



AgEcon SEARCH

RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

USDA/FAER-26

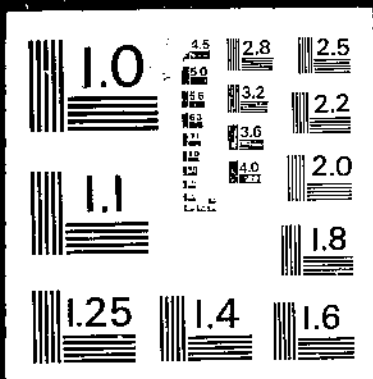
AGRICULTURE IN THE SOUTHEAST ASIAN RICE BOWL AND ITS RELATION TO U. S. FARM EXPORTS.
(Foreign Agricultural Economic Report). / Boyd A. Chugg. Washington, DC: Economic
Research Service, Jun. 1965.

(NAL Call No. A281.9/Ag8F)

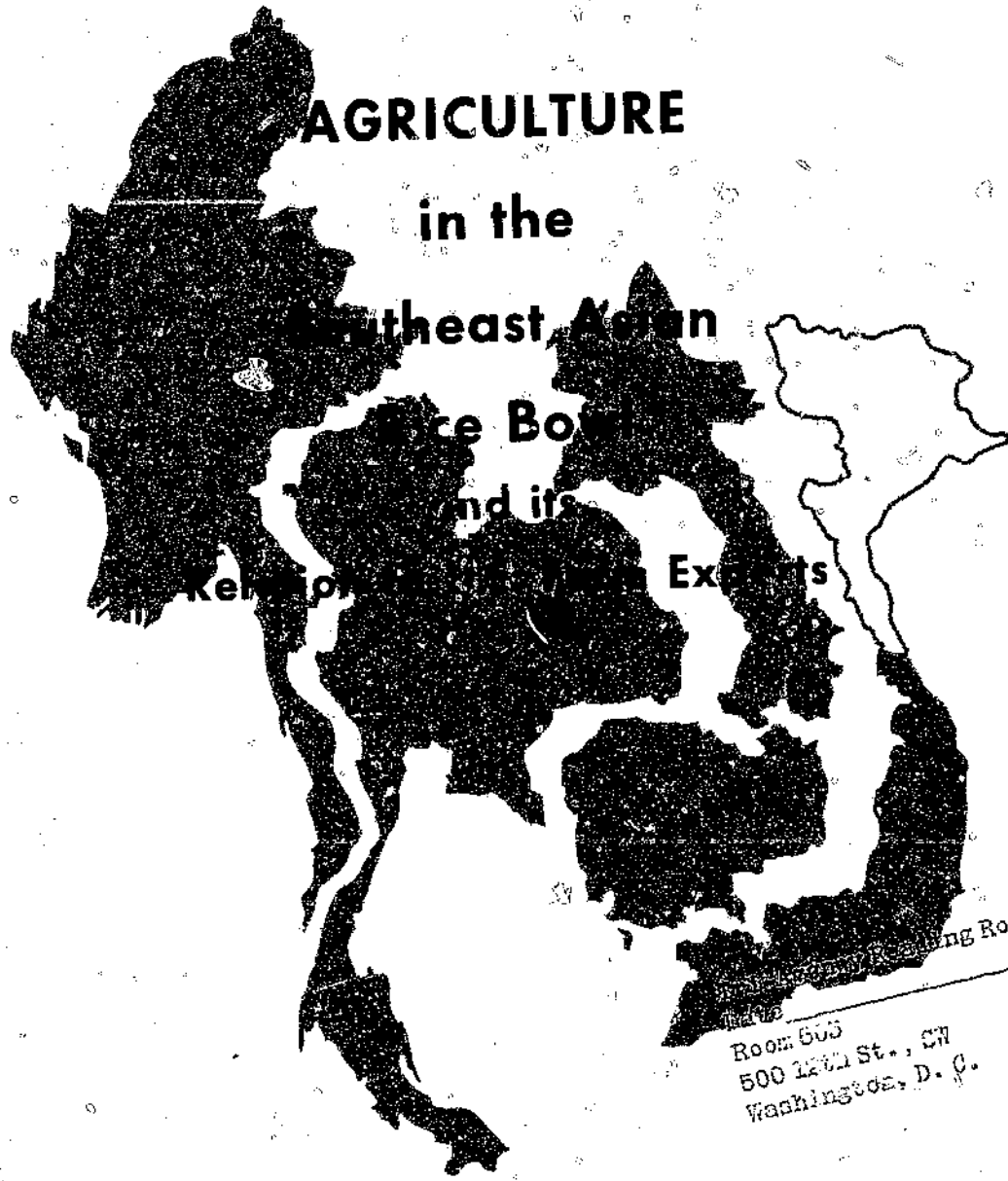
1 OF 1

USDA-FAER

26



FAER 26



AGRICULTURE

in the

Southeast Asian

Rice Bowl

and its

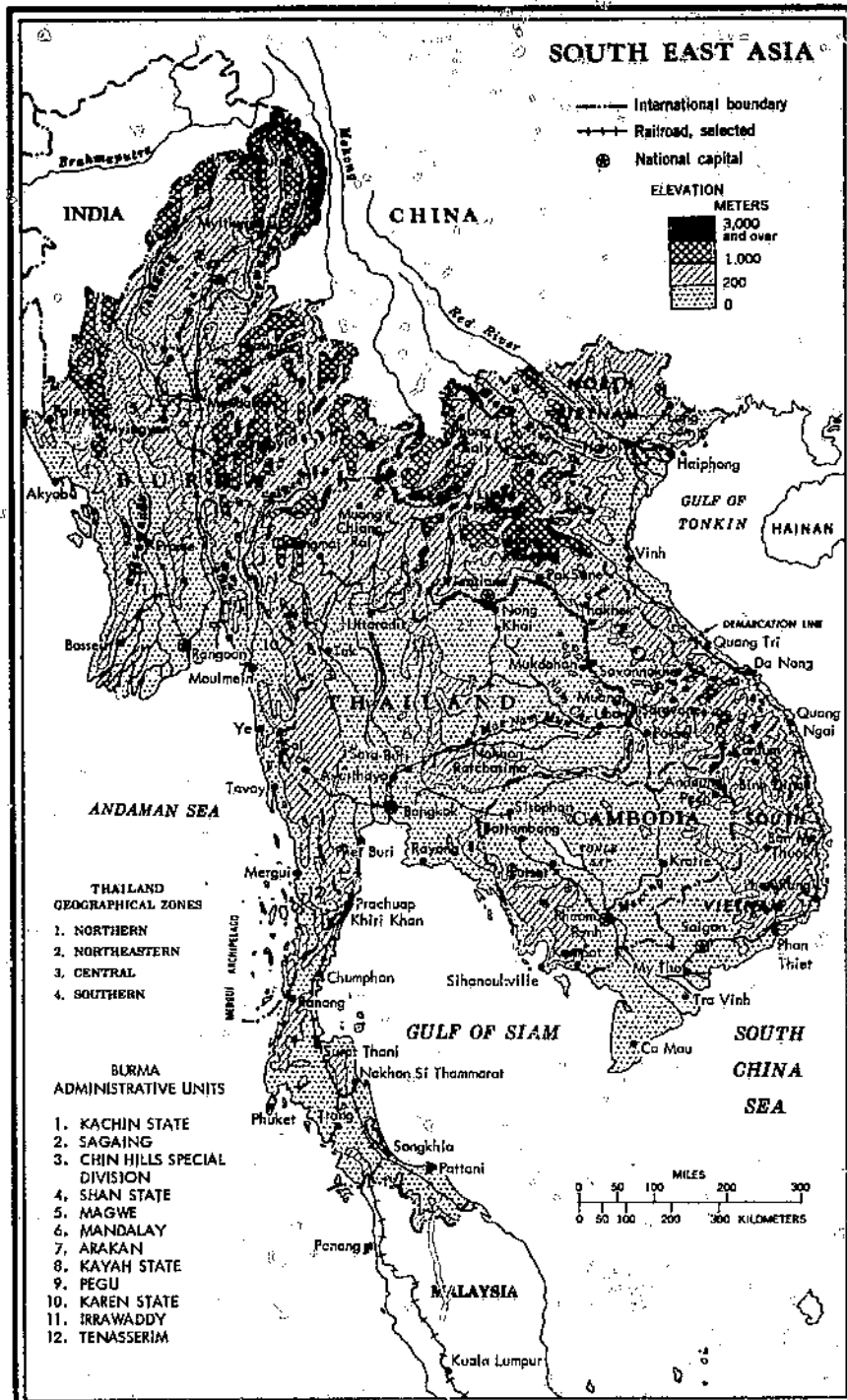
Implications for U.S. Exports

Room 505
500 12th St., NW
Washington, D. C. 20241

FOREIGN AGRICULTURAL -
ECONOMIC REPORT NO. 26

U.S. Department of Agriculture

Economic Research Service



CONTENTS

	<u>Page</u>
Summary	ii
Introduction	1
The Rice Bowl Countries	2
Burma	2
Cambodia	5
Laos	7
Republic of Viet Nam	9
Thailand	12
Agricultural Production	13
Rice	16
Rubber	19
Corn	19
Cotton and tobacco	22
Other major crops	23
Livestock and poultry	25
Foreign Trade	30
Trade in major agricultural products	30
Rice	30
Rubber	31
Trade by country	34
Burma	34
Cambodia	37
Laos	37
Viet Nam	40
Thailand	45
U.S. Agricultural Trade with the Region	48
Exports to the region	48
Imports from the region	52
Competition with U.S. farm exports	52
Rice	55
Corn	58
Literature Cited	60

Washington, D. C.

June 1965

SUMMARY

The Rice Bowl Region analyzed in this report consists of the following countries as they are now constituted: Union of Burma, Cambodia, Laos, Republic of (South) Viet Nam, and Thailand. The Region is notable for having exportable surpluses of several agricultural products, especially rice.

Most of the Region is situated between 5° and 25° north of the Equator and is an area of tropical monsoons. Land utilized for farming ranges from 18 percent of the 22.3 million hectares in Laos to 40 percent of the 17.1 million hectares in the Republic of Viet Nam. The present cultivated land consists mainly of natural, flat, flooded rice paddy where rainfall is abundant. Other major crops utilizing cultivated land are corn, pulses, oilseeds, tobacco, sugarcane, cotton, tea, and rubber.

With 80 million inhabitants, the Rice Bowl has the highest land per capita ratio in the Far East. In an area where 80-90 percent of the population is engaged in the production of food and fiber, farmland per capita ranges from about 0.36 hectare in Thailand to 1.67 hectares in Laos.

The Rice Bowl countries produce about one-sixth of the Free World's rice supply but they account for almost two-thirds of the rice entering international trade. In 1935-39, the five countries produced an average of 17 million metric tons annually or about 18 percent of Asia's rice (excluding Mainland China). By 1960-64, their combined production had risen to 25 million tons annually, but the relationship with Asia remained unchanged from prewar. For the Region, production per capita decreased from 399 kilos in 1935-39 to 352 kilos in 1963. However, Thailand's rice production per capita has continued to show a small but steady gain.

Thailand, Burma, Cambodia, and the Republic of Viet Nam combined contribute about 15 percent of the 2 million tons of crude rubber produced in the world. However, many Southeast Asian countries, faced with the competition of synthetics, lower world prices for latex, and the fact that trees do not start to yield until 6 to 8 years after planting, have not increased or improved planting in recent years.

Corn production in the Rice Bowl Region expanded from an average of 373,000 metric tons during 1955-59 to over 1 million tons in 1964. Thailand, where corn has become an important export commodity, accounts for most of the increase. The outlook for continued expansion is favorable.

For centuries cotton and tobacco have been grown in limited quantities in Southeast Asia. Poor quality has characterized both products. Improved varieties and practices are slowly being introduced to help attain higher production and a quality that is more consistent with demand.

A large variety of tropical and semitropical foods are grown. Most are consumed locally. In addition, a few products such as cassava in Thailand and black pepper in Cambodia are being grown primarily for export.

Livestock are far more important for draft purposes than as sources of food. Cattle and buffalo are used almost exclusively for draft. Fish is more important than meat in the diet. Pigs, chickens, and ducks are the sources of meat preferred by most of the people in the Region and these foods seem to be increasing in importance.

A relatively few commodities account for the bulk of exports from all five countries. Rice is by far the most important, followed in order by rubber and corn. Other export items include cotton, pulses, and oilcake from Burma; cassava products, kenaf, kapok, and castorbeans from Thailand; coffee from Laos; tea and hogs from Viet Nam; and pepper, kapok, and pulses from Cambodia.

In an average year, earnings from the sale of rice represent nearly 75 percent of the total value of all Burmese exports, 35 percent for Thailand, 30 percent for the Republic of Viet Nam, and 30 percent for Cambodia. Exports go largely to nearby Asian countries.

The sale of rubber by Southeast Asian countries is very important as a foreign exchange earner. In the Republic of Viet Nam, 55 to 65 percent of foreign exchange earnings come from the export of rubber. In Thailand rubber accounts for over

20 percent of the value of all exports. Although Cambodia's rubber shipments are less than 40,000 tons annually, their value is usually the largest of any single agricultural commodity exported.

Agricultural products are only a small part of the total import value for each country. Dairy products, wheat flour, tobacco, and cotton are the major agricultural items purchased from outside sources.

The total value of all U.S. agricultural exports to the five Rice Bowl countries from July 1955 through June 1964 was approximately \$381 million. A little over 70 percent was accounted for by shipments under U.S. Government programs. Nearly 50 percent moved under P.L. 480 and another 25 percent was sold for foreign currency through Mutual Security and AID programs. The remaining 25 percent of agricultural sales were outside Government programs (dollar sales), chiefly to Thailand. The principal agricultural commodities exported were cotton, tobacco, milk products, vegetable oils, bulgur, and wheat flour.

The total value of U.S. agricultural imports from the region averaged only about \$46 million annually during 1960-63, with Thailand accounting for about 80 percent of the total value. Rubber is the leading agricultural import. Other items of significance imported by the United States are hides and skins, duck feathers, kapok, tapioca, and cinnamon.

The United States and the Rice Bowl countries grow many agricultural products that are noncompetitive or complementary to each other. However, a few farm commodities exported by both the United States and the Rice Bowl countries are competing directly in world markets. Of these, rice and corn predominate. Over the years ahead the United States may face some increase in competition from other farm products that can be produced in the Region, notably live animals for slaughter, pork and pork products, fruits, and vegetables. The Rice Bowl countries are expanding and developing their market for foodstuffs in the heavily populated industrial centers of the Far East such as Japan, Hong Kong, and Singapore. Trade channels are being opened also with other industrialized countries of the world.

AGRICULTURE IN THE SOUTHEAST ASIAN RICE BOWL AND ITS RELATION TO U.S. FARM EXPORTS

By Boyd A. Chugg, Agricultural Economist
Foreign Regional Analysis Division
Economic Research Service

INTRODUCTION

The so-called Rice Bowl Region of the world has gained increased attention in recent decades, due in part to geographic location, in part to agricultural developments, and in part to political changes. The countries of the region are Burma, Thailand, Laos, Cambodia, and Viet Nam. The Rice Bowl countries, together with the States of Malaya, occupy the southern extreme of continental Southeast Asia. The Region borders both India and China, the two most populous countries of the world. Its land mass extends into the long-established and well-used trade channels between the Indian and Pacific oceans. Free and open access to these trade channels is important to the free world, both economically and politically.

Economically, the Region has exportable surpluses of several agricultural products, but especially rice. Even with existing low yields and general underdevelopment of agriculture and its infrastructure, Burma, Thailand, Cambodia, and the Republic of Viet Nam are the only countries in the rice-eating Far East that consistently produce more rice than is needed for their own populations. With the many favorable natural conditions in the Region, yields of agricultural products can be substantially increased by the further application of advanced technology.

The Southeast Asian Rice Bowl countries, though rich in natural resources and in ancient customs and civilizations, are poor in capital and skills. The vast majority of the people are still engaged in agricultural production. Their few crops for export are highly sensitive to world price fluctuations. With a few exceptions, the farmers (peasants) still carry on the cultivation practices of their ancestors. They are generally poorly educated and have not found or been given any lasting incentive for change. Political independence has not greatly changed the

economic and social structure which determines the peasants' way of life. The intensive application of human labor is still the essential way of farming.

Politically, Southeast Asia has become an active battleground in the ideological war between communism and democracy. The United States is actively engaged in supporting democratic forces.

THE RICE BOWL COUNTRIES

The area analyzed in this report consists of the following countries as they are now constituted: Union of Burma, Thailand, Laos, Cambodia, and Republic of (South) Viet Nam (see map). Over the years there have been several changes in political divisions and boundaries. Following World War II, French Indo-China became the independent countries of Cambodia, Laos, and Viet Nam. Viet Nam was later (1954) divided at the 17° parallel into North (Democratic Republic of) and South (Republic of) Viet Nam. During the Japanese occupation of most of this area (1940-45), the rice-producing provinces of Battambang and Siem Reap in Cambodia were taken from the French and control was given to Thailand. In 1946 these provinces reverted to Cambodia.

Burma was separated from India in 1937. The various states and regions now constituting the Union were joined together in 1948 and became a fully independent nation outside the British Commonwealth.

Five great rivers in the area of this report have dominant influence on agriculture as well as transportation and population concentrations. All five originate in the southeastern Himalayas. They are the Irrawaddy, Sittang, and Salween in Burma, the Chao Phraya in Thailand, and the Mekong with its vast untapped potential which flows by all five countries.

Most of the land lies between 5° and 25° north of the Equator and is considered a tropical monsoon area. With 80 million inhabitants, it has the highest land per capita ratio in the Far East.

Burma

Burma, geographically lying between 10° and 28° north latitude and 93° and 103° east longitude, shares land borders with

six countries. Thailand and Laos occupy the east border; Tibet and Yunnan province of China the north and northeast; and India and East Pakistan the northwest. Like a giant horseshoe, mountain ranges encircle the country. Rising some 2,500 to 4,500 meters, they present barriers to land travel and have thus contributed to Burma's isolation from neighboring countries. At the open end of the horseshoe, the country's 2,000-kilometer coastline extends along the Bay of Bengal and the Andaman Sea.

The tropical climate has alternating seasons of wet and relatively dry conditions dictated by monsoons. There is a well-defined rainy season from May to October. Rain during the remainder of the year is light and sporadic. The two coastal regions of Arakan and Tenasserim, along with the extreme northern mountain area, receive the heaviest rainfall. The Arakan Yoma mountain range cuts off the center of Burma from the monsoonal rain. This area, known as the dry zone, around Mandalay and extending south to Prome and along the upper Sittang river valley, receives the least rainfall. The dry zone depends on irrigation for most of its successful crop production. Another area of high rainfall is the south-central section which includes the large rice delta.

Burma has eight major topographical areas: (1) the Arakan coastal plain along the Bay of Bengal; (2) the Arakan Yoma, a mountain range dividing the western border from the Central Irrawaddy valley; (3) the northern hills; (4) the Shan plateau on the eastern border; (5) Tenasserim, a part of the western shore of the Malay peninsula and the southern extremity of Burma; (6) the dry zone in the heart of Burma; (7) the Pegu Yoma, a small mountain range in the central valley dividing the Irrawaddy and Sittang River valleys; and (8) the broad flat delta in south-central Burma formed by the deposits of the Irrawaddy and Sittang River systems.

The three main rivers, Irrawaddy, Sittang, and Salween, run southward through Burma and play a vital part in the country's economy. The Irrawaddy, which runs the full length of Burma, is the principal artery of commerce. It forms the greater part of the central valley and has created the broad delta that supports Burma's important rice crop. Its valley and delta are the most heavily populated regions. The Sittang River, which forms in

central Burma, is separated from the Irrawaddy Valley by the Pegu Yoma. Its wide valley and delta contribute to the southeast rice-growing area. The Salween River flows through the Shan Plateau where its many rapids prevent navigation. Its valleys are narrow except for an area of flat land where it enters the sea near Moulmein. The river is used mainly for floating timber downstream from the forests of the east.

The country's population is composed of a number of distinct ethnic groups with historic rivalries. Burman, Karen, Kayah, Kachin, Arakanese, and Mons, together with various hill tribes, make up the total population. The Burmans, who occupy most of the level land area throughout the central and lower delta, are the largest ethnic group, comprising about two-thirds of the total population.

More than 90 percent of the people are Buddhists and its precepts strongly influence national behavior. A central precept of the faith is the gaining of eternal peace (Nirvana). The path to Nirvana is found by doing good deeds. Acquisition of power or economic means in this life is secondary to attaining merit by good deeds, having a spirit of tolerance, and showing restraint or cessation of desire. Much of the timing of human activity is affected by Buddhist cosmological and astrological beliefs.

Burma is an agricultural country with rice overwhelmingly its most important product. The country as yet has very little industrial capacity for producing capital goods and only limited capacity for turning out consumer items. Important mineral deposits, such as lead, zinc, tin, tungsten, and petroleum, are present but relatively unexploited.

Burma is an ancient country that has recorded many conquests and rulers. The first relatively unified state emerged in the 11th century. It was overrun by the hordes of Kublai Khan in 1287; internal disorder and intermittent wars with neighboring powers followed. After a series of wars from 1824 to 1886 with Great Britain, Burma became a part of the British Indian Empire. Roads, cities, and rice lands were developed. Burma was separated from India in 1937 and granted a separate constitution, which provided a considerable measure of self-government. Burma

then emerged as the world's largest exporter of rice. The country was granted full independence outside the British Commonwealth in 1948.

Burma has never fully recovered from the devastation of the agricultural economy that took place during World War II. Reconstruction and economic recovery are still retarded by civil disturbances incited by regional and racial groups. Burma today is a loosely organized union of peoples occupying separate regional areas. The regions are Divisional Burma (administrative districts), which encompasses the delta and valleys of the Irrawaddy, Chindwin, and Sittang River systems; four states, Karen, Kayah, Kachin, and Shan; and the Chin Hills division (see map). Since independence these semiautonomous factions have not been successful in developing a unified national policy for economic recovery and development which is needed to meet the demands of a rapidly increasing population and for improvement of the country's agricultural economy.

Cambodia

Cambodia is adjacent to Thailand, the Republic of Viet Nam, and Laos. It has 365 kilometers of coastline along the Gulf of Siam. Three-fourths of the land area is a broad, saucerlike basin. The basin is partly rimmed by low, disconnected mountains, but the country itself has little mountainous terrain.

A warm, humid, and fairly mild climate prevails throughout the year. The climate is favorable to growing a wide variety of crops the year around but traditionally the peasant produces only one crop per year. Rainfall is heaviest during the southwest monsoon, from June to November. The southwestern mountains, over which the moisture-laden air currents enter the country from the Gulf of Siam, receive the heaviest rainfall. Rainfall drops as the wind currents move inland, but rises again over the higher eastern elevations. Parts of the lowlands often suffer from drought.

The longest river in Cambodia is the Mekong, which enters from Laos in the north and leaves in the southwest through the Republic of Viet Nam to empty into the South China Sea. At Phnom Penh, the capital city of Cambodia, the Bassac River is

formed from a branch of the Mekong and flows parallel with the Mekong, although several kilometers south, to the sea. Some seven smaller rivers in Cambodia empty into the Mekong as it flows through the country. Eight others flow into the Gulf of Siam. About 10 small streams empty into the Tonle Sap, one of the largest inland lakes in Asia.

The Tonle Sap, a giant lake reservoir in the central flatland, has a unique physical feature. During the rainy monsoon season of June-November, the water in the river connecting the Tonle Sap with the Mekong at Phnom Penh flows toward the lake. The Tonle Sap during this season rises 12 to 15 meters and increases some seven times in size, to about 2,000 square kilometers at full flood stage. During the dry season, December through May, the river flow reverses and the lake shrinks as the water empties back into the Mekong River.

These rivers and the lake play a vital role in the lives and activities of Cambodians. The majority of the people live along the waterways, which provide them with major arteries of transportation and communication. Streams overflow the low areas, depositing silt and renewing soil fertility for the important rice crops. Seasonal variations of the water levels sometimes cause damaging floods or drought.

Today Cambodians are a heterogeneous people whose ancestors were of many races. Their origin is ancient and obscure. In a period prior to 2,000 B.C., a migration from the northwest moved into the Mekong Delta area. Soon after, they came in contact with people of Indonesian stock living in what is now southern Cambodia. At the beginning of the Christian era, these people were known as Khmers and generally resembled the present-day Cambodians.

Successive waves of migration into the Khmer empire originated from India in the third century B.C. In the eighth century A.D., Cambodia received an Indo-Malay invasion from Java. Thai invasions occurred from the 10th to the 15th century. In more recent times the physical makeup of the Khmers has been affected by mixing of Vietnamese, Chinese, and Europeans.

Almost 90 percent of the population of Cambodia are now classified as Khmers. They have adopted the ancient culture of

the once vast empire which reigned from 802 to 1432 AD and extended from the South China Sea to the Bay of Bengal and north to China.

The Cambodians are a product of countless centuries of Khmer culture and racial blending. They are Buddhists, have a common language (Khmer), show reverence for the throne, and share a deep sense of nationalism.

Agriculture is now and always has been the basis of the Cambodian society and economy. Long before the French came to Cambodia in 1863, an economy based on farming for family consumption prevailed. Then, as now, the predominant items in the diet were rice, fish, fresh fruits, and vegetables.

For export the French built up rice and rubber production while Chinese interests developed pepper. Today the economy is primarily dependent on the first two of these crops. Commercial trade attracted foreign bankers and businessmen, principally Chinese, Vietnamese, and French. Railways, highways, and a seaport at Sihanoukville are slowly being improved and developed.

The forests are wild and unexploited. Mineral resources have not been extensively explored. Industry is limited to rice milling and other small agricultural processing along with handicrafts for local consumption. Recently, cotton textile, plywood, paper, and cement factories have been constructed.

Laos

Laos is a palm-tree-shaped country of some 22.3 million hectares, about 1,000 kilometers long and ranging from 100 to 500 kilometers in width. Forested mountains make up two-thirds of the country. Two large plateaus, the Bolovens in the south and the Tran Ninh (Plane de Jarres) in the north, together with the lush valleys along the Mekong River, provide almost all its level and cultivated area. The Mekong River, with all the larger cities on its left bank, is the principal means of transportation.

This landlocked Kingdom is bordered by six nations: Cambodia on the south, South Viet Nam and North Viet Nam on the east, the Peoples Republic of China on the north, Burma on

the northwest, and Thailand (an ethnic as well as a geographic neighbor), which shares the Mekong along part of its long western border.

Laos lies within the tropics and is in the monsoon belt. Altitude ranges from near sea level to 2,000 meters. Tropical, subtropical, and temperate-zone crops can be grown. At the higher elevations such as the Tran Ninh plateau the climate is mild enough for many temperate-zone crops and livestock, yet warm enough for bananas and papayas to flourish.

On the average, most areas of the country receive at least 60 inches of rainfall per year. On the Plateau des Bolovens, where rainfall is heaviest, the annual average in one section exceeds 160 inches. Nevertheless, sections of the Kingdom suffer crop damage from drought each year during the rainy season.

The Kingdom of Laos descends from Lan Xang (Land of a Million Elephants); it emerged in the 14th century. Its area was considerably larger than at present. Lan Xang endured until about the end of the 17th century when it separated into three rival Kingdoms, ruled from the cities of Luang Prabang, Vientiane, and Champassak. Each was headed by a member of the royal family. They remained autonomous until 1946 when the French established the present constitutional parliamentary monarchy. The country gained its independence from France in 1954. The Government is headed by a King, a direct descendant of the royal Lan Xang and Luang Prabang line, along with an appointed Prime Minister. The Government, with headquarters in Vientiane, has been neither strong nor unified.

Laos has about 2.5 million people representing hundreds of ethnic tribal groups. The Lao group is in the majority, making up over 50 percent of the population. They live in the lowlands and are the chief cultivators of flooded paddy fields. Other ethnic groups predominate in the mountain villages.

For centuries the total population has been almost entirely engaged in agriculture. The people continue to follow traditional patterns of subsistence farming on a family basis. They do not expect their farms to produce more than enough to satisfy the family's meager needs.

The agricultural economy of Laos is extremely primitive by any accepted standards. For the peasant and his family, life is an annual routine of cultivating, planting, and harvesting. The way of life is dictated by the monsoon cycle and punctuated by exuberant religious celebrations. The country produces a wide variety of crops. Both livestock and poultry are raised. Rice is the most important crop. The production of agricultural products for trade is very limited. Most trade in farm products is in small amounts, local and on a barter basis.

Enough food to provide an adequate diet for all Laotians can be produced within the country. Deficiencies that now exist are mainly the result of physical, educational, and economic underdevelopment. Presently, rice accounts for 85 percent of the caloric intake. It is basic to each meal. Fish supplements this basic rice diet. Fruits and vegetables are plentiful in season. Wild bamboo shoots, nuts, and other wild foods are commonly gathered. Meat is supplied irregularly through the many religious sacrifices of animals.

Insecurity, war damage, tradition, and uprooting of large numbers of people over the last two decades have blocked economic development and heightened the Kingdom's dependence on foreign assistance. There are no railroads and only a primitive road system, much of which is impassable during the rainy monsoon periods. Almost all manufactured products must be imported because only the most rudimentary industries exist. The one high school that includes a 12th grade graduates 75 persons annually. Only a few graduates go on to foreign universities.

Republic of Viet Nam

The Republic of (South) Viet Nam, shaped like a boomerang, is curved, long, and narrow. Its width varies from only 50 kilometers in the north to 200 kilometers in the center. The country has a coastline of more than 1,200 kilometers along the South China Sea. The country extends from 8.5° to 17.0° north latitude and from 104° to 109.5° east longitude. It is bordered on the south and east by the South China Sea, on the west by the Gulf of Siam, Cambodia, and Laos, and on the north by the Peoples Democratic Republic of (North) Viet Nam.

The country can be divided into three main geographic areas: (1) The flat Mekong Delta from Saigon south; (2) the Annamite Mountain chain, rising to heights of 1,830 meters and running parallel with the coast from Phan Thiet north to the border of North Viet Nam, with an elevated plateau area extending west to the Cambodian and Laotian borders; and (3) the coastal plain, sometimes quite narrow, extending east of the Annamite chain to the sea.

The weather pattern is divided into two main monsoon periods with a transition period after each. From mid-May to October, the southwest monsoon brings warm, moist air over the country from the tropical area southwest of Viet Nam. The mountain plateau and the delta receive at this time their maximum rainfall, with almost daily showers. The coastal sections to the east of the Annamite Mountains have little rain and the warmest temperatures of the year occur during this period. From October to mid-November the fall transition period occurs. Precipitation decreases except over the coastal section, which receives its maximum precipitation at this time.

During the northeast monsoon season (mid-November to mid-March) air which originates in Northern Asia and adjacent Pacific areas moves into the country from the northeast. As a result, it becomes cooler and drier. The weather is generally fair but with some cloudiness and light rain during the early part, especially along the coast. Mid-March to May is the spring transition period. It is the warmest season over the mountain plateau and delta areas.

Typhoons and tropical storms rarely affect the southern portion of the country but occasionally enter or skirt the central and northern section. They are accompanied by heavy rain and high winds and generally occur during September to December.

The Mekong and Bassac Rivers form the large southern rice delta. Waterways crisscross the area south and southwest of Saigon where the building of roads is impracticable. The canals and rivers permit medium-size ships to navigate great distances throughout the delta. The canal system also performs a vital irrigation and drainage function. Much of the system is unusable as a result of silting and lack of maintenance during the long period of civil disturbances.

The one railroad reaches from Saigon along the coast north to Quang Tri near the 17th parallel. National highways extend the length of the country, with others running from the coast west to Phnom Penh and Battambang in Cambodia and to Savannakhet in Laos. Waterways and airways are used extensively.

About 85 percent of the people are ethnically Vietnamese. Among the remainder of the population, the largest minorities are the Chinese and the indigenous mountain groups collectively known as Montagnards. The Vietnamese closely resemble the Chinese, though they have long maintained a strong separate identity. Their language, once written in Chinese characters, is today one of the few languages in the Far East written in a Roman alphabet (quoc ngu), having been phonetically transcribed by Jesuit missionaries in the 16th century. About 90 percent of the population are Buddhists and 10 percent are Christians, most of the Christians being Catholic.

Prior to World War II, the territory encompassed in the Republic of Viet Nam was devoted mainly to agricultural production. Under French guidance the Mekong Delta was developed into a vast rice-producing area which provided a surplus for the rest of the country plus annual exports of around 1.5 million tons. Rubber production, which was introduced by French planters, provided the second major export.

The Vietnamese economy had little opportunity to recover after World War II, as civil warfare began in 1946. The Vietnamese (Viet Minh and other groups) in their struggle with the French from 1946 to 1954 brought disorder to the countryside, and the agricultural population largely confined its productive activity to meeting its own meager needs.

After partition of Viet Nam in 1954, agricultural production recovered rapidly and by 1957 exports of rice and rubber were resumed. But a steady increase in insurgent activity reached alarming proportions by 1960, again slowing agricultural and general economic progress.

Since partition in 1954, the Republic has been developing its own resources and establishing industries with assistance from abroad. Diversification in agricultural production is gradually

taking place. Adoption by the peasants of better agricultural practices and new varieties, and extending the use of fertilizers and plant protective measures, have all aided in maintaining the food supply of the country, despite the harassment of the insurgents. Some progress has also been made in developing the livestock, poultry, and fishery wealth of the country. Known mineral resources are limited and only light industry which complements agriculture and provides for domestic market is in operation.

Thailand

The Kingdom of Thailand, with an area of 5.4 million hectares, extends some 1,900 kilometers from north to south and in width varies from only 15 kilometers in the peninsula to 800 kilometers through central Thailand. The heart of the Kingdom is the central plain where the Chao Phraya (Mother of Waters) River system flows. This triangular flat plain is interwoven with canals and is considered the rice bowl of Thailand. In addition to the central plain, the Kingdom consists of three other rather distinct regions. These are the northeast, southern peninsula, and northern regions. The northeast or Khorat plateau is a low, broad, flat-to-rolling plateau, where conditions are favorable for cattle raising and the growing of many upland crops. Conditions in the peninsula are favorable for rubber and coconut production. The northern area is dissected by mountains and valleys and has a diverse agriculture.

Thailand, for the most part, has a tropical climate with definite wet and dry seasons. Annual rainfall averages 40-60 inches, except along the west slopes of the peninsula where it may average 165-200 inches annually. The Khorat plateau receives the least. In this area drought and flash floods are common.

Eighty percent of the people are ethnically Thai. Although there are slight regional differences most of the people speak the same language, practice the same religion, and are physically and culturally similar. They share a common historical tradition and respect for the monarchy.

Thailand has had a long history of highly centralized government, ruling with a firm but benevolent hand. The Kingdom has

never been subjected to colonial rule. Today the people are progressive and have a rather strong sense of national identity.

The Thai economy is basically agricultural. Rice is the major crop, providing 75-80 percent of the total caloric intake in the diet and accounting for one-third of the value of all exports. Agricultural diversification is expanding rapidly. Over 80 percent of the people are farmers who own and operate small farms (usually around 5 hectares). They produce ample food for the whole Kingdom plus an exportable surplus.

Thailand has several seaports, with most of the traffic at Bangkok. Many feeder roads now under construction will connect with a main road system which extends to all regions from Bangkok. There are sectors of the major highways that are still not adequate for year-round service. Inland waterways are Thailand's oldest and historically most important means of transportation.

A railroad extends from Bangkok to the northern city of Chiangmai; to two terminal points along the Mekong River in the northeast; to the southeast, where it connects with the Cambodian railroad to Phnom Penh, and to the south where it connects with the cities of Kuala Lumpur and Singapore in Malaysia.

The Kingdom is steadily developing the infrastructure which is needed to increase its agricultural production and diversification. While the economy is yet predominantly agricultural, a trend toward more industrialization is shown by additional manufacturing, business, and other commercial establishments. However, as yet most of Thailand's manufacturing establishments are small, many little more than workshops.

AGRICULTURAL PRODUCTION

Physical conditions within the Region are favorable for a diversified tropical agriculture. A large variety of food and fiber crops and several kinds of livestock and poultry are produced. Where proper instruction and incentives are provided, farmers have responded by increasing production of crops for sale. The best example of such response is Thailand's corn-production program.

However, there are several obstacles mitigating against obtaining rapid additional production. Most farmers in the Rice Bowl are poorly educated. Labor is not used effectively the year around. Farms are small and yields are low. Capital for improvement or expansion of the farm is generally insufficient or available only at exorbitant rates of interest.

Land utilized for farming ranges from 18 percent of the 22.3 million hectares in Laos to 40 percent of the 17.1 million hectares in the Republic of Viet Nam (table 1). The present cultivated land consists mainly of natural, flat, flooded rice paddy where rainfall is abundant. The heavy rainfall during monsoonal periods causes streams to overflow their banks and leave silt deposits which partly restore plant nutrients to the land each year. Other major crops utilizing cultivated land are corn, pulses, oilseeds, tobacco, sugarcane, cotton, tea, and rubber. These crops are mostly grown on lands where neither natural flooding nor manmade water-distribution systems exist.

A large part of the area of each country is covered by tropical forests and undrained swamps. Some of these lands may be used for cattle grazing or cleared and drained for crops under certain conditions.

Population density per square kilometer in continental southeast Asia is the lowest in the Far East. In an area where 80-90 percent of the population is engaged in the production of food and fiber, farmland per capita ranges from about 0.36 hectare in Thailand to 1.67 hectares in Laos. The population pressure on existing farmland is greatest in Thailand where crops are now produced on 9.0 of the 10.3 million hectares of farmland, compared to only 6.6 of the 17.5 million hectares of farmland in Burma and 1 out of every 4 hectares in Laos.

Although descriptive material is available for formulating a general picture of the region's agricultural economy, the statistics on agriculture, as in many other developing countries, are often inadequate for specific analysis. The agricultural statistics used throughout this report are from several sources, most of which use different methods to arrive at estimates of such items as land use, agricultural production, and trade. Where conflicts have arisen in the statistics used, minor adjustments have been necessary to make all countries more comparable.

Copies

Data published by the same source are not always comparable from one period of time to another. There is evidence of under-reporting of production and livestock numbers; also of unrecorded trade in farm products across frontiers. Even population figures are not firm; Thailand conducted a complete enumeration in 1960, but none of the other countries have done so.

Table 1.--Land use: Estimates for selected countries of Southeast Asia, 1962

Area and use	Burma	Cam- bodia	Rep. of Viet Nam	Laos	Thai- land
	----- 1,000 hectares -----				
Total area.....	67,800	18,112	17,085	22,250	51,400
Total culti- vated in crops.....	6,614	2,696	2,900	1,020	9,035
Fallow and other culti- vable.....	10,848	1,198	4,000	3,000	1,279
Total farm- land.....	17,462	3,894	6,900	4,020	10,314
Forested, permanent grazing, swamps.....	45,274	13,666	8,720	15,940	30,211
Waterways, urban, other.....	5,069	552	1,465	2,290	10,874
	----- Million -----				
Population 1962.....	23.2	5.7	14.9	2.4	28.7
	----- Hectares -----				
Farmland per capita..	0.75	0.68	0.46	1.67	0.36

FAO Prod. Yearbooks (8), Agr. Statis. Thailand (13), Cambodian Ministry of Agriculture (19). Underscored numbers in parentheses refer to items in the Literature Cited, p. 60.

Rice

The Rice Bowl countries, Burma, Thailand, Cambodia, Laos, and the Republic of Viet Nam, produce about one-sixth of the free world's rice supply (table 2). They account for almost two-thirds of the rice entering international trade. Their production and exports become even more significant when related to the Far East and South Asia where most of the rice-consuming peoples of the world live, and where some 85 percent of the exports originate from the Rice Bowl countries.

In 1935-39, the five countries produced an average of 17 million metric tons annually or about 18 percent of Asia's rice (excluding Mainland China). By 1960-64, their combined production had expanded by 47 percent to 25 million tons annually--again about 18 percent of all rice produced in Asia.

For the five countries, Thailand has contributed about 50 percent of the increase since 1955-59. Thai production has steadily increased over the years. Even during World War II and shortly thereafter, Thailand's production rose, along with that of Laos and Cambodia, as relatively little damage occurred during that period to the rice fields. In contrast, war-inflicted damage to rice paddies in Burma and Viet Nam drastically lowered production during the 1940's and early 1950's. Aside from war damage, the slow traditional process of reclaiming and improving rice-growing areas and the vagaries of weather have continued to be the dominant factors determining the size of the rice crop.

The area devoted to rice in each country has not increased as fast as production. The combined acreage of the five countries rose from an annual average of 12.3 million hectares during 1935-39 to 16.2 million hectares during 1960-64, up about 30 percent. Burma is producing as much rice as it did during 1935-39 on approximately 12 percent less land. The other four countries have all increased the acreage devoted to rice.

For the region, production per capita decreased from 399 kilos in 1935-39 to 352 kilos per person in 1963 or 12 percent less than prewar (table 3). However, Thailand's rice production per capita has continued to show a small but steady gain. Burma, on the other hand, did not until recent years return to the prewar

Table 2.--Rice, rough: Area and production, specified regions and periods, 1935-65 ^{1/}

Region	1935/36-1939/40 av.		1945/46-1949/50 av.		1955/56-1959/60 av.		1960/61-1964/65 av.	
	Area	Production	Area	Production	Area	Production	Area	Production
	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	ha.	M.T.	ha.	M.T.	ha.	M.T.	ha.	M.T.
Asia: ^{3/}	63,351	97,419	66,640	93,639	74,540	117,456	79,815	138,450
Burma.....	5,544	7,711	3,440	4,763	4,492	6,990	4,894	8,015
Cambodia.....	842	853	930	831	1,983	2,200	2,247	2,460
Laos.....	378	411	607	631	665	770	630	743
Republic of Viet Nam.....	2,706	3,798	^{4/} 1,230	^{4/} 1,519	2,155	4,098	2,382	5,022
Thailand.....	2,868	4,349	4,132	5,433	5,171	7,005	6,037	9,092
Total of above 5.....	12,338	17,122	10,339	13,177	14,466	21,063	16,190	25,332
North America.....	590	1,270	1,001	2,098	1,158	3,141	1,240	3,836
United States.....	406	1,018	684	1,610	626	2,238	688	2,879
Europe ^{5/}	224	1,085	226	1,000	368	1,868	324	1,540
South America.....	1,173	1,819	2,167	3,740	3,280	5,479	4,073	7,430
Africa.....	1,855	2,253	2,618	3,400	3,222	4,316	3,460	4,990
Oceania.....	16	55	40	101	36	133	37	162
Total.....	67,210	103,901	72,693	103,969	82,604	132,395	88,950	156,409

^{1/} Crops harvested in Northern Hemisphere during the latter part of the year, together with those harvested in Asia from Nov. to May, are combined with crops harvested in Southern Hemisphere countries during the first part of the following year. Harvested acreage is shown unless data for planted acreage only are available. ^{2/} Preliminary. ^{3/} Excludes Mainland China and from 1955 through 1965 North Korea and North Viet Nam. ^{4/} Includes the Cochinchina areas of the Rep. of Viet Nam only. Production in Annam (Central Viet Nam) south of the 17^o parallel is estimated between 200,000 and 250,000 metric tons annually during this period. ^{5/} Excludes USSR.

Foreign Agr. Serv. (16), Econ. Res. Serv. (17).

Table 3.--Rice, rough: Estimated production per capita, specified countries and periods, 1935-64

Country	1935-39	1945-49	1955-59	1962	1963	1964 pre-	Change, 1963 com-	
	average	average	average			liminary	pared with earlier	periods
							1935-39	1955-59
							average	average
	-Kilograms-						-Percent-	
Burma.....	497	266	348	352	360	350	- 27	✓ 4
Cambodia.....	284	225	478	460	449	433	<u>1/</u> ✓ 58	- 6
Laos.....	228	315	367	303	310	297	✓ 36	- 15
Republic of Viet Nam.....	469	<u>2/</u> 159	323	349	327	338	- 30	✓ 1
Thailand.....	300	312	289	322	343	328	✓ 14	✓ 19
Total.....	399	<u>2/</u> 253	331	347	352	343	- 12	✓ 7

1/ Part of this increase is statistical rather than real. Rice production data in Cambodia were adjusted in the later years based on revised data on the distribution of land according to use in 1958. 2/ Incomplete - see footnote 4, table 2.

Foreign Agr. Serv. (16), Econ. Res. Serv. (17).

level of production. In the meantime, Burma has registered a population increase of over 50 percent compared with 1937. Thus per capita production is substantially below prewar. Since the relatively stable period of 1955-59 in Southeast Asia, both Burma and the Republic of Viet Nam have maintained their per capita production of rice, while Cambodia and Laos have registered a decline.

Surrounded by countries whose peoples have for centuries eaten rice as their basic food but that are deficit rice producers, the exporting countries of continental Southeast Asia generally have a ready market for their rice.

Rubber

The Far East produces over 90 percent of the world's crude rubber. The largest concentration is in Southeast Asia. Malaysia and Indonesia are the world's two leading countries in both production and exports. Thailand, although producing considerably less than either of these two countries, is in third place. Together, Thailand, Burma, Cambodia, and the Republic of Viet Nam contribute about 15 percent of the 2 million tons of crude rubber produced in the world (table 4). Thailand now produces about five times as much as it produced in 1937-39 but has shown no substantial change over the past 3 years. The French established new rubber plantations after World War II in both Cambodia and South Viet Nam, and the annual production in these two countries is now double the 1937-39 average.

Many southeast Asian countries, faced with the competition of synthetics and the 6 to 8 years after planting for trees to start yielding latex, have not increased or improved plantings. In consequence, many of the trees in Thailand and especially in Burma are old and yields are quite low. Also, rubber in these two countries has been developed on many small individual holdings rather than on large estates as in Viet Nam, where four companies furnish 75 percent of the production.

Corn

Corn production in the Rice Bowl has expanded from an average of 377,000 metric tons during 1955-59 to nearly 1.3 million in 1964 (table 5). Expanded output in Thailand accounts for

Table 4.--Rubber: Production by specified countries and world production, selected periods, 1937-64

	1937-39 average	1947-49 average	1957-59 average	1961	1962	1963	1964 prelim- inary
	----- 1,000 metric tons -----						
Burma.....	11	---	17	18	17	17	16
Indo-China 1/.....	60	42	---	---	---	---	---
Cambodia.....	---	---	33	40	41	42	43
Rep. of Viet Nam.....	---	---	72	79	78	76	75
Thailand.....	40	86	150	186	195	198	195
Total of above.....	111	128	272	323	331	333	329
Other Asia and Oceania.....	913	1,245	1,562	1,628	1,646	1,575	---
All other countries.....	33	76	158	170	177	180	---
World total.....	1,057	1,449	1,992	2,121	2,154	2,088	---

1/ Consists of Cambodia, Laos, and Viet Nam. Separate figures for individual countries are not available prior to 1954. Rubber production was restricted to what is now Cambodia and the Republic of Viet Nam.

Rubber Statis. Bul. (9), Econ. Rcs. Serv. (17).

Table 5.--Corn: Production in specified countries, selected periods, 1935-64

Year	Burma	Thailand	Cambodia	Rep. of Viet Nam	Laos	Total
----- 1,000 metric tons -----						
1935-39 average:	42	5	374	33	40	494
1948-52 average:	28	31	80	---	12	151
1955-59 average:	41	165	126	29	16	377
1960.....:	44	544	119	27	15	749
1961.....:	45	600	147	32	18	842
1962.....:	77	680	182	38	19	996
1963.....:	70	900	100	37	18	1,125
1964 preliminary:	62	980	174	38	18	1,272

FAO Prod. Yearbook (8), Econ. Res. Serv. (17).

most of the increase. However, compared to total world production, that of the five Rice Bowl countries is still quite small--less than 1 percent of the world's total.

Corn has recently become an important export commodity, especially for Thailand. Until around 1956, about half of that country's corn production was utilized domestically. In recent years about 85-90 percent of total production has been exported. Conditions exist for rapid expansion for export in both Cambodia and the Republic of Viet Nam. With a rapidly growing requirement for meats in Japan, Hong Kong, Singapore, and other nearby Asian areas, feed grains such as corn are receiving a more prominent position in agricultural trade. Thus the outlook is for a continued expansion in production.

In the Region corn is mainly consumed in the form of cornmeal by ethnic groups living in mountainous areas. Only minor amounts are consumed as a fresh vegetable or used as feed for livestock.

Cotton and tobacco

For centuries cotton and tobacco have been grown in limited quantities in Southeast Asia. Poor quality has characterized both products. Improved varieties and practices are slowly being introduced to help attain higher production and a quality that is more consistent with demand.

The annual average production of cotton for the five countries during 1955-59 was 26,000 tons (table 6). Although cotton production had increased by some 45 percent by 1964, the crop still represented less than one-half kilo of fiber per capita. By comparison, the total world production averages approximately 3 kilos per capita.

Table 6.--Cotton and tobacco: Production in specified countries, selected periods, 1955-64

Country and commodity	1955-59 average	1960	1961	1962	1963	1964 preliminary
----- 1,000 metric tons -----						
Cotton:						
Burma.....	16	16	21	20	14	19
Cambodia... Rep. of	Neg.	2	10	3	2	3
VietNam:	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Laos.....	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Thailand....	10	15	13	14	13	14
Total.....	26	36	44	37	29	36
Tobacco:						
Burma.....	41	40	36	41	43	39
Cambodia... Rep. of	7	6	6	6	6	6
VietNam:	7	8	8	8	7	7
Laos.....	1	Neg.	Neg.	Neg.	Neg.	Neg.
Thailand....	26	28	29	30	31	35
Total.....	82	82	79	85	87	87

Neg. = negligible or less than 1,000 tons.

Econ. Res. Serv. (17)

The annual average production of tobacco presents almost a static situation in each country. Production for the five countries grew from an average of 82,000 tons during 1955-59 to only 87,000 tons in 1963.

Practically all the cotton and tobacco produced are utilized in the countries where they are grown. Burma and Thailand occasionally export small quantities of specialized types of both cotton and tobacco.

Other major crops

In a land where very little food, except rice, is stored or preserved and transportation facilities for prompt and wide distribution are inadequate, the people are largely dependent for their food supply upon what they can produce locally. A large variety of tropical and semitropical foods are grown in Southeast Asia. Most of the products are consumed locally. In addition, a few products such as cassava in Thailand and black pepper in Cambodia are grown primarily for export.

A multitude of tropical fruits and fresh vegetables are available for food. Current estimates indicate at least a one-third increase in the availability of fruits and vegetables over the last 5 years (table 7). Although fruit and vegetable production probably has increased rapidly, it is likely that some of the indicated recent gain is attributable to broader coverage and more adequate statistical reporting.

Kenaf, cassava, and centrifugal sugar are other major products for which sharp production increases are indicated. Increasing quantities of cassava are being grown for export in the forms of tapioca flour and cassava meal. More kenaf is being grown to satisfy the increasing local demand for gunny bags and to replace imports from India and Pakistan. Thailand has built plant facilities to make gunny bags from domestically grown kenaf.

Expanded demand for soft drinks, reconstituted milk, and related products has greatly expanded the consumption of centrifugal-type sugar. Small quantities of sugar have also been

Table 7.--Selected crops: Production by specified countries, 1957-59 average and 1963

Commodity	Burma		Cambodia		Rep. of Viet Nam		Thailand	
	1957-59 average	1963	1957-59 average	1963	1957-59 average	1963	1957-59 average	1963
	1,000 metric tons							
Cassava.....	Neg.	Neg.	Neg.	Neg.	164	360	663	2,000
Castorbeans.....	Neg.	Neg.	Neg.	5	1	3	32	45
Kenaf and jute.....	3	32	1	2	1	5	37	152
Black pepper.....	Neg.	Neg.	2	1	Neg.	Neg.	Neg.	Neg.
Pulses ^{1/}	216	300	10	20	8	19	94	78
Tea.....	4	3	Neg.	Neg.	4	5	Neg.	Neg.
Fruits.....	647	695	---	---	^{2/} 35	^{2/} 62	578	1,275
Other vegetables.....	897	940	---	---	^{3/} 165	^{3/} 360	260	995
Peanuts, shelled.....	178	218	2	6	13	22	72	75
Coconut.....	---	---	---	---	96	150	1,189	1,211
Sesame.....	52	67	3	8	1	1	17	16
Soybeans.....	---	---	13	11	2	4	24	33
Cottonseed.....	34	33	0	5	---	1	23	34
Sugarcane.....	1,133	1,213	---	---	818	---	4,481	3,500
Sugar, centrifugal.....	37	65	Neg.	Neg.	5	11	82	176
Sugar, noncentrifugal.....	146	157	27	58	20	32	100	140

Neg. = negligible.

^{1/} Pulses are mainly mungbeans except in Burma where they include larger quantities of various peas and beans. ^{2/} Pineapple only. Other fruit production not available. In 1960/61 fruit production was estimated at 350,000 tons. ^{3/} Sweetpotato only. Other vegetable production not available. In 1960/61 vegetable production was estimated at 110,000 tons.

Econ. Res. Serv. (17).

exported. The output of a number of other crops has also climbed substantially in recent years.

The coconut industry, although still growing, shows signs of deterioration. Output rose 10 percent in the 5 years ending in 1963, only half as much as any of the other vegetable oil crops. Most of the coconut trees in each of the countries are getting old and bearing fewer nuts. Actual replants have been few. Coconut trees, like rubber trees, take several years after planting before the first harvest. They are not grown on large plantations and peasants prefer to devote their resources to crops that will yield immediate returns on an annual basis.

Livestock and poultry

Cattle and buffalo are important for draft purposes rather than as sources of food. Buffalo are used primarily for draft power in plowing fields and other cropping practices. Some cattle are also used for this purpose. Cattle and buffalo are only rarely milked. Meat from these animals for food is available mainly when they are slaughtered because of old age or religious celebrations, or because they are unproductive. Horses, mules, and cattle are primarily used as pack animals and for pulling carts.

Pigs, chickens and ducks are the sources of meat preferred by most of the people in the region. Farm sales of eggs and feathers from chickens and especially ducks give an added incentive for their increased production, especially near the larger metropolitan areas. The abundance of natural resources such as water, and plant and insect life, provide a natural habitat for the raising of ducks.

Selective breeding, feeding, and other controlled management practices are still in the experimental stage, mostly on Government-operated farms. Farm animals commonly forage for their food along the river and canal banks, along roadsides, in forest areas, or in rice fields after harvest. Very little land is devoted to cultivated pastures or to forage for animals. On farms, supplemental feed is mostly composed of banana stalks, rice straw, oilseed cake, rice bran, and cooked broken rice.

Table 8.--Livestock and poultry: Numbers in specified countries, selected periods, 1937-63

Country and period	Cattle	Buffalo	Sheep and goats	Horses and mules	Pigs	Chickens	Ducks and geese
-----1,000 head-----							
Burma:							
1937-39 av. <u>1/</u> ...	5,175	1,020	372	50	530	---	---
1947-49 av. <u>2/</u> ...	4,488	721	193	13	402	---	---
1957-59 av.....	5,065	969	436	21	598	---	---
1963.....	5,384	1,257	573	---	682	---	---
Cambodia:							
1937-39 <u>3/</u>	855	345	15	15	1,000	---	150
1947-49 <u>4/</u>	842	325	15	3	345	---	---
1957-59.....	1,067	352	---	3	426	2,228	577
1963.....	1,325	475	---	---	700	2,800	580
Laos:							
1937-39 <u>5/</u>	250	300	2	10	250	---	---
1947-49.....	<u>6/</u> 179	<u>7/</u> 224	---	13	138	727	192
1957-59.....	192	415	24	25	492	2,415	935
1963.....	313	360	8	14	725	<u>8/</u> 4,880	<u>9/</u>
Rep. of Viet Nam:							
1937-39 <u>10/</u>	610	473	22	20	1,095	<u>8/</u> 3,255	<u>9/</u>
1947-49 <u>11/</u>	181	258	---	---	1,317	---	---
1957-59 <u>12/</u>	916	625	3	---	2,890	11,826	7,890
1963.....	1,100	860	45	---	3,400	17,500	11,000

Thailand:	:							
1937-39 <u>3/</u>:		5,858	5,751	---	398	1,366	---	---
1947-49.....:		4,786	5,384	21	228	2,985	---	---
1957-59.....:		5,048	6,218	---	187	3,955	24,435	8,637
1963.....:		5,650	7,015	---	190	4,150	23,550	7,593
Total:	:							
1937-39.....:		12,748	7,889	---	---	4,241	---	---
1947-49.....:		10,476	6,912	---	---	5,187	---	---
1957-59.....:		12,288	8,579	---	---	8,361	---	---
1963.....:		13,772	9,967	---	---	9,657	---	---

- 27 -
- 1/ Does not include most of the area now known as Shan and Kayah States, Chin Hills, and Putao (northern tip of Burma).
- 2/ Data for only one year, 1947/48.
- 3/ Data for 1939.
- 4/ Average of 4 years between 1947-52.
- 5/ Data for 1940.
- 6/ Data for 1951/52.
- 7/ Data for 1954.
- 8/ Includes ducks and geese.
- 9/ Included in chickens.
- 10/ Data reported for only one year: cattle and buffalo 1939, all others 1937.
- 11/ Data for 1953.
- 12/ Average for 3 years 1958-60.

FAO Prod. Yearbooks (8). Others, (1, 3, 13, 18, 20, 21).

The prevalence of highly contagious diseases and parasitic infestations results in wide fluctuations in livestock and poultry numbers. Diseases have often reached epidemic proportions and they spread rapidly from one country to another. External and internal parasites are common in all classes of livestock and poultry. Personnel and materials available for the inoculation and treatment of animals are inadequate. Wars have also reduced herds and flocks. During the occupation of Viet Nam by the Japanese in World War II, livestock and poultry numbers were reduced by approximately two-thirds. Burma also had many of its cattle and buffalo slaughtered for food and for export by the invading forces.

An actual census of livestock and poultry has never been made in any of the five countries. Estimated numbers are derived from various individual observations and Government reports issued sporadically over a period of years, and therefore are for different points in time. The estimated total number of cattle and buffalo in Burma, Cambodia, Republic of Viet Nam, Laos, and Thailand indicate only a very moderate increase in the past quarter century. Estimated cattle numbers were 12.7 million in 1937-39 and 13.8 million in 1963 (table 8). Buffalo numbers rose from 7.9 million in 1937-39 to 10 million in 1963. During 1937-39 there was one buffalo for every 1.6 hectares of rice paddy. Generally buffalo are preferred for field work. There is much evidence of the superiority of these animals for such work in rice culture. Where buffalo are available in sufficient numbers, plowing and preparing rice paddy are done almost exclusively with these animals. Otherwise, cattle or other draft animals are used. In each country buffalo move from the higher elevations, where they are mostly raised, to the lower delta areas where demand is great for their use in the production of rice.

In each country a more or less fixed ratio between the number of buffalo and the number of hectares devoted to rice seems to have become established. In the individual countries the amount of rice land per buffalo has not changed significantly over the past 25 years. For the five countries combined, this has ranged from a combined average of 1.60 hectares just after World War II to a high of 1.75 hectares in 1957-59, as shown in the following tabulation:

Rice Paddy per Buffalo

<u>Country</u>	<u>1937-39</u> <u>average</u>	<u>1947-49</u> <u>average</u>	<u>1957-59</u> <u>average</u>	<u>1963</u>
----- <u>Hectares</u> -----				
Burma.....	5.55	5.86	4.65	4.02
Cambodia.....	2.76	3.10	5.54	4.83
Laos	1.26	3.04	1.57	1.46
Viet Nam.....	5.68	---	3.70	2.71
Thailand.....	<u>.53</u>	<u>.88</u>	<u>.90</u>	<u>.94</u>
Combined average.....	1.61	1.60	1.75	1.69

There are significant differences between countries. The number of hectares per buffalo in 1963 ranged from roughly 0.94 in Thailand to 4.8 in Cambodia. Thailand, with more buffalo for draft power available per hectare than any of the other countries, more than doubled the area of land devoted to rice production from 1937-39 to 1963. Burma, whose buffalo were devastated during the period of World War II, has yet to reach the prewar area devoted to rice.

Fish has traditionally been the most significant source of animal protein in the diet of the peoples of the Rice Bowl countries. However, poultry and pork seem to be increasing in importance, as indicated by the tabulation below:

Pigs Per Capita

<u>Country</u>	<u>1937-39</u> <u>average</u>	<u>1947-49</u> <u>average</u>	<u>1957-59</u> <u>average</u>	<u>1963</u>
----- <u>Number</u> -----				
Burma.....	0.03	0.02	0.03	0.03
Cambodia.....	.33	.09	.08	.12
Laos17	.08	.22	.30
Viet Nam.....	.14	.13	.22	.22
Thailand.....	<u>.09</u>	<u>.17</u>	<u>.16</u>	<u>.15</u>
Combined average.....	.10	.10	.13	.13

FOREIGN TRADE

The foreign trade of Burma, Cambodia, Laos, Republic of Viet Nam, and Thailand consists chiefly of exports of agricultural products and imports of industrial goods. Widely fluctuating prices for important agricultural export commodities constitute one of the major economic problems of Southeast Asia.

A relatively few commodities account for the bulk of exports from all five countries. Rice is by far the most important, followed in order by rubber and corn. Other export items include cotton, pulses, and oilcake from Burma; cassava, kenaf, kapok, and castorbeans from Thailand; coffee from Laos; tea and hogs from Viet Nam; and pepper, kapok, live animals, and pulses from Cambodia. The major exports of nonagricultural products are limited mainly to tin, wood and wood products, and some fish. Considerable illegal traffic is conducted in gold and opium.

Agricultural products are only a small part of the total value of imports for each country. Dairy products, wheat flour, high-quality cigarette tobacco, and cotton are the major agricultural products purchased from outside sources.

Traditionally, Southeast Asian people have not included dairy products and bread in their diets. With changes in dietary habits more of these products are being imported and consumed.

Trade in Major Agricultural Products

Rice: World trade in rice is concentrated in the Far East, where this cereal is the staple item in the diet of most of the people. Not only is rice the chief food of the Southeast Asian people, it is also the largest earner of foreign exchange for Burma and Thailand, and the second largest for the Republic of Viet Nam and Cambodia. In an average year, earnings from the sale of rice represent nearly 75 percent of the total value of all Burmese exports, 35 percent for Thailand, 30 percent for the Republic of Viet Nam, and 30 percent for Cambodia.

Year-to-year variation in the amount of rice available for export by these four Southeast Asian countries is determined primarily by weather conditions. The timing and extent of the

monsoon rains largely determine the size of the crop and thus the amount of rice available for export above the quantity needed domestically. Over a longer period, many additional factors such as a rapid rise in population, war, insurrection, disease, pest infestations, and widespread reluctance to adopt new practices have caused fluctuations in each country's exportable surpluses.

During 1934-38 Burma, Thailand, Cambodia, and the Republic of Viet Nam combined, exported almost 5.8 million metric tons of milled rice annually--over two-thirds of the total international trade in rice, which totaled 8.5 million tons (table 9). In 1963 their rice exports totaled 3.7 million tons or about 55 percent of world exports of rice.

The wartime interruption of trade and disruption of production in Southeast Asia caused a pronounced fall in shipments. Other Asian countries, notably Japan and India, have decreased their dependence on imported rice since the prewar period. After World War II, the United States, Egypt, and to a lesser extent Italy all increased exports of rice, but not sufficiently to make up for the drop in exports from Southeast Asia. As a consequence, the world exportable surplus of rice has never regained its 1934-38 level.

National policies of rice exporting and importing countries of Asia have conflicting aims. Most rice exporting countries aim at increasing sales, and most importers plan to reduce purchases by becoming more nearly self-sufficient in rice production. Neither of these two policies has as yet materialized to any significant degree, except in Japan, where increased yields and production have reduced the need for rice imports. On the other hand, Indonesia, Malaysia, Hong Kong, and Pakistan have increased their imports of rice in recent years.

Rubber: Most of the world's rubber is produced in industrially underdeveloped countries of Southeast Asia and is exported to highly industrialized countries of Europe, America, and Japan. International trade in rubber doubled from 1937-39 to 1963 (table 10). The export sale of rubber is a very important source of foreign exchange for Southeast Asia. In the Republic of Viet Nam, 55 to 65 percent of foreign exchange earnings come from the export of rubber. In Thailand, the value of rubber exports is

Table 9.--Rice, milled: Estimated indigenous exports by specified countries and regions, selected periods, 1934-63 ^{1/}

Area	1934-38: average	1957-59: average	1960	1961	1962	1963
----- 1,000 metric tons -----						
Burma.....	3,070	1,618	1,749	1,591	1,722	1,670
Former Indo-:						
China.....	1,320	---	---	---	---	---
Cambodia..	---	197	318	229	132	324
Rep. of						
VietNam:	---	181	340	155	84	322
Thailand.....	1,388	1,266	1,201	1,564	1,274	1,442
Total.....	5,778	3,262	3,608	3,539	3,218	3,758
Other Far						
East ^{2/}	2,193	1,436	1,468	635	830	937
Total Far:						
East....	7,971	4,698	5,076	4,174	4,048	4,695
United States:	72	692	997	836	1,050	1,197
All others.....	423	763	739	982	806	945
World						
total....	8,466	6,153	6,812	5,992	5,904	6,837

^{1/} Indigenous exports exclude reexports of imported rice.

^{2/} Data incomplete. Primarily Mainland China, partly based on returns from importing countries and partly estimated. Some trade between communist countries not reported.

FAO Rice Rpt. (6).

Table 10.--Rubber: Exports by specified countries, selected periods, 1937-63

Area	1937-39 average	1947-49 average	1957-59 average	1961	1962	1963
----- 1,000 metric tons -----						
Burma.....	7	8	12	10	11	9
Indo-China ^{1/}	57	45	---	---	---	---
Cambodia.....	---	---	33	40	37	39
Rep. of Viet Nam.....	---	---	72	83	69	70
Thailand.....	40	82	149	185	194	187
Total of above.....	104	135	266	318	311	305
Other Asia and Oceania.....	888	1,216	1,534	1,604	1,570	1,583
All other countries.....	33	49	140	138	149	154
World total exports.....	1,025	1,400	1,940	2,060	2,030	2,042

^{1/} Consists of Cambodia, Laos, and Viet Nam. Separate figures for individual countries are not available prior to 1954.

Rubber Statis. Bul. (9), Econ. Res. Serv. (17).

generally second only to that of rice and accounts for over 20 percent of the value of all exports. Although Cambodia's rubber shipments are less than 40,000 tons annually, their value is usually the largest of any single agricultural commodity exported. Only in a few years of very favorable rice harvests has the value of rice exports exceeded that of rubber in Cambodia.

The rapid increase in world production of synthetic rubber has raised a new challenge to the producers of natural rubber. Led by Malaysia, the world's largest producer and exporter, higher-yielding varieties of trees are being planted to combat this challenge. Before 1920, owners were lucky if their trees produced 300 pounds of latex per acre. By 1950, it was possible to obtain yields of 1,500 to 2,000 pounds per acre on selected plantings with high-yielding clones. Newer varieties now yield up to 4,000 pounds per acre.

Producers of synthetic rubber are improving their product and capturing a larger share of the total rubber market. The appearance of synthetic rubber in larger quantities, in better quality, and in specific types for certain industrial uses, has caused a decline in natural rubber prices. Lower prices have already discouraged new plantings by small rubber planters and are a threat to future plantings by the large rubber estates of Southeast Asia.

Trade by Country

Burma: With a high degree of central Government control of foreign trade, Burma has managed to maintain a close balance between the value of imports and that of exports (table 11). Agricultural products account for about 85 percent of all exports. Rice and rice products alone account for over two-thirds. Pulses, oilcake, and some cotton and rubber are other agricultural products exported.

Major purchasers of Burmese agricultural products, mainly rice, are Indonesia, Ceylon (through Mainland China), India, Pakistan, and Malaysia. Smaller but increasing amounts are being shipped to the USSR and to other East Europe, Middle East, and Africa countries.

Table 11.--Burma: Foreign trade, major agricultural products and total, 1960-63

Item	1960		1961		1962		1963	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.
<u>EXPORTS</u>								
Rice and rice products 1/.....	1,827	151.0	1,645	149.3	1,742	167.8	1,712	170.3
Other agricultural products...	313	36.7	380	37.6	439	48.0	476	50.3
Teak and wood.....	100	19.2	99	19.1	162	31.7	161	33.4
Metals and ore.....	38	7.9	29	7.5	37	9.0	38	9.4
Other.....	---	5.7	---	5.1	---	6.1	---	5.8
Total exports.....	---	220.5	---	218.6	---	262.6	---	269.2
<u>IMPORTS</u>								
Milk, tinned or dried.....	---	11.6	---	10.8	---	10.9	---	14.3
Sugar and preparations.....	---	2.6	---	1.8	---	1.3	---	Neg.
Vegetable oils.....	---	6.4	---	1.1	---	1.3	---	.5
Meat and meat preparation.....	---	.2	---	.1	---	.1	---	Neg.
Animal oils and fat.....	---	Neg.	---	Neg.	---	1.1	---	1.1

Continued--

Table 11.--Burma: Foreign trade, major agricultural products and total, 1960-62--continued

Item	1960		1961		1962		1963	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.
<u>IMPORTS--Con't</u>								
Wheat and wheat products.....	---	---	---	---	---	3.0	---	2.8
Tobacco and tobacco products..	---	.5	---	.5	---	.2	---	.1
Spices.....	---	.5	---	.6	---	.6	---	Neg.
Gunnies and other sacks.....	---	5.8	---	8.8	---	5.9	---	4.8
Other imports.....	---	230.7	---	191.4	---	194.6	---	211.6
Total imports.....	---	258.3	---	215.1	---	219.0	---	235.2

Neg. = negligible or less than \$50,000.

¹/ Includes shipments of both rice and rice products. Amount may differ from table 9, which includes shipments of rice only.

Government of the Union of Burma (2), (4).

The government controls imports. About a third of foreign exchange expenditures are for capital goods. Major consumer goods imported include textiles, dairy products, pharmaceuticals, and paper products.

Burma has generally met its needs for manufactured goods from the United Kingdom, Japan, India, and Mainland China, and to a smaller extent West Germany, the Netherlands, and the United States. Japan is now the largest supplier of Burmese imports, partly because of reparation payments to Burma. Imports from Mainland China should increase because of the \$84 million non-interest-bearing loan recently extended to Burma.

Farm products account for less than 10 percent of total Burmese imports.

Cambodia: The chief exports of Cambodia are rubber, rice, and corn, in that order, with smaller amounts of pepper, tea, live animals, and kapok (table 12).

France is the largest foreign buyer of Cambodian products. That country purchases most of Cambodia's pepper and a considerable part of its rubber and rice. Malaysia, Hong Kong, Japan, and Mainland China are other principal markets. The United States buys some rubber. Practically all Cambodian exports are of agricultural origin whereas only about 10 percent of the value of imports represents farm products.

Cambodia runs a trade deficit with most of its foreign trade partners. Japan and France are the major suppliers of Cambodian imports, with increasing amounts coming from Mainland China but less from the United States, especially since the latter part of 1963 when Cambodia abruptly stopped U.S. economic and military assistance.

Cambodian foreign trade is subject to strict State control. All exports must be approved by and licensed by the Government. All imports are similarly controlled and only those goods may be brought into the country that serve the essential interests of the people as determined by the Government.

Laos: Laotian foreign trade is extremely unbalanced as the annual value of imports is several times that of exports. Little

Table 12.--Cambodia: Foreign trade, major agricultural products and total, 1960-63

Item	1960		1961		1962		1963	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.
<u>EXPORTS</u>								
Rice and rice products <u>1/</u>	391.0	23.2	285.0	24.1	182.0	14.4	---	---
Corn.....	164.0	8.3	104.0	4.9	134.0	7.9	---	---
Rubber <u>2/</u>	40.0	27.9	36.0	20.4	36.0	20.4	---	---
Pepper.....	1.2	1.5	1.3	1.6	.8	1.2	---	---
Kapok.....	5.1	1.2	6.4	1.0	7.6	1.0	---	---
Live animals.....	10.2	1.7	20.1	4.3	28.2	.9	---	---
Dry beans.....	47.0	3.5	5.9	.7	9.1	1.0	---	---
Palm sugar.....	1.1	.3	1.0	.3	1.1	.3	---	---
Soybeans.....	7.4	.5	7.1	.5	3.5	.2	---	---
Sesame.....	3.2	.3	6.0	.3	7.5	.6	---	---
Peanuts.....	.2	.1	.5	.1	.3	.1	---	---
All other.....	---	2.1	---	5.2	---	6.4	---	---
Total exports.....	---	70.4	---	63.4	---	54.4	---	89.0

38

<u>IMPORTS</u>								
Milk products.....	4.2	2.7	3.6	2.2	4.3	2.5	---	---
Fruit and vegetables (fresh)...	4.9	1.1	5.1	1.1	5.4	1.5	---	---
Coffee.....	---	---	.9	.7	.5	.3	---	---
Tea.....	---	---	.4	.3	.2	.1	---	---
Wheat flour.....	12.8	1.6	16.1	1.7	13.2	1.6	---	---
Meat and fish (canned).....	.8	1.1	0.5	.3	.4	.3	---	---
Sugar.....	12.8	1.6	13.0	1.6	18.3	2.2	---	---
Fruit and vegetables (canned)...	1.0	.5	.5	.3	1.0	.5	---	---
Alcohol and other beverages...	5.2	2.1	6.0	2.3	5.4	2.1	---	---
Tobacco and cigarettes.....	.8	.7	.5	.6	.4	.4	---	---
Mineral products.....	217.4	8.2	268.9	10.1	343.6	11.6	---	---
Textile products.....	13.1	17.2	9.4	10.7	10.4	11.6	---	---
Metal products.....	54.9	32.6	58.6	41.2	81.3	41.3	---	---
Other.....	---	25.3	---	23.9	---	26.3	---	---
Total imports.....	---	94.7	---	97.0	---	102.3	---	107.2

1/ Includes shipments of both rice and rice products. Amount may differ from table 9, which includes shipments of rice only.

2/ Quantities may vary slightly from those shown in table 10 because of different methods used in recording time of shipments and in converting latex.

Annuaire Statistique Du Cambodge (5).

is produced for export as the bulk of the population is engaged in subsistence agriculture.

Imports into Laos are increasing rapidly while exports are trending downward. Agricultural production is declining and an increased demand for food from the nonrural sector is being met by additional imports. The monetized sector of the economy is enlarging through increases in the number of civil Government and military personnel and refugees from embattled areas seeking security in the cities. While the urban and monetary sectors grow, the rural population, which should be increasing production if the added demand for agricultural products is to be met, is declining.

The value of all recorded imports increased from about \$11.8 million in 1960 to \$29.0 million in 1963 (table 13). Imports of rice, the basic food, rose from 4,575 tons during 1960 to over 50,000 tons in 1963. Imports of all other items also increased during this period.

Thailand is the largest supplier of Laotian imports, accounting for over 25 percent of the total value. Rice is the main product and is of a glutinous variety preferred by Laotians. Indonesia supplies Laos with petroleum products. The United States, Japan, and France are principal suppliers of other products.

Laos exports a little coffee and cattle hides but trade and custom statistics record no foreign sales of rice in recent years. However, reportedly there is some movement of rice to Thai markets from a few communities which produce a surplus along the Laotian banks of the Mekong River. This trade is not recorded in Laos customs reports.

Malaysia and Thailand are the major destinations of Laotian exports. Malaysia takes most of the tin. Thailand, along with Hong Kong, takes most of the other products. France up to 1959 was one of the principal purchasers of Laos exports, but exports to France dropped from 23 percent of the total value in 1958 to an average of around 2 percent annually over the following 5 years.

Viet Nam: The value of Vietnamese imports greatly exceeds that of exports (table 14). The deficit is financed primarily by the

Table 13.--Laos: Foreign trade, principal agricultural products and total, by value, 1960-63

	1960	1961	1962	1963
- - - - - 1,000 dollars - - - - -				
<u>IMPORTS 1/</u>				
Rice, milled.....	640.0	1,568.7	4,436.2	---
Animals and meat.....	530.0	820.0	1,457.5	1,073.7
Vegetables.....	855.0	2,100.0	4,911.2	4,955.0
Fats and oils.....	40.0	40.0	45.0	115.0
Industrial food products.....	1,901.2	2,466.2	2,683.7	283.7
Rubber and rubber prod- ucts.....	225.0	215.0	323.8	345.0
Leather and hides.....	13.8	37.5	35.0	20.0
Wood and wood products.....	50.0	55.0	178.8	180.0
All other.....	7,580.0	9,291.0	10,048.8	---
Total.....	11,835.0	16,593.7	24,120.0	29,038.7
<u>EXPORTS 1/</u>				
Green coffee.....	82.5	26.2	142.5	64.1
Tin.....	416.3	247.5	438.7	465.0
Wood.....	43.8	55.0	11.2	62.7
Cardamom.....	72.5	72.5	35.0	33.5
Benzoin.....	36.2	26.2	---	11.6
Sticklac.....	11.2	18.8	2.5	6.3
Leather and hides.....	17.5	22.5	28.8	20.8
Others.....	258.2	140.5	116.1	52.2
Total.....	938.2	609.2	774.8	716.2

1/ Excludes gold and illicit trade.

U.S. Dept. State, USAID-CAP Laos (21).

Table 14.--Republic of Viet Nam: Foreign trade, major agricultural products and total, 1960-63

Item	1960		1961		1962		1963	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 M.T.	1,000 dol.	1,000 M.T.	1,000 dol.	1,000 M.T.	1,000 dol.	1,000 M.T.	1,000 dol.
<u>EXPORTS</u>								
Rice.....	340.0	27,270	154.5	14,598	83.9	8,753	322.6	35,740
Rubber 1/.....	70.1	47,998	83.4	43,832	74.5	37,917	68.9	33,480
Hogs.....	5.3	2,064	5.3	2,460	---	Neg.	---	Neg.
Duck eggs.....	.7	229	1.4	636	1.9	875	---	440
Vegetable oils.....	.9	291	3.3	877	2.4	557	---	60
Duck feathers.....	.7	589	.6	689	.6	914	---	660
Tea.....	1.1	1,046	1.7	1,612	1.9	1,879	---	1,860
Other agricultural exports.....	148.0	4,778	138.5	4,705	144.3	4,077	---	3,980
Nonagricultural exports.....	.4	186	.6	357	.7	495	---	450
Total.....	---	84,451	---	69,766	---	55,467	---	76,670
<u>IMPORTS</u>								
Milk and products.....	---	12,029	---	12,595	---	13,121	---	12,580
Wheat flour.....	56.2	6,748	62.9	7,015	72.4	8,028	56.1	6,260

Continued--

Table 14.--Republic of Viet Nam: Foreign trade, major agricultural products and total, 1960-63
(continued)

Item	1960		1961		1962		1963	
	Quantity:	Value	Quantity:	Value	Quantity:	Value	Quantity:	Value
	: M.T.	: dol.	: M.T.	: dol.	: M.T.	: dol.	: M.T.	: dol.
<u>IMPORTS--Con't</u>								
Sugar and preparations.....	53.0	4,578	38.0	3,080	48.4	3,997	54.5	8,900
Leaf tobacco.....	2.1	3,093	2.7	4,503	2.6	3,942	---	4,180
Textile raw materials.....	4.1	1,587	9.1	5,364	9.5	6,580	---	6,300
Other imports.....	---	212,305	---	222,539	---	228,195	---	247,960
Total.....	---	240,340	---	255,096	---	263,863	---	286,180

Neg. = negligible.

¹/ Quantities may vary slightly from those shown in table 10 because of different methods used in recording time of shipments and in converting latex.

U.S. Operations Mission to Viet Nam (20).

United States Government through various programs. Other contributors include several other Western nations, Japan, and international organizations.

Rubber and rice are the major Vietnamese exports. A sharp reduction in the amount of rice exported in 1961 and 1962 was a result of abnormal flooding during the 1961/62 crop year, a reduction in the internal movement of rice into normal trade channels caused by the strengthened position and increased interference of the insurrectionists, and further stockpiling by the Government to retain an adequate internal food supply. During this period a small amount of rice was even imported to preclude speculation or an undue price rise in Saigon and other urban areas. Exports of live hogs and pork, which went chiefly to Hong Kong, have been virtually suspended, but are expected to increase gradually as internal strife is reduced. Nonagricultural products make up a very small part of total exports.

France purchases most of the Vietnamese rubber. Lesser quantities go to the United Kingdom and the Federal Republic of Germany. Major buyers of rice are Malaysia, Philippines, Indonesia, and France. Another significant foreign outlet for Vietnamese products is Hong Kong.

Dairy products and wheat flour are the major agricultural products imported by Viet Nam. The United States is the principal supplier of these items. The United States also furnishes the major portion of metal products, machinery, and appliances. France remains an important supplier of Vietnamese consumer goods, but the predominant position once held by that country has been sharply reduced. Japan, Indonesia, the Federal Republic of Germany, and the United Kingdom are other major suppliers.

The United States has increased its share of Vietnamese imports by financing, through U.S. aid programs, a major part of all imports. Taiwan, South Korea, India, and certain other developing countries are rapidly increasing their sales to Vietnam under the U.S.-aid-financed commercial import program.

Both exports and imports require a license issued by the Vietnamese government. Export licensing is designed to control foreign exchange transactions, to prevent the export of commodities

in short supply, and, when necessary, to enforce an embargo on trade. Import licensing is maintained to conserve foreign exchange and to channel imports into lines of goods most desirable as determined by the Government. Licensing procedures vary with commodities and sources of financing, and are subject to frequent change.

Thailand: Agricultural products make up almost 90 percent of the total value of all Thai exports. Thailand in 1964 moved up to first place as an exporter of rice. It is the world's third largest exporter of rubber. These two agricultural commodities account for 55 to 60 percent of the total value of the Kingdom's exports (table 15). Other important exports in recent years are corn, kenaf, cassava products, and oilseeds. The kingdom is progressively broadening its export base. Rice exports, which accounted for over 60 percent of the total value of all shipments abroad prior to World War II, now range from 30 to 35 percent of all exports. Tin, teak, and other wood products are the principal nonagricultural exports.

Thailand's exports are mainly sold to other Far East countries. Japan, Malaysia, Hong Kong, and Indonesia combined provided a market for over one-half the value of all Thai exports. Outside the Far East, the United States, the United Kingdom, and West Germany are the principal purchasers of Thailand's products.

Agricultural imports are small, amounting to about 10 percent of the total value of all Thai imports. The major products are: cotton, tobacco, wheat flour, and cereals from the United States; dairy products from Europe and Oceania; and coffee from Indonesia.

Japan is the leading supplier of Thai imports, mainly consumer goods. The United States, the United Kingdom, and West Germany are the principal sources for capital equipment and industrial chemicals. Other suppliers of Thai imports are Hong Kong and Malaysia. Although manufactured consumer goods remain the foremost part of all imports, the greatest increases have been registered in machinery, reflecting the expansion of the Kingdom's transportation system and its industrial development.

Table 15.--Thailand: Foreign trade, major agricultural products and total, 1960-63

Item	1960		1961		1962		1963	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.	1,000 M.T.	Mil. dol.
<u>EXPORTS</u>								
Rice 1/.....	1,203	123.6	1,576	173.0	1,271	155.8	1,444	167.4
Rubber.....	170	124.0	185	102.4	194	101.5	187	91.3
Maize.....	515	26.5	567	28.7	472	24.1	744	39.8
Cassava products.....	244	13.1	416	20.6	378	19.5	311	17.1
Jute and kenaf.....	62	11.1	143	30.1	238	27.8	147	17.2
Tobacco.....	2	1.0	1	.6	3	1.5	4	2.0
Peanuts.....	10	1.9	14	2.5	15	2.7	14	2.7
Kapok.....	11	3.3	14	4.0	16	4.9	16	5.2
Eggs (hen and duck).....	15	5.9	16	6.1	5	1.8	3	1.0
Mung beans.....	23	2.3	26	2.9	21	3.0	21	2.8
Castor beans.....	24	3.4	33	4.5	54	6.0	40	4.7
Hides and skins.....	8	4.0	9	4.0	7	3.4	6	2.5
Cattle and buffalo (vol. in 1,000 head).....	57	4.8	69	5.7	62	4.9	42	3.8
Other agricultural exports.....	---	2.8	---	2.5	---	2.9	---	2.5
Total agricultural exports:	---	327.5	---	387.6	---	359.7	---	360.0
Nonagricultural exports.....	---	51.1	---	48.1	---	47.2	---	48.1
Total.....	---	378.6	---	435.7	---	406.9	---	408.1

IMPORTS								
Live animals (vol. in 1,000 head).....	18.9	0.1	6.9	---	13.3	0.1	12.4	0.1
Meat.....	---	.1	---	0.1	---	.1	.1	.2
Dairy products and eggs.....	52.7	19.8	53.8	19.7	61.3	21.9	60.8	22.6
Fish and products.....	8.6	3.2	9.5	2.9	7.9	2.7	2.9	1.5
Cereals.....	25.2	4.1	27.4	4.5	28.7	3.8	28.2	3.9
Fruit and vegetables.....	5.6	2.7	5.3	2.3	4.6	2.1	4.0	2.3
Sugar.....	.5	.3	.3	.2	.4	.2	.5	.2
Coffee, tea, spices.....	7.7	5.3	7.0	5.0	7.7	4.4	4.2	2.8
Animal feed.....	1.4	.3	1.4	.2	.8	.1	.3	.2
Miscellaneous food preparations.....	1.4	1.9	1.2	1.8	1.6	1.0	3.0	.9
Beverages (vol. in million litres).....	.4	.6	.6	.7	1.4	.8	1.4	1.0
Unmanufactured tobacco.....	3.9	4.5	5.8	8.7	3.9	6.1	3.7	5.6
Natural fibers.....	5.0	2.9	8.8	5.4	8.2	4.9	9.3	5.3
Crude materials.....	1.9	2.0	2.1	2.4	2.0	1.8	1.8	1.6
Oils and fats (vol. in 1,000 litres).....	3.8	.9	2.3	.7	3.3	.9	3.2	.8
All other.....	---	413.9	---	440.0	---	502.3	---	552.8
Total.....	---	462.6	---	494.6	---	553.1	---	601.8

1/ Quantities may differ slightly from table 9 because of differences in methods of conversion or the time in which shipments were counted.

Foreign Trade of Thailand (11, 12).

There are no formal restrictions on the operations of private enterprise, but the Government plays an active role in economic affairs. Government organizations engage directly in banking, export, import, and distribution, thus competing with private businesses in all major nonagricultural fields of economic endeavor.

U.S. AGRICULTURAL TRADE WITH THE REGION

Exports to the Region

The total value of all U.S. agricultural exports to the five Rice Bowl countries from July 1955 through June 1964 was approximately \$381 million (table 16). A little over 70 percent was accounted for by shipments under U.S. Government programs. Nearly 50 percent moved under Public Law 480 and another 25 percent was sold for foreign currency through Mutual Security and AID programs. The remaining 25 percent of agricultural sales were outside Government programs (dollar sales), chiefly to Thailand. The principal agricultural commodities exported were cotton, tobacco, milk products, vegetable oils, bulgur, and wheat flour.

Dairy products exceed in value other U.S. agricultural exports to the Rice Bowl Region. For each of 3 years, 1961 through 1963, the value of U.S. dairy-product exports to the five countries totaled around \$12 million and averaged 24 percent of the total U.S. agricultural exports to the Region (table 17). The Republic of Viet Nam was the chief recipient, but shipments went to all five countries. During the same 3 years, the value of tobacco exports represented 22 percent of the total. Each country received some tobacco but most of it was purchased by Thailand.

Most of the grain and grain products exported to these countries is in the form of wheat flour, with some exceptions. Burma imports whole wheat. In Viet Nam about \$7 million of the \$12.4 million imported in 1962 was milled rice, and about \$2.5 million of the \$9.8 million imported in 1963 was corn for feed. Cambodia in 1961 imported whole wheat valued at \$1,305,000 of the \$1,848,000 total for grains.

Cotton made up some 20 percent of total U.S. agricultural exports to these five countries. In addition to raw cotton, arrangements are made under P.L. 480 to purchase cotton from the United

Table 16.--U.S. agricultural exports: Total value and value by U.S. Government programs to specified countries, July 1, 1954, to June 30, 1964

Country	Public Law 480				P.L. 87-195 Sec. 402 sales for foreign currency and economic aid <u>3/</u>	Total agricultural exports under specified Government programs	Total agricultural exports outside specified Government programs	Total agricultural exports
	Title I Sales for foreign currency	Title II Famine and other emergency relief	Title III Foreign donations <u>1/</u>	Barter <u>2/</u>				
----- 1,000 dollars -----								
Burma.....	<u>6/</u> 9,870	0	1,620	0	0	11,490	- 271	11,219
Cambodia.....	---	2,343	44	38	10,490	12,915	- 608	12,307
Laos.....	---	839	1,443	0	979	3,261	714	3,975
Rep. of Viet Nam.....	88,446	21,765	46,670	5	84,700	241,586	- 7,174	234,412
Indo-China <u>7/</u>	0	0	203	0	212	415	19,880	20,295
Thailand.....	4,142	0	437	4,537	358	9,474	89,457	98,931
Total.....	102,458	24,947	50,417	4,580	96,739	279,141	102,008	381,139

1/ Foreign donations are authorized under Sec. 416 of the Agricultural Act of 1949 and Sec. 302, Title III, P.L. 480.
2/ The barter program is authorized under the Charter Act of the Commodity Credit Corporation; Sec. 303, Title III, P.L. 480; and other legislation. 3/ Mutual Security programs, sales for foreign currency except \$6.4 million. Includes ocean transportation when not reported separately. Exports under Sec. 402 during July-March 1961-62 were programed during the prior fiscal year. There is no mandatory requirement in P.L. 87-195, the Act for International Development, Sept. 4, 1961, for sales of agricultural commodities for foreign currency. 4/ Includes, in addition to unassisted commercial transactions, shipments of some commodities with Government assistance in the form of (1) extension of credit for relatively short periods, (2) sales of Government-owned commodities at less-than-domestic market prices, and (3) export payments in cash or in kind. 5/ Minus in any particular year attributed to lags in reporting or to differences in valuation procedures. 6/ Does not include \$26,010,000 value of raw cotton purchased by Burma but exported to a third country for processing. 7/ Not separated by country.

Foreign Agr. Trade of U.S. (14).

Table 17.--U.S. agricultural exports: Quantity and value of principal products to specified countries, calendar years 1961-63

Country and year	Total value	Dairy products				Wheat flour and other grain products	
		Milk, condensed: sweet		Other		Quantity	Value
		Quantity	Value	Quantity	Value		
	1,000 dol.	1,000 lb.	1,000 dol.	1,000 lb.	1,000 dol.	1,000 cwt.	1,000 dol.
Burma:							
1961.....	905	---	---	2,260	337	10	29
1962.....	474	---	---	2,476	298	40	113
1963.....	1,612	---	---	1,320	77	---	---
Cambodia:							
1961.....	3,029	2,980	724	---	---	493	1,848
1962.....	1,309	1,587	384	---	---	154	588
1963.....	733	1,682	394	---	---	22	92
Laos:							
1961.....	156	---	---	---	---	4	19
1962.....	350	---	---	---	---	2	8
1963.....	933	1,287	312	---	60	38	158
Rep. of Viet Nam:							
1961.....	25,827	42,625	10,050	---	616	1,061	3,547
1962.....	36,638	43,300	10,145	---	694	---	12,383
1963.....	38,331	42,765	9,877	---	732	675	9,817
Thailand:							
1961.....	14,928	---	---	1,158	309	---	211
1962.....	10,222	---	---	1,290	239	---	122
1963.....	11,864	---	---	947	170	---	163
Total:							
1961.....	44,845	---	10,774	---	1,262	---	5,654
1962.....	48,993	---	10,529	---	1,231	---	13,214
1963.....	53,473	---	10,583	---	1,039	---	10,069

U.S. Foreign Agr. Trade (15).

Continued--

Table 17.--U.S. agricultural exports: Quantity and value of principal products to specified countries, calendar years 1961-63--Continued

Oils and fats		Tobacco and products		Cotton		Fruits and vegetables : preparations	Food for relief	Other agricultural products
Quantity	Value	Quantity	Value	Quantity	Value			
1,000 lb.	1,000 dol.	1,000 lb.	1,000 dol.	1,000 R. Ble.	1,000 dol.	1,000 dol.	1,000 dol.	1,000 dol.
---	---	468	413	---	---	55	---	71
---	---	---	---	---	---	10	5	48
---	---	---	---	10	1,385	21	---	129
---	---	282	247	---	---	---	---	210
---	---	217	146	---	---	---	---	191
---	---	159	133	---	---	---	---	117
---	---	49	26	---	---	---	90	21
---	---	85	44	---	---	---	266	32
---	---	333	175	---	---	---	210	18
1,109	199	3,945	2,429	35	4,885	---	3,414	687
3,481	633	3,427	2,114	36	5,157	---	4,516	996
14,563	2,706	8,458	5,540	49	6,797	---	2,056	806
---	---	13,580	9,190	33	4,048	164	---	1,006
---	---	7,677	5,313	27	3,312	242	---	994
---	---	9,066	6,456	31	3,624	282	114	1,055
---	199	---	12,305	---	8,933	219	3,504	1,995
---	633	---	7,617	---	8,469	252	4,787	2,261
---	2,706	---	12,304	---	11,806	303	2,380	2,125

States and have it processed into fabric by a third country. Burma, for instance, during fiscal years 1960/61 through 1962/63 purchased \$6.5 million of U.S. cotton for processing in third countries.

Amounts of U.S. agricultural products being exported to Burma and Cambodia are decreasing while a considerable increase is taking place in amounts exported to Viet Nam and Laos. Burma, during 1957-59, imported from the United States an annual average of \$1.6 million worth of agricultural products. By 1962 the value was only \$474,000. A purchase agreement for cotton in 1963 restored the value to its 1957-59 level, but this rebound may be temporary. The political atmosphere in Burma and Cambodia and insurrection in the Republic of Viet Nam and Laos, and their effects on U.S. aid programs, are the major causes of the change in U.S. agricultural exports to these countries.

Imports from the Region

U.S. imports of agricultural products from Burma, Cambodia, the Republic of Viet Nam, and Thailand are very small (table 18). Almost nothing is imported from Laos. Lack of diversification and low production per capita prevent these countries from exporting more than a few commodities. The total value of U.S. agricultural imports from these four countries averaged about \$46 million annually during 1960-63, with Thailand accounting for about 80 percent of the total.

Rubber is the leading agricultural import by the United States from the Region. The value of rubber imported during 1960-63 averaged \$32 million annually or about 70 percent of the value of total U.S. imports from these four countries. Other items of significance imported by the U.S. are hides and skins, duck feathers, and kapok. In addition the Rice Bowl Region is one of the few sources from which the United States can obtain certain special agricultural commodities such as tapioca from Thailand, and cinnamon from the Republic of Viet Nam.

COMPETITION WITH U.S. FARM EXPORTS

The United States and the Rice Bowl countries grow many agricultural products that are noncompetitive or complementary

Table 18.--U.S. agricultural imports: Quantity and value, from specified countries, calendar years 1960-63

Country and year	Total		Crude rubber		Hides and skins		Feathers		Kapok		Others 1/	
	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity
	1,000 dollars	Metric tons	1,000 dollars	1,000 pieces	1,000 dollars	1,000 Metric tons	1,000 dollars	1,000 Metric tons	1,000 dollars	1,000 Metric tons	1,000 dollars	1,000 Metric tons
Burma:												
1960.....	188	---	---	79	86	42	44	---	---	---	71	58
1961.....	665	---	---	104	88	81	82	---	---	---	797	495
1962.....	676	---	---	52	49	23	27	---	---	---	934	600
1963.....	349	---	---	---	---	85	77	---	---	---	---	272
Cambodia:												
1960.....	6,603	8,968	6,603	---	---	---	---	---	---	---	---	---
1961.....	2,212	4,650	2,200	---	---	---	---	---	---	---	---	---
1962.....	4,892	9,926	4,847	44	25	---	---	---	---	---	---	12
1963.....	6,098	12,501	6,084	---	---	---	---	---	---	---	---	20
Rep. of Viet Nam:												
1960.....	4,246	3,934	3,151	---	---	179	238	---	---	---	1,031	857
1961.....	4,550	6,243	3,395	---	---	43	69	---	---	89	1,521	997
1962.....	3,022	4,486	2,358	---	---	110	189	1,016	116	237	---	359
1963.....	1,921	1,646	933	---	---	---	209	---	137	---	---	642
Thailand:												
1960.....	48,069	52,828	38,768	---	52	84	94	7,112	2,172	89,178	6,983	6,983
1961.....	33,415	41,621	21,897	---	10	---	---	8,128	2,563	11,037	8,945	8,945
1962.....	33,541	44,178	23,006	---	77	117	163	10,160	2,956	61,077	7,339	7,339
1963.....	33,333	40,335	20,133	---	14	182	179	10,160	3,422	---	---	9,585
Total:												
1960.....	59,106	65,730	48,522	79	138	305	376	7,112	2,172	---	---	7,898
1961.....	40,842	52,514	27,492	---	98	124	151	---	2,652	---	---	10,449
1962.....	42,131	58,590	30,211	---	151	250	379	11,176	3,072	---	---	8,318
1963.....	41,701	54,482	21,750	---	14	436	465	10,160	3,559	---	---	10,513

1/ Burma mostly raw cotton. Thailand mostly cassava flour (tapioca) plus 2,235 M.T. of jute valued at \$2 million in 1962 and \$1 million in 1963. Republic of Viet Nam mostly cassia bark (cinnamon).

U.S. Foreign Agr. Trade (15).

to each other. The United States buys rubber, which is grown in the Rice Bowl Region, along with tropical fruits, spices, cordage fiber, and tapioca. Little of these products are grown in the United States. Dairy and wheat products and selected varieties of cotton and tobacco, from the United States, complement the agriculture of the Rice Bowl countries.

However, a few farm commodities exported by both the United States and the Rice Bowl countries are competing directly in world markets. Of these, rice and corn predominate. These two are the only commodities that presently are significantly involved in direct competition in foreign markets.

Nevertheless, over the years ahead the United States may face some increase in competition from other farm products that can be produced in greater volume in the Region. Programs of diversification, economic development, and foreign trade expansion may well bring forward new farm exports, although volume will be limited. Some Rice Bowl countries are particularly interested in expanding and developing their markets for foodstuffs in nearby major trading cities, notably those in Japan, Hong Kong, and Singapore in Malaysia. Items which may be involved in expanded export trade include live animals for slaughter, pork and pork products, fruits, and vegetables.

Japan is the major importer of farm products in the Far East and is the world's leading buyer of U.S. agricultural produce. More trade is developing between this vital market and the countries of Southeast Asia, stimulated by complementary products, closeness of markets, and cultural understanding. Many of Japan's tools and machines are readily adaptable and have practical and useful application for increasing production in the developing countries of Southeast Asia. Food, fiber, and other raw materials needed by Japan are becoming increasingly available in these countries, partly as a result of Japanese, U.S., and other technical assistance programs in agriculture. Increased exports of raw materials to Japan help pay for the increased imports coming from that country.

The geographic distance between Japan and the Rice Bowl countries gives them a decided advantage in shipping costs over

the more distant countries in Europe, Africa, and America. Furthermore, trade patterns, familiarity of products, and cultural understanding between Asian countries have existed for centuries to form a common bond for expanded trade relations. Thus, U.S. farm products in Japan will probably encounter a limited increase in competition from the Rice Bowl Region.

Rice

Roughly half of U.S. rice exports go to countries of the Far East and South Asia. The countries of this Region that take U.S. rice also import from the traditional rice exporting countries of the Region, i.e., Burma, Cambodia, Viet Nam, and Thailand. Thus, there is direct competition between the United States and the Rice Bowl countries in supplying the rice import needs of Asian countries. Total exports of rice from the United States moved from an annual average of 610,000 metric tons during 1951-55 to 1,027,000 tons during 1961-63 (table 19). While this represented a 40 percent increase in rice exports for the United States, the four rice exporting countries of Southeast Asia increased their combined exports of rice by only 15 percent. About 85 percent of the total rice exported from these four countries is destined for Asian markets.

Practically all of the rice exported from the United States to Asia is shipped under U.S. Government programs. Countries receiving rice and other products under U.S. Government programs are required to make normal purchases from traditional sources.

The quantity of rice shipped from the United States to Asia and the Far East has increased approximately 60 percent since the early 1950's, while the combined exports from Burma, Thailand, Viet Nam, and Cambodia to their neighbors of Asia and the Far East have increased by less than 10 percent. Obviously, the rice exporting countries of Southeast Asia have not fully met the challenge of increasing their exportable surpluses to satisfy the fast-growing demand for additional rice in the Far East and South Asia. Rice from the United States is filling the increased need, which has been created in large measure by rapidly increasing populations.

Table 19.--Rice, milled: Estimated average quantity exported by and received from specified countries, selected periods, 1951-63

Countries of destination	Exporting countries					
	United States			Burma		
	1951-55	1956-60	1961-63	1951-55	1956-60	1961-63
	----- Metric tons -----					
Ceylon.....	12,594	20,978	0	207,276	206,500	290,515
Hong Kong.....	1,627	135	1,315	18,086	14,061	6,680
India.....	1,862	104,069	249,267	357,856	362,871	177,312
Indonesia.....	26,350	96,472	185,930	167,447	327,958	346,235
Japan.....	227,936	1,143	507	220,485	99,380	19,790
Malaya.....	---	731	<u>2/</u> 5,562	<u>3/</u> 126,398	<u>3/</u> 84,947	<u>3/</u> 101,930
Pakistan.....	---	123,033	16,755	---	162,293	201,920
Philippines.....	1,030	15,645	6	---	---	---
Singapore.....	---	833	---	---	93,230	26,200
Other Far East and Pacific Islands..	58,567	37,451	64,111	45,926	45,050	167,200
Total of above.....	329,966	400,490	523,453	1,143,474	1,396,290	1,337,782
Africa.....	---	---	---	43,894	63,929	111,635
Middle East.....	---	---	---	40,439	39,254	22,540
Europe (includes Russia).....	---	---	---	107,702	178,147	121,570
Other (not specified).....	280,042	399,884	503,314	51,616	112,242	113,075
Total.....	610,008	800,374	1,026,767	1,387,125	1,789,862	1,706,602

1/ Cambodia 3 year average 1953-55.

2/ Malaya and Singapore.

3/ British Borneo and Malaya.

4/ Included in others.

Based primarily on official Government Customs Reports and part estimated.

Table 19.--Rice, milled: Estimated average quantity exported by and received from specified countries, selected periods, 1951-63--Continued

Exporting countries								
Cambodia			Rep. of Viet Nam			Thailand		
1951-55	1956-60	1961-63	1951-55	1956-60	1961-63	1951-55	1956-60	1961-63
Metric tons								
8,762	43,592	35,898	12,005	19,770	15,564	5,749	10,634	48,051
					26,700	161,518	177,480	200,814
					3,300	83,159	12	18
25,538	356		18,387	20,208	118,758	114,102	339,793	
			6,914	3,333	358,790	72,878	52,479	
2/ 38,497	2/ 69,430	50,000	2,884	3/ 31,589	146,615	156,638	163,519	
	3,242				21,100	42,801	35,658	70,725
			19,473			228,573	252,278	181,474
64,230	1,117	4,040			3,333	4/	4/	4/
137,027	117,737	39,930	79,433	125,127	1,145,963	849,680	1,056,873	
19,014	23,489	31,730				16,959	32,440	54,915
222	13,490					10,655	78,725	104,881
19,672	76,287	116,490				42,803	39,131	47,826
2,971	7,046	44,250	97,025	61,845	107,625	252,546	146,017	
178,906	238,049	282,400	152,613	176,458	186,972	1,324,005	1,252,522	1,410,512

Corn

Corn grown for export by Rice Bowl countries, especially Thailand, is another important agricultural product of the Region, competing in foreign markets directly with corn from the United States. The production of corn throughout most countries of the Region can be expanded rapidly, as evidenced by the sharply increased production in Thailand since 1957. Thailand sells about 80 percent of its corn abroad, and exports are likely to reach a million tons within the next 3 years. Most of the increase in corn output in Thailand has been on new lands. An increase in yields of 50 to 70 percent can be obtained on existing land by proper application of fertilizers and pest-control measures.

Thailand and the United States are both supplying corn to meet the increasing demand that is developing in Japan. In 1963, Japan imported 1,061,000 metric tons of corn from the United States. This represented 40 percent of Japan's total imports of corn (table 20). Imports from Thailand during the same year totaled 429,000 tons, or 16 percent of the Japanese imports. Japan has consistently purchased around 80 percent of Thailand's total corn exports and is expected to continue to do so.

Table 20.--Japan: Imports of corn from specified countries, selected periods, 1951-63

Year	Total	United States		Thailand		Argentina		Republic of South Africa		Others	
	1,000 metric tons	1,000 metric tons	Pct. of total	1,000 metric tons	Pct. of total	1,000 metric tons	Pct. of total	1,000 metric tons	Pct. of total	1,000 metric tons	Pct. of total
1951-55.....	170	107	62.9	20	11.8	17	10.0	10	5.9	16	9.4
1956-60.....	759	250	32.9	122	16.1	175	23.1	110	14.5	102	13.4
1961.....	1,831	515	28.1	460	25.1	286	15.6	446	24.4	124	6.8
1962.....	2,316	1,031	44.5	237	10.3	52	2.2	868	37.5	128	5.5
1963.....	2,645	1,061	40.1	429	16.2	75	2.8	779	29.5	301	11.4

Foreign Trade of Japan (10).

LITERATURE CITED

- (1) (Burma) Student Press, Rangoon (edited by U. Tun Nyoe and Daw Ma Ma Khin)
1957. The Burma Yearbook and Directory, 1957-58.
49, Natmauk Lane, Rangoon, Burma, Dec.
- (2) Burma, Government of (Central Statistical and Economics Department, Revolutionary Government of Union of Burma)
1960-63. Bulletin of Export Trade, Totals for January to December. Statis. Paper No. 1, Rangoon.
- (3) (Burma) Superintendent, Government Printing and Stationery, Rangoon
1963. Report of the Revolutionary Council to the People on the Budget Estimates of the Revolutionary Government of the Union of Burma for 1963-64.
- (4) (Burma) Central Press, Rangoon
1964. Selected Monthly Economic Indicators. Statis. Paper No. 3, Dec.
- (5) Cambodge, Royaume du (Ministre du Plan)
1962. Annuaire Statistique du Cambodge. Direction de la Statistique and des Etudes Economiques.
(Phnom Penh, Cambodia.)
- (6) Food and Agriculture Organization of the United Nations
1964. FAO Rice Report 1964. Rome.
- (7) _____
1947. International Yearbook of Agricultural Statistics 1941-42 to 1945-46. Vol. III, Apportionment of Areas, Agricultural Production and Numbers of Livestock in Various Countries. Rome.
- (8) _____
1951, 1958, 1959, 1962. Production Yearbook(s). Rome.
- (9) International Rubber Study Group, Secretariat of
1964. Rubber Statistical Bulletin, Vol. 19, No. 1, Oct., London, W.C. 2.

- (10) Japan Tariff Association
1955. Annual Return of the Foreign Trade of Japan,
Commodity by Country. Ministry of Finance,
Tokyo.
- (11) Thailand, Bank of
1964. Bank of Thailand Monthly Report. Dept. Econ.
Res., Vol. IV, No. 10, Oct.
- (12) Thailand Department of Customs
1962. Annual Statement of Foreign Trade of Thailand.
(B.E. 2505.)
- (13) Thailand Ministry of Agriculture
1964. Agricultural Statistics of Thailand, 1962.
Div. Agr. Econ. (Bangkok), Jan.
- (14) U.S. Department of Agriculture
1963. U.S. Agricultural Exports Under Government-
Financed Programs, 1954-55 through 1961-62.
(Reprint from Foreign Agr. Trade of U.S.,
Nov.-Dec. 1962, by Econ. Res. Serv.)
- (15) _____
1963. U.S. Foreign Agricultural Trade by Countries,
Calendar Year. Suppl. to Monthly Agr. Trade
of U.S., Nov.
- (16) _____
1964. World Agricultural Production and Trade. Statis.
Rpt., Foreign Agr. Serv., June.
- (17) _____
1964. Indices of Agricultural Production for the
Far East and South Asia. Average 1952-54
and Annual 1959 through 1964. Econ. Res.
Serv., Dec.
- (18) _____
1964. Thailand: Agricultural Situation - Foreign Agr.
Serv. Dispatch from Agr. Attache, Bangkok,
AGR-41A, Nov. 4.)

END
DATE
FILMED
7-24-79
NTIS