kinds of tea are usually imported, but of these only nine are of any importance, as shown in this table.

Source: Food and Drug Administration, U. S. Department of Agriculture.

No tea is produced in the United States, but the blending and packaging of tea is a large and important industry. Statistics of exports of tea repackaged in the United States are not available, but re-exports of foreign tea averaged 811 thousand pounds annually during the period 1935-39. Exports for the first 9 months of 1940 amounted to 1,407,000 pounds.

Estimated stocks of tea on hand in the United States in recent years are shown in the table following. Combined stocks of green and oolong at the end of 1940 accounted for nearly 10 million pounds out of a total of 47 million pounds of all tea. Stocks at the end of 1940 were larger than in 1939 because of the much larger imports, but those of green and oolong accounted for a smaller proportion of the total than in 1939.

Estimated stocks of tea in the United States
on December 31, 1936-40

(In 1,000 pounds)

Kind of tea	1936	1937	1938	1939	1940
Black-British and Dutch	20,700	20,600	18,400	24,700	32,300
Black-Chinese and Japanese	4,000	5,600	5,500	4,600	5,100
Green, oolong, and other	10,000	12,100	10,600	9,700	9,600
Total, all kinds	34,700	38,300	34,500	39,000	47,000

Source: The Spice Mill, June 1941.

Most of the tea imported from Japan is transported in Japanese boats. At the time when only green tea was exported from Japan practically all imports into the United States were handled by American firms. After Japan began to produce black tea to compete with that from India and Ceylon, American import firms lost some of their business to Japanese firms. In 1922 American firms still handled 73 percent of Japan's export trade in

tea, but by 1939 only about 25 percent of it. American firms, however, still ship the bulk of the Japanese tea which enters the American-Canadian market. Some of the larger import houses in the United States which import Japanese tea employ a small Japanese personnel, and the few branches of Japanese export houses in the United States employ a few Americans. The total number of employees is very small.

About 16 million pounds of green tea are consumed annually in the United States (mainly in the Central and Western States), of which Japan supplies about 13 million and China 3 million pounds. There is no exact equivalent of green tea, but for many years the trend in the United States has been steadily from green to black tea. Any shortage of green tea would undoubtedly accelerate this trend (imports of green tea declined from 25 million pounds in 1929 to 15 million in 1940.)

The United States annually (average 1935-39) consumes about $5\frac{1}{2}$ million pounds of oolong tea from Formosa for which there is likewise no exact equivalent. The consumption of oolong, however, has been declining - from 9 million pounds in 1929 to 5 million in 1940. In the past few years, owing largely to the rise in price of Japanese tea, American dealers have been buying larger quantities of black tea.

The United States Army uses about one pound of tea per man per year, and the Navy nearly three pounds. The Army uses black tea only - blends of India, Ceylon, Java, and Sumatra. The Navy also uses black tea; it has, at various times, however, made purchases of Chinese congou (black), and Formosa oolongs (semiblack), which teas it considers interchangeable with the regular blacks from the Dutch and British possessions.

There are usually three to five grades of each type of tea quoted on the market, and of these the Japan greens average the lowest in price, followed in ascending order of price by China greens, Formosa oolongs, China blacks (congou), Java and Sumatra blacks, and Ceylon and India blacks. Generally speaking, users of green tea buy a cheap tea.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports of tea from Japan would have no important economic effects on American interests provided that such a cessation was not accompanied by serious interference with United States imports of tea from Ceylon, India, and the Netherlands Indies. (Imports of tea from China are small, only about 5 percent of United States total.) United States Army and Navy rations would be unaffected by a cessation of imports from Japan.

Almost four-fifths of the tea consumed in the United States in 1940 was black tea, of which Japan (including Formosa), supplied only about a twentieth part. Black teas from other sources could easily replace those now imported from Japan.

Less than 5 percent of United States tea consumption in 1940 was oolong, and all of this came from Formosa. There would be no important replacement of such tea from other sources, but black tea would be an acceptable substitute for most users. Consumption of oolong in the United States is not only small but has been declining in recent years.

Almost one-seventh of the United States consumption of tea in 1940 was green tea, practically all of which came from Japan. If supplies from that source were unavailable, China conceivably would provide some of the deficiency, although circumstances might render that unfeasible. Ceylon,

however, should be able to augment its production of green tea on short notice, as tea is harvested there the year round. (Ceylon has already marketed small quantities of green tea in the United States.) Present stocks of green tea in the United States are sufficient to take care of consumption requirements at the current rate for about 7 to 8 months. Should imports from Japan cease, the present shift from green to black tea in the United States would be accelerated.

The American export houses in Japan would suffer to some extent if imports from Japan into the United States were to stop. Practically all these firms, however, also operate in the other important tea producing areas (principally British and Netherlands possessions.) Presumably, therefore, the net shrinkage in their tea trade would be small.

Practically all of the blenders and dealers in Japanese tea also handle teas imported from other countries. A cessation of imports from Japan would therefore not likely cause an important decline in their total business.

UNITED STATES IMPORTS OF TEA, N.S.P.F.^{1/}

Class 1521.0

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	94,837	21,372	81,372	18,313	97,791	21,090	98,963	22,689		
Ceylon -----	19,967	6,337	22,145	6,707	25,152	7,141	25,929	7,783		
Netherlands Indies	18,734	4,250	20,639	4,412	28,276	5,709	31,009	5,792		
British India -----	10,124	2,854	12,173	3,380	15,797	3,916	17,204	4,529		
Japan -----	28,746	3,725	17,086	2,054	23,511	3,304	17,656	3,190		
China -----	6,621	828	6,307	770	3,510	532	5,392	900		
United Kingdom -----	9,433	3,096	2,671	905	953	355	1,134	354		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Ceylon	Neth. Indies	British India	Japan	Ceylon	Neth. Indies	British India	Japan
January -----	7,698	11,927	7,838	1,710	3,226	3,077	3,026	1,678	2,385	1,201	1,941
February -----	7,931	8,864	8,863	1,913	2,415	3,147	1,015	2,156	3,197	1,340	1,213
March -----	8,576	8,056	6,197	3,348	1,859	2,226	343	2,002	2,380	590	378
April -----	6,866	8,630	7,793	3,326	2,851	1,899	224	1,204	4,834	162	773
May -----	8,785	4,922	11,190	1,557	1,842	825	176	3,623	5,007	1,020	451
June -----	6,724	6,510		2,339	2,180	190	648				
July -----	6,799	7,316		2,191	2,665	420	1,372				
August -----	7,500	7,176		2,077	3,038	160	1,512				
September -----	7,307	7,783		765	4,702	209	1,524				
October -----	7,653	9,030		3,170	2,068	1,008	1,993				
November -----	9,953	9,364		1,559	2,000	2,145	3,077				
December -----	11,999	9,385		1,969	2,163	1,898	2,746				
Total, 12 mos.	97,791	98,963		25,929	31,009	17,204	17,656				

^{1/} Not specially provided for.

PYRETHRUM OR INSECT FLOWERS, CRUDE

General information.

Pyrethrum flowers are the dried flower heads of several species of Chrysanthemum, which have powerful insecticidal properties. Pyrethrum is cultivated in many parts of the world, the principal producing countries being Yugoslavia, Japan, and British East Africa. The crude flowers are one of the most important raw materials used in the manufacture of insecticides.

Pyrethrum flowers are prepared for insecticidal use either by grinding them to a fine powder or by extracting the pyrethrin with kerosene or a similar petroleum solvent. About three-fourths of the pyrethrum consumed in this country is used in the form of liquid extract for spraying and the other fourth in powder form. Such insecticides are employed principally against household insect pests, such as flies, roaches, and moths, but they are also used for horticultural and livestock insect sprays and for dusting powders.

United States requirements of pyrethrum flowers are supplied almost entirely by imports, principally from British East Africa and Japan. From about 1915 through 1939 Japan was the most important source of imports. Since then British East Africa (Kenya) has been the principal supplier of the somewhat reduced total imports; in 1940 it accounted for more than 5 times the amount imported from Japan and in the first five months of 1941, for more than 20 times as much. Import statistics from principal supplying countries are given in the table at the end of this section.

There has been no commercial production of crude pyrethrum flowers in the United States because of the low price of the imported product. Exports of pyrethrum are in the form of finished insecticide sprays or powders and are not separately reported in official statistics. It is estimated that the present stock in all forms is equivalent to 12 to 15 million pounds of crude flowers, or to about 1 year's normal imports.

About two-thirds of the imports of Japanese pyrethrum flowers are carried in Japanese boats and about 10 percent in American-owned ships. The importers in this country and all domestic processors are, so far as is known, under American control and employ American nationals. There are four or five importers of crude pyrethrum flowers and about 100 to 150, mostly small concerns, process the finished insecticide. Their total employment amounts to between 500 and 1000 people.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports of pyrethrum flowers from Japan would have little if any economic effect on this country. Since 1936 United States imports from British East Africa (Kenya) have increased steadily and in 1940 and the first part of 1941 were many times the imports from Japan. The crude insecticide from Kenya contains 1.3 percent pyrethrin as compared with only 0.9 percent in the Japanese product. It thus appears that the crude pyrethrum flowers from British East Africa will likely continue to displace Japanese insecticide in the United States market. There is also available in the United States a synthetic organic insecticide which can be produced in any desired quantity from domestic raw materials which are readily available. For most purposes it is equally satisfactory with pyrethrum.

UNITED STATES IMPORTS OF PYRETHRUM, OR INSECT FLOWERS, CRUDE

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	20,092	2,204	14,537	2,491	13,569	3,174	12,591	2,949		
Japan -----	17,850	1,995	10,896	1,781	7,486	1,636	2,031	409		
British East Africa -----	1,423	139	2,864	619	5,524	1,466	10,387	2,513		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan	Brit. E. Africa		Japan	Brit. E. Africa		
January -----	1,084	1,234	581	543	647		-	581		
February -----	864	940	232	302	611		55	177		
March -----	1,504	1,056	38	325	701		-	38		
April -----	792	776	57	452	280		-	34		
May -----	789	845	475	25	797		-	475		
June -----	471	113		56	57					
July -----	355	197		117	80					
August -----	495	2,417		68	2,349					
September -----	814	1,158		-	1,158					
October -----	1,542	1,958		20	1,933					
November -----	2,793	206		-	206					
December -----	2,066	1,691		123	1,568					
Total, 12 mos.	13,569	12,591		2,031	10,387					

RAPESEED OIL (DENATURED)

General information.

Rapeseed oil has high viscosity, does not readily thicken when heated or on exposure to the air, mixes well with mineral oil, and emulsifies with water. In the United States it is used principally for lubricating, especially in marine reciprocating engines. Rapeseed oil is also used as a rubber substitute (for incorporation with rubber and for art gum crasers) made by treating the oil with sulphur or sulphur chloride. For some of these substitutes, other oils, such as corn and soybean, are more or less interchangeable with rapeseed oil.

Prior to this year (1941) rapeseed oil was imported mainly from Japan. In the first five months of 1941, however, Argentina became the principal supplier. China and India are the principal growers and have generally been the chief exporters of rapeseed. These two countries, together with Argentina, are possible sources of rapeseed and rapeseed oil. Stocks of rapeseed oil in the United States on June 30, 1941, were approximately 8 million pounds, or about a 9-months' supply at the recent rate of consumption.

Rapeseed oil enters the United States principally in Japanese ships. Some of the selling agencies in the United States are American and some Japanese.

There are several oil refining companies in the United States engaged in the processing of rapeseed. The oil is treated in tanks and little labor is required.

Probable economic effects of a cessation of imports from Japan.

Certain properties of rapeseed oil make it especially desirable for lubricating marine reciprocating engines, and although the quantities required for this purpose are not large, this oil is considered important for this special use. If supplies from Japan ceased to be available, it might be possible to increase still further imports from Argentina and to obtain supplies from India, or to use substitutes.

Most of the domestic equipment now used for processing rapeseed oil can be used for treating other oils. Any shrinkage in total imports of rapeseed oil would, therefore, not render useless the productive capacity or reduce employment.

UNITED STATES IMPORTS OF RAPESEED (COLZA) OIL (DENATURED)

Class 2246.0

By Principal Countries

Country	1937		1938		1939		1940(prel.)		1941(prel.)	
	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000
All countries, total-	650	292	689	278	1,185	399	1,723	761		
Japan -----	650	292	685	276	1,185	399	1,546	684		
Argentina -----	-	-	-	-	-	-	177	77		

By Months and by Principal Countries - Quantity (1,000 gallons)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan	Argentina		Japan	Argentina		
January -----	32	340	114	340	-		71	43		
February -----	59	103	118	103	-		88	30		
March -----	148	155	74	155	-		40	34		
April -----	34	162	109	162	-		19	90		
May -----	228	130	489	129	1		49	440		
June -----	32	68		61	7					
July -----	32	145		137	8					
August -----	21	26		21	5					
September -----	60	84		66	18					
October -----	167	116		100	16					
November -----	304	126		112	14					
December -----	68	268		160	108					
Total, 12 mos.	1,185	1,723		1,546	177					

JAPAN WAX

General information.

Japan wax is obtained from the berries of a shrub native to Japan and China. It is somewhat like tallow, but has a rancid odor and taste. It is used as a substitute for beeswax and in combination with other waxes in candles, floor wax, and furniture polish.

United States imports are wholly from Japan and there is no domestic production. Consumption is, therefore, approximately equal to imports, which averaged about 3 million pounds annually for the 4 years 1937-40.

Practically all imports of Japan wax are shipped in Japanese vessels and enter at Atlantic coast ports, principally at New York.

Probable economic effects of a cessation of imports from Japan.

Japan wax has no direct military use, and there are ample supplies of substitutes, particularly domestic paraffin wax, for civilian uses. The plants now using Japan wax could continue to operate without material change in equipment or employees by substituting other kinds of wax.

UNITED STATES IMPORTS OF JAPAN WAX

Country	By Principal Countries									
	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000		
All countries, total	4,157	362	2,161	176	3,645	363	2,328	324		
Japan	4,157	362	2,161	176	3,645	363	2,328	324		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Japan			Japan		
January	230	297	609	297			609		
February	162	270	270	270			270		
March	211	202	184	202			184		
April	229	171	480	171			480		
May	393	86	164	86			164		
June	364	78		78					
July	400	137		137					
August		232		176					
September	162	150		150					
October	224	157		157					
November	584	218		218					
December	454	386		386					
Total, 12 mos.	3,645	2,328		2,328					

PERILLA OIL

General information.

Perilla oil is obtained from the seeds of an annual plant grown in Manchuria, Chosen, Japan, China, and Northern India. Japan and the Kwantung Leased Territory are the principal sources of perilla oil for export.

Perilla oil is consumed principally in paints and varnishes and in linoleum and oilcloth, paints and varnishes taking the major share. Smaller quantities are used in printing inks, and for miscellaneous purposes where a "drying" oil is required. Perilla oil produces a hard, brilliant, tough, water-resistant film, excelling linseed oil in this respect. It is especially desirable in the production of high-grade enamel paints. Because of its high-drying properties, it is often blended with oils of lower-drying properties, such as soybean oil, to produce a satisfactory product for use where the low-drying oil alone would not be suitable.

The United States obtains its supply of perilla oil almost wholly from Japan and Kwantung. No perilla oil is produced in the United States from domestic seed. From time to time small quantities of seed have been imported for crushing in the United States. The largest quantity imported was in 1939, when 6.5 million pounds were entered (equivalent to about 2.5 million pounds of oil). There was practically no importation of seed in 1940. Imports of perilla oil were very low in 1940 (11 million pounds, as compared with from 30 to 50 million pounds in each of the years 1937 to 1939). The smallness of imports was due to the short crop of seed in Manchuria in 1939 and to the low prices offered the Manchurian farmer.

The United States exported from 2 to 6 million pounds of perilla oil (as foreign merchandise) annually in the period 1937-40. Factory and warehouse stocks declined from 15 million pounds at the end of 1939 to 7 million pounds at the end of 1940, and rose to 8.9 million pounds on June 30, 1941.

Normally perilla oil is shipped to the United States in Japanese vessels. The selling agencies in the United States (about one-half of which are American-controlled and the other one-half, Japanese) employ mainly American nationals.

Before resale, part of the perilla oil imported into the United States is treated, but the major part is sold direct to the large number of paint, varnish, linoleum, printing ink, and other manufacturers, who treat the oil themselves.

Probable economic effects of a cessation of imports from Japan.

Perilla oil has no important direct military use. Combined civilian and military requirements of paints, varnishes, inks, linoleum, etc., at present, however, are increasing the demand for perilla oil. If it were no longer available, other drying oils, both domestic and foreign, would be substituted. These would include linseed oil, dehydrated castor oil, oiticica oil, and drying oils made from fish and soybean oils.

Most of the equipment now used in processing perilla oil could be used in processing other drying oils. The number of workers employed would be little affected by the kind of oil processed.

UNITED STATES IMPORTS OF PERILLA OIL

Country	By Principal Countries								
	1937		1938		1939		1940 (prel.)		1941 (prel.)
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	
All countries, total	43,591	2,127	31,821	1,665	51,284	2,205	11,347	873	
Kwantung -----	20,739	868	14,940	716	28,370	1,233	6,446	580	
Japan -----	16,233	889	15,237	856	22,415	944	4,780	280	
China -----	4,175	225	1,644	93	338	20	121	13	

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Kwantung	Japan		Kwantung	Japan	
January -----	3,893	4,369	276	661	3,701		191	84	
February -----	3,509	318	351	155	163		294	57	
March -----	3,105	221	611	60	161		611	-	
April -----	2,598	108	1,020	-	108		917	102	
May -----	3,837	82	762	60	22		762	-	
June -----	4,120	916		807	109				
July -----	3,262	812		639	60				
August -----	5,697	898		861	37				
September -----	5,560	861		861	-				
October -----	5,720	1,613		1,343	270				
November -----	3,845	840		840	-				
December -----	4,138	309		159	149				
Total, 12 mos. -----	51,284	11,347		6,446	4,780				

AGAR-AGAR

General information.

Agar-agar is the commercial name of the dried, bleached, gelatinous extract of several species of gelidium - a seaweed native to shores on both sides of the Pacific washed by the Japan Current. Imported agar-agar is identical chemically with the domestic product but differs in physical form. Both products are used principally in medicinal and pharmaceutical preparations and as a culture medium in bacteriological work. They are also used to a limited extent in candies and certain food products.

Imports, which come almost exclusively from Japan, have always been several times greater than domestic production. During the past decade, the annual imports ranged between 450 and 700 thousand pounds. Domestic production, which began in 1923, slightly exceeded 100 thousand pounds in 1925, but in other years was less than 50 thousand. In 1940 approximately 25 thousand pounds were produced. Exports of agar-agar - reported in official statistics under "crude drugs" - have been small and irregular. Data are not available regarding stocks in the United States.

The exportation of agar-agar from Japan is rigidly controlled by the government through the Agar-agar Exporters Association of Japan. Approximately 95 percent of Japan's exports to the United States are transported on Japanese vessels. Selling agencies in the United States, with the exception of one large Japanese trading house, are American-controlled and employ American nationals. The Japanese firm also employs a number of American nationals.

There is but one domestic producer of agar-agar and he depends for his supply of seaweed on imports from Mexico. The material is gathered there off the coast of Lower California by Japanese divers. Seaweed is also obtainable off the coast of California, but American divers are not available for gathering it. At one time, consideration was given to bringing in divers from Japan but none have been brought in thus far.

About six domestic pharmaceutical houses process imported agar-agar. Processing consists essentially of sorting, cleaning, and cutting. The processed article is then either distributed directly to the retail trade, or is incorporated into biological and pharmaceutical preparations. Although the pharmaceutical houses that process the imported material are large - employing between 15 and 20 thousand persons - agar-agar is only one of the several hundred articles handled by them.

Probable economic effects of cessation of imports from Japan.

If there were a cessation of imports from Japan, the sole domestic producer could probably satisfy the country's essential military and civilian requirements so long as seaweed continued to be available from Mexico. Consumption of agar-agar for many purposes could be considerably reduced without injury to public health. Many uses of agar-agar are based more upon its availability and upon custom than upon its indispensability. For example, a number of laxatives made from emulsions of agar-agar and mineral oils could be replaced by other laxatives.

Because of the large number of other products handled by domestic pharmaceutical houses, it is doubtful that any of them, or their employees, would be seriously affected by a cessation of imports of agar-agar from Japan.

UNITED STATES IMPORTS OF AGAR-AGAR

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	704	418	589	333	497	378	635	606		
Japan	696	416	589	333	497	378	623	597		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan			Japan			
January	46	29	67	29				67		
February	29	13	65	13				65		
March	45	51	15	51				15		
April	28	38	80	31				80		
May	44	45	52	44				52		
June	57	75		74						
July	39	61		61						
August	34	31		31						
September	55	33		33						
October	52	74		74						
November	35	52		52						
December	33	133		130						
Total, 12 mos.	497	635		623						

DEAD OR CREOSOTE OIL

General information.

Creosote oil is a coal-tar distillate containing a mixture of tar acids. More than 90 percent of production in the United States is consumed as a wood preservative, chiefly on cross ties, telephone and telegraph poles, and construction timbers.

Statistics of domestic production and sales of creosote oil are shown in the following table.

Creosote oil: United States production and sales, 1937-39

Year	Production		Sales	
	Quantity	Quantity	Value	
	Gallons	Gallons		
1937	107,293,751	107,485,199	\$12,472,500	
1938	88,066,812	88,712,723	10,820,307	
1939	110,241,843	101,486,998	12,384,939	
1940	119,678,785	107,715,986	13,030,307	

Source: Synthetic Organic Chemicals, United States Production and Sales, U.S. Tariff Commission.

Statistics of United States imports of creosote oil by principal countries are shown in the table at the end of this section.

The United Kingdom was the principal supplier of imports in 1940, but was superseded by Canada in the first 5 months of 1941. Imports from Canada have been entered mainly at the port of New York. Virtually all of the creosote oil imported from Japan is consumed in wood preserving on the Pacific Coast. About 30 plants, employing several hundred persons, are engaged in that industry on the coast. The oil from Japan is believed to be imported directly by the American consumers.

Exports of creosote oil, 1937-40, were as follows:

Creosote oil: United States exports, 1937-40

Year	Quantity	Value	Principal countries
	Gallons		
1937	664,976	\$111,901	Canada (75%), Mexico (8.4%); Panama (6.5%).
1938	532,546	90,819	Canada (70.5%), Mexico (6.2%), Cuba (5.7%).
1939	2,397,796	337,252	Mexico (89.6%), Canada (3.7%), Cuba (1.6%).
1940 ^{1/}	398,850	84,306	Canada (27.2%), Panama (18.0%), Argentina (15.9%), Colombia (12.5%), Mexico (8.4%), Cuba (5.7%).

^{1/} Preliminary.

Source: Official statistics of the U. S. Department of Commerce.

Probable economic effects of a cessation of imports from Japan.

Creosote has little direct military use. From 150 to 200 million gallons are consumed annually in the United States, of which about 10 to 12 million gallons are consumed in the Pacific Coast area; about one-half of the consumption on the Pacific Coast is supplied by Japan. Certain salts of zinc, chromium, arsenic, and other metals are used in relatively small quantities in wood preserving. Most of these metals are of military importance, and large supplies are not at present available for conversion into wood preservatives.

The United States has abundant supplies of tar; and facilities for producing its entire requirements of creosote oil either exist or could soon be installed at little cost. Less than 10 percent of the existing plant capacity, however, is located west of the Mississippi River. Increased production of coke in that area would be necessary

to justify any sizeable installation of creosote-producing equipment. If imports from Japan were unavailable on the West coast the western consuming plants could probably be supplied from plants located in the eastern part of the United States and of Canada but probably only at an increase in cost over the Japanese product.

UNITED STATES IMPORTS OF DEAD OR CREOSOTE OIL

Country	By Principal Countries									
	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000	1,000 gallons	\$1,000		
All countries, total	58,190	6,802	55,392	6,316	51,877	5,769	39,010	3,890		
United Kingdom —	24,815	2,841	28,018	3,213	22,555	2,576	33,111	3,308		
Belgium —	9,137	1,085	5,891	664	9,589	1,140	16	2		
Japan —	5,614	645	4,870	484	5,673	594	5,065	493		
Germany 1/ —	2,849	342	7,159	849	4,569	557	-	-		
Netherlands —	12,329	1,457	6,262	742	2,811	313	-	-		
Canada —	2,570	316	868	111	532	62	450	54		

By Months and by Principal Countries - Quantity (1,000 gallons)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				United Kingdom	Japan	Canada	United Kingdom	Japan	Canada
January —	7,483	4,788	3,689	3,887	873	29	3,325	318	47
February —	6,523	209	1,605	195	-	48	816	675	114
March —	841	7,324	30	6,050	876	20	-	-	30
April —	4,066	4,432	1,092	4,384	-	48	6	-	1,087
May —	4,400	926	2,735	152	757	18	-	-	2,735
June —	1,647	1,440	-	1,400	-	40	-	-	-
July —	5,690	11,836	-	10,827	970	39	-	-	-
August —	2,127	3,617	-	3,590	-	27	-	-	-
September —	6,520	977	-	5	952	20	-	-	-
October —	3,946	70	-	2	-	68	-	-	-
November —	4,547	2,450	-	2,394	-	56	-	-	-
December —	4,087	941	-	265	639	37	-	-	-
Total, 12 mos. —	51,877	39,010		33,111	5,065	450			

1/ Includes Austria beginning 1938.

MENTHOL

General information.

Menthol is a colorless, crystalline solid, with a characteristic odor. The natural product is obtained from Japanese peppermint oil expressed from the plant Mentha arvensis. It is made synthetically from a variety of raw materials, chiefly Java citronella oil. Menthol is used in medicine, foods, dental preparations, and certain types of cigarettes.

The domestic production of menthol, practically all of which is by synthesis, has in recent years supplied about one-fifth of domestic consumption. Although natural menthol can be produced in the United States, the present domestic output is negligible.

United States imports of natural menthol, by principal countries, are shown in the table at the end of this section. In recent years imports have averaged from 350,000 to 400,000 pounds annually.

Menthol is not shown separately in official export statistics. Very little, if any, is exported as such. Several thousand pounds are probably exported annually in the form of medicinal preparations and other products containing menthol.

United States imports of natural menthol were almost entirely from Japan prior to 1939. In that year China supplied nearly 24 percent of United States imports, and in 1940 and in the first 5 months of 1941, supplied over 78 percent of the total. Until recent years production of menthol in China was negligible, the peppermint oil produced there having been exported to Japan for extraction. China ceased exporting peppermint oil to Japan and began the production of

menthol (in the province of Kiangsu) following the outbreak of Sino-Japanese hostilities in 1937. Both production and exports, which go direct from Shanghai, have steadily increased since 1938.

The large consumers of menthol ordinarily carry inventories ample for a year's operation. Several of the larger users import their requirements direct from the Orient. Others buy from importers and chemical supply houses. Probably very few persons are engaged solely in the distribution of Japanese menthol.

A large part of the United States consumption of menthol is by firms making medicinal products, and by tobacco companies selling mentholated cigarettes. In the manufacture of both menthol medicinals and cigarettes labor is a small part of total cost, and probably not as many as a thousand persons are directly engaged in producing mentholated products.

Probable economic effects of a cessation of imports from Japan.

No substitute is available for menthol in medicine, either for military or civilian use. Other materials could be used in flavoring, and the consumption in cigarettes could be dispensed with or at least cut down. Domestic production might be sufficient for strictly medicinal purposes. More menthol could be produced synthetically in the United States by an expansion of plant capacity. But any large increase in synthetic production would bring about a shortage of the preferred raw material, Java citronella oil, until larger supplies of such oil or raw materials of domestic origin were available. United States requirements of menthol could alternatively be produced from plants grown in California, but only at a considerably higher cost than for imported menthol.

UNITED STATES IMPORTS OF NATURAL MENTHOL

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000		
All countries, total	417	981	366	865	355	766	404	810		
Japan -----	417	981	346	827	271	615	82	200		
China -----	1/	1/	20	38	84	151	322	610		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Japan	China		Japan	China	
January -----	8	73	48	28	45		1	47	
February -----	38	52	23	12	40		9	14	
March -----	23	55	46	5	50		1	45	
April -----	18	27	27	-	27		9	18	
May -----	20	18	33	6	12		19	14	
June -----	23	12		1/	12				
July -----	20	19		6	13				
August -----	23	21		1/	21				
September -----	23	30		9	21				
October -----	50	43		2	41				
November -----	72	13		6	7				
December -----	37	41		8	33				
Total, 12 mos. -----	355	404		82	322				

1/ Less than 500.

CAMPHOR, CRUDE AND REFINED

General information.

Natural crude camphor is a crystalline solid obtained from the tree Cinnamomum camphora, native to Formosa, Japan proper, and China. Natural refined camphor is a white solid produced by refining the crude. Synthetic camphor, produced from turpentine, is interchangeable in use for most purposes with either form of natural camphor.

The substantial United States production is entirely of synthetic camphor, and practically the entire output is by a single company.

United States imports of natural crude camphor and of natural refined camphor are shown separately in the tables at the end of this section. Japan is the sole supplier. United States exports of camphor, not shown separately in official statistics, are known to be small.

Normal stocks of camphor in the United States are probably about 3,000,000 pounds. Although domestic production has increased considerably, stocks are probably below normal because of the sharp decrease in imports in 1940 and the low level of imports, particularly of crude, during the first part of 1941.

The production of natural camphor in Formosa, its transportation, and distribution in the United States are wholly controlled by an official Japanese Camphor Monopoly.

Ten plants were engaged in the United States in 1939 in making nitrocellulose (pyroxylin) plastics, using crude camphor as a plasticizer. About 500 employees are engaged in producing nitrocellulose sheets, rods, and tubes. Refined camphor, which is not further processed in this country, is distributed, along with many other products, through wholesale drug houses.

Probable economic effects of a cessation of imports from Japan.

Military requirements of camphor are primarily as a plasticizer for nitrocellulose film base, and as a medicinal. Civilian requirements are much the same, except that a wider variety of nitrocellulose plastic products are consumed. Cellulose acetate and other plastics may be substituted for nitrocellulose in the manufacture of film base and other plastic products, and synthetic organic chemicals, such as tricresylphosphate, may be substituted in part for camphor as a plasticizer in nitrocellulose products. No satisfactory substitute for camphor as a medicinal is available.

In the event of a cessation of imports of camphor from Japan, it is doubtful that consuming industries would be seriously affected. There is installed capacity for making synthetic camphor in the United States sufficient to supply 80 percent of the country's requirements; and plant capacity could be expanded in less than 6 months to supply all requirements. The production of synthetic camphor requires little labor. The United States also has facilities for producing both plasticizers other than camphor and plastics other than those requiring camphor.

UNITED STATES IMPORTS OF NATURAL CAMPHOR, REFINED

Country	By Principal Countries									
	1937		1938		1939		1940(prel.)		1941(prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	1,016	466	719	329	818	329	397	250		
Japan	1,016	466	719	329	818	329	397	250		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin								
				1940				1941				
				Japan				Japan				
January	41	103	70	103					68			
February	76	29	79	29					76			
March	73	30	29	30					28			
April	53	11	77	11					76			
May	129	11	114	11					100			
June	67	14		14								
July	27	15		15								
August	33	29		29								
September	33	8		8								
October	147	19		19								
November	117	51		51								
December	22	77		77								
Total, 12 mos.	818	397		397								

UNITED STATES IMPORTS OF NATURAL CAMPHOR, CRUDE

By Principal Countries

Country	1937		1938		1939		1940(prel.)		1941(prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	1,912	554	784	237	1,157	323	713	238		
Japan	1,912	554	784	237	1,157	323	713	238		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin								
				1940				1941				
				Japan				Japan				
January	-	382	-	382					-			
February	66	-	67	-					66			
March	73	-	-	-					-			
April	-	-	66	-					66			
May	73	-	-	-					-			
June	166	-	-	-								
July	66	-	-	-								
August	-	198	-	198								
September	132	-	-	-								
October	66	66	-	66								
November	390	-	-	-								
December	125	67	-	67								
Total, 12 mos	1,157	713		713								

COTTON MANUFACTURES, N.S.P.F.

General information.

Cotton manufactures, n.s.p.f., include a wide variety of commodities, imports of which are mainly specialties from Europe and low-priced articles from Japan. The principal articles imported from Japan are tablecloths and napkins other than damask and those made of plain-woven cotton cloth. Imports are chiefly woven-figured, yarn-dyed, cloths and napkins, made in various patterns. Similar cloths and napkins are produced in the United States.

Probable economic effects of a cessation of imports from Japan.

Tablecloths (not damask or plain-woven) from Japan are sold by 5-and-10-cent chain stores, mail-order houses, and department stores at prices ranging from 20 cents to one dollar, according to size. Similar domestic articles are also available, but not generally at prices as low as those which have prevailed for the imports from Japan. A stoppage of such imports would therefore limit the supplies of low-priced articles, and would probably result in some substitution of non-textile articles. Domestic producers with unused capacity for similar textile or substitute materials would, therefore, likely benefit from a stoppage of imports.

UNITED STATES IMPORTS OF ARTICLES AND MANUFACTURES OF COTTON, N.S.P.F.

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
		\$1,000		\$1,000		\$1,000		\$1,000		\$1,000
All countries, total		4,207		2,171		2,438		2,037		
Japan -----		2,286		961		1,273		1,119		
Italy -----		345		230		264		169		
Belgium -----		141		100		221		75		
China -----		64		92		173		372		
United Kingdom ---		490		183		155		120		
Germany 2/ -----		87		301		60		2		
Austria -----		392		-		-		-		

By Months and by Principal Countries - Value (\$1,000)

Month	1939	1940	1941	Principal countries of origin									
				1940					1941				
				Japan	Italy	Belgium	China	United Kingdom	Japan	Italy	Belgium	China	United Kingdom
January -----	\$180	\$241	\$183	\$140	\$29	\$18	\$21	\$13	\$114	3/	3/	\$42	\$13
February -----	163	144	159	78	8	9	20	8	105	-	3/	45	4
March -----	195	159	150	70	8	18	28	9	80	-	1	52	7
April -----	172	118	160	47	16	9	18	14	106	-	3/	42	5
May -----	186	143	139	58	33	7	18	6	85	-	3/	43	6
June -----	172	152		56	33	3	35	10					
July -----	230	134		78	3	2	32	10					
August -----	228	188		123	5	2	45	8					
September ---	231	178		108	9	1	29	20					
October -----	234	166		100	8	1	37	4					
November -----	230	220		126	16	3	49	9					
December -----	217	194		135	1	2	40	9					
Total, 12 mos. -----	2,438	2,037		1,119	169	75	372	120					

1/ Also includes classes 2061.3, 2061.5, 323.35, 323.41, 323.67, and 9439.95.

2/ Includes Austria beginning 1938.

3/ Less than \$500.

COTTON CLOTH, BLEACHED, PLAIN

General information.

Most cotton cloth comes from the loom as gray goods woven of unbleached and undyed yarns; the remainder is woven in whole or in part of dyed yarns. The gray goods may be subsequently bleached, dyed, or printed. Of the total domestic cotton cloth finished by bleaching and dyeing establishments in recent years, about 39 percent was bleached; 31 percent, dyed; and 30 percent printed. The principal types of bleached cloth are sheetings, printcloths, broadcloths, and fine goods such as batiste, lawn, voile, and organdy. Other bleached cotton cloth includes twills and drills, shirtings, damask, terry-woven fabrics, duck, etc. Imports of bleached cotton cloth consist principally of sheetings, mulls, and shirtings from Japan, with small quantities of fine cloths from Switzerland and the United Kingdom.

Mull is soft, with practically no starch, and is similar to the domestic nainsook. This fabric is used mainly in the manufacture of nightgowns and underwear. Shirting, which contains more starch, is generally similar to domestic muslin and is used chiefly in the manufacture of handkerchiefs, shirts, and wearing apparel. Imported sheeting is used in the manufacture of sheets, pillowcases, and lining.

The bleached fabrics imported from Japan are made of finer yarns than those used in corresponding domestic fabrics. The domestic low-end printcloth is used chiefly for nightgowns and other low-priced, lightweight articles.

Prior to 1935 Europe was the chief source of imports, supplying mostly fine-quality fabrics and specialties. Since 1935 Japan has been the principal source, supplying mainly plain-woven bleached cloth. Imports of bleached fabric in recent years, by principal countries, are shown in the table at the end of this section.

The United States output of cotton cloth is the largest in the world, having amounted to over 9 billion square yards in 1940. The output of finished cotton cloth as reported by textile finishers indicated that over one-half of the domestic production of cotton cloth is finished by bleaching, dyeing, or printing. The volume of production by finishers in recent years is shown in the following table.

Total cotton cloth finished in the United States, 1936-40

(In millions of yards)					
	1936	1937	1938	1939	1940 ^{1/}
Bleached	1,740	1,579	1,462	1,694	1,617
Dyed	1,637	1,256	1,068	1,306	1,317
Printed	1,346	1,250	1,135	1,305	1,231
Total	4,723	4,085	3,665	4,305	4,165

^{1/} Preliminary.

Source: Compiled from Survey of Current Business, U.S. Department of Commerce.

Of the total cotton cloth bleached in the United States, sheetings represent from 20 to 25 percent, printcloths from 10 to 15 percent, and broadcloths about 10 percent. The remainder consists of a wide variety of fabrics, principally shirtings, lawns, voiles, poplins, reps, twills or drills, and ducks.

Although total exports of domestic cotton cloth exceed total imports, United States exports are much less than those of either Japan or the United Kingdom, and represent less than 3 percent of production. Bleached cotton cloth has represented less than 20 percent of total United States exports of cotton cloth in recent years; the bleached cloth amounted to 19 percent of the total in 1937 but declined to about 10 percent by 1940. Exports of bleached cloth have been less than imports. Domestic exports of bleached cotton cloth (exclusive of ducks, which are small) for the period 1937-40 are shown in the table below.

Bleached cotton cloth: United States exports, 1937-40

(In thousands of square yards)

	1937	1938	1939	1940 ^{1/}
Drills, twills, and warp sateens	3,835	4,767	6,212	4,462
Sheeting	16,784	13,231	14,178	8,956
Carded broadcloth	-	-	12,812	9,036
Cheesecloth	-	-	1,826	6,464
Printcloth	-	-	7,484	5,226
Other bleached cloth	22,789	24,886	-	-
Total	43,408	42,884	42,512	34,144

^{1/} Preliminary.

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

There are many importers of bleached cloth from Japan, the principal ones being the branches of large Japanese trading houses. These companies sell direct, or through brokers, to manufacturers of underwear, handkerchiefs, and sheets and pillowcases. Some sales are made to jobbers, but such business represents only a small fraction of the total volume.

The imported fabrics from Japan, processed by domestic manufacturers of handkerchiefs, nightgowns, sheets, pillowcases, etc., constitute only a minor fraction of the total goods processed in the United States in the production of such articles.

Probable economic effect of a cessation of imports from Japan.

The primary reason for imports of bleached cotton cloth from Japan is their low price, which permits the manufacture of inexpensive articles. These compete with similar but higher-priced articles made wholly of domestic cloth. Products made from Japanese cloth are retailed principally in 5-and-10 cent stores, chain stores, and department-store basements. A cessation of imports would therefore increase the cost of certain articles purchased by those in the lower income brackets. The consumption of goods made from Japanese cloth, however, represents only a small fraction of the total consumption of similar cloth or articles made therefrom. Domestic manufacturers of bleached cotton cloth would probably be able to increase their output somewhat, but many of them are already operating at capacity.

UNITED STATES IMPORTS OF COTTON CLOTH - BLEACHED, PLAIN

By Principal Countries

Country	1937		1938		1939		1940(prel.)		1941(prel.)	
	1,000 sq. yds.	\$1,000	1,000 sq. yds.	\$1,000	1,000 sq. yds.	\$1,000	1,000 sq. yds.	\$1,000	1,000 sq. yds.	\$1,000
All countries, total	96,682	5,717	34,359	2,350	87,769	4,443	71,098	3,489		
Japan	88,909	4,261	28,764	1,306	77,363	2,781	64,193	2,272		
Switzerland	4,908	639	3,654	479	7,165	848	4,531	617		
United Kingdom	2,591	663	1,644	425	3,028	709	2,053	549		

By Months and by Principal Countries - Quantity (1,000 sq. yds.)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Japan	Switzer-land	United Kingdom	Japan	Switzer-land	United Kingdom
January	6,233	7,701	6,448	6,778	729	186	6,066	269	113
February	6,913	7,484	9,160	6,476	820	182	8,643	330	187
March	7,950	3,370	7,041	2,403	719	219	6,537	257	246
April	4,526	4,519	8,148	3,692	555	200	7,813	205	130
May	3,817	5,563	6,095	5,031	303	199	5,841	190	64
June	5,432	5,199		4,672	157	219			
July	5,214	4,176		3,951	47	173			
August	5,051	4,724		4,440	141	126			
September	9,543	6,285		5,910	174	201			
October	9,884	4,535		4,210	157	165			
November	9,847	10,804		10,441	300	63			
December	13,359	6,738		6,189	429	120			
Total, 12 mos.	87,769	71,098		64,193	4,531	2,053			

PLAINBACK COTTON VELVETEENS

General information.

Cotton velveteens are filling-pile fabrics ordinarily made wholly of cotton. In weaving, the warp (longitudinal) threads and a small part of the filling (cross) threads are used to form the ground; the remaining filling threads, intended for use as pile, are floated over the surface and bound into the ground at regular intervals to form longitudinal "races" which are subsequently cut.

Velveteens may be divided into two general groups: (1) Plainback, and (2) twillback. Plainback velveteens are of cheaper construction and usually of lighter weight than twillback, and the pile is not so firmly bound into the ground fabric.

Because of the tendency of the pile to loosen and drop out when subjected to any friction, plainback velveteens require a protective lining when made into garments. Besides their use in cheaper apparel, such as blouses, skirts, scarfs, berets, and trimmings, plainback velveteens are used in the production of slippers, coat handers, picture-frames, jewelry boxes, and display cards. They are also used for linings of eye-glass cases, for polishing cloths, and for decoration and drapery materials in theaters.

Japanese velveteens are made of somewhat finer yarns than are used in the domestic velveteens, and the threads per square inch slightly exceed those in the domestic fabrics, but they frequently have ridges and other imperfections in finish and color not found in domestic velveteens.

Imports of low-priced velveteens from Japan have displaced some domestic plainback velveteens in certain lines - such as in the manufacture of slippers, in linings for boxes and cases, and to a lesser extent, in the manufacture of blouses, but they have also created new markets, in the lower price ranges, for articles containing the foreign velveteen.

Prior to 1934 imports of cotton velveteens were almost wholly from Europe, largely from the United Kingdom and Germany. Recent imports have been almost entirely from Japan, and over 95 percent have consisted of plainback velveteens. As shown in the table at the end of this section, Japan supplied 99.9 percent of the plainback cotton velveteens imported into the United States in the period 1937-40.

Domestic production of plainback cotton velveteens is not shown separately in census statistics, but a preliminary census report for 1939 shows production of all cotton velveteens in that year to have been 5.2 million square yards, weighing 2.2 million pounds. The average weight of that production (6.85 ounces per square yard) indicates that the domestic output in 1939 consisted mainly of twillback velveteens. Exports have been negligible.

Probable economic effects of a cessation of imports.

A stoppage of imports from Japan would cut off the only source of low-priced plainback velveteens. This would no doubt result in substitutes for velveteen being sought for many uses. There would likely be an increase in demand for domestic velveteen, despite its higher price. This could easily be supplied, inasmuch as the installed capacity of looms suitable for making velveteens is sufficient to increase domestic output several fold.

UNITED STATES IMPORTS OF PLAINBACK VELVETEENS OF COTTON

By Principal Countries

Country	1937		1938		1939		1940(prel.)		1941(prel.)	
	1,000 sq.yds.	\$1,000	1,000 sq.yds.	\$1,000	1,000 sq.yds.	\$1,000	1,000 sq.yds.	\$1,000	1,000 sq.yds.	\$1,000
All countries, total-	3,858	595	967	154	1,624	231	2,314	357		
Japan -----	3,857	594	964	151	1,622	230	2,312	355		

By Months and by Principal Countries - Quantity (1,000 sq. yds.)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan			Japan			
January -----	36	127	59	126			59			
February -----	49	166	74	166			74			
March -----	52	87	259	87			259			
April -----	38	233	295	233			295			
May -----	13	53	265	52			263			
June -----	66	145		145						
July -----	290	195		195						
August -----	182	407		407						
September -----	537	460		460						
October -----	289	296		296						
November -----	63	127		127						
December -----	9	18		18						
Total, 12 mos.	1,624	2,314		2,312						

COTTON TABLE DAMASK AND MANUFACTURES THEREOF

General information.

Cotton table damask is a special type of jacquard-figured fabric having warp-sateen figures on a filling-sateen ground, or vice versa. The surface threads in the figures lie at right angles to those in the ground so that light falling on the fabric is more diffusely reflected when it strikes the figures, causing them to stand out in bold relief. Cotton table damask is usually woven of coarse or medium yarns (15s to 30s, usually in the single) and subsequently bleached and finished to imitate linen table damasks. Manufactures of cotton table damask are mainly tablecloths, table runners, napkins, and doilies.

The following table compares, as far as the data permit, production, imports, and exports of cotton table damask in selected years beginning with 1925, the year in which production and consumption attained their peak.

Cotton table damask and manufactures thereof: Summary
of United States production, imports, and exports,
in specified years, 1925 to 1940

(Value in thousands of dollars)

Year	Production	Imports	Exports	Ratio of imports to production
				Percent
1925	12,450	410	160	3.3
1929	8,383	364	245	4.3
1931	3,651	180	64	4.9
1933	2,837	235	58	8.3
1935	3,320	379	85	11.4
1937	2,980	1,434	67	48.1
1939	1/	2/ 1,413	2/ 39	-
1940	1/	2/ 1,969	2/ 34	-

1/ Not available.

2/ Preliminary.

Sources: Production figures, Bureau of the Census; import and export figures, compiled from official statistics of the U.S. Department of Commerce.

United States production and consumption of cotton table damask has declined sharply since 1925. The decrease in the output for use in tablecloths and napkins is due in part to the substitution of other types of less expensive woven fabrics (principally plain-woven fabrics such as prints and yarn-dyed checks), in part to the increasing use for informal occasions of luncheon sets of cloth or paper dollies and napkins, to the use of lace cloths for formal occasions, and in part to the increasing use by restaurants of paper dollies on bare table tops.

The table below shows domestic production in specified years for the period 1925-39 during which the trend of production was sharply downward.

Cotton table damask and manufactures thereof: United States
production in specified census years, 1925 to 1939

Year	Quantity		Value	Value per unit	
	1,000 pounds	1,000 square yards		Per pound	Per square yard
			1,000		
			dollars		
1925	14,604	53,468	12,450	\$0.853	\$0.233
1929	12,379	35,868	8,383	.677	.234
1931	6,993	20,524	3,651	.522	.178
1933	5,402	15,818	2,837	.525	.179
1935	4,781	15,341	3,320	.694	.216
1937	5,248	15,910	2,980	.568	.187
1939	4,909	13,301	1/	-	-

1/ Not reported.

Source: Bureau of the Census.

Data are not available on the number of mills or of workers engaged in the manufacture of cotton table damask. Fewer than a dozen mills now include table damask as a major item of production. Inasmuch as the looms used in weaving damask may also be used to weave various other fabrics, a number of cotton mills produce damask only on order, and practically none of them confine their output to this one fabric. The production of cotton table damask is not localized.

Most of the cotton table damask is woven in the gray and afterwards bleached and mercerized. Some damask is dyed and then subjected to beetling or other processing to produce a cloth resembling linen damask. The mills which produce most of the cotton table damask piecegoods also produce articles made therefrom, the manufacture of which involves cutting, hemming, and packaging. A few mills have their products finished in outside plants which specialize in finishing cotton or rayon fabrics.

Imports of cotton table damask from Japan were insignificant prior to 1936. In the years 1922-35 Czechoslovakia ranked first as a source of imports (in value and apparently in quantity), and the United Kingdom and Belgium were the only other sources of importance. In 1936 Czechoslovakia still ranked first in value, but imports from Japan had increased to such an extent that Japan ranked first in quantity and second in value. For the period 1939-40, when the volume of imports reached its peak, Japan supplied about 80 percent of the total quantity, which accounted for slightly over 60 percent of the total value. In the first five months of 1941, imports from Japan were 50 percent greater than in the corresponding period in 1940 and represented more than 90 percent of the quantity and more than 75 percent of the value of total imports of this product. This increase in imports was no doubt partly due to reduced imports of linen table damask from the United Kingdom.

The wide spread between the price of Japanese cotton damask and damask from other countries is apparent upon examination of the unit values as set forth in the following table. For the 5-year period 1936-40, imports from Japan averaged \$0.435 per pound, whereas imports from all other countries averaged \$1.124.

Cotton table damask and manufactures thereof: United States imports
for consumption from Japan and all other countries,
1936-40 and five-year total

Country	1936	1937	1938	1939 1/2	1940 1/2	Five-year total
Quantity (pounds)						
Japan	378,271	1,107,678	773,522	1,835,821	2,901,533	6,996,825
All other	505,127	808,199	705,173	642,734	536,782	3,198,015
Total	883,398	1,915,877	1,478,695	2,478,555	3,438,315	10,194,840
Value						
Japan	\$124,283	\$513,679	\$338,177	\$767,409	\$1,301,846	\$3,045,394
All other	524,865	920,349	835,859	645,916	666,941	3,593,930
Total	649,148	1,434,028	1,174,036	1,413,325	1,968,787	6,639,324
Unit value (per pound)						
Japan	\$0.329	\$0.464	\$0.437	\$0.418	\$0.449	\$0.435
All other	1.039	1.139	1.185	1.005	1.242	1.124
Average	.735	.748	.794	.570	.573	.651

1/ Preliminary.

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

Exports of cotton table damask decreased from 780,000 square yards in 1929 to 145,000 square yards in 1940. Domestic producers have been unable to develop or even to maintain their markets in the face of low-price competition from other countries, particularly Japan.

Probable economic effects of a cessation of imports from Japan.

The consumption of cotton table damask in the United States has decreased since 1925. This has resulted in a sharp decrease not only in domestic production but also in imports, which formerly consisted mainly of high-quality, high-priced damask from Europe. Imports from Japan, which commenced in 1936, increased sharply because of their very low price. A cessation of imports from Japan would greatly restrict the supplies of low-priced cotton damask available to domestic consumers.

These cotton mills in the United States which are in a position to supply cotton table damask and the cheaper plain-woven fabrics would benefit from a stoppage of imports, as would also the producers of substitute materials.

Class 3082.4

UNITED STATES IMPORTS OF TABLE DAMASK AND MANUFACTURES OF, IN CHIEF VALUE OF COTTON,
VALUED LESS THAN 75 CENTS PER POUND

By Principal Countries

Country	1937 1/		1938 ^{1/} (Apr. 16-Dec. 31)		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000		\$1,000
All countries, total			691	312	2,056	888	2,984	1,341		
Japan			554	232	1,833	764	2,870	1,273		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan			Japan			
January	134	312	249	293			246			
February	68	178	347	166			342			
March	160	258	318	240			315			
April	149	137	381	121			379			
May	181	208	330	195			330			
June	180	202		196						
July	205	205		201						
August	143	206		199						
September	223	317		313						
October	242	336		332						
November	166	363		358						
December	205	262		256						
Total, 12 mos.	2,056	2,984		2,870						

1/ Not separately reported in import statistics prior to April 16, 1938.

TABLE AND BUREAU COVERS, CENTERPIECES, RUNNERS, SCARFS,
NAPKINS AND DOILIES, OF PLAIN-WOVEN COTTON CLOTH,
N.S.P.F.

General information.

The above classification was inserted in the Tariff Act of 1922 for the purpose of securing separate enumeration of the imported specialties known in the trade as "Japanese blue prints" and made of coarse sheeting stencil-dyed in indigo. This classification also covers a specialty more recently imported known as "India prints" (plain-woven articles printed in varicolored oriental design), as well as staple and special plain-woven articles produced in Europe and elsewhere and sold unbleached, bleached, printed, dyed, or colored. Imports from Europe have been mainly high grade machine or hand-printed articles in sets, including tablecloth and napkins.

Imports of table and bureau covers, centerpieces, runners, scarfs, napkins, and doilies, made of plain-woven cotton cloth, have been supplied principally by Japan, Germany, and the United Kingdom. Japan has usually been the most important source of such imports, having supplied slightly over 70 percent of the total value in the period 1937-40.

Domestic production of such articles is not separately recorded, but the output of goods, printed or yarn-dyed, that are competitive with the imported specialties is known to be large and to supply the greater part of the domestic demand. Exports are not recorded, but are known to be relatively small.

Probable economic effects of a cessation of imports from Japan.

Imports from Japan, formerly only "blue prints," now include color-printed tablecloths, napkins, and similar articles. These are brought in principally because they are lower priced than most similar domestic products. A cessation of imports from Japan would therefore cut down the supplies of low-priced articles and compel the substitution, in some degree, of higher priced domestic textiles, or of tablecloths, napkins, and doilies made of paper; the last named are already being used extensively, particularly in restaurants, tea rooms, and taverns. Domestic manufacturers of both the cloth and the paper articles have ample productive capacity to handle any likely increase in demand resulting from a stoppage of imports from Japan.

UNITED STATES IMPORTS OF TABLE AND BUREAU COVERS, CENTERPIECES, RUNNERS, SCARFS, NAPKINS
AND TOWELIES, OF PLAIN WOVEN COTTON CLOTH, NOT SPECIALLY PROVIDED FOR

Class 3083.0

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
		\$1,000		\$1,000		\$1,000		\$1,000		
All countries, total		928		419		355		393		
Japan		704		298		240		285		
United Kingdom		37		7		10		30		
Belgium		28		6		17		25		
Iran		23		26		20		16		
Netherlands		28		27		35		9		
Czechoslovakia		94		42		16		-		

By Months and by Principal Countries - Value (1,000 dollars)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	United Kingdom	Belgium	Iran	Japan	United Kingdom	Belgium	Iran
January	33	32	28	22	3	3	3	24	1/	-	-
February	22	17	23	12	1	-	-	18	3	1	1
March	28	47	22	36	1	5	2	16	3	-	-
April	21	26	27	15	2	3	2	15	9	-	2
May	21	32	25	26	1	4	-	23	1	-	-
June	25	23		17	1	3	1				
July	28	26		19	6	-	1/				
August	23	43		33	2	4	-				
September	27	29		26	3	-	-				
October	54	42		26	9	1	1/				
November	32	47		29	1/	2	6				
December	36	29		24	1	1/	2				
Total, 12 mos.	355	393		285	30	25	16				

1/ Less than 500.

COTTON FLOOR COVERINGS

General information.

Cotton floor coverings, almost wholly rugs, include a wide variety of types, particularly among imports, which supply the greater part of consumption in the United States. Chenille rugs predominate in domestic production and are followed by oval braided rugs, tufted rugs, rag rugs, plush rugs, and hooked rugs. In imports, cotton imitation oriental and other cut-pile rugs, mainly from Belgium, predominate in terms of value. In terms of quantity, cotton rugs, other than imitation oriental and cut pile, predominate and are from Japan. Japanese cotton rugs include rag rugs (hit-and-miss, plain, and plaid), rice-straw rugs (cotton chief value), chenille rugs, sanshu-yarn rugs, hooked rugs, and braided rugs.

Imports of cotton floor coverings, by principal countries during the period 1937-40 and the first 5 months of 1941 are shown in the table at the end of this section.

Domestic production of cotton floor coverings, not recorded by types, is estimated at about 4 million square yards annually. Exports are negligible.

Cotton rugs are imported from Japan by Japanese firms which deal almost exclusively in Japanese goods, and also by domestic firms which handle both imported and domestic products. The Japanese rugs are retailed in this country by chain stores, mail-order houses, and department stores.

Probable economic effects of a cessation of imports from Japan.

Japanese cotton rugs are imported almost entirely because of their low prices. About 15 years ago the Japanese began to imitate American hit-and-miss rag rugs for sale to this market, with the result that production in the United States decreased steadily with the influx of cheaper rugs from abroad. Other types, such as plaid rag rugs and chenille rugs, which have developed in this country as higher quality offerings, have also felt severe competition from Japanese imitations. Cessation of imports from Japan would encourage expansion of the domestic industry but probably not to such an extent that it would make up the deficiency, inasmuch as the domestic product would probably sell at higher prices than have prevailed for the imports from Japan.

UNITED STATES IMPORTS OF COTTON FLOOR COVERINGS

 Class 3224.1-3
 3224.7
 3224.9

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 sq. yds.	\$1,000	1,000 sq. yds.	\$1,000	1,000 sq. yds.	\$1,000	1,000 sq. yds.	\$1,000	1,000 sq. yds.	\$1,000
All countries, total	17,143	5,580	9,018	3,253	12,459	4,440	7,744	2,695		
Japan -----	12,372	1,798	5,549	717	7,157	905	5,207	842		
Belgium -----	3,980	3,201	2,771	2,060	4,562	3,061	1,915	1,445		
Italy -----	604	453	470	315	500	313	327	247		
France -----	21	26	103	91	146	107	75	64		
Canada -----	117	53	91	38	70	38	66	39		
China -----	12	6	17	8	23	14	148	54		

By Months and by Principal Countries - Quantity (1,000 sq. yds.)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	Belgium	Italy	China	Japan	Belgium	Italy	China
January -----	1,154	1,322	455	906	354	42	4	436	3	-	16
February -----	890	941	644	539	348	24	2	572	-	-	70
March -----	1,608	1,028	555	645	329	34	6	495	1	-	52
April -----	1,471	882	651	537	287	33	7	601	2	1	36
May -----	1,522	979	304	641	276	49	5	224	-	-	71
June -----	1,069	442		327	76	20	7				
July -----	691	312		268	30	7	2				
August -----	689	190		121	39	16	6				
September -----	697	374		276	48	28	12				
October -----	950	274		171	24	33	34				
November -----	813	524		405	64	7	37				
December -----	905	476		371	41	34	26				
Total, 12 mos.	12,459	7,744		5,206	1,916	327	148				

COTTON RAGS, INCLUDING WIPING RAGS, EXCEPT
FOR PAPER MAKING

General information.

Imports under the above tariff classification consist principally of wiping rags and rags for remanufacture. Wiping rags, or wipers, are pieces of cloth torn or cut from used clothing, such as kimonos, shirts, slips, and knit underwear. These rags are usually entered in prepared form, but the preparation varies from simply removing the buttons and tearing open the sleeves to cutting the material into suitable sizes and washing or bleaching. Wiping rags are used primarily for wiping machinery.

Rags for remanufacture include those rags (except paper stock) too small for wiping but suitable for the reclamation of the fiber. The reclamation process consists of passing the rags through a picking or garnetting machine where they are shredded and reduced to a fibrous mass. The cotton "shoddy" thus obtained is used in making batting or wadding for mattresses, in roofing felts, as calking cotton, and some is respun into yarn for use in mops and in coarse fabrics.

Imports consist almost entirely of rags which require no further processing as rags. About 95 percent of the bales brought in are sold in the original package. Japan is the principal source of imports, having supplied over 95 percent of the total in each year since imports were first reported separately. These goods are shipped chiefly from the Kobe and Osaka districts of Japan. They include many varieties of rags but are principally old cotton kimonos and knit underwear.

Imports reached a peak in 1937, amounting to more than 30 million pounds, but subsequently decreased sharply. In 1940 they dropped to 1,333,482 pounds, and for the first 5 months of 1941 were only 31,000 pounds, as compared with 949,000 pounds in the corresponding period of 1940. Statistics of imports from Japan are shown in the table at the end of this section.

Domestic production of cotton rags doubled from 1931 to 1935, having amounted to about 98 million pounds in 1935. More recent figures are not available. At the present time domestic production not only supplies domestic consumption, but also affords a considerable exportable surplus.

Exports, usually less than imports, far exceeded imports in 1939 and 1940. These exports include wiping rags, rags intended for remanufacture into cotton shoddy, and remnants. Canada, the United Kingdom, and Italy have been the most important purchasers in recent years.

No statistics are available on the number of establishments that produce wiping rags, but it is estimated that there are over 100 such establishments scattered throughout the United States, including dealers and laundries. The laundries usually purchase graded rags which they wash and sterilize. The dealers usually buy ungraded rags which they sort and grade and then have sterilized, generally by laundries. The principal producing States are Illinois, Michigan, Ohio, Pennsylvania, and California.

Probable economic effects of a cessation of imports from Japan.

Imports from Japan have declined so sharply during the last 2 years that a cessation of imports would have but little additional effect.

UNITED STATES IMPORTS OF COTTON RAGS, INCLUDING WIPING RAGS, EXCEPT FOR PAPER MAKING

Class 3227.1

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	30,101	1,762	18,535	1,057	8,009	575	1,333	128		
Japan -----	29,583	1,729	18,405	1,049	7,576	546	1,282	124		
Argentina -----	-	-	-	-	11	<u>1/</u>	3	<u>1/</u>		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan	Argentina		Japan	Argentina		
January -----	2,139	687	11	666	-		-	-		
February -----	726	126	9	117	-		7	-		
March -----	746	84	34	84	-		24	-		
April -----	932	16	-	16	-		-	-		
May -----	607	68	22	66	-		-	21		
June -----	341	47		43	-					
July -----	316	64		64	-					
August -----	573	5		-	3					
September -----	470	9		8	-					
October -----	193	148		148	-					
November -----	479	11		2	-					
December -----	487	68		68	-					
Total, 12 mos. -----	8,609	1,333		1,282	3					

1/ Less than \$500.

COTTON FISH NETS AND NETTING

General information.

Prior to 1932 the small amounts of cotton fish nets and netting imported were mainly from Europe. In 1932 Japan became the principal source, supplying in that year about 120,000 pounds. In 1937 imports from Japan rose to 800,000 pounds, but thereafter they declined to 619,000 pounds in 1940, and to 244,000 pounds in the first 5 months of 1941.

Domestic production of cotton fish nets and netting has in recent years ranged from 1-3/4 to 2-1/2 million pounds annually. The largest domestic producer of netting also produces most of the cotton seine twine used by the other manufacturers of netting. Exports, which are not reported separately, probably amount to less than 40,000 pounds per year. Statistics of imports in recent years are shown at the end of this section.

Probable economic effects of a cessation of imports from Japan.

Cotton fish nets and nettings are imported from Japan principally because of their low price. A stoppage of imports would therefore result in a scarcity of low-priced netting. Domestic production capacity for fish nets is probably sufficient to meet all domestic requirements, though at higher prices than have prevailed for the imported product.

UNITED STATES IMPORTS OF COTTON FISH NETS AND NETTINGS

 Class 323.63
 323.64

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	846	255	499	154	775	199	656	210		
Japan -----	802	236	474	141	719	171	619	181		
Netherlands -----	31	12	14	6	36	15	5	3		
United Kingdom ----	10	6	8	5	10	6	23	18		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan	United Kingdom		Japan	United Kingdom		
January -----	29	130	69	126	-		64	5		
February -----	9	75	46	72	-		46	-		
March -----	29	53	34	53	-		34	-		
April -----	12	52	54	44	5		54	-		
May -----	36	52	46	40	9		46	-		
June -----	67	70		67	2					
July -----	115	50		45	5					
August -----	104	24		24	-					
September -----	120	27		25	2					
October -----	90	61		61	-					
November -----	20	24		24	-					
December -----	94	38		38	-					
Total, 12 mos. -----	775	656		619	23					

RAW SILK

General information.

The term "raw silk" means silk in skeins, as reeled from the cocoon or rereeled. Raw silk is used principally in the manufacture of hosiery and to a lesser extent in weaving. For most textile uses, two or more raw silk threads must be doubled together and twisted into ply yarn. This process is called "throwing" and the resultant product is known as "thrown silk."

For military purposes, the chief use of raw silk is in the manufacture of woven fabrics for man-carrying parachutes, balloons, and parachutes for pyrotechnic signals and flares. Suspension lines for parachutes are made of corded silk yarns encased in a tubular braided silk outer covering. Narrow silk tapes are required for reinforcing bands in parachutes, and silk sewing thread is needed for stitching.

Japan is the largest producer of silk and China is the second. Italy, France, and other countries produce much smaller quantities. The United States, the largest consumer of silk, obtains the great bulk of its raw silk from Japan. China is an important secondary source, but little Chinese silk has been found suitable for the manufacture of hosiery.

United States imports of raw silk from all countries amounted to 87 million pounds, valued at 427 million dollars in 1929; they declined in quantity in each succeeding year thereafter, except 1931 and 1935. The decrease from 1929 to 1940 was 49 percent in quantity and 71 percent in value, imports in 1940 amounting to 44.9 million pounds, valued

at 125 million dollars. Imports in the first 5 months of 1941 amounted to 15.1 million pounds (compared to 13.6 million pounds in the corresponding period of 1940). Imports of raw silk by years for the period 1937-40 and by months from January 1940 through May 1941 are shown in the table at the end of this section.

Practically all of the raw silk imported into the United States in recent years has been transported in foreign vessels. In 1938, Japanese boats accounted for 83 percent of the silk cargo tonnage, vessels of other foreign registries for 15 percent, and American boats for the remaining 2 percent.^{1/}

Almost all of the raw silk imported into the United States from Japan is handled by Japanese controlled companies, and it is estimated that 94 percent of Japan's export business in silk with the Americas is done by seven large Japanese firms, all of which have branches in the United States. The small amount of silk not imported by the large Japanese trading forms has been brought in principally by import merchants and thrown-silk dealers.^{2/} Importers of raw silk are organized into a trade association known as the Raw Silk Importers, Inc. Membership in 1940 consisted of 15 import merchants and 14 thrown-silk dealers. Domestic manufacturers have imported little silk directly.

There is no commercial production of raw silk in the United States, hence there are no domestic exports. There has been, however, a substantial reexport of imported raw silk, amounting usually to 5 percent or more of total imports (12 percent in 1940). Practically all of these reexports have gone to Canada and the United Kingdom.

^{1/} U.S. Maritime Commission, Special Report No. 2896.

^{2/} These include dealers operating their own thrown-silk plants as well as dealers who have raw silk thrown on commission.

Total stocks of raw silk in New York warehouses (the only important stocks in the United States) have increased somewhat in recent years as shown in table 1. Month-end stocks averaged higher in the 12-month period ending June 1941 than in any earlier corresponding period shown in the table.

Table 1. - Raw silk: Importers' warehouse stocks in New York and Hoboken at end of each month, 1937-41 ^{1/}

(In bales of 132.25 pounds)					
Month	1937-38	1938-39	1939-40	1940-41	1941-42
July	41,494	42,305	25,748	43,211	47,208
August	44,183	39,747	25,060	46,898	
September	43,957	40,711	27,760	44,454	
October	40,834	43,811	35,935	48,297	
November	45,424	46,218	41,927	60,330	
December	49,535	53,278	55,610	72,248	
January	68,678	48,554	59,225	63,433	
February	43,834	38,178	50,306	54,106	
March	36,326	23,116	45,887	49,904	
April	41,455	20,738	42,698	49,373	
May	37,016	24,201	43,285	50,341	
June	44,457	19,209	41,822	53,436	

^{1/} Including Commodities Exchange certificated stocks and stocks at terminals.

Source: Commodity Exchange, Inc.

The available warehouse stocks of raw silk, use of which is now permissible only under Government license, are adequate for production of about one-half million parachutes. A parachute of the average size used for military purposes requires 7.8 pounds of silk (representing about 65 square yards of cloth) for the canopy, and 3.9 pounds for shroud lines, tapes, and sewing thread. Statistics of stocks of parachutes and parachute cloth on hand are not available for publication.

There are several substitutes available for silk in the manufacture of parachute cloth, nylon having thus far given the most promising results. High-tenacity acetate rayon yarn, such as has been used by Great Britain, also is suitable. Vinyon also may have possibilities.

As shown in table 2, hosiery has accounted in recent years for steadily increasing proportions of the declining amounts of silk consumed in the United States. In 1940, almost 90 percent of the total consumption was used in the manufacture of hosiery, principally full-fashioned for women. (Unless otherwise indicated, all subsequent reference to silk and nylon hosiery is to full-fashioned hosiery only.) Census data indicate that 499 firms and 97 thousand workers were engaged in the full-fashioned hosiery industry in 1939. Full-fashioned hosiery production in 1940 amounted to 503 million pairs, according to the National Association of Hosiery Manufacturers. An additional 350 establishments and 36 thousand workers were employed in the production of silk thread, thrown yarn, and woven fabrics. Most full-fashioned hosiery concerns are fairly large, whereas firms in the weaving industry range from individual weavers who have set up a shop for themselves with two or three looms to establishments of substantial size.

Table 2. - Raw silk: United States consumption by uses, 1939-40.

(In thousands of pounds)

Year	Net monthly deliveries to U.S. mills ^{1/}		Consumption in -		Ratio to total	
	Hosiery ^{2/}	Other uses	Hosiery ^{2/}	Other uses	Hosiery	Other uses
	Annual total				Percent	
1934 -----	58,188	28,088	30,100	48.3	51.7	
1935 -----	62,289	32,886	29,403	52.8	47.2	
1936 -----	57,837	35,266	22,571	61.0	39.0	
1937 -----	53,599	38,635	14,964	72.1	27.9	
1938 -----	51,668	37,352	14,316	72.3	27.7	
1939 -----	47,325	38,449	8,876	81.2	18.8	
1940 ^{3/} -----	35,801	32,068	3,733	89.6	10.4	

^{1/} Reexports deducted from gross monthly mill takings. These monthly net delivery figures approximate actual consumption except for changes in mill stocks of raw silk held. Data of Commodity Exchange, Inc., as published in Rayon Organon, shown in bales, and converted to pounds by multiplying by 132.25.

^{2/} Full-fashioned and seamless. Data from National Association of Hosiery Manufacturers.

^{3/} Preliminary.

Factory stocks of all full-fashioned hosiery (over 90 percent being silk hosiery) on hand on June 30, 1941 amounted to 87 million pairs, or about 2 months' supply, based on average monthly shipments in 1940; stocks in the hands of wholesalers and retailers - for which statistics are not available - accounted possibly for 1 month's supply; and raw silk, and silk in process, in the hands of hosiery manufacturers accounted for more than an additional month's supply. A minimum of 4 months' supply of full-fashioned hosiery would therefore appear to have been available at that time. The corresponding minimum supply available at the end of July 1941 (when imports of silk from Japan virtually ceased) may be assumed to have been little different from that at the end of June 1941.^{1/} Retail purchases since the end

^{1/} All stocks of raw silk were frozen as of August 2 and may now be used only under a Treasury license. It seems probable that, for the time being at least, no raw silk supplies will be available for civilian uses. All thrown silk which was on hand on August 2, however, may be used.

of July have been abnormally large, but this has had the effect principally of transferring stocks from manufacturers and dealers to consumers' hands. Production of silk hosiery since the end of July has declined sharply.

Substitutes for silk in hosiery manufacture are nylon, rayon, and cotton (particularly desirable as lisle and mercerized yarn). Of these, nylon is at present by far the most acceptable insofar as physical characteristics and appearance are concerned; the retail prices of most nylon hosiery, however, are almost twice those at which the great bulk of silk hosiery has been sold. The output of nylon yarn has steadily increased since initiation of production in December 1939. Prices of nylon yarn were reduced late in 1940 and again in June 1941.^{1/} The prices of nylon hose were increased somewhat late in 1940 (output had not kept pace with the increasing consumer demand) but were reduced later in the spring of 1941.

About 36 million pairs of nylon hose were produced in 1940. Practically all of these were made from yarn supplied by a single nylon yarn plant at Seaford, Del. A second plant of equal capacity, also at Seaford, began operations in November 1940, but did not attain full production until the Spring of 1941. Production of nylon hosiery in the last quarter of 1940 was, as shown in table 3, at the rate of over 60 million pairs per year.^{2/} In the second quarter of 1941, production was at a rate in excess of 100 million pairs per year. Output in

^{1/} The total net reduction in 30 denier yarn (the main type used in full-fashioned hosiery) was about 27 cents per pound, or about 6 percent.

^{2/} The du Pont Company, in February 1941, reported that "at the end of the year (1940) women's nylon stockings were being manufactured at the rate of 68,000,000 pairs annually."

that period was the equivalent of 20 percent of the total shipments of all full-fashioned hosiery in 1940, which shipments amounted to 519 million pairs.

Table 3. - Production of nylon full-fashioned hosiery, by months, and corresponding annual production rates, July 1940 - June 1941

Month	Production	Corresponding annual production rate
1,000 pairs		
<u>1940:</u>		
July -----	3,183	38,196
August -----	3,712	44,544
September -----	4,494	53,928
October -----	5,302	63,624
November -----	5,185	62,220
December -----	5,154	61,848
<u>1941:</u>		
January -----	5,720	68,640
February -----	6,068	72,816
March -----	7,131	85,172
April -----	8,389	100,668
May -----	8,630	103,560
June -----	9,050	108,600

Source: Quarterly Statistical Bulletin of Hosiery Industry, National Association of Hosiery Manufacturers, February, May, and August 1941.

Future production of nylon hosiery will depend on several factors which cannot be fully appraised at present. For example, if following the stoppage of imports of silk from Japan, there should also be a cessation of imports of bristles from north China, the proportion of the basic nylon ingredient (flake polymer) which would be made into brush bristles might be increased and that available for making nylon yarn for hosiery be reduced correspondingly. The proportion of nylon used in hosiery might also be reduced in consequence of an increased

demand for nylon in woven materials and for other purposes. Also, some nylon might be requisitioned by the Government for defense purposes. The amount of nylon available for hosiery and for all other uses will also depend on whether any new nylon yarn plants will be constructed. The company controlling the nylon patents has thus far been the only company to erect plants in the United States.^{1/}

On the basis of the expected output of nylon by plants now in operation or under construction the production of nylon hosiery (on the assumptions mentioned in the next paragraph) may be estimated to be at the rate of about 121½ million pairs by the end of 1941, and at the rate of about 243 million pairs by the end of 1942. The estimated rate for the end of 1941 is based on capacity operation of the two nylon yarn units located at Seaford, Del. The first of these units, which began operation in December 1939, has been producing at full capacity for some time, and the second, which began operation in November 1940, reached full capacity before the middle of 1941. The estimate of the rate of nylon hosiery production for the end of 1942 is based on an increase in yarn output by a plant at Martinsville, Va.; this plant is nearing completion and is expected to be operating at full capacity early in 1942. Each of the units at Seaford, Del., has a yarn capacity of 4 million pounds per year, and the plant at Martinsville, will have a capacity of 8 million pounds.

^{1/} A nylon yarn plant licensed by du Pont has been constructed in Canada by a Canadian affiliate of Imperial Chemical Industries, Ltd.

The above estimates of output of nylon hosiery are based also on the assumption that 80 percent^{1/} of the production of nylon yarn will be used in the manufacture of hosiery and that, on the average, 19 pairs of hose can be made from 1 pound of yarn.^{2/}

The above estimates, incidentally, correspond closely with the actual rate of production of nylon hosiery in October 1940, the month of maximum hosiery production based on the output of a single nylon fiber unit of 4 million pounds capacity. Output of nylon hosiery in that month was at the rate of 63.6 million pairs annually. If the output of nylon hosiery by the end of the years 1941 and 1942 were to be in the same relation to the estimated production of nylon yarn as prevailed in that month, they would be at the annual rates of 127.3 million pairs and 255.6 million pairs, respectively.

The above estimates of production of nylon hosiery are calculated on the basis of hosiery made entirely of nylon. Early in August 1941, the manufacturers of nylon yarn announced that patent licensing restrictions forbidding the mixture of nylon with other materials in hosiery would be lifted. There are, therefore, no longer any legal obstacles to incorporating welts (or even feet) made of such yarns as rayon or cotton in hosiery made chiefly of nylon.^{3/} The output of nylon hosiery

^{1/} Approximately 85 percent entered into full-fashioned hosiery in the spring of 1941. In view of the increasing use of nylon for other than hosiery, however, 80 percent is believed to provide a more conservative basis for making estimates for future nylon hosiery output.

^{2/} The computation for the end of 1931 is 8,000,000 (pounds of nylon yarn output) multiplied by 80/100 (the proportion of yarn output it is assumed will be devoted to full-fashioned hosiery) multiplied by 19 (the number of pairs of hose which can be made from 1 pound of fiber) = 121,600,000 (pairs of hose). The output by the end of 1942, based on twice the production of yarn, would be 243,200,000 pairs of hose.

^{3/} In fact, the Government now requires hosiery manufacturers to use silk with other yarns in hosiery manufacture and has recommended that, at least 50 percent of the nylon hosiery output be of nylon in combination with other yarns.

could be increased by about 25 percent if other fibers could be substituted in the welts.^{1/} Table 4 compares the number of pairs of nylon hosiery incorporating non-nylon welts with the number of all-nylon hose which previously it was estimated could be made by the end of 1941 and 1942, respectively.

Table 4. - Estimated annual rate of production of full-fashioned nylon hosiery, with and without substitute materials incorporated in welts

Period	All-nylon	Nylon with non-nylon welts
Quantity (millions of pairs)		
End of -		
1941	121.6	152
1942	243.2	304

Source: Calculations by the U.S. Tariff Commission based on data obtained from official and private publications and other sources.

The actual output of nylon hosiery may be expected to be somewhere between the extremes shown in the above table, assuming, of course, that nylon yarn production will expand as now anticipated and that about 80 percent of the output will be devoted to full-fashioned hosiery.^{2/} The consumption (shipments) of all full-fashioned hosiery in 1940, however, was 519 million pairs, of which 480 million pairs were silk. There is no possibility, therefore, that nylon hosiery can be produced in sufficient volume, on the basis of the nylon yarn production now expected, to make up the deficiency which would result from a stoppage of production of silk hosiery. Many users of nylon hosiery claim that these

^{1/} The output could be further increased if substitute materials were to be used in the feet.

^{2/} It should be noted that the remaining 20 percent of the nylon yarn output will amount to 3.2 million pounds annually, when total output reaches estimated capacity, 16 million pounds. This figure (3.2 million pounds) is more than twice the amount that has hitherto been available to all users of nylon yarn combined, other than the full-fashioned industry.

hose wear longer than silk hosiery; if such is the case, any given output of nylon hose would replace more than a corresponding number of pairs of silk hose.^{1/} If nylon hosiery is to replace silk hosiery at its present level of consumption, it can do so only after more nylon-yarn plants are constructed. No plans for additional units have been publicly announced. In any event, no additional plants could come into production before about 1 year from the beginning of their actual construction.

If further supplies of silk will not be available for hosiery, consumers in the aggregate will be obliged, once existing stocks of hosiery are exhausted, and until the new Martinsville nylon plant is in operation, to reduce their rate of consumption of silk and nylon hosiery combined to between 25 and 30 percent of that for 1940. The extent to which the deficiency can be filled will depend on the degree to which hosiery of still other materials becomes available and is found acceptable. It is probable, however, that the total consumption of hosiery will decline, at least temporarily. When the nylon plant at Martinsville, Va., gets into production, consumption of nylon hosiery can be increased to between 50 and 60 percent of the rate of consumption of silk and nylon hosiery in 1940.

Full-fashioned women's hosiery made of materials other than silk or nylon amounted in 1940 to about 5 million pairs or only 1 percent

^{1/} This consideration has not taken into account in estimating prospective deficiencies in hosiery, principally because satisfactory comparative data on the wearing qualities of nylon and silk hosiery are not available.

of the total production of all full-fashioned hosiery. Most of these hose were of rayon, cotton, and mixtures; and very few of them were made of yarns as fine as those entering into the great bulk of the silk and nylon hosiery.

The trend in the consumption of women's hosiery in the United States in recent years has been in the direction of greater sheerness. A sample analysis by thread types of the women's silk hosiery produced in March 1941 shows that 60.1 percent of the total was of 3-thread or finer, that 28.7 percent was of 4 or 5-thread, and that only 11.2 percent was 6-thread or coarser.^{1/}

In the manufacture of hosiery of 2 or 3 threads^{2/} (corresponding approximately to 30 or 40 denier) only silk or nylon have thus far been used in appreciable quantities. Production of these types was at the annual rate of about 300 million pairs in 1940, whereas production of nylon hosiery even by the end of 1941 will not likely be at the rate of over 150 million pairs. To make up the whole of the deficiency with correspondingly sheer cotton and rayon hose would require about 8 million pounds of very fine cotton and rayon yarn.

Domestic production of plied cotton yarns equal in fineness to 3-thread silk (240/2 or finer) is not commercially feasible. Plied cotton yarn of 160/2 is the finest made in the United States but the output is so small that it could supply only a negligible part of the

^{1/} National Association of Hosiery Manufacturers, Quarterly Statistical Bulletin. March 1941, p. 11.

^{2/} These, together with 1-thread, comprise the group of "very sheer" hosiery referred to in the following portions of the text.

yarn needed to make up the deficiency in sheer hosiery.^{1/} Moreover, domestic capacity for producing very fine cotton yarns is extremely limited and could not easily be expanded.

The capacity of the United States for producing fine rayon yarns is large, but the output of rayon has been going principally into products other than women's hosiery, including a number of defense materials as well as men's hosiery, women's dress goods, etc. The rayon industry is already operating at maximum capacity, and demand for rayon in recent months has exceeded output as evidenced by declines in stocks. If production of the fine sizes of rayon (from 50 to 100 deniers) were to be increased to meet the needs of full-fashioned hosiery manufacturers, it would result in a reduction in total output of rayon, inasmuch as the rate of production is slower for the finer yarn than for the coarser.

The Office of Price Administration and Civilian Supply recently ordered rayon producers to allot 7 percent of their stocks and their monthly output during August and September 1941 to hosiery manufacturers.^{2/} This may permit some expansion in the production of full-fashioned rayon hosiery, but not necessarily an expansion in output of hose comparable in sheerness with most silk and nylon hosiery.

^{1/} Output for sale of 121s and finer in 1937 (the latest year for which data are available) was 203,000 pounds, an amount which if devoted entirely to full-fashioned hosiery would permit the manufacture of possibly 4 million pairs. Imports of cotton yarns of numbers 121s in recent years have ranged from 200,000 to 400,000 pounds annually but these have been used mainly in the production of lace.

^{2/} Subsequently, producers of acetate rayon were exempt because acetate yarn is not particularly suitable for making full-fashioned hosiery.

It would appear, therefore, that unless more very fine cotton or rayon yarn were shortly to become available as a result of larger imports,^{1/} the rate of production of very sheer (corresponding to 1 to 3-thread) hosiery in the United States for the immediate future will have to be reduced to less than one-half of that produced in 1940. By the end of 1942, however, when the new nylon plant at Martinsville, Va., will have attained full production, sufficient nylon yarn should be available to make possible an aggregate production of very sheer hose at almost the 1940 rate, assuming that all the nylon entering into hosiery was used for very sheer hose, the requirements for the less sheer being supplied by rayon or cotton.

Considerable domestic capacity exists for making rayon yarn sufficiently fine to replace silk in hosiery of 4- or 5-thread construction (which corresponds roughly to 60 and 75 denier rayon or nylon yarns,^{2/} and 180/2 and 142/2 in cotton yarns). All producers of rayon, however, are already operating at maximum capacity to supply existing demands. Increased consumption by hosiery manufacturers would therefore necessitate some diversion of output from present uses.^{3/}

For the production of hosiery corresponding to silk of 6 threads or more, it would probably be less difficult to obtain some increased

^{1/} Great Britain appears to have some plant capacity which could be devoted to the production of fine cotton and rayon yarns for the United States. British manufacturers claim, however, that high duties make the United States market unattractive. (The United States duty is 25 to 30 percent ad valorem on fine cotton yarns, single and ply, and the equivalent ad valorem duty on rayon is much in excess of 100 percent.)

^{2/} To date there has been no commercial sale of nylon full-fashioned hosiery using yarns coarser than 40 denier in the leg portion but 70 denier yarn has been used in the welt.

^{3/} To the extent that such diversions are made, other industries using rayon or rayon fabrics will be affected.

supplies of cotton from mills specializing in coarse yarn, inasmuch as not all of them are currently operating at capacity.

The trend of consumption of raw silk in the United States for purposes other than hosiery has been sharply downward. The so-called silk manufacturing industry used 54 million pounds of silk in 1929, but only 4 million in 1940. Consumption declined during this interval from 66 percent of the total amount of silk used to about 10 percent. The principal replacement material has been rayon.

In 1939 production of silk broad goods, including silk warp mixtures and pile fabrics, amounted to 71.8 million linear yards, as compared with 1,346 million linear yards of rayon goods. The value of broad woven fabrics wholly or in chief value of rayon was almost eight times as great as that of silk goods. The popular price dress fabrics, which account for the bulk of the broad goods consumption, have been virtually preempted by rayon fabrics; the necktie and lining trades also have turned largely to rayon fabrics except for specialties.

Most of the machinery used in making hosiery and other knit goods, and also woven fabrics, from silk or nylon can be used in making similar goods or fabrics from rayon or cotton yarns. Shifting from one yarn to another involves making adjustments of machinery and sometimes added investment in new attachments, as well as some changes in labor requirements. Most manufacturers of woven materials are accustomed even at present to shifting from one yarn to another, and knitting mills can do so with moderate difficulty.

If total production of hosiery is to be sharply curtailed for at least 1 year, the full-fashioned hosiery industry in the aggregate may expect to sustain considerable losses in employment and reduction in profits during this period. The full-fashioned hosiery industry employs about 97,000 workers, many of whom might find it difficult to obtain satisfactory alternate employment particularly in areas where hosiery firms employ a large proportion of the workers.

Production of silk hosiery also provides employment for persons engaged in the throwing industry. At present about 18,000 workers double and twist the silk and nylon which is consumed almost entirely by the hosiery industry.^{1/} Many of the workers would have difficulty in finding other employment unless they could obtain it in performing similar operations in the expanded production of nylon, rayon, or other yarns.

Probable economic effects of a cessation of imports from Japan.

Although a complete stoppage of imports of silk would not have an important effect either on the defense program of the United States or the economy of the country as a whole, the impact would be serious, at least temporarily, for certain groups.

Data on United States requirements of silk for defense purposes and the stocks on hand of finished materials and materials in process for such purposes are not available for publication. However, available warehouse stocks of raw silk, which may now be used only under

^{1/} Since most of these work on both silk and nylon, no allocation by type of yarn is possible.

Government license, would be sufficient for making about one-half million parachutes of the average size used for military purposes. Moreover, there are also available several substitutes for silk in the manufacture of parachutes; nylon, especially, gives particularly promising results.

Inasmuch as about 90 percent of United States consumption of silk enters into hosiery, a stoppage of imports of silk from Japan would affect principally: The manufacturers and employees in the women's hosiery industry; the firms and employees of the throwing industry engaged in doubling and twisting silk for use principally as hosiery yarn; and the very large number of consumers of silk hosiery, including women in all but the lowest income brackets. The effect on domestic importers and on American steamship lines would be negligible inasmuch as the great bulk of the silk imported into the United States is handled by Japanese firms and is transported in foreign vessels, principally Japanese. The manufacturers and users of men's hosiery and of woven silk fabrics would likewise be little affected, since rayon and other yarns have been accepted for these purposes and have already largely displaced silk. The plants and workers now devoted to the production of woven silk fabrics could readily be employed in the production of fabrics woven of other yarns.

The manufacturers of and the 97,000 workers engaged in the silk hosiery industry, as well as the silk yarn and thread industries and their employees (about 20,000) are already feeling the effects of the virtual stoppage of imports of silk from Japan. Manufacturers of full-fashioned hosiery have already curtailed their output considerably

and may be obliged very shortly to reduce it much further. The production of hosiery from nylon, which was at the rate of 108 million pairs per year in June 1941, may be expected to increase to a rate of 120 to 150 million pairs per year in the remaining months of 1941. Should hosiery manufacturers depend solely on nylon as a replacement for silk, the output of full-fashioned hosiery in the remaining months of this year will likely be at only 25 to 30 percent of the average monthly rate in 1940. However, some small amounts of thrown silk (which were in the hands of manufacturers when silk processing was placed under Government license) can be used to augment temporarily the supply of nylon. There will also be some increase in the amount of fine cotton and rayon yarn available. When the new nylon yarn plant (now nearing completion) comes into full production, yarn will be available for making nylon hosiery at the rate of about 240 to 300 million pairs annually. This plant is expected to be operating at full capacity by the end of 1942. By that time there may also be available increased amounts of other fine yarns for hosiery. Manufacturers of silk hosiery should have little difficulty in adapting their present plants and machines to the production of hosiery of materials other than silk.

Some of the silk hosiery workers who are now unemployed or will shortly become so, will doubtless be able to find employment in other industries, many of which are now expanding operations on defense and private contracts in the very areas in which hosiery mills are located. Most of the displaced workers who now double and twist silk for hosiery will likely be able to find employment either throwing nylon or rayon, or in some other industries.

The impact of a cessation of silk imports will be felt most severely in the several industrial areas where hosiery manufacture is largely concentrated. According to the 1939 census, over 30 percent of total number of factory workers in Charlotte, N.C. (2,748), and in the Reading industrial area (Berks County) of Pennsylvania (13,655) were engaged in making full-fashioned hosiery or in throwing and spinning silk.^{1/} The corresponding percentage for the whole State of Pennsylvania was 5.5 and for North Carolina 7.8.

Insofar as consumers in the aggregate are concerned, the stoppage of imports of silk will necessitate that, until additional supplies of nylon and other yarns become available, they reduce their annual rate of consumption of full-fashioned hosiery. However, they will not be obliged, even initially, to reduce consumption by as much as the production of full-fashioned hosiery is expected to decline. The existing 4 months' stock of silk and nylon hosiery (now probably transferred largely to the hands of retail purchasers) can for a time be used to make up part of the deficiency; and some remaining portion of it can be made up by increased production of nylon, and by greater output of rayon and cotton hosiery. The period of maximum curtailment in consumption will probably be brief because commencing early in 1942 the output of nylon yarn available for hosiery will probably increase steadily as the new nylon plant gets into production. (Full output is expected by the end of 1942.)

^{1/} In a number of smaller communities, for which Census data are not available, the degree of concentration may be equally high.

To the extent that consumers in the aggregate will be willing to do with fewer hose of very sheer construction (1- to 3-thread), the smaller will be the shortage in full-fashioned hosiery, since the intermediate cotton and rayon yarns can probably be made available in somewhat greater quantities than the finest yarns, and the still coarser yarns in even greater quantities. Nylon hose are now produced only in the very sheer constructions corresponding approximately to 1- to 3-thread silk. Until nylon from the new plant becomes available, production of very sheer hose is not likely to be at more than one-half the rate that prevailed in 1940. By the end of 1942, however, sufficient nylon should be available for hosiery to supply very sheer hose at about the same rate as in 1940 (provided that none of the nylon is used for less sheer hose).

The extent to which there will be an immediate shortage of hosiery in the less sheer constructions (corresponding to 4-thread or coarser) will depend on the degree to which production of full-fashioned rayon and cotton hosiery will be increased over the 1940 level of about 5 million pairs. Total production of full-fashioned hosiery in 1940 in constructions corresponding to 4-thread or coarser was about 200 million pairs, of which silk accounted for over 95 percent. The prospect, therefore, is that the initial shortage in hosiery of less sheer construction will be even greater than in the very sheer. The extent and duration of the shortage are indeterminate; these will depend on how quickly and in what amounts manufacturers expand their output of hosiery of cotton, rayon, mixtures of them, or of other fibers acceptable to

consumers. In the meantime, consumers may turn increasingly to the use of ankle and heavy sport hose made by the seamless hosiery industry. At present, however, such hose are not in great demand, especially for "dress" purposes. Seamless hose generally wear much longer than sheer, full-fashioned hose, and the yarn requirements are less difficult to meet, both qualitatively and quantitatively.

UNITED STATES IMPORTS OF RAW SILK, INCLUDING TUSSAH

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total -	57,816	106,594	55,194	88,821	51,600	120,852	44,857	124,997		
Japan -----	53,915	90,573	51,323	83,651	44,580	106,951	36,411	105,311		
China -----	2,747	5,078	1,573	2,145	5,865	11,713	6,920	16,155		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	China			Japan	China		
January -----	4,889	4,359	2,940	3,654	646			2,524	416		
February -----	2,998	1,880	2,232	1,359	516			1,889	343		
March -----	3,315	2,138	3,170	1,714	219			2,787	381		
April -----	3,755	2,374	3,446	1,829	127			2,710	736		
May -----	3,325	2,815	3,279	1,902	328			2,828	451		
June -----	3,583	2,289		1,866	171						
July -----	2,403	3,758		3,219	539						
August -----	4,296	4,470		3,381	1,089						
September -----	6,452	3,493		2,844	649						
October -----	6,628	6,152		5,139	1,013						
November -----	5,173	6,950		5,925	1,025						
December -----	4,783	4,179		3,579	598						
Total, 12 mos. -----	51,600	44,857		36,411	6,920						

SILK WASTE

General information.

Silk waste is a term used to designate all silk other than that reeled from the cocoon. The waste includes cocoons unfit for reeling, partly unwound cocoons, and broken filaments discarded in silk filatures in the process of reeling raw silk. It also includes mill waste recovered in textile manufacturing processes, and exhausted noils discarded in the process of making spun-silk yarn.

Unreelable cocoons and silk filature waste are used almost wholly in the spun-silk yarn industry, which also makes use of open silk thread waste of low twist, largely of domestic origin. Short or exhausted silk noils are employed principally by the woolen industry in making a coarse silk noil yarn for use in ornamenting woolen and worsted fabrics. Both spun-silk yarns and silk noil yarns are of military importance in the manufacture of cartridge-igniter cloth and gunpowder-bag cloth for high caliber ordnance. Raw silk could also be used for these purposes but has not been thus far principally because of its very much higher price.

Cartridge-bag cloth for use in big guns must burn quickly and completely without leaving a hard smoldering residue, and silk has been generally believed to be the only fiber possessing that combination of characteristics. Early in August 1941, however, the United States Army publicly announced that it was no longer dependent on silk in the manufacture of most types of powder bags. Powder bags for small and medium calibers are successfully made of cotton, wool, and mohair,^{1/}

^{1/} Army specifications have been drafted for rayon cartridge cloth made of high tenacity viscose rayon yarn for use in the assembly of charges of propellant powder for cannon.

but silk remains indispensable for most igniter cloth, lacing twine, straps for loading charges, and sewing thread for stitching the powder bags.

China in recent years has been the most important source of United States imports of silk waste. Japan at one time was the largest supplier, but since 1939 it has sharply reduced exports in order to conserve material for its own military requirements. United States imports from Japan in 1940 amounted to only 20,000 pounds and in the first 5 months of 1941, to 4,000 pounds. Small amounts of silk waste were imported from European countries prior to the present war, but imports from these sources have now virtually ceased. Statistics of United States imports by years for 1937-40 and by months from January through May 1941 are shown in the table at the end of this section.

Since silk is not produced commercially in the United States, the only domestic production of silk waste is in the form of byproducts of silk manufacture. Reexports of silk waste have ordinarily been negligible but in 1939 they amounted to 74,000 pounds, equivalent to 2 percent of United States imports (exclusive of cocoons) in that year, and in 1940, to 153,000 pounds, equivalent to 5 percent of imports.

There are some stocks of silk waste on hand in the United States but statistics are not available for publication. Data concerning United States military requirements of silk waste likewise are not available for publication.

Silk noils were formerly obtained from Japan and European countries, but imports from these sources have now ceased. Imports of

silk noils from China, which has no spun-silk industry of importance, are negligible. Silk noils for the manufacture of cartridge cloth must, therefore, be supplied almost entirely by the domestic spun-silk industry processing Chinese filature and cocoon waste.

The output of spun silk has declined greatly since the peak year, 1921, when production for sale amounted to 4.7 million pounds. By 1933, the output had fallen to 1 million pounds; it rose to almost 2 million pounds in 1937, but declined to 1 million pounds again in 1939. At present only five firms, employing about 1,500 persons, are engaged in this business. The great decline in production of spun silk has resulted in a corresponding reduction in the output of silk noils.

Domestic substitutes for imported silk filature waste are limited. The bulk of silk mill waste originates in hosiery and throwing plants, and much of this waste is too hard-twisted to be suitable for manufacture into spun silk. The fiber obtained by garnetting new clips and rag waste (from used silk garments or stockings) is not suitable, except as a blend with silk noils and open silk thread waste, because the fiber alone is not sufficiently long or strong for spinning.

Probable economic effects of a cessation of imports from Japan.

Inasmuch as imports of silk waste from Japan since 1940 have been negligible, a stoppage of such imports would have little further effect. And if, as recently reported, satisfactory substitutes are available for silk waste in the manufacture of most types of cartridge bags, then a stoppage of imports of silk waste and of raw silk from Japan (and even from China) would have only a limited bearing on United States ability to meet the most important of its military requirements. For

indispensable military uses, available domestic supplies of filature waste, silk noils, mill-thread waste, reclaimed silk fiber, and raw silk should suffice for the immediate future. On August 8, 1941, all stocks in the United States of silk waste, silk noils, reclaimed silk fiber, and raw silk were placed under mandatory priority control by the Government.

Insofar as civilian requirements are concerned, spun rayon (made from rayon staple fiber or rayon waste) and continuous filament rayon are satisfactory substitutes for silk waste in most uses. Some of the equipment and part of the labor supply in the spun-silk industry could be employed in making spun-rayon yarn and novelty mixture yarns.

UNITED STATES IMPORTS OF SILK WASTE, N.S.P.F.

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000
All countries, total	6,292	1,855	1,856	432	3,654	1,049	2,664	909		
China -----	2,954	919	1,505	335	3,163	800	2,533	871		
Japan -----	2,534	620	234	79	161	96	20	9		

By months and by Principal Countries - Quantity (1,000 pounds)

Month	1935	1940	1941	Principal countries of origin						
				1940			1941			
				China	Japan		China	Japan		
January -----	140	613	322	609	1		317	4		
February -----	71	296	191	280	-		181	-		
March -----	237	74	283	69	-		246	-		
April -----	188	99	98	91	-		96	-		
May -----	207	110	230	94	5		205	-		
June -----	407	67		67	-					
July -----	211	69		69	-					
August -----	199	277		277	1					
September -----	797	240		202	-					
October -----	308	322		300	13					
November -----	250	248		230	-					
December -----	539	249		245	-					
Total, 12 mos. -----	3,654	2,664		2,533	20					

HABUTAI AND OTHER PLAIN-WOVEN SILK FABRICS

(Reported as all-silk fabrics over 30 inches wide, bleached, printed, piece-dyed, or yarn-dyed, etc., not Jacquard-figured, valued at \$5.50 or less per pound)

General information.

Imports under this classification consist almost wholly of Japanese export specialties, such as habutai, pongee, and spun-silk Fujii cloth. The principal fabric, which represented 85 percent of the exports of broadsilks from Japan to the United States in 1938 (later Japanese export data are not available), is habutai, known in the retail trade as "China silk." Habutai is an unweighted all-silk fabric of close, firm, but uneven texture, woven of low-quality, unthrown, raw silk in the gum. It is also made with a silk warp and rayon filling, silk being the fiber of chief value. Habutai is woven in many different thicknesses and weights the latter of which are expressed in momme.^{1/} The bulk of the habutai imported from Japan in recent years has been the very lightweight grades of 3, 3½, and 4 momme, classified as "sheer fabrics." These weights are equivalent to 42, 36, and 31 square yards per pound, respectively.

Lightweight habutai is used principally by oil-silk processors who impregnate the fabrics with various oils or synthetic resins for umbrellas, raincoats, shampoo capes, aprons, shower curtains, varnished electrical insulating tapes, hospital bed sheetings, covers for food containers, linings for tobacco pouches, toilet cases, garment bags, and similar articles. Habutai uncoiled is used in the manufacture of

^{1/} A fabric weighing 1 momme averages, for rough calculation, about 125 square yards to the pound; dividing 125 by the momme weight of any cloth will give the equivalent in square yards per pound.

handkerchiefs, infants' caps, dress shields, lamp shades, window curtains, and bias dress tapes. Unbleached habutai is used as a foundation fabric in the manufacture of burnt-out laces in the embroidery industry. Habutai weighing about 12 momme (10 square yards per pound) was formerly used for canopies of parachutes for the United States Air Service, but for some years both the Army and the Navy have specified silk fabrics made in the United States. Japanese habutai and pongee are still used in the manufacture of both pyrotechnic parachutes (for flares) and man-carrying parachutes for commercial sale and for export.

Japan is the only source of unprocessed habutai in the gray and bleached condition. Converting and processing of Japanese habutai and pongee are carried on in several other countries; England, in particular, has a considerable export trade in printed and dyed habutai and pongee.

Imports of wide, plain-woven all-silk fabrics advanced beyond the gray condition and not exceeding \$5.50 per pound in value (the bulk of which is habutai), declined 30 percent in volume in 1940 as compared with 1939. Imports were higher in the first 5-month period of 1941 than in the corresponding period of 1940, but were still somewhat below those for the corresponding period of 1939. Imports under this category are shown in the table at the end of this section.

There is no domestic production of broadsilks which approach in fineness the imported habutai in weights of 4 momme and less; the large amount of weaving-mill labor required and the slow rate of production make the manufacture of such fabrics unsuited to industrial conditions

in the United States. Domestic mills make an imitation habutai with a filling of thrown tram silk or of rayon, but the cloth is usually heavier than the imported product.

The distribution of imported habutai is carried on principally by three or four Japanese commercial houses having agencies in this country, and, to a lesser extent, by a few independent United States importers who handle, in addition, other types of goods. The bulk of the importation is transported to the United States in vessels flying the Japanese flag.

The oil-proofing, dyeing, and printing of habutai are done by the finishing trades, but work on habutai constitutes only a negligible proportion of their total business. There are fewer than a dozen mills which oil-proof the fabric or dye and print the finished oil-silk for sale or for the account of consuming manufacturers. The larger manufacturers of electrical equipment process whatever amounts of fabric they themselves need in electrical insulation and some for others, either on a sale or on a commission basis. Limited amounts of silk habutai also are processed by mills primarily engaged in waterproofing cotton cloth and in making other coated and filled fabrics and varnished papers.

Probable economic effects of a cessation of imports from Japan.

If imports of habutai should cease, domestic manufacturers now using plain untreated habutai for articles of apparel and house decoration could to some extent substitute rayon fabrics. Later, as output of "synthetic" fibers expands, fabrics woven of nylon, and of high-tenacity rayon could also be substituted. Mills at present processing

habutai for oil-silk products could undoubtedly shift to cotton lawn and cotton balloon cloth, the finer grades of which, however, are much more expensive than the sheer grades of habutai. Rayon fabrics are also being oil-treated with waterproofing compounds, but are said to be less absorbent and less flexible than silk. Capacity in both rayon and cotton yarn manufacture is being almost fully utilized at present, but the yarn requirements to replace imported habutai would be very small in relation to total yarn output, especially in rayon.

Electrical insulating tapes can be made with a fiber glass-cloth base impregnated with varnish.

There may be available, in addition, synthetic materials to replace oiled habutai for consumer goods. The most important is pliofilm, a rubber hydrochloride introduced commercially in 1936 by one of the larger manufacturers of rubber goods. This material is a transparent, odorless, film resembling cellophane, and is made by subjecting high-grade crepe rubber to chemical treatment. Production in 1940 was several times greater than imports of habutai. Military requirements, however, may preclude much pliofilm being entered into civilian consumption.

UNITED STATES IMPORTS OF SILK WOVEN FABRICS (ALL SILK) OVER 30 INCHES WIDE, BLEACHED, PRINTED, Class 3710.71
PIECE-DYED, OR YARN-DYED, ETC., NOT JACQUARD-FIGURED, VALUED AT \$5.50 OR LESS PER POUND

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 sq.yd.	\$1,000	1,000 sq.yd.	\$1,000	1,000 sq.yd.	\$1,000	1,000 sq.yd.	\$1,000	1,000 sq.yd.	\$1,000
All countries, total	18,503	2,512	22,872	2,342	14,290	1,703	10,042	1,338		
Japan -----	17,775	2,346	22,350	2,212	13,816	1,584	9,768	1,269		
France -----	473	106	399	85	319	75	146	28		

By Months and by Principal Countries - (Quantity (1,000 sq.yd.))

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	France			Japan	France		
January -----	1,373	921	1,106	875	20			1,091	4		
February -----	1,436	730	820	693	30			814	5		
March -----	1,413	961	1,209	926	30			1,198	-		
April -----	763	439	1,002	405	29			990	4		
May -----	1,309	558	1,044	530	26			1,039	1/		
June -----	824	582		570	9						
July -----	787	625		623	1						
August -----	1,032	1,137		1,125	1						
September -----	1,728	1,100		1,096	-						
October -----	1,525	1,104		1,089	-						
November -----	867	1,184		1,152	-						
December -----	1,228	701		684	1/						
Total, 12 mos. -----	14,290	10,042		9,768	146						

1/ Less than 500.

RAYON STAPLE FIBER

(Reported as "filaments of rayon or other synthetic textiles not exceeding 30 inches in length, other than waste.")

General information.

Rayon is not only produced in the form of continuous filaments which are made into yarn in the rayon plant, but the filaments are also cut into short lengths for use as a spinning material in the cotton, woollen, worsted, and spun-silk industries. These short length filaments are called "staple fiber" or "cut fiber." Yarn spun wholly or predominantly of staple fiber is "spun-rayon yarn."

World production of staple fiber increased from about 6 million pounds in 1930 to over one billion pounds in 1940. In 1940 the world output of staple fiber surpassed that of rayon filament yarn for the first time. The greatest increase has been since 1935, when Germany, Japan, and Italy began intensive production in an attempt to lessen their dependence on foreign sources of textile fibers. Production of staple fiber considerably exceeds that of rayon yarn in those three countries. Continuous filament yarn is still the main product of the rayon industry in the United States, although the annual rate of production of staple fiber has increased from less than one-half million pounds in 1930 to about 125 million pounds in the first half of 1941.

Imports of staple fiber also increased greatly prior to 1940. From 1930 through 1935 imports ranged up to 3 million pounds annually; after 1935 they increased yearly and exceeded 47 million pounds in 1939. War conditions abroad in 1940 reduced United States imports to less than 18 million pounds. Imports constituted about one-half of total

domestic consumption from 1936 through 1939, but only 13 percent in 1940.

There are seven producers of staple fiber in the United States, three of which account for the bulk of production. The productive capacity of the industry has been increasing rapidly: Rated at 65 million pounds at the end of 1939, it reached 130 million pounds in July 1941 and is expected to reach 145 million pounds in 1942.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports of staple fiber from Japan, which in most recent years has ranked below the United Kingdom and Italy as a supplier, would have little effect on the domestic textile industry. In this country the chief outlet for most grades of domestic and European staple fiber is the cotton industry. Japanese staple fiber has not been used to any appreciable extent by domestic cotton spinners as most of it is unsuitable in length, size, and quality for processing on their equipment. Topmakers and woolen and worsted manufacturers have been the principal consumers of Japanese staple fiber. Their comparatively small requirements for blending purposes could probably be met by increased use of rayon waste and staple fiber of the wool type.

Class 3810.0

UNITED STATES IMPORTS OF FILAMENTS OF RAYON OR OTHER SYNTHETIC TEXTILES,
NOT EXCEEDING 30 INCHES IN LENGTH, OTHER THAN WASTE
By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000		\$1,000
All countries, total	20,607	3,847	23,189	4,609	47,400	9,016	17,734	3,268		
United Kingdom -----	3,094	699	12,033	2,438	27,602	5,258	6,992	1,277		
Italy -----	5,637	1,092	9,908	1,940	9,481	1,931	3,644	815		
France -----	34	7	208	30	4,923	798	358	57		
Japan -----	11,639	2,001	526	85	2,855	445	6,407	1,033		
Germany 1/	108	33	324	88	1,702	441	230	67		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				United Kingdom	Italy	France	Japan	United Kingdom	Italy	France	Japan
January -----	2,869	5,087	1,658	1,857	616	198	2,334	1,138	-	-	520
February -----	3,320	2,581	1,773	1,412	740	160	269	806	-	-	966
March -----	3,916	1,273	2,252	190	826	-	158	1,386	118	-	748
April -----	3,438	2,119	1,608	1,223	806	-	91	1,235	-	-	360
May -----	3,299	562	1,304	-	329	-	214	800	61	-	419
June -----	4,130	659	-	-	216	-	421	-	-	-	-
July -----	3,490	387	-	10	84	-	183	-	-	-	-
August -----	3,398	435	-	2/	5	-	430	-	-	-	-
September -----	3,084	214	-	-	-	-	214	-	-	-	-
October -----	4,047	378	-	-	22	-	356	-	-	-	-
November -----	5,670	1,573	-	500	-	-	1,073	-	-	-	-
December -----	6,739	2,466	-	1,800	-	-	664	-	-	-	-
Total, 12 mos.	47,400	17,734		6,992	3,644	358	6,407				

1/ Includes Austria beginning 1938.

2/ Less than 500.

PEDALINE HAT BRAID AND UNFINISHED PAPER HAT BODIES

General information.

Pedaline hat braid is made by winding a continuous strip of cellophane spirally around a core of hemp and braiding the resultant product. The braid is used almost exclusively in making low-priced hats for women. Paper hat bodies (or toyos) are made from twisted rice paper coated with pyroxylin plastic. Toyos are used almost exclusively in the production of inexpensive hats for men, and in all price ranges of hats for women.

Toyos are made only in Japan, and that country in recent years has also produced most of the world's supply of pedaline braid. Imports into the United States of unfinished paper hats (bleached, dyed, colored or stained) and of pedaline braid are shown separately in the two tables at the end of this section.

There has been no production of pedaline braid in the United States for some years. Both this product and the toyos are usually imported from October through March for use in the following spring and summer seasons. There are no available statistics of stocks held in the United States, but it is probable that the present stocks are sufficient to supply all United States requirements for the remainder of the year 1941.

Exports of hat materials from Japan are controlled by an exporters' association approved by the Japanese Government. The Japanese manufacturers ordinarily sell through sales agents in the United States to importers, who in turn resell to manufacturers of millinery or of men's hats. One of the largest importers, however, is a Japanese firm, and

another is an American wholesaler of men's hats.

The women's millinery industry in 1939 included 1,050 establishments employing 27,055 persons. In that year women's trimmed straw hats accounted for 34 million dollars out of 101 million dollars production of all trimmed hats. In 1937 the men's straw hat industry included 47 establishments employing 3,366 persons. Production data for hats made from pedaline braid or from toys are not available.

Probable economic effects of cessation of imports from Japan.

There is no military use of these hat materials or hats. For civilian use "straw" hats can be made of other materials than pedaline braid or toys, some of which materials come from Latin America. These other materials, however, are generally used in only the more expensive dress hats. The most probable effect of a lack of the cheap oriental materials would therefore be a sharp decline in the production of inexpensive straw hats for both men and women. Low-priced substitutes are less available for men's hats than for women's hats. To the extent that substitute hats would not be produced, losses in income to both employers and employees would probably result. The incidence of reduced employment and payrolls on different types of workers (blockers, trimmers, etc.) would vary with the material used in producing substitute types of hats.

Pedaline braid has in the past been made in the United States and could again be made, but probably not in price ranges for use in inexpensive "straws." Former purchasers of straw hats might be led by style changes to buy other types of hats; and the practice of going hatless might become more common.

UNITED STATES IMPORTS OF HEMP (PEDALINE) HAT BRAIDS, FLAITS, ETC., CONTAINING RAYON, ETC.

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000	1,000 pounds	\$1,000		
All countries, total	2,036	1,107	1,808	1,020	1,621	768	1,362	704		
Japan	2,040	1,055	1,789	999	1,615	762	1,348	683		

By Months and by Principal Countries - Quantity (1,000 pounds)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan			Japan			
January	360	242	247	238				243		
February	236	202	239	197				239		
March	259	191	224	189				224		
April	92	80	134	78				134		
May	94	34	48	33				48		
June	11	41		41						
July	4	4		4						
August	-	6		6						
September	8	35		35						
October	126	121		121						
November	250	215		215						
December	181	191		191						
Total, 12 mos.	1,621	1,362		1,348						

UNITED STATES IMPORTS OF UNFINISHED HATS, BONNETS, AND HOODS, COMPOSED WHOLLY OR IN CHIEF Class 3912.1
 VALUE OF PAPER (EXCEPT HARVEST HATS), BLEACHED, DYED, COLORED, OR STAINED

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000		
All countries, total	6,520	1,247	4,203	806	5,541	979	4,295	857		
Japan -----	6,394	1,233	4,163	797	5,516	974	4,130	823		
China -----	30	5	14	4	20	4	163	33		

By Months and by Principal Countries - Quantity (number in thousands)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	China			Japan	China		
January -----	624	438	421	427	11			331	90		
February -----	538	540	295	537	3			284	11		
March -----	786	777	381	777	-			341	40		
April -----	752	364	464	364	-			444	20		
May -----	756	447	333	445	2			308	25		
June -----	210	148		147	1						
July -----	169	98		91	7						
August -----	195	115		108	7						
September -----	271	200		197	3						
October -----	423	330		304	26						
November -----	439	425		372	53						
December -----	378	413		361	50						
Total, 12 mos -----	5,541	4,295		4,130	163						

STICKS OF BAMBOO

General information.

Bamboo is imported into the United States chiefly in the form of sticks or poles for making a variety of articles, the principal use being in the manufacture of rug poles, garden stakes, etc. Certain high grade bamboo, such as Tonkin, is used for manufacturing split bamboo fishing rods.

Although Japan has been the principal supplier of United States imports of bamboo in recent years, other countries are important producers and, if need be, some of them could increase their shipments to the United States. The major portion of high grade bamboo originates in China. No bamboo is produced commercially in the United States.

Probable effects of a cessation of imports from Japan.

A stoppage of imports from Japan would have little economic effect on the United States. The high grade bamboo now shipped to the United States from Japan is believed to originate in China, and the varieties of Japanese origin which are imported into the United States could be largely replaced by imports from other areas.

Substitutes of domestic derivation for most uses of bamboo are believed to be available.

Class 4067.0

UNITED STATES IMPORTS OF STICKS OF BAMBOO, IN THE ROUGH, OR NOT FURTHER ADVANCED THAN CUT INTO LENGTHS
SUITABLE FOR STICKS FOR UMBRELLAS, PARASOLS, SUNSHADES, WHIPS, FISHING RODS, OR WALKING CANES

By Principal Countries

	1937		1938		1939		1940 (prel.)		1941 (prel.)	
		\$1,000		\$1,000		\$1,000		\$1,000		\$1,000
All countries, total-		277		250		268		544		
Japan -----		201		168		198		355		
China -----		28		45		20		127		
British India ^{1/} -----		22		26		47		40		

By Months and by Principal Countries - Value (\$1,000)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan	China	British India	Japan	China	British India	
January -----	17	68	78	45	15	7		43	31	2/
February -----	11	29	77	15	7	3		32	43	2
March -----	28	39	101	29	5	5		40	56	3
April -----	24	42	86	24	13	2		27	56	3
May -----	22	37	45	27	2/	10		26	14	1
June -----	19	51		39	9	3				
July -----	20	52		39	9	4				
August -----	22	49		22	14	2				
September -----	10	37		14	20	2/				
October -----	30	33		20	11	2				
November -----	33	40		37	2	1				
December -----	32	67		44	22	1				
Total, 12 mos.	268	544		355	127	40				

^{1/} Includes Burma.^{2/} Less than 500.

MANUFACTURES OF PAPER, N.E.S.

General information.

United States imports from Japan of manufactures of paper not elsewhere specified consist almost entirely of toys, novelties, decorative knicknacks, and gewgaws of low unit value made largely or entirely of paper or paperboard and employed for many purposes in which lasting qualities are nonessential. Imports of these articles from Japan have been decreasing annually for several years; in 1940 they were valued at approximately a quarter of a million dollars, representing about 70 percent of total imports under this classification. By far the larger part of these imports have heretofore been sold in Japanese bazaar stores, 5-and 10- cent stores, and novelty shops, few if any of the imports requiring further conversion prior to sale in retail markets.

Japan has for many years been the principal United States source of supply for these articles. Prior to 1940, Germany also was an important supplier. The United Kingdom, France, Canada, and Italy have each furnished approximately 5 percent of the total imports in recent years.

The domestic production of like or equivalent articles is not known but it is probably small. Many of the imported specialties represent a comparatively large amount of hand labor, whereas most of the corresponding articles produced in the United States are machine made. Exports, if any, are negligible. United States stocks of these imported articles are probably limited to those held by retailers since importers turn over their stocks rapidly.

Most of the wholesale agencies in the United States selling Japanese manufactured paper articles are Japanese controlled. Some retail establishments in the United States, however, import directly without making use of such agencies.

Probable effects of a cessation of imports from Japan.

A stoppage of imports from Japan would have only negligible economic effects in the United States. The disappearance of the Japanese specialties would probably reduce the number of novelty lines displayed at 5- and 10-cent stores, particularly during the holiday season, but would go largely unnoticed. Domestic manufacturers might benefit in some measure from an increased demand for novelties to replace the imports.

UNITED STATES IMPORTS OF MANUFACTURES OF PAPER, NOT ELSEWHERE SPECIFIED

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
		\$1,000		\$1,000		\$1,000		\$1,000		
All countries, total		931		580		509		370		
Japan -----		571		297		272		266		
Germany 1/ -----		167		159		111		1		
United Kingdom -----		42		28		28		24		
France -----		38		23		23		13		
Canada -----		35		18		18		19		
China -----		8		9		12		19		
Italy -----		14		10		12		10		
Palestine -----		37		37		2		2		

By Months and by Principal Countries - (Value (1,000) dollars)

Month	1939	1940	1941	Principal countries of origin									
				1940					1941				
				Japan	United Kingdom	France	Canada	China	Japan	United Kingdom	France	Canada	China
January -----	36	36	30	25	3	2	1	1	25	2/	2/	1	2
February -----	29	21	19	12	2	2	2	1	14	2	-	1	2
March -----	41	23	24	14	1	1	2	1	16	2	2/	3	2
April -----	43	35	25	25	2	2	1	1	18	2	-	2	2
May -----	40	24	19	15	2	2	2	1	10	3	-	2	3
June -----	34	31		20	2	3	2/	2					
July -----	32	28		22	2	2/	1	1					
August -----	41	29		21	3	2/	1	2					
September -----	52	26		18	1	2/	2	1					
October -----	57	42		34	1	2/	1	4					
November -----	67	42		33	3	1	3	1					
December -----	37	33		27	2	2/	3	3					
Total, 12 mos. -----	509	370		266	24	13	19	19					

1/ Includes Austria beginning 1938.

2/ Less than 500.

POTTERY HOUSEHOLD TABLE AND KITCHEN ARTICLES,
DECORATED, COLORED, ETC.

General information.

The articles here considered are of the kind ordinarily used on tables and in kitchens in private homes for serving, preparing, or storing food and beverages, as distinguished from corresponding articles used in hotels, restaurants, and other public places. Imports from Japan come predominantly within two general groups: (1) Inexpensive grades of both earthenware and china or porcelain; and (2) medium-priced china or porcelain dinnerware.

Earthenware and chinaware are made of the same general classes of materials, but the proportions of the several ingredients used vary, and the processing differs somewhat, china generally being baked at higher temperatures. The differences in proportions of ingredients and in baking temperatures, however, give the finished products their identifying characteristics. Earthenware is generally opaque and absorbent, whereas chinaware is translucent and nonabsorbent. Being nonabsorbent, chinaware resists discoloration around chips somewhat longer than earthenware. Japanese chinaware is usually more elaborately decorated than the American product, either china or earthenware, in the same retail price class. There is severe competition between Japanese chinaware and domestic earthenware, particularly in the low-price ware.

The two tables at the end of this section show separately United States imports of table and kitchen articles, decorated, colored, etc., distinguishing earthenware from chinaware. For a number of

years Japan has been by far the largest foreign supplier of inexpensive grades of these articles. Because of the cessation of imports from Germany and from Czechoslovakia (now absorbed by Germany), Japan has also become practically the sole supplier of United States imports of medium-priced china household dinnerware, a class of tableware for which there is a large demand in the American market. The United Kingdom has been the largest foreign supplier of the better grades of earthenware approximately comparable in quality and finish to the major part of the earthenware table articles produced in the United States.

United States consumption of china or porcelain household table articles (of other than the highest grades) as distinguished from earthenware, has been until recently supplied almost entirely by imports. The domestic industry does not produce inexpensive grades of china similar to those imported in large amount from Japan, and until recently supplied only a negligible proportion of the consumption of medium-priced china dinnerware. In the last 2 or 3 years there has been a large increase in the domestic production of medium-priced china dinnerware, and several new producers have entered the field. No data are available for domestic production of this class of ware, but prior to the outbreak of hostilities in Europe, domestic production probably averaged less than \$100,000 annually. Production in 1940 may have amounted to as much as \$500,000.

The domestic industry supplies by far the larger part of the United States consumption of earthenware household table and kitchen articles, and production has increased substantially in recent years.

The value of output was greater in 1939 than in any year of the preceding decade, and production in 1940 probably exceeded that in 1939. The following table gives figures for domestic production of earthenware reported by the Bureau of the Census as "white-ware." This classification may, for practical purposes, be considered as covering the better grades of earthenware, generally referred to in the producing branch of the pottery industry as a semivitreous china type of earthenware, to distinguish it from the cheaper grades. Figures for the substantial production of the inexpensive grades are not separately reported.

Domestic production of so-called semivitreous china type of earthenware table and kitchen articles, in specified years, 1929 to 1939

(Value in thousands of dollars)

Year	Value	Year	Value
1929	32,066	1937	25,711
1932	14,325	1938	25,348
1936	23,735	1939	28,226

Source: Bureau of the Census.

Although figures are not available, exports of pottery household table articles are known to have been negligible in the past. It is reported, however, that domestic exports to Canada have recently increased substantially because of the curtailment of supplies from European sources.

Practically all Japanese medium-priced china dinnerware used in the United States is imported and sold wholesale by Japanese concerns. Two of these, by far the most important, are controlled by the

producing concerns in Japan, and the larger of the two is also one of the chief importers of other classes of china and earthenware table articles, as well as of decorative articles. It is not known to what extent the other Japanese importing concerns are controlled by suppliers in Japan. The importation from Japan of china and earthenware table and decorative articles (other than china dinnerware) is in large part carried on by both Japanese and American concerns.

Probable economic effects of a cessation of imports from Japan.

A cessation of imports of china dinnerware from Japan would affect domestic consumers. The present prices for the domestic china dinnerware usually are from 30 percent to 50 percent above prices for the better grades of Japanese china dinnerware and possibly three times as high as for the cheaper grades of the Japanese product; and domestic sources of supply are not adequate to meet even the present demands on them. Consumers with only moderate purchasing power would be obliged to curtail their purchases of china dinnerware. They would probably substitute mainly domestic earthenware and possibly some machine-made glassware. Imports from Japan have made available to American consumers at low prices a considerable volume of novelties and specialties (both earthenware and china) of a type that has not been and probably never will be produced by the domestic industry. Domestic earthenware, decorated or not decorated, could largely replace the cheap grades of Japanese china and earthenware at little or no higher cost to consumers. Both the domestic chinaware and earthenware industries would benefit to some extent from a cessation of imports from Japan.

UNITED STATES IMPORTS OF EARTHENWARE AND STONEWARE, DOMESTIC OR HOUSEHOLD TABLE AND
KITCHEN ARTICLES, DECORATED, COLORED, ETC.

Class 5371.2
5371.3

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 dozens	\$1,000	1,000 dozens	\$1,000	1,000 dozens	\$1,000	1,000 dozens	\$1,000		
All countries, total	4,392	2,675	2,195	1,675	2,613	1,950	2,512	2,049		
United Kingdom	717	1,175	545	919	756	1,188	828	1,398		
Japan	3,438	1,189	1,445	457	1,653	478	1,536	458		
Italy	85	128	88	158	104	152	67	109		

By Months and by Principal Countries - Quantity (1,000 dozen)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				United Kingdom	Japan	Italy	United Kingdom	Japan	Italy
January	191	228	190	68	146	5	59	125	1
February	153	160	167	53	92	10	45	118	1/
March	211	225	202	85	116	9	95	102	1/
April	217	192	214	83	87	14	88	118	1/
May	207	181	206	64	101	9	74	125	1/
June	218	198		71	117	5			
July	211	193		83	99	5			
August	249	271		71	188	5			
September	227	218		39	172	2			
October	261	247		68	171	1			
November	276	234		68	161	1			
December	192	165		75	86	1/			
Total, 12 mos.	2,613	2,512		828	1,536	67			

1/ Less than 500.

Class 5350.2

UNITED STATES IMPORTS OF CHINA AND PORCELAIN DOMESTIC OR HOUSEHOLD TABLE AND KITCHEN ARTICLES
AND UTENSILS, DECORATED, COLORED, ETC.

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 dozen	\$1,000	1,000 dozen	\$1,000	1,000 dozen	\$1,000	1,000 dozen	\$1,000		
All countries, total	5,995	4,166	3,377	2,659	3,504	2,565	2,940	2,637		
Japan	5,269	2,771	2,721	1,511	3,079	1,670	2,592	1,750		
United Kingdom	43	406	31	273	72	395	106	626		
Germany 1/	295	505	163	312	130	232	6	10		
China	45	32	60	43	103	65	133	83		
Czechoslovakia	242	324	347	418	24	25	1	1		

By Months and by Principal Countries - Quantity (1,000 dozen)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan			Japan			
January	224	273	141	241			117			
February	275	211	166	182			150			
March	294	235	131	200			115			
April	299	232	192	204			162			
May	290	269	141	243			124			
June	209	277		244						
July	256	230		202						
August	336	304		271						
September	358	251		233						
October	356	225		198						
November	352	263		233						
December	255	165		136						
Total, 12 mos.	3,504	2,940		2,592						

1/ Includes Austria beginning 1938.

POTTERY, NONHOUSEHOLD, DECORATED, COLORED, ETC.

General information.

The decorated or colored pottery here considered may be divided into two general groups, namely, (1) art and decorative articles, whether or not utilitarian, mainly vases, jardiniers, figures and like ornamental pieces, including numerous novelties, and (2) articles for industrial uses. United States imports (both earthenware and stoneware, par. 211, and china and porcelain, par. 212) of articles coming within the first group have been large, whereas those of pottery articles for industrial uses have been inconsiderable. Most, if not all, of the imports from Japan come within the first general group.

The tables at the end of this section show United States imports of earthenware and stoneware and of china of the above descriptions. For a long period Japan has been by far the largest foreign supplier of art and decorative pieces and of novelties; the imports from that country cover articles ranging widely in price, grade of ware, and decoration, and include a large number of figures, novelties, and other articles of small intrinsic value.

In the past the United States consumption of china and porcelain art and decorative pieces of cheap and medium-priced grades (these grades representing the greater part of consumption) has been supplied almost wholly by imports; since the outbreak of the present European war two or three domestic concerns have begun commercial production of medium-priced articles on a relatively small scale, but no attempt has made or is likely to be made by domestic interests to produce the cheap

grades competitive with the articles imported in large quantities from Japan. On the other hand, the consumption of earthenware and stoneware art and decorative articles (which is smaller than that of china articles) is supplied mainly by the domestic industries, although imports account for a fairly large proportion of the total.

Official statistics for total United States production of art and decorative articles are not available. The table following shows production for three general groups of pottery; the first group, largely utilitarian pottery, includes some tableware and probably a considerable amount of art and decorative articles; the other groups relate to art and decorative pottery, mainly earthenware and stoneware.

Pottery: United States production of specific classes, in specified years, 1929 to 1939

(In thousands of dollars)					
Year	Class of ware				
	Stoneware (except	Art	Garden	Total	
	chemical), yellow	pottery	pottery		
	ware and Rockingham earthenware ^{1/}				
1929	4,144	2,325	369	6,838	
1932	2,516	1,414	261	4,191	
1936	1,637	3,135	250	5,022	
1937	1,889	3,512	230	5,631	
1938	1,767	4,071	400	6,238	
1939	1,816	5,340	327	7,483	

^{1/} Stoneware, mainly crocks, jugs and other utilitarian articles; probably includes some tableware and a substantial amount of art and decorative articles; yellow ware and Rockingham earthenware (forms of tableware) usually represent less than 10 percent of total for the entire group.

Source: Bureau of the Census, U. S. Department of Commerce.

Figures for United States exports of art and decorative pottery are not available, but it is known that exports are small in relation to imports.

United States branches of Japanese concerns import the major proportion of art and decorative pottery obtained from Japan.

Probable economic effects of a cessation of imports from Japan.

Japan has for many years supplied the major part of United States imports of art and decorative pottery articles; Germany, Italy, and Czechoslovakia were also large suppliers in past years. None of the imports of these classes of pottery is essential. Imports from Japan range from those of low unit value to those which are artistic in form and have comparatively expensive applied decoration. Japanese articles consist largely of novelties of a class or kind not produced in the United States, and many of them are typically Japanese in form and decoration. Low prices to the consumer and the character of the article itself account to a considerable extent for the large sale of such Japanese pottery in American markets.

A stoppage of imports from Japan would result in the practical disappearance from United States markets of extremely low-priced pottery articles, particularly china articles, which are purchased mainly by persons of limited incomes. Substitutes such as American earthenware sell at much higher prices and would be available in less variety.

The domestic earthenware industry apparently has ample plant capacity and sufficient skilled labor to supply the demand for articles in the price range at which it can afford to sell. The large plants are equipped with modern tunnel kilns and other appliances and machinery. The numerous small plants and individual operators throughout the country would be capable of producing in the aggregate a substantially larger amount of ware even without expanding their plants.

UNITED STATES IMPORTS OF CHINA AND PORCELAIN ARTICLES (OTHER THAN TABLE AND KITCHEN
WARE, CHEMICAL AND ELECTRICAL PORCELAIN, AND SANITARY ARTICLES), DECORATED,
COLORED, ETC.

Class 536.52
536.527

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 dozens	\$1,000	1,000 dozens	\$1,000	1,000 dozens	\$1,000	1,000 dozens	\$1,000	1,000 dozens	\$1,000
All countries, total	4,660	1,165	3,541	835	3,798	867	4,921	960		
Japan	4,343	519	3,228	308	3,515	368	4,778	666		
Germany 1/	179	218	180	204	182	170	4	9		
France	12	120	11	77	26	138	24	80		
China	71	132	47	74	51	69	93	79		
United Kingdom	4	46	4	38	7	63	12	95		
Czechoslovakia	36	76	58	76	4	4	2/	2/		

By Months and by Principal Countries - Quantity (1,000 dozens)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	France	China	United Kingdom	Japan	France	China	United Kingdom
January	241	501	316	491	3	2	2	303	2/	12	1
February	228	251	336	245	3	3	2/	328	2/	7	1
March	265	336	269	324	3	7	1	262	2/	6	1
April	286	208	390	202	2	3	1	373	-	15	1
May	293	421	370	407	9	2	2	356	2/	13	1
June	344	417		401	2	12	2/				
July	327	549		539	2	7	1				
August	357	462		446	2/	13	1				
September	387	369		357	1	8	2				
October	358	558		547	2/	10	1				
November	317	519		512	2/	7	1				
December	395	330		307	2/	21	2/				
Total, 12 mos	3,798	4,921		4,778	24	93	12				

1/ Includes Austria beginning 1938.

2/ Less than 500

UNITED STATES IMPORTS OF EARTHENWARE AND STONWARE, NOT SPECIALLY PROVIDED FOR,
DECORATED, COLORED, ETC., OTHER THAN TABLE AND KITCHEN ARTICLES AND SANITARY
ARTICLES

Class 5373.7

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	1,000 dozens	\$1,000	1,000 dozens	\$1,000	1,000 dozens	\$1,000	1,000 dozens	\$1,000	1,000 dozens	\$1,000
All countries, total	1,409	1,042	1,022	843	1,353	955	1,366	884		
Japan -----	1,134	484	704	271	942	389	1,123	587		
Italy -----	86	185	102	220	237	247	68	131		
United Kingdom -----	19	50	39	83	37	96	27	72		
China -----	12	12	15	10	24	10	57	16		
Hong Kong -----	3	3	4	3	9	4	19	7		

By Months and by Principal Countries - Quantity (1,000 dozens)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	Italy	United Kingdom	China	Japan	Italy	United Kingdom	China
January -----	53	112	73	94	5	3	3	63	1	2	4
February -----	57	67	49	47	8	3	2	44	1/	1	1
March -----	73	77	58	56	9	2	5	50	1/	1	3
April -----	59	91	64	66	7	3	7	53	1/	3	4
May -----	87	97	60	75	11	2	4	51	1/	3	2
June -----	107	103		80	8	2	4				
July -----	140	154		129	9	2	5				
August -----	160	156		130	5	2	9				
September -----	135	155		139	4	2	4				
October -----	199	169		146	2	2	6				
November -----	158	113		102	1/	2	5				
December -----	125	72		59	1/	2	3				
Total, 12 mos. -----	1,353	1,366		1,123	68	27	57				

1/ Less than 500.

SLIDE FASTENERS

General information.

Slide fasteners imported from Japan are much the same as those made in the United States, but are usually of poorer quality. Patent restrictions limit the importation of those with locking sliders. Japan has several large producers who carry on a world-wide trade through export organizations. Practically all United States imports in recent years have been from Japan. Entries from the Philippines are from one concern which began the manufacture of fasteners several years ago for export to the United States. This company is reported to be American-owned.

Total production of slide fasteners in the United States in 1939 amounted to about 180 million units, valued at about \$18,000,000. A large part of that output consisted of fasteners with locking sliders. Of the United States consumption of nonlocking fasteners, probably one-third to one-half is supplied by Japan. The domestic industry consists of six well-established companies and of at least four others who have recently entered the field. The industry employs from 7,000 to 10,000 persons, about one-half of whom are women. It could expand output considerably on short notice, apart from priority restrictions on the use of materials.

There are four or five importers of fasteners, all United States firms, handling diversified lines of products, both domestic and imported.

Probable economic effects of a cessation of imports from Japan.

Insofar as domestic manufacturing capacity is concerned a stoppage of imports from Japan would cause no domestic shortage in slide fasteners. Priority regulations may, however, limit supplies of raw materials available to this industry.

A cessation of imports would immediately result in some loss of business to American importing firms. Slide fasteners, however, account for only a small part of their total business. One of the largest importers is already financially interested in one of the newer domestic manufacturing firms. Some of the low-priced articles now made with Japanese zippers could not be made to sell at the same price if American zippers were used, but similar articles made by the adaptation of other closing devices of domestic origin could be.

UNITED STATES IMPORTS OF SLIDE FASTENERS

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000
All countries, total	39,491	870	43,729	902	32,349	696	32,500	687		
Japan -----	32,009	610	39,006	745	28,654	579	26,754	526		
Philippine Islands -----	299	14	1,801	62	3,316	106	4,184	131		
China -----	-	-	-	-	36	3	1,554	30		

By Months and by Principal Countries - Quantity (number in thousands)

Month	1939	1940	1941	Principal countries of origin					
				1940			1941		
				Japan	Phil. Islands	China	Japan	Phil. Islands	China
January -----	3,175	2,960	3,160	2,197	611	151	2,185	582	386
February -----	3,053	1,831	1,836	1,590	219	22	1,522	53	261
March -----	2,775	2,954	2,354	2,790	120	44	2,022	-	332
April -----	2,231	2,477	2,667	1,744	632	101	2,086	217	363
May -----	2,096	2,495	2,911	2,256	220	19	2,162	271	478
June -----	1,703	2,780		2,270	355	155			
July -----	2,315	2,398		2,161	172	65			
August -----	2,570	3,143		2,668	353	122			
September -----	3,203	2,698		2,317	147	227			
October -----	3,645	3,104		2,243	636	225			
November -----	3,067	2,814		2,434	259	121			
December -----	2,516	2,846		2,084	460	302			
Total, 12 mos.	32,349	32,500		26,754	4,184	1,554			

INCANDESCENT ELECTRIC LAMPS, METAL FILAMENT, OTHER THAN MINIATURE

General information.

Imports of electric lamps other than miniature consist almost entirely of metal filament lamps of the conventional types used for household and commercial purposes. They range from 50 to 100 watts and retail at prices lower than domestic lamps of corresponding wattage.

Imports, which are supplied almost entirely by Japan, increased from nearly 1 million lamps in 1929 to 32 million in 1935, but declined thereafter, in 1940 amounting to 18.8 million. The unit value of lamps imported from Japan declined from 3 cents in 1931 to 1½ cents in 1933. In recent years the unit price has remained at about 1.7 cents.

The production of incandescent electric lamps in the United States probably exceeds that of all other countries combined. Manufacture is concentrated in the plants of a few large companies, the largest of which produce full-line electrical machinery and apparatus, lamps accounting for a small but important part of their total production. United States production of large lamps increased from 352 million valued at 65 million dollars in 1929, to more than 516 million valued at 58 million dollars in 1939. The volume of production in 1940 is reported to have increased about 10 percent over that of 1939. Approximately 90 percent of this production is accounted for by the General Electric Company and the licensees of its patents, including the Westinghouse Electric and Manufacturing Company.

Lamps with metal (tungsten) filaments are by far the most important class of lamps produced; of these there are more than 9,000 sizes and types manufactured in the United States. The domestic producers have much less competition from imports of large lamps than from imports of miniature lamps. On the basis of quantity, imports of large lamps were equivalent to nearly 11 percent of domestic production in 1932, 6 percent in 1936, and 2 percent in 1938.

United States exports of large lamps are small in relation to production, normally amounting to less than 2 percent of the total domestic manufacture. In terms of quantity, exports amounted to 4.8 million lamps in 1935, 6.7 million in 1938, 8.6 million in 1939, and 10.4 million in 1940. Cuba, the Philippine Islands, Canada, Chile, and Colombia have been our principal export markets for large lamps. Patent and marketing agreements very largely account for the limited number of countries to which the United States exports lamps.

Imported lamps are generally distributed by wholesale and jobbing houses which usually import direct from Japan. The principal retail outlets are chain and variety stores located in many cities throughout the country.

Lamps imported from Japan supply only a very small proportion of the total consumption of incandescent electric lamps in the United States. As with miniature lamps, the imported large lamps are generally lower in efficiency and price than the corresponding domestic lamps, and consumption of the imported lamps is limited almost entirely to a trade where price is the controlling factor.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports of Japanese lamps would probably have small effect upon the domestic trade. The domestic production is carried on almost entirely by mass-production methods, and output could readily be expanded to take up the slack caused by a cessation of imports. Employment would be affected only negligibly since most of the importing wholesalers and jobbers carry a large variety of products, lamps accounting for only a small part of their business.

UNITED STATES IMPORTS OF INCANDESCENT METAL FILAMENT LAMPS:
OTHER THAN MINIATURE
By Principal Countries

	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000		
All countries, total	22,224	373	10,260	187	16,978	276	18,832	276		
Japan	22,212	369	10,208	179	16,884	258	18,676	266		

By Months and by Principal Countries - Quantity (number in thousands)

Month	1939	1940	1941	Principal countries of origin								
				1940				1941				
				Japan				Japan				
January	441	1,148	984	1,135					967			
February	310	1,041	750	968					691			
March	1,161	1,179	621	1,169					609			
April	1,572	1,252	1,284	1,244					1,284			
May	1,222	1,047	914	1,047					914			
June	1,012	1,275		1,258								
July	1,321	2,833		2,828								
August	1,895	2,547		2,547								
September	2,039	1,739		1,739								
October	2,236	2,062		2,062								
November	2,019	1,886		1,843								
December	1,750	873		836								
Total, 12 mos.	16,978	18,832		18,676								

INCANDESCENT ELECTRIC LAMPS, METAL FILAMENT, MINIATURE

General information.

Imported miniature lamps of the types coming from Japan, while similar in design and construction to lamps produced in the United States, are lower in quality and price than most of the domestic production. Imports consist almost entirely of low-voltage lamps of the types used in Christmas-tree sets, toys, and flashlights. Imports supply only a very small fraction of the domestic consumption of miniature lamps for automobile and radio use and none of the types used for military or scientific purposes where quality and dependability are important considerations.

Imports of miniature lamps were at a high level during the past decade, the highest having been in 1936 when 117 million, valued at \$653,000, were entered. For the 5-year period 1936-40, annual imports averaged nearly 90 million lamps. Prior to 1940, Japan supplied virtually all of the imports, and in that year supplied 85 percent of the total, and China supplied the remainder. (See table at the end of this section.)

On the basis of official estimates, about 75 percent of these imports were decorative lamps (Christmas-tree types) and the remainder, toy and flashlight lamps. The unit value of imported lamps in most years averaged one-half cent.

Total domestic production of miniature lamps rose from 86 million lamps in 1921 to 272 million in 1929. Since 1929 the domestic manufacture of low-voltage lamps is known to have increased substantially (official statistics are not available). The present annual production is probably 350 million to 400 million lamps.

Miniature lamps are manufactured in the United States by about 14 companies, the larger of which are highly mechanized and use mass production methods. Four of these, the General Electric Company and the Westinghouse Electric Company, together with two other companies (both licensed by the General Electric Company) account for nearly 90 percent of domestic output. Production could easily be increased sufficiently to replace imports, but probably only at prices somewhat higher than prevail for the imported product.

The ratio of imports to domestic production, based on quantity, was 58 percent in 1932, 28 percent in 1934, and 21 percent in 1938. Based on value, imports were equivalent to 6, 4, and 3 percent, respectively, of domestic production in the years mentioned.

United States exports of miniature lamps increased from 5.2 millions in 1935 to 10.6 millions in 1937, fell to 9.8 millions in 1939, and rose to 24.7 millions in 1940. British India, Australia, the Philippine Islands, Cuba, and the Union of South Africa were the principal foreign markets of the United States.

Wholesale and jobbing houses in and around New York City are the principal importers. Most of the imported lamps are sold direct to large consumers, chiefly manufacturers of Christmas-tree sets, toys, flashlights, and chain drug, hardware, and variety stores. From 5 to 10 firms probably account for most of the imports. In some instances imports are made direct by firms acting as importer, broker, and agent in the sale and distribution of lamps to retailers.

Probable economic effects of a cessation of imports from Japan.

A stoppage of imports from Japan would eliminate most of the supply of low-priced miniature decorative and novelty lamps in the United States, inasmuch as imports of corresponding types of lamps from the Japanese-controlled areas in China would not likely increase at such time. Domestic producers have sufficient capacity to supply the whole domestic market but would likely supply it only at higher prices than have prevailed for the Japanese products. The retail price of the most popular type of Japanese Christmas-tree lamp - which class constitutes the bulk of all imports of miniature lamps - has been 2 for 5 cents as compared with 5 cents each for the corresponding domestic lamp.

UNITED STATES IMPORTS OF MINIATURE INCANDESCENT ELECTRIC LAMPS, METAL FILAMENT

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000	Number in thousands	\$1,000
All countries, total	100,089	538	55,998	299	79,223	507	97,120	711		
Japan -----	100,050	536	55,890	298	78,134	502	82,707	658		
China -----	-	-	-	-	1,084	4	14,412	53		

By Months and by Principal Countries - Quantity (number in thousands)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	China			Japan	China		
January -----	1,467	6,228	2,979	5,550	678			2,370	608		
February -----	921	3,888	3,063	3,244	644			2,150	913		
March -----	2,015	7,924	2,753	6,895	1,029			2,073	672		
April -----	5,175	5,772	7,723	4,672	1,100			5,409	2,314		
May -----	6,256	5,879	3,098	4,463	1,416			2,104	994		
June -----	6,898	4,967		4,021	946						
July -----	6,587	8,782		8,056	726						
August -----	9,737	11,097		10,472	625						
September -----	8,776	11,005		9,545	1,460						
October -----	9,964	11,782		9,884	1,898						
November -----	11,271	15,072		12,480	2,592						
December -----	10,156	4,724		3,425	1,298						
Total, 12 mos. -----	79,223	97,120		82,707	14,412						

CULTURED PEARLS AND PARTS AND SOLID IMITATION PEARLS^{1/}

General information.

Cultured pearls are used chiefly in medium- and high-priced necklaces; imitation solid pearls are used chiefly in the manufacture of inexpensive jewelry, such as necklaces, bracelets, earrings, brooches, pendants, and novelty and ornamental jewelry.

At present Japan is practically the wole foreign source of cultured and of imitation pearls and parts. United States imports of cultured pearls in 1940 were valued at \$356,000, of which Japan provided \$320,000. Imports in 1940 of imitation solid pearls and parts, except iridescent, totaled \$266,000, with Japan supplying \$265,000. Formerly, France and Spain were important suppliers of imitation pearls but Japanese competition gradually forced those countries out of the United States market.

Cultured pearls are not produced in the United States, domestic production consisting entirely of imitation solid pearls. These are made in establishments which also manufacture novelty jewelry. Statistics of the volume of the domestic production of imitation pearls are not available. The domestic industry employs about 3,000 workers.

^{1/} This section covers two import classifications only: (1) Pearls and parts, not strung or set, cultured or cultivated, class 5953.9; and (2) imitation pearls, solid, except iridescent, valued not more than 1/4 cent per inch, class 9701.2.

Probable effects of a cessation of imports from Japan.

A stoppage of imports from Japan would probably have little effect upon the domestic jewelry trade as a whole, even though pearl merchandis would largely disappear from the market. The absence of pearls would probably divert consumer attention to other lines of jewelry which would be available in similar price classes.

Domestic producers of imitation solid pearls depend upon imports of Japanese glass cores. These glass cores can be produced in the United States, but at a much greater cost.

Domestic manufacturers could probably employ most of their equipment and personnel now devoted to making articles containing pearls in the production of other varieties of novelty jewelry.

UNITED STATES IMPORTS OF IMITATION PEARLS, SOLID, EXCEPT IRIDESCENT, VALUED
NOT MORE THAN ONE-FOURTH CENT PER INCH

By Principal Countries

Country	1937		1938		1939		1940(prel.)		1941 (prel.)	
	1,000 inches	\$1,000	1,000 inches	\$1,000	1,000 inches	\$1,000	1,000 inches	\$1,000	1,000 inches	\$1,000
All countries, total-	133,509	151	102,456	119	241,650	268	236,623	266		
Japan -----	131,056	148	98,353	112	231,855	251	235,985	265		

By Months and by Principal Countries - Quantity (1,000 inches)

Month	1939	1940	1941	Principal countries of origin						
				1940			1941			
				Japan			Japan			
January -----	17,830	25,898	26,744	25,898			26,624			
February -----	10,468	12,159	14,780	12,159			14,780			
March -----	23,543	17,064	25,393	17,064			25,393			
April -----	15,574	13,859	17,804	13,538			17,804			
May -----	19,740	19,840	23,643	19,840			23,643			
June -----	20,003	14,703		14,703						
July -----	19,876	12,545		12,545						
August -----	14,635	7,899		7,899						
September -----	22,831	23,104		23,104						
October -----	28,194	25,924		25,924						
November -----	33,615	26,590		26,590						
December -----	15,341	37,038		36,721						
Total, 12 mos.	241,650	236,623		235,985						

UNITED STATES IMPORTS OF PEARLS AND PARTS, NOT STRUNG OR SET, CULTURED OR CULTIVATED

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
		\$1,000		\$1,000		\$1,000		\$1,000		\$1,000
All countries, total-		385		223		328		356		
Japan -----		379		216		323		320		
China -----		-		2		2		33		

By Months and by Principal Countries - Value (1,000 dollars)

Month	1939	1940	1941	Principal countries of origin							
				1940				1941			
				Japan	China			Japan	China		
January -----	24	27	44	26	1			44	1/		
February -----	14	17	54	15	2			54	-		
March -----	45	39	74	38	1			66	8		
April -----	16	21	66	21	-			63	3		
May -----	27	22	66	19	3			66	-		
June -----	24	18		17	1						
July -----	30	28		21	7						
August -----	22	47		39	5						
September -----	35	14		14	-						
October -----	28	41		32	9						
November -----	35	42		38	4						
December -----	28	40		40	-						
Total, 12 mos.	328	356		320	33						

1/ Less than 500.

MISCELLANEOUS PYROXYLIN ARTICLES

(Reported as compounds of cellulose (other than acetate) made into finished or partly finished articles, n.e.s., other than slides used as buckles, toilet articles, or smokeless powder)

General information.

Imports under the above classification consist principally of low value novelties such as charms, figures, brooches, bracelets, and similar merchandise, made of cellulose nitrate (pyroxylin).

Japan supplies more than 90 percent of United States imports of these articles. Separate statistics of domestic production are not available, but such production is known to be large relative to imports.

The imported and domestic articles are distributed principally through the 5- and 10-cent and novelty stores. The domestic articles are generally of better quality than the imported, and are replacing them.

Probable economic effects of a cessation of imports from Japan.

The articles in this classification have no military use. Civilian consumption could easily be supplied by articles made from cellulose acetate and other plastic materials produced in this country, though probably only at somewhat higher prices.

COMPOUNDS OF CELLULOSE (OTHER THAN ACETATE) MADE INTO FINISHED OR PARTLY FINISHED ARTICLES, N.E.S.,
OTHER THAN SLIDES USED AS BUCKLES, TOILET ARTICLES, OR SMOKELESS POWDER

By Principal Countries

Country	1937		1938		1939		1940 (prel.)		1941 (prel.)	
		\$1,000		\$1,000		\$1,000		\$1,000		
All countries, total		432		293		280		296		
Japan		405		275		266		287		

By Months and by Principal Countries - Value (1,000 dollars)

Month	1939	1940	1941	Principal countries of origin								
				1940				1941				
				Japan				Japan				
January	25	33	10	31					10			
February	13	15	8	14					7			
March	27	28	13	27					12			
April	27	19	12	18					12			
May	27	23	9	21					9			
June	25	29		29								
July	24	31		30								
August	30	24		24								
September	20	27		26								
October	17	27		27								
November	22	26		26								
December	23	14		14								
Total, 12 mos.	280	296		287								

APPENDIX

PRINCIPAL COMMODITIES IMPORTED INTO THE UNITED STATES FROM JAPAN, 1939 AND 1940,
AND JANUARY-MAY 1940 AND 1941

Import classification No.:	Commodity	Unit of quantity	Quantity				Value (1,000 dollars)			
			1939	1940	January-May		1939	1940	January-May	
					1940	1941			1940	1941
0055.5	Swordfish, frozen (naturally or artificially), whole, or beheaded, or eviscerated, or both	1,000 lbs.	1,605	870	623	134	148	100	71	18
0060.5	Fish, other than cod, haddock, hake, pollock, cusk, and rosefish: Fresh or frozen; filleted, skinned, boned, sliced, or divided, n.s.p.f.	do.	3,166	3,016	1,544	690	317	384	191	95
0065.2	Tuna fish, in oil or in oil and other substances	do.	7,764	5,538	3,000	877	1,314	958	503	185
0067.1	Salmon, not in oil or in oil and other substances, in airtight containers, weighing with contents not over 15 pounds each	do.	350	208	70	122	45	30	11	19
0080.0	Crab meat, crab sauce, and crab paste	do.	10,719	10,709	8,637	1,676	3,767	3,269	2,663	495
0087.6	Oysters, not in airtight containers: Seed oysters, and other than fresh or frozen	do.	1,516	1,201	1,186	1,225	37	28	27	38
0976.0	Fish scrap and fish meal (not fertilizer)	Long tons	28,993	12,854	12,565	1/	1,165	554	538	2/
850.97	Fish scrap and fish meal, nitrogenous: fertilizer materials	do.	10,577	5,308	4,325	-	418	233	187	-
0804.0	Cod oil	1,000 gals.	422	46	37	-	126	24	17	-
0805.0	Cod-liver oil	1,000 gals.	139	263	24	257	61	278	23	266
221.97	Fish livers	1,000 lbs.	5,321	6,293	1,446	1,391	1,434	2,080	455	417
222.40	Vegetable or animal drugs, advanced in value or condition, n.e.s.	do.	70	198	81	2/	197	838	304	2/
0961.0	Mother-of-pearl shells, unmanufactured	do.	4,963	1,443	1,124	1,375	531	171	133	216
0714.0	Mink fur skins, undressed	Thousands	744	571	298	480	984	898	506	917
2505.0	Lily bulbs	do.	22,089	25,295	1,402	1,113	539	845	30	35

Footnotes at end of table.

PRINCIPAL COMMODITIES IMPORTED INTO THE UNITED STATES FROM JAPAN, 1939 AND 1940,
AND JANUARY-MAY 1940 AND 1941-Continued

Import classifi- cation No.	Commodity	Unit of quantity	Quantity				Value (1,000 dollars)			
			1939	1940	January-May		1939	1940	January-May	
					1940	1941			1940	1941
0917.0	Bristles, sorted, bunched, or pre- pared -----	1,000 lbs.	155	223	122	126	405	515	274	256
1234.0	Sauces, n.s.p.f. -----	do.	8,931	7,107	2,374	2,099	297	268	86	83
1249.9	Vegetables, including horseradish, cut, sliced, parched, roasted, reduced to flour, packed in oil, or prepared, n.s.p.f. -----	do.	3,053	2,578	954	534	273	283	104	56
125.68	Ajinomoto and other monosodium- glutamate preparations -----	do.	503	440	219	173	429	390	197	163
1309.1	Pineapples, prepared or preserved, n.s.p.f. -----	do.	16,189	21,240	2,542	9,318	555	792	75	366
133.32	Mandarin oranges, canned -----	do.	1,655	5,610	561	309	97	393	34	21
1521.0	Tea, n.s.p.f. -----	do.	23,511	17,656	4,784	4,756	3,304	3,190	708	718
2202.0	Pyrethrum, or insect flowers, crude	do.	7,486	2,031	1,647	55	1,636	409	353	9
2246.0	Rapeseed (colza) oil, denatured -----	1,000 gals.	1,185	1,546	889	267	399	684	371	126
2252.1	Japan wax -----	1,000 lbs.	3,645	2,328	1,026	1,707	363	324	140	253
2256.0	Perilla oil -----	do.	22,415	4,780	4,155	243	944	280	225	22
2800.0	Agar-agar -----	do.	497	623	168	279	378	597	167	268
8000.0	Dead or creosote oil -----	1,000 gals.	5,673	5,065	2,506	993	594	493	212	102
8127.1	Natural menthol -----	1,000 lbs.	271	82	51	39	615	200	124	121
8258.0	Natural camphor, crude -----	do.	1,157	713	382	132	323	238	109	54
8259.0	Natural camphor, refined -----	do.	818	397	182	348	329	250	106	221
923.70	Articles and manufactures of cotton, n.s.p.f. -----	-	-	Not available	-	-	1,273	1,119	393	490
305.0010, etc.	Cotton cloth: Bleached, plain -----	1,000 sq.yds.	77,363	64,193	24,380	34,900	2,781	2,272	866	1,294
3080.6	Plain-back velveteens of cotton -----	do.	1,622	2,712	664	950	230	355	100	154
3082.4	Table damask and manufactures of, in chief value of cotton, valued less than 75 cents per pound -----	1,000 lbs.	1,833	2,870	1,015	1,612	764	1,273	428	724

PRINCIPAL COMMODITIES IMPORTED INTO THE UNITED STATES FROM JAPAN, 1939 AND 1940,
AND JANUARY-MAY 1940 AND 1941-Continued

Import classifi- cation No.:	Commodity	Unit of quantity	Quantity				Value (1,000 dollars)					
			1939	1940	January-May 1940	1941	1939	1940	January-May 1940	1941		
3083.0	:Table and bureau covers, center- : pieces, runners, scarfs, napkins, : and doilies, of plain woven cotton : cloth, n.s.p.f. -----	-										
3224.1, etc.	:Cotton floor coverings -----	:1,000 sq.yds.	7,157	5,207	3,268	2,328	905	842	431	360		
3227.1	:Cotton rags, including wiping rags, : except for paper making -----	:1,000 lbs.	7,576	1,282	949	31	546	124	84	3		
323.63-4	:Cotton fish nets and nettings -----	:do.	719	619	335	244	171	181	85	85		
3702.0-1	:Raw silk -----	:do.	44,580	36,411	10,458	12,738	106,951	105,311	36,020	33,961		
3704.0	:Silk waste -----	:do.	161	20	6	4	96	9	2	1		
3710.71	:Silk woven fabrics (all silk) over 30: : inches wide, bleached, printed, : piece-dyed, or yarn-dyed, etc., not : Jacquard-figured, valued at \$5.50 or : less per pound -----	:1,000 sq.yds.	13,816	9,768	3,429	5,132	1,584	1,269	504	576		
3810.0	:Filaments of rayon or other synthetic: : textiles, not exceeding 30 inches in: : length, other than waste -----	:1,000 lbs.	2,855	6,407	3,066	3,013	445	1,033	501	487		
3900.2	:Hemp (pedaline) hat braids, plaits, : etc., containing rayon, etc. -----	:do.	1,615	1,348	735	888	762	683	375	447		
3912.1	:Unfinished hats, bonnets, and hoods, : composed wholly or in chief value of: : paper (except harvest hats), : bleached, dyed, colored, or stained	:Thousands	5,516	4,130	2,550	1,708	974	823	497	347		
4067.0	:Sticks of bamboo, in the rough, or : not further advanced than cut into : lengths, suitable for sticks for : umbrellas, parasols, sunshades, : whips, fishing rods, or walking : canes -----	-										
					Not available		198	355	140	168		

PRINCIPAL COMMODITIES IMPORTED INTO THE UNITED STATES FROM JAPAN, 1939 AND 1940,
AND JANUARY-MAY 1940 AND 1941-Continued

Import classifi- cation No.:	Commodity	Unit of quantity	Quantity				Value (1,000 dollars)			
			1939	1940	January-May		1939	1940	January-May	
					1940	1941			1940	1941
479.99	Manufactures of paper, n.s.p.f. -----	-		Not available		272	266	91	83	
5350.2	China or porcelain, domestic or household table and kitchen articles and utensils, decorated or colored, etc. -----	1,000 dozen	3,079	2,592	1,070	668	1,670	1,750	654	496
536.52	China and porcelain articles (other than table and kitchen ware, chemi- cal and electrical porcelain, and sanitary articles), decorated, colored, etc. -----	do.	3,515	4,778	1,669	1,622	368	666	192	216
5371.2-3	Earthenware and stoneware, domestic or household table and kitchen articles, decorated, colored, etc. --	do.	1,653	1,536	542	588	478	458	154	139
5373.7	Earthenware and stoneware, n.s.p.f., decorated, colored, etc., other than table and kitchen articles, and sanitary articles -----	do.	942	1,123	238	261	389	587	164	134
679.564	Slide fasteners -----	Thousands	28,654	26,754	10,575	9,977	579	526	205	196
7064.1	Incandescent metal filament lamps: Other than miniature -----	do.	16,884	18,676	5,563	4,465	258	266	84	60
7064.0	Miniature incandescent electric lamps, metal filament -----	do.	78,134	82,707	24,824	14,106	502	658	174	103
5953.9	Pearls and parts, not strung or set, cultured or cultivated -----	-		Not available		323	320	119	293	
9701.2	Imitation pearls, solid, except iridescent, valued not more than 1/4 cent per inch -----	1,000 inches	231,855	235,985	88,499	108,244	251	265	99	125

PRINCIPAL COMMODITIES IMPORTED INTO THE UNITED STATES FROM JAPAN, 1939 AND 1940,
AND JANUARY-MAY 1940 AND 1941-Continued

Import classifi- cation No.	Commodity	Unit of quantity	Quantity				Value (1,000 dollars)			
			1939	1940	January-May		1939	1940	January-May	
					1940	1941			1940	1941
9753.9	Compounds of cellulose (other than acetate) made into finished or partly finished articles, n.e.s., other than slides used as buckles, toilet articles, or smokeless powder	-		Not available			266	287	111	50
	Imports shown above						145,300	141,979	51,528	46,628
	All other						15,795	14,954	5,912	5,833
	Total imports						161,095	156,933	57,440	52,461
	Ratio of enumerated imports to total imports (percent)						90.2	90.5	89.7	88.9

1/ Less than 1/2 long ton.

2/ Less than \$500.

3/ Less than 500 pounds.

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