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NIE-56

ECONOMIC IMPORTANCE OF THE FAR EAST *

Resources of the Far East

The Far East is an important source of a large number of strategic and basic commodities required by the United States and other areas of the Free World. Twenty-five of these commodities were regarded as of sufficient importance to be included on the attached table titled "Resources of Major Importance of the Far East". Of these, tin, tungsten, chromite, rutile, rubber, abaca, coconut oil, and wool would probably represent the most serious losses to the Free World defense potential. The loss of certain basic food commodities--wheat, rice, dairy products, and meat--would be critical to the United Kingdom, South Asia, and other Far East countries. While no single item deserves to be rated in the highest category of loss, the cumulative importance of the many commodities is such that the loss of the area, or important parts of it, would be a severe one to the rest of the Free World. In the case of some commodities the seriousness to the Free World of the loss of the surplus producing areas will vary depending on whether the total Far East area, or only certain parts, are lost. This applies particularly in the case of foodstuffs where if the grain producing areas were lost, but the large consuming areas remained in the Free World, the problem to the Free World would be much different than if the reverse were true.

The Far East now furnishes over 60 percent of the Free World supply of new tin. Very little increase during the next three years appears possible from the alternative sources--Bolivia, Belgium Congo, and Nigeria. Loss of the Far East would mean drastic reduction of non-essential uses and withdrawals from stockpile. The Far East supplies roughly 70 percent of the Free World's supply of rutile, 30 percent of the tungsten, and 20 percent of the chromite. Dependence on the Far East for these commodities can be lessened during the next few years by further development of alternative sources and substitutes, but at costs in money, labor, equipment, and transportation. Of the other metals produced in the Far East, nickel, for which demands for essential uses are heavy and increasing, is most important, though the Far East is a relatively minor source.

Even though the Far East supplies nearly 90% of the world's exportable surplus of natural rubber, it is estimated that loss of the area could be covered from synthetic production and withdrawals from stockpile for a period of at least five years.

Australia and New Zealand produce two-thirds of the world's exportable supply of wool. There is no adequate alternative source, reserves are insufficient, and

* Includes Japan, South Korea, Taiwan, the Phillippines, mainland Southeast Asia, Indonesia, Australia and New Zealand.

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substitute fibers not wholly satisfactory for all military requirements. No substantial improvement in the situation except with regard to the reserves can be expected during the next few years. The Philippines produce 85 percent of the world's abaca, a hard fiber which has no fully satisfactory substitute in marine uses. Replacement rather than substitution to meet essential uses from Latin America would require several years and large US investment. The Far East produces 70 percent of the world's exportable supply of coconut oil which has many uses, both industrial and as food. There is no adequate alternative source. Substitutes present a greater problem in Allied countries than in the US.

South Asia and Far East countries are greatly dependent on Australian wheat and Southeast Asian rice. The loss of this grain could not, as a practical matter, be completely replaced by shipments from other grain surplus areas, and great hardship and some starvation would likely result. On the other hand, the Far East, outside of Australia and the Burma-Thailand-Indo-China rice area, is a heavily deficit grain area, and the loss of the whole area would not appreciably increase the drain on other Free World grain exporters. The United Kingdom obtains over 70 percent of its butter and cheese imports and about 50 percent of its meat imports from Australia and New Zealand, as well as substantial quantities of wheat from Australia.

In addition to the commodities already mentioned the Far East is the principal source to the Free World of silk and cinchona bark (source of quinine and quinidine), both of which have relatively restricted but very important strategic uses.

Japan's importance is contained in her potential to become an arsenal for the Free World and/or a basic industrial supplier to Free Asia. At the present time Japan's output of industrial goods, including machinery, is significant chiefly to other Far East countries. The fact that no other country in the area is or is likely to become important industrially in the near future lends emphasis to Japan's potential importance. Japan's potential, however, hinges on the availability of raw materials.

It is not considered likely that there will be any substantial increase in the near future in the availability of natural or agriculture resources in the Far East area. Generally speaking, the loss of the metals and other natural resources would be most serious to the US and the more industrialized Free World nations, whereas the loss of the agricultural commodities, except wool and abaca, would be less serious to the US than to other areas of the Free World.

The Importance of Individual Countries

Individually, countries of the Far East vary considerably in importance. The loss of Indonesia (tin, rubber, bauxite, coconut oil, cinchona bark, and others), Malaya (tin, rubber, and coconut oil), Australia and New Zealand (wool, rutile, lead, zinc, wheat, meat and dairy products), the Philippines (chromite, abaca, coconut oil, and others), and Japan (silk, tea, but primarily her potential industrial capacity) would be most serious. In the next category of importance would be Thailand (rice, shellac, relatively small amounts of tin, tungsten, and rubber), and South Korea (chief source of tungsten in the Far East). Of lesser importance are Burma, Indo-China, New Caledonia, Formosa and other countres.

RESOURCES OF MAJOR IMPORTANCE IN THE FAR EAST

Resource	Chief Sources	Net Exports of Area 1/ As % of Free World Exports	Net Exports of Area 1/ As % of Free World Production	Areas Primarily Affected by Loss	Degree 2/ of Loss	Remarks
Natural Resources						
Tin	Far East Total	67	60	Free World	B	Development of adequate alternative sources improbable 1952-54; stockpile only 60% complete and is sufficient only for 18 months Free World consumption; no fully adequate substitute.
	Malaya	(38)				
	Indonesia	(22)				
	Thailand	(7)				
Tungsten	Far East Total	35	25	Free World	C	South Korea source uncertain; stockpile less than one-third complete but equals 9 years of Far Eastern supply; substitutes not wholly satisfactory; expansion alternative sources probable.
	South Korea	(17)				
	Burma	(5)				
	Thailand	(6)				
	Australia	(9)				
Nickel	Far East Total	3	3	Free World	D	Free World nickel situation serious but Far East supply is small.
	New Caledonia	(5)				
Bauxite	Far East Total	8	6	Japan US	E	Because of high quality, loss of Far East ore would necessitate readjustments stockpiling program.
	Indonesia	(11)				
Chromite	Far East Total	19	17	Free World	C-Metallurgical	Far East not major source this grade; production from alternative sources may be increased; stockpiling about 55% objective.
	New Caldedonia	(5)			B-Refractory	Philippines a major source of high quality chromite; alternative sources inadequate; US stockpile relatively low and represents only about 17 months of Phillippine output.
	Philippines	(15)				

RESOURCES OF MAJOR IMPORTANCE IN FAR EAST
(continued)

Resource	Chief Sources	Net Exports of Area 1/ As % of Free World Exports	Net Exports of Area 1/ As % of Free World Production	Areas primarily Affected by Loss	Degree 2/ of loss	Remarks
Lead	Far East Total	17	10	Free World	D	Substantial increase Free World output expected 1952-54.
	Australia	(19)				
Zinc	Far East Total	16				
	Australia	(16)	9	Free World	D	Alternative sources could replace Far East but would delay fulfillment stockpile; objective now 80% fulfilled.
	Japan	(negl.)				
Rutile	Far East Total	99	55-70	US-UK	C	High consumption rate anticipated; alternative sources currently not operating but could be revived; substitutes only partly satisfactory; no stockpile.
	Australia	(99)				
Cadmium	Far East Total	14	7	UK	D	1952-55 demand probably can be met from alternative sources.
	Australia	(13)				
	Japan	(1)				
Petroleum	Far East Total	0 3/	0	Other Far East	E	Far East deficit area.
	Indonesia	(1)				
	Borneo	(1)				
Rubber	Far East Total	89 4/	49 5/	Free World	C	Synthetic production would have to be stepped up. Synthetics not satisfactory for all uses; stockpile fairly good.
	Malaya	(36)				
	Indonesia	(47)				
	Thailand	(6)				
Shellac	Far East Total	n.a.	25	Free World	D	No adequate substitutes in some uses. About 25% of consumption considered essential to military use. Stockpile about 80% complete.
	Thailand					
	Indo-China					

RESOURCES OF MAJOR IMPORTANCE IN FAR EAST
(continued)

Resource	Chief Sources	Net Exports of Area 1/ As % of Free World Exports	As % of Free World Production	Areas primarily Affected by loss	Degree 2/ of Loss	Remarks
Agriculture Resources						
Abaca	Philippines	85 6/	85 6/	Free World	C	Most substitutes lack strength and durability for marine uses but are satisfactory for many other uses. Alternative sources (Latin America) being expanded but large scale increase would require several years and heavy US investment. Stockpile goal over 60% met and represents 7 months of Philippine supply.
Apparel Wool	Far East Total	64 7/	70 7/	Free World	B	No alternative source for quantity which might be lost; substitutes not wholly satisfactory; heavy military requirements; authorized US war reserves may be filled by mid-1952 but only equal to slightly over 10% of Far East's annual exports.
	Australia	(47)				
	New Zealand	(20)				
Copra & Coconut Oil	Far East Total	70	55-60	Free World	C	Substitutes available in US for many important uses though not all; US stockpile less than 10% of Far Eastern annual exports; used as edible oil in Europe and difficult of replacement except from dollar sources.
	Philippines	(47)				
	Malaya	(12)				
	Indonesia	(14)				
Rice	Far East Total	38 6/	2 6/	Other Far East and South Asia	C	Not significant except to Far East and South Asia but highly important there; doubtful, in practice, if Free World could or would replace loss.
	Burma	(32)				
	Thailand	(32)				
	Indo-China	(3)				
Wheat	Far East Total	0 8/	0	UK, Far East & South Asia	C	Far East other than Australia deficit about to extent Australia's surplus; serious loss to South Asia; create additional dollar problems for UK.
	Australia	(13)				
Cinchona Bark (Quinine and quinidine)	Indonesia	67	60-65	Free World	D	Substitutes for quinine satisfactory; no satisfactory substitute for quinidine but stockpile (incl. quinine) good; alternative sources can be increased.

RESOURCES OF MAJOR IMPORTANCE IN FAR EAST
(continued)

Resource	Chief Source	Net Exports of Area 1/ As % of Free World Exports	Net Exports of Area 1/ As % of Free World Production	Areas Primarily Affected by Loss	Degree of Loss 2/	Remarks
Silk	Far East Total	74 9/	30 9/	Free World	D	Only use for which no adequate substitute is gun powder bags; stockpile silk waste for this purpose now inadequate though increasing; alternative sources not satisfactory at present time.
	Japan	(77)				
Dairy Products & Meat	Far East Total	36	3	UK	C	Significant only to UK, but represents over 70% butter and cheese imports and almost 50% of meat imports of that country; serious problems in replacement.
	New Zealand	(23)				
	Australia	(14)				
Palm Oil	Far East Total	27	n.a.	UK, Netherlands	D	Substitutes for tin and terne-plate industries appear satisfactory; loss as an edible oil harder to replace.
	Indonesia	(18)				
	Malaya	(9)				
Black Pepper	Far East Total	20	n.a.	Free World	E	No satisfactory substitute; alternative sources not adequate to fill demand; importance of commodity rated low.
	Indonesia	(27)				
	Formosa	(4)				
	Japan					
Tea	Far East Total	11	n.a.	Free World	E	Alternative source South Asia would fill demand partially, at higher prices; substitute beverages exist.
	Indonesia	(7)				
	Formosa	(2)				
	Japan	(2)				
Sugar	Far East Total	7 10/	n.a.	US, UK, Middle & Far East	D	Alternative sources can expand production; Near and Far East most affected.
	Formosa	(3)				
	Australia	(3)				
	Philippines	(3)				
Industrial Resources						
Machinery	Far East Total	n.a.	negl., if any	Other Far East	E	Japan has good potential. Now produces about 34% world machinery output which could be doubled by 1954. Australia imports 27 times as much machinery as it exports.
	Japan	n.a.				
	Australia	(0)				

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Footnotes

1/ These percentages are based on 1950 export and production figures unless otherwise indicated.

2/ The degree of loss of each commodity has been rated in the approximate order of importance by the letters A, B, C, D and E. It should be emphasized that because of the many variables involved the application of these ratings necessarily involves a large degree of judgment based upon our appraisal of the current situation.

A - Reduction in defense and essential civilian consumption unavoidable.

B - Impact on defense and essential civilian consumption could be avoided only by drastic reduction of non-essential civilian consumption and by withdrawal from stockpiles, if any.

C - Defense and essential civilian consumption could be maintained only by reducing significantly either non-essential civilian consumption or stockpiles, if any.

D - Maintenance of scheduled defense and essential civilian consumption would require moderate rationing, moderate stockpile reduction, or slowing down scheduled increase of stockpile.

E - Relatively minor economic adjustments could compensate for the loss

3/ Based on estimated availability 1952.

4/ Based on 1951-52 export estimates.

5/ Based on 1951-52 production estimates. Free World production includes production of synthetic rubber.

6/ Average 1948-50.

7/ 1949.

8/ July 1949 - June 1950.

9/ Average 1948-50. Raw silk only.

10/ Average 1949 and 1950.

MINERALS AND METALS

Among the more important strategic metals and minerals supplied by the Far East to the free world are tin, tungsten, chromite, bauxite, rutile, cadmium, beryl, nickel, lead and zinc. Only in the case of lead and zinc are free world supplies sufficient, assuming the loss of the Far East's supply, to permit maintenance of required consumption levels. The loss of the other metals and minerals would, however, have more serious repercussions, and in general could not be compensated for prior to 1954-55. The severity of the loss results from the relative concentration of production in the area under review and the difficulties of replacement from remaining free world sources.

In terms of free world production, the loss of the Far East would mean, for example, a loss of 60% of the free world's output of tin; 70% of its rutile; and roughly 30% of its chromite and tungsten. Far Eastern production of other metals such as bauxite, beryl, nickel and cadmium accounts for a much smaller share of free world production. The difficulty in replacing even small quantities of beryl and nickel would be considerable. Development of alternative supplies would moreover be limited by competing demands for labor, equipment, and transportation facilities.

Tin. The Far East, principally Malaya, Indonesia, and Thailand (roughly in the ratio 6:3:1) furnishes more than 100 thousand metric tons annually or over 60 percent of the Free World supply of new tin. Alternative sources are principally Bolivia, Belgian Congo, and Nigeria which produced about 54 thousand metric tons in 1951. Very little increase appears probable from these countries in the next three years. Output from other countries is negligible.

Consumption in the noncommunist world in 1950 was 146 thousand metric tons. In recent years the excess of world output over consumption has been absorbed by the United State's defense stockpiling. Loss of the Far Eastern supply would prohibit further accretions to the United States stockpile, necessitate a reduction in Free World consumption say to 100 thousand metric tons and leave a net deficit of about 45 thousand metric tons to be made up from Free World stocks. Such a deficit would, in the course of a few years, be extremely serious.

As of December 31, 1951, the United States strategic stocks were 147 thousand metric tons; and surplus European stocks were believed to be from 15 to 20 thousand metric tons.

Tungsten. With the loss of the tungsten resources of China, the other countries of the Far East, (South Korea, Burma, Thailand, Australia, New Zealand and Japan) became of great importance to the noncommunist World as sources for meeting the increased demands for this very strategic metal. In 1950, production of these countries amounted to 2,376 metric tons (tungsten metal content) or 27% of the Free World output. Of 1950 production, 1,040 metric tons were mined in South Korea. One tungsten deposit in this country, located near the 38th parallel, is one of the World's three largest and is capable of supplying 25% of U. S. annual requirements. For the present, however, production from South Korea must be considered uncertain. The balance of the 1950 Free World production (6200 MT) came principally from the US, Bolivia, Brazil, Spain and Portugal. The US depends upon imports to the extent of approximately 60% of consumption and in 1951 37% of these imports originated in the Far East.

The tungsten supply situation in the Free World became very critical in late 1950 and as a result prices were driven abnormally high. Under the stimulus of the high prices and long term contracts for tungsten ores, the marginal mines of the US are being reopened and will contribute to an expansion in supply. In addition, it is probable that other producing countries of the Free World can expand output by appreciable amounts. The extent of expansion is dependent mainly upon continuation of high prices and financial assistance to exploit new deposits. It is possible to conserve tungsten to a certain extent by a partial substitution of molybdenum, but for most applications this product is inferior. Even under the most favorable conditions, however, it is unlikely that Free World requirements, including additions to the stockpiles, can be met by 1955. The loss of Far Eastern sources undoubtedly would advance the date beyond 1955.

In the US measurement of the stockpile inventory against the objective is a further indication of the seriousness of the tungsten situation. On December 31, 1951, the stockpile inventory was 20,433 metric tons. The objective is 66,225 metric tons.

Nickel. In the Far East, only New Caledonia is a nickel supplier at present. In 1950, the nickel content of ore mined was approximately 6,300 metric tons or about 5 percent of the Free World output. Usually the New Caledonian product, mostly matte, is shipped to France for refining and distribution. Thus, the loss of the Far Eastern supply would have no direct effect on the United States supply position. Nevertheless, the loss to free w orld nations would be heavy for several reasons. In the period 1945-50 the Free World nickel supply has met immediate consumption needs but the US has been unable to acquire more than 17 percent of the planned defense stockpile, while Europe's rate of consumption was curtailed by its low steel production rate.

In the United States, consumption has lagged only slightly behind availability in recent years. Strategic stocks of 46,638 metric tons had been accumulated by December 31, 1951, and of this total about 40 percent was acquired in fiscal year 1947. This accumulation has been possible through the voluntary use of low-alloy steels of World War II type and in 1951, through exercise of end-use controls. United States estimated consumption in 1951, was about 78 thousand metric tons and exports over 2 thousand metric tons. The use of nickel in 1951 was subject to severe conservation measures. Nevertheless, military requirements, particularly the jet engine program, are expected to expand by 1954 to several times the 1951 level. The magnitude of the nickel problem is indicated by the 1952 estimates which call for minimum essential requirements of 108 thousand metric tons of which about 63 thousand metric tons is for direct military use.

The only important prospects for increasing the nickel supply are projects in Canada and Cuba. The Nicaro development in Cuba is expected to produce 7,000 to 9,000 metric tons in 1952 and to increase to a maximum of 15,000 to 16,000 metric tons in 1953. The new Canadian supplies will not be available until 1954 and will amount to about 12,000 metric tons. That the whole of this new supply would become available to the United States appears doubtful inasmuch as these increments would probably be shared with other countries.

In summary, a supply-demand deficit now exists and will become more serious through the 1952-54 period. Loss of any available supply connotes imposition of additional, and drastic restraints on use, including those now considered essential.

Bauxite. The principal sources of bauxite in the Far East have been Indonesia (Bintan Island), Malaya and the Palau Islands. These areas mined over 900 thousand metric tons or about 7 percent of the world's peak output in 1943, which was shipped to Japan. Since the second World War only Indonesia has resumed production. In 1950, Indonesia shipped 531 thousand metric tons or about 7 percent of the Free World total for that year. In 1949-51 aluminum ore from the Far East supplied 15 percent of US supply. Far Eastern ore has been especially significant because of its high quality which makes it a most desirable addition to the national stockpile, to which it has been consigned. Addition of this ore to the stockpile has permitted greater acceptance of lower grade ore. Western Hemisphere sources, which normally supply virtually all United States bauxite requirements, were not equipped to meet immediately the recent rapid expansion in demand and stockpile acquisitions. Alternative new ore sources in Jamaica and Haiti are expected to relieve this situation in 1953-54, but the Bintan supply will be of value as an auxiliary supply for new West Coast metal plants, Canadian as well as American, now under construction. To lose the Far East ore would not greatly affect the United States security though it would retard stockpiling. The December 31, 1951 defense stockpile inventory of metal grade ore was 3,599 thousand metric tons; and the objective is 5,080 thousand metric tons.

To other noncommunist nations, except Japan, the loss of the Far Eastern metal-grade ore would be nominal. Japan depends on Southeast Asian bauxite. Estimated annual requirements for 1950-51 are about 140 thousand metric tons derived chiefly from Bintan. Potential requirements are considered larger. South Japan remain in the Free-World orbit and the rest of the Far East be lost, bauxite for Japan's light metal industry would present a problem.

Chromite. The Philippine Republic is a major producer of refractory-grade chromite and a minor producer of metallurgical-grade exports. New Caledonia is a substantial producer of metallurgical ore. The loss of these sources would constitute a serious handicap to the United States and to the world.

In 1950, New Caledonia and the Philippines exported about 120 thousand metric tons of metallurgical ore. On the 1950 basis the Far East production, excluding Japan, was about 12 percent of the world total, which was probably close to 1 million metric tons. New Caledonia and the Philippine Republic furnished 20 percent of the United States 1949-50 average metallurgical ore imports. The loss of the Far Eastern ore would be a blow to the United States. The December 31, 1951, strategic stock inventory was 1,801 thousand metric tons. The stockpile objective is 3,251 thousand metric tons.

At this time, other noncommunist countries, receive very little of the Far Eastern supply, depending largely on chromite from Africa with lesser quantities obtained from Europe.

Although production from these areas may be increased somewhat, it does not appear to be possible to increase the output to meet the deficits within the period 1952-54. Should the Far East be lost as a source of metallurgical ore, other noncommunist countries would be affected by the redistribution of the available supply.

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With respect to refractory grade chromite, the US and other noncommunist world would suffer more severly from the loss of the Philippines as a source. Its share in Free World supply is not clearly determinable but probably lies between 40 and 45 percent of the total, (the Philippines produced about 200 thousand metric tons while the Free World production was about 430 thousand metric tons). For some applications, it is considered to be of superior quality and is thus more important than the mere percentage indicates. In the years 1949-51, from 50 to 65 percent of American imports came from the Philippines. Next, in importance has been Cuba with less than half as much on the average. Present plans call for doubling Cuba's output (to about 190 thousand metric tons yearly) but even if this program is achieved it will not make up for the Philippine supply in either quantity or quality.

The loss of Philippine refractory ore would necessitate sharing part of the ore now drawn from other resources with the rest of the Free World, withdrawals from the stockpile and solution of the transportation and port difficulties in Africa. The stockpile stocks at the end of December 1951 was only 284 thousand metric tons. Since the objective was set at 803 thousand metric tons it is obvious that world supply has afforded little surplus over demand.

Lead. The Far East produces about 16 percent of the Free World's mine output. Australia, provided about 94 percent of the Far East total in 1950. Most of the Far Eastern product is exported. The net exports of Far East lead in 1950 were 140 thousand metric tons. Since in that year about 125 thousand metric tons of lead from all sources went into Free World stocks the net deficit for consumption based on 1950 without this area would have been about 25 thousand metric tons.

Loss of the Far Eastern supply would not seriously affect the United States position assuming the anticipated expansion in available supply but might delay attainment of programmed stockpile. The strategic stock inventory as of December 31, 1951, was 382 thousand metric tons with an objective of 635 thousand metric tons. Substantial increases in noncommunist world output are expected in 1952-54, with moderate later additions.

Zinc. The Far East's mine production of zinc in 1950 amounted to about

13 percent of Free World output. Australia and Japan account for 4/5ths and 1/5th of the Far East output, respectively.

Current supply-requirements estimates indicate that under continued partial mobilization conditions the US position may be expected to improve to the extent that the stockpile objective can be fulfilled sometime in 1954, and unrestricted civilian consumption permitted beginning in 1953. This assumes that government assisted supply expansion projects develop as currently projected, without which the cumulative 1952-1954 deficit in meeting industry requirements would be about 270 thousand metric tons, excluding any stockpiling. As of December 31, 1951 the US stockpile inventory amounted to 550 thousand metric tons compared with an objective of 671 thousand metric tons.

In 1950, the free world outside of the United States received about 140 thousand metric tons of the 248 thousand tons of zinc produced in the Far East. Major alternative sources, aside from the US are Canada, Mexico, other Latin American countries, and Africa. Substantial production expansion is under way in all these areas. Loss of the Far Eastern supply to the Free World, after the end of 1952, could be replaced from other sources although this would necessitate continuation of current restrictions on civilian use and deferment of stockpile completion.

Rutile. Rutile, the chief use of which at present is for coating welding rods, is found associated with zircon and ilmenite in the beach sands of New South Wales and Queensland, Australia. The concentrate containing these three minerals may be shipped as such or may be further processed to make a rutile, zircon-rutile, zircon, rutile-ilmenite or other combination product. Production and shipments stated herein are in terms of rutile contained in all these products.

For five years or more Australia has been the source of 55 to 70 percent of the world's rutile production, which was 25,600 metric tons in 1950. Australia's output in that year was about 18,600 metric tons, which was expected to be exceeded in 1951. Since 1947, Australia has shipped over 60 percent of its exports of rutile to the US and about 20 percent to the United Kingdom.

In the past ten years United States output, second generally to Australia's, has ranged from about 3,500 to about 12,000 tons, including some substandard materials. US consumption in 1948-50 averaged 11,200 tons and may have reached 20,000 tons in 1951, roughly double the anticipated rate of production. Consumption in excess of 31,000 tons annually is estimated for the next few years, in uses vital to the mobilization program. Rutile is not now being purchased for the strategic stockpile. However, largely by transfer from the World War II stocks, the stockpile contained 16,763 tons of rutile as of June 30, 1951. Industry stocks are equivalent to only a few months supply at current rates of use.

The loss of Australian rutile would present a severe problem to both the US and the rest of the Free World. Possible alternative sources are Brazil, French Cameroons and India. These countries formerly produced substantial amounts but in recent years have not been able to compete in price with Asutralia, and have almost ceased production. These alternative sources probably could be revived if necessary. Synthetic titania can replace rutile in some uses but is not accepted as a universal substitute.

Beryl. For some years Australia has been the leading Far Eastern producer, but its production amounts to less than 1 percent of the Free World's supply. South Korea provided a few tons during World War II, but none has been reported since 1945. Insignificant quantities have been produced in Japan. Reported Australian output from 1948 to 1950, dropped from about 54 to 23 metric tons of beryl concentrates of less than standard quality. Known Free-World output, on the contrary, has increased greatly reaching approximately 4,500 metric tons of concentrates in 1949, and considerably more in 1950-51. Since 1948, Australia's exports have been reserved for the United Kingdom.

Cadmium. Australia and Japan are the only Far Eastern producers of cadmium, a by-product of zinc production. In 1950, when the total estimated Free World production of cadmium was approximately 5,96? metric tons, Australia and Japan produced 525 and 90 metric tons respectively, or approximately 10% of the total Free World production.

The estimates that the cadmium situation was critical, which prevailed in 1951, are being modified in 1952. This is in part due to recalculations of requirements, under conditions both of partial and full mobilization, also, the adoption of "assisted" programs for lead, zinc, and cadmium and an attractive price for cadmium, have "firmed up" the estimates of the future supply of cadmium. Projected availability, when measured against foreseeable requirements including additions to strategic stocks, leave a modest surplus for the years 1952 through 1955.

The loss of the Far East supply, which flows primarily to the United Kingdom, would place an added burden on the United States. This could be met by the re-imposition of the more stringent end-use limitations, which were in effect during most of 1951. A possible alternative source for cadmium would be Africa.

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SECURITY INFORMATION

EFFECTS OF REMOVAL OF FAR EAST FROM THE FREE WORLD SUPPLY AND DEMAND FOR STRATEGIC METALS AND MINERALS

Unit – Metric Tons

	FREE WORLD TOTAL		FAR EAST TOTAL		FREE WORLD LESS FAR EAST		U.S. STOCKPILE
	Mine Production	Apparent Consumption	Mine Production	Apparent Consumption	Mine Production	Apparent Consumption	December 31, 1951.
BAUXITE	7,230,800	7,021,400	534,297	123,173	6,696,503	6,898,227	3,598,978
CADMIUM	5,966	5,725.6	615	169.9	5,351	5,555.7	2,705
CHROMITE	1,822,000	1,731,000	367,265	42,823	1,454,735	1,688,177	2,379,443
LEAD	1,473,200	1,600,500 a/	224,900	70,900 a/	1,248,300	1,529.600 a/	382,068
MANGANESE	3,595,652	3,618,000	180,667	213,282	3,414,985	3,404,718	2,336,947
NICKEL	119,613	123,364 a/	6,300	2,844 a/	113,313	120,520 a/	46,638
RUTILE	25,600	17,540	18,606	762	6,994	16,778	b/
TIN	166,000	146,000	105,600	5,950	160,400	140,050	147,944
TUNGSTEN	8,576	9,501 a/	2,376	231 a/	6,200	9,270 a/	20,433
ZINC	1,902,000	1,716,630	248,392	86,154	1,653,608	1,630,476	550,169

a/ Actual Consumption
b/ Except for surplus stocks transferred, rutile is not stockpiled.

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RUBBER

The free world received 75 per cent of its new rubber supplies from the Far East, South Asia, Africa and Latin America in 1950. This dependence was reduced to 64 per cent during 1951 and is expected to be diminished further to 60 per cent in US fiscal 1952 now that US synthetic rubber is being produced at the near capacity annual rate of 925 thousand tons. The Far East is the principal source of the natural rubber imports and still accounts for the major portion of the free world's new rubber supplies. South Asia and Africa each furnished less than 5 per cent while Latin America's contribution to these supplies is negligible. (Tables 1, 2 and 3).

Excluding the Far East, the free world could produce almost 1.4 million tons of natural and synthetic rubber per annum or 70 per cent of its record level of consumption achieved in 1950. (Table 4). This rate of output, together with government stock accumulations of 1.1 million tons (mainly in the U.S.) would thus enable the free world to maintain the 1950 consumption level of 2.0 million tons for 2 years from current production and stocks even if all supplies were cut off from the Far East during that period. However, maintenance for a period of five years of this annual rate of consumption, which would be adequate to meet all essential civilian and military needs 1/ of the free world under conditions of cold war, could require that existing and contemplated synthetic rubber production capacity be expanded by 350 thousand tons annually. Such expansion would entail the use of stainless steel, aluminum and other strategic materials which are now in scarce supply. With this increase in synthetic rubber output, the free world's new rubber position during the five years beginning in mid-1952 would be as follows:

	(In 000's long tons)
Natural Rubber Stocks Enroute to Free World from Far East as of July 1, 1952	175
Natural Rubber Commercial Stocks in Importing Areas	200
US Government Natural Rubber Stocks	980
Natural Rubber Stocks of Other Governments (Mainly the U.K. and France)	90
Synthetic Rubber Stocks	175

1/ It is the judgment of experts in the field that unessential civilian consumption of 1950 plus the curtailment of civilian rubber consumption resulting from the shortage of steel and other products will approximately compensate for the growing military requirements of the free world.

US and Canadian Synthetic Rubber Production from Existing Facilities - 5 years	5500
Western Europe Synthetic Rubber Production - 5 years (Based on present West German and Italian plans)	175
Natural Rubber Production of the Free World a/ - 5 years	1125
Total Supplies (Natural and Synthetic)	8420
Working Stocks Required for a 2.0 Million Ton Level of New Rubber Consumption (8% of Consumption)	-160
Net Supplies Available for Consumption - 5 years	8260
Yearly Supplies (8260 ÷ 5)	1650 b/
Additional Supplies of Synthetic Rubber Required to Achieve a 2.0 Million Ton Annual Level of New Rubber Consumption	350
Yearly Supplies for Essential Civilian and Military Requirements	2000 c/

Five important conclusions emerge from the preceding calculations:

(1) Government stocks would be completely dissipated by the end of the five-year period;

(2) Commercial stocks would be drawn down to minimum levels (slightly in excess of 4 weeks supply);

(3) The proportion of natural rubber in the total rubber supply would be 25 per cent, which is somewhat above the minimum necessary to insure against any debasement in the final products;

(4) The annual production of synthetic rubber in the U.S. and Canada will exceed their requirements; and,

(5) Annual production of natural and synthetic rubber in the non-dollar areas of the free world will not be adequate to meet the needs of these countries, thus necessitating imports from the U.S. and Canada.

The relatively small volume of synthetic rubber production which is envisaged for the free world outside the U.S. and Canada takes account of investment plans of the Federal Republic of Germany during the five year period under review to expand recently installed synthetic rubber facilities in that country and Italian plans to reactivate the German-built Pirelli plant in

a/ Excluding the Far East, which consists of Japan, South Korea, Taiwan, the Philippines, mainland of Southeast Asia, Indonesia, Australia and New Zealand.
b/ Of which 511.5 thousand tons or 31 per cent is natural rubber and 1,138.5 thousand tons or 69 per cent is synthetic rubber.
c/ Of which 500 thousand tons or 25 per cent is natural rubber and 1,500 thousand tons or 75 per cent is synthetic rubber.

Milan. The latter, with an annual capacity of 9 thousand tons, will come into operation within the next few months.

The absence of technical know-how, the difficulty in obtaining the strategic raw materials required to build synthetic rubber plants and the unfavorable prospects for competition with present rubber producers will serve as deterrents to other countries planning to install synthetic rubber plants. Thus, the additional annual output of 350 thousand tons required to provide the free world with the 2.0 million level of consumption may have to come from an expansion of existing facilities in the U.S. and Canada. Although synthetic rubber from the U.S. and Canada can be purchased for approximately half the price of natural rubber, there would be a general worsening of the world's dollar position (1) because of the loss of dollar sales of natural rubber and (2) because of the necessity of paying dollars for synthetic rubber imports. However, these difficulties could be minimized to some extent through a system of allocations which took account of the differing foreign exchange positions of importing countries and on ability to pay. Such a system should have due regard for the need to maintain a proper proportion between natural and synthetic rubber supplies in each individual country to assure the quality of the final rubber products.

Additional facilities for the production of reclaimed rubber do exist in the U.S. to the extent of 100 thousand tons annually which could offset in part some of the indicated deficit. However, the possibility of substitution of this additional reclaimed rubber for new rubber will depend on the types of rubber goods to be produced.

Although the denial to the free world of the Far Eastern natural rubber supplies would necessitate adjustments, the loss of such supplies from other producing regions would cause no hardship. The loss of imports of some 100 thousand tons and 65 thousand tons, respectively, from South Asia and Africa will be more than compensated by the reduced demand from the U.S. when the stockpile objective is achieved in mid-1954. South America produces only small quantities of natural rubber, most of which is consumed domestically. The Near and Middle East are not producers of rubber and consume only negligible quantities.

Table 1. ESTIMATED NATURAL RUBBER EXPORTS
(000's Long Tons)

FAR EAST	1950			1951 a/			1951/52 a/		
Total Exports	1610.0			1620.0			1565.0		
Minus Exports to Soviet Bloc	202.0			200.0			175.0		
Exports to Free World		1408.0			1420.0			1390.0	
SOUTH ASIA									
Total Exports	118.5			115.0			105.0		
Minus Exports to Soviet Bloc	0			5.0			0		
Exports to Free World		118.5			110.0			105.0	
AFRICA									
Total Exports	53.5			60.0			65.0		
Minus Exports to Soviet Bloc	0			0			0		
Exports to Free World		53.5			60.0			65.0	
LATIN AMERICA AND UNSPECIFIED									
Total Exports	3.0			3.0			negl.		
Minus Exports to Soviet Bloc	0			0			—		
Exports to Free World		3.0			3.0			—	
TOTAL EXPORTS TO FREE WORLD			1583.0			1593.0			1560.0
Exports to U.S.		777.0			750.0			735.0	
Exports to NATO		445.0			480.0			465.0	
Exports to Rest of Free World		361.0	1583.0		363.0	1593.0		360.0	1560.0

Source: Rubber Statistical Bulletin, November 1951, Vol. 6, No. 2
a/ ACS/DFI, Dept. of State and NPA Estimates.

Table 2. ESTIMATED NEW RUBBER SUPPLIES IN FREE WORLD
(000's Long Tons)

	1950		Percent of New Rubber Supplies		1951 a/		Percent of New Rubber Supplies		1951/52 a/		Percent of New Rubber Supplies	
IMPORTS OF NATURAL RUBBER												
From Far East	1408.0		66		1420.0		57		1390.0		53	
From South Asia	118.5		6		110.0		4		105.0		4	
From Africa	53.5		3		60.0		2		65.0		3	
From Latin America and Unspecified	3.0		negl.		3.0		negl.		negl.			
Total		1583.0		75		1593.0		64		1560.0		60
PRODUCTION OF SYNTHETIC RUBBER												
United States	476.2		23		845.0		34		975.0		37	
Canada	58.4		2		62.0		3		64.0		3	
West Germany	–		–		1.0		negl.		6.6		negl.	
Total		534.6		25		908.0		36		1045.6		40
TOTAL NEW RUBBER SUPPLIES		2117.6		100		2501.0		100		2605.6		100

Sources: Table 1 and Rubber Statistical Bulletin, Nov. 1951, Vol. 6, No. 2

a/ ACS/DFI, Department of State, and NPA estimates

Table 3. WORLD NATURAL RUBBER PRODUCTION
(000's Long Tons)

	1950	Percent of WORLD TOTAL	1951	Percent of WORLD TOTAL	1951/52	Percent of WORLD TOTAL
FAR EAST	(1645.0)	88.7	(1,655.0)	88.3	(1,585.0)	88.1
Malaya	694.1		615.0		590.0	
Indonesia	692.8		830.0		760.0	
Indochina	48.5		50.0		50.0	
Thailand	112.0		110.0		105.0	
Sarawak	55.6		48.0		48.0	
British Borneo	26.5		17.0		17.0	
Burma	10.6		11.0		11.0	
Oceania	2.3		2.0		2.0	
Other Asia	2.6		2.0		2.0	
NEAR and MIDDLE EAST	-	-	-	-	-	-
INDIA-PAKISTAN-CEYLON	(129.1)	6.9	(117.0)	6.2	(114.0)	6.3
Ceylon	113.5		101.0		98.0	
India	15.6		16.0		16.0	
AFRICA	(53.5)	2.9	(70.0)	3.7	(68.0)	3.8
Liberia	29.3		33.0		32.0	
Nigeria	13.4		22.0		21.0	
Belgian Congo	8.1		11.0		11.0	
French Africa and Other	2.7		4.0		4.0	
LATIN AFRICA	(27.4)	1.5	(33.0)	1.8	(33.0)	1.8
Brazil	19.9		24.0		24.0	
Other	7.5		9.0		9.0	
WORLD TOTAL	1,855.0	100.0	1,885.0	100.0	1,800.0	100.0

Sources: Rubber Statistical Bulletin, Nov. 1951, Vol. 6, No. 2, CIA and MPA estimates.

Table 4. FREE WORLD a/ CONSUMPTION b/ OF NEW RUBBER - 1950
(000's Long Tons)

	Natural	Synthetic	Total
United States	720.3	538.3	1,258.6
Other Nato Countries			
Belgium	12.1	1.0	13.1
Canada	46.1	22.6	68.7
Denmark	5.6	negl	5.6
France	99.9	7.4	107.3
Greece	1.6	negl	1.6
Ireland	3.5	negl	3.5
Italy	39.4	2.7	42.1
Luxembourg	1.8	negl	1.8
Netherlands	14.3	0.4	14.7
Norway	5.0	0.2	5.2
Portugal	1.9	negl	1.9
Turkey	1.9	—	1.9
United Kingdom	219.7	2.8	222.5
Subtotal Other NATO	452.8	37.1	489.9
Other Free World			
Austria	7.5	0.4	7.9
Federal Republic of Germany	78.6	3.4	82.0
Finland	4.6	negl	4.6
Spain	6.3	negl	6.3
Sweden	13.9	3.0	16.9
Switzerland	4.9	0.4	5.3
Yugoslavia	3.8	n.a.	3.8
Other Free World	124.3	0.4	124.7
Subtotal Other Free World	243.9	7.6	251.5
Total Free World	1,417.0	583.0	2,000.0
Free World Excluding U.S.	696.7	44.7	741.4

a/ Excluding the Far East, which consists of Japan, South Korea, Taiwan, the Philippines, mainland of South East Asia, Indonesia, Australia and New Zealand.
b/ Statistics for major consuming countries are actual consumption figures. In the absence of such data for minor consuming areas, import statistics are used. The difference between imports and actual consumption for these countries is not significant.

SOURCES: Rubber Statistical Bulletin and Department of State.

S E C R E T

Security Information

Petroleum

This study is based on the year 1952 with the assumption that no general war would occur in event of denial of the oil of any one of the specified areas. The data is considered adequate for general conclusions on the petroleum position of the United States, Canada and Western Europe in event of loss of these areas.

The loss of the Far East would result in a small surplus in the petroleum supply of the remaining non-Communist area. The excess of refining capacity over crude availability is too small to have a major impact on the overall position of the rest of the Free World.

The Far East is a petroleum deficit area with an estimated availability in 1952 of 13.8 million metric tons and a total requirement of about 18.5 million (including 3.3 million tons of bunkers), with a resulting deficit of 4.7 million tons. The refining capacity, including expansion plans for 1952, is about 17.4 million tons, or about 3.6 million in excess of the crude oil availability in the area. Indonesia and Borneo are the primary sources of this crude oil, while some is imported from the Middle East to fully utilize the existing refinery capacity. Since the bunker requirement of the Far East is the result of trade within the area and trade with the non-Communist world, it is assumed that in event of loss the bunkering requirement would disappear.

The petroleum balance for the remainder of the non-Communist world, including military requirements of the United States, Canada and Western Europe, would show a surplus of about 5.6 million metric tons, which is .9% of the total requirements amounting to 611.4 million. The loss of the area would therefore relieve the producing countries of the necessity of supplying petroleum to offset the small normal deficit. The loss of the refining capacity would have no impact on the refinery position of the non-Communist world.

In event of loss of the Far East except Japan, Australia and New Zealand, the petroleum balance for the remainder of the world would show an indicated deficit of 4.6 million metric tons. However, the refining capacity of Japan and Australia totals 5.3 million tons with only a .3 million crude availability. Additional crude could be supplied from the Middle East to utilize this capacity and eliminate the indicated deficit for the non-Communist world.

S E C R E T

TABLE I. Availability and Civilian Requirements in the Non-Communist World 1952 Assuming no General War
Thousand Metric Tons Crude Oil Equivalent

Countries	Crude Oil Availability	Crude Charging Capacity	Civilian Requirements 1/ Bunkers	Other Products	Total
US, Canada and Western Europe					
US and Possessions	379,800	367,375	18,352	378,579	396,931
Canada	7,250	23,620	777	20,768	21,545
Iceland	-	-	69	228	297
Norway	-	50	200	1,677	1,877
Denmark	-	31	141	1,940	2,081
United Kingdom	50	29,615	2,979	19,700	22,679
Netherlands	700	7,375	911	3,255	4,166
Belgium-Luxembourg	-	3,495	320	3,200	3,520
France	190	24,675	1,100	12,188	13,288
Italy	10	10,665	733	6,108	6,841
Portugal	-	500	250	778	1,028
West Germany	1,300	6,987	355	6,549	6,904
Finland	-	-	1	705	706
Sweden	-	1,190	363	4,946	5,309
Spain	-	2,435	1,959	1,697	3,656
Switzerland	-	200	-	1,531	1,531
Yugoslavia	150	400	-	322	322
Total	389,450	478,603	28,310	463,971	492,281
Far East					
Taiwan	-	842	20	172	192
Japan	300	4,280	310	2,828	3,138
Burma	50	100	15	226	241
Hong Kong	-	-	208	408	736
Other Continental Asia	-	-	775	2,281	3,056
British Borneo	5,000	3,275	293	117	410
Indonesia	8,500	7,900	517	1,308	1,825
Philippines	-	-	113	1,494	1,607
Australia	-	1,055	822	5,095	5,910
New Zealand	-	-	203	1,105	1,308
Other Pacific Islands	-	-	10	125	135
Total	15,850	17,452	3,336	25,222	28,558
Near East	114,400	50,295	10,264	10,263	20,537
South Asia	450	513	1,519	5,710	7,229
Africa	100	75	3,124	6,794	9,918
Latin America	122,500	80,971	9,179	39,100	48,279
GRAND TOTAL	630,750	627,909	55,722	541,080	596,802

1/ For the purposes of comparison in this study the requirements for petroleum products have been converted to crude oil equivalent. It has been assumed that the weight of the products available is 87 percent of the weight of the crude oil used in their production. For comparative purposes the same percentage relationship is assumed for the bunkering requirements as well as the requirements for other products. As in the case of availability the estimates have been based on information developed by the Petroleum Administration for Defense with the assistance of special industry committees. It is believed that the range of error is between plus 5 and minus 5 percent.

TABLE II. Relationship of Crude Oil Availability to Total Requirements
1952 Assuming no General War
Thousands of Metric Tons Crude Oil Equivalent

	Crude Oil Availability	Requirements: Civilian: Bunkers	Requirements: Civilian: Other Products	Requirements: Military	Requirements: Total	Surplus + or Deficit -
Total Non-Communist World						
US, Canada and Western Europe	389,450	28,310	463,971	33,150	526,431	-136,981
Far East	13,850	3,338	15,222	-	18,560	- 4,708
Near East	114,400	10,254	10,283	-	20,537	+ 93,863
South Asia	450	1,519	5,710	-	7,229	- 6,779
Africa	100	3,124	6,794	-	9,918	- 9,818
Latin America	112,500	9,179	39,100	-	48,279	+ 64,221
Total	630,750	55,722	541,080	33,150	629,952	+ 798
Loss of Far East						
US, Canada and Western Europe	389,450	28,310	463,971	33,150	526,431	-136,981
Near East	114,400	10,254	10,283	-	20,537	+ 93,863
South Asia	450	1,519	5,710	-	7,229	- 6,779
Africa	100	3,124	6,794	-	9,918	- 9,818
Latin America	112,500	9,179	39,100	-	48,279	+ 64,221
Total	616,900	52,386	525,356	33,150	611,394	+ 5,506
Loss of Near East	516,350	55,722	530,797	33,150	619,669	-103,319
Loss of South Asia	630,300	54,203	535,370	33,150	622,723	+ 7,577
Loss of Africa	630,650	52,598	534,286	33,150	620,034	+ 10,616
Loss of Latin America	518,250	46,543	501,980	33,150	581,673	- 63,423

SECRET

SECURITY INFORMATION

SHELLAC

SUMMARY

The Far Eastern lac producing countries, Burma, Thailand, Indo-China, and Malaya, together produce about 25 per cent of the world's crude or sticklac. The proportion of the world's unbleached shellac which these countries produce is much smaller, although unknown.

Should India, the main source of the world's shellac, be lost, but not the Far Eastern producing countries, part of the crude lac which they normally export to India for processing, could in time be processed locally, particularly in Thailand. This would require training of the natives and furnishing the necessary equipment.

For a description of shellac, its uses, and substitutes, reference is made to the report on India and Pakistan.

THAILAND

If Indian supplies of shellac to the Western World were interdicted, the available production of unbleached shellac in Thailand would be far from sufficient for US requirements, as average output is less than one-fourth that of India. However, production has been increasing, and intensive training of natives in the processing of sticklac for one or two years would materially increase output of unbleached shellac, if the necessary equipment is made available.

Production of Thai shellac in terms of unbleached shellac equivalent, has been reported as follows (in thousands of pounds).

1947	8,669
1948	18,816
1949	9,858
1950	17,251

Information on production of unbleached shellac is not available except for 1949 when about 11,000,000 pounds were produced. There are about 30 lac-producing plants in Thailand and establishment of additional ones in new localities is contemplated.

Prior to World War II most of the harvest of sticklac was exported to India for processing, the remainder being processed for consumption by local lacquerware industries.

[illegible]

Beginning about 1947, US and Japanese experts went to Thailand to aid in the development of processing sticklac, and more recently, Thailand sent representatives to India to study processing methods. As a result, Thai exports of unbleached shellac directly to consuming countries have been increasing since the war, and exports of sticklac to India have decreased. Nevertheless, Thailand is still dependent on India for processing an appreciable portion of its crude lac. About 60 to 70 per cent of Thailand's production of sticklac is shipped as unbleached shellac directly to the US. The percentage of US shellac imports coming from Thailand has increased each year from 6 per cent of imports from all countries in 1947 to almost 34 per cent in 1950.

Actual volume of these imports are shown below (in thousands of pounds):

	Unbleached	Bleached
1947	2,490	704
1948	6,183	2,063
1949	10,424	648
1950	13,499	311

Thailand export statistics are complicated by the fact that there are imports from Indo-China and India.

The quality of Thai shellac is said to be generally inferior to that of the Indian product. Only very small quantities of the Thai product have been acquired for stockpile, and consist of the lowest grade.

INDO-CHINA

Loss of Indo-China would have no direct effect on the Free World's supply of shellac because the country exports only the crude lac. Indirectly, however, the small quantities of crude lac which it exports to nearby countries for processing would reduce slightly exports of unbleached shellac by the processing countries.

Production of unbleached shellac in Indo-China has been reported as follows (in thousands of pounds):

1935-39	1,530
1947	1,229
1948	1,129
1949	299
1950	126

Exports of sticklac in 1949 and 1950 amounted to the following (in thousands of pounds of equivalent unbleached shellac):

1949 (1st nine months	175	To Thailand
1950	(52	To Hong Kong
	(73	To Thailand

The US imports no shellac from Indo- China.

BURMA

The loss of Burma but not of India would affect the US in the same manner and possibly to a greater degree than would be the case with Thailand under similar conditions - namely by reducing India's production of unbleached shellac from imported sticklac. Conversely, if Burma should not be lost, but India were lost, the effect would be almost the same because adequate sticklac processing facilities are not available in Burma.

No information on Burmese production or trade in lac and shellac is available. Much, if not most of the sticklac output, is exported to India for processing. No efforts to develop a processing industry in Burma have been reported.

The US does not import any shellac from Burma, and it is doubtful whether any unbleached shellac is produced there at all, other than small quantities for local handicrafts industries.

MALAYA

Small quantities of sticklac are collected in Malaya, but no production or trade data are available. The loss of Malaya would have no appreciable effect on supplies of shellac for the Free World.

S-E-C-R-E-T
SECURITY INFORMATION

INDUSTRIAL RESOURCES

Summary and Conclusions:

The evidence indicates that at the present time and in light of present performance and of factors now at work, it is unlikely that the loss of the Far East could be regarded as constituting a critical loss to the rest of the free world insofar as industrial resources are concerned, inasmuch as the Far East is a net importing region. In the case of Japan and Australia, although the present loss would not be significant, the loss at some time in the future under certain conditions might be serious. The only significant category of industrial products for either is machinery, equipment and instruments (as itemized in the accompanying tables), hereafter called machinery.

Present Level of Significance of Japan and Australia:

Japan in the first half of 1951 exported machinery at an annual rate of $114.8 million, or roughly 4 per cent of the annual rate of machinery production for the month of July 1951. This current annual rate of production, in turn, is approximately one-third of Japanese machinery production for the peak war year 1944. Of total current machinery exports, roughly two-thirds stay in the Far East. South America is the only other major machinery customer, receiving in the first half of 1951 about 17 per cent (or $20 million at an annual rate), which is insignificant quantitatively to South America as a whole in absolute terms, although it is possible that it has quantitative or qualitative significance to one or more individual countries. As for Australia, she is a net importer of manufactured goods. She imports 27 times (1949/50 data) as much machinery as she exports. Her major machinery customers are in the Far East (New Zealand and Southeast Asia), so that loss of the area as a whole would mean, arithmetically, a gain to the rest of the free world.

Possible Change in Conditions:

Both Japan and Australia could expand production, after which expansion the total loss to the free world of production capacity would be correspondingly increased. Even so, machinery exports are still not likely to be significant, though it is possible that on-the-spot consumption by the United States and/or countries of Western Europe could be appreciably increased. In this event,

S-E-C-R-E-T

however, the loss of the area would probably obviate the need or usefulness for such local consumption. Of course, it is possible that only parts of the Far East might be lost, but such contingent permutations of possibilities have been regarded as outside the frame of reference of this paper.

The United States may continue to assist in the further development of Japan, with her consent, over the next few years as either (1) an arsenal in the Orient and/or (2) a basic industrial supplier to free Asia. The decision would have to be made as to the goal. Then an assessment would be necessary as to the kind and amount of reallocation of productive resources and elimination of certain lines of production which would be required in each country, within the limits of feasibility, in order to maximum the fulfillment of the qualitative goals sought. There is evidence for thinking that capitalizing on idle capacity and the potential for expanded capacity could produce a significant increase in key categories within a few years by such a reallocation program, provided that the United States and the rest of the free world were willing to supply both the required raw materials and substantial financial assistance to pay for them. In such an event--having once decided to build up Japan industrially or militarily--then the free world should, of course, stand to lose its investment as well as the expanded level of production which would have been achieved by the investment.

Using SCAP statistics and projections therefrom, without attempting critically to evaluate them, Japanese machine output could be doubled by 1954, to reach a level of roughly 7 per cent of free world machinery output. At the same time, exports could be increased fivefold if, in addition to increased commercial exports approximately in proportion to increased production, the United States government should decide to increase her on-the-spot procurement substantially. These estimates depend not only on Japanese performance and United States cooperation, but also upon successful investment and trading arrangements by Jap an with the countries of Southeast Asia. As to Australia, any projection would depend upon United States willingness to supply capital equipment. Having mineral resources and an integrated steel industry, Australia could expand considerably in time of emergency. As in the case of Japan, however, this expansion would not mean significant increases in exports to countries outside the Far East unless such outside countries consumed their purchases in the Far East.

Difficulties of Analysis:

There are a number of difficulties which make it impossible to arrive at anything like a precise statistical answer to the problem at hand. In the first place, Australia is industrialized only in a limited and specialized sense and both Japan and Australia depend substantially upon imports from relatively near-by areas, or from the United States, for raw materials. Hence the significance of the loss of either country depends upon the assumptions. Thus, in neither case would it be critical if (1) the surrounding source areas had been previously lost, and/or (2) United States exports were no longer available either due to shortages at home or elsewhere in the free world or because trade channels were cut off.

Second, it is difficult to estimate precise production, consumption, export, or import figures for heterogeneous items as long as they are quoted in money terms. Yet data are mostly available in such terms. Prices change and the exchange ratios between the domestic currency and United States dollars change. Price variations differ from commodity to commodity, and export and import prices differ for the same commodity according to the trading partner involved. However, even when variables can be quoted in quantity terms, there is then such a plethora of different categories that it is almost impossible to give a comprehensive list. If quantity figures are used, it is possible at most to list a few key products.

Finally, the loss of a country should be ideally assessed on a net basis. That is, it is not only a question of a country's present export figures for commodities under study, but rather of the net contribution to free areas outside that country--which might be calculated by subtracting non-consumed imports of each type of industrial goods from the sum of the gross exports of the corresponding type. Such a precise computation was not feasible for the present breakdown of commodities under the terms of reference of this study and would be difficult for industrial products for any country under any circumstances. Hence it has been impossible to pin-point the net effect of the loss of either country, commodity by commodity. The seriousness of this limitation is probably greater in the case of Australia than in the case of Japan.

JAPAN

Production and Capacity:

Machinery and equipment of all classes produced in Japan in 1951 had an estimated value of about $3 billion (see Table 1). At an estimated value of $1150 per metric ton, production would have totalled 2.6 million tons, so it can be roughly estimated that production of machinery ranged between 2 and 3 million tons.

If machinery production in 1932-1936 be taken as 100, peak war production (1944) was 718, capacity at the end of 1950 was 350, and the annual rate of production during July, 1951, was 222. In other words, latest production figures show that about one-third of December 1950 capacity was idle as late as July 1951, and that December 1950 capacity was half of Japan's historical maximum.

Over-all machinery production could be increased by 1954 from the 1951 index of 222 to an index of 400 to 500 by (1) increasing the capacity for producing certain machinery components up to 30% to alleviate bottlenecks and by (2) converting some of the surplus idle plant capacity to needed machinery components.

Japan has the necessary capabilities, skills and labor supply for expanded production. There is a present shortage of electric power and raw materials for iron and steel production. Electric power shortage can be eliminated by the building of new plants, some of which are under construction. Part of the present power shortage is due to a temporary shortage of water for the hydro plants. As to steel, the war left the bulk of the producing plant still intact, the problem has not been capacity but rather raw materials, particularly coking coal, iron ore, and manganese.

It would seem that the solution of the crucial raw materials situation is contingent upon Japanese success at negotiation with source areas and investment in Southeast Asia, and that if successful she should have no difficulty producing enough steel to meet the requirements of a doubled machine output.

Japan's production capabilities cover all components of the machinery industry, and hence the industry is capable of concentrating upon one or another type of machinery production as requirements dictate. In some fields such as armaments production, expansion would be slow because a large quantity of special single-purpose machines required for such production has been removed from the Japanese economy by the US and Allies. SCAP destroyed some of these single purpose machines and the rest of the SCAP machine tool reparation requisitions are in storage and are potentially available for Japanese industry. In some cases such as machine tool production, a large percentage of plant capacity is standing idle due to lack of economic demand.

Exports:

Exports of machinery have been steadily increasing. During the first six months of 1951 they reached an annual rate of $114.8 million, compared to an annual rate of $51.6 million for the first half of 1950 (see Table 3). During the first half of 1951 Asia received 65 per cent, South America 17 per cent, North America 9 per cent, Europe 7 per cent, and the remaining 2 per cent went to Africa, Australia, and Oceania.

Machinery exports during this time constituted about 4 per cent of production value; and these exports of machinery constituted about 9 per cent of the value of all exports. United States government procurement of Japanese machinery for Korea in fiscal year 1950/1951 was $60 million. Total exports might be increased fivefold by 1954 with expanded production and increased United States procurement, which could be greatly expanded if military needs should so dictate. Table 4 shows SCAP's estimate of Japan's power to increase exports of capital goods, assuming (1) considerable increases in United States procurement, (2) a planned program of relating Japanese industry to United States industry and needs, and (3) a greatly expanded trade with Southeast Asia. Obviously, this expansion depends in large measure on United States policy, but it also depends upon Japanese ability to conclude economic agreements with the countries of Asia.

AUSTRALIA

Australia has an unbalanced, thin, and undeveloped industrial plant and has a small over-all labor force and a small labor force in manufacturing. Of a total work force of 2.6 million in the fall of 1951, there were 918,000 in factory industries, and a third of these were in the metal-working industries. Australia's capacity to expand industrially is severly limited not only by a shortage of a specialized work force but also by a limited and inflexible capital plant and a shortage of fuels and even of certain other raw materials. Furthermore, whatever expansion might be forthcoming would be at the expense of her agricultural production, which is of real significance to the industrial complex of the free world as a whole. In any case, Australia is a net importer of manufactured goods. She imports 65 per cent as much as she produces ($614 million in 1949/1950) and exports only 2.4 per cent as much.

Table 5 shows the major lines of production (and of export) of industrial products, which is concentrated in four major categories--electrical machinery, industrial machinery, instruments, and vehicles, together designated herein as machinery. While Table 5 presents these data in value terms (in both Australian pounds and United States dollars at the current exchange rate), Table 6 selects certain sub-categories and presents them in both quantitative and value terms. The total production of machinery as presented in Table 5 was A£ 220,073,000 in 1948/49 and A£ 272,883,000 in 1949/50 (while because of the devaluation of the Australian pound this same output measured in United States dollars appears to decline -- $706,400,000 in 1948/49 and $614,000,000 in 1949/50. These figures include a high percentage of final-stage production out of imported parts. Thus in the case of motor vehicles Table 6 shows that in 1948/49 only some 20,000 vehicles valued at A£ 24,800 were completely manufactured in Australia, although total consumption was approximately 200,000 passenger cars and trucks, practically all of which were merely assembled in Australia. Table 7 shows the World War II production of a few selected war-goods to indicate something of Australia's capacity along this line in time of emergency. Finally, it should be noted that steel capacity is basic to the entire Australian industrial capacity, and in 1943 steel capacity was 1,626,000 tons, while at present it is 1,750,000 tons.

Turning now from production to trade figures, it must be stressed that exports do not reflect Australia's contribution to the free world without relating them to production and import data. Hence, Tables 5 and 6 are set up on a basis which makes possible a comparison of the three variables. The most salient fact about Australia which emerges from these tables is that however much industrial merchandise she exports -- which is mostly to New Zealand and the rest to Southeast Asia and to the Union of South Africa --, her net role is that of a drawer on world markets for manufactured commodities. Gross exports of machinery as shown in Table 5 amounted to only $13 million in 1949/50, which is only 3.3 per cent of the value of imports and about 2 per cent of machine production.

TABLE 5. AUSTRALIA

PRODUCTION, EXPORTS AND IMPORTS OF MACHINERY
1948/1949 and 1949/1950
(Dollar value in millions, L (Australian) value in thousands)

Commodity Group	Production 1948/49 1/ United States dollars 3/	Production 1948/49 1/ L Australian	Production 1949/50 1/ United States dollars 3/	Production 1949/50 1/ L Australian	Exports 2/ 1949/50 United States dollars 3/	Exports 2/ 1949/50 L Australian	Imports 1949/50 United States dollars 3/	Imports 1949/50 L Australian
Electrical machinery, apparatus and equipment, including wireless radio equipment.	143.2	44,622	122.7	54,518	2.6	1,157	55.0	24,460
Vehicles, aircraft, ships and parts 4/	256.8	79,991	224.2	99,658	2.0	901	183.5	81,547
Optical, surgical and scientific instruments and appliances and photographic goods	16.3	5,076	12.9	5,733	1.8	817	13.7	6,089
Industrial machinery, plant and equipment 5/	290.1	90,384	254.2	112,974	8.6	3,806	147.3	65,468
TOTAL	706.4	220,073	614.0	272,883	15.0	6,681	399.5	177,564

1/ Production is defined here as wholesale selling value at the factory including by-products.
2/ Domestic exports only.
3/ Converted from L (Australian) 1948/1949 at 1 L = $3.21; 1949/1950 at 1 L = $2.25.
4/ This category excludes the value of motor vehicle repairs, motor vehicle accessories and horse-drawn vehicles.
5/ This category also includes agricultural implements as well as engineering products and plant and equipment not described in detail in the sources.

Sources: Summary of principal statistics of Factories: Australia 1949-1950; Commonwealth, Bureau of Census and Statistics, Canberra, Australia.
Production Bulletin #43 1948-1949, Commonwealth, Bureau of Census and Statistics, Canberra, Australia.
Oversea Trade 1949-1950 #47 Commonwealth, Bureau of Census and Statistics, Canberra, Australia.

Table 1. Japanese Output and Capacity of Machinery, in Value Terms, Current and Projected

(Millions of dollars)

Product	Actual output			Capacity 1/	
	1949	1950	1951	Actual Dec. 1950	Projected 1954-56
Transportation Equipment	246	437	1094	2011	2924
Electrical Equipment and Supplies	196	308	821	1297	1929
Professional, Scientific, and Precision Instruments	28	43	114	184	274
All Other Machinery	252	319	931	1498	2224
TOTAL	722	1107	2960	4990	7351

1/ The last 2 columns are at July 1951 prices.

Source: Japan's Industrial Potential, Vol. II, Oct. 1951.

Table 2. Japanese Output and Capacity of Machinery, in Physical Units, Current and Projected.

Product	Unit	Actual Output July, 1951 at an Annual Rate	Capacity Actual Dec. 1950	Capacity Projected 1954-56
Transportation Equipment				
Ships				
New Construction				
Civilian Shipyards 1/	1,000 GT	229	802	1,028
Ex-Naval Shipyards	1,000 GT	0	-	90
Aircraft	Units	0	0	1,500
Railway Rolling Stock				
Locomotives, Steam and Electric	Units	163	744	744
Freight and Passenger cars	Units	11,124	15,500	15,500
Industrial Rolling Stock				
Locomotives	Units	468	1,308	1,500
Freight Cars	Units	22,020	56,300	77,300
Motor Vehicles				
Heavy Trucks and Buses	Units)	26,400	3,360	4,800
Standard Trucks and Buses	Units)		33,000	52,800
Small Trucks and Passenger Cars	Units	9,444	16,000	24,000
Three-Wheel Vehicles	Units	42,832	47,760	65,000
Motorcycles	Units	10,404	5,880	13,500
Motor Scooters	Units	16,362	24,000	24,000
Bicycles and Trailers				
Bicycles 2/	1,000 Units	702	2,059	3,600
Trailers	Units	9,312	281,664)	432,000
Pedicabs	Units	0	12,200)	
Industrial Machinery	1,000 MT	912	1,346	2,000
Power Transmission Equipment	MT	24,156	-	-
Pumps	MT	20,532	-	-
Fan, Blower, Compressor	MT	8,040	-	-
Conveyor	MT)	55,224	-	-
Crane, Derrick and Winches	MT)			
Mining & Excavat. Mchy.	MT	33,900	-	-
Construction Machinery	MT	12,312	-	-
Grinding & Crushing Mchy.	MT	6,180	-	-
Iron & Steel Wks Coke Oven	MT	147,564	-	-
Furnace, Foundry Ept.	MT	14,680	-	-
Metal Forming Machinery	MT	105,012	-	-
Chemical Machinery	MT	76,800	-	-
Pulp & Paper Machinery	MT	15,792	-	-
Rubber Working Mchy.	MT	4,080	-	-
Wood Working Mchy.	MT	7,704	-	-
Printing Mchy.	MT	9,348	-	-
Textile Machinery	MT	226,656	-	-
Food Products Mchy.	MT	19,152	-	-
Steel Ribs and Bridges	MT	181,080	192,000	255,600
Bearings	MT	5,880	6,948	10,100
Boilers	MT	21,864	26,592	47,000
Turbines	MT	2,532	9,840	11,000

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Table 2. Japanese Output and Capacity of Machinery, in Physical Units, Current and Projected.

Product	Unit	Actual Output July, 1951 at an Annual Rate	Capacity Actual Dec. 1950	Capacity Projected 1954-56
Industrial Mchy. (Cont'd)				
Internal Combustion Engines	MT	9,444	81,534	95,400
Machine Tools	MT	5,652	14,400	16,300
Electrical Machinery				
Standard Motors	Units	386,928	480,000	570,000
D.C. Generators	Units	3,768	9,120	13,560
Standard Transformers	Units	130,704	199,200	199,200
Electric Fans	Units	205,980	182,724	210,000
Storage Batteries	1,000 MT	11	18	27
Dry Cells	1,000 Unit	88,212	132,000	260,000
Vacuum Tubes	1,000 Unit	14,868	18,120	22,000
Electric Light Bulbs	1,000 Unit	247,728	465,000	465,000
Miscellaneous Machinery				
Clocks & Watches	1,000 Unit	3,122	4,800	4,800
Binoculars	Units	276,816	250,000	500,000
Cameras	Units	249,552	275,000	400,000
Typewriters, Japanese	Units	7,944	12,000	20,400

1/ 1950 annual rate is eight-month moving average, converted to an annual basis.
2/ Annual capacity data are for 55 large manufacturers only; total, December 1950, incl. small manufacturers, 4-5 millions.

Source: Japan's Industrial Potential, Vol. II, 20 October 1951

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Table 3. Japanese Exports of Machinery
January 1950 to July 1951

(Millions of dollars)

ITEM	Jan-June 1950	July-Dec. 1950	Jan-June 1951
Transport Equipment	10.8	22.1	22.5
Electrical and Communications Machinery and Apparatus	3.0	4.8	6.8
Machinery, Other than Electrical	12.0	18.1	28.1
Engines Turbines and parts	1.9	2.2	
Textile Machinery	7.5	12.0	
Industrial Machinery N.E.C.	1.2	1.4	
Office appliances and printing mchy.	0.3	0.3	
Construction and Mining Equipment	0.1	0.3	
Agricultural Machinery	0.1	0.1	
Miscellaneous Machinery	0.9	1.8	
TOTAL	25.8	45.0	57.4
Percentage of Total Exports	8.6	8.6	8.7

Note: The annual rate of machinery exports during Jan-June 1951 was about 4 percent of the estimated $2960 million value of production in 1951.

Source: Japanese Economic Statistics, Section II, Foreign and Domestic Commerce Bulletins up to # 59 July 1951 - SCAP.

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Table 4. Disposition of Japanese Factory Output, Current and Projected 1/

(Billions of dollars)

	Actual		Projected 1/				
	1950	1951	1952	1953	1954	1955	1956
Value of all factory output 2/	8.0	10.7	12.1	16.3	18.5	20.2	20.6
Value of machinery output	1.9	3.0	3.6	5.2	6.3	7.2	7.4
Exports of machinery							
(1) Commercial	0.1	0.1	0.3	0.5	0.5	0.5	0.6
(2) Investment in SE Asia			0.2	1.0	0.6	0.5	0.2
Sub-total	0.1	0.1	0.5	1.5	1.1	1.0	0.8
(3) U. S. procurement	-	0.1	0.4	0.6	1.1	1.7	1.9
Total exports	0.1	0.2	0.9	2.1	2.2	2.7	2.7
Domestic machinery consumption							
(1) Capital investment in Japan	1.8	2.8	2.6	2.6	2.4	2.0	1.6
(2) Japanese security forces	0.0	0.0	0.1	0.5	1.7	2.5	3.1
Total domestic consumption	1.8	2.8	2.7	3.1	4.1	4.5	4.7
Value of other factory production	6.1	7.7	8.5	11.1	12.2	13.0	13.2
Exports of other factory products							
(1) Commercial	0.7	1.2	1.2	1.9	2.2	2.5	2.5
(2) U. S. procurement	-	0.2	0.5	1.5	1.5	1.6	1.6
Total exports	0.7	1.4	1.7	3.4	3.7	4.1	4.1
Domestic consumption of other factory products							
(1) Japanese consumers and government use	5.3	6.2	6.5	7.0	7.3	7.5	7.7
(2) Japanese security forces	0.1	0.1	0.3	0.7	1.2	1.4	1.4
Total domestic consumption	5.4	6.3	6.8	7.7	8.5	8.9	9.1

1/ Table 4. summarizes a SCAP study on Japan's Industrial Potential which "envisages the practical implementation of a plan for the mobilization of the Japanese industrial potential for United States military procurement within Japan. Consideration of this multifaceted problem is predicated upon an appreciation of the mutual advantages to accure to both the United States and Japan with due reference to vital factors of the world shortage of strategic materials, the individual national rearmament programs of the Western Powers and the international Military Defense Assistance Program sponsored by the U.S."..Vol. I, page 1.

"The appraisal of Japan's industrial potential as given in this report is not a plan to reorganize and direct Japanese industry solely in the interests of U. S. procurement. Neither is it offered as a plan for U.S.-Japanese cooperation. Rather, it is a summarization of the plans and ambitions of Japanese industrialists themselves, together with a consideration of some of the problems that will be encountered in achieving these plans, and an appraisal of the mutual benefits that may be derived by the free world."..(Vol.II, page 2).

2/ 1950 values in 1950 dollars; all other values in 1951 dollars.

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Table 6.

QUANTITY AND VALUE OF AUSTRALIAN PRODUCTION, EXPORTS AND IMPORTS OF MACHINERY
MOST RECENT YEARS AVAILABLE

AL in millions

	Production 1948-1949		Exports 1949-1950		Imports 1949-1950	
	Quan.	AL	Quan.	AL	Quan.	AL
Motor vehicles	20,190	24.8	—	.7	—	73.1
Aircraft engines	n.a.	n.a.	144	0.1	133	0.2
Motor vehicle engines	18,000 e/	n.a.	12	..	1,767	0.2
Marine engines (gas)	3,083	0.3	444	0.1	3,399	0.1
Diesel engines	n.a.	—	126	..	631	0.3
N.E.S. Diesel	4,425	1.0	497	0.1	5,971	2.3
Gasoline, etc., engines	21,669	1.4	201	..	16,214	0.5
Road making machinery		1.1		0.3		0.3
Earth-moving machinery		1.4	1/	1/		3.6
Machine tools, lathes		0.7	2/	2/		1.0
" " , other		1.2		0.1		1.8
other metal working mach.		1.2	—	0.1	—	
Tractors and road rollers	6,946	n.a.	323	0.1	27,572	15.3
Harvester (complete)	2,271	1.1 3/	—	0.1	17	..
Optical instruments	n.a.	1.2	—	..	—	0.8
Surgical and medical inst.	—	0.5	—	0.3	—	1.4

(AL = $3.21, 1948-49; $2.25, 1949-50)
(..) = Less than AL 50,000
e/ i= estimated
— not available

1/ Included with road-making machinery.
2/ Included with "Machine tools, other".
3/ Production excludes 242 Harvesters assembled, the value of which is not available.

Source: Overseas Trade 1949-50 #47, Commonwealth, Bureau of Census and Statistics, Canberra, Australia

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TABLE 7

AUSTRALIA'S WARTIME PRODUCTION FISCAL YEAR 1943

(Peak Year)

Armored vehicles	3,000 units
Mortars	1,000 units
Rifles	138,000 units
Machine guns	48,000 units

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FAR EAST

Agricultural Significance of the Far East to the United States, U.S. Allies, and "Other Non-Communist" Areas

Summary

The Far East is an important source of several strategic commodities to the US, US Allies, and many "other non-Communist" countries, and also a source of several important basic commodities upon which US Allies and "other non-Communist" areas are greatly dependent. The loss of the entire area, or of various important segments of it, would be a severe one.

The commodities considered in this report are as follows: Abaca, Apparel Wool, Rice, Wheat and Wheat Flour, Copra and Coconut Oil, Cinchona Bark, (source of quinine and quinidine), Silk, Dairy Products, Meat, Palm Oil, Black Pepper, Tea, and Sugar.

See Appendices 1-13 attached for detailed statements and tables on each of the commodities.

Important Commodities

1. Abaca - The loss of the Far Eastern source of abaca in the Philippines, would mean the loss of about two-thirds of the United States' imports of abaca, and about 85 percent of the Free World's supply. Philippine abaca exports averaged about 80,000 metric tons annually during the 1948-50 period. Latin America is the source for the remaining 15 percent of world abaca supplies. Under the impetus of a law passed by Congress in 1950 production in the Western Hemisphere is expected to increase from the present 10,000 to 15,000 tons to about 30,000 tons annually. The US stockpiles abaca and had on hand on 31 December 1951, 61 percent of the 81,648-ton stockpile objective. US Allies are fully dependent on the Far Eastern abaca supply and a loss of that area would shift their dependence to the smaller US controlled Latin American source.

Abaca, commonly called manila hemp, is durable and possesses a high degree of tensile strength. These qualities combined with its ability to withstand the action of salt water make it ideal for marine manufacture and use. Its main uses include marine cordage and nets of all kinds, drilling cable, rope, wire rope centers, pulp for specialty paper, etc. Substitutes such as sisal, henequen, nylon, wire, and steel chains can replace abaca for many but not all uses, but often at a sacrifice of quality.

Further plantings of abaca in Latin America, which would almost certainly require additional large scale investment on the part of the U.S. government, without assurance of entirely satisfactory results, could to some extent, and after several years, offset the loss of the Philippines. At least for a number of years to come the loss of the Philippines would leave the Free World with a serious deficit in abaca, manageable only through an effective program for utilizing substitutes in the less essential uses.

2. Apparel Wool - The apparel wool surplus producing countries of the Far East -- Australia and New Zealand - export about two-thirds of the World's exportable supply of wool. Average annual exports in recent years from these two countries totalled about 360,000 metric tons, clean basis. World production of apparel wool is about 800,000 metric tons annually, of which Australia and New Zealand together produce about 390,000 tons clean basis. The United States must import about two-thirds of its requirements of apparel wool. In the 3-year period 1948-50 an average of 41 percent of US imports originated in Australia and New Zealand.

The loss of this area would result in serious hardship to the industrial and military efforts of the Free World. The remaining world supply would be inadequate both as to type and quantity to meet the minimum needs of the military of the United States and its Allies at current consumption levels.

The United States probably is in a less critical position than are some of the Allied countries. The U.S. has a large supply of fibers that may be substituted for wool to a large extent, including cotton, re-used and re-worked wool, and many synthetic fibers. In military fabrics, the synthetic fibers generally are not substituted for wool to a proportion greater than 15 percent though this could be increased to at least 25 percent and still retain good wearing qualities.

The U.S. is stockpiling wool, principally in the form of fabrics and end items. By 30 June 1952 it is anticipated that the "authorized war reserve" objective of 45,360 metric tons (an amount almost equal to the annual US wool clip) will be delivered. This supply is considered large enough to provide industry time in which to procure new wool and process it into end items in case of an emergency.

3. Rice - The rice surplus producing countries of Southeast Asia -- Burma, Thailand, and Indo-China-produce about 70 percent of the world's exportable supply

of rice. The loss of this source would be serious to such other areas of the Far East as remained in the Free World, and to India and Ceylon. Malaya and Ceylon would be in a critical situation, reduced to dependence on the wheat surplus areas, and India, Indonesia, and Japan would be seriously affected. In theory, at least, there may be sufficient grain in the United States and Canada to fill the gap caused by this loss of rice. In practice, however, because of exchange problems, because the people in the areas involved are normally rice eaters, and a probable reluctance on the part of exporting countries to "give away" grain in adequate amounts and reduce reserves, would result in widespread hardship, and very likely starvation, in the chief rice importing nations. It is very possible, of course, that the loss of the rice surplus producing areas would be attended by loss of some of the deficit areas (for example, Malaya) which would reduce the demand on the Free World. No country outside of Asia would be seriously affected by the loss of the rice.

4. Wheat and Wheat Flour - The only wheat surplus producing country of the Far East -- Australia -- exports about 13 percent of total Free World exports of wheat. Annual exports have averaged about 3 million tons in recent years. The fact that Australia is the most important non-dollar exporter of wheat greatly enhances its importance to dollar-short importing countries. Loss of this source would be an extremely serious one to such countries as the United Kingdom, Egypt, India, Japan, and New Zealand and several other Far Eastern countries. Furthermore, from the supply standpoint it might be difficult for the other exporting countries to replace Australian grain without reducing reserves too far below desirable levels and without undertaking to lend or grant the funds required to buy grain. On the other hand, the rest of the Far East is a deficit area by about the amount of Australia's surplus, and the loss of the entire area would not represent a net drain on Free World sources. The adjacent South Asia area, which imports over 40 percent of Australia's wheat, is also a heavy deficit grain area. Of the European countries, only the United Kingdom consistently imports large quantities of grain from Australia.

5. Copra and Coconut Oil - Three surplus-producing countries of the Far East--the Philippines, Indonesia, and Malaya--contributed in 1950 nearly 75 percent (about 1,275,000 tons) of the world's exported supplies of copra and coconut oil which, in terms of copra equivalent, approximated 1,750,000 metric tons.

Coconut oil, a by-product of copra, is used extensively in the manufacture of soap and, in Europe and other countries (though not in the U.S.) in the production of margarine and shortening. It is important as a source of lauryl alcohol, essential in the manufacture of all-purpose synthetic rubber. Derivatives of coconut oil are used as plasticizers in the milling of rubber goods and in the production of a large number of chemical specialities, especially synthetic detergents and disinfectants. Finally, coconut oil is an important ingredient in the manufacture of napalm bombs.

The U.S. is almost wholly dependent upon the Far East (specifically the Philippines, to which country import duty and processing tax concessions have been granted) for copra and coconut oil. The U.S. has a stockpile objective of 122,472 metric tons which has nearly been met. The fact that the U.S. is now a major exporter of other fats and oils, combined with the good stock position, reduces U.S. dependence on the Far East source. Other fats and oils can be used interchangeably with coconut oil for many purposes, though not for all.

Exports in 1950 to U.S. Allies from the Philippines, Indonesia, and Malaya totalled 595,000 tons, copra equivalent, which represents nearly 44 percent of the total tonnage from those three Far East countries. This was only slightly more than the quantity shipped to the United States. Areas such as Western Europe which have a deficit of fats and oils and have to use coconut oil for food purposes would have difficulty replacing the Far East coconut oil with suitable substitutes except from dollar sources, with accompanying exchange problems.

6. Cinchona Bark - Indonesia produces about two-thirds of the cinchona bark entering world trade channels, and loss of this area could substantially reduce the supply of cinchona bark and its derivatives available to the Free World. Within a few years, production of cinchona bark in the Belgian Congo and certain Latin American countries could probably be expanded sufficiently to meet minimum Free World requirements. Progress in the development of synthetic anti-malarial remedies and in mosquito control will reduce requirements of quinine, but quinidine requirements for cardiac therapy are increasing.

The United States is dependent, directly or indirectly, on Indonesia for about three-fourths of its total supplies of cinchona bark, the product from which quinine and quinidine are extracted. There is currently no program for further stockpiling quinine. Present supplies of 318.5 metric tons are 187 percent of the 170.1-ton stockpile objective recommended by the Munitions Board.

Cinchona bark's chief value at present is as the source of quinidine, a drug used in the treatment of auricular fibrillation (irregularly beating heart). The 31 December 1951 stockpile of quinidine was 28.9 metric tons, 39 percent of the total objective of 73.7 tons to be met by 30 June 1954. It was estimated in August 1950 that the United States would require for military and civilian use about 14.5 metric tons (51[illegible],000 ounces) of quinidine during the first year of an emergency. Since quinidine requirements for cardiac therapy are increasing, and since there are no known substitutes, the above estimate probably represents minimum future annual requirements of this drug.

An attempt is being made to meet quinidine stockpile objectives by processing the drug from its original source, cinchona bark, because it is a simpler and cheaper operation. However, quinidine can be extracted from quinine. Three ounces of quinine yields about an ounce of quinidine. At this extraction rate the overstock of quinine presently in storage is more than enough to fulfill the quinidine stockpile objective when added to present quinidine inventories.

7. Silk - Japan is the world's largest producer of raw silk. Annual world production is about 16,000 metric tons (35 million pounds) of which Japan produces about one-half. China is also an important producer of raw silk, the major portion of which is utilized within China.

Japan annually exports about 5,000 tons (11 million pounds), or about 80 percent, of all the raw silk entering world trade channels.

In general, those countries which export raw silk also are exporters of silk waste. In addition, other countries which import raw silk for manufacture into silk goods are exporters of silk waste. In this group of countries are Canada, Brazil, Switzerland, and the U.S.S.R.

Silk waste and noils are used almost exclusively in the manufacture of gun powder bags in the United States. For this purpose, 33 percent raw silk may be combined with waste, but 100 percent raw silk bags are technically unsatisfactory. There are no known satisfactory substitutesfor silk waste powder bags, though there have been continuing experiments with replacement materials. There are no other essential uses for silk for which a satisfactory substitute has not been found.

The United States is stockpiling silk waste. The objective is 4,309 metric tons by 30 June 1954. As of 31 December 1951, 620 tons, or slightly more than 14 percent of the objective, had been delivered. This was only about 20 percent of the amount scheduled for delivery by the end of 1951. However, deliveries have been more regular in recent months and no difficulty in attaining the stockpile objective on schedule is anticipated. With the stockpile objective completed the United States will be assured of a 4 to 5 year supply of silk waste.

8. Dairy products - Two countries of the Far East Area, Australia and New Zealand, represent a major export source of butter and cheese. Together they produced about 50 percent of the world's exportable supply of butter in 1950, and, in the same year, about 35 percent of the Free World's exportable supply of cheese. The loss of this Far East source of butter and cheese would be of major importance only to the United Kingdom, which imported about 92 percent of the butter and 86 percent of the cheese exported by Australia and New Zealand in 1950. The United Kingdom has been importing nearly 75 percent of its total butter imports and 70 percent of its total cheese imports from Australia — New Zealand. The other major exporters of butter and/or cheese to the United Kingdom are Denmark, the Netherlands, Canada, Switzerland, and Italy. If the butter and cheese supplies of Australia and New Zealand are lost to the United Kingdom they can only be replaced by a combination of the following: (1) a major diversion of fluid milk from other uses to butter and cheese production; (2) a major increase in the production of margarine from edible fats and oils; and (3) a major increase in milk production for cheese in the United States or, a very slightpossibility, in other countries. Such an increase might require a number of years, and if made in the U.S. would aggravate the UK dollar problem.

9. Meat - During 1949 Australia and New Zealand together accounted for about one-third (600,000 tons) of the world's exports of approximately 1.8 million metric tons of meat. The United Kingdom imports about 1.1 million metric tons of meat annually, and a little less than one-half or about 500,000 tons, comes from Australia — New Zealand. Thus, the loss of that area would be serious to the United Kingdom, which is already at a very much reduced (from prewar) level of meat consumption. Of the 100,000 tons or so of Australia — New Zealand meat exports which do not go to the United Kingdom, over one-half is exported to other Far East areas. While a small quantity, it represents an important source of meat for the small percentage of the population of certain of the Far East countries that regularly consume meat. During 1951 Australian exports of lamb

and mutton declined slightly due to an increased emphasis on wool production, but the combined exports of Australia and New Zealand are expected to continue at a level of 550,000 tons or higher annually.

10. Palm Oil - The Palm Oil surplus producing countries of the Far East--Indonesia and Malaya--produced in 1950 about 27 percent of the world's export volume of palm oil. Exports from the Far East in that year totalled 149,100 metric tons, about 98 percent of which went to the Allied Nations, with the dominant share going to the United Kingdom and the Netherlands. Africa is the source for virtually all of the rest of the exportable Palm Oil, and the U.S. imports virtually all of its supplies from that area.

The loss of Indonesian and Malayan Palm oil could be absorbed with small effect on the countries of the Free World. A satisfactory substitute for Palm oil in the steel, tin, and terne-plate industries apparently now exists though Palm oil is still preferred. Substitutes are, of course, available for Palm oil as an edible product, though the loss of this, as with other oils, would create problems for several countries. Production of Palm oil in Africa could likely be increased somewhat if higher prices prevailed.

11. Black Pepper - The surplus black pepper producing countries of the Far East -- Indonesia, French Indo-China, Siam and Sarawak -- exported 7,744 metric tons or 33 percent of world exports of black pepper in 1950.

Indonesia is the most important source of black pepper in the Far East and currently the second most important in the world. In the prewar period, 1935-39, the world exports of black pepper averaged about 65,000 tons annually. Approximately 91 percent of this amount was supplied by Indonesia. Pepper gardens in Indonesia were badly damaged during the war, and civil unrest in postwar years greatly retarded rehabilitation.

Black pepper is by far the most important of all the spices, and is imported into most of the countries of the world. No satisfactory substitute has yet been found. Prices now are about forty times as high as they were in the prewar period, indicating a large unsatisfied demand.

A rapid recovery in the Indonesian black pepper industry offers about the only hope for greatly increased supplies within the near future. Only a moderate increase in production has been forecast for India, the chief source of black pepper at present. Eventually, certain South and Central American countries may become important suppliers of black pepper, or a satisfactory synthetic substitute may be developed. More than half of the world's exportable supply of black pepper is consumed in the U.S. The Far East provides practically the entire world's supply of white pepper, which has about the same uses as black pepper, but is more delicately flavored and more expensive.

12. Tea - The tea surplus producing countries of the Far East -- Indonesia, Taiwan, Japan, Indochina, and Malaya -- furnished 46,958 metric tons, or 12 percent of world tea exports for 1950, which totalled 393,642 metric tons.

Indonesia is the most important source of tea in the Far East and the third most important source in the world. Now that green tea from China is generally unavailable to the Free World, Japan, which exported 7,231 tons in 1950, is the only important source of green tea, the principal type of tea consumed in North Africa, where political repercussions were felt when the supply of green tea from China was cut off.

The loss of the Far East would reduce somewhat the supplies available to the Free World, and would raise prices and necessitate changes in trade patterns. A serious tea leaf disease called Blister Blight is spreading rapidly in several important tea producing countries, and the expected substantial increase in Indonesian tea production will assume a greater importance if this disease is not checked fairly soon.

13. Sugar - The sugar surplus producing countries of the Far East -- Formosa, Australia, the Phillipines, Fiji, and Indonesia -- supply about 10 percent of the world's exportable supply of sugar. Average annual exports for 1949 and 1950 from the Far East totalled 1.5 million metric tons, raw value, of which 1.2 million tons, or 82 percent, went to the United States and its allies. The chief importers were the United States, United Kingdom, Japan, Canada, New Zealand, Egypt and Hong Kong in order of importance.

The loss of either Formosa, Indonesia or Fiji would not have any serious affect on the world market other than a bolstering of the world price for sugar. The loss would be most serious to the consuming areas of the Middle and Far East. Increased production of cane in Cuba and elsewhere plus the stimulation of sugar beet production in the Northern Hemisphere areas of the Free World, could to a large extent offset the loss of the Far East surplus producing areas.

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FAR EAST

Appendix 1 - Abaca

Appendix 2 - Apparel Wool

Appendix 3 - Rice

Appendix 4 - Wheat and Wheat Flour

Appendix 5 - Copra and Coconut Oil

Appendix 6 - Cinchona Bark

Appendix 7 - Silk

Appendix 8 - Dairy Products (Butter and Cheese)

Appendix 9 - Meat

Appendix 10 - Palm Oil

Appendix 11 - Black Pepper

Appendix 12 - Tea

Appendix 13 - Sugar

Washington, D. C.
14 March 1952

FAR EAST

Abaca

Significance of the Far East in World Supply.

The Far East, principally the Philippine Islands, has traditionally been the important supplier of abaca to the world market. Indonesia (an important source of supply prior to World War II) and British Borneo furnish a very small amount, the latter country shipping to Great Britain. Production has been emphasized in Latin America in recent years.

The Philippines export about 85 percent of the world's exportable supply of abaca. Central America, which produces about 15 percent of the total world production of abaca, exports its crop to the United States. The remaining 85 percent, or about 80,000 metric tons, was produced in the Philippine Islands. Of the Philippine exports in the 1948-1950 period, 49 percent went to the United States. Allied countries, notably Japan and the United Kingdom, imported 47 percent. Ninety-six percent of total exports went to non-Communist countries.

United States Dependence on the Far East

In recent years United States imports of abaca from the Far East, particularly the Philippine Islands, have made up about two-thirds of its total imports. The other one-third has come from the Latin American countries of Panama, Costa Rica, Guatemala, and Honduras where, in the early 1940's, a project operated by the United Fruit Company under government contract was initiated to assure the United States a closer source of supply.

By 31 December 1951, the United States had on hand 61.1 percent (about 50,000 metric tons) of its 81,648-ton stockpile objective, which is scheduled for attainment through planned deliveries by 30 June 1953. This stockpile objective, which was established at the quantity feasible of rotation is 40 percent of the computed stockpile deficit of 205,027 metric tons. Progress in stockpiling indicates that the objectives for abaca will be reached on the target date.

Abaca production in Latin America has declined continuously the past three years with only a relatively small decrease in total acreage. In 1950 under Public Law 520, the sum of $35,000,000 was appropriated to increase abaca production in the Western Hemisphere. This law provides for the planting of 50,000 acres of abaca in the Western Hemisphere and the first of these plantings is now being made. The acreage will probably be scaled down to about 43,000 acres as a result of abandoning approximately 6,000 acres of poor land. At an estimated yield (by the Fibers Industry Advisory Committee) of 1,500 pounds of dry fiber per acre about 29,000 metric tons could be produced annually. This figure is 36 percent of the average annual exports of the Philippine Islands for the 1948-50 period and is about 11,000 tons less than U. S. average annual imports from the Philippines for the same period.

Latin American production, supplemented with the accrued stockpile which, according to present indications, will be completed by the time the new plantings come into production, would provide the United States with approximately 47,000 metric tons per year based on the present rotation rate of about 18,144 tons per year (29,000 tons of Latin American production plus 18,144 tons rotation per year). Assuming normal growing conditions, the United States would have on the basis of present stockpile objectives about five years to further increase abaca plantings to bolster supplies before the stockpile was depleted -- if the Far Eastern supply of abaca were cut off. Furthermore, the Latin American production plus rotation stocks on a yearly basis would be 6,000 tons above the annual use planned by the stockpiling committee. Assuming the 205,027-ton stockpile deficit were filled, this amount proportioned out over a 5-year period would provide 41,000 tons per year. Thus, the Latin American production plus the amount of abaca in the rotation schedule would for a 5-year period provide 6,000 tons more per year than was planned by the stockpile committee. It is likely that during the 5-year period adjustments such as increased production and less use of abaca through substitutes, could in effect assist the United States to maintain an adequate supply of abaca.

Allied Dependence on the Far East

The United States' allies, composed almost entirely of NATO countries, import about 45 percent of the total world's exportable supply of abaca. The Allied Nations are almost entirely dependent on the Far East for their supply of abaca.

Other Non-Communist Area Dependence on the Far East

Average annual exports to other non-Communist countries amounted to about 2 percent of the world's exportable supply of abaca during the 1948-50 period, an indication that abaca is not an important item in the economy of these countries.

The attached table shows average annual exports of abaca, cordage and twine for the three years 1948-50 from the Philippine Islands to the chief importing countries of the world.

Conclusions

At present the loss of the Far Eastern supply of abaca would result in the loss of about two-thirds of the United States' imports of abaca, and about 85 percent of the Free World's supply. Since the war the United States has annually taken about half the Philippine abaca exports.

If the Far Eastern abaca supply were available until after the new plantings in Latin America are in full production and the 30 June 1953 stockpile objective of 81,648 metric tons is reached, the United States could, under present abaca rotation schedules maintain for the ensuing 5 years an average annual supply of about 47,000 tons. This figure is 45 percent of the average annual world production of abaca since the war (1947-51) and is 84 percent of the average annual U. S. imports for the same period. Taken alone, the anticipated increased Latin American production would be about 75 percent of U. S. average annual imports from the Philippines.

Hence, if the Far Eastern abaca supply were lost, the United States would control the sole supply of the Free World's supply of abaca. Since the U. S. Allies are fully dependent on the Far Eastern abaca supply, this would mean a shifting of their dependence to a smaller supply and at the same time, a supply from a dollar source.

Abaca, or manila hemp as it is known in trade channels can be highly refined in manufacture, is durable and possesses a high degree of tensil strength. These qualities combined with its ability to withstand the action of salt water make it ideal -- and the leading rope fiber -- for marine manufacture and use. Its main uses include marine cordage and nets of all kinds, drilling cable, rope, wire rope centers, pulp for specialty paper, etc. Substitutes such as sisal, henequen nylon and wire could be used for many but not all abaca uses. Loss of the Far Eastern supply would materially but not completely reduce imports to the United States and its allies. The Latin American countries do not now produce sufficient abaca to fill this gap. After further plantings of abaca in Latin America, much of the Far East abaca losses could be replaced, but without an effective program of utilizing substitutes to replace abaca shortages, abaca would be in short supply for many years to come.

Attachment.

TABLE 1. - FAR EAST: Average Annual Exports of Abaca and Cordage and Twine by the Philippine Islands, 1948-1950

Destination	Abaca	Cordage and Twine
	- - - Metric Tons - - -	
United States	36,394	1,376
Allies		
United Kingdom	7,886	
Japan	14,379	
Western Germany	2,437	
Other NATO Countries	11,546	
Total Allies	36,248	
Other Non-Communist		
South America		195
Africa		97
Far East	749	921
Western Europe	626	
Total Other Non-Communist . .	1,375	1,213
Total Non-Communist	74,017	2,589
Soviet Orbit (China)	1,770	53
Other	999	669
		1/ + 378
Total All Exports	76,786	3,689

1/ Adjusted to agree with total.

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Security Information

THE FAR EAST

Apparel Wool

Significance of the Far East in World's Supply.

The apparel wool surplus producing countries of the Far East – Australia and New Zealand – export about 66 percent of the World's exportable supply of apparel wool. Average annual exports in recent years from these two countries totaled about 360,000 metric tons, clean basis, of which about 20,000 tons annually or about 5 percent went to other countries in the Far East. The chief importers have been India and Japan, with Japan almost entirely dependent upon this area for its raw material supply.

World production of apparel wool is about ~~one million~~ 795,550 metric tons annually, of which Australia and New Zealand together produce about ~~900,000~~ 386,100 tons, ~~greasy~~ clean basis.

U. S. Dependence on the Far East

The United States must import about two-thirds of its requirements of apparel wool. In the 3-year period 1948-50 an average of 41 percent of U. S. imports originated from this area. Australia is particularly important as a source of fine wool in demand for both military and civilian use.

The United States is stockpiling wool, principally in the form of fabrics and end items. The objective is to stockpile a quantity sufficient to insure a 9 to 12 months' supply, or enough to provide lead time in which to turn raw wool on the hoof into fabric and end items.

There are four categories of buying in the procuring of woolen apparel goods for military purposes:

(1) Current requisitions, which consist of end items for immediate issue.

(2) Mobilization reserves, which consist of end items held in readiness for rapid or sudden increases in military personnel.

(3) Authorized war reserves. This category at present is authorized at 45,360 metric tons (100,000,000 lbs.) This amount, almost equal to the annual United States wool clip, may consist of both raw wool and

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end items and is considered a large enough supply to provide the industry time in which to procure wool on the hoof and process it into end items in case of an emergency. It is anticipated that the entire 45,360 tons will be delivered by 30 June, 1952. Over 90 percent will be in the form of end items.

(4) Raw wool stockpiling. This category of buying has not commenced yet, although the military is authorized to do so. Definite policy on how much raw wool is to be stockpiled within a certain period is still in the process of being determined, however.

Allied Dependence on the Far East

All of our allies are dependent upon the apparel wool exporting countries of the Far East. The countries of Western Europe; France, Belgium, Italy, Western Germany, the Scandinavian countries and United Kingdom depend upon this area for about 75 percent of their supply. The loss of Australia and New Zealand as a source of wool would seriously impair the defense efforts of the United States and its allies.

Other Non-Communist Area Dependence on Far East

Other non-Communist areas other than those mentioned would not be directly affected by the loss of the Far East as a source of apparel wool. However, the impact on world supply by the loss of this area would affect all the Free World.

The attached Table I shows apparel wool exports for 1949 from Australia and New Zealand to the chief importing countries of the world.

Conclusion

As exports of apparel wool from Australia and New Zealand make up about two-thirds of the World's exportable supply, the loss of this area would result in serious hardship on the industrial and military efforts of the Free World. The remaining world supply would be inadequate both as to type and quantity to meet the minimum needs of the military of the United States and its Allies at current consumption levels.

The United States probably is in a less critical position than are some of the Allies as far as wool supply goes. The United States has a large supply of fibers that may be substituted for wool to a large extent. First among these fibers is cotton, of which the United States is the world's largest producer. Second, is the 300 million pounds of re-used and re-worked wool available annually and, third, are the many synthetic fibers such as orlon, nylon, acetate, dynel, dacron and spun rayon. Of the latter group, spun rayon is the largest displacer of wool. Dynel is more wool-like than the others, but is the only one which fails to add strength to fabric when used as a wool substitute. Nylon and acetate have been widely used for many years. More recently, orlon and dacron have been increasing in popularity.

In military fabrics, the synthetic fibers generally are not substituted for wool to a proportion greater than 15 percent. Wool fabric with 15 percent orlon, dacron or nylon fibers retains the feel of wool and is stronger than 100 percent wool. Woolen fabrics with 25 percent synthetic fibers have good wearing qualities but not the "feel" of wool.

Appendix 2

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Table 1. Apparel Wool a/, Exports from Australia and New Zealand by Destination, 1949

DESTINATION	ORIGIN		
	Australia	New Zealand	Total
	-- Thousand Metric Tons --		
United States	26.4	6.5	32.9
Allies			
NATO Countries:			
United Kingdom	120.4	68.3	188.7
France	47.6	21.6	69.2
Belgium	31.9	3.9	35.8
Italy	23.6	2.3	25.9
Other NATO Countries	9.5	9.3	18.8
Total NATO Countries	233.0	105.4	388.4
Other Allies:			
Japan	13.1	1.8	14.9
Western Germany	11.7	7.2	18.9
New Zealand	0.2	-	0.2
Total Allies	258.0	114.4	372.4
Other Non-Communist			
Far East	0.7	0.9	1.6
Miscellaneous	6.8	1.2	8.0
Total Other Non-Communist	7.5	2.1	9.6
Soviet Orbit			
U.S.S.R.	9.7	7.6	17.3
Poland	9.1	1.9	11.0
Czechoslovakia	1.8	0.2	2.0
China	0.3	b/	0.3
Total Soviet Orbit	20.9	9.7	30.6
Not Specified	2.3	3.5	5.8
Total Exports	315.1	136.2	451.3

a/ Clean basis.

b/ Less than 50 tons.

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Appendix 3

The Far East

Rice

Significance of Far East in World's Supply

The rice surplus producing countries of Southeast Asia - Burma, Thailand, and Indochina - export about 70 percent of the world's exportable supply of rice. Average annual exports in recent years from these three countries totaled about 2.5 million metric tons, of which nearly 2 million tons, or 80 percent, went to other countries in the Far East, and the India-Pakistan-Ceylon area. The chief importers have been India, Malaya, Ceylon, Japan and Indonesia in order of importance.

Burma, Thailand, and Indochina produce only 12 percent of the total world rice crop which is about 150 million tons annually. India and China, with a combined total annual production of about 80 million tons, produce 53 percent of the world total, but both are normally net importers of that commodity.

US Dependence on Far East

The United States, itself an exporter of rice on a relatively small scale, is not, of course, at all dependent on the Southeast Asia source.

Allied Dependence on Far East

Of our allies, only Japan is an important customer of the three major rice exporting countries. Japan has imported on the average about 250 thousand tons of rice during the three years 1948 through 1950 from Southeast Asian sources, representing more than 85 percent of Japan's total rice imports and about 13 percent of Japan's total grain imports. During the years immediately following World War II, Southeast Asia as a source of rice was closed to Japan, and the United States furnished Japan wheat and other grain during those years. The U.S. is still supplying substantial quantities of wheat and barley to Japan. Japan desires to import more rice than it has been possible to do in recent years, and thus reduce her continued dependence on grain from dollar sources. Japan's rice imports have increased since December 31, 1949, when the World War II program of allocating world rice supplies ended under the International Emergency Food Council. In 1951, out of total rice imports of 775,000 metric tons, 71 percent was imported from Southeast Asia - 323,000 tons from Thailand; 148,000 tons from Burma, and 80,000 tons from Taiwan. The loss of Southeast Asia rice would increase Japan's dependence on dollar sources (US and Canada) for grain.

Other Non-Communist Area Dependence on Far East

The countries chiefly dependent on the Southeast Asia exporting area for rice supplies are "other non-communist countries" located in the Far East, notably India, Indonesia, Ceylon, and Malaya. These and other Far East areas have imported an average of 1.9 million tons annually, more than 70 percent of the Burma-Thailand-Indochina exports. In Ceylon and Malaya, rice imports from the Southeast Asia exporting sources, represents about 40 percent of total cereal consumption, and from 50 to 60% of cereals consumed by the urban or non self-supplier portion of the population. The loss of the Southeast Asia sources of rice would cause great hardship in these countries. In India and Indonesia the percentage importance of Southeast Asia rice imports is much less, though in Indonesia it represents about 13% of the requirements of the urban group and in India about 7% of the cereal needs of the rationed population. In these countries the loss of the Southeast Asia rice source would be felt, and would probably result in some reduction in consumption by the urban population. Part of the loss would probably be offset by increased imports of wheat, but at the expenditure of dollars, since the United States and Canada would be virtually the only sources with unobligated surpluses of these grains.

The attached Table 1 shows average rice exports for the three years 1948-50 from Burma, Thailand, Indochina, and other Southeast Asia sources, to the chief importing countries of the world with totals and appropriate sub-totals.

Conclusion

In conclusion, the loss of Southeast Asia as a source of rice would be serious only to such other areas of the Far East and India-Pakistan-Ceylon as remained in the Free World. Malaya and Ceylon would be in a critical situation, reduced to dependence on the wheat surplus areas, and India, Indonesia and Japan would be seriously affected. While, in theory at least, there may be sufficient grain in the United States, Canada and other grain surplus areas to fill the gap caused by loss of rice, in practice, because of exchange problems, the fact that the areas involved are normally rice eaters, and a probable reluctance on the part of exporting countries to reduce their reserves by "giving away" grain in adequate amounts to Far East importers, would result in widespread hardship, and very likely starvation, in the chief rice importing nations. No country outside of Asia would be seriously affected by the loss of Southeast Asia rice.

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Appendix 3

Table 1. Rice: Exports from Southeast Asia, Average 1948-50

DESTINATION	SOURCE				
	Burma	Thailand	Indochina	Other Southeast Asia	Total Southeast Asia
	—Thousand Metric Tons—				
Allies					
Japan	72.1	146.5	0	30.9	249.5
United Kingdom	21.5	21.2	0	0	42.7
Europe (excluding U.K.) 1/	8.1	46.6	23.8	0	78.5
Other Allies	.5	2.7	0	6.7	9.9
Total Allies	102.2	217.0	23.8	37.6	380.6
Other Non-Communist					
Far East:					
India	357.1	189.2	3.5	23.5	573.3
Ceylon	331.0	42.6	0	0	373.6
Malaya	123.2	295.9	15.2	0	434.3
Indonesia	131.3	103.1	0	0	234.4
Hong Kong	20.7	85.9	7.8	0	114.4
Pakistan	19.7	0	0	0	19.7
Philippines	7.9	38.4	0	0	46.3
Other Far East	27.7	66.6	0	0	94.3
Total Far East	1,018.6	821.7	26.5	23.5	1,890.3
Middle East	8.2	12.8	0	0	21.0
French Colonies	1.0	0	67.5	0	68.5
Miscellaneous	30.1	8.5	0.4	0	39.0
Total Other Non-Communist	1,057.9	843.0	94.4	23.5	2,018.8
Total Free World	1,160.1	1,060.0	118.2	61.1	2,399.4
Soviet Orbit:					
China	42.2	108.4	1.4	16.4	168.4
Total Exports	1,202.3	1,168.4	119.6	77.5	2,567.8

1/ Incomplete in 1949.

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Appendix 4

THE FAR EAST

Wheat and Wheat Flour 1/

Significance of the Far East in World's Supply.

The only wheat surplus producing country of the Far East - Australia - exports about 12 percent of the wheat entering world trade. Annual exports from Australia in recent years have averaged around 3 million metric tons, of which about 1.1 million tons, or 39 percent, went to India. Another one-half million tons went to other countries in South and Southeast Asia. The United Kingdom, Egypt, Japan and New Zealand also purchase large quantities of Australian wheat and wheat flour.

Australia produces about 3 percent of the total world production of wheat which is about 170 million metric tons annually. India and Pakistan, with a combined total annual production of about 10 million tons, produce 6 percent of the world's wheat supply, but Pakistan's small surplus is not sufficient for India's import needs and the sub-continent as a whole is a large net importer of wheat.

United States Dependence on Far East.

The United States, itself an exporter of wheat on a large scale, is not, of course, at all dependent on the Far East (Australia) as a source.

Allied Dependence on Far East.

Of our allies, the United Kingdom, Japan and New Zealand depend heavily upon Australian wheat. These three countries together imported over 600 thousand metric tons from Australia in 1949/50. Total imports from Australia by all the allies were over 812,000 metric tons, or 26 percent of Australia's total exports.

The United Kingdom has imported on the average of about 5.5 million metric tons of wheat and wheat flour annually in recent years, about 6

1/ In grain equivalents.

percent of which came from Australia. Japan's imports of wheat and flour have been around 2 million tons annually of which about 9 percent has been Australian produced. The United States has furnished Japan with a large amount of wheat in recent years, but Japan like the United Kingdom, desires to obtain as large a proportion of her grain requirements outside the United States as possible in order to conserve dollars for other needs. The loss of Australia would increase both Japan's and the United Kingdom's dependence on dollar sources (United States and Canada) for grain.

Other Non-Communist Area Dependence on Far East.

In this group of countries, India is the most dependent on Australian wheat and wheat flour. About 40 percent of Australia's wheat exports or 1.2 million tons went to India in 1949/50. India, Ceylon, Hong Kong, Malaya and other Non-Communist countries in the Far East together imported 1.5 million tons of wheat from Australia in 1949/50. This amount represented 50 percent of Australia's total wheat exports that year. The loss of the Australian source would very seriously complicate both the food situation and the financial situation in India. India does not have the hard currency resources to purchase additional amounts of grain in Canada or the United States. The logistical problem involved in supplying India with an additional 1 million tons of grain from North America would be a serious one.

The attached table 1 shows wheat and wheat flour exports (in grain equivalents) from Australia, by destination during June to July 1949-50.

Conclusion.

From the standpoint of wheat supplies, the loss of Australia would be most serious to the United Kingdom, Japan and New Zealand, and to several countries in the Far East - providing they remained in the Free World. India, Ceylon and Malaya would be in a critical situation as their geographical location would make difficult the transport to them of wheat from the Western Hemisphere. All three are food deficit countries and mass starvation is a constant threat to them. In theory there may be sufficient food grain in the United States, Canada and the rest of the Free World to fill the gap caused by the loss of Australia. In practice, because of exchange problems and transport difficulties, such loss would be a hardship to the United Kingdom and Japan and might result in starvation in India and Ceylon. (This reasoning assumes that there will be no increase in the supply of rice for export in Southeast Asia).

Attachment.

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Appendix 4

Table 1. Australian Exports of Wheat and Wheat Flour, July 1949 - June 1950. 1/

Destination	Thousands of Metric tons	Percent
United States	--	--
Allies:		
United Kingdom	300.8	9.7
Japan	187.4	6.1
New Zealand	156.6	5.1
Other NATO Countries	62.7	2.0
Other Allies	105.1	3.4
Total Allies	812.6	26.3
Other Non-Communist:		
Western Europe	90.9	2.9
Far East:		
India	1,194.9	38.6
Ceylon	164.2	5.3
Hong Kong	113.4	3.7
Malaya	100.4	3.2
Other	62.1	2.0
Total Far East	1,635.0	52.8
Near and Middle East:		
Egypt	244.4	7.9
Other	99.2	3.2
Total Near and Middle East	343.6	11.1
Other	99.6	3.2
Total other Non-Communist	2,169.1	70.0
Poland	9.3	0.3
Unspecified	107.2	3.4
Total Exports	3,098.2	100.0

1/ In grain equivalents.

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Appendix 5

THE FAR EAST

Copra and Coconut Oil

Uses

Copra is the raw material from which coconut oil and copra meal, as by-products, are derived. Coconut oil has many uses, both for industrial and food purposes. One of its principal uses is in the manufacture of soaps and shampoos to which coconut oil imparts desirable lathering qualities because of its high lauric-acid content. When refined and deodorized, coconut oil is used extensively in the baking and confectionary industries. There it is used in the preparation of frosting-fillers, as sprays on cookies and crackers, and as a replacement for butter and cocoa butter, because of their higher costs, in candies. The fairly high melting point of coconut oil, contrasted with that of butter and cocoa butter, imparts a better keeping quality to items made from it; this factor is important under conditions of no refrigeration. Furthermore, coconut oil is used extensively in Europe and other countries, in the production of margarine and, to a lesser degree, shortening.

Coconut oil is a strategic oil in the Nation's defense-armament program and is, therefore, a stockpile item. It is important as a source of lauryl and octyl alcohols. Lauryl alcohol is essential in the manufacture of all-purpose synthetic rubber, highly important in time of war. Moreover, derivatives of coconut oil are used as plasticizers in the milling of rubber goods and in the production of a large number of chemical specialties, especially synthetic detergents and disinfectants. Finally, coconut oil is an important ingredient in the manufacture of napalm bombs, a modern weapon of war.

Substitutes and their Availabilities.

Substitutes for coconut oil for certain uses are readily available, or can be expanded to be made available, but for other uses, substitution is less extensive. Tallow and greases, of which the United States is the world's major source, and palm oil are satisfactory substitutes in the making of soaps for civilian use although the end product may be inferior in lathering quality.

However, with the rapid growth in the use of synthetic detergents, very acceptable soap products can be manufactured without the use of coconut oil. In the baking and confectionary industries, other oils such as peanut, corn and cottonseed, while perhaps less satisfactory, can be used. Palm-kernel and babassu oils, with properties essentially the same as those of coconut oil, also are good substitutes. In Europe and other countries where coconut oil is important in the manufacture of margarine and shortening, whale oil, to a limited extent, and hydrogenated "soft oils" - peanut, cottonseed, and soybean - are suitable alternatives. In contrast with the 1920's, when large quantities of coconut oil were used in the United States, the ingredients now used in the manufacture of margarine in this country are primarily cottonseed and soybean oils. As a source of lauric acid, important to the Nation's defense program, coconut oil is second only to palm-kernel oil, relatively limited in quantity. Babassu oil, also a good alternative, is available in only limited quantity from Brazil. Annual world availabilities of palm-kernel oil, virtually a "byproduct" of the production of palm oil, are estimated to have ranged from 350,000 to 375,000 tons in the last three years, equivalent to only 20 to 30 percent of the availabilities of coconut oil. Babassu oil supplies have been estimated at only 22,000 tons in recent years.

While other fats and oils can be used interchangeably with coconut oil in many instances, there are limits to which this can be done. Nevertheless, a substantial rise in the price level of fats and oils because of a loss of Far East supplies of coconut oil, likely would bring forth increased output of substitute oils in Free World countries.

Peanut production probably could be expanded, if necessary, in Africa, the United States, South America, and certain Caribbean countries. Soybean output probably could be increased in the United States chiefly, and to a lesser degree in Brazil and Africa. Palm oil and palm kernel oil production in the uncultivated areas in Africa could be expanded under suitable incentives, and newly-planted areas in certain parts of Africa and Central America will be yielding new production in the next three to eight years. Rapeseed output in Europe could be increased to a limited degree. Oil from cottonseed, a byproduct of cotton, would be determined by the world's needs for fiber. Output of whale oil from year to year is limited largely by the international agreement limiting the pelagic catch of whales. Increased production of lard, tallow, and greases, all byproduct items, would be governed by the extent to which livestock numbers are expanded. Apart from considerations of national fat-and-oil stockpiles and inventories in commercial and private channels, and without consideration of the extent to which new technological developments would obviate the need for the volume of fats and oils consumed today by the Free World, it would appear that some substantial cutbacks in consumption would be in order if the Far East sources of coconut oil were cut off.

World Trade is Largely in Copra

While coconut oil as such is exported in substantial volume from the world's major surplus coconut area - the Far East - most of the oil enters world trade in the form of copra. Exports from South Asia - Ceylon - however, are largely as oil. The major coconut oil consuming countries of the world, principally the United States and several in Western Europe, prefer to import copra to be crushed into oil and meal in their own mills. Thereby they provide additional employment within those countries and have available a valuable feed concentrate, copra meal, for their livestock.

In the light of the foregoing, and because of the greater ease with which data can be comprehended when expressed in terms of a common denominator, the analysis hereafter will deal largely with copra and coconut oil data expressed in terms of copra equivalent (table 1). Thus, the data on coconut oil (table 2) have been converted to copra equivalent by multiplying by 1.59. This factor is derived from the assumption that copra, when crushed, will yield an average of 63 percent of its weight as oil.

Significance of the Far East in World's Supply

The Far East is highly important as the source of the dominant share of the world's exportable supplies of copra and coconut oil. Three surplus-producing countries in Asia - the Philippines, Indonesia, and Malaya - contributed in 1950 nearly 75 percent to the world's exported supplies of copra and coconut oil which, in terms of copra equivalent, approximated 1,750,000 metric tons. Exports from the above three countries totaled 1,275,000 tons.

Approximately 25 percent of the world's volume of copra and coconut oil traded in 1950, came from Ceylon and islands in the Southwest Pacific including Papua, New Guinea, New Hebrides, the Fiji Islands, British North Borneo, Western Samoa, Sarawak, and others. The rest came from the African area.

United States Dependence on the Far East.

The United States, a very substantial importer, is almost wholly dependent on the Far East for its supplies of copra and coconut oil. In 1950, in terms of copra equivalent, about 43 percent of the exports from the Far East went to the United States. Virtually all of this was from the Philippines.

Purchases of the United States have for many years favored procurement from the Philippines. This has resulted from import duty and domestic-processing tax concessions to the Philippines. These concessions, currently provided for under the terms of the Philippine Trade Act of 1946, and due to expire in 1974, are granted to help strengthen the Philippine economy. While there is no import duty on copra entering the United States, regardless of source, there is a duty of one cent per pound on coconut oil from sources other than the Philippines (and United States territories and possessions) from which imports of oil are duty-free. Moreover, while there is a tax of three cents per pound, levied at the time of the first domestic processing, on coconut oil originating in the Philippines, the processing taxes on oil from other sources total five cents per pound. These taxes, and the two-cent differential in favor of the Philippines, apply likewise to oil produced in this country from copra originating in the Philippines as against other sources.

The importance of copra and coconut oil to the United States, now a major world-net-exporter of fats and oils, is indicated by the fact that in the last three years imports of fats, oils and oilseeds, in terms of oil equivalent, have averaged 540,000 metric tons. Of this quantity, the oil equivalent of copra and coconut oil imports has averaged 312,000 tons, or 58 percent of the total. However, upon the cessation of imports for stockpiling of coconut oil, imports of these items are expected to decline materially owing to their decreased use in soap manufacture because of the expanding production of detergents.

The stockpile objective of 122,472 metric tons with the target date set for 30 June 1954, was 95.7 percent complete on 31 December 1951. Deliveries scheduled for 30 June 1952 will increase the stockpile to 96.7 percent of the total objective, and planned deliveries for the same date would boost the accrued stockpile to 99.5 percent of total objective. The stockpiling program is not lagging as indicated by the fact that whereas scheduled deliveries as of 31 December 1951 would have meant 96.4 percent of the total objective actual deliveries put the oil accumulation at 95.7 percent of the total objective.

Stockpiling coconut oil is a new experience for both the government and users of the product. To assure adequate stocks of high grade oil without the effects of deterioration the stockpile was built up ahead of schedule to allow for rotation of stocks. The size of the stockpile of coconut oil is determined on the basis of a supply sufficient to last 5 years from the time the stockpile objective is met.

Allied Dependence on The Far East

Our Allies are heavily dependent on the Far East for their copra and coconut oil supplies. Perhaps a notable exception is the United Kingdom, a large importer of copra and coconut oil, which obtains the dominant portion of its supplies from its islands in the Southwest Pacific, and British East Africa.

Exports in 1950 to our Allies from the Philippines, Indonesia, and Malaya, the source of nearly three-fourths of the world's exports, totaled 555,000 tons as copra equivalent, nearly 44 percent of the total tonnage from those three Far East countries. This was but slightly more than what was shipped to the United States. Exports went mainly to the Netherlands, Western Germany, Italy and "other NATO countries." A small quantity went to Japan. The small quantity shipped to the United Kingdom from the Far East is due to that country's practice of procuring its supplies primarily from other sources, as explained above.

Other Non-Communist Area Dependence on the Far East

Other non-Communist areas of the world, while taking only 13 percent of the copra equivalent exported in 1950 from the three major surplus-producing countries, are highly dependent on the Far East for their copra and coconut oil requirements. With India a major producer of copra, but nevertheless deficit in this commodity and coconut oil, exports from the three Asian countries to "other non-Communist countries" totaled only 161,000 tons, copra equivalent. This tonnage went primarily to Western Europe and South America. Only 24,000 tons went to India-Pakistan.

One should note here that the India-Pakistan area could, if circumstances necessitated, rely entirely on Ceylon to supply its needs for copra and coconut oil. In 1950 Ceylon exported 144,000 tons, copra equivalent. Of the total volume exported to India-Pakistan from the Far East and Ceylon - 67,000 tons - only 43,000 tons, or nearly 65 percent, was from Ceylon. Thus, while only 8 percent of the world's exported supplies of fats and oils in 1950 were from Ceylon, that island-country could well assure India-Pakistan of sufficient coconut oil supplies if sources in the Far East were cut off.

The attached Table 1 contains data on the exports, expressed in terms of copra equivalent, of copra and coconut oil from the Philippines, Indonesia, and Malaya to the principal importing countries of the world. Furthermore, it contains data on exports from Ceylon on the same basis. In Tables 2 and 3 are the data, showing exports of coconut oil and copra, respectively, which are the bases for Table 1.

Conclusion

The loss of the Far East as a source of copra and coconut oil would not seriously affect India-Pakistan because of the likelihood that their requirements could be met easily by supplies from Ceylon. However, the loss to the United States and to our Allies, particularly in Western Europe, would be substantial. Nevertheless, the United States and its Allies could cope with such a situation today much better than a decade ago when Far East supplies were cut off by Japanese naval and military actions. At that time the United States was a major net importing country. Today the reverse is true. The United States now is a major net exporter of various fats, oils, and oilseeds. This has come about by having increased its production from an average of 3,737,000 metric tons (8.2 billion pounds), oil equivalent, in 1937-41 to an estimated 5,600,000 tons (12.3 billion pounds) in 1951. At the same time the United States changed from a net import position of 715,000 tons (1.6 billion pounds) in 1937-41 to a net export position in 1951 of 550,000 tons (1.2 billion pounds). By a further expansion in the oilseed crops, primarily soybeans and peanuts, and by restricting civilian consumption of fats and oils, perhaps to the extent of decreasing annual per capita consumption of food fats and oils from the 1950-51 average of about 44 pounds to 40 pounds, the United States alone could make a very substantial contribution to her Allies in the event of the loss of the Far East supplies of coconut oil and copra, equivalent to 800,000 tons of oil. Furthermore, the United States position is greatly strengthened by the results obtained under the stockpiling of coconut oil. Likewise, our Allies are presumed to be in a more favorable position because of their stockpiling activities in the last year or two.

The United States and her Allies today probably could withstand the loss of Far East supplies. Preparations for such contingency had not been made prior to Pearl Harbor in 1941. Then the United States was a major net importer of fats and oils. But today, being not only a major net exporter of fats and oils, the United States could, if necessary, increase production and net exports to even higher levels than the records attained in 1951. Hence, the stockpiling program of coconut oil in the United States could be operated solely from the point of view of military necessity.

Attachment

Appendix 5

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Table 1. Copra and Coconut Oil Exports (in Copra Equivalent) by Destination, 1950

DESTINATION	SOURCE				
	South Asia	Far East			TOTAL
	Ceylon	Indonesia	Philippines	Malaya	
		- - Thousand Metric Tons - -			
United States	1.0	-	548.2	.5	549.7
Allies					
United Kingdom	.3	-	-	13.7	14.0
Canada	13.3	-	21.8	-	35.1
Italy	17.0	-	35.6	15.8	68.4
Netherlands	30.0	180.8	46.0	30.7	287.5
Other NATO Countries	6.5	12.9	56.4	36.6	112.4
Western Germany	15.1	40.6	2.9	31.2	89.8
Japan	-	-	29.2	1.1	30.3
Total Allies	82.2	234.3	191.9	129.1	637.5
Other Non-Communist					
Western Europe	12.4	7.6	17.1	30.6	67.7
Far East:					
India	15.1	-	-	21.7	36.8
Pakistan	27.7	-	-	2.3	30.0
Other Far East	.2	-	-	15.5	15.7
Middle East	3.0	-	12.9	5.2	21.1
South America	.6	-	37.8	.3	38.7
Other	.3	-	5.2	4.6	10.1
Total Other Non-Communist	59.3	7.6	73.0	80.2	220.1
Soviet Orbit	-	-	1.1	8.9	10.0
Unspecified	1.0	-	.5	-	1.5
Total Exports	143.5	241.9	814.7	218.7	1,418.8

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Table 2. Coconut Oil, Exports by Destination, 1950

DESTINATION	ORIGIN			
	The Far East			South Asia
	Philippines	Malaya	Total	Ceylon
	- - Thousand Metric Tons - -			
United States	64.4	0.3	64.7	0.6
Allies				
Canada	-	a/	-	8.4
Italy	1.0	8.3	9.3	10.6
Netherlands	0.6	7.8	8.4	18.9
Other NATO Countries	0.5	1.2	1.7	3.2
Western Germany	-	7.7	7.7	9.5
Other Allies	-	0.2	0.2	0.3
Total Allies	2.1	25.2	27.3	50.9
Other Non-Communist				
Western Europe	-	2.8	2.8	6.3
Far East:				
India	-	13.7	13.7	4.3
Pakistan	-	0.6	0.6	11.5
Hong Kong	-	4.4	4.4	a/
Other	-	5.3	5.3	0.1
Middle East	-	2.0	2.0	1.9
Other	3.0	2.6	5.6	0.6
Total Other Non-Communist	3.0	31.4	34.4	24.7
Soviet Orbit				
Poland	0.7	-	0.7	-
U.S.S.R.	-	1.0	1.0	-
Total Soviet Orbit	0.7	1.0	1.7	-
Unspecified	0.3	-	0.3	0.7
Total Exports	70.5	57.9	128.4	76.9

a/ Less than 50 tons.

b/ Statistics from Indochina are not available for 1950. Total exports of coconut oil from Indochina in 1949 are reported as less than 1,000 metric tons.

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Appendix 5

THE FAR EAST

Table 3. Copra, Exports by Destination, 1950

DESTINATION	ORIGIN				
	The Far East				South Asia
	Indonesia	Philippines	Malaya	Total	Ceylon
	- - Thousand Metric Tons - -				
United States	-	446.0	-	446.0	-
Allies					
United Kingdom	-	-	13.7	13.7	-
Netherlands	180.8	45.0	18.3	244.1	-
Other NATO Countries	12.9	111.5	37.0	161.4	1.4
Other Allies:					
Western Germany	40.6	2.9	19.0	62.5	-
Japan	-	29.2	1.1	30.3	-
Total Allies	234.3	188.6	89.1	512.0	1.4
Other Non-Communist					
Western Europe	7.6	17.1	26.2	50.9	2.4
Far East	-	-	1.4	1.4	17.7
Middle East	-	12.9	2.0	14.9	-
South America	-	37.3	-	37.3	-
Others	-	0.9	0.8	1.7	-
Total Other Non-Communist	7.6	68.2	30.4	106.2	20.1
Soviet Orbit	-	-	7.3	7.3	-
Total Exports	a/ 241.9	702.8	126.8	1,071.5	21.5

a/ Excludes unrecorded shipments to Malaya of approximately 92,000 metric tons.

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Appendix 6

THE FAR EAST

Cinchona Bark, Quinine, and Quinidine

Significance of the Far East in World's Supply.

Indonesia is the only country in this area which produces a significant exportable surplus of cinchona bark, the source of quinine, quinidine, and a number of other important drugs. Indonesia produces about two-thirds of the cinchona bark entering world trade channels. About one-half of Indonesia's production is exported in the form of cinchona bark, and the balance is processed into quinine and other derivatives for domestic consumption and for export to Hong Kong, the Netherlands and to a large number of countries in the Far East. About two-thirds of the cinchona bark exported from Indonesia goes to the Netherlands, where it is processed into quinine, quinidine, and related drugs. The Netherlands exports quinine and quinidine to many countries all over the world. Most of the balance of Indonesia's exports of cinchona bark goes to the United Kingdom, Italy, Germany, and the United States, and much of the quinine and quinidine processed in the first three of the above countries is exported.

Although cinchona bark is produced in India, Ceylon, Malaya, and the Philippines, production in these countries generally is insufficient to supply local requirements.

United States Dependence on the Far East.

The United States does not produce any cinchona bark and is dependent, directly or indirectly, on Indonesia for about three-fourths of its total supplies of cinchona bark, from which quinine and quinidine are extracted.

There is currently no program for further stockpiling quinine. Present supplies of 318.5 metric tons are 187 percent of the 170.1-ton stockpile objective recommended by the Munitions Board. Quinine can be stored for long periods of time without deteriorating, and can be processed as needed. The excessive amount in stock is being used as standby supplies to supplement the quinidine stockpiling program if necessary.

An attempt is being made to meet quinidine stockpile objectives by processing the drug from its original source, cinchona bark, for two reasons: (1) it is a simpler operation, and (2) it is less expensive. The 31 December 1951 inventory of 28.9 metric tons was 39 percent of the total objective of 73.7 tons to be met by 30 June 1954. Had all supplies scheduled for delivery been made by 31 December 1951 the stockpile would have been increased to 55.8 metric tons or about 76 percent of the total objective. Although this indicates somewhat of a lag in meeting stockpile quotas, it is planned to have 68 tons or 92 percent of the total objective, in the stockpile by 31 December 1953. These deliveries will come from normal trade sources as long as practicable. Three ounces of quinine yields about an ounce of quinidine. At this extraction rate the overstock of quinine presently in storage is more than enough to fulfill the quinidine stockpile objective when added to present quinidine inventories. Since the process of extracting quinidine from quinine is about three times as costly as extracting quinidine from Java cinchona bark, an attempt is being made to fulfill stockpile requirements from the normal avenues of trade.

Dependence of Allies and Other Non-Communist Areas on the Far East.

Countries in the Pacific area are more dependent on Indonesia for quinine than are countries in Africa and Latin America. The Belgian Congo now produces about one-fifth of the world's exportable supply of cinchona bark, and its output could be expanded considerably if necessary. Current world production of cinchona bark exceeds effective demand, and producers in the Belgian Congo and Indonesia have voluntarily restricted production in order to keep prices from dropping to an unremunerative level. Tanganyika produces a relatively small surplus of cinchona bark.

In Latin America, cinchona is produced in Guatemala, Costa Rica, Peru, Ecuador, Bolivia, and Colombia. These countries exported substantial quantities of cinchona bark during World War II when Indonesia was in the hands of the enemy, but since then exports have declined. For the most part, the bark produced in Latin America is low in quinine content compared with the bark produced in Indonesia and the Belgian Congo. Most of the trees grow wild, and transportation is a big obstacle. However, a process of selection and breeding is being carried on in Guatemala and several of the other countries which shows promise of leading to larger production of better grade cinchona in the future.

Conclusion.

The loss of Indonesia would seriously reduce the supply of cinchona bark and its derivatives available to the United States, its allies, and to other non-Communist countries, particularly to those in the Pacific area. Within a few years, production of cinchona bark in the Belgian Congo and certain Latin American countries could probably be expanded sufficiently to meet minimum Free World requirements. Progress in the development of synthetic anti-malarial remedies and in mosquito control will reduce requirements of quinine, but quinidine requirements for cardiac therapy are increasing. It takes 10 pounds of dried Java cinchona bark to produce 1 ounce of quinidine.

The importance of quinine in the United States as an anti-malarial drug is declining rapidly because of the development of cheaper, more effective synthetic substitutes which are produced entirely from material readily available in the United States and elsewhere in plentiful supply. Among these synthetics are chloroquine, camoquin, paludrine, pentaquine, and atebrine. Chloroquine is the drug of first choice in the treatment of malaria at present. It costs substantially less than quinine and is less toxic and more effective. Camoquin is a new drug which is similar to chloroquine, but about a fourth less expensive. Paludrine is used extensively in areas under British influence, and it is less expensive than either chloroquine or camoquin but is quite a bit slower in its reaction. Quinine, however, is still the anti-malarial remedy in chief use in all countries in which malaria is prevalent. The greatest requirements for quinine is in tropical and sub-tropical areas of the world.

It is the opinion of certain medical authorities in the Public Health Service and elsewhere that cinchona bark's chief value at present is as the source of quinidine, a drug used in the treatment of auricular fibrillation (irregularly beating heart), and that total world requirements for cinchona bark will decline rapidly because of the development of less costly and

Declassified and Approved For Release 2012/09/19 : CIA-RDP79R01012A001700030006-6

more effective synthetic substitute for quinine, and because of increased use of new and more effective insecticides in the control of mosquitoes.

It is difficult to estimate U. S. requirements of quinine, since its use in the treatment of malaria is being supplanted by less costly and more effective synthetic substitutes. A commodity committee estimated in June 1950 that about 25.5 metric tons (900,000 ounces) would be adequate for military and civilian requirements during the first year of an emergency, but that estimate appears extremely high in the light of subsequent developments. The same committee estimated in August 1950 that the United States would require for military and civilian use about 14.5 metric tons (512,000 ounces) of quinidine during the first year of an emergency. Since quinidine requirements for cardiac therapy are increasing, and since there are no known substitutes, the above estimate probably represents minimum future requirements of this drug.

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THE FAR EAST

Silk

The Importance of the Far East in World Supply.

Raw Silk: Japan is the world's largest producer of raw silk. Annual world production is about 16,000 metric tons (35 million pounds) of which Japan produces about one-half. China is also an important producer of raw silk, the major portion of which is utilized within China.

Japan annually exports about 5,000 tons (11 million pounds), or about 80 percent, of all the raw silk entering world trade channels. China exports, on the average, about 500 tons (1 million pounds) annually. Korea also exports small quantities of raw silk. Together, the countries of the Far East supply about 86 percent of the world's exportable supply of raw silk.

Table 1 shows world trade in raw silk by country of origin and destination for specified periods with appropriate totals and sub-totals.

Silk Waste: In general, those countries which export raw silk also are exporters of silk waste. In addition, other countries which import raw silk for manufacture into silk goods are exporters of silk waste. In this group of countries are Canada, Brazil, Switzerland, and the U. S. S. R.

Total world exports of silk waste approximate 2,500 tons (5.5 million pounds) annually. Of this amount, China exports about 1,100 tons (2.4 million pounds) or 44 percent. Italy exports about 400 tons (900,000 pounds) and Russia about 300 tons (680,000 pounds) annually. Table 2 shows the major sources of silk waste exports and principal importing countries.

The principal uses of raw silk are for woven fabrics, draperies hosiery and thread. In prewar years about 75 to 80 percent of the silk consumed in the United States went into silk hosiery. Now hosiery is made almost entirely of nylon and rayon. Synthetic yarns also have replaced silk in parachutes and other items. Only in its use for thread has silk largely maintained its prewar position.

Silk waste and noils are used almost exclusively in the manufacture of gun powder bags in the United States. To a certain extent, raw silk is being used to replace waste for this purpose.

United States Dependence on the Far East.

The United States is the world's largest importer of both raw silk and silk waste and the Far East is the principal source of supply. Japan supplies the United States with 85 percent of its raw silk imports but very little silk waste. The loss of Japan, therefore, would be serious to the United States from the standpoint of raw silk supply if the United States stockpile was not adequate to supply minimum defense needs while silk substitutes were being developed. Although the United States has been securing both raw silk and waste from China (1 million pounds of each in 1950), that country, obviously, is no longer a dependable source of supply.

The United States is stockpiling silk waste. The objective is 4,309 metric tons as of 30 June, 1954. As of 31 December, 1951, 620 tons, or slightly more than 14 percent of the objective, had been delivered. This was only about 20 percent of the amount scheduled for delivery by the end of 1951. However, deliveries have been more regular in recent months and no difficulty in attaining the stockpile objective on schedule is anticipated. With the stockpile objective completed the United States will be assured of a 4 to 5 year supply of silk waste.

Allied Dependence on Far East.

Of our allies, France, the United Kingdom and Switzerland are the largest purchasers of Japanese raw silk. Most of Hong Kong's imports of about 400 tons from China undoubtedly is transhipped to other countries. Belgium and France also purchase significant quantities of silk waste from China, but again China is not a dependable source of supply. If the Japanese source of silk were lost, there would not be a large enough dependable supply of raw silk or of silk waste to supply the needs of the allies.

Other Non-Communist Dependence on Far East.

In this group of countries, Switzerland is dependent upon Japan for 80 percent of her raw silk imports. India and Pakistan together procure 60 percent of their total imports, or 300 tons, from Japan and China. The loss of Japan might not, however, be serious to these countries as Japan's raw silk might remain available to them in the same manner as China's silk is still available on the world market.

Conclusion.

The loss of the Far East, particularly Japan, would seriously curtail the supply of raw silk available to the United States and the rest of the Free World. The seriousness of the resultant situation would depend on the adequacy of the Free World's stockpile and the speed with which replacement materials could be developed. Silk waste is used for cartridge or gun powder bags because it leaves no residue in the gun after combustion. For this purpose 33 percent raw silk may be combined with waste, but 100 percent raw silk bags are technically unsatisfactory. There are no other known satisfactory substitutes for silk waste powder bags. There have been continuing experiments with replacement materials. Some success has been attained in experiments with specially processed cotton bags, but field tests are still needed to determine their practicality under combat conditions. Apparently, a satisfactory substitute for silk waste in powder bags is still some years away.

World production of cocoons could be expanded considerably but generally at the expense of food production. Japan, the principal producing country, now produces annually only about one-fifth of her prewar (1938) production of over 43,000 metric tons. Japan's current plans call for a modest expansion in production. Prior to 1950 it was more profitable for Japanese farmers to raise food crops than to engage in sericulture. The reverse is now true and if raw silk prices are maintained at current or higher levels, it is reasonable to expect that larger quantities of raw silk will be available for export from Japan.

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Appendix 7

THE FAR EAST

Table 1. World Exports of Raw Silk, by Destination, Average 1948-50

DESTINATION	Italy 1/	Japan 2/	China 3/	Others	Total
	--Metric Tons--				
United States	136	2,075	220	2	2,433
Allies					
United Kingdom	31	607	20	43	701
France	92	934	7	n.a.	1,033
Australia	-	92	1	n.a.	93
Western Germany	77	67	-	n.a.	144
Total Allies	200	1,700	28	43	1,971
Other Non-Communist					
Switzerland	133	530	1	n.a.	664
India and Pakistan	209	220	117	n.a.	546
Other Far East	-	220	99	n.a.	319
Egypt	57	31	11	n.a.	99
Brazil	3	10	-	n.a.	13
Total Other Non-Communist	402	1,011	228	-	1,641
Soviet Orbit					
Poland	5	-	-	n.a.	5
U. S. S. R.	-	-	78	n.a.	78
Total Soviet Orbit	5	-	78	-	83
Not Specified	92	171	6	n.a.	269
Total Exports	835	4,957	560	45	6,397

1/ Includes re-exports.

2/ Countries other than the United States and the United Kingdom - 1950 only.

3/ Countries other than the United States and the United Kingdom - 1947-48 average.

n.a. - Not available.

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Table 2. World Exports of Silk Waste and Noils
by Source and Destination, Average 1948-50

DESTINATION	SOURCE				
	China 1/	Japan & Korea	Italy 2/	U.S.S.R.	Others
			--Metric Tons--		
United States.	302	46	47	309	184
Allies					
United Kingdom . .	18	-	40		105
France	106	-	81		
Italy.	54				304
Belgium.	255	-	3	-	-
Hong Kong.	390	-	-	-	-
Switzerland1	51	-	110	-	-
Western Germany. .			119	-	1
Other Countries. . .			23		
Total 3/					

1/ For countries other than the United States and United Kingdom, average for 1948-49 only.

2/ Including re-exports.

3/ Since all figures not strictly comparable no totals are shown.

Appendix 8

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Security Information

The Far East

Butter

Significance of Far East in World Butter Supply.

The only butter surplus producing countries in the Far East are Australia and New Zealand. Together, they produced about 50 percent of the world's exportable supply of butter during 1950. Annual exports in 1950 totaled about 222,000 metric tons. Of this total, about 203,000 metric tons, or nearly 92 percent, went to the United Kingdom; less than 4,000 metric tons, or 2 percent, went to other allies; and, less than 15,000 metric tons, or 7 percent, went to all other non-communist countries. Only 2 tons went to Soviet orbit countries.

United States dependence on Oceania

The United States, itself an exporter of butter on a very small scale, had only negligible imports of butter in recent years and is not dependent on Far Eastern sources.

Allied dependence on the Far East

Of our allies, only the United Kingdom is an important customer of Oceania. The United Kingdom has imported an annual average of slightly over 200,000 metric tons of butter during 1950 and the three year period 1948-50 from the Oceanic countries. This represents nearly 75 percent of the United Kingdom's total butter imports and more than 90 percent of the total butter exports of Australia and New Zealand. This relationship is expected to continue, barring drastic changes in the world situation, due to the long-term butter contracts between the United Kingdom and Australia and New Zealand.

Other non-Communist area dependence on the Far East

Of the total butter exports of Australia and New Zealand, less than 15,000 metric tons, or less than 7 percent, went to other non-Communist areas. Of this amount, Far Eastern countries took 6,500 tons; the Near and Middle East took 2,000 tons; the Western Hemisphere took nearly 4,000 tons; and Africa took nearly 2,000 tons. In the Far East, the major customers were Singapore, Malaya, Hong Kong, and Ceylon. In the Near and Middle East, the major importers were Iran and Egypt. In the Western

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Hemisphere, the major importers were the British colonies and possessions. In Africa, the major importers was the Union of South Africa.

Summary

The loss of the butter supply of Australia and New Zealand would be of major importance to the United Kingdom and of minor importance to the other allied and non-communist countries. The only other major butter exporter to the United Kingdom is Denmark which sends 75 percent of its exportable surplus to the United Kingdom now, and thus supplies about 25 percent of the United Kingdom's butter import requirements. The only other major butter exporter is the Netherlands which has total butter exports of less than 20 percent of the United Kingdom's import needs, and which at present export mainly to Belgium, Switzerland, and Western Germany. The only other major butter producing countries are the United States and India, neither of which has or is expected to have any significant surplus of butter for export. Thus, if the butter supply of Australia and New Zealand were lost, it could only be substituted for by a major diversion of fluid milk or milk from other uses, into buttermilk, or by a major increase in the production of margarine from edible fats and oils.

Appendix 8

Table 1: Butter, Exports from Oceania by Destination, 1950

Destination	Source: Australia	Source: New Zealand	Source: Total
	----- Metric Tons -----		
United States and Possessions	3	--	3
Allies:			
United Kingdom	69,192	134,066	203,258
Japan	47	69	116
Germany, Western	102	518	620
Other NATO			
France	17	2,032	2,049
Italy	492	508	1,000
Netherlands	14	--	14
Total Other NATO	523	2,540	3,063
Total Allies	69,864	137,193	207,057
Other non-Communist			
Far East (Incl. Oceania)	5,844	682	6,526
Near and Middle East	1,989	80	2,069
Western Hemisphere	2,099	1,668	3,767
Africa	1,708	62	1,770
Other Western Europe	372	--	372
Total Other non-Communist	12,012	2,492	14,504
Total Free World	81,878	139,685	221,563
Soviet Orbit	2	--	2
Total Exports	81,880	139,685	221,565

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Appendix 8

Security Information

The Far East

Cheese

Significance of Far East and Oceania in World's Supply

The only cheese surplus producing countries in this area are Australia and New Zealand. Together, they produced about 35 percent of the non-communist countries' exportable supply of cheese during 1950. Exports from Oceania in 1950 totaled about 124,000 metric tons. Of this total, 107,000 tons, or more than 86 percent, went to the United Kingdom; slightly more than 6,000 tons, or 5 percent, went to the United States; slightly less than 4,000 tons, or 3 percent, went to other allies; and slightly more than 6,000 tons, or 5 percent, went to all other non-communist countries. Only 2 tons went to the Soviet orbit countries.

United States Dependence on Oceania

The United States is normally an importer of cheese, although in the war and postwar years it has exported large quantities. During 1950, Oceania exported slightly over 6,000 tons to the United States. This was equal to 25 percent of the total U. S. imports but only 1 percent of the total consumption of the United States.

Allied Dependence on Oceania

Of our allies, only the United Kingdom is an important customer of Oceania. The United Kingdom imported 107,000 tons of cheese from Australia and New Zealand in 1950. This represents nearly 70 percent of the United Kingdom's total cheese imports and more than 86 percent of the total cheese exports of the two countries. This relationship is expected to continue, barring drastic changes in the world situation, due to long-term cheese contracts between the United Kingdom and Australia and New Zealand.

Other Non-communist Area Dependence on Oceania

Of the total cheese exports of Australia and New Zealand, slightly over 6,000 tons, or 5 percent, went to other non-communist areas. Of this amount, the Far East took 1,500 tons, the Near and Middle East took 2,000 tons, Latin America took 1,400 tons, other Western Europe took 800 tons and Africa took 700 tons. Of all "other Non-Communist" countries only Egypt, with 1,300 tons, took more than 760 tons in 1950.

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Summary

The loss of the cheese supply of Australia and New Zealand would be of major importance to the United Kingdom and of minor importance to the other allied and non-communist countries. The other major cheese exporters to the United Kingdom are: Canada, Denmark, the Netherlands, Switzerland, and Italy. These countries supply nearly 30 percent of the United Kingdom's cheese import requirements. The only other major cheese producing country is the United States which is normally on an import basis for cheese. Thus, if the cheese supply of Australia and New Zealand were lost, it could only be replaced by a major diversion of fluid milk from other uses into cheese or by a major increase of milk production for cheese in the United States and, a very slight possibility, in other countries.

Any significant increase in the production of dairy products will require a number of years. Increased production will be more difficult perhaps than at the beginning of World War I when production facilities were less fully utilized than at present. Post World War II civilian demand for dairy products has been large enough to utilize almost fully the capacity of the world dairy products industry.

Table 1: Cheese, Exports from Oceania by Destination, 1950 1/

Destination	Source: Australia	Source: New Zealand	Source: Total
	---- Metric tons ----		
United States and Dependencies	46	6,335	6,381
Allies			
United Kingdom	16,263	90,691	106,954
Other Allies	-	958	958
NATO Countries	113	2,772	2,885
Total Allies	16,376	94,421	110,797
Other Non-Communist Countries			
Far East (Including Oceania)	1,475	23	1,498
Near and Middle East	2,048	25	2,073
Africa	625	52	677
Other Western Europe	827	-	827
Latin and South America	1,205	159	1,364
Total Other Non-Communist	6,180	259	6,439
Total Free World	22,602	101,015	123,617
Soviet Orbit	2	-	2
Total Exports	22,604	101,015	123,619

1/ 1950 export pattern was essentially same as in 1948 and 1949 both in quantity and distribution.

Appendix 9

THE FAR EAST

Meat

Significance of Far East in World's Supply.

Meat production in the principal meat producing countries of the world (excluding the Far Eastern countries where cattle and buffalo are kept primarily for draft purposes) is about 33 million metric tons annually. Of this amount, Australia and New Zealand together produce about 1,600 thousand tons, or 5 percent of the total. Australia produces approximately twice the quantity of New Zealand.

Approximately 1.8 million metric tons of meat enter world trade channels annually. Of this amount, about 600 thousand tons, or 32 percent, originates in Oceania. Oceania, therefore, produces only 5 percent of the world production of meat, but supplies 32 percent of the world's exportable supply. Beef and veal are the principal meats exported from Australia, whereas mutton and lamb comprise 75 percent of New Zealand's meat exports.

United States Dependence on the Far East.

The United States, although a net importer of meat, is not dependent on Oceania for meat. During World War II, however, the United States Army purchased a large amount of meat from Australia and New Zealand. A large portion of this was mutton and lamb which was not as popular as beef among American troops.

Allied Dependence on the Far East.

Of our allies, the United Kingdom is the most dependent upon Oceania for meat supplies. The United Kingdom imports a total of over 1 million tons of meat annually, one-half of which comes from Oceania. About 50 percent of the United Kingdom's meat imports from Oceania is comprised of mutton and lamb from New Zealand. This relationship is expected to continue, barring drastic changes in the world situation, due to the long-term meat contracts between the United Kingdom and Australia and New Zealand.

If Oceania's supply of meat were lost to the United Kingdom, it would be difficult to stretch the remaining Free World supplies to meet the minimum needs of the United Kingdom. Stringent rationing would be necessary. Even if enough meat were made available to her from other areas, the United Kingdom would be hard pressed financially unless payment in sterling could be arranged.

The "other allies" and NATO countries are not dependent on Oceania for meat.

Other Non-Communist Area Dependence on the Far East.

The "other non-Communist" countries imported about 60,000 tons of meat from Oceania in 1949, over 50,000 tons of which came from Australia. About 40 percent of the total represented trade with other countries in the Far East and Oceania. Latin America, Western Europe, and the Near and Middle East areas each took less than 10,000 tons. Africa took a little more than 10,000 tons.

Although Oceania's exports of meat to "other non-Communist" countries is not large in relation to her total exports, they may be of considerable importance to the importing countries in this group. In some countries only a small political, economic or religious group may consume the entire quantity imported. Under such circumstances the loss of a meat supply might have considerable psychological significance.

The attached Tables 1, 1a and 1b show 1949 exports of meat from Australia and New Zealand by destination, with totals and appropriate subtotals.

Conclusion.

The loss of the exportable meat supply of the Far East (Oceania) would not directly hurt the United States nor any of its allies except the United Kingdom. The United Kingdom, however, would be seriously inconvenienced. There is not a supply of exportable meat available elsewhere in the world large enough to offset the loss of Oceania. On the other hand, if other foods remained available at near current levels, there is not much danger of starvation in the United Kingdom merely from the loss of Oceania's meat, since about one-half of the meat consumed in the United Kingdom is produced locally. The present per capita consumption of meat in the United Kingdom is about 90 percent of prewar.

In addition to Oceania's importance as a source of meat supply, the area is of significance due to the fact that both countries, Australia in particular, have a well-organized meat industry capable of processing large quantities of meat into products that may be shipped and distributed where no refrigeration is available. Canned meat is of vital importance to an army. It is an indispensable item under certain conditions. Australia and New Zealand canned a large amount of meat for use by the allied armies in World War II. They are the only countries in the Far East where facilities for canning meat are available.

Attachments.

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Appendix 9

Table 1. Exports of Meat (Carcass Weight Basis) from Australia and New Zealand by Destination, 1949

DESTINATION	KIND OF MEAT				
	Beef & Veal	Mutton & Lamb	Pork	Other 1/	Total
	--Metric Tons--				
United States	-	6	4	13	23
Allies					
United Kingdom	172,595	336,851	18,397	9,544	537,387
Other Allies	94	-	-	3	97
Other NATO Countries	3,121	12	3	803	3,939
Total Allies	175,810	336,863	18,400	10,350	541,423
Other Non-Communist					
Other Western Europe	4,690	978	209	183	6,060
Latin America	5,833	486	1,318	273	7,910
Far East	7,277	2,120	2,878	72	12,347
Near and Middle East	5,750	2,178	1,089	33	9,050
Arabian States	358	19	100	9	486
Africa	6,603	167	154	3,265	10,189
Oceania	10,568	625	501	946	12,640
Total Other Non-Communist	41,079	6,573	6,249	4,781	58,682
Total Free World	216,889	343,442	24,653	15,144	600,128
Soviet Orbit	597	-	-	293	890
Other Countries	12	-	1	2	15
Total Exports	217,498	343,442	24,654	15,439	610,033

1/ Includes goat meat, canned meat and vegetables, other canned meat, salted or pickled meat, for New Zealand. Australia, canned meat and vegetables only.

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Table 1a. AUSTRALIA: Exports of Meat (Carcass Weight basis) by Destination, 1949

DESTINATION	Beef & Veal	Mutton & Lamb	Pork	Can. Meat & Vegetables	Total
	--Metric Tons--				
United States	-	6	4	13	23
Allies					
United Kingdom	103,334	74,765	9,991	8,954	197,044
Other Allies	94	-	-	3	97
Other NATO Countries	2,885	12	3	519	3,419
Total Allies	106,313	74,777	9,994	9,476	200,560
Other Non-Communist					
Other Western Europe	4,690	978	209	183	6,060
Latin America	4,628	376	898	173	6,075
Far East	7,268	2,118	2,852	62	12,300
Near and Middle East	5,466	2,178	1,089	10	8,743
Arabian States	358	19	100	9	486
Africa	6,601	167	154	3,216	10,138
Oceania	6,328	388	288	539	7,543
Total Other Non-Communist	35,339	6,224	5,590	4,192	51,345
Total Free World	141,652	81,007	15,588	13,681	251,928
Soviet Orbit	597	-	-	293	890
Other Countries	12	-	1	2	15
Total Exports	142,261	81,007	15,589	13,976	252,833

Appendix 9

S E C R E T

The Far East

Table 1b. NEW ZEALAND: Exports of Meat (Carcass Weight Basis) by Destination, 1949

DESTINATION	Beef & Veal	Mutton & Lamb	Pork	Other 1/	Total
	Metric Tons				
Allies					
United Kingdom	69,261	262,086	8,406	590	340,343
Other NATO Countries	236	—	—	284	520
Total Allies	69,497	262,086	8,406	874	340,863
Other Non-Communist					
Latin America	1,205	110	420	100	1,835
Far East	9	2	26	10	47
Near and Middle East	284	—	—	23	307
Africa	2	—	—	49	51
Oceania	4,240	237	213	407	5,097
Total Other Non-Communist	5,740	349	659	589	7,337
Total Exports	75,237	262,435	9,065	1,463	348,200

1/ Includes goat meat, canned meat and vegetables, other canned meat, salted or pickled meat. The United Kingdom imported the major portion of meats not shown-such as edible offals and canned tongue-a total of 14,743 metric tons.

S E C R E T

THE FAR EAST

Palm Oil

Uses

Palm oil is used extensively for both food and non-food purposes. High grade refined oil is used in many countries in the manufacture of margarine and vegetable shortening. In Africa it is used by the natives in crude form for edible purposes. In the Belgian Congo and elsewhere it has been used satisfactorily in trucks having a Diesel type motor.

Large quantities of palm oil are used in the soap, steel, tin and terne-plate industries. At one time the soap industry in the United States used sizable quantities. In the last decade, however, the amount used for soap manufacture has declined very materially. In the three year period 1949-51, of the 35,800 metric tons of U. S. palm oil imports, the volume used in soap manufacture was about 1,850 tons, or about 5 percent of the imported tonnage. Of all fats and oils used in soap manufacture in the last six years, palm oil has comprised less than one percent. Unlike coconut oil, palm oil does not impart lathering properties to soap.

The most important use of palm oil in the United States is in the manufacture of steel. It is valuable in the cold-rolling of steel, in the process of drawing wire, and in producing tin and terne-plate. Since the manufacture of these items is highly important to the Nation's defense program, palm oil is considered an essential item. This oil is so desirable for steel, tin and terne-plate production that, unlike palm oil for other uses, when so used it is exempt from the 3-cent per pound processing tax which is payable at the time of its initial processing.

Substitutes

Refined and hydrogenated "soft oils" - such as peanut, cottonseed, and soybean - and hydrogenated deodorized fish oils are very suitable as replacements for palm oil in the manufacture of margarine and shortening. However, in the steel, tin and terne-plate industries, crude palm oil is much preferred to other oils mainly because it is relatively low in cost and, more important, its composition is near the optimum for such purposes. That is, in tin plating the oil used must be such that it will not polymerize too rapidly when the plated metal sheets are passed through the bath at a temperature of 460° - 550°F. However, hydrogenated cottonseed oil can be blended with it to good advantage when necessary. Moreover, if it has an iodine value of about 50, cottonseed oil can be used as a substitute in tinning.

Experiments have been conducted in this country in recent years to develop a satisfactory substitute for palm oil. These experiments have been concerned with the use of inedible low-cost animal fats, primarily tallow and greases. Production of a satisfactory substitute for palm oil in tin and terne-plate manufacture has been accomplished, but on a small scale. However, there still remains for the iron and steel industry to determine whether tin and terne-plate manufactured with this newly developed "oil" will prove satisfactory in the production of tin cans used for such products as pineapple and citrus juices subject to long-time storage. Furthermore, there remains the problem of an aesthetic nature: Will the Food and Drug Administration permit the manufacture of tin containers from tin-plate in which the finishing process involves the use of an "oil" from fats declared unfit for human consumption? Apart from this consideration - and the former, which is more important - it would appear that a satisfactory substitute for palm oil has been found. And the United States is, by far, the world's leading producer of surplus tallow and grease, the necessary raw materials for this "oil".

Significance of the Far East in World's Supply

The palm oil surplus producing countries of the Far East - Indonesia and Malaya - produced in 1950 about 27 percent of the world's export volume of palm oil. Exports from the Far East in that year totaled 149,100 metric tons. While the quantities exported to Middle Eastern and non-Communist Far Eastern countries were negligible - on a combined basis, only one percent of the total - about 98 percent of the exported tonnage went to the Allied Nations, with the dominant share going to the United Kingdom and the Netherlands.

Indonesia and Malaya produce only about 15 percent of the world's total production of palm oil, with virtually all of the remainder being produced in Africa.

United States Dependence on the Far East

The United States is not dependent on the Far East for its palm oil imports. Supplies imported into this country in postwar years have come primarily from African countries.

The stockpile program for palm oil envisages an accumulation of 45,360 metric tons by 30 June 1954. This objective represents a 5-year emergency supply. As of 31 December 1951, the objective was 72.1 percent completed. Deliveries, however, were behind schedule. If all purchases scheduled for delivery prior to 31 December 1951 had been received, the stockpile as of that date would have been 110.5 percent of the objective instead of only 72.1 percent. It is now anticipated that the stockpile objective will be met by mid-summer, 1952. Plans for rotating stocks in the stockpile will insure that fresh supplies are always on hand.

Allied Dependence on the Far East

Of our allies, the United Kingdom, the Netherlands, and Western Germany are the major importers of Far Eastern palm oil. The loss of palm oil from Indonesia and Malaya would, of course, intensify the dependence of our allies on African sources. However, expanded output in Africa among native producers could be induced somewhat by higher prices and, possibly, increased availabilities of consumption goods.

Other Non-Communist Dependence on the Far East

The dependence on Far Eastern availabilities of palm oil by other non-Communist countries in the Far East and Middle East is of virtually no importance.

The attached Table 1 shows exports of palm oil in 1950 from Indonesia and Malaya to the chief importing countries of the world with totals and appropriate sub-totals.

Conclusion

The loss of Indonesian and Malayan palm oil would not impair the economies of the countries of the Free World. In essence such loss would reduce the total Free World supply of palm oil by a maximum of about 25 percent and would call for readjustments mainly in intra-European trade. With substitutes available for palm oil for edible use, and with a satisfactory substitute developed for palm oil as a "strategic" item - in the steel, tin, and terne-plate industries - the countries of the Free World probably could readily withstand the loss of the Far East supplies, particularly with continued access to African supplies, the source of roughly 75 percent of the world's total availabilities. Since palm oil is obtained solely from soft-currency areas, currency exchange problems would be of minor importance.

Attachment

Appendix 10

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THE FAR EAST

Table 1. Palm Oil, Exports by Destination, 1950

DESTINATION	SOURCE		
	Indonesia	Malaya	Total
	Thousand Metric Tons		
United States	0.7	0.3	1.0
Allies			
United Kingdom	29.5	49.8	79.3
Netherlands	57.1	0.3	57.4
Other NATO Countries	-	0.5	0.5
Western Germany	9.1	a/	9.1
Other Allies	0.3	0.1	0.4
Total Allies	96.0	50.7	146.7
Other Non-Communist			
Far East	0.4	0.4	0.8
Middle East	-	0.6	0.6
Total Other Non-Communist	0.4	1.0	1.4
Total Exports	97.1	52.0	149.1

a/ Less than 50 tons.

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FAR EAST

Black Pepper

Significance of Far East in World's Supply.

The surplus black pepper producing countries of the Far East - Indonesia, French Indochina, Siam, and Sarawak - exported 7,744 metric tons or 33 percent of world exports of black pepper in 1950. In addition, the Far East exported 1,185 tons of white pepper, about half of which consisted of Indonesian carryover stocks from prior years. White pepper is the seed of pepper berries allowed to ripen on the vine, while black pepper is dried in the sun without removing the skin and pulp. White pepper has about the same uses as black pepper but is less pungent, more delicately flavored, and more expensive. Practically the entire world supply of white pepper is produced in the Far East.

Indonesia is the most important source of black pepper in the Far East and currently the second most important in the world. In the prewar period, 1935-39, world exports of black pepper averaged about 65,000 tons annually. Approximately 91 percent of this amount was supplied by Indonesia. Pepper gardens in Indonesia were badly damaged during the war, and civil unrest in postwar years greatly retarded rehabilitation. Exports of black pepper from the other pepper producing countries of the Far East in 1950 were considerably below the prewar level.

United States Dependence on Far East.

Black pepper cannot be produced commercially in the United States. It is by far the most important of the spices. Currently, it accounts for about two-thirds of the value of all spices imported into the United States. In the fiscal year 1950-51, imports of black pepper into the United States were valued at about $52 million, slightly exceeding the value of tea imports.

The supply of black pepper in the postwar years has been inadequate for world requirements and pepper prices have increased remarkably. The New York wholesale price per pound of black pepper increased from 4 cents in 1939 to 10 cents in 1945, 62 cents in 1948, $1.06 in 1949 and $1.63 in 1950. The peak was reached in August 1950 with an average price of $2.66 a pound. Since then, black pepper prices have remained fairly constant at about $1.65 a pound.

Although United States black pepper imports were approximately two-thirds as high as in the prewar period, the United States took about 55 percent of the world's exportable supply in 1950. World exports of black pepper totaled 23,583 tons in 1950, and exports to the United States amounted to 13,037 tons. The Far East supplied 18 percent of the world's black pepper exports to the United States in 1950.

Allied Dependence on Far East.

All our allies depend directly or indirectly on the Far East for part of their supply of black pepper. The largest direct shipments of black pepper from the Far East to our allies go to the Netherlands, France, Italy, Western Germany, and the United Kingdom. Approximately 3,045 tons of black pepper produced in the Far East were shipped to Singapore and exported from that port to most of our allies and to a great many other countries. A substantial part of the black pepper shipped from Indonesia to the Netherlands in 1950 was re-exported to our allies and other countries.

Other Non-Communist Area Dependence on Far East.

Most of the other non-Communist countries of the world are dependent, either directly or indirectly, on the Far East for part of their black pepper requirements. Black pepper is produced commercially in only a very few countries but is the most widely consumed of all spices.

Conclusion.

Black pepper is by far the most important of all the spices, and is imported into most of the countries of the world. No satisfactory substitute has yet been found. It is in extremely short supply, and prices of this commodity now are about forty times as high as they were in the prewar period. More than half of the world's exportable supply of black pepper is consumed in the United States.

World black pepper requirements are roughly double the present available supply, and a rapid recovery of the Indonesian black pepper industry offers about the only hope for greatly increased supplies within the near future. Only a moderate increase in production has been forecast for India, the chief source of black pepper at present. Eventually, certain South and Central American countries may become important suppliers of black pepper, or a satisfactory synthetic substitute may be developed.

Attachment.

Appendix 11

Table 1. Black Pepper: World Exports, 1950

DESTINATION	SOURCE						
	Indonesia	French Indochina	Siam	Sarawak	Total Far East	All Other	Total
	--Metric Tons--						
United States & Possessions	2,078	1/ 5	213	-	2,296	10,741	13,037
Allies							
United Kingdom	40	-	-	-	40	31	71
Western Germany	44	-	-	-	44	378	422
Other NATO Countries:							
Canada	6	-	-	-	6	610	616
Netherlands	847	-	-	-	847	1,743	2,590
Remaining NATO	190				190	543	733
Total Other NATO	1,043	-	-	-	1,043	2,896	3,939
Other Allies	7				7	18	25
Total Allies	1,134	-	-	-	1,134	3,323	4,457
Other Non-Communist							
Far East	3,051	-	-	16	3,067	-	3,067
Near and Middle East	7	-	-	-	7	160	167
Africa	9	-	-	-	9	3	12
Other Western Europe	6	-	-	-	6	59	65
Other Western Hemisphere	28	-	-	-	28	-	28
Total Other Non-Communist	3,101	-	-	16	3,117	222	3,339
Total Free World	6,313	5	213	16	6,547	14,286	20,833
Soviet Orbit	-	-	-	-	-	523	523
Ship Stores	-	-	-	-	-	8	8
Other Countries	1	-	-	-	1	1,022	1,023
Not Specified	-	2/1,010	186	-	1,196	-	1,196
Total Exports	6,314	1,015	399	16	7,744	15,839	23,583
Intra-area Trade	3,051	-	-	16	3,067	-	3,067
Net Exports	3,263	-	-	0	4,677	15,839	20,516

1/ This figure obtained from Foreign Trade and Navigation of the United States, 1950.

2/ Practically all exported to France and the French Union.

THE FAR EAST

Tea

Significance of the Far East in World's Supply.

The tea surplus producing countries of the Far East - Indonesia, Taiwan, Japan, Indochina, and Malaya - furnished 46,958 metric tons, or 12 percent of world tea exports for 1950, which totaled 393,642 metric tons.

Indonesia is the most important source of tea in the Far East and the third most important source in the world. In prewar years (1935-39), Indonesia's tea exports averaged 69,480 metric tons annually. The tea industry in Indonesia was damaged greatly during World War II, but it is recovering rapidly. Indonesia exported 27,538 metric tons of tea in 1950.

Japan's tea exports in 1950 amounted to 7,231 tons compared with prewar average exports of 19,632 tons annually. Japan's tea trade was cut off by the war, but exports of tea are expected to increase considerably during the next several years. Now that green tea from China is generally unavailable to the Free World, Japan is the only important source of green tea, the principal type of tea consumed in North Africa and certain other areas.

United States Dependence on Far East.

The United States does not produce any tea. World exports of tea to the United States in 1950 amounted to 46,237 metric tons. The Far East supplied 6,663 metric tons, or 14 percent, including 2,159 tons of green tea. Practically all of the tea consumed in the United States is black tea.

Allied Dependence on Far East.

World tea exports to our allies in 1950 amounted to 259,711 metric tons. The Far East supplied 18,905 tons, or 7 percent of the total. Only France and the Netherlands depend on the Far East for a substantial portion of their tea supply. World tea exports to the Netherlands totaled

15,984 tons in 1950, and 11,924 tons, or 75 percent of the total, came from Indonesia. Imports into France in 1950 amounted to 684 metric tons of which 495 metric tons, or 72 percent, came from Indochina.

Other Non-Communist Area Dependence on Far East.

Other countries in the Far East obtained 5,362 tons, or 64 percent of their tea supply in 1950 from the surplus tea producing countries in the Far East. Countries in Africa depended on the Far East for 26 percent of their total supply in 1950 and for nearly all of their green tea requirements. World tea exports to Africa in 1950 amounted to 19,265 metric tons, of which 5,072 tons were supplied by the Far East. Algeria, Morocco, and Tangiers obtained practically all of their supplies in 1950 from the Far East, mostly from Japan.

The Far East exported 6,749 metric tons of tea to the Near and Middle East in 1950. This accounted for 18 percent of world tea exports to the Near and Middle East in that year.

The Anglo-Egyptian Sudan and Afghanistan depended on the Far East for most of their tea supply in 1950. Finland is the only other country in the world which obtained a large proportion of its tea supplies from the Far East in 1950.

Conclusion.

The loss of the Far East would seriously reduce the supply of tea available to the Free World. Certain countries are dependent on the Far East for a major proportion of their tea supply. The present world supply of tea is adequate to meet demand; however, a serious tea leaf disease called Blister Blight is spreading rapidly in several important tea producing countries, and the expected substantial increase in Indonesian tea production will assume a greater importance if this disease is not checked fairly soon. Japan is the only important source of green tea left to the Free World, and this type of tea is in great demand in certain countries, particularly in North Africa where political repercussions were felt when the supply of green tea from Communist China was cut off.

Appendix 12

Table 1. World Exports of Tea by Area of Destination, 1950

DESTINATION	SOURCE							
	Taiwan 1/	Japan	Indo-nesia	Indo-China	Malaya	Total Far East	All Other 2/	Total
	—Metric Tons—							
United States & Possessions	2,232	2,159	2,265	7	–	6,663	39,574	46,237
Allies								
United Kingdom	815	5	2,068	–	–	2,888	177,871	180,759
Australia	–	–	2,301	–	–	2,301	25,734	28,035
Other NATO:								
Canada	336	298	212	–	–	846	20,347	21,193
Netherlands	48	–	11,924	–	–	11,972	4,012	15,984
Remaining NATO	46	50	69	495	–	660	3,973	4,633
Total Other NATO	430	348	12,205	495	–	13,478	28,332	41,810
Other Allies	139	–	99	–	–	238	8,869	9,107
Total Allies	1,384	353	16,673	495	–	16,905	240,806	259,711
Other Non-Communist								
Far East	3,404	709	1,003	246	–	5,362	2,981	8,343
Near and Middle East	39	229	6,481	–	–	6,749	31,243	37,992
Africa	999	3,723	169	181		5,072	14,193	19,265
Other Western Hemisphere	181	56	209	–	–	446	2,982	3,428
Other Western Europe	113	–	736	–	–	849	14,633	15,482
Total Other Non-Communist	4,736	4,717	8,598	427	–	18,478	66,032	84,510
Total Free World	8,352	7,229	27,536	929		44,046	346,412	390,458
Soviet Orbit	1,317	–	–	–	–	1,317	3	1,320
Ship Stores	–	–	–	–	–	–	150	150
Other Countries	898	2	2	–	–	902	119	1,021
Unspecified	–	–	–	–	693	693	–	693
Total All Exports	10,567	7,231	27,538	929	693	46,958	346,684	393,642
Intra-area Trade	3,404	709	1,003	246	–	5,362	2,981	8,343
Net Exports, Far East	7,163	6,522	26,535	683	693	41,596	343,703	385,299

1/ 1949, 11 months.

2/ Includes primarily Ceylon, India, Pakistan, British East Africa, Nyasaland and Brazil.

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Appendix 13

Security Information

THE FAR EAST

SUGAR

Significance of the Far East in World's Supply:

The sugar surplus producing countries of the Far East - Formosa, Australia, the Phillipines, Fiji, and Indonesia - export about 10 percent of the world's exportable supply of centrifugal sugar 1/. Average annual exports for 1949 and 1950 from the Far East totaled 1.5 million metric tons, raw value, of which 1.2 million tons, or 82 percent, went to the United States and its allies. The chief importers were the United States, United Kingdom, Japan, Canada, New Zealand, Egypt and Hong Kong in order of importance.

As a result of World War II and with increased production of sugar in other areas of the world, the above five countries of the Far East produced an average of only 2.5 million tons of sugar, or less than 9 percent of the world total during 1948-49 and 1949-50. Generally, a considerable percentage of production moves into world trade and the potential exports of the Far East are much greater than present production figures indicate.

U.S. Dependence on the Far East:

The Philippine Trade Act and the U.S. Sugar Act of 1948 provide an annual U.S. import quota of 891,000 metric tons of Philippine sugar. Although the Philippines failed to meet their quota during 1949 and 1950 (averaging 427,000 metric tons to the U.S. during those two years), they expect to fill their quota in the near future. The import quota, if filled this year, will constitute 14 percent of U.S. sugar requirements.

1/ Native or non-centrifugal sugar is not considered in this report. Very little non-centrifugal sugar enters world trade.

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Allied Dependence on the Far East:

The United Kingdom and British Commonwealth (excluding India and Pakistan) imported an average of 659,000 metric tons of sugar from the Far East during 1949 and 1950. These imports constituted 16 percent of the total import requirements of the British system (4.1 million tons). For the individual countries of the United Kingdom, New Zealand and Canada, the Far East provided the following percentages of total imports:

	Total Imports (Metric Tons)	Percent Far East Exports are of Total Imports
United Kingdom	1,443,000	24
New Zealand	83,000	95
Canada	567,000	19

Japanese imports from the Far East averaged 245,000 tons during 1949 and 1950. Although, in recent years, Japan has imported sugar from such areas as Cuba, Mexico and certain South American exporters, it rapidly returned to its pre-war dependence on nearby Formosa to fill the bulk of import requirements as soon as sugar stocks were available.

Other Non-communist Area Dependence on the Far East:

The areas of Malaya, Burma and Hong Kong imported an average of 90,200 tons of sugar from the Far East in 1949 and 1950. These imports constituted 55 percent of total import requirements for the three countries. This percentage would be higher if Indonesian exporters were in a better position to supply sugar to nearby Malaya.

Australian and British Pacific Islands imported an average of 8,000 tons of sugar during 1949 and 1950. The amount imported was negligible in terms of total world trade, yet the total consumption requirements of these islands are derived from Australia, Fiji and New Zealand.. The same is true of the nearby French Pacific Islands which imported an average of 1,500 tons during the same period.

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Siam is dependent on surrounding areas for a large percentage of its sugar requirements. The Middle East areas of Aden, Arabia and Syria imported an average of 8,000 tons from the Far East during 1949 and 1950. These areas are not wholly dependent on the Far East for sugar supplies but prefer to purchase sugar in the Far East because prices are lower. Egypt, now a net importer received an average of 84,000 tons during 1949 and 1950 from the Far East. With a rising consumption rate in Egypt, this country probably will continue to be dependent on the Far East in the future.

Conclusion: The Philippines and Australia are now striving to exceed pre-war sugar production levels and the combined production of the two areas may exceed 2 million tons in the near future. Australia will have an estimated 550,000 metric ton surplus by 1953-54; the Philippines expect to meet their U.S. quota by that year; and with a total export surplus of 900,000 tons from the other areas of Fiji, Formosa and Indonesia, total exports should approximate 2.4 million tons from the 1953-54 crop. The larger part of this total would be shipped to American and British importing areas. The balance would be directed to Japan and other non-communist areas of the Middle and Far East.

The loss of either Formosa, Indonesia or Fiji would not have any serious effect on the world market other than a bolstering of the world price for sugar. Because of the location of the larger producing areas of Australia and the Philippines, a loss of the consuming areas of the Middle and Far East would probably precede the loss of these two producing areas. Even the loss of the entire Far East sugar production would be largely offset by the loss of consumption in British supplied and independent areas. The loss of the Far East sugar supply probably could be taken care of by increased production of cane in Cuba and elsewhere plus the stimulation of sugar beet production in the Northern Hemisphere areas of the Free World.

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Table 1. THE FAR EAST: Average Annual Exports of Sugar by Destination, 1949-50.

Destination	SOURCE					
	Formosa	Australia	Philippine Islands	Fiji	Indonesia	Total
	---1,000 Metric tons---					
United States and Possessions	-	0.1	426.9	-	-	427.0
Allies:						
United Kingdom	4.0	330.2	-	10.9	0.1	345.2
New Zealand	-	54.8	-	32.2	-	87.0
Japan	244.9	-	-	-	1/	244.9
Other NATO Countries						
Canada	-	36.9	-	70.6	-	107.5
Netherlands	4.5	-	-	-	-	4.5
Total Other NATO	4.5	36.9	-	70.6	-	112.0
Total Allies	253.4	421.9	-	113.7	0.1	789.1
Other Non-Communist						
Far East	75.1	8.8	-	0.7	16.6	101.2
Near and Middle East . . .	87.6	-	-	-	4.7	92.3
Africa	-	-	-	-	0.5	0.5
South America	2.4	-	1/	-	-	2.4
Other British	-	0.4	-	-	-	0.4
Total Other Non-Communist	165.1	9.2	-	0.7	21.8	196.8
Total Free World . . .	418.5	431.2	426.9	114.4	21.9	1,412.9
Soviet Orbit	25.0	-	-	-	-	25.0
Unspecified	35.6	0.2	-	-	0.5	36.3
Total Exports	479.1	431.4	426.9	114.4	22.3	1,474.2
Intra-area Trade	75.1	63.6	-	0.7	16.6	156.0
Net Exports	404.0	367.8	426.9	113.7	5.7	1,318.2

1/ Less than 50 tons

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