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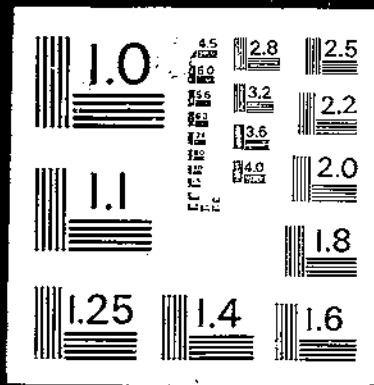
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COMPETITIVE POSITION OF U. S. FARM PRODUCTS IN THE JAPANESE MARKET. (Foreign Agricultural Economic Report). / Hughes H. Spurlock. Washington, DC: Economic Research Service. Nov. 1966.

(NAL Call No. A281.9/Ag8F)

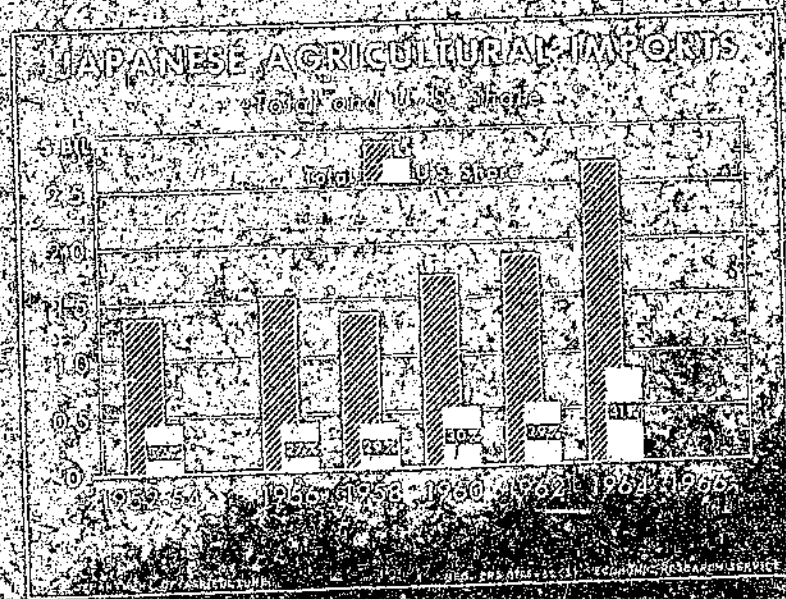
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THE COMPETITIVE POSITION OF U.S. FARM PRODUCTS IN THE JAPANESE MARKET

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PREFACE

This study describes and appraises the extent, nature, and sources of competition affecting the sales of U.S. farm products in the Japanese market during 1950-64. Recent trends and developments are mentioned as indicative of what lies ahead in demand and competition. Farm resources, production trends, and farm policies are considered.

Factors noted on the demand side for farm products are those that are expanding and changing Japanese demand, such as population growth, rising consumer income, urbanization, westernization, and product substitution. Considerable emphasis is given to Japan's capacity to import as determined by the growth and strength of the general economy, export markets, foreign exchange earnings, and balance of payments.

Farm imports are discussed as an integral part of the broader economic framework. For example, Japan's practice of buying farm products to obtain and hold markets for its manufactured goods as this practice affects the U.S. share of the market is discussed at some length in the report. Another aspect of trade policy stressed concerns access to the market in terms of import controls and trade barriers.

The analysis of competition in selling selected commodities is approached from the standpoint of world supply, potential supplying countries, and leading sources of supply that compete with U.S. interests in the market. Products selected for study are rice, wheat, barley, raisins, lemons, corn, grain sorghum, cotton, tobacco, soybeans, safflower seeds, hides and skins, tallow, poultry, and nonfat dry milk.

Most of the data used are from official Japanese sources. The author has relied heavily upon the Office of the U.S. Agricultural Attache in Tokyo and commodity specialists of the Foreign Agricultural Service of the Department of Agriculture for analysis of the data and supplemental material. Any errors, however, are the responsibility of the author.

CONTENTS

	Page
Summary	v
Economic factors shaping trade trends and developments . .	1
General economic conditions and progress	1
Dependency on farm imports	3
Growth and changes in demand	4
Financing import needs	7
Agricultural production policy and production trends	8
Agricultural policy	9
Changing land-use patterns	15
Production trends	16
Agricultural trade policy and trade trends	17
Trade policy	17
Changing trade patterns	24
Trade trends	29
Competition, commodity-by-country	32
Food grains	33
Rice	34
Wheat	41
Barley	48
Feed grains	53
Corn	57
Grain sorghum	62
Industrial crops	64
Cotton	64
Tobacco	73
Oilseeds	82
Soybeans	82
Safflower seeds	89
Livestock and poultry products	89
Tallow	89
Hides and skins	94
Poultry	99
Nonfat dry milk	102

	Page
Fruits	106
Raisins	108
Lemons	109
Outlook and market development.	109
Highlights of 1965	109
Outlook	110
Market development by the United States	112
Market development by competing countries	114
Selected references	115

November 1966

LIST OF TABLES

Table	Page
1. Japan: Per capita consumption of selected principal food products, average 1934-38, annual 1955-62.	6
2. Japan: Summary of agreements on commerce, trade, and payment with selected countries, 1963..	22
3. Japan: Balance of trade, 1950-64.	30
4. Japan: Rice used in making sake, 1958-63.	37
5. Japan: Area and production of milled rice, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64.	40
6. Japan: Area and production of wheat, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64.	44
7. Japan: Wheat imports by country of origin and use, July 1962-June 1963.	45
8. Japan: Area and production of barley, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64.	50
9. Japan: Number of livestock and chickens, average 1950-54, annual 1955-64, and targets for 1971..	54
10. Japan: Feed ingredients used in making compounds and formula feeds, July 1961-June 1962 and July 1962-June 1963.	55
11. Japan: Area and production of corn, imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64.	58
12. Japan: Area and production of grain sorghum, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64.	63

Table	Page
13. Japan: Area and production of cotton, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64	69
14. Japan: Acreage and production of tobacco by specified kinds, 1964	75
15. Japan: Area and production of tobacco, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64	78
16. Japan: Production of high-quality cigarettes and average mixing ratios of imported leaf, 1950-62. .	80
17. Japan: Area and production of soybeans, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64	83
18. Communist China: Production and exports of soybeans and percentage of total exported, 1955-64 . . .	87
19. Japan: Production of tallow, and imports by principal country of origin, averages 1950-54, and 1960-64, annual 1955-64	90
20. Japan: Production of hides and skins, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64	97
21. Japan: Number of chickens on farms, egg production, and chicken meat-production, averages 1950-54 and 1960-64, annual 1955-64	100
22. Japan: Imports of dressed poultry, chicks, and hatching eggs by country of origin, 1958-64	101
23. Japan: Production, net imports, and consumption of milk, 1955-64	103
24. Japan: Imports of nonfat dry milk, by principal country of origin, 1953-64	104
25. Japan: Planted area and production of selected fruits, averages 1950-54 and 1960-64, annual 1955-64	107
26. Japan: Imports of selected farm products in 1960, and projection for 1965, 1970, and 1975	111

SUMMARY

Japan imported agricultural products valued at \$2,683 million in 1964, an increase of more than 12 percent over the previous year. The 1964 figure was nearly double the 1952-54 average and more than triple the 1950 figure. The value and the rate of growth established Japan as one of the largest and fastest growing farm markets in the world. In this rapidly expanding and highly valued market, the United States holds a strong position. Although competition is keen, Japan--already the U.S. farmers No. 1 market--promises to become the first \$1 billion outlet for U.S. farm products.

Of Japan's nearly \$2.7 billion farm import bill in 1964, the United States supplied \$820 million, 31 percent of the total. Purchases from the United States increased 19 percent over 1963. The U.S. share of the market averaged 32 percent for 1952-54 compared with 29 percent for 1962-64.

For most U.S. farm exports to Japan, a buyer's market generally exists with alternative sources of supply for all or part of Japan's needs. Faced with a growing import bill and periodic balance-of-payments problems, Japan puts much effort into buying where the terms are most favorable. Successful sellers in the Japanese market must compete in such matters as price, quality, promptness of delivery, financing, and reliability. These general competitive factors require, in addition, promotional efforts, personal contacts, servicing, understanding Japan's requirements, and correcting conditions that cause dissatisfaction. The United States has done well in meeting these selling requirements.

Japan, relying so heavily on foreign trade, has an unusually strong incentive to buy farm products where the purchases will help expand and diversify markets for its exports, largely manufactures. This incentive is most likely to influence buying decisions where the seller is an under-developed neighboring country, where the seller has an unfavorable balance of trade with Japan, and where Japan has strong long-term trading ambitions as a supplying nation. To the extent that this is a factor, the United States has trouble countering it.

Several factors influence the quantities, types, and quality of farm products that Japan can and will buy. Population growth is adding nearly 1 million persons annually to the consumer market. Incomes are rising year after year. Land suitable for expanding cultivation is limited, and opportunities for expansion have been

widely exploited. The expected increases in food and fiber requirements of the future will be met largely by imports.

Rapid gains in consumer purchasing power are not only increasing demand but are also shifting demand from the cheaper starchy foods to the more expensive foods, such as meat, milk, eggs, and fruits. A policy of producing rather than importing many livestock products is booming the demand for feed grains and other ingredients that go into livestock feeds.

The costs of producing farm products in Japan are high. Japanese farmers, however, receive Government subsidies paid primarily as price supports on commodities for which domestic demand is strong and increasing. As a corollary to high support prices, the domestic market is protected by nontariff and, to a lesser extent, tariff barriers. Progress toward liberalization of import controls has eased the problem of getting foreign supplies into Japan generally, but not for many of the price-supported items.

Principal U.S. farm products for which Japan is a major market include cotton, soybeans, wheat, corn, grain sorghum, barley, rice, hides and skins, tallow, tobacco, raisins, lemons, safflower seed, poultry, and nonfat dry milk. The list is growing.

Competition from other countries varies considerably among products and from year to year. The United States and Mexico are the major competitors in cotton sales. Soybeans are supplied primarily by the United States and Mainland China. The United States, Canada, Australia, New Zealand, and Argentina provide the bulk of wheat, barley, hides and skins, tallow, and grain sorghum. Corn imports come largely from the United States, South Africa, and Thailand. Zambia, Malawi, and Rhodesia (formerly Northern Rhodesia, Nyasaland, and Southern Rhodesia) now provide the most serious competition to the United States in supplying flue-cured tobacco. Taiwan, Burma, Mainland China, and Thailand compete with U.S. growers for rice sales. The United States has supplied the bulk of the market for raisins, lemons, safflower seed, poultry, and nonfat dry milk in recent years.

Some important U.S. farm products are facing competitive problems arising from product substitution: Manmade fibers replacing cotton; detergents substituting for tallow-based soaps; and plastics replacing leather. The United States is the leading supplier of cotton, tallow, and hides and skins.

The outlook for the general economy is for the gross national product, rising at around 10 percent annually over the last decade, to continue growing though at a reduced rate. A recession, which started in late 1964 and continued through 1965, is causing some pessimism among the Japanese. But exports continue brisk and Japan's economy remains basically sound despite some slackening growth and weaknesses. The balance-of-payments position is good.

THE COMPETITIVE POSITION OF U.S. FARM PRODUCTS IN THE JAPANESE MARKET

By Hughes H. Spurlock, Agricultural Economist
Foreign Regional Analysis Division
Economic Research Service

ECONOMIC FACTORS SHAPING TRADE TRENDS AND DEVELOPMENTS

GENERAL ECONOMIC CONDITIONS AND PROGRESS

The size and character of the Japanese market for farm products are inseparable from the general health and growth of the overall Japanese economy. Japan's success in keeping the economy strong has been outstanding.

At the close of World War II, the country was virtually in ruins. Industrial production was running at one-third of the 1934-36 level. One-fourth of the capital equipment had been destroyed. Agriculture was producing only 60 percent of its prewar output. Exports had practically vanished. Inflation and the black market flourished. The job of reconstruction was not completed until the early 1950's, probably around 1952-53 (26).¹ U.S. assistance was important in helping Japan to reconstruct.

Progress and accomplishments since the end of reconstruction have been excellent. Over the last decade, Japan has achieved an annual economic rate of growth around 10 percent--the highest rate attained by any country for which comparable statistics are available. The rate of growth slackened after 1961, but soon recovered. It dropped again in 1965, but is still averaging higher than the nearly 8 percent planned by the Government in establishing targets for the 1960 decade.

Actually, the announced Government plan--referred to generally as the Income-Doubling Plan--proposed to double national income by 1970. This calculation called for an annual compound rate of growth of 7.8 percent in the gross national product. The

¹ Underscored numbers in parentheses refer to items listed in Selected References, p. 115.

productivity drive has succeeded beyond expectations. It now seems probable that the targets set for 1970 will be reached well ahead of schedule.

Economic strength was evident in 1964, the most recent year of record, and extended through all sectors of the economy, though not evenly. Industrial output, exports, imports, wages, employment, and consumer expenditures all moved ahead briskly and registered strong gains. Total consumer expenditures in 1964 increased by 12 percent; much of the increase occurred among low-income groups, adding broad strength to the market.

Stresses and strains that usually accompany high economic activity continued to make themselves felt in 1964. Keeping consumer prices reasonably stable was causing concern, though the problem was not considered critical. Recently announced plans call for keeping consumer price increases down to 2.5 percent annually through 1968. With consumer incomes rising much faster than prices, the level of living continues to improve rapidly despite price increases. Japan's wholesale price index remains rather stable; there is no evidence that export goods generally are not priced competitively in the foreign market. On the contrary, Japanese ships, steel, machinery, and other exports are selling exceptionally well.

Some observers point out that the Japanese success cloak certain weaknesses and potential pitfalls. These observers point out that Japan's high rate of economic growth has created undesirable imbalances that threaten future growth. Inflation is cited as one such threat. Neglect of public-sector expenditures in favor of a rapid buildup in modern plants and factories (the means of production) is also pointed to as a potential bottleneck. Another weak spot mentioned is dependency on foreign capital imports to offset unfavorable balances in the current account. Those who hold such views suggest that a slower rate of growth with all sectors of the economy moving ahead at a more even rate might be preferable.

Japanese Government plans are in the nature of "indicative planning." The Government does not control priorities for investments in a mandatory sense, as the Communist countries do, for example. The Japanese Government can and does influence the rate of growth through monetary policy and other indirect controls. The plans committing the Government to promoting economic growth and setting targets give Japanese businessmen guidance and confidence and serve a useful purpose. But the Government does not control the decision-making processes in the economy. Business groups are relied upon to take corrective action when industry is overproducing. Government spending programs or tax cuts to increase demand have not been extensively used.

Since reconstruction Japan has had four recessions centering in 1954, 1957, 1961, and 1965. But the first three recessions did no more than provide for retrenchment and had little lasting effect on economic growth. The Japanese businessman's eagerness to invest and the Japanese consumer's growing desire for more goods and services have led to heavy spending for imports and imbalances in the foreign account.

Despite the high rate of growth, prices have been fairly stable, and Japan's economic strength far exceeds the weaknesses. The economy can rightly be described as strong, sound, and promising for further long-term progress. There are, however, certain difficult areas in Japan's economic situation that have serious implications for foreign trade. Some of these are discussed in the report as they affect markets for U.S. farm products.

DEPENDENCY ON FARM IMPORTS

Except for a skilled, educated, disciplined, and industrious labor force, Japan has relatively few resources--including agricultural resources. Heavy buying of food and fiber by the Japanese from foreign sources reflects the fact that Japan does not have sufficient farmland to grow the nation's needs. Japan's farm imports include supplementary products, such as wheat, rice, and soybeans, to bridge the gap between domestic production and requirements. Other imports, such as cotton, wool, and some tropical products, are not grown in Japan to any significant extent and must come almost entirely from outside sources. Japan's farm import needs are large enough and inclusive enough that agricultural exporting countries with temperate climates, such as the United States, and those with tropical climates, like Taiwan, are selling farm produce to Japan in increasing quantities.

In many respects, the Japanese market is similar to markets in countries of Western Europe. From the point of view of U.S. agricultural export interests, both Japan and the industrialized countries of Europe are excellent cash customers. Such nations not only need to import large quantities of food and fiber but also possess a thriving manufacturing industry and trade which supplies foreign exchange with which to pay for imports.

Japan's geographic and economic position most closely resembles that of the United Kingdom. Both countries are islands situated alongside continental land masses and committed by necessity to adopting an economic policy built around importing, processing, and exporting. Such countries must trade on a large and growing scale to live and prosper. The Japanese are constantly pushing for new and expanded markets as outlets for their energetic production at home. Diplomacy is shaded with what Government officials view as deference to necessities; hence, the

Japanese are willing to trade with all countries, including the Communist areas of the world.

Along with the rapid growth in the economy, have come great changes that touch the life of every Japanese citizen. Some of these changes have a strong significance in shaping Japan's shopping lists in world markets.

GROWTH AND CHANGES IN DEMAND

While the aggregate Japanese demand for farm products is marked by a strong expansion trend, the changes occurring in the demand structure are becoming more and more important to sellers of specific products. The growing affluence of the Japanese people, associated with the high rate of economic growth, is enabling average Japanese families to purchase expensive foods and other consumer items previously beyond their means. Foreign suppliers face the necessity of studying the market forces at work, anticipating changes in demand, and tailoring export products to fit traditional and new Japanese wants. Several considerations stand out as determinants of the size and nature of the Japanese market both now and in the years ahead.

Japanese population passed the 97 million mark in 1964, ranking Japan as having the seventh largest population in the world. The increase since 1950 totals close to 14 million--about equal to the total number of people living in both Australia and New Zealand. The rate of growth has been slowed down to less than 1 percent annually, a low rate compared with the Far East and many other parts of the world, but not insignificant in relation to Japan's agricultural resources. The addition of nearly 1 million more consumers in an already crowded, small country creates problems in feeding, clothing, and housing. The Japanese Government estimates that the population will reach 102 million by 1970.

This is not to imply that Japan faces a population explosion which threatens the country's economic future. Supplying food and fiber for 5 million additional people is within the capabilities of Japan, provided that Japanese goods and services can be sold abroad. Only part of the new demand for farm products will likely be met by increased production on Japanese farms; the remainder will need to be imported.

That a larger population will require more food and fiber even at current consumption levels is obvious enough. But, even more important in creating greater demand, and particularly in changing the structure of demand, is more and more money in the hands of the Japanese consumers. In announcing the Income-Doubling Plan during the 1960's, the Japanese authorities estimated that real per capita national income would double by 1970.

Japan's per capita income in Japan's fiscal year (JFY) 1963 reached 526 U.S. dollars.² In a Japanese setting larger personal income can be expected to have a far-reaching impact. First, food balances show that Japanese consumers, on the average, ate only 2,282 calories daily in 1962. Japanese authorities have set a target of 2,500 calories as a desirable standard. A recently announced nutritional survey reported that about 20 percent of the people in urban areas and 30 percent of those in rural areas consumed less than 2,000 calories daily. Almost 10 percent of the nonfarm households did not reach even 1,700 calories. Thus, there is room for expanding total food consumption among the current population. Increased purchasing power, widely distributed among the people, is a key factor in bringing this about.

The varying levels of food consumption show that Japanese prosperity measured in terms of the national account statistics conceals areas of underconsumption that a more searching analysis brings into focus.

Second, and more important, the nutritional quality of the Japanese diet leaves much to be desired. Traditionally, the average Japanese diet has depended heavily on starchy food supplemented by fish and vegetable proteins. Diets do not contain enough of the animal proteins provided by red meats, milk, and eggs. They are also deficient in fruits and vegetables. Rising incomes will make better nutrition possible.

Food balances for recent years show the changes that are taking place (table 1). The Japanese are eating more fruits, vegetables, milk, meat, eggs, and fats. These health foods were previously priced beyond the reach of the average consumer. As this shift takes place, demand for some other foods is declining.

Other changes affecting consumer habits are occurring. With the rapid shift from agricultural to industrial work, Japan is fast becoming a nation of urban people. While this has been happening, the influence of the Western world--particularly of the United States--has become increasingly noticeable in the cities and urban areas.

Such traits as eating habits and style of dress are showing change in varying degrees but particularly among the young Japanese. Such changes affect the type of foods and agricultural raw materials that will find acceptance by the Japanese. The growing demand for bakery products, especially bread, and the increasing use of hides to make Western-style shoes are examples.

Improved transportation, refrigeration, and food merchandising facilities and techniques are coming into use to better serve the needs of the urban population. Advertising and sales promotion

² Japan's fiscal year begins April 1 and extends through March 31 of the next calendar year.

Table 1.--JAPAN: Per capita consumption of selected principal food products, average 1934-38, annual 1955-62

Period	Rice	Wheat	Barley	Potatoes	Meat	Eggs	Milk & milk products	Sugar	Vegetables	Fruits	Fish & shellfish	Fats & oils	Total calories ¹
	----- Kilograms -----												
Average, 1934-38.....	134.0	9.7	12.7	54.7	3.8	2.9	4.5	14.4	79.2	16.4	35.3	1.9	2,175
1955.....	110.6	25.1	17.6	48.7	3.3	3.4	12.1	12.3	67.9	14.6	24.1	2.7	2,214
1956.....	111.6	23.9	15.7	45.7	3.7	3.4	14.2	12.8	70.1	19.3	22.1	3.0	2,156
1957.....	116.0	24.9	15.1	43.4	4.2	3.8	16.6	12.7	75.6	20.2	25.3	3.2	2,231
1958.....	113.1	24.8	13.4	42.0	4.6	3.9	17.9	13.8	72.7	21.2	24.0	3.4	2,224
1959.....	113.4	25.9	11.0	37.6	4.8	4.0	19.9	14.3	74.9	22.7	24.9	3.8	2,224
1960.....	114.3	25.8	8.1	34.0	4.9	4.8	25.6	14.9	86.3	25.3	25.4	4.3	2,244
1961.....	116.5	25.8	5.7	33.0	6.4	6.5	25.5	15.7	84.5	27.3	27.3	4.7	2,287
1962.....	117.2	26.0	4.7	28.9	7.8	6.7	30.4	16.7	95.9	26.1	27.2	5.3	2,282

¹ Excludes liquors and drinks.

Sources: Data for 1934-38 are from United Nations Food Balance Sheets and are not strictly comparable to annual data from Japan's Food Balance Sheet: (12).

are also being used. Consumption patterns differ considerably between urban and rural areas. Expanded and improved food distribution methods are needed, particularly for meats, fresh milk, and other products requiring rapid handling and refrigeration over wide areas. The U.S. style chainstores and supermarkets are being considered for use where conditions are favorable.

FINANCING IMPORT NEEDS

The Japanese themselves and foreign observers have expressed some doubts about the soundness of the Japanese economy in the coming years. Often, the question of earning sufficient foreign exchange is the basic underlying source of anxiety. Despite more than a decade of an unprecedented boom, such doubts are not entirely quieted.

Actually, during the prosperity enjoyed by the Japanese since recovery from World War II, the balance-of-payments problem has seriously troubled Japan in buying abroad. Four times since 1952 stern measures have been necessary to curb imports. Also, the Japanese authorities have restrained foreign spending by the use of monetary and fiscal policies. These tools have undeniably been used with considerable skill, but the Japanese have also benefited from favorable world economic conditions.

Some of the import controls are being taken off as Japan moves increasingly into the role of a major power, opening the Japanese market to foreign sellers and exposing Japanese industry and agriculture to increased competition. Wages and other related costs in Japan are rising. So far, increasing labor productivity has enabled the Japanese to increase wages while maintaining competitive prices for exports. Foreign exchange holdings have been built up despite heavy foreign expenditures. Holdings at the end of 1964 were enough to finance about 4 months of imports.

Japan has managed the foreign exchange account very well in the past, but has to keep a close watch on the problem to maintain a proper balance between expenditures and earnings. This has not been easy. The most basic element in financing purchases is, of course, the trade account--the relationship between sales abroad and purchases. The trade account, more than any other source of income, provides lasting support and stability in the foreign exchange positions. Curbs on purchases coupled with a booming export trade have kept the trade account in hand.

Japan's foreign account has had serious imbalances in what is termed the services account, which includes such items as transportation, insurance, investment incomes, and foreign travel. Deficiencies in this account have had to be met from other sources. Between 1953 and 1963 the cumulative deficit on goods and services amounted to \$1.4 billion; unilateral transfers amounted to another

\$0.3 billion. Despite this, gross official reserves rose by \$0.9 billion because Japan received a net capital inflow of \$2.5 billion during the period (26).

By following sound monetary policies and maintaining attractive interest rates, Japanese firms and commercial banks have had little difficulty in obtaining short-term credit from foreign sources. However, the heavy use of private short-term credit in recent years has caused some concern because of the effects on balance of payments.

A large part of the Japanese capital has been raised in the United States, and the rest in Europe. With heavy dependence on foreign capital generally, and on U.S. capital specifically, Japan was considerably concerned when the United States imposed a 15-percent interest equalization tax on foreign investments.

Despite the problems, however, the Japanese have managed to keep the overall foreign payments problem under control, and can be reasonably expected to continue. A great deal depends on world economic conditions especially as these relate to trade, prices, competition, market access, and so on. The world situation has been favorable for Japan over the last several years. Japan's economy is linked to the rest of the world to such an extent that serious economic instability, particularly in the United States, would inevitably bring about major repercussions in Japan.

AGRICULTURAL PRODUCTION POLICY AND PRODUCTION TRENDS

Under present circumstances, Japan buys abroad primarily to fill deficiencies and to obtain products that cannot be grown in Japan. The comparative cost of growing a product or importing it is often muted by other considerations. Domestic products are the first source of competition for products that can be grown in Japan.

The extent and nature of competition from Japanese farms call for consideration of Japan's production policies and production trends, together with forces that are expanding production as opposed to the barriers or limitations.

Japan is poorly endowed with basic farm resources. Agricultural land suitable for growing crops and grazing is severely limited. Cultivable land areas are more or less fixed. The total cultivated land area is only about 6,081,000 hectares. Farm households number some 6,057,000, making the average size of farm about 1 hectare (2.47 acres). Cultivable land per capita is less than 0.2 acre, among the lowest in the world. Slightly over 30 percent of the land area produces two crops per year.

AGRICULTURAL POLICY

Japanese policies have been set to make the best of the above-mentioned situation. With a limited land base, agriculture has developed in a pattern based on high yields, obtained through extensive use of family labor, supplemented by modern cultural practices. The pattern has yielded well in terms of outturn per acre. But the return to labor--the crop yield per unit of labor is low. Policies and programs have been kept reasonably flexible, changing to fit the exigencies of the moment and to adjust agriculture into the broader aspects of the general economy.

For many decades Japanese agriculture has operated under the guidance of the Japanese Government. Before World War II, agricultural production increased and the farm sector provided Japan with much of the required economic means to expand the nation's power and influence. Farm taxation was high and farmers received little in return. The life of the farmer was harsh. After World War II and following the land reform, the Government's policy toward the farm sector changed. A growing social concern was shown toward helping Japanese farmers to enjoy the nation's growing prosperity.

In the immediate postwar years, Japan set farm policies to meet current needs and problems. Initially, the broad national aims had to be centered around reconstructing the economy. With reconstruction accomplished in the early 1950's, national goals could begin to focus on advancing the nation's standard of living, providing full employment, and moving Japan into the role of a major, modern, industrial trading power.

For several years after the end of hostilities, the pressing problem for agriculture was not only to restore production but also to alleviate widespread hunger. The situation called for emphasis on crops that would yield maximum food supplies per unit of land. A companion part of this problem involved achieving even distribution by controlling supplies, eliminating black markets, and discouraging speculation; in pursuing these objectives, the Japanese Government became deeper and deeper involved in rural affairs.

Today, the Government continues to support, guide, and protect Japanese agriculture. Price supports and protective policies are difficult to phase out once started. Efforts to change policies and programs that may no longer be needed or in the national interest often affect important sectors of the economy adversely, and proposed changes arouse opposition. Farm policies also reflect the role of agriculture in the Japanese economy as important both historically and currently. The quickening of the more glamorous industrial sector tends to push agriculture to the side.

For perspective, the emergence of modern Japan dates back to not so many years ago. Agriculture was the backbone of the

economy until rather recently. The farm sector was, and still is, vital in supporting, developing, and sustaining the national economy. Historically, the rural sector served as a source of capital and manpower to build other industries. It helped to earn much of the foreign exchange to pay for essential imports of capital goods and technology, and provided a supply of food and raw materials required by the urban population. Farm people also provide a major market for industrial goods and services at home enabling Japanese industries to take advantage of economies of scale in the manufacturing processes. In this context, keeping the agricultural sector prosperous becomes an important supporting factor in achieving general economic growth and strength.

Since World War II, agriculture has declined sharply as a percentage of overall production. Less than 10 percent of the gross national product came from the farming sector in 1964 compared with 17.8 percent in 1955. This does not mean, however, that agriculture in Japan is of minor importance to the Japanese people. It reflects more the enormous expansion taking place in the nonfarm sectors of the economy as contrasted with a much slower pace in agriculture.

Given a very limited land area, a major aspect of Japan's policy is the question of the degree of self-sufficiency toward which the Japanese decide to work. Self-sufficiency is obviously for Japan a matter of degree or percentage, made so by limited farm resources and climate. There are several factors that favor a high degree of self-sufficiency in the Japanese view. About 25 percent of the labor force is still employed on the farm. Also, maximizing domestic production holds down pressures on the balance of payments, always an important consideration for Japan. Depending on foreign supplies causes official concern about world shortages and price increases. Then, too, there is the danger of supply lines being cut or disrupted in times of war or political turmoil.

Balanced against the attractive features of striving for a high degree of self-sufficiency is the weighty economic fact that Japanese agriculture, even though yields are high, is a high-cost industry requiring protection and expensive support programs. Many farm products can be purchased abroad and transported to Japan cheaper than the Japanese farmers can grow them. The Japanese consumer, in one form or another, eventually pays the bill for the high-cost agricultural products. He pays either in the form of higher taxes to support prices paid to farmers, or in higher prices for food, or in both forms.

Price supports are applied extensively in Japan. Roughly 68 percent of total agricultural output in fiscal year 1962 was subjected to the effects of some form of Government price policy. Products coming under the present price and control system fall

into three rough categories. First, for the major food grains--rice, wheat, and barley--the Government controls prices. Second, a price-support system is in effect which attempts to stabilize market prices within a range by setting upper and lower limits. Such products as pork and silk cocoons come under this system. Third, potatoes and sugarbeets are protected by a floor price established by the Government (13). If prices fall below the floor price, the Government can and does intervene.

The second and third categories have not been used extensively in recent years because of strong market demand and good prices. Rice, wheat, and barley, however, are tightly regulated and prices paid to farmers are set by the Government. These three grains account for at least half of the total value of agricultural output.

Japan has followed a policy of vigorously encouraging irrigation, which is vital in Japanese agriculture. Even though the country is generally well supplied with water and enjoys a temperate climate, irrigation is necessary for paddy land. Crop losses from excessive rain and drought are sometimes serious. Destructive typhoons are an annual threat. Over one-half of the total cultivated land is irrigated. Irrigation, carried out by the National Government, Prefectural Governments, and local organizations, is helping farmers to increase production of crops and to diversify. But irrigation is well advanced in Japan. There is limited opportunity for further progress.

Policies on land reclamation affect Japanese production also. The Japanese Government continues its efforts to reclaim new land. However, land converted into roads, factory sites, airfields, and residential areas offset the reclaimed land areas and work against enlarging the cultivated land base. Some 96,000 hectares of farmland were turned into industrial and commercial-use land in 1958-62. Consequently, reclamation is not likely to expand the cultivated area significantly. Reclamation will be constructive by offsetting, or at least partly offsetting, losses of land to industrial or commercial uses. This can help keep the cultivated area from shrinking. Efforts to convert upland areas to paddy land also continue, but, because of the conversion of paddy land to other uses, net gains are small.

The Japanese Government pays the entire cost for upland reclamation projects, and 75 percent of the cost for land and seaside reclamation work. In addition, the Government provides technical and financial assistance in broad soil-improvement to increase production.

Japanese policy over the years has actively promoted the acquisition of modern technology. Unquestionably, an important factor promoting progress in farming has been the Japanese

willingness at all levels to learn and to adopt new methods, but only on a selective basis. Also apparent has been the natural tendency of the Japanese for the technology adapted at a given time to draw heaviest on the input in greatest supply at the moment. Until very recently, labor, especially family labor, has been plentiful and cheap relative to capital inputs which required investment funds needed in industrial development. Rapid introduction of capital (machinery, etc.) would have displaced labor and resulted in unemployment. Yields per acre from mechanized farming could have actually declined. However, labor-intensive agriculture on small farms, though productive in terms of high yields, has resulted in low wages for farm labor, and caused farm people not to share equally in the growing prosperity. This situation lies at the root of several problems in the farm sector. Current efforts to overcome the problem appear prominently in farm programs and policies. Fortunately, Japan's total economy is now strong enough to bear the cost of doing more for the farmers. Industry, which once drew on the rural sector, can now supply a reverse flow of resources.

The Japanese Government has recognized that the lasting solution to low labor and farm income is to have industry and commerce absorb extra labor from the overcrowded farm sector. This has been taking place at a rapid rate. With a diminishing labor supply, farm labor is becoming scarce and expensive.

Japanese soils are not inherently fertile. Both the skills of the Japanese farmers and the scientific approach have been necessary. For a country no larger than Japan, the agricultural research system is unusually large. An estimated 6,500 scientists and technicians are engaged in research. Initial research concentrated on rice, but other phases of agriculture are now included. Research projects are directed toward increasing production, improving quality of crops, and reducing costs. Research has, among other things, provided new varieties of seeds, discovered methods of controlling insects and combating diseases, and improved the uses of fertilizer. With many experiment stations scattered throughout the country, it has been possible, through local testing, to fit new methods to local conditions on a selective basis. This research enables Japan to adopt new technology selectively with a minimum number of costly errors.

The extension service in Japan is doing an effective job in linking research centers to the farm units, disseminating research results, and providing technical guidance. After World War II, both research and extension services were reorganized for more effective administration and coordination of effort. These two services, together with a well-developed general educational program, have been important in enabling Japan to reach the current high level of production. Work continues along these lines. Again in the policy area, the Japanese have gone a long way towards

taking the risk out of farming through price supports backed up by an insurance program. It is not known how important this is making farmers receptive to adopting changes that incur debt.

The Japanese Government passed several laws dealing with farm legislation. These laws embraced the aims and objectives of the basic farm policy. Two major laws were the Food Control Law of 1942, primarily a wartime measure, and the more recent Basic Agricultural Law of July 1961.

The Food Control Law of 1942 provided the legal basis of the Japanese food policy in World War II. It authorized the Government to manage foods, adjust their demand, and control their distribution. Rice, wheat, potatoes, miscellaneous cereals, and processed foods were subject to Government management. Producers of rice and wheat were obligated to sell these foods to the Government at specified prices. The Government was to establish a food corporation to buy and distribute rice and wheat. The law also provided that the Government's purchase price would be determined by production costs, prices of commodities, and other economic conditions, and that the selling price would be determined by household expenses, prices of commodities, and other economic conditions. The stated purpose of the 1942 legislation was to secure the necessary amounts of food for the people and to stabilize the national economy.

In general, the Food Control Law provided for the creation of a dual-price system and strengthened and consolidated the State's control over agriculture. This law is still valid although more than 10 sets of amendments have been made on it.

The more recent legislation, the Basic Agricultural Law of 1961, is of greater interest in providing insight into the Government's thinking. As stated, it appears to be a charter or policy guide rather than a specific law spelling out details. It is, however, important basic legislation that commits the Japanese Government to a definite general policy or course of action.

The 1961 legislation came about in response to changing economic conditions and the meaningful recognition that agriculture is a backward sector of the economy needing help to modernize and to improve rural conditions. Its major aim is to tie agriculture to the rest of the economy and to improve the unfavorable economic and social conditions in the rural areas. A second important feature of the bill is the acceptance of the need to develop agriculture selectively. The first of the two major provisions of the law translated into action puts the Government into the role of proposing and implementing actions to support farm prices at a level calculated to equalize farm income with income in other industries. The second provision calls for the Government to direct agricultural development on a selective basis, emphasizing production of products for which demand is rising.

A third important and timely feature of the bill deals with the need to change the backward structure of agriculture (25). Enlarging the farms or grouping small farms to permit the use of large machinery and other labor-saving devices has become a pressing problem. This part of the law recognizes that a farm family working two acres of land cannot make an adequate income to support his family. Hard work, good practices, meticulous care may and do give good yields, but the operation lacks scale. Larger farms would lend themselves to better qualified managers and improved management practices.

These three provisions--the income equalization concept, selective agricultural development, and changing farm structure--seem to be the fundamentals of the new law. Price stability, improving production, cutting costs, and other measures dealt with are not new; they are basic policy goals for agriculture in most countries.

There are several problems and developments that gave rise to the need for new legislation. In general though, the legislation represents an attempt by the Japanese to modernize and adjust agriculture to fit the changing times. Pressures for change are strong. Implementing the new law brings a confrontation with several realities that are related and complex.

Much of what the new legislation is intended to do can be accomplished if Japanese farmers can enlarge their farm operations and cut costs of production. Enlarging the farm units and mechanizing to raise labor returns have first priority. For a country as advanced as Japan in most respects, an unusual amount of farmwork has been carried on with animal and human power, hand tools, and animal-drawn equipment. However, power machinery is coming more and more into use. Farmers owning cultivators in 1963 were 3.5 times the number owning this equipment in 1960, for example.

Several factors have slowed mechanization and large-scale farming. A leading hindrance has been the small and scattered landholdings. Efforts to lower unit cost of production involve substituting capital and power machinery for human and animal labor. For this development to succeed, farm operations should be enlarged to obtain economical farm units for machinery farming.

Consolidating farms, however, runs into some formidable barriers. Land laws restrict the size of farms that can be owned. Legislation in 1961 eased this legal problem, but many farmers are not anxious to sell their small parcels of land even at high prices. Rents that are permitted reportedly do not make leasing or renting land attractive enough to the owner. Part-time farming is widely practiced. In short, economic growth and development have brought the Japanese Government and farmers face-to-face with the problem of how to consolidate small farms to save labor,

use power machinery, realize economies of scale, and generally lower unit costs. No ready solution is in sight.

Current emphasis is on some kind of a cooperative arrangement for pooling land. If this does not work--and the chances are that it may not--then more basic changes may have to be made that will permit individual Japanese farms to become larger. The larger units under private ownership could become more efficient and lower unit costs.

The foregoing discussion has pointed up some of the basic and emerging problems in Japanese agriculture and the policies designed to achieve three major economic goals: (1) To increase production; (2) to lower costs; and (3) to channel farm resources into uses that accord with changing demand. The results show a record of progress and stubborn problems.

CHANGING LAND-USE PATTERNS

A brief recounting of the Japanese postwar experience clearly reflects adjustments of land use to fit changing needs. In the early postwar years, the problem of seeing that the people had enough to eat held first priority. Production of cereal grains and potatoes, crops that yield a large number of calories was emphasized. Aided by large shipments of U.S. grains, the program succeeded.

With the lean postwar years behind, an increasingly affluent Japanese people began demanding a higher quality diet. Shifts in demand called for adjustments in land use. Current policies emphasize rice, livestock enterprises, fruits, and vegetables. Land planted to such crops as barley, soybeans, and wheat is declining. Rice still enjoys a favored role in Japan's land use choices, reflecting Government price-support policies aimed at providing largely from domestic production the continuing strong consumer demand for this traditional food.

Japanese farmers are free to use their land and resources as they choose. But the Government does have an effective means of influencing the farmer's choice, by varying support prices to make earnings in some enterprises more profitable than in others. Also, consumer demand reflected in higher prices pulls the farmer toward growing the products most in demand. There are also other factors affecting farmers' choices. For example, a growing shortage of farm labor is credited with reducing the land sown to wheat. Some farmers working in industrial jobs reportedly do not elect to plant wheat, even though not planting may mean leaving the land idle.

The increasing demand for livestock products shows up in expanded numbers of livestock, rising demand for commercial feed, and increased production of pasture and roughages. In general

Japan is succeeding with the Government's policy of guiding domestic production to meet changing consumer demands.

Labor productivity on Japanese farms rose 30 percent in 1958-62. Productivity in the manufacturing sector rose 51 percent during the same period. Despite gains in farming, Japanese farm production remains a high-cost operation, and returns to farm labor are still not satisfactory. The farmer's standard of living lags well behind the levels of urban dwellers. Domestic producers of most farm products have to be subsidized in large measure, and much of the farm sector is protected from foreign competition by the Government.

PRODUCTION TRENDS

Japanese agricultural production has been registering rather steady year-to-year gains of 2 to 4 percent for the past several years. The rate of increase for Japanese fiscal years 1956-62 shows an average increase of 3.9 percent. Poor growing conditions caused agricultural production to decline 2.1 percent in JFY 1963, but production recovered in 1964. Plans anticipate a continued gain of about 2.8 percent over the next 5 years. Much of the anticipated increase is expected to occur in the livestock sector and in greater production of fruits and vegetables. The crop index in the 5 years 1957-62 increased from 118.4 to 130.6 (1950-52 = 100). During the same period, livestock and livestock products went from 189.3 in 1957 to 387.2 on the same base.

Japanese farmers have succeeded in obtaining per acre yields that are among the highest in the world. They have obtained these yields by using modern farming practices, adopting improved strains of crops, and using large inputs of fertilizers, pesticides, and insecticides. The effects of modern methods have been maximized by the applied skills and patience of the Japanese farmer. Thus, much of the impact from such measures has already been brought into use in the crop sector, and further gains may be harder to achieve. Gains in livestock and poultry hold greater promise.

Also in irrigation, reclamation, and technology, the opportunities for increasing production have been widely exploited. Further advances will be made, though not very easily. Also, the Japanese are not encouraging production of the starchy foods with the same urgency as in the early postwar years. Bumper rice crops since 1955, a shift in demand away from the starchy foods, stabilization of world food supply and demand, an easing of the balance-of-payments problems--all of these have caused Japan to take a more relaxed attitude toward maximizing self-sufficiency. However, in 1965 a leveling off in rice production, leading to a sharp rise in imports, began to exert new pressures for greater production efforts.

AGRICULTURAL TRADE POLICY AND TRADE TRENDS

For Japan, trade and trade policy are basic issues, central to the aspirations of the broad programs for putting the Japanese standard of living on an economic plane comparable to Western countries. The goal of catching up with more advanced nations is a national objective. Government and business groups work closely together both toward this goal, at home and abroad.

The Income-Doubling Plan for the 1960's assumes that exports will achieve an annual growth rate of about 10 percent and that imports will increase at about the same rate. Japanese authorities have emphasized that success in elevating the Japanese standard of living depends on the trade sector. With so much depending on the successes or failures of trade programs, much of Japan's activity in the foreign field is orientated toward trade and trade promotion. Trade policy necessarily receives high priority in both official and public concern. Japanese diplomacy takes both a short- and a long-range view, looking ahead to conditions several years from now as well as to the near future.

TRADE POLICY

In slightly less than 100 years Japan has grown from a backward, semifeudal society into a modern industrialized nation, capable of mastering the most advanced technology. Steadily improving quality products from the expanding Japanese industry have found a market either at home or in a foreign country. Since recovery from World War II, economic advances have been pushed forward as a package of coordinated economic movers built around industrial production and trade. Production and exports have been planned toward keeping foreign trade strong and expanding. Japan's import-dependency rate for many basic raw materials is 100 percent, or close to it. Also, major items of modern machinery and equipment must be imported to overcome Japan's technological lag. Importing technology may decline as Japan reaches higher levels of research and development.

Actually the high import-dependency rate and the technological lag has not been the serious drag on economic development that they appear to be at first glance. There are some compensations. Technologically, Japan in building from the ground up in the postwar years has been able to plan, purchase, and install the latest designs in machinery and equipment, putting Japanese manufactures in a highly favorable competitive position in terms of quality and production cost. In buying raw materials, Japanese importers are able to shop world markets to select bargain prices. Competition and technological improvements, such as bulk-hauling over ocean routes, have held down ocean transportation costs to the advantage of Japan.

One result of Japan's high import-dependency rate is that Japan is at the mercy of forces in international commerce over which one country has only limited influence and no effective control. Another problem of much greater importance is that imports, which increase every year, must ultimately be paid for out of increased earnings. Thus, earnings are rightly described as the key item. For Japan, the greater part of foreign exchange earnings comes from selling to foreign countries a large and growing selection of its products, 90 percent or more of which are manufactured.

Therefore, keeping expenditures and income close enough in balance to avoid pressures on foreign exchange holdings is a continuing concern for the Japanese authorities. Four times in the postwar period--1954, 1957, 1961, and 1964--a deteriorating balance-of-payments position forced the Government to take strong measures to dampen the demand for imported goods. In early 1965 the international liquidity position of Japan was considered ample as a working balance, and a booming export trade is maintaining that strength.

In considering Japan's future import potential, however, the balance-of-payments situation is always a major factor that the Government guards zealously. The Japanese authorities have shown on past occasions that measures to reduce foreign spending are flexible and that curbs strong enough to cut back imports will be imposed if necessary. Although food and fiber have a high priority on the import list, they are not immune to cutbacks, particularly in times of deep crisis.

Much of Japan's decisions on trade policy can be traced directly or indirectly to the Government's keen concern about protecting the nation's means of settling foreign accounts. The Japanese imposed rigid controls over the kind, amount, and source of imports in the immediate postwar years. For several years, Japan's trading partners, of which the United States is the largest, recognized the necessity of such protective measures.

Japan does not impose heavy import duties on food and industrial raw materials. To do so would not serve the country's best economic interest. But, with high unit costs of production and high support prices, tariffs are used where necessary to protect domestic producers of some farm products. In recent years, Japan has employed several methods to control imports. They are tariffs, licensing, foreign-exchange controls, and import-guarantee deposits. Guarantee deposits, which range from 1 to 35 percent, generally exempt staple foodstuffs. However, the Government has provided itself with means of limiting such imports as the need arises.

With licensing and foreign-exchange control and state trading, tariff rates as a means of protecting Japanese producers are not vital. Some tariffs on farm products have been set high on paper but have not been applied. Tobacco, with a 355-percent duty rate, is an example. Control of imports to protect domestic producers and

the balance-of-payments position has been effectively accomplished through a system of licensing and foreign-exchange control. For several products--such as tobacco, wheat, rice, and barley--the State is the only importer and distributor. So long as this is true, a tariff is unnecessary.

The allocation of foreign exchange was introduced primarily as a means of protecting a sensitive balance-of-payments situation. Actually, the system served a dual purpose, acting both as a safeguard against an excessive drawdown of foreign reserves and as an effective nontariff barrier in protecting home industry. The farm products still remaining on the Fund Allocation list as of January 1, 1963, constituted roughly three-fourths of the total value of farm production in JFY 1959 (April 1, 1959 - March 31, 1960). The provisions of the controls are discussed in the following paragraphs.

Before April 1, 1964, an import budget was prepared semi-annually. Three licensing systems, discussed below in the order of the difficulty of obtaining an import license, were in effect.

First, and the least restrictive, was the Automatic Approval List. For imports of commodities on this list, licenses were issued upon application to a foreign exchange bank. No limitations were imposed on the quantity of commodities imported or on the source of imports. If foreign exchange budgeted proved inadequate, the amount could be supplemented.

Second, and more restrictive, was the Automatic Fund Allocation. This list was installed in 1959 as a transitional step before transferring a commodity to Automatic Approval. Applications for foreign exchange allocations were made to the Ministry of International Trade and Industry (MITI). This agency evaluated the effects of imports on domestic producers. If imports posed a threat, licensing would be curtailed or discontinued; if not, the item was put on Automatic Approval.

Third, and the most restricted category, was the Fund Allocation System (the Negative List). Global quotas were established. The Government budgeted the amount of exchange to be used during the 6-month budget period. The foreign exchange allocated put a ceiling on the amount of imports.

As Japan's foreign exchange position improved, the International Monetary Fund (IMF) and others began urging the Japanese to "liberalize" their import trade restrictions but recognized that this should be done gradually.³ Japan agreed in 1960 to begin moving toward liberalization although progress on many farm products has been difficult. Agricultural commodities remaining under fund allocation restriction are wheat and wheat products, rice, barley, tobacco, citrus fruits (except lemons), dairy products, livestock

³ A "liberalized" item is one which was either on the Automatic Approval or Automatic Fund Allocation Import List.

for breeding, and most processed foods. These commodities are generally "sensitive" items involving mostly protection for domestic producers.

Major products of interest to the United States which have been liberalized are cotton, corn, grain sorghum (for feed use), soybeans, tallow, hides and skins, and lemons. The last significant farm items to be liberalized were grain sorghum (for feed use) and lemons. Soybean oil and meal were scheduled for liberalization but action has been postponed. A sizable part of the remaining farm items not liberalized are products that receive price supports that are well above landed import prices, and products of farm enterprises, such as the livestock industry, that Japan wants to protect.

In moving to ease access to the Japanese farm market, Japan faced, and still faces, something of a dilemma. The leadership is caught between a high cost structure in agriculture and a political commitment to the Japanese farmers to support farm prices on the one hand, and a need to cooperate in an international program to promote free trade that will benefit the overall Japanese economy on the other hand. For the Japanese Government there does not appear to be any easy or quick solution.

The Government has adopted a system of deficiency payments to soybean farmers, under which soybean growers sell their products at competitive prices and receive deficiency payments from the Government. This system could be extended to other products. Wheat, for example, could be handled this way. Reportedly, some thought has been given to a variable levy system in which the levy would constitute the difference between world and domestic prices. The revenue earned could be used in financing price supports paid to Japanese farmers. The variable levy would not open the Japanese market to foreign competition on a freely competitive basis where domestic production of protected items would compete with foreign imports. And the variable levy would not reduce the price of foods and fiber to the consumer. Lowering the production cost of Japan's agricultural products is the key to the problem.

After April 1, 1964, moves taken to deal with the liberalization problem involved a shift away from the semiannual budget and the fund allocation system as promised. In lieu of exchange allocations, quantitative import quotas were substituted. The old and the new designations are shown below.

<u>Former Designation</u>	<u>New Designation</u>
Automatic Approval System (AA)	Automatic Approval System (AA) unchanged
Automatic Fund Allocation System (AFA)	Automatic Import Quota System (AIQ)
Fund Allocation System (FA)	Import Quota System (IQ)

This appears to be a change in form or procedure taken by Japan in adherence to Article VIII of IMF and to comply with the objectives of the Organization for Economic Cooperation and Development (OECD) in trade. Imports are not expected to be materially affected by the shift from the fund allocation to a quota system. Japanese officials are moving cautiously. The effects of opening the door to import trade and inviting competition are being watched carefully by the Japanese authorities. There is no evidence that imports have increased at a dangerous rate as a result of liberalization, or that overimporting is threatening the balance-of-payments position as was feared in some quarters.

For the Japanese economy as a whole, liberalization--opening the heretofore protected Japanese market to greater competition--is expected to help Japan eliminate inefficient industries and to expand profitable ones in which the Japanese have comparative advantages. Products in which Japan excels as a producer will be exported to earn foreign exchange. Countries selling to Japan commodities that can be imported more cheaply than Japanese industry can produce them will benefit by increased sales in the Japanese market. With the domestic labor force near full employment, Japan is in a position to concentrate on producing products where the country has the greatest comparative advantage.

Yet, Japan, like other countries, stops short of pursuing the rationale discussed above to its end. Japanese leaders have anxieties about becoming too heavily dependent on world food and raw materials, particularly for basic commodities such as rice. Studies on population and food production, which suggest future world shortages, heighten Japanese anxieties about possible shortages and rising prices. Then, too, there is the general concern which all nations share in varying degrees about world political and economic instability that could make ocean shipping hazardous. These are some of the reasons why Japan will likely continue producing products, especially the basic food items, that could be imported more cheaply.

Japan makes extensive use of bilateral trade agreements as a framework for trading. As of June 1, 1963, a total of 43 countries, 8 of which were communist, were listed as having agreements on commerce, trade, and payments with Japan (exclusive of Open Accounts). Table 2 shows examples of typical Japanese trade agreements for selected countries which are major suppliers of the Japanese needs in farm products. Except for Korea, the documents contain a title, terms of validity, treatment for tariff and import system provisions, major exports, major imports, and basis of payments. Significantly, these agreements do not specify amounts or provide for a clearing arrangement. For Korea, Japan has an open account agreement. The trade plan specifies the value of imports and exports and calls for settlement through a single account in the Bank of Japan (15).

Table 2.--JAPAN: Summary of agreements on commerce, trade, and payment with selected countries, 1963¹

Country	Title	Treatment		Major commodities	
		Tariff	Import system	Exports	Imports
Australia...	Agreement on Commerce.	Most favored nation.	Most favored nation.	Textiles, iron and steel products, etc.	Wheat, wool, sugar, hides, tallow.
Canada.....	Agreement on Commerce.	Most favored nation.	Most favored nation.	Textiles, iron and steel products, machinery, etc.	Wheat, pulp, iron ore, etc.
Thailand....	Trade arrangement.	Most favored nation.	Most favored nation.	Textiles, machinery construction materials, etc.	Rice, peanuts, soybeans, castorbeans, sesame seeds, etc.
Pakistan....	Treaty of Friendship and Commerce.	Most favored nation.	Most favored nation.	Machinery, steel mill products.	Raw cotton, jute.

¹ As of June 1, 1963.

Source: (15).

As a member of the General Agreement on Tariff and Trade (GATT), Japan grants most-favored-nation treatment for tariffs on a reciprocal basis. Other countries are assured treatment as favorable as possible. Some countries receiving most-favored-nation treatment have inserted reservations in which the right to establish values for ordinary and special duty purposes on an emergency basis is included.

Imports of the three basic food grains--rice, wheat, and barley--are controlled by the Food Agency under the Ministry of Agriculture and Forestry. The actual imports are handled by licensed contractors, but the commodities are turned over to the Food Agency which markets them. The Government, in effect, directs the buying and controls the selling of these products and realizes a sizable profit, particularly on wheat. Tobacco is a State monopoly. The State also controls nonfat dry milk used in the school lunch programs and exercises considerable control over other imports.

As an island country earning a livelihood by manufacturing and trade, Japan has a strong interest in international organizations. Consequently, the Japanese have taken an increasingly active role in world affairs. An important step was taken on April 28, 1964, when Japan was admitted to the OECD. Japan is now included in the councils of the major nations of the free world; it also has the distinction of being the first non-Western country in the OECD. As a member country, Japan hopes to obtain a better understanding, on the part of other members, of its industrial structure and wage system with a view toward reducing discrimination against Japanese exports, particularly in Western Europe. Membership, however, also adds responsibilities and increases the pressure on Japan to further liberalize trade restrictions and to enter increasingly into a full-scale open economy.

In addition to OECD, Japan is a member of such important world organizations as the United Nations (UN), the General Agreement on Tariff and Trade (GATT), the International Monetary Fund (IMF), and the International Wheat Agreement (IWA). Membership in OECD, IMF, and GATT carries an obligation on the part of each member to work toward increasing trade and lowering trade restrictions, both tariff and nontariff. As Japan pursues these objectives, though all the goals cannot be immediately achieved, the economy of the country is expected to change materially. These changes and Japan's growing economic affluence now have the Japanese poised on the edge of a new era, particularly in agriculture.

Also, with the emergence of a modern, industrial Japan, the composition of the nation's exports is rapidly changing. The shifts result partly from new production capabilities and partly from changes in world demand as the Japanese see it. Japanese industry has moved rapidly into an advanced stage where modern machinery,

chemicals, ships, electronic equipment, and many other items of advanced design can be produced and sold in increasing volume. Relatively high wages can be paid Japanese workers in producing this type of product because competitive countries also pay high wages in heavy industry.

Japan's stages of progression have been from an agricultural economy to light manufactures and then into a modern industrial complex. For several years, Japan's role as an exporter of textiles and other light manufactures has faced dangers from competition. Rising wages in Japan are putting Japanese mills, despite their efficiency, under pressures in competing with Hong Kong, Taiwan, India, Pakistan, and other areas where labor is still plentiful and cheap. Several underdeveloped countries are interested in light manufactures in much the same way and for much the same reason as Japan, several decades ago. These countries are now producing their own needs, protecting home markets, and moving into the export field.

Japanese textiles and other light manufactures earned, in earlier times, a reputation for being low in price and quality, causing sharp competition for foreign producers with higher wages than prevailed in Japan. As a result, major importing countries have invoked voluntary import quotas and other restrictions against imports of textiles from Japan in order to protect domestic industries and to avoid disruptions of orderly marketing. Japanese heavy industry and chemical products should be less subject to this type of difficulty. These and other considerations have led Japan to put major emphasis on exporting machinery and chemicals; light manufactures have become less important as export items than in the earlier stages of economic development. The light manufactures are, however, expected to continue to be of great significance to the Japanese economy at home in providing jobs and abroad for earning foreign exchange. Broadening and diversifying production and expanding the list of exports are moves calculated to add strength and stability.

CHANGING TRADE PATTERNS

Private traders purchase products where such factors as price, quality, trade terms, and reliability of supply are most favorable. The Japanese are no different in this respect. Japan, in fact, gives such factors special attention because of the size of its import bill, the importance of imports to the people's livelihood in keeping down the cost of living, and the balance-of-payments problems. It is also a good business practice. Sales of U.S. farm products have done well in this type of competition.

There is, however, another area in trade which is broader, and involves in principle the Japanese Government rather than the

private trader. Decisions are not so direct, not so straightforward, and not so easily demonstrated. Broad trade issues, long-term considerations, and national policies become entangled. This other area arises out of Japan's heavy dependence on export trade to keep Japanese manufactures moving in increasing volumes off the growing Japanese assembly lines. To do this, selecting the source of imports inevitably becomes linked in varying degrees with export considerations both now and over the next several years. Gaining and holding markets abroad, in what is referred to as an aspect of trade diplomacy, is a prime motive. The extreme of this situation is, of course, where a purchase of Japan's manufactured items is made conditional on a written or oral understanding that Japan takes an offsetting amount of farm products. Japan's written trade agreements do not specify amounts, as pointed out.

Already Japan has gone far toward restructuring the Japanese economy to get into a better position for supplying a wide selection of items needed by developing economies. But developing nations, if they are to expand trade with Japan, must earn the necessary foreign exchange, and they are not doing so in sufficient amounts.

Two reasons account for this. First, farm production has not increased enough to supply the increasing number of people and to provide the big volume of surpluses needed to export. Also the terms of trade have often run against the sellers of primary products in world markets. Prices of farm exports have often declined, except in war periods, while prices of industrial goods imported have increased. Japan as a large importer has profited from price declines. The underdeveloped areas are attempting, through such world organizations as the United Nations to obtain some relief in which the developed areas would give concession or advantages to imports from less developed countries.

The idea that underdeveloped countries earning more foreign exchange would become better customers for Japan's industrial products is persuasive. Japan is not likely to take the appeal of underdeveloped nations for markets and more favorable treatment lightly, especially when steady pressure from such countries to purchase their farm products is applied by areas having an unfavorable balance of payments with Japan. On this point, the Prime Minister recently stated that his Government would make efforts to survey, develop, and purchase primary products from developing countries, especially those in Southeast Asia.

In implementing this policy, the Japanese could favor the less developed countries when their products are competitive in quality and price without incurring any cost to Japan. At some sacrifice they could pay more to underdeveloped areas for their farm products. Or, they could admit these countries' produce free of import duty. Also, in another but directly related sense, Japan

could send Japanese technicians to help neighboring Asian countries expand lagging farm production through adopting improved Japanese technology. This is already being done to some extent. Japan would then buy the imports, and sell the exporting countries chemical fertilizers and other production requisites. Something along this line has taken place between Japan and Taiwan. Cooperation would, of course, be on a basis of voluntary arrangements. However, Japan can also help the less developing nations by extending grants and yen credit as an alternative to trade concessions.

Trading activities on the part of Japan are not limited to Southeast Asia. Japanese trading activities extend to most parts of the world. As a big importer and a skilled manufacturing nation, Japan can trade to mutual advantage with developing countries throughout Asia, Latin America, and Africa. In these areas, Japan looks for market outlets and sources of raw materials.

In developing sources for raw materials, the Japanese have shown a willingness to supply investment capital and technology to develop local industries in the host country. This type of activity may at some future time find Japan taking a big role in finding and developing new areas of production for farm products, with important implications for the United States. It can make expanding the U.S. share of the market for some products difficult.

The greatest impact of this is likely to be in Southeast Asia, but could extend to all of Asia. Japanese emphasis on Asian affairs is rooted in history, geography, and the complementarity of the Japanese economy with the economies of neighboring Asian countries.

In 1934-36 almost two-thirds of Japan's export trade was with other Asian countries and more than half of Japan's imports came from them. In 1964 Southeast Asia absorbed 26.7 percent of Japan's exports. Geographic locations and hauling distances are favorable for trade. And, political issues aside, there is a complementarity between an industrialized Japan and the developing countries with agricultural economies and mostly farm products for exports.

Geographically, Japan's world trade now divides into three more or less equal parts: The United States, Southeast Asia, and the rest of the world. Actually, for much of the last century Japanese trade was strong with other Asian countries. This trade was thoroughly disrupted during World War II. The marks of the conflict have not entirely disappeared. As the bitterness and distrust caused by Japan's military adventures have subsided, both diplomatic and trade relationships have been gradually established with Asian nations except for the Communist countries. Japan, as a major Asian nation, will play an increasingly larger role in Asian affairs. Two-way trade and technical aid is one way of doing this.

Trade with the Communist countries is perplexing for Japan. The Japanese do not desire to forego any opportunities for profitable trade; in fact, they probably feel that the country can hardly afford to be selective for political and diplomatic reasons. On the other hand, Japan is fully committed to the side of the United States and the Free World in promoting world peace and economic progress.

Consequently, the Japanese have tried to walk a "tight rope" on the issue of trading with Communist China, attempting to separate trade from politics. This is not easy, primarily because the Communist countries are not likely to cooperate for any extended period of time. For them, trade and diplomacy go hand in hand, and the leadership is not likely to let the two remain separated.

Less than 5 percent of Japan's trade is now with the Communist countries. Because of geographical and historical relationships, and because of the emergence of Communist China as a world power, a great deal of interest and speculation is coming to center on Japan's trade, or lack of trade, with nearby Mainland China. It is, of course, in looking ahead that the speculation arises. Actually, Sino-Japanese trade remains shaky 15 years after the Communists seized the Mainland. Diplomatic recognition has not been granted to Peiping. Instead, Japan recognizes the Republic of China (located in Taiwan) as the legal and rightful government of all of China, as does the United States and many other countries. There is no significant pressure to change this diplomatic position at this time.

Such trading activities as are carried on between Japan and the nearby Mainland are conducted between private traders in Japan and the Chinese Government. Japan would gain little or nothing by recognizing the Communists. Trade relations on the existing basis have been stormy as a result of the Chinese attempting to use trade as a device in maneuvering for diplomatic and political gains. This is indicative of China's interest in obtaining diplomatic recognition, but Japan has steadfastly refused to yield to this type of pressure. World events, however, are moving and shifts are taking place. Should the Mainland's political situation change, Japan wants to be in a position to participate in any new developments, if opportunities come.

The current schism in Sino-Soviet relations stirs additional interest and raises important implications about trading possibilities. Communist China now needs to trade with the Western countries and shows signs of wanting to expand trade with the nations of Western Europe and Japan. Political links with trade are sometimes muted by the Communist authorities, but are just under the surface and frequently come out into the open. Recent Chinese overtures are in a lower political key. French recognition of the Communist regime and the prospects of Western European

countries gaining a firm hold on Chinese trade make some Japanese citizens and business groups more eager to step-up trade with the Mainland lest Japan be disadvantaged commercially at some future time.

Much of the drive to increase trade with the Communists loses its force because responsible Japanese leaders know that trade with the Mainland is uncertain at present, and, for a booming Japan, it has no great sense of urgency attached. However, because of long-run possibilities for an expanded Japanese market on the Mainland, and because of some public opinion and pressures inside Japan, the Government does not feel it advisable to ignore the trade question and relationships with the Mainland. Consequently, revival of trade is taking place even though Japan runs some risk of alienating the Republic of China (Taiwan) and possibly losing a profitable and growing market for an uncertain Mainland trade accommodation. The Japanese Government, however, does not appear to be making any strong effort to encourage Sino-Japanese trade. But all of this could change. Export difficulties for Japanese goods in other markets would increase official interest in trade with Communist countries.

The notion in Japan that China is a strong market and a source of supply has its foundation in recent history. In the prewar period some 18 percent of the country's imports came from China. Some Japanese feel that this type of trade can and should be reestablished. There is, also, the impressive population statistic of more than 700 million Chinese, which at a glance appears to set the stage for an enormous market on Japan's doorstep.

Other reasons generally cited for favoring expanded trade are that the two countries lie in geographic proximity to each other; that the two peoples have cultural ties and ethnic similarities; that the two economies--one backward and agricultural, the other modern and industrialized--complement each other in an economic sense.

China stands to gain more than Japan from trade. Japan has strong markets in the Free World and sources of abundant raw materials. Communist China could add very little. On the other hand, China could benefit a great deal by importing advanced Japanese technology and equipment in exchange for low-quality raw materials. Of all the sources open to China, Japanese methods and techniques in agriculture, particularly, should be most easily adopted. The Japanese have had practical experience with production problems under Chinese conditions gained during the occupation of the Mainland and Taiwan.

As indicated, the only advantages to Japan would be to expand some markets and gain access to some low-quality raw materials and agricultural products. It might be misleading to assume that China cannot find a means to pay Japan and that this precludes

any sizable increase in trade. Growth in the Chinese economy and the shift in China's trade patterns could, and probably will, increase Sino-Japanese trade. The quantities of farm products, minerals, and other items once going to the Soviet Union to pay for industrial goods, if sold in the Free World markets, could make China a sizable competitor. The Chinese appear to have completed or nearly completed payment of earlier long-term loans received from the Soviet Union. This should ease the pressure on China's foreign account. The Chinese Communist leadership appears also to have turned slightly away from the more doctrinaire approach to farm problems and people. This switch may or may not last. But if given a little more sensible treatment, the hard-working Chinese farmers may again enable the regime to resume exporting farm products on a level considerably above the low 1959-61 years. This could happen even though the Mainland continues to import wheat and other grains for use in the coastal cities.

Current and developing trade appear to be unsettled. If trade continues to expand as now appears likely, Chinese farm products--such as soybeans, rice, pulses, corn, hides, and skins--will likely continue to be offered to Japan. If the Japanese want to sell steel, fertilizers, and other manufactures to China--and they do--some farm products will likely be taken to promote such exports. This, of course, hurts U.S. opportunities when exporting and importing are linked in such a manner. In the long run, however, it appears that China will not be able to export many farm products but will require practically all of its farm products for domestic uses.

TRADE TRENDS

World War II badly disrupted Japan's international trade. Recovery began very soon after the end of the war. However, by 1950 exports were only 32 percent of the 1934-36 average. The share of textiles, including raw silk and cotton products, was abnormally high in the prewar years. A marked shift in composition of trade became noticeable also after the war. Textiles, which had accounted for 52 percent of total exports in 1934-36, declined sharply at this time (33). Exports of machinery, metals, and chemicals expanded at a relatively faster rate than textiles and increased their percentage of the total.

From 1956 to 1963 a highly significant structural change took place. Machinery exports as a percentage of the total rose from 12.4 percent in 1955 to 27 percent in 1963, and the percentage continues to grow (5). The share accounted for by textiles continues downward. Other products that have sold exceptionally well in the postwar period have been cameras, toys, plywood, glassware, footwear, radios, and other items which Japan has improved to meet world export standards.

The growth of Japan's imports and exports and the balance of trade for 1950-64 are shown in table 3. Values are based on custom returns and have not been adjusted for price changes. Japan generally incurs a trade deficit on the basis of exports f.o.b. and imports c.i.f. Therefore, with adjustments for freight and insurance included in the c.i.f. figures, the merchandise account would be more nearly in balance.

Japanese imports and exports have been growing twice as fast as world trade--a comparative measure of the upward trend of Japan's foreign trade. Exports (f.o.b.) in 1964 increased some 22 percent over 1963, reaching \$6,673 million, while imports (c.i.f.) went up about 18 percent to \$7,938 million. Attaining and holding a proper balance between exports and imports has been more of a problem. However, on a foreign exchange basis, the account is satisfactory. When deficits have become troublesome, the cause has generally been over buying on the part of Japanese businessmen rather than a decline in exports. A rapid buildup of Japanese industry has required heavy spending for capital goods in some boom years.

Of most direct interest to U.S. farmers, the annual value of Japan's agricultural imports has trended up sharply over the last decade or more. This rise in farm imports has paralleled the population growth and the growing needs of the country for food

Table 3.--JAPAN: Balance of trade, 1950-64

Year	Imports (c.i.f.)	Exports (f.o.b.)	Balance
----- Million dollars -----			
1950.....	974	820	-154
1951.....	1,995	1,355	-640
1952.....	2,028	1,273	-755
1953.....	2,410	1,275	-1,135
1954.....	2,399	1,629	-770
1955.....	2,471	2,011	-460
1956.....	3,230	2,501	-729
1957.....	4,284	2,858	-1,426
1958.....	3,033	2,877	-156
1959.....	3,599	3,456	-143
1960.....	4,491	4,055	-436
1961.....	5,811	4,236	-1,575
1962.....	5,637	4,916	-721
1963.....	6,736	5,452	-1,284
1964.....	7,938	6,673	-1,265

Source: (19).

and raw materials in excess of the quantities supplied by domestic producers. As the demand for farm imports has grown, the composition or the type of imports has adjusted to changing demand for foods and agricultural raw materials. The level, trends, and composition of farm imports by major commodity groups are shown in figure 1. The major groups conceal some changes and shifts in demand for specific farm products. This is shown more clearly in the sections of the report dealing with selected products of major concern to U.S. export interests.

Since the end of World War II, the United States has been the leading supplier of the Japanese market. (The share of the total Japanese farm imports by value for selected years are shown on the cover.) U.S. sales have been heavily concentrated in nine products--cotton, soybeans, rice, wheat, barley, corn, hides and skins, tobacco, and tallow. Rice and barley virtually disappeared from the list of major exports to Japan for a time. Their future is still somewhat uncertain. Some other products are finding good reception in Japan. They are: Grain sorghum, safflower seed, raisins, lemons, nonfat dry milk, and poultry. The following sections of the report discuss the general sources of supply of major U.S. farm exports to Japan and the competitive position of the United States in the market.

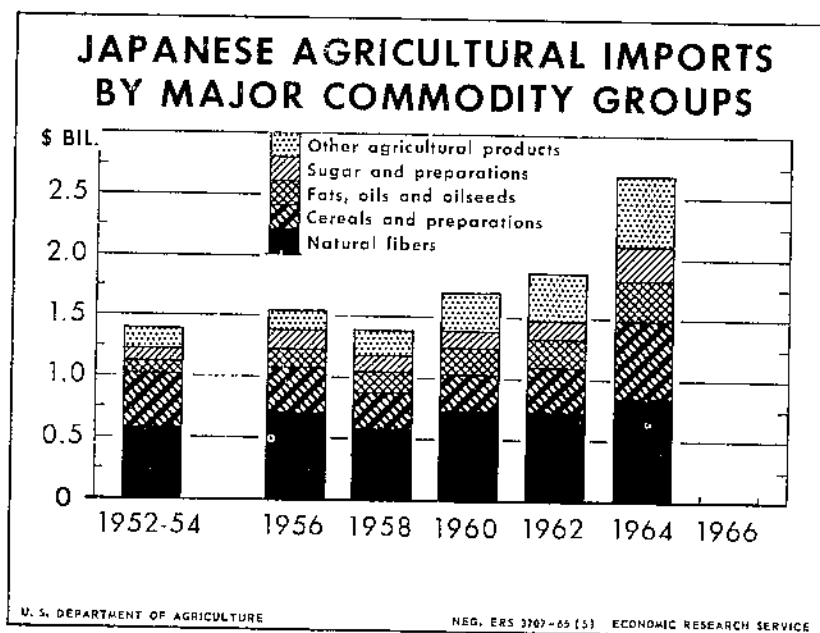


Figure 1

COMPETITION, COMMODITY-BY-COUNTRY

Japanese traders are active throughout the world, buying and selling a wide assortment of commodities. The country's farm import needs are large and include most products grown anywhere in the world. Japanese annual purchases from the world's farmers and ranchers are increasing year after year. In 1964, these purchases amounted to \$2,683 million. Alternative sources of supply exist for most farm products. Since purchases are on a global basis, all sellers are free to compete. The market opportunities that Japan offers attract sellers from all parts of the world. As a result, there are generally many countries bidding for a larger share of the current and the future market potential.

Agricultural exporting countries selling to Japan can be divided into two groups--the less developed countries and the industrialized countries. The underdeveloped areas, situated primarily in Asia, Africa, and Latin America, are striving to increase agricultural production and are pushing sales of farm products vigorously as a means of earning foreign exchange. Often such countries depend on one or two farm exports to meet most of their international obligations. These areas, faced with slow increases in production and often with mounting population pressures, do not generally have large surpluses. They do have the benefit and the advantage of Japan's desire to cooperate with them by buying their products.

The industrialized countries have had problems in disposing of surplus farm products. In the developed countries, widespread application of modern technology has boosted production so much that supply exceeds domestic needs. The excess must be sold abroad or stored at considerable cost. Selling is much preferred. Holding and expanding foreign outlets is a leading problem for them.

Along with the United States, developed countries such as Canada, Australia, New Zealand, France, and some countries of Western Europe have difficult farm marketing problems. Both Canada and Australia possess large agricultural resources and modern technology. Both countries have a small population so that domestic demand is not great. Foreign markets are highly significant to them.

The pressures to sell assure that Japanese buyers face a supply situation where competition among sellers is keen. The Japanese have strong reasons for encouraging competition. Inviting many sellers to compete keeps Japan from becoming dependent on one source of supply. In a more direct commercial sense, it assures competitive prices and attention to quality in products offered for sale. With Japan's large annual import bill, small savings on each unit purchased amount to sizable savings in foreign exchange expenditures. Keeping down the cost of imported raw materials is important to cost-conscious Japanese manufacturers.

Importing at the lowest possible prices is also a means of curbing consumer prices, an important consideration in a country with inflationary pressures. These are some of the reasons why Japan is one of the most competitive markets in the world and why it is likely to remain so.

Proof of the importance that the Japanese attach to trading skillfully can be found in the amount of resources, financial and human, devoted to foreign trade. The work is centered in several trading firms that are unique to Japan. These organizations act both as salesmen for Japanese manufacturers and as buyers for the Japanese firms that use imported products. Although the organizations have many facets, rendering services is the central reason for their existence. The service offered by these firms is basically expert knowledge and competence. Their buyers are familiar with world trading conditions and patterns. The firms have offices, staffed with well-trained people, at strategic and widely scattered points in the major trading areas of the world (32). From a competitive point of view, the trading firms give Japan the organization and the expert knowledge required to locate and negotiate the best buys for Japanese interests.

On a geographic basis, the sharpest competition for U.S. farmers in the Japanese market, other than Japanese growers, comes from Australia, Canada, Mexico, Argentina, Mainland China, Thailand, and the Union of South Africa. Of course, there are others depending on the product. The supplying countries include both underdeveloped and developed countries. In this connection, answers to the question which country or area enjoys an advantage in supplying the Japanese market because of lower production cost, or shorter ocean transportation distances are difficult to find measured in terms of dollars and cents. The increasing role of the various governments in financially aiding their export trade clouds the issue of comparative advantage in an economic sense except as a point of reference.

Turning to products of keenest concern to U.S. farmers, the following sections of the report discuss the competitive situation affecting selected farm products. Products chosen are those of major interest to U.S. agriculture based on Japanese purchases of recent years. They are raw cotton, rice, wheat, barley, corn, grain sorghum, soybeans, safflower seeds, hides and skins, tallow, raisins, lemons, tobacco, poultry, and nonfat dry milk.

FOOD GRAINS

Rice, barley, and wheat are the major food grains in Japan. Several miscellaneous grains are grown but in such small quantities that they do not figure prominently in the nation's food supply. As

in most low-income countries with limited agricultural land and many people, food grains have historically provided the bulk of the Japanese diet. For the Japanese the supply of rice, barley, and wheat has generally made the difference between being hungry and being reasonably well fed. Consequently, grain production, supply, and distribution have been matters of top importance in the national life.

In 1934-38, Japan had a caloric intake estimated at 2,175 calories daily per capita. About 70 percent of the total came from grains, primarily rice, barley, and wheat. Another 7 percent came from potatoes and other starchy root crops. Together, these starchy foods made up more than three-fourths of the total.

In the postwar period, caloric consumption has increased. In 1962, it was 2,282 calories (excluding liquors and soft drinks). Of this amount, starchy foods (cereals and potatoes) accounted for roughly two-thirds. The daily supply of 2,282 calories is below nutritional reference standards for an adequate diet. Japan has set 2,500 calories as an ideal nutritional standard.

In the earlier stages of economic development, a diet built around rice and fish fitted into development plans and resource availabilities. Growing cereal grains and potatoes, using cheap family labor abundantly applied, would produce the maximum number of calories per unit of land. Only in the last few years has the economy reached a stage at which the country can improve diets on a sizable scale. Some progress has already been made, as shown in table 1.

The Nutritional Survey (page 5) noted improvements in the nutritional quality of the diet, but pointed out that there is still a considerable way to go. In terms of goals set for 1970--described as ideal levels--the 1963 consumption level of fat was at 77 percent of the target; calcium, at 62 percent; and vitamin B-2, at 66 percent. There is still--the study concluded--a need to reduce the caloric intake from rice and to increase the intake of animal foods as a source of fats and oils as well as quality proteins. More vegetables and fruits, especially green and yellow vegetables, are needed as a source of vitamins.

Clearly, Japan is moving toward a change in diet pattern that is shifting food demand. Starchy food crops are in a decline. Not all starchy crops will be equally affected because some are strongly entrenched in consumer preferences. Crops of greatest interest to U.S. farmers and developments affecting the market are discussed in the following section.

Rice

Japanese consumers prefer rice to all other cereal crops. Trends in the Japanese rice market are difficult to appraise. The

future demand for rice imports and implications for U.S. rice growers are uncertain. Historical events and developments of the past two decades furnish several clues, but these do not necessarily forecast the future in any precise sense.

For many centuries rice has been the principal crop and the predominant source of food energy in Japan. Today, the economy still depends on the production, supply, and price of rice to a very significant extent. Providing for the people's need in this basic food and keeping prices reasonable and stable has long been a major concern of the Japanese Government. Many of Japan's agricultural laws and farm policies over the years have been centered on efforts to assure an adequate supply of rice.

Through military conquest, new sources of supply were acquired and developed to assure food needs. Before World War II (1937-39), Japan imported an average of 1,818,000 tons of rice annually from its colonies, primarily from Taiwan and Korea (25). These countries grew the short-grain rice similar to rice grown in Japan. World War II and the defeat of Japan brought an end to this colonial supply. Japan once again was back to relying on domestic production and commercial imports from regular trade channels.

Domestic production averaged 12.2 million metric tons in 1935-39 of paddy rice equivalent. The average for 1948-52 was slightly under 12 million tons and dropped to 10.3 million in 1953. Actually rice production held up surprisingly well during the war. A slight decline in domestic production and a loss of colonial imports, however, put severe strains on the rice supply. The stringent food situation was further intensified by a heavy inflow of Japanese citizens--estimated at 6 million--repatriated from the colonies back to the home islands after the end of the war. Rice imports and other foodstuffs were badly needed.

From 1950 to 1954, rice imports into Japan averaged nearly 1 million metric tons of milled rice; this amount was about 55 percent of the prewar average. Also the source of procurement had to be changed. Korea no longer produced significant quantities of rice for export, and Taiwan recovered slowly. The United States supplied about 18 percent of the 1950-54 total imports.

The 1955 rice crop in Japan marked a turning point in production and eased the tight supply-demand situation. Production jumped from a 1950-54 average of 11,492,000 metric tons in paddy equivalent to 15,481,000 tons in 1955. Production has been maintained on this new and high plateau with some year-to-year fluctuations. A record crop of 16,261,000 tons was harvested in 1962. The last 3 crop years show production figures moving somewhat sideways at a high level, but slightly below the record crop of 1962.

On the demand side for rice, the Japanese market presents the more difficult problems for analysis, particularly as to future

demand prospects. Experience in other countries has shown that, when consumer incomes rise, food consumption patterns shift from starchy foods--cereals, potatoes, and other root crops--to more health foods, such as milk, eggs, red meats, vegetables, and fruits. Japan's per capita national income has already advanced far enough to reflect such a general shift, but rice continues to be the preferred cereal. This raises an interesting question: Will Asian people, on attaining economic affluence, behave in the expected manner in shifting away from rice? The question is broader, of course, than just purchasing power consideration since it involves such things as customs, attitudes, scales of values, and educational level of the people.

Modern Japan is in a position to provide some answers to this question. Per capita income is now at a level where consumers can afford other foods and the Japanese have demonstrated an eagerness to try "the new and the different generally." But more time and analysis will be required for an answer as to what extent and at what speed an affluent Asian people--long accustomed to eating rice--will abandon a tradition of building the meal around one product.

Available Japanese food balances show some interesting developments and trends. During the severe rice shortages after World War II, Japan could not obtain rice and had to reduce consumption drastically from the 294 pounds consumed annually per capita before the war. Consumers accepted substitutes, such as barley, wheat, and potatoes; they had no other choice.

Beginning in 1955, rice supplies again became plentiful, but rice has not achieved the predominance in the diet that it once held. Per capita consumption was only about 257 pounds in 1962, some 37 pounds below the prewar figure. However, per capita consumption is increasing slightly at a time when Japanese consumers are generally moving away from starchy foods, especially barley. There is no way of estimating how far the shift back toward prewar levels will go, or when per capita consumption will start declining.

Two factors influencing rice consumption to an unknown degree are rationing and Government pricing of rice. Some 20 years after the end of the war, Japanese-grown rice is still rationed. In addition to rationing, the Government is heavily involved in the production and distribution of rice. Prices paid to farmers are fixed at a high level, which is reflected in high retail prices. Consequently, with rationing and price-fixing the demand for rice in a free-market framework is not being tested vigorously in the postwar period.

In assessing demand prospects, however, there are additional elements to be considered. Population is increasing by almost 1 million people annually. These people will require additional rice.

Many consumers can eat more or the same amount of rice and at the same time eat meat and other animal products. Also, the brewery industry is increasing the tonnage of rice used in making "sake," the national drink (table 4). The amount of rice used to make sake has more than doubled in the last 6 years. It is not unreasonable to expect that consumption of sake will continue to increase, expanding the demand for rice.

The basic reason why the United States lost the Japanese rice market after 1955 was the great successes in increasing yields achieved by the Japanese rice growers. Imports of rice dropped from an average of 992,000 tons in 1950-54 to only 223,000 tons in 1960-64. Recent developments, however, have put the question of self-sufficiency in doubt. Japan will likely need to import about 1 million tons of rice in the 1965-66 rice year.

The Japanese Government's policy on rice has an important bearing on the degree of self-sufficiency attained and the degree likely to be maintained in the long run. Japanese farmers receive what are probably the highest prices in the world for their rice, making it a most profitable crop. In setting support prices, the Government considers cost of production, parity, and the broad economic aim of enabling the farm population to share more evenly in the nation's growing prosperity. Since rice is grown on three-fifths of the farms, increasing the prices paid to rice growers provides a useful vehicle for funneling additional funds into the lagging farm economy.

Since 1960, rice has been supported on a "cost and income compensation formula." Under this formula, the cost of producing rice is calculated using an average of the three most recent years. The average is then adjusted to bring agricultural income more closely into line with nonagricultural income. The revision is guided by comparing such factors as materials and labor costs in rural areas with those in industrial areas.

Table 4.--JAPAN: Rice used in making sake, 1958-63

Year	Domestic rice	Imported rice			Total
		Short-grain	Long-grain	Broken	
----- 1,000 metric tons -----					
1958.....	194	16	41	8	259
1959.....	212	2	20	9	243
1960.....	241	2	9	22	274
1961.....	301	1	5	27	334
1962.....	351	11	16	15	393
1963.....	504	16	19	17	556

In the present Japanese economy these built-in movers push prices upward. The support price for the 1964 crop was pushed up by 14 percent. Consumer prices in January 1965 were also raised by about the same percentage.

The following calculations, worked out in the U.S. Agricultural Attache's office in Tokyo, provide an example of the rice support-program for 1961.

<u>Domestic rice</u>	<u>Price per metric ton¹</u>
Production cost.....	\$110.10
Government purchase price.....	224.90
Government wholesale price.....	220.10
Official retail price	236.10
 <u>Imported short-grain rice</u> (Japonica type)	
Government purchase price ²	155.64
Official retail price	230.60
 <u>Imported long-grain rice</u> (Indica type)	
Government purchase price ²	130.94
Official retail price	197.20

¹ Milled rice basis. ² Paid to importers.

Supporting prices is costing the Japanese Government more and more each year. An alternative would be to import more rice. Should the Government adopt such a policy, the question of available world supplies has to be considered. The Japanese cannot be sure that rice will always be available.

Rice, indigenous to the Far East, is believed to have been introduced into Japan by immigrants from South China in about the first century B.C. The rice introduced is thought to have been of the short-grain variety, which the Japanese prefer (1). More than 90 percent of the world's rice is grown and consumed in the Far East. Rice trade is also largely confined to the Far East. Mainland China grew an estimated one-third of the world supply in the late fifties, India around one-fifth, and Japan about one-fifteenth (6). Burma, Thailand, Pakistan, Indonesia and other Far East countries are also large growers and consumers. Burma and Thailand are the world's leading exporters. The United States is

the third largest exporter. Mainland China exports rice in good crop years, and some finds its way into Japan when political relationships between the two countries permit it. For the past several years, Asian countries have moved their available rice exports into world trade without any great difficulties. Population growth in the rice-consuming areas is expanding demand. Some countries may not have the rice to export because of growing domestic needs.

U.S. rice growers, on the other hand, under strict acreage control, still produce more rice than can be sold for cash. Much of the rice grown moves under aid programs, and new cash markets are badly needed.

A closer look at the countries supplying Japan in recent years shows that other Asian countries are in an advantageous position, but supplying countries are widely scattered (table 5).

The type of rice demanded by Japan, transportation distances, and general trade considerations give other Asian countries an edge in the Japanese market, particularly when import requirements are small. Neighboring Taiwan, South Korea, and Communist China grow the type of rice preferred by the Japanese consumer. But all three countries have limited export availabilities.

Taiwan has an agreement with Japan to exchange fertilizers and other manufactures for rice. A minimum amount of 150,000 tons is expected to move to Japan in 1965. Taiwan has an annual agreement with the United States which limits the amount of rice that can be exported as long as Taiwan still qualifies for other grains under PL 480. A more fundamental question, however, from the long-run point of view is export availabilities. Taiwan has a population growth rate of more than 3 percent annually. Although good gains have been made in rice production over the past several years, the amount available for export is not large, even in good years.

South Korea, a grain-deficit country, can spare only small quantities of rice, and this only in good crop years. However, South Korea and Japan have recently reached an accord diplomatically and much closer economic relations are anticipated. But Korea's domestic requirements, like those of Taiwan, are rising because of population growth.

Mainland China is an unknown quantity as a competitor. Japan reportedly purchased 120,000 metric tons of rice from the Mainland in 1965. This transaction marks the first purchase since 1958, when a political squabble brought trade to a virtual halt. Reportedly, the Chinese Communists offered larger amounts. But Japan may consider this source unreliable and be reluctant to depend on it.

Japan purchases rice every year from Thailand and Burma, probably to balance trade with its underdeveloped Asian neighbors. Italy, Spain, and Brazil have been sporadic suppliers to Japan.

Table 5.--JAPAN: Area and production of milled rice, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Area	Production	Imports ¹								Supply	Import-dependency rate ²
			United States	Italy	Thailand	Burma	Taiwan	Spain	Other countries	Total		
	1,000 acres	1,000 metric tons	-----1,000 metric tons-----								1,000 metric tons	Percent
Average:												
1950-54..	7,464	8,430	178	42	353	192	46	27	154	992	9,422	10.5
1960-64..	8,109	11,590	21	(³)	74	28	68	6	26	223	11,813	1.9
1955.....	7,961	11,270	243	66	341	236	183	29	148	1,246	12,516	10.0
1956.....	8,013	9,918	20	32	130	267	89	57	165	760	10,678	7.1
1957.....	3,003	10,432	(³)	(³)	115	106	115	0	11	347	10,779	3.2
1958.....	8,039	10,914	0	31	45	51	191	39	148	505	11,419	4.4
1959.....	8,125	11,376	0	0	70	27	151	21	8	277	11,653	2.4
1960.....	8,175	11,701	0	0	64	47	33	0	31	175	11,876	1.5
1961.....	8,156	11,301	(³)	0	34	6	69	0	17	126	11,427	1.1
1962.....	8,116	11,838	(³)	(³)	63	21	52	0	42	178	12,016	1.5
1963.....	8,050	11,659	(³)	0	94	28	85	0	15	222	11,881	1.9
1964.....	8,048	11,450	107	0	117	36	102	29	24	415	11,865	3.5

¹ Standard International Trade Classification Nos. 042-110, 042-120, 042-210, 042-220, 042-290.

² Equals imports divided by production plus imports (stock figures not available).

³ Less than 500 metric tons.

Source: (11) and (19).

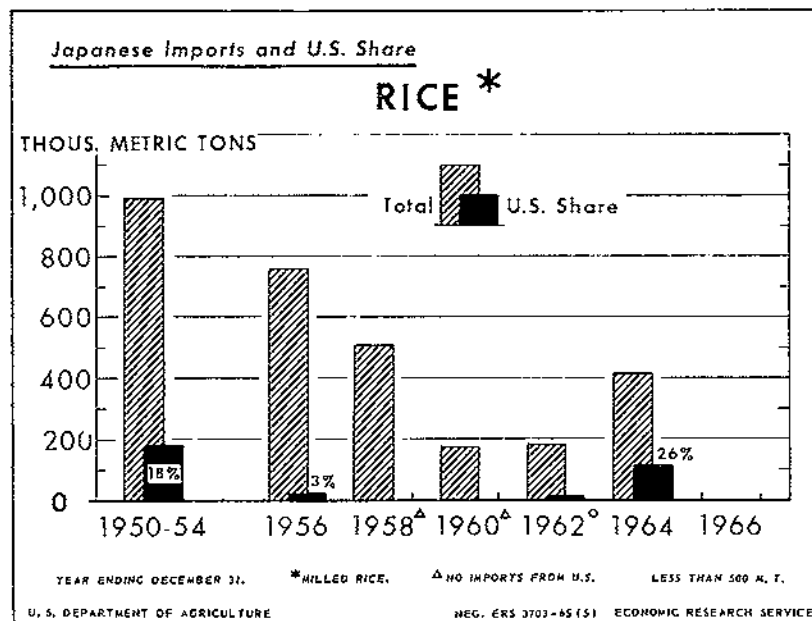


Figure 2

Essentially, the larger the quantities of rice required, the better the chance for U.S. sales. This is especially true of the long-grain (Natto) variety produced in the southern part of the United States. Historically, the Japanese have preferred the short-grain U.S. rice (Pearl variety) grown in California. Most U.S. shipments to Japan have come from this area. However, the Japanese have recently purchased shipments of the long-grain rice. Prospects for further sales are hopeful, depending on how much rice Japan needs and the available supply of the preferred short-grain variety.

The Japanese rice market in the rice year November 1964 - October 1965 expanded substantially. Purchases reportedly amounted to 722,000 metric tons. Prospects that even a larger amount will be needed next year are good.

The recent flurry in buying may or may not be temporary. However, there are too many unknown factors on both the demand and supply side for the United States to rule out Japan as a potential market, as seemed plausible a few years ago when U.S. sales dropped to zero, and Japan appeared to have achieved self-sufficiency. How U.S. rice exports have fared in the Japanese market over the past several years are shown in figure 2.

Wheat

Wheat rivals rice as the most important food grain in the world. Rice provides only a slightly larger share of human food.

Wheat, in terms of acreages devoted to growing crops, is the leading cultivated crop. Production areas are widely scattered over a large part of the world. Wheat production in 1964 was estimated at 9,170 million bushels, compared with the 1955-59 average of 7,965 million. The leading producing countries, excluding Communist China, are the Soviet Union, the United States, Canada, France, India, Italy, Turkey, and Australia.

Estimated stocks of wheat in principal exporting countries on January 1, 1965, amounted to 3,158 million bushels compared with a 1950-54 average of 2,029 million. Some 1,443 million bushels were held by the United States in 1965 and 914 million bushels by Canada (36). Other leading Free World exporters are Argentina and Australia. The Soviet Union accounts for most of the Soviet-Bloc exports.

World demand for wheat has increased, along with population growth and economic development. But demand does not grow fast enough; it lags behind the advances in production, resulting in large carryover stocks. U.S. aid programs and purchases by the Communist Bloc since 1960 have helped to hold stocks down. Against this, new technology, mechanization, price supports, and stabilization schemes have stimulated production to a point where the actual and potential outturn exceeds the commercial demand. Even the aid programs and acreage controls have not restored the balance.

Japanese food balances show that per capita consumption was about 2.5 times larger in 1951-53 than in the prewar period 1934-38. The boom in wheat consumption following the end of World War II occurred at a time of severe food shortages. Rice and other foods were in short supply. Japanese consumers had to accept substitutes. U.S. wheat stocks were made available and large amounts of wheat moved into Japan to relieve food shortages and to hasten the Japanese recovery. The total demand for wheat in Japan grew from 3,156,000 metric tons in 1951 to 4,271,000 in 1962.

The per capita consumption of wheat edged up from the 1951-53 level of 25 kilograms per year or 2.5 times the prewar level, to 26 kilograms in 1962. The per capita figures do not include wheat taken out and shown in manufacturing use. These deductions in the amount of 200,000 to 300,000 tons go into manufacturing processed Japanese foods. More detailed studies are needed to obtain the consumption of food wheat in total and in the many and changing uses.

Like so many things in Japan the utilization of wheat is undergoing significant changes affecting the demand for specific types of wheat. Growing conditions in Japan are not suited to the production of hard wheats, and the total supply is imported. Japanese wheat farmers grow a soft wheat with a low gluten content, used principally for making noodles and confectioneries. Increasingly, Japan has

turned to hard wheats with a high protein content and other associated qualities required by the rapidly expanding modern baking industries.

The demand for wheat is stronger among urban people. Also, indications are that bread is popular with young people. Both of these factors have long-run implications. In addition, the demand for wheat is affected by the availability and price of rice.

U.S. soft white wheat, which is imported for food uses, competes with domestic wheat, which also must be used for food. As a source of food, wheat is Japan's second most important grain. However, the Japanese are turning increasingly to the import market to meet the country's growing demand for wheat. Imports in 1960-64 represented more than two-thirds of the total wheat supply compared with about 55 percent in 1950-54, reflecting the growing import-dependency rate (table 6).

Historically, Japan's wheat production shows some interesting trends. Acreage under wheat cultivation totaled 755,000 acres in 1878. By 1940, the acreage had increased to 1,832,000. Domestic wheat production declined after World War II because of reduced seeding. The 1960-64 average was down by 293,000 acres from 1950-54. The 1963 crop was hard hit by unfavorable growing conditions, specifically by prolonged rainfall during the harvest season. The 1964 crop was better, but production amounted to only 1,244,000 metric tons. The prospect for the immediate future is for a further decline.

Among the leading causes of the cutback in production on Japanese farms is the worsening labor shortage caused by farmers flocking to better paying jobs in the cities and a general increase in the cost of labor. Wheat-price supports are high relative to world wheat prices, but labor required to produce a bushel of wheat in Japan is also high, making for high-cost production and relatively low labor returns to wheat farmers.

Looking further ahead, more mechanization with reduced labor requirements and lower production costs may halt the downward trend and make wheat production more profitable for the declining number of Japanese left on the nation's farms. Also, except in Hokkaido, wheat is a fall-sown crop. It competes primarily with barley and rapeseeds. Production of both these crops is declining also. Reducing the wheat acreage has led to a situation where part of the land taken out of wheat is left fallow. Since Japan is attempting to utilize limited land resources fully, unused land in the country is surprising. This practice does not appear likely to continue. Some of the land formerly used for wheat may be utilized to grow forage for the expanding livestock-feeding programs. In some areas close to population centers, vegetables can be grown.

The Japanese Government's policy on supporting wheat prices has a significant bearing on production. The purchase price is

Table 6.--JAPAN: Area and production of wheat, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Area	Production	Imports ¹							Supply	Import-dependency rate ²
			United States	Canada	Australia	Argentina	Soviet Union	Other countries	Total		
	1,000 acres	1,000 metric tons	----- 1,000 metric tons -----							1,000 metric tons	Percent
Average:											
1950-54...	1,768	1,451	1,057	493	76	105	0	22	1,753	3,204	54.7
1960-64...	1,475	1,380	1,159	1,339	395	0	30	5	2,928	4,308	68.0
1955.....	1,639	1,468	1,154	872	182	79	0	0	2,287	3,755	60.9
1956.....	1,625	1,375	1,080	904	251	42	0	0	2,277	3,652	62.3
1957.....	1,526	1,330	1,267	862	111	0	0	0	2,240	3,570	62.7
1958.....	1,480	1,281	1,092	1,035	151	2	0	0	2,280	3,561	64.0
1959.....	1,464	1,416	873	1,127	396	0	16	0	2,412	3,828	63.0
1960.....	1,488	1,531	981	1,326	307	0	64	0	2,678	4,209	63.6
1961.....	1,603	1,781	799	1,459	355	0	18	0	2,631	4,412	59.6
1962.....	1,586	1,630	880	1,207	446	0	29	0	2,562	4,192	61.1
1963.....	1,442	716	1,452	1,303	382	0	41	0	3,178	3,894	81.6
1964.....	1,256	1,244	1,681	1,400	484	0	0	27	3,592	4,836	74.3

¹ SITC No. 041.

² Equals imports divided by production plus imports (stock figures not available).

Source: (11) and (19).

calculated on a parity formula using the April 1950-March 1952 period as the base. In the early 1950's, the Government raised the fixed prices in an effort to make the supports competitive with the free (or black) market prices. Japanese wheat growers are not required by law to sell their wheat to the Government. However, most of them do, indicating that growers find Government prices more attractive than those of commercial buyers. In selling domestic wheat the Government absorbs losses, but recoups on imported wheat by marking up the prices.

The Food Agency, located in the Ministry of Agriculture and Forestry controls imported wheat. All wheat, whether for food or feed, comes in through Government channels except for small amounts imported for milling and re-export. Designated importers buy and import the wheat for the Government. Wheat imports are planned and designated under two headings: imports for food and imports for livestock feed. Imports of feed wheat must be milled at a specified 45-percent milling rate. Wheat-import purchases by use and origin in the most recent year of record, July 1, 1962-June 30, 1963, are shown in table 7. More than 70 percent of imports were purchased for human consumption.

During 1950-64, sales of U.S. wheat in the Japanese market were strong, but year-to-year sales show considerable variation. These fluctuations reflect changes in types of wheat demanded by the Japanese, prices at Pacific Coast ports of U.S. hard wheat, and the aggressive promoting of wheat sales by competing countries supplying the market. The U.S. share of the market is shown in figure 3.

The shifting demand toward hard wheats made it more difficult for the United States to hold its share of the Japanese wheat market. In supplying hard wheat, the United States encountered cost and price difficulties. For example, hard wheat produced in the United States has to be transported from the central part of the United

Table 7.--JAPAN: Wheat imports by country of origin and use, July 1, 1962--June 30, 1963

Country of origin	Food ¹	Feed ²	Total imports
- - - - - Metric tons - - - - -			
United States.....	715,123	144,900	896,023
Canada.....	876,055	260,716	1,136,771
Australia.....	--	313,033	313,033
Soviet Union.....	60,800	--	60,800
Grand total.....	1,687,978	718,649	2,406,627

¹ Purchases of wheat for milling and re-export are not handled by the Government and therefore are not included.

² With 45-percent extraction rate for wheat flour.

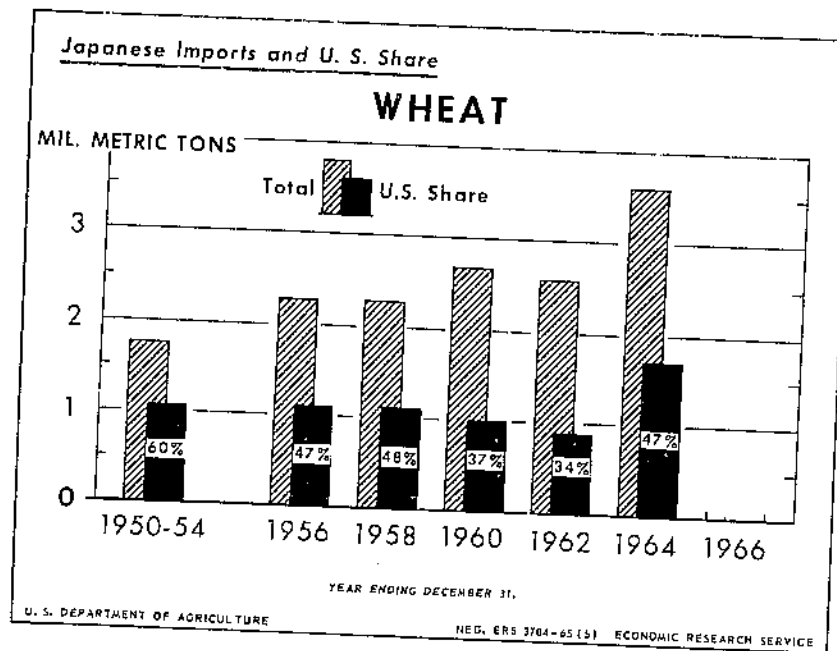


Figure 3

States to coastal ports, thereby increasing its price. Measures were taken to overcome this difficulty by building up stocks of hard wheat at U.S. West Coast ports that were offered to Japan at prices competitive with Canadian wheat.

A closer look at the supplying countries shows that the United States, Canada, and Australia are furnishing the bulk of Japan's wheat requirements (table 6). Argentina has not been an active supplier for several years but in 1964 was reported to have inquired about sales to Japan. The Soviet Union entered the market in 1959, but has not been a major supplier.

The United States and Canada have dominated the Japanese market for wheat. Australian wheat has come in under the feed-wheat quota. Canadian wheat sales in 1960-64 amounted to 2.7 times the amount imported in 1950-54. The United States supplied 60 percent of the market in 1950-54 and Canada supplied about 28 percent. In 1960-64, the United States had 40 percent of the market compared with 46 percent held by Canada. However, U.S. sales in 1963 went up sharply, regaining the lead from Canada as the leading supplying country. The United States supplied 47 percent of the market in 1964 and Canada about 39 percent. A poor wheat harvest in 1963 forced the Japanese to increase purchases abroad. The United States got most of the increase. Stocks of wheat at West Coast ports to meet Canadian competition have helped U.S. exports to obtain a larger share of the market.

Though there have been some complaints on quality of Canadian wheat, it is generally well regarded by the Japanese and other users. Wheat is Canada's chief agricultural crop and export commodity and is a leading earner of foreign exchange. Thus, the Canadian wheat farmers, the Government, and others have a big stake in keeping wheat production and sales prosperous. The Canadians spend considerable effort in keeping quality exports moving into world channels.

The Canadian Wheat Board, a Government monopoly established under the Canadian Wheat Board Act of 1935, has been an effective instrument in expanding world markets for Canadian wheat. The Board has the responsibility for orderly marketing of wheat, oats, and barley which move from one province to another and enter into export trade. Grading and inspection by the Board of Grain Commissioners, another agency of the Canadian Government, has contributed to the high reputation of Canadian wheat exports. The Board also promotes the use and sale of wheat in foreign markets.

Canadian wheat growers have also benefited from Government aid through statutory controls which regulate rail-freight rates of Western grain for exports. This has meant many million dollars to the prairie grain growers. Canadian farmers are also insured against drastic cuts in production caused by drought or other natural disasters.

In the 1940's, Canadian wheat production averaged 392 million bushels annually. Production in the 1950's averaged 495 million bushels. Carryover in the 1940's averaged 257 million bushels but increased to 498 million as an average for the 1950's. Over the years, Canada--like the United States--has demonstrated a capacity to produce wheat at a higher rate than domestic and export outlets could handle. Sales to Communist China and other Bloc countries have alleviated the problem temporarily, but have not removed it permanently (21).

Australia, the third largest foreign source of Japanese imports, is a leading wheat producing and exporting country. Wheat exports are subject to considerable fluctuation, reflecting periodic short-falls in production caused by drought. From 1955-56 to 1959-60, stocks never rose above 1 year's domestic needs, not an excessive stock position for a country highly susceptible to drought.

Wheat farmers in Australia have concentrated on producing soft wheat. Emphasis is being placed on producing varieties with higher protein content to achieve better baking qualities (22). Australian wheat now going to Japan moves under the heading of feed wheat, but this could change. Japan's purchases of Australian wheat in 1950-54 averaged 76,000 metric tons, but their purchases increased to 395,000 tons in 1960-64.

The Australians, like the Canadians, have a Wheat Board. Exports of wheat and flour are channeled through the Board. The

Board, an adjunct of the Australian Government, has been an effective instrument in opening and expanding trade channels for wheat.

Argentina has not been an important supplier to the Japanese market since 1954. When Argentina has good wheat crops, the country will likely want to sell wheat to the Japanese. But Argentina is not expected to offer as serious competition to the United States as Canada and Australia, even though Argentina has long been among the world's leading grain producers and its wheat is an important earner of foreign exchange. Nearby Brazil takes a large part of Argentina's wheat crop available for exports. Other important markets are in Western Europe.

The Soviet Union is the world's largest wheat-producing country. Production, however, fluctuates widely from year to year. Following a good crop in 1958, Soviet exports exceeded 6 million metric tons. All but approximately 1.7 million tons went to Bloc countries. In 1963 and 1964, the Soviets had to buy wheat from the Western countries because of shortfalls in domestic production. Large purchases were also made in 1965.

The Soviet Union began trying to get into the Japanese market in 1959 and has made some small shipments. It is problematical whether competition will ever be significant. Soviet production and export surpluses are uncertain, and Japan needs a reliable source of supply. Also, the European satellite countries will likely continue to take much of the Soviet supplies, unless the satellite countries turn to Free World sources for their wheat imports.

One possible factor favoring imports is the promises of the Soviet Union to increase purchases of Japan's manufactures. If the Soviet officials had their way, imports from Japan would be paid for by Japanese purchases of raw materials. The Soviets and other Communist countries favor trade on a basis which strikes a balance between imports and exports. Wheat, if available, could be included in that type of an exchange. Japanese business groups eager to export chemicals, industrial supplies, and equipment could exert pressures for the Japanese Government to take Soviet products.

Barley

The principal countries exporting barley to Japan are the United States, Canada, and Australia. Production capabilities and stocks in the several exporting countries are sufficient to assure brisk competition. World barley production in 1964 is estimated at 4,080 million bushels compared with a 1955-59 average of 3,255 million. Estimated stocks of barley held by the principal exporting countries amounted to 615 million bushels on January 1, 1965, compared with

a 1950-54 average of 456 million. More than one-half, 310 million bushels, of the stocks were held by the United States (36).

Barley is consumed primarily as a food grain in Japan. After rice and wheat, barley is the third most important cereal grain. It is referred to as a staple food grain. To a lesser extent, barley has been used as a feed grain. It is also used by the brewing industry.

Food balance figures show that per capita consumption amounted to 12.7 kilograms annually in prewar 1934-38. Consumption increased in the lean postwar years and averaged 19.7 kilograms in 1950-53, reflecting general food shortages, especially of rice, that existed following the war. Consumption began to decline in 1955. By 1962, per capita consumption was reduced to 4.7 kilograms. This shift away from barley is associated with rising consumer incomes, the availability of rice, the decline in consumption of starchy foods, and the relatively low ranking of barley on the consumer's scale of preferences.

Some further insight into the loss of consumer preference for barley and the conditions under which barley will sell can be found in the history and use of barley by the Japanese. Before World War II, barley was a major crop in Japan and provided an important part of the food supply. In 1939, Japan produced 934,000 metric tons of naked barley (a hull-less type) and 844,000 tons of common barley (a covered or hulled type). Barley, however, was insignificant in the foreign trade of Japan. Traditionally, the Japanese have used barley to supplement and extend rice. Small-grained varieties with white kernels are more desirable than blue kernels for processing. The blue kernels are objectionable because they stand out in a mixture of rice and barley. Barley is also used in making soups (20). From a nutritional standpoint, barley complements rice by providing additional protein, calcium, and essential vitamins to the diet.

Japanese consumers, however, eat barley more for economic reasons. It is a familiar food; but, more important, it is a relatively cheap source of energy. The Japanese, however, regard barley as inferior to rice. Developments have shown that the demand for barley drops sharply when consumers have a choice between barley and rice and can afford rice.

The foremost competitor of the United States in the Japanese market for barley is the Japanese grower. Much of what has taken place in the postwar period involving barley production and imports can be seen in table 8. Both demand and production of barley have declined, but demand has fallen more sharply than production. The import-dependency rate dropped from 24.6 percent in 1950-54 to only 7.5 percent in 1960-64, showing Japan's approaching self-sufficiency in barley though at a reduced level of demand. The situation took a sharp reversal in 1963 and 1964 with imports

Table 8.--JAPAN: Area and production of barley, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Area	Production	Imports ¹						Supply	Import-dependency rate ²
			United States	Canada	Australia	Iraq	Other countries	Total		
	1,000 acres	1,000 metric tons	----- 1,000 metric tons -----						1,000 metric tons	Percent
Average:										
1950-54.....	2,404	2,192	290	244	120	41	20	715		
1960-64.....	1,575	1,593	78	24	24	(³)	3	129	24.6	
1955.....	2,460	2,407	326	104	146	0	0	576	7.5	
1956.....	2,425	2,341	399	221	301	0	0	922	19.3	
1957.....	2,307	2,160	201	272	380	0	0	853	28.3	
1958.....	2,259	2,067	429	147	138	2	0	716	28.3	
1959.....	2,207	2,308	138	115	232	3	0	488	25.7	
1960.....	2,071	2,301	0	0	0	0	(³)	(³)	17.5	
1961.....	1,711	1,976	0	0	0	0	0	2,301	0	
1962.....	1,514	1,726	0	0	0	0	0	1,976	0	
1963.....	1,396	759	113	37	7	2	0	1,726	0	
1964.....	1,183	1,205	276	82	111	0	13	172	18.5	
							2	471	1,676	28.1

¹ SITC No. 043-000.

² Equals imports divided by production plus imports (stock figures not available).

³ Less than 500 metric tons.

Source: (11) and (19).

again becoming important. Imports of feed barley came to almost 500,000 metric tons in 1964. Demand for barley as livestock feed remained strong in the first months of 1965.

Domestic barley production dropped from a 1950-54 average of 2,192,000 metric tons to only 1,593,000 in 1960-64. Planted acreage, despite Government-support prices, declined from 2,404,000 to 1,575,000 acres in the same period. Labor shortages have caused some of the decline. Land taken out of barley has been mostly diverted to more economical crops or left fallow. The Government is aware of the shift in demand from barley as a food, but continues to support barley prices and to control barley imports.

The price of barley is supported under a parity formula using the base period April 1950-March 1952. Like wheat, farmers do not have a fixed quota for deliveries to the Government. But the Government stands ready to purchase all quantities offered for sale at fixed prices. Government purchases of domestic barley and imported barley are sold at fixed prices. Tariffs are not imposed on imported barley, but prices are marked up to keep the price of imported barley in line with domestic prices. This yields a profit to the Government.

Government prices have moved up as the economic indices on which the formula is based have advanced, but prices have not been high enough to keep resources from shifting to other uses. At times, prices paid to farmers have been increased when Government-held surpluses were not moving into consumption channels, because of weakening demand. With barley surpluses held by the Government, imports of barley were discontinued from 1959 until 1963. Reduction in prices of surplus stocks and a sharp drop in domestic production in 1963 caused by a poor growing season reversed the situation. In 1963, imports totaled 172,000 tons.

The countries exporting barley to Japan have been the United States, Canada, and Australia, the same countries that have shared the Japanese wheat market. Japan has showed no fixed pattern in purchasing barley. How U.S. sales have fared as a share of the market is shown in figure 4. In 1950-54, the U.S. share of the market amounted to about 41 percent, Canada supplied 34 percent, and Australia nearly 17 percent.

Australian barley made strong percentage gains in the early 1950's relative to the United States and Canada. In 1954 Australian barley held more than 28 percent of the market and remained a strong competitor through 1959 when Japan discontinued imports. Actually, Australia was the leading supplier in 1959 with more than 47 percent of the market. Of the 172,000 metric tons imported in 1963, however, the United States supplied 113,000 tons, about two-thirds of the total. In 1964 the United States supplied 276,000 tons, 59 percent of the market. Australia was the second largest supplier in 1964 with 111,000 tons. But each country's share of the

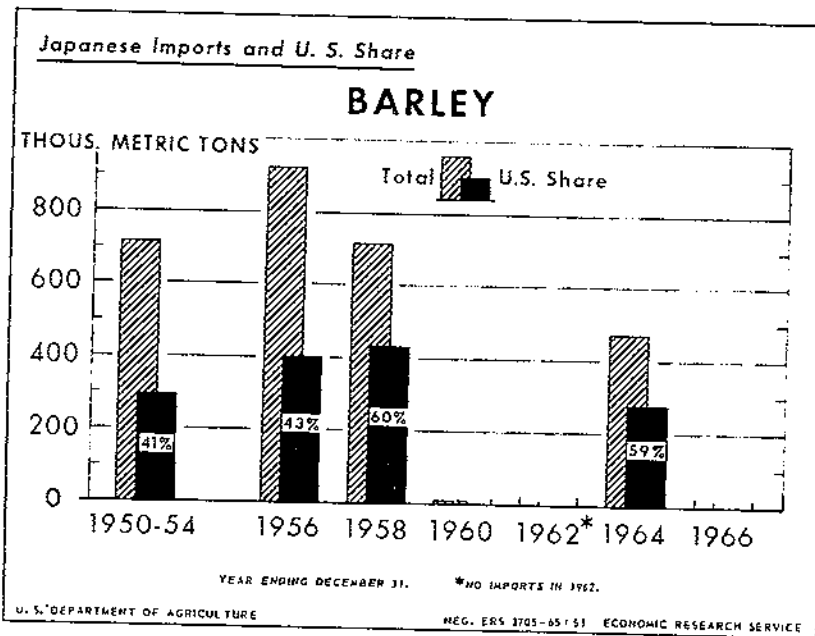


Figure 4

market has fluctuated considerably from year to year. Although Australia and Canada have found an additional market for their barley in Communist China, they can be expected to continue as competitors in the Japanese market.

The outlook for Japan's becoming and remaining a large market for barley depends on the livestock-feed demand. The prospects for food barley appear dim. Barley imports are controlled by the Food Agency. The Government, despite price supports, has tended to encourage shifting barley acreages to wheat. Planted acreage of barley continues to decline. On the demand side, some opinions have been expressed that the decline in consumption of barley for food may have ended and that barley, particularly soft barley, may again be imported though not in large quantities. There is also a prospective market demand for two-row common barley for use in brewing beer.

In the booming livestock-feed industry, the projected outlook is for corn and other feed-grain imports to exceed 9.5 million metric tons by 1975 compared with 2,354,000 tons in 1960. Commercial-mixed production amounted to 5.8 million metric tons in 1963, up more than 1 million tons from 1962. Barley has a good chance to find an increased demand from this mushrooming growth, but grains compete with each other in feed mixes. Price ratios where one grain can be substituted for another become a factor. On the encouraging side, the Food Agency authorized substantial

purchases of barley for feed use in 1963 and again in 1964. Actually, whether barley could again find an important market in Japan if permitted to enter at world prices has not been tested.

FEED GRAINS

Japan's demand for feedstuffs is related to the growing livestock and poultry industry. Significantly, the Japanese have made expansion of livestock and poultry a top goal in agricultural development plans. The plans are being implemented vigorously with special emphasis given to increasing production of dairy products, pork, chicken meat, and eggs. The number of livestock and chickens on farms and the trends in numbers, together with targets for 1971, are shown in table 9.

The most significant decline in livestock enterprises is found in numbers of horses. Between 1955 and 1964, the number of horses dropped from nearly 1 million head to only 396,000 in 1964. One reason for the decline is that horses for military uses are no longer needed. Also, with the switch to the use of machinery in farming, horses and draft cattle are not needed in such large numbers as in the early days. Numbers of sheep and goats on farms are also declining, with sheep having the largest decline. Numbers of beef cattle produced for meat have fallen recently. Numbers of dairy cattle, hogs, and chickens are making rapid gains as planned, and are expected to continue expanding as shown in targets for 1971.

The strong emphasis on livestock farming touches the vital interest of Japanese farmers, the Japanese Government, and particularly exporters of farm products to the Japanese market. For the farmer, the implications include greater diversification with less reliance on cereal grains, additional income to farmers, and shifts in farm resource use--more land diverted to pasture and forage.

The most significant implication for U.S. feed-grain interest is, of course, the feed requirements associated with livestock numbers. More and more corn, sorghum, feed wheat, barley, and byproducts such as bran and soybean meal are being consumed. The following paragraph describes briefly and generally how these requirements are calculated and how the import needs are established.

Each year the Feed Deliberation Council, an advisory body to the Japanese Government on feedstuffs, plans a feed supply and demand program. Total requirements are based on all feedstuffs ranging from commercial-mixed feeds to forage crops and pasture grasses. Import requirements are estimated by taking total requirements, calculated on the basis of total digestible nutrients (TDN), and subtracting the estimated quantities that can be supplied from domestic sources. The remainder is the estimated amount to

Table 9.--JAPAN: Numbers of livestock and chickens, averages 1950-54, annual 1955-64, and targets for 1971

Year	Dairy cattle ¹	Draft and beef cattle	Horses	Sheep	Goats	Hogs	Chickens
	1,000 head	1,000 head	1,000 head	1,000 head	1,000 head	1,000 head	1,000 head
Average 1950-54.....	256	2,346	1,084	520	468	713	26,312
1960-64.....	1,067	2,300	508	461	472	3,348	² 86,753
1955.....	421	2,636	927	784	533	825	45,715
1956.....	497	2,719	888	893	631	1,170	42,589
1957.....	588	2,590	818	945	669	1,546	45,341
1958.....	654	2,465	762	916	622	1,649	50,291
1959.....	751	2,365	728	864	589	2,244	48,215
1960.....	824	2,340	673	788	561	1,918	54,627
1961.....	885	2,326	618	677	520	2,604	71,806
1962.....	1,002	2,332	547	504	499	4,033	90,006
1963.....	1,145	2,337	471	389	469	3,296	98,447
1964.....	1,238	2,207	396	274	401	3,461	n.a.
Target for 1971 ³	2,900	⁴ 2,500	500	700	500	7,400	150,000

¹ Data for 1956 and subsequent years do not include male animals. ² 4-year average. ³ Estimated numbers of livestock needed and targets set by the Japanese Government. ⁴ Japanese cattle.

Source: (11) and (14).

be supplied by imports. This estimate puts total requirements for the JFY 1964 (April 1964-March 1965) at 14.8 million metric tons of TDN. Domestic supplies of TDN were estimated at 10.7 million metric tons (including oilseed meal produced from imported oilseeds). Thus, import requirements were put at 4.1 million. Imports of feedstuffs would be the quantities needed to provide 4.1 million tons of TDN.

Of great interest to U.S. producers of feed grains is the fact that a rapidly expanding livestock industry in Japan and a limited expansion of domestic production is widening the gap between feed requirements and domestic supplies. Import requirements are booming to such an extent that Japan has become the world's fastest growing feed-grain market. Mixed-feed production, using a large percentage of imported grains and other imports, increased nearly fivefold from 1958 to 1963. The composition and amounts of ingredients going into compounds and formula feeds for 2 recent years are shown in table 10.

Table 10.--JAPAN: Feed ingredients used in making compounds and formula feeds, July 1961-June 1962 and July 1962-June 1963

Product	July 1961-June 1962		July 1962-June 1963	
	Quantity	Distribution	Quantity	Distribution
	1,000 metric tons	Percent	1,000 metric tons	Percent
Corn.....	1,943	45	2,133	39
Wheat.....	74	2	41	1
Barley.....	10	(¹)	5	(¹)
Milo (grain sorghum).....	(²)	--	512	9
Other cereals.....	³ 262	6	37	1
Wheat bran.....	464	11	460	9
Barley bran.....	21	(¹)	16	(¹)
Rice bran & oil meal.....	217	5	249	5
Soybean meal.....	251	6	348	6
Palm oil meal.....	35	1	26	1
Linseed oil meal.....	60	1	97	2
Other vegetable oil meal...	134	3	180	3
Fish meal.....	221	5	241	4
Other animal feed ingredients.....	92	2	119	2
Other.....	557	13	965	18
Total.....	4,341	100	5,429	100

¹ Less than 0.5 percent.

² Included in other cereal.

³ Mostly imported milo supplied by the United States.

Commercial-feed consumption in Japan according to end usage is roughly as follows:

Chickens.	75 percent
Dairy cattle.	10 percent
Hogs	12 percent
Other, including beef cattle	3 percent

The above percentages vary slightly from year to year but the structure is not changing rapidly. The usage, of course, reflects the characteristics and composition of the Japanese livestock industry and the related feed requirements. About three-fourths of the total goes to feed poultry flocks.

Why did the Japanese turn to promoting livestock farming and will they succeed? Livestock production has been officially recognized for some years as a sector of the farming economy that needed increasing emphasis. The Basic Agricultural Law of 1961, which contains the major guidelines for current and future farm policy, calls for strong support for livestock development.

Growing prosperity with rising consumer incomes brought Japanese officials to a critical juncture. The growing demand for livestock products and the shift away from starchy foods called for an adjustment in farm policies to reflect consumer demands as indicated by the rising prices of such products as red meats, milk, butter, and ice cream. More livestock products were needed, and the Government decided that the country should produce most of its own pork, dairy products, and poultry rather than buy them from foreign sources.

The shift to greater emphasis on livestock is an important economic decision, and one that probably was taken only after thorough consideration of alternatives and problems. Food calories can be more cheaply produced in the form of starchy foods--cereals and root crops. Japan is limited in pasture and forage production, resources generally associated with livestock production in Western countries. Feed grains are also mostly imports for Japan. This, at first glance, tends to make emphasis on livestock farming seem risky. However, current programs pointing up livestock are hedged by a continued emphasis on maintaining rice production, thus assuring a domestic supply of the basic food staple. Also, there is considerable undeveloped pastureland, which will be developed and improved. Marginal land, now in grains other than rice, such as barley, may be diverted to growing roughage. Of major interest to U.S. farmers is that feed grains will be imported in increasing amounts.

Judging from Japan's many successes in other undertakings, it seems logical to expect that Japanese farmers and technicians will give careful attention to following improved, modern practices

of animal husbandry. High-producing, efficient animals will be needed to convert feed into livestock products profitably. Breeding-stock imports are screened for quality and type. Present prices for livestock products in the Japanese markets are high, but somewhat erratic. Government controls protect the home market and the livestock farmer from competition with cheaper imports. Increasing efficiency and lowering the cost to the Japanese consumer should be basic considerations.

The Japanese record of successfully coping with challenges indicates that livestock programs will also be made to work and that the strong demand for feed grains will continue and grow. Helping also to stimulate demand for feed grains used in commercial mixes is the development of large-scale commercial livestock enterprises. Production of poultry, especially broilers, is particularly suited to large-scale operations. Even on the scattered farms, as the Japanese farmers add more hogs or chickens they are less able to provide enough homegrown feed and must depend more on commercial feed. The amount of money now being spent for feed by the Japanese farmer is rising. The Government will be concerned about feed prices being kept reasonable. To make livestock farming profitable, the price that farmers have to pay for feed and the price received for animal products will have to be kept in a relationship that provides a satisfactory profit. This presents some problems. For example, the low market prices that farmers received for eggs in 1965 appear to be discouraging farmers from buying feed for laying hens.

Corn

Corn and, more recently, grain sorghum accounted for about 48 percent of the ingredients of commercial-feed mixes in 1962-63 (table 10). Producers of these two products have a large stake in the Japanese market.

The world supply of corn from which Japan may elect to buy is large and growing. Corn production exceeded 8 billion bushels for the first time in 1963, marking a strong upward trend compared with a 1955-59 average of a little less than 6.5 million. A slight decline occurred in 1964, caused by a sharp drop in the U.S. crop. About 51 percent of world production was accounted for by U.S. growers in 1963, and 46 percent in 1964. But corn is widely grown and is available for export in varying amounts from several sources (38). Competition for markets in such areas of the world as Western Europe and Japan with large livestock feed requirements is keen.

The strongest competition for U.S. interests in supplying Japan's corn requirements comes not from Japanese farmers, but from other countries. Leading sources of Japan's corn requirements and import-dependency rate are shown in table 11. The data

Table 11.--JAPAN: Area and production of corn, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Area	Pro-duction	Imports ¹							Supply	Import-dependency rate ²
			United States	Union of South Africa	Thailand	Argen-tina	Rumania	Other countries	Total		
	1,000 acres	1,000 metric tons	----- 1,000 metric tons -----							1,000 metric tons	Percent
Average:											
1950-54....	105	63	71	0	10	16	0	8	105	168	62.5
1960-64....	100	105	867	595	432	170	46	165	2,275	2,380	95.6
1955.....	123	100	199	48	48	4	0	44	343	443	77.4
1956.....	122	83	135	44	44	31	0	91	345	428	80.6
1957.....	119	97	242	144	30	14	0	86	516	613	84.2
1958.....	122	111	348	12	113	133	0	60	666	777	85.7
1959.....	118	104	338	97	109	270	0	99	913	1,017	89.8
1960.....	107	115	184	254	314	428	0	174	1,354	1,469	92.2
1961.....	106	116	515	446	460	286	72	52	1,831	1,947	94.0
1962.....	104	104	1,031	868	237	52	33	95	2,316	2,420	95.7
1963.....	95	104	1,061	779	429	75	82	219	2,645	2,749	96.2
1964.....	89	86	1,545	626	722	11	42	283	3,229	3,315	97.4

¹ Includes SITC Nos. 044-0110, 044-0120.

² Equals imports divided by production plus imports (stock figures not available).

Source: (11) and (19).

emphasize the minor role of domestic production in supplying Japan's total and growing needs for corn and the increasing dependency on imports. Corn is used primarily for feed; a small percentage is used in industry for making products such as starch. Corn prices are not supported by the Japanese Government, and imports have been liberalized. The Japanese know that, with limited land, growing corn would be more expensive than importing it. High-priced corn would increase feed costs and impede the livestock industry.

Domestic production figures show that Japanese farmers planted an average of 105,000 acres of corn in 1950-54, and 100,000 acres in 1960-64. However, annual figures show that corn acreage reached 123,000 acres in 1955 and declined to 89,000 acres in 1964. Production went from 63,000 metric tons in 1950-54 to 105,000 tons in 1960-64, reflecting increased yields brought about by improved technology.

The most impressive change was in the import-dependency rate. In 1950-54, Japan's import-dependency rate was 62.5 percent. In 1960-64, imports accounted for more than 95 percent of the supply. Imports of corn showed a sharp upward trend, exceeding 1 million tons for the first time in 1960 and reaching 3,229,000 metric tons in 1964. The rapid expansion in corn imports in 1960-64 occurred despite large increases in imports of grain sorghum which substitutes for corn in livestock feed.

Over the past several years, Japan has been one of the U.S. farmer's best customers for corn. The U.S. share of the market is indicated in figure 5. Annual import figures show that the United States has been the major supplier every year since 1950, except for 1954 and 1960. Argentina held the lead in those years. The U.S. percentage of the market shows considerable year-to-year fluctuations. In 1960, the U.S. percentage dropped to about 14 percent, then rose to around 45 percent in 1962, only 2 years later. The U.S. share in 1964 was 48 percent of the nearly 3 1/4 million tons imported.

Some Japanese have criticized the quality of U.S. corn. These people say that the corn is pale and has excessive moisture. But availability of corn in other supplying countries, prices, and buying to promote Japanese exports are probably the leading considerations in the quantities of U.S. corn purchased in any given year.

South Africa has made amazing gains in the market and is the number 1 challenger to the U.S. position as the leading source of supply. Japan is South Africa's principal customer for corn. Reportedly only about one-sixth of the corn going to Japan from South Africa is white corn. It is exported for industrial uses, but brings a lower price in the export market. Formerly South Africa exported mostly white corn. But, with exports becoming increasingly important, South African farmers are shifting emphasis

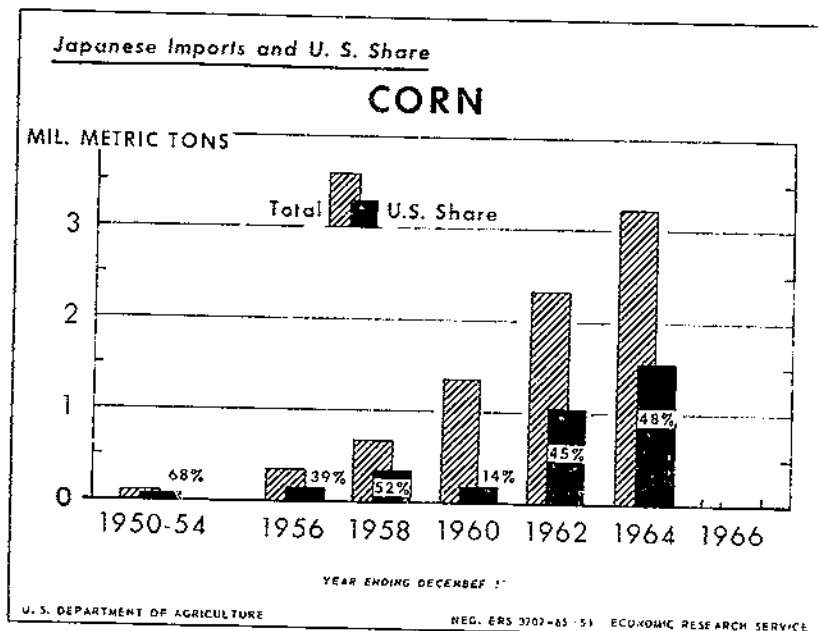


Figure 5

toward the yellow varieties, which are preferred for exporting to countries feeding livestock and poultry. The shift to yellow corn to meet export demands illustrates South Africa's interest in exploiting opportunities opening in the export field.

An indication of South Africa's success in this field is that since 1954 Japan's imports from South Africa have risen from zero to a peak of 868,000 metric tons in 1962. The volume dropped in 1963 to 779,000 tons, and amounted to only 626,000 tons in 1964. Imports from South Africa averaged 595,000 tons in 1960-64 compared with an average of 867,000 from the United States. The strong showing of South African corn in the Japanese market is attributable to the country's advances in domestic corn production.

The Government of South Africa established a Maize (Corn) Board to promote orderly marketing and to stabilize prices. In earlier years, subsidies on white corn, the type preferred for domestic uses and especially for human consumption, were set higher than for yellow, but the Board recently eliminated these price differences. The shift to increased production of yellow corn for exports was strengthened by introduction of yellow hybrids.

Thailand, currently the third largest import source for Japan's corn requirements, has also made major gains in quantities going to Japan. From only 10,000 metric tons per year in 1950-54, Japan's corn imports from Thailand climbed to an average of

432,000 metric tons for 1960-64, although there have been annual fluctuations.

Thailand has made strong progress in expanding corn production. In 1955-59, corn production averaged only 5,960,000 bushels, then reached an estimated 38,580,000 bushels in 1964 (38). Despite its excessive moisture content, corn grown in Thailand has a good reception in the Japanese market. Recently, modern corn-drying equipment has been installed to correct the moisture problem of corn moving in international trade.

Except for small shipments to Singapore and Hong Kong, Thailand depends almost entirely on the Japanese market. Reportedly, the Japanese have offered to take all of the Thai corn available for export in some years. Point-of-entry prices received by the various suppliers indicate that Japan buys Thailand's corn on a competitive basis. The Japanese Government, however, has a keen interest in helping such developing Southeast Asian countries as Thailand with their marketing problems. Two-way trade considerations facilitate entry for Thai corn into the Japanese market. Thailand could reduce its concentrated shipments to Japan by expanding market outlets elsewhere, or by developing a livestock industry to use the corn. But for the immediate future the prospects are that Japan will constitute the big outlet.

Corn purchases from Argentina by Japan dropped sharply after totaling 428,000 metric tons in 1960. Argentine prices in 1961 were up. Import data show that Argentine prices (c.i.f.) averaged \$64.66 per metric ton for 1961 compared with \$57.88 for U.S. corn.

Japan is purchasing corn over much of the world. About 15 countries are now supplying Japan with varying quantities. Rumania has gained a foothold in the Japanese market in the last 3 years. Other Communist Bloc countries shipping corn to Japan are Mainland China and North Korea. Japan reportedly contracted to import 250,000 metric tons of corn from the 1964 Chinese corn crop. The principal reasons for this move are the interests in developing alternative sources for corn and to advance export trade with the Bloc countries. The latter reason is believed to be the major consideration. Exporting corn and other farm products gives the Communist countries a means to pay for imports of manufactures. China is a large producer of corn but has never been a significant exporter. The Communist, however, having little foreign exchange, could set aside corn for shipments to Japan in order to trade for badly needed equipment, supplies, and technology.

Indications are that Japan's needs for corn will continue to expand. Competition for this business will be brisk. But U.S. farmers can reasonably expect Japan to continue purchasing high-quality U.S. corn that is competitively priced, though it may

be difficult to obtain a larger share of the market except when major supplying countries have poor crop years.

Grain Sorghum

To date the United States has been almost the exclusive supplier of Japan's rapidly expanding imports of grain sorghum. Competition has been minor. Japanese farmers produce negligible amounts; the average was only 5,000 metric tons in 1950-54 and around 1,000 tons in 1960-64.

Meanwhile, imports rose from a negligible quantity in the early 1950's to an average of 459,000 tons in 1960-64. The most dramatic increase occurred in 1962 when imports jumped from 146,000 metric tons in 1961 to 400,000 in 1962. In 1963, imports again rose to 750,000 tons and reached 953,000 in 1964 (fig. 6).

Grain sorghum imports are linked to the mixed-feed industry and the expanding needs for livestock feed. Reportedly grain sorghum is used mostly with corn in feed formulas on about a 2-to-1 ratio (40 percent corn and 20 percent grain sorghum). Many formulas now use this combination, whereas only corn was used formerly. Very little mixed feed contains grain sorghum without corn.

World supplies of grain sorghum for export are not large except in the United States. Argentina increased shipment to Japan

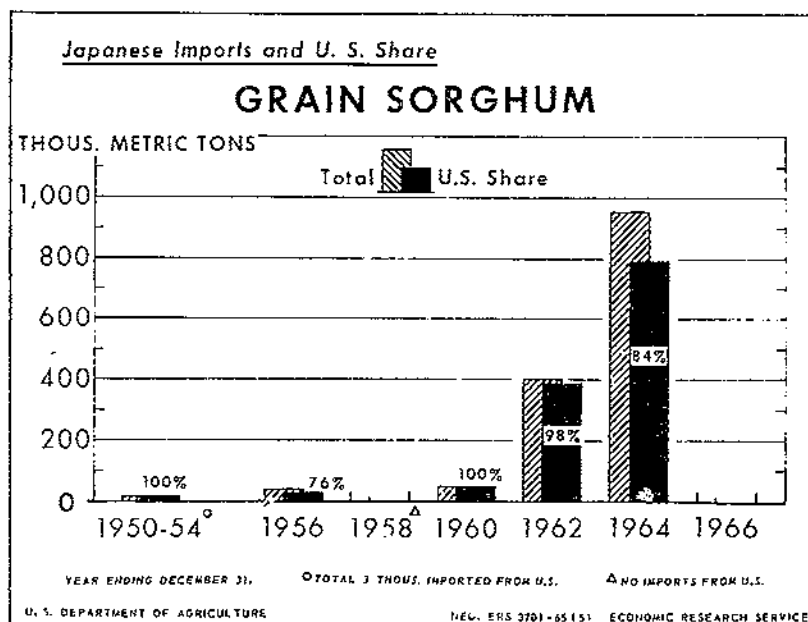


Figure 6

Table 12.--JAPAN: Area and production of grain sorghum, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Area	Production	Imports ¹				Supply	Import-dependency rate ²
			United States	Argentina	Total countries	Total		
	1,000 acres	1,000 metric tons	----- 1,000 metric tons -----				1,000 metric tons	Percent
Average:								
1950-54.....	10	5	3	(³)	(³)	3	8	37.5
1960-64.....	3	1	425	32	2	459	460	99.8
1955.....	7	3	80	0	19	99	102	97.1
1956.....	7	3	29	0	9	38	41	92.7
1957.....	6	3	(³)	0	0	(³)	3	.03
1958.....	5	2	0	0	0	0	2	0
1959.....	4	2	16	0	0	16	18	88.9
1960.....	4	2	45	0	0	45	47	95.7
1961.....	3	2	146	(³)	0	146	148	98.6
1962.....	3	1	394	0	6	400	401	99.8
1963.....	2	1	742	7	1	750	751	99.9
1964.....	2	1	797	152	4	953	954	99.9

¹ Includes SITC Nos. 045-0930, 045-931, 045-932.

² Equals imports divided by production plus imports (stock figures not available).

³ Less than 500 metric tons.

Source: (11) and (19).

in 1964 by offering grain sorghum at highly competitive prices. Argentina's exports to Japan rose from 7,000 tons in 1963 to 152,000 in 1964. The U.S. share of the market dropped from 99 percent in 1963 to 84 percent in 1964. Also, Mainland China has shown an interest. But the Japanese have permitted importing from China only for industrial use due to the high content of tannic acid in the Chinese product. U.S. growers will probably have less competition in selling this product than in selling any other farm item for which Japan is a significant outlet except soybeans. Because corn and sorghum are substitutable in feed mixes, price ratios are important. Greatly expanded sales of grain sorghum might replace some corn exports.

INDUSTRIAL CROPS

Cotton

Japan is the world's largest customer for cotton fiber, taking nearly a fifth of all cotton imports in 1959-61. Annual imports averaged nearly 3 1/4 million bales in 1960-64. As a consumer of cotton products, Japan ranks fifth among the nations of the world, but ranks first as an exporter of cotton textiles. The size and importance of the Japanese market as a steady cash outlet for raw cotton attracts cotton sellers from all the cotton-exporting countries.

The United States is the largest grower and exporter of cotton, but the crop is widely grown in warmer latitudes, mostly on rain-watered fields. Some cotton is also grown on irrigated land, especially in such areas as the Soviet Union, the United Arab Republic, Mexico, and the western part of the United States. With many growers and exporters, competition for world markets is keen. Japanese buyers of raw cotton, largely for the cotton mills, have acquired the knowledge and equipment to blend the various growths by substituting one growth for another without an unacceptable loss of quality. This lessens the effect that blending requirements have on determining the source of cotton imports.

The role of cotton in the Japanese economy is changing, and the changes strongly affect the demand for raw cotton. Historically, cotton and the cotton-textile industry have been of major significance in the economic growth of modern Japan. More than any other single industry, cotton textiles have contributed to the expansion and stability of the Japanese economy, particularly in the earlier stages when Japan was getting started as a manufacturing nation. Like many other facets of Japan's economic life, the dominant place of cotton textiles is changing and cotton manufacturing is receding in relative importance. Diversification

of industrial production and marketing reduced the country's reliance on cotton textiles. This change is only in a relative sense, however. It does not alter the fact that the cotton-textile industry is still of great importance to Japan's economic well-being. The industry remains one of the largest employers of industrial labor, providing jobs and incomes for many of the Japanese people. Also, a large part of the vital foreign exchange earned still comes from selling cotton products abroad.

Many changes during World War II affected the Japanese textile industry in the postwar period. Japan had some 12.8 million spindles in 1938, only a short time before World War II. The output of pure cotton yarn reached a peak of 1,586 million pounds in 1937. During 1934-36, cotton yarn and fabrics accounted for 18 percent of Japan's total exports, and raw cotton dominated imports.

During World War II, the cotton-textile industry suffered heavy damage from air raids. This destruction and the pressing demand for scrap metal reduced the 12.8 million spindles on hand at the beginning of the war about 78 percent. Recovery after 1946 came rather quickly. The number of registered spindles reached some 9 million in 1957, about 70 percent of the prewar level, and has remained close to that number.

Excessive production capacity clashing with market demand that does not grow fast enough is a perplexing problem for the Japanese. Around 1 million spindles have been immobilized in recent years as a means of holding down production. The Textile Equipment Law, enacted in 1956, restricted expansion of the cotton-textile industry until 1965 on the grounds that productive capacity was more than adequate to meet prospective demand until that time. In October 1964, a new textile law was introduced.

Modernization and increased efficiency are continuing goals of the Japanese. Action taken is pointed toward encouraging spinners to increase production in the efficient mills while phasing out the inefficient ones. This endeavor has been most successful. The modernized cotton-textile industry is, for the most part, equipped with new machinery. Production is carried out efficiently, but further improvements are sought.

Cotton consumption by the mills varies from year to year depending on demand for cotton products. Market demand for cotton goods, both domestic and foreign, determines the amount of raw cotton Japan will import. In the domestic market, cotton textiles can expect to benefit from a growing population, rising consumer incomes, and, possibly, some new uses for cotton from the change in the mode of living. For example, adopting Western-style living can expand the demand for household linens, but this type of change takes time and the impact is not likely to come about quickly. Per capita consumption of cotton in Japan amounted to 8.44 pounds in 1963, up only slightly from a prewar average of

7.44 pounds. Factors favoring increased consumption are offset, in large part, by adverse forces.

The current situation and the future prospects relate most directly to the demand for cotton goods, domestic and foreign, and competition from manmade fibers. Japan's cotton goods are exported in large quantities and are widely marketed in both developed and underdeveloped countries of the world.

Developments in the export-demand sector have not been favorable in recent years. Cotton piece goods from Japanese mills have historically found strong acceptance in other Asian countries. Now, many Asian countries are developing their own textile industries, protecting their industries, increasingly supplying their own textile needs, and moving cotton products into the export field in competition with Japanese products. Communist China, formerly a large Japanese market, is now a competitor for sales abroad. African countries, such as Algeria, the Republic of South Africa, Kenya, the Sudan, Ethiopia, and Ghana, are taking up some of the slack in the slipping foreign demand for cotton goods caused by unfavorable developments in Asia. But even these new market outlets are moving in the direction of establishing or expanding a cotton-textile industry as a practical step toward industrializing.

More than 50 percent of Japan's exports of cotton cloth are to underdeveloped countries where incomes are very low. Many poorer nations have per capita annual incomes below \$100. Price is a big factor; quality is not so important. Although Japan produces a full quality range, much of its cotton cloth is made to fit the consumer's limited purchasing power and is less than top quality. Underdeveloped countries have mostly farm products and raw materials to sell. Buying these items in order to sell Japanese manufactures is one way of promoting exports.

Japanese cotton textiles are admitted into the United States in large quantities, but voluntary quotas have been adopted to facilitate orderly marketing. Australia is also an important market for Japanese cotton textiles, but shipments to that sparsely settled country with only a few million consumers have obvious limitations. So far the large markets in the industrialized countries of Western Europe have been difficult for Japan to penetrate in volume, though the situation may be easing somewhat with the trend toward liberalization.

Moreover, the Japanese cotton-textile industry is under competitive pressure from the fast-developing manmade fibers. This competition continues to increase, affecting both the domestic and foreign demand for cotton goods. Japan has been prompt to increase the production of manmade fibers and is producing a wide selection of these materials. Manmade fibers compete with cotton not only in textiles, but also in such uses as tires, fishnets, fishing tackle, and insulation for electric wiring (8).

The main attraction of the manmade fibers from the Japanese Government's point of view, particularly the Ministry of Finance, is that some of the raw materials used are obtainable domestically and that imports are less expensive than raw cotton. Expenditures for cotton reached \$530 million in 1961, and amounted to more than \$439 million in 1964. Raw cotton represents Japan's heaviest outlay for farm imports year after year. This strains the foreign exchange budget; easing such pressure appeals to the Japanese authorities. Consequently, with encouragement from the Japanese Government, the growth of the manmade-fiber industry in Japan has been accelerated.

Cotton interests are taking steps to meet the challenge. Manufacturers of cotton textiles have acted in a number of ways to lessen the impact of manmade fibers. Research has been stepped up to find new ways of improving cotton products to make them more acceptable to end-users. The use of chemical treatments to impart special characteristics, such as wash-and-wear and wrinkle-resistant qualities, to cotton goods has been promoted. Cotton finishes with relatively expensive design are being introduced. Market development programs are being encouraged (8).

Prices of cotton textiles relative to manmade fibers are also important. Keeping down the cost of raw cotton and pricing U.S. cotton competitively with other cotton growths help the Japanese cotton-textile manufacturers. Also, savings made possible by low-interest loans from the Export-Import Bank aid Japanese cotton-textile manufacturers to stay competitive. Cotton still faces, however, a strong and continuing challenge from manmade fibers.

Domestic raw cotton production in Japan is negligible. Virtually all cotton used is imported. However, competition among supplying countries is intense and will probably remain so. Growing cotton appeals to farmers in many countries. Advances in agronomy have increased yields per acre, and prices received for cotton often make the crop profitable. For many less developed countries, cotton is an important means of earning foreign exchange. The profit incentive, technological progress, and official encouragement combine to keep production and exports rising.

The large number of countries producing and selling cotton gives an importing country such as Japan a wide selection of sources. U.S. stocks are available if supplies from other sources become short or prices unattractive. Japan, however, recognizes the advantages of U.S. cotton judged on the basis of quality, uniformity, and availability. Competitive pricing is the big determining factor as a general rule, and Japan buys heavily when prices of U.S. cotton are competitive.

In 1964 the Japanese purchased raw cotton from more than 23 different countries. However, more than four-fifths of the total imports in 1964 as well as in 1963 came from the United States and

Latin America. Asian countries supplied about 11 percent of the total in 1964 compared with 15 percent in 1963. African countries provided 6 percent in 1964 compared with 5 percent in the previous year.

The U.S. share of the market was 34 percent in 1964, up 2 percent from the previous year. Over the longer period of a decade, the U.S. share has been erratic as shown in figure 7. As late as 1961 the United States supplied 52 percent of the 3,655,000 bales purchased by Japan in that year. The percentage dropped to 32 the following year, remained unchanged in 1963, and increased to 34 percent in 1964. Changes in world supply and demand and competitiveness of U.S. prices are underlying factors heavily influencing the U.S. share.

Major countries competing for the Japanese cotton market are shown in table 13. Mexico is offering the strongest competition. Developments in the Mexican cotton industry over the postwar years show why. Production exceeded a half million bales for the first time in 1948. Only 2 years later the output passed the 1 million mark. In 1964, production amounted to 2,395,000 bales. The largest crop harvested so far was 2,425,000 bales in 1962. Output dropped to 2,109,000 bales in 1963. Mexico has now become the sixth largest cotton-producing country in the world and the second largest exporter of upland cotton. The stimulus for expanding production comes from the strong export demand. About 75 percent of the

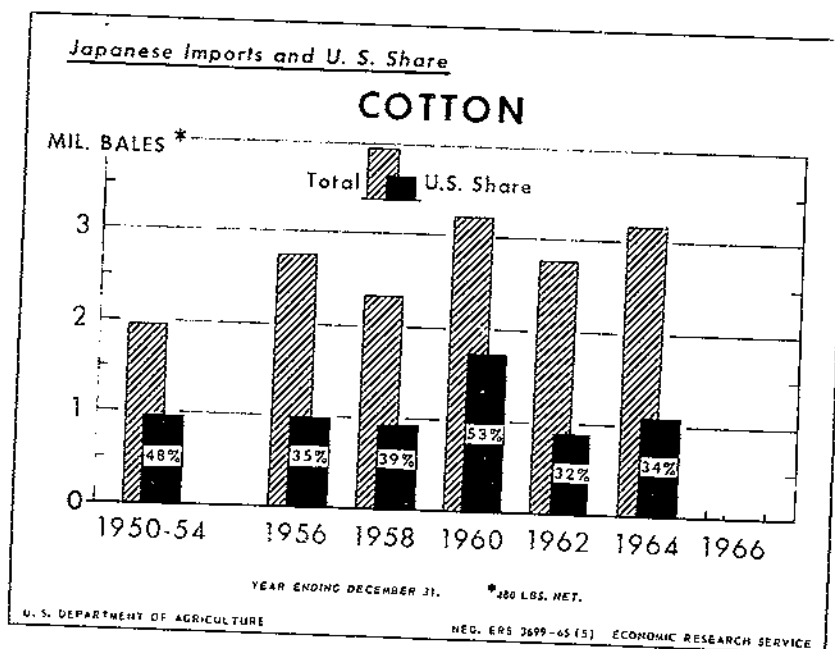


Figure 7

Table 13.--JAPAN: Area and production of cotton, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Area	Production	Imports ¹								Supply	Import-dependency rate ²
			United States	Mexico	Pakistan	India	Brazil	Salvador	Other countries	Total		
	<u>Acres</u>	<u>Bales</u>	----- 1,000 bales (480 lbs. net) -----								<u>1,000 bales</u>	<u>Percent</u>
Average:												
1950-54..	8,737	1,598	937	326	290	81	96	3	226	1,959	1,961	99.9
1960-64..	1,256	³ 360	1,327	764	147	184	121	188	483	3,214	3,214	100.0
1955.....	3,652	764	654	445	239	172	193	51	271	2,025	2,026	100.0
1956.....	3,121	472	979	729	291	180	202	87	293	2,761	2,761	100.0
1957.....	3,244	465	1,415	470	256	156	153	44	209	2,703	2,703	100.0
1958.....	2,785	429	923	574	201	184	80	85	295	2,342	2,342	100.0
1959.....	2,701	413	681	888	193	224	125	154	525	2,790	2,790	100.0
1960.....	1,814	398	1,718	659	146	115	55	102	426	3,221	3,221	100.0
1961.....	1,705	322	1,906	777	72	198	135	142	425	3,655	3,655	100.0
1962.....	1,260	--	880	801	132	210	172	177	394	2,766	2,766	100.0
1963.....	800	--	1,045	789	257	215	129	268	546	3,249	3,249	100.0
1964.....	700	--	1,085	795	128	180	111	252	626	3,177	3,177	100.0

¹ Includes SITC Nos. 263-0110, 263-0120, 263-0121, 263-0122.

² Equals imports divided by production plus imports (stock figures not available).

³ Totals rounded to 100 percent except for 1950-54 average.

⁴ 2 years only.

Source: (11) and (19).

country's cotton goes to foreign markets. And Japan is by far the leading user of Mexican cotton (7).

Japan's imports of Mexican cotton averaged only 326,000 bales in 1950-54, or 16.6 percent of total imports. This figure went up to an average of 764,000 bales for 1960-64, or 23.8 percent of the total. Mexican cotton is highly similar to that grown in the United States as to types, varieties, qualities, and staple length. Because Mexico has an abundance of cheap labor, cotton is hand-picked; the quality of the fiber is good and tends to be priced below comparable U.S. grades in world markets. In addition, Mexico exports three-fourths of the cotton crop, which makes production increases in that area particularly significant in terms of market competition for U.S. growers. Domestic mill consumption is running around 500,000 bales annually. This is not expected to increase much in the years immediately ahead. The cotton-textile industry in Mexico has grown slowly over the last decade. Thus, any substantial production increases in the future can be expected to expand supplies to be exported (7).

El Salvador, another U.S. neighbor to the South, was the third largest supplier of the Japanese market in 1964, supplying more than one-fourth of a million bales. Sales to Japan have grown from a negligible amount in 1950-54 to the present level. Like Mexico, El Salvador has been able to increase exports to Japan because of rapid expansion in cotton production. More than 90 percent of the cotton grown is exported. In recent years, Japan has been buying from 50 to 90 percent of the total quantity going into foreign trade channels. Again, the large percentage of the crop going into foreign markets and the high concentration of shipments to Japan make El Salvador's cotton more competitive in Japan than the level of production would otherwise inculcate.

Production in El Salvador is likely to expand if prices are attractive enough. Corn is the alternative crop. Acreages could be diverted to cotton if returns are sufficiently attractive. Also, land now in pasture might be put into cotton. In addition, some land could be brought into production through reclamation. Yields per acre, already high, may be further increased. These and other measures could raise production to around 450,000 bales compared with 335,000 bales grown in 1964 (31). Like Mexico, most of the additional cotton would likely end up in world markets, possibly in Japan.

Pakistan, a major cotton-producing country, has been a sizable and important supplier of cotton to Japan. The average imports from Pakistan in 1960-64 amounted to 147,000 bales; in 1950-54, the average was 290,000 bales. There have been sizable year-to-year fluctuations. Imports for 1963 totaled 257,000 bales, slightly over one quarter of a million, but dropped to 128,000 in 1964. Both figures are below the 1950-54 average. Some of this cotton is of the

short harsh Asian type. Because it is not used in spindles, this type of cotton does not compete strongly with U.S. cotton.

The decline in Japanese purchase has come about at a time when total cotton exports of Pakistan were declining. Total exports dropped from a postwar peak of 1,273 bales in 1952 (crop year beginning August 1) to 506 million in 1956. Since 1956, exports have been below 400,000 bales, falling to a low of 244,000 in 1960 and totaled only 299,000 in 1961. During 1947-64, production increased from 925,000 bales to 1,800,000 (24). Pakistan is also importing cotton to blend with their cotton under U.S. aid programs.

The Pakistan Government, eager to develop industrially, is stressing the development of a domestic textile industry, with encouraging success. The number of installed spindles increased from 177,000 in 1948 to 1,998,000 in 1961. Public officials and industrial leaders have predicted that the number will increase substantially in the future. Much of the machinery and equipment is made in Japan.

The rapid growth in the cotton-textile industry since independence in 1947 has reduced textile imports to negligible quantities, stimulated the domestic use of cotton, increased exports of textiles, and sharply reduced exports of raw cotton.

Cotton prices are not supported by the Government; prices received by farmers are subject to fluctuations. The Pakistan farmer strives first to grow enough food to provide family requirements. Food crops, therefore, receive first priority or claim on his land and other resources. The rising population creates a greater domestic demand for textiles, but at the same time decreases the amount of land available for nonfood crops.

The outlook for production in Pakistan and particularly for export availabilities indicates no additional competition from that source. This is true even though Pakistan has an obvious potential for increasing cotton production through increased yields per acre, which are now far below many other countries growing irrigated cotton. Backward cultural practices and a poor marketing system create barriers to increasing yields. Gains are expected to be slow. Production of the upland variety, which now accounts for more than 90 percent of the country's cotton output, will likely increase. Asian type cotton, grown mostly for export, will probably continue to be grown for that purpose. Weather can cause sharp year-to-year fluctuations in supply. As long as Pakistan has cotton to export, however, Japan will probably be willing to buy the short staple type. But with Pakistan consuming more and more cotton at home the competitive impact from that source is diminishing.

India is the fourth largest cotton-producing country in the world. Production in 1964 was estimated at 4,800,000 bales compared with 5,200,000 in 1963. With a population of more than 450 million people and a large export trade in cotton goods, India also

ranks among the leading countries as a consumer of raw cotton. The country is now a net importer of cotton. Exports are generally short staple cotton and imports are long staple.

Japan, a leading buyer of Indian cotton for many years, is coming increasingly to dominate the market. In 1950-54, Japan took an average of 81,000 bales of Indian growth, and in 1960-64, an average of 184,000 bales. Japan bought 180,000 bales in 1964, the most recent year of record.

The internal requirements for cotton in India are rising. Production in recent years has not stayed abreast of domestic needs. However, India may continue to export short staple cotton as in the past, and import finer varieties from countries such as the United States, Egypt, and Kenya. Currently, most cotton imports from the United States move under U.S. aid programs and do not constitute any drain on scarce foreign exchange.

As an exporter India is in much the same position as Pakistan. The bulk of India's exports are likely to go to Japan. Competition from Indian growth is not expected to increase. With an expanding and efficient textile industry, India may find it more profitable to process its cotton and export cotton manufactures, adding value to the product and thereby marketing surplus labor.

Brazil, another source of Japanese imports, is not only a big cotton-producing country but also a large consumer. Exports are significant though not major at present. Japan purchased an average of 121,000 bales of Brazilian cotton in 1960-64. Imports in 1964 amounted to 111,000 bales. Cotton production in Brazil reached a peak during World War II, then dropped sharply after the war. Production again expanded and in 1955-59 approached the earlier record. Production in 1964 was estimated at 2,200,000 bales. Indications are that a slow uptrend may be realized for future years.

Brazil has long followed a policy that aims to insure adequate supplies of raw cotton for domestic needs. Exports are authorized only after domestic requirements seem assured. Consequently, export levels reflect both production and domestic consumption. With domestic consumption rising, any shortfalls in production will affect the export supply.

Brazil's future as an export source is uncertain. The country has an unexploited production potential, in that large areas are available for growing cotton. The question is whether the country can and will exploit the opportunities. Many of the determinants in the answer to this question lie outside agriculture, involving such broad issues as political and economic stability and Government policy toward general economic and agricultural development.

Cotton prices are supported by a guaranteed-price plan. The official position is to promote the expansion of cotton production. Some progress is being made and some further gains can be

reasonably expected. Domestic consumption is rising in response to population growth and rising income. Brazil has achieved self-sufficiency in cotton textiles, and the country has a small export. Rising consumer income will increase domestic consumption further (28).

In further appraising competition that U.S. sellers can expect in Japan, it should be remembered that Japan buys cotton from such countries as Egypt in the underdeveloped Middle East, and from the Sudan and other African countries.

Tobacco

The world demand for tobacco is strong and growing. But demand does not match world production, much less potential production. Growers, including U.S. tobacco farmers, are producing well below capacity.

With supply exceeding demand, competition for markets is brisk. Many countries produce and export tobacco. Because of blending requirements, many countries, including major growing areas, also import some leaf. For farmers, tobacco is generally a profitable enterprise. Yields per acre are usually high; prices are relatively rewarding; land area requirements are low; and production is labor-intensive rather than capital-intensive. And, in many of the less developed countries, labor is plentiful and cheap.

Foreign governments value tobacco exports as a source of foreign exchange earnings. The tobacco industry can also be an important source of Government revenue through the imposition of sales tax on cigarettes and other tobacco products. Producing tobacco is officially encouraged and promoted. Prices are often supported and stabilized by one means or another. Since tobacco is widely traded, foreign market prospects influence the level of production.

With many sellers of tobacco, buyers, such as the Japanese, shop around. As a general rule, they purchase from countries that can supply the quantity and quality leaf requirements they need at the most favorable prices.

In considering the areas from which Japan may buy tobacco, it is necessary to relate specific requirements to types of tobacco and areas of production. World tobaccos are not homogeneous. Types differ and quality varies. By types, tobaccos are classified into 8 major categories: Flue-cured, burley, other light air-cured, light sun-cured, oriental and semioriental, dark air-cured, dark sun-cured, and fire-cured (38). The groupings are based primarily on the inherent characteristics of each type caused by genetic differences or breeding and different methods of curing. Within these categories, there are also wide ranges of quality or

grades caused by such factors as climate, soils, curing and handling techniques, and the general skills and technical knowledge of the producers.

The following countries are the world's leading producers of tobacco: The United States, Mainland China, India, the Soviet Union, Brazil, Turkey, and Rhodesia. Total world production of tobacco reached 10,257 million pounds in 1964, up 20 percent from the 1955-59 average. The United States produces about 22 percent of the world's total crop. In 1950-54, the United States supplied about 38 percent of the total quantity of tobacco exported. By 1964, the U.S. share had dropped to about 27 percent.

Leaf consumed in Japan is mostly in the form of cigarettes. Shredded tobacco, once popular for use in the old-fashioned Japanese pipe, now accounts for only about 3 percent of the leaf. Cigars and pipe tobaccos are of minor significance. The U.S. market in Japan is for flue-cured tobacco used in making high-quality cigarettes. In 1964, flue-cured tobacco accounted for more than 90 percent of Japan's total tobacco imports, and purchases from the U.S. accounted for 55 percent of the flue-cured imported. Other sources of flue-cured constitute the effective competition for U.S. interests.

All the leading tobacco-producing countries, previously mentioned, are important producers of flue-cured tobacco and potential suppliers of the Japanese market, except the Soviet Union and Turkey. These two countries are most significant as growers of oriental tobacco, which is used in manufacturing oriental-type cigarettes. Also, oriental-type leaf grown in such areas as Turkey and Greece is shipped abroad to be blended with flue-cured and light air-cured leaf in the manufacture of American-type cigarettes. Oriental leaf can be substituted for flue-cured in a mixture, but not without affecting the quality of the cigarette.

Japanese farmers are the major suppliers of the domestic market, when all types of tobacco are considered. Japan's import-dependency rate in 1960-64 was less than 10 percent. Production increased from 157,000 metric tons in 1963 to 211,000 in 1964, or 34 percent. Imports in the same year increased by 84 percent, exceeding 29,000 tons. Purchases from the United States rose in 1964, from 9,767 metric tons to 15,065, an increase of 54 percent, underscoring the strength of demand for quality flue-cured tobacco.

Japan's pattern of tobacco production is shown in table 14. Almost two-thirds of the 1964 crop consisted of flue-cured leaf. Tobacco production is being increased. The Japanese have the technical know-how and the type of skilled labor needed to produce quality tobacco; but there are quality problems.

Flue-cured Virginia tobacco was introduced into Japan in 1902 from the United States. It is grown along the seacoast in central and southern Japan, where the dry mild climate is more suitable than

Table 14.--JAPAN: Acreage and production of tobacco by specified kinds, 1964

Kind of tobacco	Acreage harvested	Production	
		Total	Percentage of total
	<u>Acres</u>	<u>Metric tons</u>	<u>Percent</u>
Flue-cured.....	124,339	133,446	63.4
Burley.....	11,121	12,408	5.9
Light sun-cured (native)....	67,935	64,460	30.6
Wrapper (native).....	279	231	0.1
Total.....	203,674	210,545	100.0

in other parts of the country. Japanese flue-cured leaf is lemon or orange in color and has a mild sweet taste, but it is less fragrant than the U.S. leaf (17). To improve quality and increase yields, Japan has done much research and experimentation in tobacco. Progress has been made, but, in general, climatic and soil conditions are such that the Japanese have not been able to produce the specific quality of flue-cured tobacco that cigarette manufacturers need. The need for quality leaf opens the way for sales of U.S. leaf.

Native tobacco is the second kind most widely grown; it was 30.6 percent of the crop in 1964. The native leaf is both sun- and air-cured. The leaf, thin and yellowish brown, is most useful as a filler. Production of white burley was begun in the northern areas in 1938. Burley production reached 9,200 metric tons in 1943 but declined to only 1,500 tons in 1954. Since then, production has recovered, and in 1964 was 12,408 tons, 5.9 percent of the total crop. Burley is used in cigarette mixtures, and much of the crop is exported. West Germany is the major outlet.

Since Japan imports flue-cured tobacco for blending, how important is the size of the domestic flue-cured crop in determining how much tobacco Japan will import? Would large supplies of domestic tobacco, though not of the right quality, cause the Government to require the use of domestic leaf even though it meant lowering the quality of the cigarette? Spending foreign exchange for something that can be grown at home clashes with the Japanese Government's general policy of promoting self-sufficiency.

The general production, imports, and supply of tobacco shown in table 15 reveal some interesting figures and relationships. First, production increased by 51,000 metric tons between 1950-54 and 1960-64. Annual variations occurred with high production in 1955 and 1956, which led to large stocks and reduced imports in the following years. Imports averaged 5.4 percent of the total

supply in 1950-54 when foreign exchange was tight, and 9.6 percent in 1960-64 when foreign exchange was generally good. On a quantity basis, imports in 1960-64 were about 2.8 times as large, 16,046 metric tons compared with 5,751, indicative of the growing demand for imported quality leaf and the Government's willingness to permit importing. These figures indicate that stocks of Japanese tobacco are a factor, but a prosperous Japan is looking for quality. Under more austere circumstances and in the face of severe strains on foreign exchange, the amount of importing permitted might be different.

Decisions on sources of procurement, domestic and foreign, are far from a free-market concept. The way tobacco is handled and controlled in Japan greatly reduces the effect of market forces. The powerful Japanese Tobacco Monopoly Corporation, established in 1904, exercises decisive control over tobacco handling from the farmer to consumer. No other farm product is under tighter Government control and regulation. Cultivation on selected farms, as well as curing, importing, and exporting of tobacco, is in the hands of private individuals or businesses, but their activities are under the direction and firm control of the Monopoly.

The Monopoly redries, stores, manufactures, and wholesales the manufactured product. Revenues earned go to the Japanese Government. Monopoly profits in fiscal year 1964 provided 4.8 percent of the central Government's total revenue. Profits from the tobacco industry are also an important source of revenue for local governments. Import duty on tobacco is 355 percent ad valorem. With State trading, it is not invoked and has little or no significance. Tobacco is not mentioned as a product to be liberalized under Japan's shift toward a more open economy.

Of interest to the United States is the fact that the Monopoly has the power to expand or cut back domestic production through quota allotments and to influence the type and quality of leaf grown through varying prices paid to growers. More important, the Monopoly also decides on the amount or percentage of U.S. and other foreign leaf to be put into cigarette mixtures. It also sets prices of the various brands and determines the amounts, quality, and sources of leaf imports. With unchallenged control the Monopoly is in a position to decide the quality of cigarettes made available to the Japanese consumer, particularly when foreign-made cigarettes are not generally on sale to compete with domestic manufactures. Japan imports very little manufactured tobacco.

The Japanese continue to encourage tobacco production. The Monopoly's announced plans for 1965 acreage allotments called for the following increases:

Kind of tobacco	Acreage	Percentage increase over 1964
Flue-cured.....	130,963	5.3
Burley.....	12,231	10.0
Light sun-cured (native).....	69,188	1.8
Total (excluding wrapper).....	212,382	4.4

These figures show that the Japanese authorities desire to expand production following a record crop in 1964, up 34 percent from the previous year. Estimated total stocks at the end of 1964 amounted to 396,000 metric tons compared with 320,000 at the beginning of the year. The effort to increase production does not reflect a move toward self-sufficiency. Instead, it appears to reflect an anticipated increase in tobacco consumption, which has been moving ahead at a brisk pace year after year. From 1963 to 1964, consumption of tobacco products increased 6 percent.

Cigarette consumption declined in January 1964 which raised a question about the probable effects of the "Smoking and Health," report, issued in January 1964 in the United States (39). There is no evidence that confidence in the future of the market has been shaken. Not only have the officials targeted larger production of leaf, but also manufacturing facilities are being modernized and expanded. The present program provides for a manufacturing capacity capable of turning out 229 billion cigarettes annually by 1970. Approximately 163 billion were produced in JFY 1964. The Japanese clearly expect demand to continue upward.

Changes are taking place in the type of cigarette favored by smokers. Demand for filter-tip cigarettes continues strong. During the first 9 months of 1964, filter-tip sales increased 63.7 percent and comprised 25 percent of total sales. All the filter-tip brands contain some U.S. leaf. The shift to filter-tip cigarettes, however, may lead to the importing of a slightly lower quality flue-cured tobacco that can be obtained from non-U.S. sources. If so, this would hurt U.S. interests.

As things now stand, cigarette brands containing varying quantities of U.S. leaf are doing exceptionally well. Production of the 7 such brands is shown in table 16, and production reflects consumption. As a group the total outturn increased from 8,262 million cigarettes in 1950 to almost 41 billion in 1962, about a fivefold increase.

The preference for brands containing U.S. leaf continues. Consumption increased by more than 25 percent during the first three quarters of 1964 compared to an increase of less than 6 percent for all cigarettes during the same period.

Table 15.--JAPAN: Area and production of tobacco, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Area	Production	Imports ¹							Supply	Import-dependency rate ³
			United States	India	Zambia, Malawi, and Rhodesia ²	Turkey	Greece	Other countries	Total		
	1,000 acres	1,000 metric tons	-----Metric tons-----							1,000 metric tons	Percent
Average:											
1950-54.....	146	100	2,413	3,280	0	0	0	58	5,751	106	5.4
1960-64.....	166	151	10,011	1,186	2,454	753	872	770	16,046	167	9.6
1955.....	185	150	5,921	2,640	0	210	100	1,602	10,473	160	6.5
1956.....	189	152	4,173	1,351	0	85	72	23	5,704	158	3.6
1957.....	179	145	1,760	0	0	274	214	2	2,250	147	1.5
1958.....	167	138	2,530	0	0	0	102	53	2,685	141	1.9
1959.....	153	129	5,502	0	0	184	0	1	5,687	135	4.2
1960.....	146	121	5,757	293	172	312	243	26	6,803	128	5.3
1961.....	140	126	7,869	0	1,801	720	600	12	11,002	137	8.0
1962.....	157	139	11,595	738	3,104	1,037	943	122	17,509	157	11.2
1963.....	182	157	9,767	1,308	1,876	1,067	1,448	358	15,824	173	9.1
1964.....	204	211	15,065	3,592	5,319	658	1,128	3,330	29,092	240	12.1

78

¹ Includes SITC Nos. 121-010, 121-020, 121-030, 121-040.

² Formerly Federation of Rhodesia and Nyasaland.

³ Equals imports divided by production plus imports (stock figures not available).

Source: (11) and (19).

The percentage of imported leaf in the total mix going into the production of high-quality cigarettes (table 16) is increasing. In 1950 about 4.5 percent of the mix was imported leaf. By 1962 the percentage had reached nearly 25 percent. The amount used in each brand varies from as low as 10 percent in the Hikari and AAA brands to 45 percent in the Fuji brand.

The popularity and consumer acceptance of the cigarettes containing U.S. leaf has enabled the United States to hold a large share of the tobacco market in Japan, but competitive pressures are increasing. The share of the market held by the United States is shown in figure 8. More than 60 percent of Japan's total tobacco imports came from the United States in 1960-64 compared with only 42 percent in 1950-54, a substantial gain.

But a closer look at the annual import data shows a different picture. The U.S. share of the market reached 97 percent in 1959, but has declined every year since, amounting to only 52 percent in 1964. Private trade groups and export promoters in the Japanese Government appear to be encouraging the Monopoly to buy more tobacco from non-U.S. sources for trade purposes.

The strongest foreign competition for U.S. flue-cured tobacco is from Zambia, Malawi, and Rhodesia (formerly the Federation of Rhodesia and Nyasaland). Leaf from this source entered the

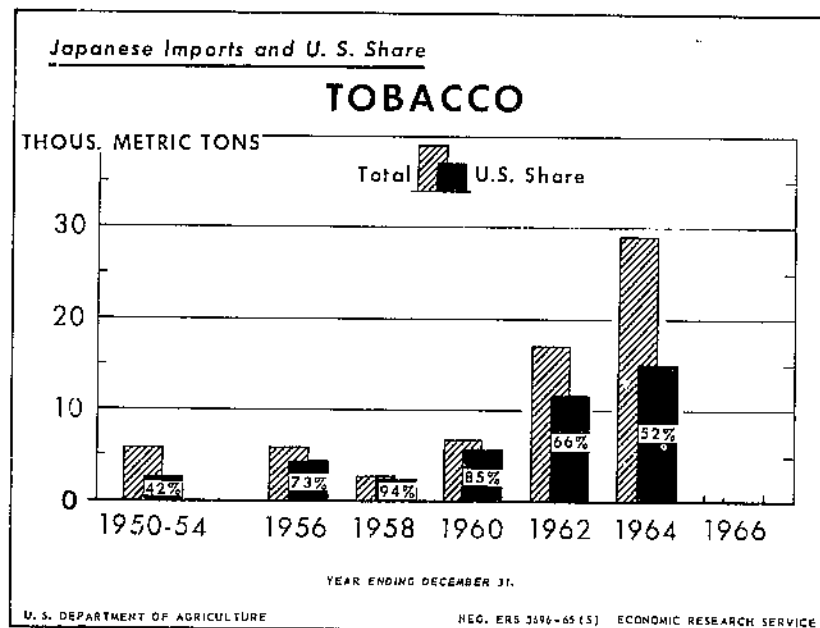


Figure 8

Table 16.--JAPAN: Production of high-quality cigarettes and average mixing ratios of imported leaf, 1950-62¹

Year	Brand							Total	Average mixing ratio ²
	Fuju	Peace	Hikari	Pearl	AAA	Hope	Hi-lite		
	-----Millions-----								<u>Percent</u>
1950.....	--	803	7,459	--	--	--	--	8,262	4.51
1951.....	--	2,872	21,667	--	--	--	--	24,539	6.17
1952.....	11	9,850	26,162	--	--	--	--	36,023	7.75
1953.....	181	15,328	22,541	--	--	--	--	38,050	15.95
1954.....	39	7,832	19,437	--	--	--	--	27,308	13.49
1955.....	111	5,598	10,155	3,673	--	--	--	19,537	16.33
1956.....	192	7,744	7,616	1,529	--	--	--	17,081	19.82
1957.....	267	11,040	6,201	2,173	--	--	--	20,066	20.93
1958.....	213	11,332	3,947	2,018	--	650	--	18,160	21.72
1959.....	219	13,460	3,511	2,339	395	1,045	36	21,005	21.61
1960.....	249	15,443	2,175	2,148	3,831	1,085	3,352	28,283	20.04
1961.....	288	18,078	1,823	1,873	2,908	1,408	9,271	35,649	21.26
1962.....	300	21,100	1,600	1,900	2,800	2,350	10,850	40,900	24.65

¹ Percentage of imported high quality leaf in each brand is shown in parentheses following the brand name: Fuju (45), Peace (25), Hikari (10), Pearl (15), AAA (10), Hope (15), Hi-lite (15), Tokyo 64 (25). ² Percentage that imported leaf is of the mixture used in producing the high-quality cigarettes.

Note: Tokyo 64 was introduced late in 1964.

Source: (9).

Japanese market for the first time in 1960. Imports amounted to only 172 metric tons. The amount increased the following year and again in 1962, reaching 3,104 metric tons, but declined in 1963 to 1,876 tons. Imports reached 5,319 metric tons in 1964, a record high, and accounted for 18 percent of the total.

Rhodesian leaf is lower in quality and in price than U.S. tobacco. The average import value of Rhodesia's flue-cured tobacco arriving in Japan during 1963 was 64.5 cents per pound. U.S. leaf--all flue-cured--had an import value of 99 cents per pound.

Zambia, Malawi, and Rhodesia rank second to the United States as exporters of unmanufactured tobacco. In 1964, combined tobacco exports of these three countries totaled 252 million pounds, a record. Of the amount, 88 percent, or 223 million pounds, was flue-cured (38).

Flue-cured tobacco grown in India offers some competition. India grows about 7 percent of the world's tobacco, but is a significant though erratic competitor for the Japanese market. In foreign trade India both exports and imports tobacco. Imports consist of small quantities of high-quality leaf for blending. India exported 158 million pounds of tobacco in 1964 compared with an average of 84.4 million in 1950-54. The United Kingdom takes a large share of India's tobacco. Several other countries in Europe also buy leaf from India.

In 1950-54, Japan imported an average of 3,280 metric tons of Indian leaf annually. This was about 57 percent of total Japanese imports. The United States supplied most of the remainder. Indian shipments dwindled after 1954, and no tobacco moved from India to Japan in 1957 through 1959. Only small quantities were shipped to Japan in 1960 and none in 1961. Some 738 metric tons moved in 1962 and about double that amount in 1963. Imports in 1964 amounted to 3,592 metric tons, 12 percent of total imports. One big factor is the low price; another is Japan's desire to buy India's limited export items.

Thailand and Canada are other countries that supply flue-cured tobacco to Japan. But before 1964 amounts had been quite small. In 1964 Thailand shipped about 2,917 metric tons and Canada 667 metric tons.

It is expected that cigarette consumption will continue to increase in Japan, expanding the import requirements for flue-cured and oriental tobacco. Some of the expected trends are increased cigarette consumption by women, and further shifting to American-type, filter-tipped blended cigarettes containing both oriental and burley, as well as flue-cured, tobacco. Total U.S. leaf exports to Japan are expected to continue to increase. However, the United States will face difficulties in holding its traditional share of the tobacco market.

OILSEEDS

Soybeans

Competition among supplying countries in world soybean markets is more limited than for most other farm products. Only the United States and Mainland China are major producers and sizable exporters. However, soybeans compete with other oilseeds that are similar in use. The United States alone grew 64 percent of the world soybean crop in 1964, Communist China produced roughly 29 percent. Other producers are widely scattered; they account for only a small part, 7 percent, of the total crop. Before World War II, China dominated the world soybean export markets. U.S. exports were negligible.

Soybean production in the United States has increased since the beginning of World War II. In 1935-39 the United States produced only 12 percent of a much smaller world total, Mainland China accounted for 77 percent. Expansion of world production has been rapid owing to the growth occurring in the United States. Today, about 90 percent of the soybeans moving in world trade is produced in the United States.

In the Japanese market the purpose for which soybeans are to be used--that is, whether the beans are to be processed into human foods or crushed for oil and meal--has a bearing on the type and origin. Data show that over 70 percent of the soybeans utilized in JFY 1963 were crushed for oil and meal. The big increase in demand is in soybeans for crushing. Between JFY 1960 and 1963, the amount of soybeans crushed for oil and meal increased from 839,000 metric tons to 1,236,000 tons, a gain of 397,000 tons, or a 47-percent increase. Soybeans for food increased from 460,000 to 508,000 tons, a gain of 48,000 tons, about 10 percent.

Historically, soybeans have been, and still are, an important item in the Japanese diet. China is the only other country where soybeans are used extensively for human food. Domestic soybeans, which supplied only about 13 percent of the total supply in 1964, are the first choice for use as food. Most of the domestic crop is used for food; very few domestic soybeans are crushed. The oil content generally runs around 15 percent, 3 to 4 percent below U.S. soybeans. Japanese food manufacturers producing miso (soy paste), shoyu, (soy sauce), and tofu (bean curd) like the domestic soybeans. Demand for these products in total is increasing very slowly, and future demand is uncertain.

Production of soybeans on Japanese farms continues to decline sharply (table 17). Only 535,000 acres were in soybeans in 1964, compared with an average of 1,036,000 in 1950-54. Production dropped from 450,000 metric tons to 240,000 in the same period.

Table 17.--JAPAN: Area and production of soybeans, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Area	Production	Imports ¹					Supply	Import-dependency rate ²
			United States	Mainland China	Brazil	Other countries	Total		
	1,000 acres	1,000 metric tons	-----1,000 metric tons-----					1,000 metric tons	Percent
Average:									
1950-54.....	1,036	450	280	37	7	3	327	777	42.1
1960-64.....	647	340	1,191	144	3	8	1,346	1,636	79.8
1955.....	952	507	572	204	31	1	808	1,315	61.4
1956.....	947	455	536	166	12	3	717	1,172	61.2
1957.....	899	458	605	200	0	(³)	805	1,263	63.7
1958.....	856	391	777	89	28	11	905	1,296	69.8
1959.....	837	426	951	0	29	18	998	1,424	70.1
1960.....	758	418	1,091	(³)	11	26	1,128	1,546	73.0
1961.....	708	387	1,102	42	3	11	1,158	1,545	75.0
1962.....	656	336	1,126	165	2	0	1,293	1,629	79.4
1963.....	577	318	1,314	227	0	3	1,544	1,862	82.9
1964.....	535	240	1,322	284	0	1	1,607	1,847	87.0

¹ Includes SITC Nos. 221-0400.

² Equals imports divided by domestic production plus imports (stock figures not available).

³ Less than 500 metric tons.

Source: (11) and (19).

Soybean production has been discouraged in recent years by frequent adverse weather and increased damage from diseases and insects. Support prices with deficit payments by the Government have not been adequate to offset the factors discouraging production.

The Government set prices for the 1963 soybean crop at 55,166 yen--approximately \$153 per metric ton. Indigenous soybeans are sold in competition with imported beans which have a 13 percent ad valorem import duty imposed. Japanese farmers receive as a deficiency payment the difference, if any, between what their soybeans bring and the established support price. The support price tends to rise because of the Government's general policy of supporting agriculture.

Domestic soybean production, however, continues to decline. The Government's aim in guaranteeing prices is to protect the soybean growers from liberalized imports, and maintain a reasonable income to farmers who still plant soybeans rather than to encourage greater production. Consequently, the support price is not very meaningful under present conditions. Only soybean imports have been liberalized, not imports of soybean oil and soybean meal.

Some observers have suggested that growing soybeans may become more profitable for the Japanese farmers through the introduction of improved varieties of soybeans, improved cultural practices, and lower production costs. If so, this might halt the shift away from growing soybeans and bring about greater production. It does not seem likely, though, that Japan will materially expand soybean production, and increases, if any, would not offset the rapid rise in demand.

Japan is one of the largest world markets for U.S. soybeans. The United States has held the major share of the Japanese soybean import market since the end of World War II (fig. 9). In 1950-54, the United States supplied about 86 percent of total imports, but the percentage reached a low point in 1955 of about 71 percent. In 1960, the United States held a record 97 percent of the import market. The percentage dropped in 1963 to slightly below the 1950-54 level of about 86 percent, and in 1964 fell to 82 percent. In the main, these ups and downs reflect the changing positions of Communist China as a source of supply.

American soybean interests have done a careful and effective job in adapting U.S. soybeans to Japan's requirements and preferences. Research and education have brought encouraging results in providing soybeans that fit Japanese demand not only for soybeans to be crushed but also for food.

When beans are to be crushed for oil and meal, U.S. soybeans have an important advantage over both the native crop and soybeans grown in China. Soybeans produced in the United States have a higher oil content, and Japanese buyers are willing to pay more for

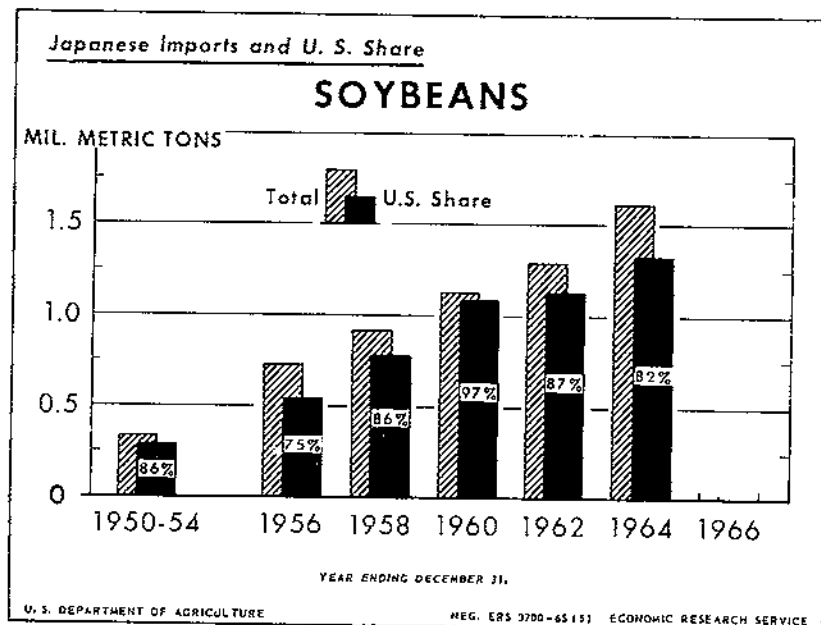


Figure 9

the U.S. than the Chinese crop. More than 70 percent of the soybeans utilized in 1963 were crushed for oil and meal. The Japanese market has readily taken all of the soybean meal produced. Disposing of the oil domestically has been more of a problem. Japan has exported soybean oil to improve the domestic market price. Both the high oil content of U.S. soybeans and growing demand put U.S. soybeans in a highly favorable competitive position.

U.S. soybeans have not been in the most favorable position in competing for the market in soybeans for food. Food manufacturers lean first toward domestic soybeans and second toward Chinese beans. But progress has been made toward gaining greater acceptability for U.S. soybeans going into human food as pointed out in the following quotation.

"Demand for U.S. soybeans for use in food products manufacturing is increasing as a result of soybean food research and better industry studies in the United States and Japan. Japanese processors of tofu, shoyu, miso, and natto are beginning to prefer U.S. soybean varieties. According to the recent findings of the Japanese Agriculture-Forestry-Fishery Problems Investigating Committee, tofu makers are now using imported U.S. 'Hawkeye' variety soybeans, and miso makers are shifting their preference to the imported U.S. 'Harosoy' variety. These improved U.S. soybean varieties have been

found to be more suitable for food-making purposes than older imported varieties. Also the 'Jackson' and 'Lee' varieties, imported from the southern areas of the United States, have been found to be suitable for making food products peculiar to Japanese taste (30)."

Nearby Communist China provides the only foreign competition of any significance. In 1935-39, Japan imported an average of 616,700 metric tons of Chinese soybeans. Not until 1955 did Japan's imports of beans from all sources exceed this figure. Japan's imports of Chinese soybeans are shown in table 17. Trade in Chinese soybeans was substantial up to 1958. At this time a sharp break occurred, which lasted through 1961, followed by a recovery. In 1955, Japan imported about 204,000 metric tons of Chinese beans, giving the Mainland 25 percent of the market--the highest percentage achieved before the break. Japanese imports reached 284,000 metric tons in 1964, a postwar high, but this amount was less than 18 percent of the market.

The erratic movements in soybean imports from China highlights the political nature of the trade and introduces one of the most unpredictable aspects for the future. Soybean trade follows the ups and downs of general trade activity between the two countries. General trading, in turn, follows the changing Sino-Japanese political situations.

A significant development that can have a lasting influence on China's attitude toward trading with Japan is the Sino-Soviet split. Ideological and political differences with the Soviets and reduction in Sino-Soviet trade forced the Chinese to look elsewhere for markets and sources of supply. Nearby Japan was a logical choice. Trade began to pick up. From a low point of less than \$3 million in 1960, Japan's total exports to China exceeded \$152 million in 1964. Imports from China rose from around \$21 million in 1960 to almost \$158 million in 1964. But in the early months of 1965, Sino-Japanese relations were again strained, as a result of political squabbling over Japan's refusal to extend credit to China through the Japanese Export-Import Bank.

China exported a total of almost 639,000 metric tons to the Soviets in 1959; the figure dropped to 351,000 in 1960; then to only 10,300 in 1961. No shipments were reported in 1962 or 1963. In fact, no Chinese beans were reported as having gone to the Bloc countries in 1962-63, and only small amounts in 1961. Exports to Japan increased sharply during the period of the decline in Bloc trade. If the new patterns should hold, the implications of the shift in market outlets could be significant, depending on whether Communist China can restore, and possibly expand, soybean production.

Production estimates and available export data (the latter taken from trade returns of countries trading with China) show the amounts of beans grown and exported in 1955-63 (table 18).

Table 18.--COMMUNIST CHINA: Production and exports of soybeans and percentage of total exported, 1955-64

Year	Production ¹	Exports ²	Percentage exported
	----- 1,000 metric tons -----		Percent
1955.....	9,117	950	10.4
1956.....	9,253	970	10.5
1957... ..	9,117	972	10.7
1958.....	9,800	944	9.6
1959.....	9,500	1,343	14.1
1960.....	8,200	996	12.1
1961.....	7,900	335	4.2
1962.....	7,700	339	4.4
1963.....	7,811	328	4.2
1964.....	8,573	n.a.	--

¹ Estimated by the U.S. Department of Agriculture and should be regarded as only rough approximations.

² Compiled from the custom statistics of countries trading with China. Data are incomplete.

Data on production and trade indicate two things of interest which shed some light on China's capabilities to produce and willingness to export. First, soybean production is in difficulty, having declined sharply since 1958--the beginning of the now discredited "great leap forward." Second, data on production and trade show that there is a relationship between production and exports. To assume that the Chinese regime will always export food to obtain foreign exchange, regardless of the domestic food situation, is open to question. The decline in exports during 1960-63 indicates that the assumption may need to be modified.

There is a small chance that soybean production will recover. If 1964 estimates are approximately correct, production showed some recovery, rising about 9.7 percent from the previous crop. But production remained 1 1/4 million tons below the 1958 crop. Another 10-percent gain would add 857,000 tons of soybeans. There is an unexploited production potential in China's agricultural sector. And it is true that soybeans have historically played a vital role as an earner of foreign exchange. The need for foreign exchange is always pressing for China. But the population growth is adding an estimated 14 to 15 million additional people annually to be fed. Fats and oils are scarce. Then, too, and probably more important, soybeans have to compete with other crops in the land utilization pattern and land in soybeans may be put into more profitable crops. Also, an industrializing China would logically shift to exporting more and more manufactured goods. Thus, it is hard to see how China can export soybeans again at the 1959 level of more than 1,343,000 tons. Yet, should production recover

to the 1958 level, the regime could export 10 percent of the soybean crop.

Moreover, if production were to increase and if the Japanese market were China's first choice as an outlet, Chinese soybeans could become a much more serious source of competition. Offerings of 500,000 tons or more annually would not be too difficult. This is, to be sure, a problematical situation in view of the shifting trade pattern of China and Sino-Japanese political relationships.

There are strong indications that China and Japan each have an interest in expanding trade, but developing trade has not been smooth and it is not likely to be in the foreseeable future.

At the moment, Japan's stated policy calls for separating political questions from economic matters. Private Japanese traders are permitted to do business with Government organizations of Communist China. Indications are appearing that Japan is moving toward closer official relationships with the Mainland. The agreement to establish permanent unofficial trade missions in Tokyo and Peiping, the exchange of news reporters, the willingness to talk of air routes, and the extension of 5-year credit to the Chinese are moves that signal possible change in the future.

The foregoing discussion mentions some of the general conditions and the changing framework in which Chinese soybeans may enter Japan. It is well-known that Japanese importers work closely with the Japanese Government. If China offers to buy complete plants, machinery, iron and steel, fertilizers, insecticides, and transport equipment from the Japanese, offering soybeans as one means of payment, the Japanese will likely listen. As has been pointed out, the power that gives impetus to such trade is Japan's desire to sell and to diversify market outlets. Buying becomes a means to that end. This bent on the part of Japan to buy in order to sell poses the most difficult problem for the United States in competing with Chinese soybeans. Another problem is that the state trading practiced by the Chinese enables Chinese trading officials to set prices low enough to make sales.

In 1962, China and a Japanese trade group signed a trade agreement, generally referred to as the Liao-Takasaki Long-Term Agreement. The agreement was to last for 5 years, from 1963 to 1967. It called for Japan to buy 750,000 metric tons of soybeans from China, or an average of 150,000 tons annually. In addition, soybeans are imported through what the Chinese call "friendly terms."

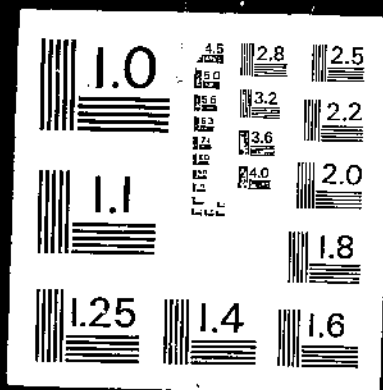
Some frictions have been reported over such matters as price negotiations, pricing beans of varying oil content, times of delivery, amounts, and quality. The Japanese are finding that the Chinese are an uncertain source of supply, and there are also problems on quality. It is also most unlikely that the Chinese will be content with the Japanese policy of separating trade from

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COMPETITIVE POSITION OF U. S. FARM PRODUCTS IN THE JAPANESE MARKET. (Foreign Agricultural Economic Report). / Hughes H. Spurlock. Washington, DC: Economic Research Service, Nov. 1966.

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politics. China can be expected to keep pressuring Japan on this point at every opportunity.

Safflower Seed

Japan's buying of safflower seed has increased in the last 10 years. Before 1956, purchases were negligible. From 16,225 metric tons in 1956, imports rose to 198,217 metric tons, valued at \$21,710,000 in 1964. Reportedly, more purchases of safflower seed would have been made in 1964 if exportable supplies had been available.

Practically the entire amount, 99.2 percent, in 1960-64 came from the United States. Small amounts came from Canada in some years, and in 1964 a negligible amount came from Communist China. Thus the United States has had little competition. Safflower seed competes with soybeans, and price ratios between the two products are important.

LIVESTOCK AND POULTRY PRODUCTS

Tallow

The United States produces more than half of the world production of tallow and greases. Nearly 75 percent of world exports came from the United States in 1956-60, and 68 percent in 1963.

Japan imports mostly beef tallow. The potential sources of supply are those countries where beef cattle production is a major enterprise. Tallow becomes available as one of several byproducts.

Large numbers of cattle are found scattered over much of the earth. Dairy cattle predominate in Western Europe. In India, the home of the world's greatest number of cattle, the animals are used primarily for draft purposes. India's religious customs forbid the slaughter of cattle.

The parts of the world where beef cattle are commercially produced for export are not so extensive. Foreign countries supplying the Japanese tallow market in recent years have been the United States, Australia, Canada, and New Zealand. These four countries have supplied Japan almost every year, and they are likely to remain major competitors for the market. Argentina, a sizable producer of beef and tallow, is not shipping to the Japanese market at present.

Competition from domestic production is small. In 1960-64, Japanese farmers accounted for only about 10 percent of the total supply (table 19). The country's import-dependency rate increased from 88.4 percent in 1950-54 to 90.1 percent in 1960-64. Unless

Table 19.--JAPAN: Production of tallow, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Production	Imports ¹						Supply	Import-dependency rate ²
		United States	Australia	New Zealand	Canada	Other countries	Total		
		-----1,000 metric tons-----							<u>Percent</u>
Average:									
1950-54.....	8	59	1	(³)	1	0	61	69	88.4
1960-64.....	18	138	13	5	7	0	163	181	90.1
1955.....	15	98	3	1	2	14	117	132	88.6
1956.....	15	95	5	3	2	1	106	121	87.6
1957.....	13	101	12	6	5	(³)	124	137	90.5
1958.....	14	95	8	6	5	1	115	129	89.1
1959.....	16	114	18	4	3	0	139	155	89.7
1960.....	15	144	7	4	3	0	158	173	91.3
1961.....	15	147	5	6	3	0	161	176	91.5
1962.....	16	107	14	4	9	0	134	150	89.3
1963.....	20	130	25	4	10	0	169	189	89.4
1964.....	22	163	11	8	10	0	192	214	89.7

¹ Include SITC Nos. 411-321 and 411-322.

² Equals imports divided by production plus imports (stock figures not available).

³ Less than 500 metric tons.

Source: (19).

sharp and unexpected declines in the total demand for tallow should occur, there is little likelihood that domestic supplies will account for any substantially larger percentage of Japan's requirements. Even though Japan is moving toward more livestock farming, domestic production is estimated to reach only 25,000 metric tons by 1970.

Tallow supplied by Japanese farmers averaged 8,000 metric tons annually in 1950-54. Domestic production more than doubled, and averaged 18,000 metric tons for 1960-64. However, tallow imports increased from 61,000 metric tons to 163,000 (table 19). Numbers of cattle are likely to increase on Japanese farms, but tallow production will probably not make any major increases although some expansion is expected. The import-dependency rate could increase, depending on demand.

The changing demand and utilization pattern for tallow poses questions concerning future demand. Japanese industry uses tallow for many products. Listed below are the major uses and the percentage of tallow consumed by each in 1958-60.

<u>Use</u>	<u>Percent</u>
Soap	77.4
Shortening	7.2
Margarine	2.2
General industrial	13.2

Demand for each of the items in which tallow is a major component part is influenced by such determinants as price, availability of substitutes, and changing technology. This is part of the difficult problem in assessing the future demand for tallow. For some end products, the demand shows an upward trend; for others, demand is declining. The serious decline so far in demand is in the soap industry and is traceable primarily to the use of substitutes.

More than three-fourths of the tallow consumed in Japan goes into the manufacture of face soaps and laundry soaps (cake and powder). With such a heavy reliance on one end use, the total demand for tallow is vulnerable.

Production of laundry soap has declined, owing to the growing use of detergents. Total soap production showed strong gains, increasing from 147,826 metric tons in 1951 to a high of 380,205 tons in 1959. But production since 1959 is off sharply, amounting to only 224,600 tons in 1963.

The switch to detergents for laundry has been associated with the growing use of electric washing machines. From 3,328 machines produced in 1951, production reached 2,664,000 units in 1963. Production of detergents rose during this same period, from

5,000 metric tons in 1951 to about 258,000 tons in 1963. Detergent production in 1963 was more than 5 times the 1959 level. It was 36 percent larger than the 1962 production.

Production of face soap has increased since 1951, rising from 36,800 metric tons to 77,600 in 1963. Laundry soap also showed gains from 1951 through 1959, but then fell sharply after 1959.

The Japanese soap industry is not alone in losing ground to the detergents, as these products continue to gain acceptance in other countries. Industrialized countries such as Japan can be reasonably expected to increase the demand for tallow for nonsoap uses. Underdeveloped countries will need more soap as income rises; this could help Japanese exports.

Trouble in the soap industry has undoubtedly hurt the demand for tallow in Japan as it has in other countries, but this trouble has not kept Japan's imports from increasing. A total of 192,000 metric tons was bought in 1964, compared with 139,000 tons in 1959 when the shift to detergents began. Studies have indicated that the import demand for tallow may decline after 1965. Other observers close to the problem are more optimistic. They point out that even if tallow-based soap experiences further losses to detergents, increased use of tallow in other products, such as shortening and margarine, will offset the loss in demand from the soap industry. There is also a potential for increased use of tallow for face soap.

Another large potential demand for fats is in mixed feeds, which will be needed to supply Japan's growing livestock and poultry industries. Use of fats in mixed feeds has so far found widest use in the United States, but it also has promising prospects abroad. Surveys in Japan indicate the potential demand for tallow in feed could double or triple present imports for all purposes if used at U.S. levels of consumption (4).

Prices are important in Japan where products are substitutable. A supply of high-quality tallow at favorable prices can have a substantial impact on the increased use of tallow. Increased prices of raw materials push up production costs and manufacturers are under pressure by the Government not to raise prices in the interest of curbing the rise in cost of living and promoting national stability.

The United States is, by far, the major supplier of the Japanese market (fig. 10). Japan is also the leading world outlet for U.S. tallow. In 1964, 85 percent of the tallow imported by Japan came from this one source. The Japanese have learned from experience that the high-quality U.S. tallow is both the best suited and the most economical for making soap. Exporters of U.S. tallow have cooperated with the Japanese in correcting sources of possible complaints or dissatisfaction.

Australia is the most serious competitor of the United States in the Japanese market for tallow. Japanese imports from Australia

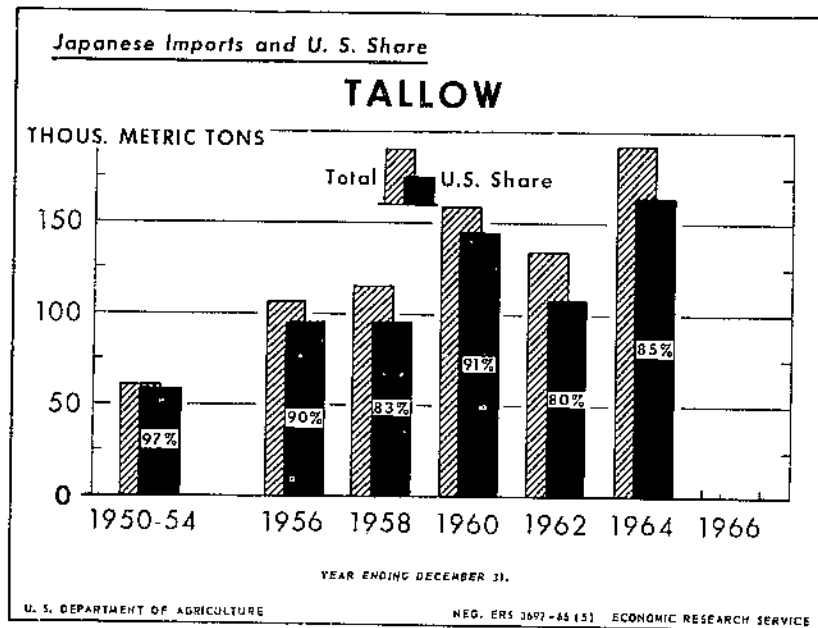


Figure 10

rose in 1962 and again in 1963, but fell off sharply in 1964. Australia, however, has not been a consistent supplier. In 1959, Japan imported 18,000 tons; in 1961, only 5,000 tons; and in 1963, 25,000 tons, a record high.

Production of tallow and greases in Australia has increased during recent years, and larger quantities of tallow have become available for exporting. Production in 1963 rose more than 16 percent over the 1956-60 average. Exports about doubled during the same period. Japan, after the Republic of South Africa, was Australia's second best market in 1963. Communist China was fifth.

Australia is adjusting its meat processing to conform to North American marketing requirements. As a result, there is a greater accumulation of fat trimmings for tallow production. About 40 percent of Australia's tallow and greases was exported in 1959-60, and nearly 70 percent in 1963. Domestic consumption is used primarily to make soap and candles. As in other countries, however, detergents are replacing soap, reducing domestic demand for tallow. This decrease in domestic demand is helping to increase export supplies (22). The Japanese market is a natural outlet for Australian tallow as it is for many other raw materials. Australia is actively striving to expand shipments to that outlet.

New Zealand tallow has moved into Japan consistently since 1954, though not in large quantities. Imports from New Zealand

increased from a negligible amount in 1950-53 to an average of 5,000 metric tons in 1960-64. Imports reached 6,000 tons in 1957 and 1958, and again in 1961, before dropping to 4,000 tons for both 1962 and 1963. A new high of 8,000 tons was registered in 1964.

Production of tallow and greases in New Zealand is increasing, as are exports. The rate of increase in exports is not much different from that in production. New Zealand exports about four-fifths of the tallow and greases produced. Like Australia, New Zealand ships to many countries. Japan, the fifth largest market in 1962, took only one-fourth the amount going to the United Kingdom. Communist China was a close second to the United Kingdom in 1962 as a buyer of New Zealand's tallow. Chinese buying tallow reduces competition for U.S. tallow selling in free world markets. In late 1962 New Zealand adopted the bulk method of handling tallow. About one-third of tallow exports are shipped in bulk.

In 1962, Canada replaced New Zealand as the third largest supplier of the Japanese tallow market. Canadian shipments in that year tripled, rising from 3,000 metric tons in 1961 to 9,000 in 1962. Imports from Canada amounted to 10,000 tons in both 1963 and 1964. Production in 1963 was 23 percent above the 1956-60 average. Exports were up 55 percent in 1963 from the same base period. Canada was the fifth largest world exporter of tallow and greases in 1963.

Hides and Skins

The same countries--the United States, Australia, New Zealand, and Canada--that compete for the Japanese tallow market are the major suppliers of hides and skins. In addition, Argentina has been a steady competitor for these sales. Other potential suppliers include such areas as India, South Africa, Ethiopia some Middle East countries, and possibly Communist China. The United States, Australia, New Zealand, Canada, and Argentina supplied most of the total imports in 1964.

The demand for leather in Japan continues to grow, chiefly because of the growing number of Japanese consumers who have adopted Western-styled footwear. Demand is also spurred by other end-users.

Leather, however, faces strong competition from leather-like substitutes in much the same way that cotton competes with the manmade fibers. Lower price is the big advantage of the leather-like substitutes. Nevertheless, demand for goods made of leather is strong and growing. Lowering cost of producing leather goods so they can compete with the substitutes is important.

The Japanese have a policy of importing raw hides and skins to be processed in Japan rather than higher priced finished leather.

Attaining efficiency has been a problem for the Japanese tanning industry. Unlike many other sectors of the Japanese economy processes used in the tanning industry remain outdated. Two important reasons for this lag stand out and are interrelated. First, at a time when Japan has moved at a rapid pace toward large-scale assembly production, the tanning industry has remained a collection of many small firms as shown in the following data for 1960.⁴

<u>Number of employees</u>	<u>Number of factories</u>
300-499	1
200-299	2
100-199	4
50-99	28
30-49	39
20-29	59
10-19	167
4-9	220
3 and under	<u>443</u>
Total	963

Almost 69 percent of the tanneries have fewer than 10 employees. The small establishments are not capable of filling large orders of uniform quality as required by large manufacturers of shoes or other leather products. Bigger and more efficient tanneries are needed.

Second, many tanning and finishing establishments are technologically backward. They need new equipment and processing methods that require capital investment. However, the forces of change, everywhere apparent in modern Japan, are beginning to reach the tanning industry.

Japan's move toward a more open economy, including import liberalization, sharpens the need to make Japanese production more efficient to meet world competition at home and abroad. The small, inefficient firms that have operated behind a wall of protection will be under increasing pressure from foreign producers with lower cost, large-scale production methods.

Another force favoring increased efficiency through consolidation and large-scale operations in tanning comes from the emergence of large shoe manufacturing firms. Such firms may find it advisable to acquire tanning facilities through joint ventures or other methods. Thus, it seems only a matter of time before the Japanese leather and tanning industry will bring into use larger

⁴ U.S. Department of State, Foreign Market Survey on Leather and Footwear, Airgram A-253 from the Tokyo Embassy, Sept. 16, 1963.

capital outlays, greater mechanization, and more modern equipment. (See reference in footnote 4.)

Available statistics on the production and uses of leather are incomplete. Such data, however, show that 132,947 metric tons of leather were produced in 1962, up 22,000 tons from 1961 and 50,000 tons above the 1960 figure. About 74 percent of the leather consumed in 1962 was used to make footwear; most of the rest, 23 percent, was used to make bags, cases, gloves, sporting goods, and other consumer items. Industrial leather, belt leather, and other industrial uses accounted for only about 3 percent of the total.

Westernization and rising consumer incomes are bringing an increased number of shoe customers every year. The actual number of pairs of shoes manufactured is difficult to obtain because shoes are produced in many small, widely scattered factories. Estimates for recent years have varied widely. Total production of leather shoes for 1961 is estimated at 10 million pairs, but some estimates have run much higher. At any rate, the number is small for a country with 97 million people, an increasing number of whom can afford high quality consumer items. The Japanese Ministry of Agriculture has estimated that the total demand for raw hides and skins will be 400,000 metric tons in 1970. About 80 percent, or 320,000 tons, will be imported. This puts domestic production at 80,000 tons, which seems optimistic.

The situation looks favorable for U.S. hides and skins. But, if U.S. sellers are to hold the historical share of the market, there are significant competitive problems. Japan is the largest world market for U.S. hides and skins. About 68 percent of all hides and skins imported, including reptile leathers such as alligator and lizard skins, comes from the United States. The United States supplies more than 70 percent of the total hides and skins that are used in the shoe industry. However, U.S. hides and skins must compete not only with other countries but also with domestic producers in supplying Japan's growing requirements. Domestic production, supplying countries, and the import-dependency rate are shown in table 20. The large and steady role that U.S. hides and skins have played in supplying Japan can be seen in figure 11.

Japanese producers of hides and skins supplied an average of 18,000 metric tons in 1950-54 and 32,000 tons in 1960-63. However, annual production for 1959 and later years has been nearly static, at about 31,000 or 32,000 tons. Meanwhile, imports have continued to mount, rising from a 1950-54 average of only 43,000 metric tons to an average of 138,000 in 1960-64, more than a threefold increase. Annual statistics show a new high of 159,000 metric tons reached in 1964, up 5,000 tons from the previous year. Some Japanese say that domestic raw hides and skins are better in quality than imports, but they are less uniform in size and grade, and the price is considerably higher. U.S. hides and skins are not expected

Table 20.--JAPAN: Production of hides and skins, and imports by principal country of origin, averages 1950-54 and 1960-64, annual 1955-64

Year	Production	Imports ¹							Supply	Import-dependency rate ²
		United States	Australia	Argentina	Canada	New Zealand	Other countries	Total		
	1,000 metric tons	----- 1,000 metric tons -----							1,000 metric tons	Percent
Average										
1950-54.....	18	23	3	4	1	3	9	43	61	70.5
1960-64.....	³ 32	96	21	6	4	2	9	138	170	81.1
1955.....	25	45	3	4	3	2	5	62	87	71.3
1956.....	29	50	5	6	4	2	9	76	105	72.4
1957.....	29	49	3	3	2	2	12	71	100	71.0
1958.....	20	51	10	5	2	2	6	76	96	79.2
1959.....	32	40	18	5	1	4	17	85	117	72.6
1960.....	31	67	12	4	4	2	8	97	128	75.8
1961.....	32	96	20	6	4	2	10	138	170	81.2
1962.....	32	93	25	8	4	3	9	142	174	81.6
1963.....	31	104	28	5	3	4	10	154	185	83.2
1964.....	n.a.	118	22	5	4	1	9	159		

¹ Include SITC Nos. 211-0110, 0120, 0130, 0140, 0200, 0300, 0400.

² Equals imports divided by domestic production plus imports (stock figures not available).

³ 4-year average.

Source: (19).

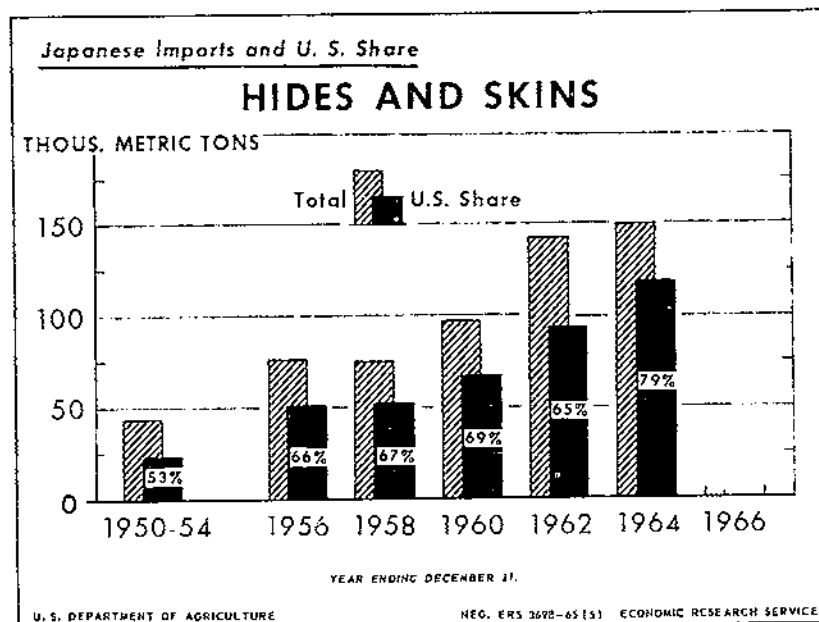


Figure 11

to have any major new competition from domestic producers in the immediate future, though domestic outturn should continue to edge up under the stimulus of the livestock promotion programs. Annual 1959-63 production figures do not indicate any rise in production.

Australia was Japan's second largest supplier of hides and skins. Shipments from Australia averaged 21,000 metric tons in 1960-64, accounting for 15.2 percent of the market. In 1950-54, Australia supplied an average of 3,000 metric tons, compared with 21,000 in 1960-64--a sevenfold increase. U.S. exports during the same period increased from 23,000 to 96,000 tons, more than a fourfold increase. Purchases from Australia showed a marked increase beginning in 1958, from 3,000 in 1957 to 10,000 tons in 1958. Imports from Australia reached 28,000 tons in 1963, but dropped to 22,000 tons in 1964. However, Japan has now become a leading outlet for Australia's growing production of hides and skins and the Australian Government and trade have a keen interest in promoting farm exports to the Japanese market.

Argentina was the third largest supplier of hides and skins, after the United States and Australia. Imports from Argentina averaged 4,000 metric tons in 1950-54 and 6,000 tons in 1960-64. The highest volume shipped during the period studied occurred in 1962 when imports reached 8,000 metric tons. Imports dropped to 5,000 tons in 1963 and 1964.

Japan's imports of hides and skins from Canada expanded from a 1950-54 average of 1,000 metric tons to 4,000 tons in 1960-64, a fourfold increase. From 1960 to 1964, annual purchases held rather steady at around 4,000 tons, dropping to 3,000 only in 1963.

New Zealand's position in the Japanese market was similar to that of Canada, in that the level of exports to Japan was small and stayed rather constant from year to year within a range of 2,000 to 4,000 tons. For 1950-54, New Zealand's average was 3,000 metric tons and dropped to 2,000 in 1960-64 owing to a sharp drop in 1964 imports.

Poultry

For U.S. exporters, developments in Japan's poultry industry have direct application in two respects. Feed-grain exporters have an interest since about three-fourths of the commercial feed consumed is in the form of poultry rations. Most of the poultry feed is layer feed, with only about 5 percent prepared for growing broilers. Low broiler production, caused by a late start in development, has opened the market for U.S. supplies of frozen dressed poultry.

Feed-grain exporters can expect to benefit by increases in poultry production. On the other hand, sellers of poultry meat have their opportunities reduced by increased domestic production. Whether the Japanese will, in the long run, import feed and grow their own poultry meat entirely using domestic labor and capital or import dressed poultry makes interesting speculation. Since 1961, they have been doing both. In the long run, the signs point toward greatly expanded domestic production, but this does not necessarily preclude importing also.

The statistics shown in table 21 tell a great deal about the poultry industry in Japan and why shifts are occurring. The number of chickens is increasing rapidly; egg production is expanding, and production of poultry meat is rising. To understand the changes, the characteristics of the flocks and the orientation of the industry must be considered.

Poultry raising in Japan has historically been directed toward producing eggs. Production has been in the hands of small farmers keeping a few chickens. The average flock consists of fewer than 20 chickens. Emphasis on egg production, with meat more or less a byproduct, has led to the adoption of breeds of chickens that are good layers rather than meat birds. The leading breed kept in the laying flocks has been the White Leghorn, a useful layer but too small and too lacking in other qualities for meat. Chicken meat has come primarily from old hens culled from the laying flock and excess cockerels.

Egg production is still considered vital to the nation's aims for improved nutrition, but meat is also desired. To produce meat,

Table 21.--JAPAN: Number of chickens on farms, egg production, and chicken-meat production, averages 1950-54 and 1960-64, annual 1955-64

Year	Number of chickens on farms	Egg production	Chicken-meat production
	<u>Millions</u>	<u>1,000 metric tons</u>	<u>1,000 metric tons</u>
Averages			
1950-54.....	33	¹ 243	² 17
1960-64.....	87	780	108
1955.....	46	375	23
1956.....	43	369	35
1957.....	45	409	38
1958.....	50	440	41
1959.....	48	453	43
1960.....	55	531	64
1961.....	72	751	69
1962.....	90	811	87
1963.....	98	850	142
1964.....	121	994	176

¹ 4-year average.

² 3-year average.

Source: (21).

a commercial broiler industry is beginning to emerge. "Dual-purpose" birds have been introduced. The poultry industry is moving toward large-scale enterprise. Broiler production as practiced in the United States, where feed efficiency together with good broiler-breeding stock and improved management practices have combined to produce excellent meat at low cost, has much to commend it to the Japanese. It would be surprising if the Japanese do not push the commercial broiler industry vigorously and successfully. A start has already been made in that direction, but development takes time.

Japan's lag in establishing a modern broiler industry has benefited U.S. exporters. Selected poultry products arriving in Japan in 1958-63, mostly from the United States but to some extent from other countries as well, are shown in table 22. The data indicate that the United States has benefited more than any other supplier by developments in the poultry field, supplying the bulk of the live chicks, hatching eggs, and dressed poultry. Live chicks and hatching eggs are imported primarily to bring in foundation stock.

The sharp rise in demand for frozen poultry since 1961 has been especially heartening. The greatest opposition comes, of course, from the Japanese producers. Ready reception of U.S. frozen poultry in the market has aroused domestic producers and

Table 22.--JAPAN: Imports of dressed poultry, chicks, and hatching eggs, by country of origin, 1958-64

Year	United States	Denmark	Mainland China	West Germany	Argentina	Rumania	United Kingdom	Other countries	Total
Poultry (kilograms) ¹									
1958	222	491	--	--	--	--	--	8,478	9,191
1959	806	--	--	--	20,000	--	--	12,712	33,518
1960	313	--	--	--	--	--	--	5,158	5,471
1961	62,878	--	--	--	25,000	--	--	3,000	90,878
1962	284,012	--	--	--	--	--	--	0	284,012
1963	3,358,149	48,522	40,980	--	--	33,950	24,452	0	3,506,053
1964	5,259,850	460,900	150,803	10,463	--	59,083	--	120	5,941,219
Chicks, live (number) ²									
1958	--	--	--	--	--	--	--	--	--
1959	416	--	--	100	--	--	--	13	529
1960	8,336	--	--	--	--	--	--	209	8,545
1961	45,936	--	--	--	--	--	--	546	46,482
1962	64,383	--	--	--	--	--	--	307	64,690
1963	1,039,172	--	--	--	--	--	3,974	83,576	1,126,722
1964	1,160,365	--	--	--	--	--	--	77,534	1,237,899
Hatching eggs (kilograms) ³									
1958	226	--	8	--	--	--	--	0	234
1959	105	--	--	44	--	--	--	0	149
1960	152	--	--	--	--	--	8	39	199
1961	1,478	--	--	--	--	--	--	12	1,490
1962	612	--	--	--	--	--	--	0	612
1963	286	--	--	--	--	--	--	0	286
1964 ³	6	--	--	--	--	--	--	0	6

¹ Includes SITC Nos. 011-400 and 011-810. ² Includes SITC Nos. 001-410 and 001-420. ³ Includes SITC No. 025-010.

has led to demands for a higher protective duty. Rates were doubled in 1964 from 10 to 20 percent ad valorem. In 1964, however, demand remained strong, and U.S. sales continued without harm to Japanese producers and without inhibiting growth of the domestic broiler industry. In fact, both groups can benefit by building markets, and Japanese consumers will be served at the same time.

Denmark, Communist China, and others have manifested an interest in the Japanese market; they can be expected to continue doing so. France moved into the market in 1965, offering poultry at low prices. Developments in the European Common Market concerning poultry can have a substantial bearing on the competition in Japan. Surpluses in Europe stimulated by high prices might be sold to Japan at reduced prices. Such pricing could result in the Japanese producers pressing their Government for greater protection against subsidized competition.

The growing demand for more meat should continue to exceed Japan's ability to produce in the foreseeable future. The current gap between domestic supplies and demand is permitting the United States to market poultry and to add another product to the list of commodities going to Japan in substantial quantities. This opportunity of gaining a new export market has been welcomed by the U.S. industry.

Nonfat Dry Milk

The growing popularity of milk and milk products among Japanese consumers is part of the general shift toward increased consumption of health foods. There are strong reasons for expecting that consumption of milk and milk products will continue to spread and grow, eventually making Japan a major consumer market and, possibly, an increasingly large importer. The Japanese authorities expect demand for dairy products to increase. They are taking steps to meet the larger requirements through greater domestic production. The demand for imported dairy products will depend on the degree of success achieved by the Japanese dairy farmers.

Large shipments of nonfat dry milk from the United States have been significant in promoting consumption of milk by the Japanese population. The nutritive value of diets of school-age children has been much improved by the addition of high-quality nonfat dry milk from the United States. These youngsters, the purchasing consumers of the future, have acquired a taste for milk. Moreover, commercial demand for nonfat dry milk seems to be increasing. Both the Japanese dairy industry and exporting countries supplying the Japanese, including the United States, will benefit from such an increase.

Consumption, production, and import statistics for 1955-64 are shown in table 23. Per capita consumption, expressed as fluid milk

Table 23.--JAPAN: Production, net imports, and consumption of milk, 1955-64

Year	Dairy cows	Supply			Consumption		Import-dependency rate
		Milk production	Imports	Total	Net	Per capita	
	1,000 head	1,000 metric tons	1,000 metric tons	1,000 metric tons	1,000 metric tons	Kilograms	Percent
1955.....	--	1,030	130	1,160	1,082	12.1	11.2
1956.....	352	1,199	172	1,371	1,281	14.2	12.5
1957.....	397	1,412	204	1,616	1,513	16.6	12.6
1958.....	421	1,579	185	1,764	1,647	17.9	10.5
1959.....	486	1,764	205	1,969	1,839	19.9	10.4
1960.....	519	1,939	606	2,545	2,395	25.6	23.8
1961.....	564	2,180	391	2,571	2,402	25.5	15.2
1962.....	637	2,528	562	3,090	2,894	30.4	18.2
1963.....	729	2,843	831	3,674	3,447	35.8	22.6
1964.....	795	3,127	960	4,087	3,887	³ 40.0	23.5

Note: Number of dairy cows are calendar year data; other data are for Japanese fiscal years (April 1 - March 31). Imports are converted to milk equivalent basis. Available supply equals production plus imports. Import-dependency rate equals imports divided by available supply. Net food consumption equals available supply minus exports, animal feed, and waste.

Sources: (11, 12, 19).

equivalent, has grown rapidly. Annual per capita consumption of fluid milk equivalent reached 40 kilograms in 1964 compared with 12 kilograms in 1955 and an average of only 4.5 kilograms in 1934-38. The 40 kilograms is still small by Western standards.

In response to growing demand and attractive market prices, numbers of dairy cows on Japanese farms have increased rapidly, more than doubling between 1956 and 1964. Total milk production rose even faster. However, the consumption of milk and milk products expressed in fluid milk equivalent has increased faster than milk production, widening the gap to be filled by imports. The import-dependency rate increased from 11.2 percent in 1955 to 23.5 percent in 1964. U.S. nonfat dry milk has accounted for a large part of the imports (table 24).

The bulk of the nonfat dry milk supplied by the United States has moved on concession. Prices have been attractive to the Japanese; the 1965 price was 8 cents a pound. Imports at concessional prices are surplus U.S. supplies, made available to the Japanese Ministry of Education for use in expanding the School Lunch Program.

Japan is now buying small quantities of imported nonfat dry milk for animal feed and other uses. Such imports move through commercial channels under licenses based on quotas set by the Government. U.S. commercial sales of nonfat dry milk to Japan have been rising, amounting to 5,700 metric tons in 1964 compared with 3,850 tons in 1963, and 2,850 in 1962. Much larger quantities could be utilized by the Japanese feed and food trade if imports were liberalized.

Competing for the commercial Japanese market for dairy products is a greater challenge to the U.S. farmers and exporters

Table 24.--JAPAN: Imports of nonfat dry milk, by principal country of origin, 1953-64¹

Year	United States	New Zealand	Australia	Others	Total
----- Metric tons -----					
1953.....	1,034	0	260	367	1,661
1954.....	14,183	0	0	0	14,183
1955.....	14,926	0	0	0	14,926
1956.....	19,319	0	0	999	20,318
1957.....	24,949	1,457	0	0	26,406
1958.....	19,706	1,431	731	0	21,868
1959.....	18,800	0	0	1	18,801
1960.....	40,187	0	618	2,621	43,426
1961.....	29,471	308	906	614	31,299
1962.....	40,162	1,368	1,909	1,675	45,114
1963.....	65,118	2,596	456	0	68,170
1964.....	73,852	2,342	157	55	76,406

¹ Includes SITC Nos. 022,0210, (1953-55) 022-0220 (1956-61) 022-221-224 (1962-64).

Source: (19).

than for almost any other U.S. farm export. The first hurdle arises from the import policies of the Japanese Government. The Government aims to promote the growth of the domestic industry. Floor prices on manufactured dairy products are maintained well above world prices. Imports are restricted to protect the domestic industry and to promote expansion. Only policies on natural cheese--imported mostly for making processed cheese--and on casein and lactose have been liberalized. Custom duties are used, in addition to quotas, for protecting domestic producers.

Important changes in the utilization of the milk produced on Japanese farms appear to be in prospect which will affect the demand for U.S. nonfat dry milk going into the Japanese School Lunch Program. At the insistence of Japanese producer groups, the Government is moving toward providing more whole milk for school children, replacing imported nonfat dry milk.

Only 53 percent of Japan's fluid milk produced in 1964 was consumed as whole milk. Almost all the rest was used in manufacturing other products. Selling whole milk is more profitable to producers, and they would like to increase their sales to consumers. To do this, however, retail prices must be lowered. Currently, these prices reflect the high costs of producing, handling, and distributing.

More efficient methods of handling and distributing milk would lower costs and reduce retail prices. For example, a great deal of overlapping occurs in collecting milk on the small, widely scattered farms. If this could be eliminated, considerable savings would result. Also, more efficient distribution of milk to scattered customers would reduce costs.

The impact of expanding the consumption of fluid milk in the School Lunch Program and in retail markets could reduce the supply for manufacturing. Thus, the Japanese may need to import processed dairy products in much greater quantities, opening up marketing opportunities for cheese, butter, whey powder, nonfat dry milk, and other manufactured dairy products.

Competition for U.S. exports comes primarily from New Zealand, Australia, and dairy-exporting countries in Europe. The U.S. faces formidable competition on prices, particularly from New Zealand. Yet the Japanese market offers promising potential if price competition can be met. Population increases, rising consumer incomes, the School Lunch Program, and a desire to improve the nation's diet are forces that promise to expand total demand. Demand will probably increase faster than Japanese production. Controlled importing of less expensive high-quality manufactured dairy products to supplement domestic supplies and to keep consumer prices from rising is believed likely to find favor with the Japanese authorities.

FRUITS

Japan is a large producer and consumer of a wide selection of fruits. Strong efforts are being made to expand the industry. Production of fruits increased from a 1950-54 average of 1,401,000 metric tons to 3,350,000 metric tons for 1960-64 (table 25). Production in 1964 reached a record level of 3,865,000 metric tons, more than 2.7 times the 1950-54 average. The land area devoted to fruit production in 1964 was 750,000 acres compared with an average of 373,000 acres in the base period 1950-54. Thus, the land area in fruit about doubled while production became roughly 2.7 times larger, underscoring the progress being made in obtaining greater yields per unit of land.

Production of nearly all kinds of fruits grown in Japan to any significant extent has increased. Sharp increases have occurred in apples, citrus (primarily mandarin oranges), grapes, peaches, pears, persimmons, and cherries.

The expansion of fruit production in Japan is an outgrowth of rapidly expanding demand and the Government policy which aims at a high degree of self-sufficiency. Government policy has encouraged fruit production on upland areas that are not well suited to growing field crops. Fruits such as mandarin oranges command a good price in world markets and are important export items. The dollar value of export earnings from the sales of mandarin oranges rose from less than \$1 million in 1950 to more than \$31 million in 1964. These earnings stand to increase as young trees, planted recently, come into production. The U.S. market is the leading outlet for canned Japanese mandarin oranges, taking more than one-third of the \$31,199,000 worth exported by Japan in 1964. The citrus canker disease prevents importing fresh mandarin oranges into the United States. Japan also exports fresh apples and pears to Asian countries and canned pears and peaches to worldwide markets.

U.S. fruit growers and export interests see progress, problems, and opportunities in the expanding Japanese market. The demand for fruit is strong. Despite prices that put some fruits in the luxury class, per capita consumption increased from 14.6 kilograms annually in 1955 to 26.1 kilograms in 1962. Population growth and, more important, rising consumer purchasing power are combining to add further strength to the demand.

Japanese efforts to produce the national requirements of fruits face some difficult problems. Hand labor is used extensively, and the cost of labor is rising. Inefficient and costly production methods make returns to growers low and prices to consumers high. Low-income groups can scarcely afford to buy some fruits because of high prices. But the Japanese authorities want to expand the consumption of health foods. Thus, high retail prices for fruits conflict with the national aim of upgrading the nation's diet.

Table 25.--JAPAN: Planted area and production of selected fruits, averages 1950-54 and 1960-64, annual 1955-64

Year	Acreage planted	Production									
		Apples	Apricots	Grapes	Peaches	Pears ¹	Persimmons	Citrus ²	Cherries	Loquats	Total ³
	1,000 acres	----- 1,000 metric tons -----									
Averages:											
1950-54...	373	435	45	45	43	91	214	505	3	20	1,401
1960-64...	676	1,015	45	181	193	308	380	1,205	7	22	3,358
1955.....	418	390	51	72	79	129	284	587	4	24	1,622
1956.....	463	750	40	82	113	160	305	766	5	25	2,248
1957.....	500	809	48	110	135	178	313	796	6	23	2,417
1958.....	520	807	33	111	139	192	292	910	6	20	2,509
1959.....	556	837	42	118	155	215	366	934	6	24	2,698
1960.....	595	876	46	155	170	250	337	1,115	6	24	2,977
1961.....	640	955	50	174	201	295	394	1,109	8	27	3,213
1962.....	680	1,000	44	194	190	324	322	1,132	7	24	3,239
1963.....	717	1,155	51	177	199	340	384	1,164	7	18	3,495
1964.....	750	1,090	32	207	208	332	464	1,507	6	20	3,865

¹ Includes Japanese pears and other pears.

² Includes mandarin, navel, and summer oranges and other citrus fruits. Mandarin oranges account for 973,000 tons (88 percent of the total) in 1963.

³ Items may not add to the total because of rounding.

Source: (11).

The fact that some fruits such as lemons and raisins are not produced in sufficient quantities to meet demand, and general pressures to liberalize more of their imports have led the Japanese authorities to ease import restrictions. Items liberalized so far, primarily raisins and lemons, have opened opportunities for U.S. exporters. Further gains will likely be more difficult to achieve because of the Japanese desire to protect the home industry in those products grown extensively on Japanese farms.

The United States hopes that Japan will liberalize other items, such as grapefruit, canned pineapples, and fruit juices. Grapefruit is permitted to enter only in small quantities. Because of the limited quantity, trade margins and consumer prices are high, holding down consumption among low-income consumers.

Raisins

Raisins were liberalized in January 1961. Japanese trade figures show that total imports of raisins increased from 6,316 metric tons in 1960 to 19,222 in 1964. Imports from the United States rose from 2,381 metric tons to 15,964 tons during the same period, more than a sixfold increase. Figure 12 shows the growth of raisin imports and the U.S. share of the market from 1950 to 1964. The United States supplied 83 percent of the market in 1964 and averaged 78 percent of the market for 1960-64. Australia and

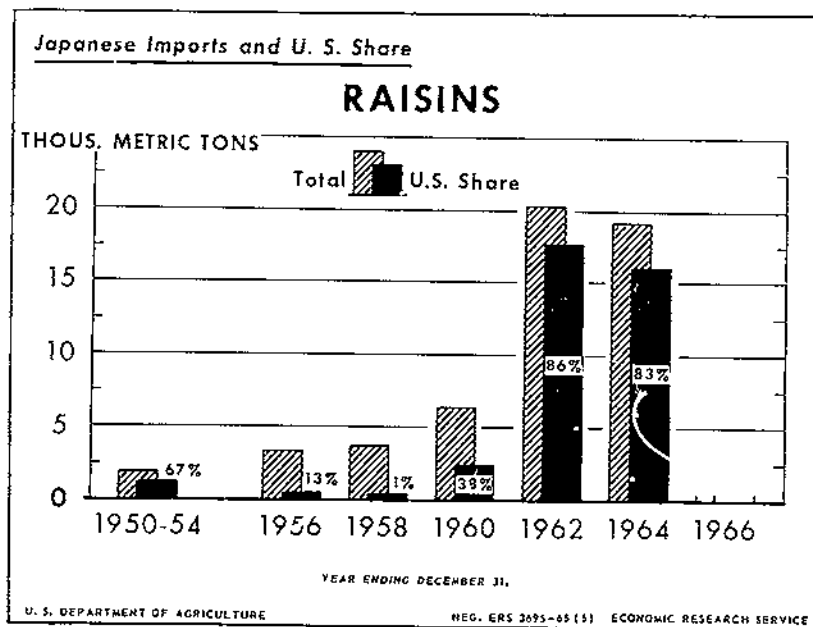


Figure 12

Greece supplied most of the rest. The quality of U.S. raisins and the acceptance by the Japanese in the last 5 years puts U.S. growers in a favorable competitive position.

Lemons

Lemon imports were liberalized in May 1964. In the following months, lemon imports exceeded 1,000 metric tons monthly from June through November, but dropped in December. Still, total imports in 1964 amounted to 14,787 metric tons compared with only 4,041 tons in 1963, before liberalization. All lemon imports in 1964 came from the United States. And in 1964 Japan became the second largest market for U.S. lemons, accounting for about 20 percent of the total U.S. dollar sales.

Opening the market to foreign sellers drastically reduced the high price that the Japanese consumers had to pay for lemons and enlarged the U.S. lemon market. It is hoped that Japan can remove import controls on other fruits with similar benefits.

OUTLOOK AND MARKET DEVELOPMENT

HIGHLIGHTS OF 1965

Trade data that have become available as this report goes to press show that 1965 was another banner year for U.S. farm products in the Japanese market. Japanese farm imports from the United States of foods, beverages, and agricultural raw materials reached a record level of over \$977 million, up more than 18 percent over the previous year.⁵ Japanese farm imports from all sources in 1965 exceeded \$2,906 million, a gain of 10.4 percent over 1964. The U.S. share of the market amounted to around 34 percent in 1965 compared with about 30 percent in the preceding year.

Looking at the several individual commodities for which Japan is a major outlet for U.S. farm production showed a mixed picture in 1965. Some items, as would be expected, shared in the growth while others declined. Cotton, nonfat dry milk, tobacco, and barley showed a decline. In most cases, however, the declines were slight.

Imports of raw cotton from the United States fell slightly below the previous year while total raw cotton imports were somewhat higher for the year. Larger imports from Central America along with slightly lower prices for comparable quality from some areas are believed to have caused the drop in purchases from the United States.

⁵ Imports in this grouping are slightly different from the compilation of farm imports used in the main body of the report.

The most serious drop occurred in the amount of nonfat dry milk imported from the United States. Japan's imports of this commodity from all sources declined in 1965, but the U.S. share dropped more sharply than the total. Practically all nonfat dry milk from the United States comes into Japan at concessional prices, however, and is used in the school lunch program. The drop in demand for nonfat dry milk reflects a policy change which calls for gradual replacement of nonfat dry milk in the school lunch program with whole milk produced on Japanese farms.

Leaf tobacco imports dropped fairly sharply in 1965. Imports from the United States were also down. The decline generally reflects heavy carryover stocks from the high level of imports in 1964 rather than any weakening of demand for tobacco products.

Total imports of barley were up sharply in 1965, but purchases from the United States declined. According to Japanese traders, U.S. barley was not always available at competitive prices during the year which kept the United States from sharing in the increased demand.

On balance, however, the losses were far exceeded by the gains overall as shown by the increase in total purchases. Among the items showing the strongest gains were corn, grain sorghum, miscellaneous feedstuffs, and soybeans. Strong demand for these items and limited availabilities in other supplying countries accounted for the sizable U.S. gains.

Preliminary data for the first third of 1966 (January - April) show Japanese imports of 19 selected farm imports, which account for the bulk of U.S. shipments to Japan, running 17 percent ahead of imports for the same period in 1965. Recent trends indicate that Japan's imports of foods, beverages, and agricultural raw materials will exceed \$3 billion in 1966. Imports from the United States should pass the \$1 billion mark making Japan the first \$1 billion market for U.S. agriculture.

OUTLOOK

What lies ahead in the Japanese market? What will the Japanese be buying and in what quantities 10 or 15 years hence? What can sellers of U.S. farm products expect in the Japanese market? To find some clues to these and other questions, the U.S. Department of Agriculture in 1961 contracted with the Institute of Agricultural Economics of the University of Tokyo to make a detailed study of factors influencing supply and demand and to project the recent trends forward to 1965, 1970, and 1975 (38).

Farm products of greatest interest to the United States were chosen for study, and projections were made on the basis of the quantities Japan had bought in recent years. A summary of the results of the study is shown in table 26. The summary indicates

Table 26.--JAPAN: Imports of selected farm products in 1960, and projections for 1965, 1970, and 1975¹

Commodity	Actual 1960	Projections		
		1965	1970	1975
	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
Wheat.....	176.9	170.0	191.0	217.0
Rice.....	19.6	--	--	--
Corn and other feed grains.....	138.1	223.0	363.0	595.0
Cotton.....	² 431.4	390.0	429.0	466.0
Tobacco.....	13.6	41.0	81.0	109.0
Oilseeds.....	184.0	321.0	482.0	658.0
Tallow.....	25.4	27.0	25.0	24.0
Hides and skins.....	41.3	103.0	205.0	318.0

¹ 1960 prices.

² Includes cotton products other than raw cotton and cotton linters.

Source: (9).

the future Japanese market as an area of great opportunity for the United States and other sellers. Only time will tell whether these projections are realistic for each product studied. Given stable world conditions with growing international trade, the projections as a whole seem to be reasonably good projections. For some items, they may be much too low. The introduction of new technology, a new use for a product, change of Government policies and prices, and other factors can throw any projection off. The authors of the study have been careful to point out the limitations of their findings and projections.

Other appraisals of the future Japanese market indicate that prospects are bright. The supporting bases for the optimism are generally the same. These include: (1) The high growth rate and strength of the Japanese economy and the fact that the policy of the Japanese Government is committed to work toward continuing a high growth rate and stability with priority to industrial development; (2) land suitable for cultivation is limited in Japan and production per acre is already high, also the cost of producing farm products is high; (3) population growth increases food and fiber needs every year; (4) rising consumer incomes create a growing demand for more and higher quality products; and (5) the Japanese are easing import restrictions, creating easier access to the market.

The appraisals assume that Japan can earn, largely through sales of Japanese manufactures, the foreign exchange needed to pay for a long list of imports and other necessary foreign obligations, of which farm products are only part.

Appraisals agree that the opportunities to expand sales are present for those who can exploit them. They would also agree that the market will be highly competitive for the various exporting countries. This knowledge has brought increasing attention to

the problems and opportunities for market development and sales promotion. Several countries, including the United States, have addressed themselves to the problem of competing successfully for the large and growing Japanese farm market.

MARKET DEVELOPMENT BY THE UNITED STATES

Faced with growing surpluses and costly storage programs, U.S. agriculture has come to rely more and more on foreign markets. The U.S. Government and commercial interests have searched diligently to find and expand markets. Over the last decade, market development has been emphasized, old projects have been expanded and improved, and new programs have been started. Problems of balance of payments and the drain on the U.S. gold reserves are additional reasons for sales promotion efforts.

The U.S. Department of Agriculture, in cooperation with U.S. agricultural and trade groups and with local cooperators in the host country, is carrying out a broad program of foreign market development with programs in 50 countries. Generally, projects are jointly financed. Japan, as the largest buyer of U.S. farm products and with a highly promising future potential, is a logical choice for major emphasis in market development.

Stepped-up work on market development started in Japan in 1956. This work has been expanded, currently nine projects are in effect. They are: Cotton, wheat, soybeans, feed grains, poultry, tallow, tobacco, hides and skins, and raisins.

The results, measured in terms of increased sales, have been generally positive in the aggregate. U.S. exports to Japan reached an all-time high in 1964. What part of this sales record can be ascribed to market development is difficult to measure. Evaluation is being attempted as the program unfolds and experience is gained.

Obviously, in a country such as Japan, many factors influence the quantities and sources of imports. Several of these are discussed in the report. Measuring the effects of any one factor, such as advertising and sales promotion, is difficult and could easily be misleading. The problem in assessing results is further complicated because there is no way of knowing what the situation would have been without market development work. Even if the sales of a product decline despite strong promotional effort, the possibility remains that the decline would have been more serious had the promotional efforts not been made. Also, time must be considered; market development is a long-run operation. Benefits are not immediately realized.

The rationale for spending funds for market promotion is well grounded and logically reasoned. A successful export program for

farm products obviously requires many things. It requires competitive pricing. It requires gaining access to the market. It requires producing and delivering quality products. It requires providing suitable credit and financial arrangements. It requires building a reputation for reliability and efficient service. It requires understanding local requirements and tailoring products to fit the needs of the buyer. It requires an analysis and understanding of the way business is transacted in the country. It also requires the molding of tastes and preferences for products that U.S. farmers can best supply and the building of good will and understanding between buyers and sellers.

The last two requirements are closely related and are a growing dimension in the increasingly competitive world markets. Molding consumer tastes brings into play the tools that generally fall under the heading of advertising and sales promotion. At the same time, a broad promotion program seeks to build and enlarge friendly relationships and understanding. Methods are varied depending on the product to be sold and the consumer groups to be cultivated. Viewed in this light, advertising and sales promotion as part of market development put the necessary finishing touches on a well-rounded export program. Without them, the other factors promoting sales might not be fully realized.

The belief that market development will be effective for farm products in Japan and other foreign countries is strengthened by the attention leading business firms give to advertising and sales promotion in the U.S. market. In the United States, billions of dollars are spent annually on advertising and sales promotion. An estimated \$14 billion was spent in 1965. The willingness to spend such large sums is taken as proof that U.S. business directors are convinced that these expenditures are necessary and profitable.

U.S. experience is basically in brand-name advertising. Whether advertising will be effective for such products as wheat, cotton, and feed grains has been questioned. Applying U.S. experience in a foreign market raises further problems. These two considerations create uncertainties that are recognized and weighed. The weight of the evidence, however, supports the decision to push sales promotion vigorously.

Another point to be considered in deciding to carry out sales promotion is the effort and resources devoted to promotional activities by the competition. The threat of losing markets to another competitor who might gain an advantage through more aggressive promoting and selling stimulates counteraction. This consideration has application in the Japanese market. U.S. decisions on market development programs take into account activities of competing countries.

MARKET DEVELOPMENT BY COMPETING COUNTRIES

The amount of money spent by governments, trade groups, and other interests to promote sales is difficult to ascertain. Similarly, the sources of money, whether government or private, are not readily obtainable. The general aims, objectives, and programs of countries doing market promotion work can be observed. Annual appraisals by the U.S. Agricultural Attache in Tokyo show that such agricultural surplus-producing countries as Australia, New Zealand, Canada, Netherlands, and Denmark are active in promotional activities in Japan.

Australia's funds and activities appear to be largely handled by boards. The Wheat Board, the Meat Board, and the Dairy Board each have local offices in Japan. The International Wool Secretariat handles wool promotion. Representatives of the three boards active in Japan maintain contacts with industry and Government officials to obtain trade information and to promote good will. Board representatives work with processors of dairy products. Also, they take the lead in participating in annual international trade fairs.

In general, Australia is striving to create a broad image as a reliable and mutually advantageous trading partner for Japan rather than to emphasize individual products. Japan has industrial products to sell, and needs to import food and industrial raw materials. Australia has raw materials and farm products to sell. Trade for the two areas, therefore, has appeal to both Japan and Australia. High-level discussions between representatives of the two countries make an effort to develop trade based on the fact that each country needs the other. Reference has also been made to the premise that such an exchange could promote desirable area development for the Far East beneficial to both countries.

Canada, another leading supplier of farm products to Japan, is particularly active in promoting the sale of grain. The Canadian Wheat Board, with a local office in Japan, handles the promotional activity. Canada is also reported to be considering promotional activities for poultry, dairy products, livestock feed, and livestock.

New Zealand's most important promotional activity in Japan is in selling wool, which is handled by the International Wool Secretariat. The second most important activity is in promoting the sale of meat, particularly mutton and lamb. Dairy promotion is of third importance.

Denmark and the Netherlands have each carried out some promotional activities directed primarily at expanding sales of dairy products. Denmark has also promoted poultry.

Apparently, the amount of money spent has not been large, but foreign exporters are keenly aware of the importance of Japan as

a potential market. It is logical to expect that they will continue their efforts to improve their position in Japan.

Competition and promotion are not just a question of several sellers of farm products bidding for a larger share of sales. There are some promotional projects in which agricultural countries have a common interest. Expanding the total demand for a product such as wheat can benefit all sellers of that commodity. Similarly, promoting the greater use of cotton in competition with manmade fibers, or promoting tallow-based soaps competing with synthetic detergents, or promoting leather goods competing with synthetics--these are areas where competing countries have a common stake. A good part of the U.S. effort in Japan has been directed toward promoting total demand.

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