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# AGRICULTURE AND TRADE OF **HONDURAS**

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UNITED STATES DEPARTMENT OF AGRICULTURE

Economic Research Service

Regional Analysis Division



## PREFACE

Honduras is a market for U.S. exports of wheat flour, processed cereal products, certain fruit and vegetable preparations, and dairy products. In 1961 agricultural exports to Honduras totaled \$4.1 million. The country usually is self-sufficient in other basic foods with the exception of sugar, most of which comes from neighboring countries.

Honduras is also an exporter of agricultural products, shipping bananas and coffee to world markets in significant amounts. In fact, agriculture is the most important sector of the Honduran economy. Farm and forest products account for over 80 percent of the value of total exports. About 80 percent of the economically active population is engaged in some form of agricultural endeavor. Many of the industries too are based on agriculture, since they process or transport farm products; some of these industries produce rum, beer, cigars, cigarettes, soap, edible fats, dairy products, and textiles.

Mining and manufacturing are relatively insignificant, although manufacturing has exhibited steady growth in recent years and is second to agriculture as a source of employment.

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## SUMMARY AND OUTLOOK

Honduras must solve many basic problems if the country is to enjoy better living standards. Some of the problems are: an inadequate road system, illiteracy, poor health and sanitation, and inadequate technical and administrative training.

Agricultural production is just keeping abreast of population growth. The population is increasing at a rate of over 3 percent per year and total population is currently estimated at 2 million. Daily per capita food intake has been estimated at around 2,200 calories. This is comparable to diets in neighboring countries but is deficient in protein, fat, and total calories.

Since the economy of Honduras rests so heavily on agriculture, positive measures should be taken to expand agricultural production. The country has extensive areas which are now lightly populated and large areas of potentially productive soils, including those suitable for grazing livestock. At this time however, transportation facilities other than air transport are almost totally lacking in these areas.

The Government of Honduras is planning a thorough study of the nation's actual and potential resources and will undertake education in modern farm practices and assistance in the form of loans. A commission from the Organization of American States has studied the agrarian reform problem and made proposals which could lead to improvement in land tenure and in the agricultural economy. With technical assistance provided by the United States, Honduras is making progress in agricultural research, extension work and home demonstration activities.

Agricultural and forest production can be expanded with more roads over the rugged terrain and into potentially productive areas. In addition improved production methods and better distribution of land among the people are needed.

Under the 4-year plan for economic development being prepared by the National Economic Council at least 40 percent of planned expenditures are expected to be devoted to road construction and communications. The Government has applied to the United States and to international agencies for loans to extend some of the existing roads, construct feeder roads leading to the main highways, and improve maintenance of existing roads. The Western Highway extension from Santa Rosa de Copán to the border of El Salvador, begun in late 1961, is expected to stimulate agricultural activity in the west. Other problems too are receiving more attention in line with the precepts of the Alliance for Progress.

If Honduras can obtain a reasonable amount of foreign financial and technical assistance and follows prudent measures for economic development, substantial progress may be achieved in the next few years.

## AGRICULTURE AND TRADE OF HONDURAS

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### BACKGROUND FACTORS

Honduras is essentially an agricultural country and will probably continue to be one. A wide range of soil and climatic conditions permits considerable diversity of agricultural production, but in both tropical and subtropical regions there are sizable areas of undeveloped land. Except for the two large fruit companies and numerous individual coffee producers, agriculture is a small-scale operation.

Along the 460-mile Caribbean coast and the 90-mile Pacific coast are low-lying plains, varying in width. The interior of the country consists of irregular, heavily wooded mountain ranges, interspersed with river valleys containing agricultural lands, forests, and pasture. In general, the rugged topography and lack of surface transportation facilities divide Honduras into many small unconnected localities. Of the total area of about 28,467,000 acres, an estimated 6,196,000 acres are in farms or range land. This is less than 22 percent of the national territory. The remainder is largely undeveloped mountain, jungle, or forest area.

### Climate

As in other Central American countries, the climate in Honduras varies with altitude. In the highlands an agreeable spring-like climate prevails throughout the year; the coastal areas are hot and humid at all times. Mean temperature in the lowlands is around 82 degrees F., while at 2,500 feet it is 73 degrees. Minimum temperatures of around 50 degrees occur in December; May is the hottest month with maximum temperatures of 90 degrees.

Annual rainfall varies according to locality, from an average of 115 inches at Tela and 117 inches at La Ceiba, both on the Caribbean coast, to 41 inches at Tegucigalpa, 34 at Comayagua, 68 at Santa Rosa de Copán, 47 at Juticalpa, and 82 at Amapala on an island in the Gulf of Fonseca.

### Soils <sup>1/</sup>

Much of Honduras' agricultural production comes from small mountain valleys and plateaus, some at fairly high elevations. This, of course, ex-

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<sup>1/</sup> The writer acknowledges the assistance given in the preparation of this section by Arnold C. Orvedal and William J. Carter, Soil Conservation Service, USDA.

cludes banana production, which is limited to the plains and river valleys of the north coast. The scattered areas of high agricultural land, interspersed with heavily forested mountainsides, may be divided into several broad categories. But since soils differ widely within a comparatively small area, programs for agricultural development should be considered only after careful study of the soil types.

Some soils of central and western Honduras have developed from exposure of granite and limestone rocks to moderate rainfall; they support deciduous and pine forests. Fertile pockets found in association with the deciduous forests apparently could be used for growing coffee, but these soils deteriorate quickly when the forest cover is removed.

Soils in some of the smaller valleys and inland plains and on the lower slopes of surrounding hills are lacking in plant nutrients. Careful management, including fertilization and addition of organic matter, would assure increased yields of the corn, rice, beans, and sugarcane which are usually grown on these soils.

In the vicinity of Choluteca there are fairly deep but sandy soils along the rivers. These soils could be made more productive by irrigation and proper fertilization. In contrast are the heavy clay soils which lie farther back from the river banks and toward the hills. With drainage and inclusion of organic matter, these soils too could be much more productive.

Along the river banks of the coastal areas of northern Honduras and over the plains built up by these rivers are found the recent alluvial soils which support the country's chief export crop, bananas. The largest of the rivers which flow across the northern coastal plain are the Ulúa, Chamelecón, Aguán, Sico, and Paulaya. Along the Comayagua, a tributary of the Ulúa, four groups of diverse soils are found. These include narrow strips of alluvial soil close to the river; poor, leached soil back from the river's flood plain; poor, black soils over gravelly subsoil; and fertile red clay loam on some of the hills in the upper part of the valley.

#### Land Use and Tenure

Under present simple production practices only a very small percentage of the total land area can be considered arable. Any increase in arable land will be determined by the extent to which modern techniques--irrigation and drainage, for example--are applied. Forests, both of pine and broad-leaf varieties, cover almost one-half of the country.

A high percentage of the land in farms is controlled by a few farmers, and approximately 75 percent of the farmers cultivate only 16 percent of the area in farms (table 1). Only 48 percent of the national territory is privately owned. The remaining 52 percent is either state owned or communally owned. Large areas of state-owned lands are found in the Departments of Olancho and Colón. If these departments are excluded, privately owned land represents 61 percent of the national territory; state owned and ejidal (communally owned) lands comprise the remaining 39 percent.



Table 1.--Honduras: Number of farms and farm area, by size, 1952

Size of farms	Farms		Farm area	
	Number	Percent	1,000 acres	Percent
Less than 2.5 acres.....	15,394	9.9	25	0.4
2.5 - 10 acres.....	73,617	47.1	475	7.7
11 - 22 acres.....	28,092	18.0	498	8.0
23 - 47 acres.....	18,620	11.9	641	10.3
48 - 122 acres.....	13,752	8.8	1,031	16.6
123 - 245 acres.....	3,865	2.5	657	10.6
246 - 492 acres.....	1,514	1.0	513	8.3
493 - 1,233 acres.....	803	.5	603	9.7
1,234 - 2,469 acres.....	284	.1	479	7.7
2,470 - 6,175 acres.....	126	.1	455	7.3
Over 6,175 acres.....	68	<u>1/</u>	819	13.2
All farms.....	156,135	100.0	6,196	100.0

1/ Less than 0.05 percent.

Over the years the area in private property has increased at the expense of state and ejidal lands. At present, state lands can be leased by individuals for crop and livestock production. However, the greater part of the state land is covered by forests, whose exploitation by concessionaires is permitted. Most agricultural operations are found on ejidal and private lands; there are also some forestry operations on these lands. Communal lands are usually used as pasture.

### Population

The country is sparsely settled; the average population density is about 45 persons to the square mile. Density is highest in the central and western parts of the country and thins out to less than 10 persons per square mile toward the northeast. More than 90 percent of the people are mestizos (Indian and white), 6 percent are pure Indian, 2 percent Negro, 1 percent white, and less than 0.1 percent are of the yellow race.

The population is about 70 percent rural and 30 percent urban; more than 80 percent of the economically active are engaged in agricultural activities. In 1959 approximately 20,000 persons were employed by the two fruit companies on coastal banana plantations as overseers, foremen, timekeepers, stockmen, and laborers. In the interior highlands commercial crops are produced by a large number of farmers. Coffee, the chief export crop in this area, is produced on almost 40,000 farms throughout the highland region. Some farms are small, operated by the owner and his family, and some are of substantial size, operated with hired labor drawn from the smaller farms.

## Transportation and Marketing

Over the past few years Honduras has obtained loans from various sources for economic development. The projects reflect the belief in official circles that deficiencies in transportation and communication are among the most important factors limiting the country's development.

Honduran statistics for 1960 show that the total length of the highway network is about 1,800 miles, of which almost 240 miles are paved. The 95-mile stretch of the Inter-American Highway that crosses the narrow southern part of the country in an east-west direction is far from the economic center and capital city, but the two departments traversed contain some of the best agricultural land in the country. Except for horse and mule trails there are no roads in the entire eastern half of the country.

In 1950 the Government of Honduras inaugurated a program of highway planning and improvement. Much of the existing highway system has been built since that time, and highway construction has had a prominent place in all plans and budgets. The government has had to seek help from outside sources to finance its highway program. The International Bank for Reconstruction and Development in 1955 loaned \$4.2 million to set up maintenance districts and to finance engineering studies for improving and constructing the Northern and Western Highways. The Western highway serves one of the most populous regions of Honduras. Beginning at San Pedro Sula it extends for 106 miles in a southwestward direction toward the border of El Salvador. The Northern Highway extends 230 miles northward from Tegucigalpa to San Pedro Sula and Puerto Cortés.

During 1956 and 1957, \$4.6 million were made available through loans for extension of the Inter-American Highway and development of a road network in the Guayape valley. This was in addition to the \$1.2 million paid by the United States as its contribution toward completion of the Inter-American Highway.

In early 1958 the IBRD made another loan - \$5.5 million - for the construction of a new paved road connecting Puerto Cortés with the national highway system and for improving the Western and Southern Highways. The latter road extends southward from Tegucigalpa, intersects the Inter-American Highway, and continues on to the Pacific port of San Lorenzo. It is the main artery for movement of trade with El Salvador and the only connection in Honduras with the Inter-American Highway. In December 1960 a World Bank mission went to Honduras to discuss with government officials plans for financing the extension of the Western Highway from Santa Rosa de Copán to Nueva Ocotepeque, near the Salvadoran border. Construction of this segment began in December 1961 (fig. 1).

Honduran railroads, of which there are approximately 800 miles, are located almost entirely within the north coast banana area. They were built to serve the banana industry and, except for 100 miles, are owned by the fruit companies. The National Railroad of Honduras operates the 100 miles and besides bananas, hauls other commercial freight and some passengers. Future expansion of the National Railroad is at best uncertain since the present interest of the government is in highway construction.



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Figure 1.--Map of Western Honduras.

There is no inland water transport system in Honduras in the real sense of the term, because the rivers are shallow and the important commercial centers are not connected. The rivers carry a few passengers travelling in dug-outs, canoes, and other small craft. Logs are floated down some of the rivers, mainly in the northeast section of the country.

Air transport is of great importance to Honduras, and the international airlines carry a substantial volume of freight. The majority of people visiting the country travel by air. Toncontin airport near Tegucigalpa is the only one of more than two dozen airports in the country that meets international standards and it is not long enough to accommodate jet aircraft.

Tegucigalpa is the most important distribution center in the southern part of the country for general merchandise, which is channeled through the city to towns in other regions. San Pedro Sula is also important commercially. It has rail connections with the north coast towns of Puerto Cortés, Tela, and Progreso; a large part of the interior is also commercially dependent upon it.

Except in the fruit companies, the marketing of agricultural products in Honduras is not highly organized. Coffee and tobacco are sold to local buyers or moved by human or animal power to central markets. Other farm products are sold in the towns and villages on market days. Larger towns or urban centers have daily markets, but smaller centers usually have only one market day a week.

There is very little primary processing of farm products, except for cleaning coffee and curing tobacco. Storage facilities are inadequate and losses from spoilage are great. However, some progress has been made toward meeting the need for more grain storage facilities. In recent years the National Development Bank has been operating three graneries, located in Comayagua, El Paraíso near the Nicaraguan border, and Jalteva in the Department of Morazán. The "Molino Harinero Sula," a flour milling monopoly, now has storage capacity of 2,000 metric tons at its Tegucigalpa plant and 1,000 tons at its San Pedro Sula plant. The National Development Bank also has about 3,000 tons storage capacity at San Pedro Sula. Scattered throughout the country the Bank also has numerous small silos and warehouses with a total capacity of about 8,650 metric tons.

## AGRICULTURAL DEVELOPMENT

The mountainous terrain of the country renders approximately 75 percent of Honduran territory difficult for agricultural use although small plantings of corn, beans, rice, and other crops are found on very steep hillsides. Practically all of the large farming operations are carried on in the Caribbean lowlands, while small-scale intensive farming is practiced in the interior. Foreign interests largely control the banana industry, but Hondurans own most of the coffee farms, the majority of which are of modest size.

### Production Practices

Except for bananas and coffee, few agricultural products are shipped outside Central America. Some modern equipment is used in the production of the

export crops. Otherwise agriculture has not gone much beyond the stage of development of colonial days, and much of it still relies wholly on hand tools and equipment. The average farmer in Honduras has 8.6 acres of land. Of this only 4.9 acres are in cultivation; he plants half of this to corn and the rest to grain sorghum, rice, beans, coffee, sugar cane, or bananas, depending upon the location of the farm. His tools are a machete, hoe, and planting stick. Only one farm in six has a plow, a cart, and a team of oxen.

A large portion of the country is so rough that it is not adapted to large scale mechanization of crops. In some of the river valleys mechanization might be successful if holdings could be consolidated into fields large enough to permit efficient use of machines. According to incomplete information from various farm machinery dealers in Honduras, 304 tractors were imported in 1957. This is estimated to be 80 percent of the tractors imported in that year.

The fruit companies have well-planned sprinkler irrigation for banana cultivation, but in the central plateau area crops and pastures often suffer during the dry season. The fruit companies, too, are the principal users of chemical fertilizers. The majority of the country's farmers are too poor to use imported fertilizers even if they wanted or knew how to do so. The United States consistently supplies the bulk of Honduras' requirements of fertilizer - about 62 percent; the remainder is supplied by Chile. United States exports to Honduras of all chemical fertilizers and fertilizer materials in recent years are as follows:

	<u>Short tons</u>
1957	6,920
1958	6,052
1959	8,284
1960	4,005

### Agricultural Policies

Government policies regarding agriculture are designed to increase domestic output through more efficient farm practices, to utilize more of the available land for agricultural production, and to develop the livestock industry. Programs involve a thorough study of actual and potential resources, education in modern farm practices, and financial assistance in the form of loans. So far, progress in agricultural education is limited. However, an agricultural school operating under the AID (Agency for International Development) educational service since 1952 provides a 3-year course in vocational agriculture. During the 3 years students receive training in livestock and poultry management, rural industries, dairying, agronomy, horticulture, farm mechanics, machinery operation, cooperatives, and related subjects. Up to mid-1960, 169 students had been graduated, most of whom have returned to the various departments of the country to work among the people.

The Escuela Agrícola Panamericana, backed by one of the fruit companies, provides good agricultural training for students from all of Latin America (fig. 2). The technical assistance program, a cooperative arrangement between the United States and Honduras, is encouraging farmers to become interested in new and possibly more profitable crops. Experiments have been conducted

with kenaf, castor beans, peanuts, sunflower, cacao, and other crops. Soil conservation and forest fire prevention are stressed. Programs for the control of livestock disease and insect pests are showing farmers the way to more efficient livestock production.



**Figure 2.--Entrance to the Pan-American Agricultural School at Zamorano, considered one of the finest schools of its type in Central America.**

Overall planning for Honduran economic development is entrusted to the National Economic Council, an agency created by the Government in 1955. A comprehensive 4-year plan for economic development is being prepared by the Council. It is expected that at least 40 percent of planned expenditures will be devoted to road construction and communications and 30 percent to education and social welfare. In order to assist in the development of economic planning, the Council in 1959 established a Planning Commission composed of seven committees, one from each major sector of the economy - agriculture; industry; tourism; transportation, communications and energy; health, housing, and city planning; education; and finance.

Agricultural development programs are implemented by three agencies: (1) the Ministry of Natural Resources, which is responsible for planning agricultural policy, managing natural resources and national lands, and stimulating agricultural development; (2) the Inter-American Technical Service for Agricultural Cooperation; and (3) the National Development Bank.

The National Development Bank is an autonomous State institution, inaugurated in July 1950, whose purpose is to contribute to the development of national production in general and to raise the living standards of the Honduran people. It is authorized to establish permanent technical assistance services and technical research in fields of agriculture, livestock raising, and industry. The Bank is authorized to make crop loans at interest rates of 4 to 8 percent for periods of 6 to 18 months; interest rates on equipment loans vary from 6 to 8 percent for periods not over 4 years; mortgage loans may run from 5 to 25 years at a rate of 9 percent annually. Because of inadequate capitalization it is almost impossible for the average farmer to obtain from the Bank the long-term credit necessary to increase his cultivated area beyond the subsistence level.

Impetus was given to general agricultural development by the signing, in January 1951, of a basic agreement between the Honduras Government and the Institute of Inter-American Affairs setting up the technical service known as STICA (Servicio Técnico Interamericano de Cooperación Agrícola). This organization undertakes general agricultural education programs in animal husbandry, irrigation, crop rotation, soil conservation, and forestry.

### Agrarian Reform

Agrarian reform in Honduras has long been recognized as a problem. Programs to solve it have been put forward from time to time, but none has been thoroughly planned or executed. Although simple land distribution has not proved successful, a program of distribution of national lands is now under way.

The program of the Agrarian Reform Commission of the Organization of American States calls for distribution of public rather than private lands to the landless "campesinos" but goes further than simple land distribution. It calls for an integrated program of agricultural, social, and political development.

In mid-1961 the Honduran Government requested \$9.3 million under the Act of Punta Del Este for financial assistance for eight projects. Of the eight, all rated high in importance, agrarian reform is one of the most urgent. A pilot project is to be located in southern Honduras, in the Choluteca River valley. The programmed expenditure of \$15 million will be spread over 4 years.

### Trade Policies

Trade policies of Honduras have the threefold purpose of providing revenues to meet budgetary obligations, conserving the country's limited foreign exchange, and promoting economic development. The country derives more than one third of its ordinary revenue from import and export duties.

Preferential import duties are accorded to certain products of El Salvador, Guatemala, and Nicaragua but do not apply to imports from the United States. Reduced or bound duties were accorded to the United States under terms of the reciprocal trade agreement which went into effect in 1936. Some agricultural commodities affected were: pork products and certain other meats, rolled oats, oatmeal and breakfast foods, certain fresh fruits and canned and

dried fruits, certain canned vegetables, wheat flour, and certain dairy products. In February 1961 the two Governments mutually decided to terminate the tariff schedules under this agreement. Honduras took the lead in this action in order to protect Honduran producers, to raise more tax revenue from imports of "luxury" items, and to enable the country to negotiate with its neighbors under Common Market arrangements. The general provisions of the agreement remain in effect.

Usually there are no quantitative controls on agricultural imports, but the government has authority to limit or prohibit entry of certain commodities when domestic supplies are ample.

### Agricultural Output

Total agricultural output has increased in recent years. Based on a 3-year period (1953-55 = 100) the index of production was 120 in 1957-58 and 125 in 1960-61. <sup>2/</sup> Crops showing the greatest increase are corn (up 40 percent) and sugar (up more than 200 percent). Rice and beans have increased moderately. Bananas, too, showed a moderate increase in 1960-61, but in 1958-59 the export crop was almost 50 percent greater than in the base period. Meat production remained fairly stable until 1960-61 when beef production increased rather sharply. Milk production has increased moderately in the last few years. Even though agricultural production is increasing it is barely keeping pace with population growth. In 1960-61 per capita production only equalled that in the base period.

### Exports Crops

Bananas and coffee are Honduras' leading exports and together represent about 70 percent of the total exports by value. Bananas are produced largely on foreign-owned plantations on the north coast, from near Trujillo on the east to the Guatemalan border on the west.

For many years Honduras was one of three leading world exporters of bananas. Recently, however, inroads of Panama disease, rising production costs, hurricane damage, and increased competition from Ecuadoran bananas have adversely affected banana production in Honduras. One of the fruit companies has changed from production of the more marketable Gros Michel variety to the more disease-resistant Giant Cavendish. This variety has its failings too, in that it is easily bruised in transit and has less consumer acceptance. The company, in order to promote sales and to provide better handling of its fruit, began shipping bananas in boxes early in 1960. Although this adds to the cost of producing and shipping, there are also savings. Shipping space is reduced by two-thirds; also, the work of removing the bananas from the stem, washing, and otherwise preparing them for sale is done by Honduran rather than U.S. labor.

The other fruit company still produces Gros Michel bananas but is considering changing to the Lacatan variety. This company is also considering

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<sup>2/</sup> Regional Analysis Division, U.S. Economic Research Service. Indices of Agricultural Production for the 20 Latin American Countries, October 1961, 48 pp.



getting out of the production business and confining itself to merchandising. Its banana plantations would be leased to supervisory employees, and in order to further reduce expenses it would give up its hospital, railroad, and other properties.

Banana exports in 1960 dropped to 17 million 50-pound stems, compared with 19.3 million the previous year and 21.5 million in 1958 (fig. 3). Prices on the U.S. market dipped, and this, coupled with low production, meant heavy losses for the fruit companies and for the independent producers as well. The hurricane of late 1961 reduced exports by 800,000 stems. Despite this, total 1961 shipments showed an encouraging increase over 1960 exports and are estimated at 21.5 million stems.

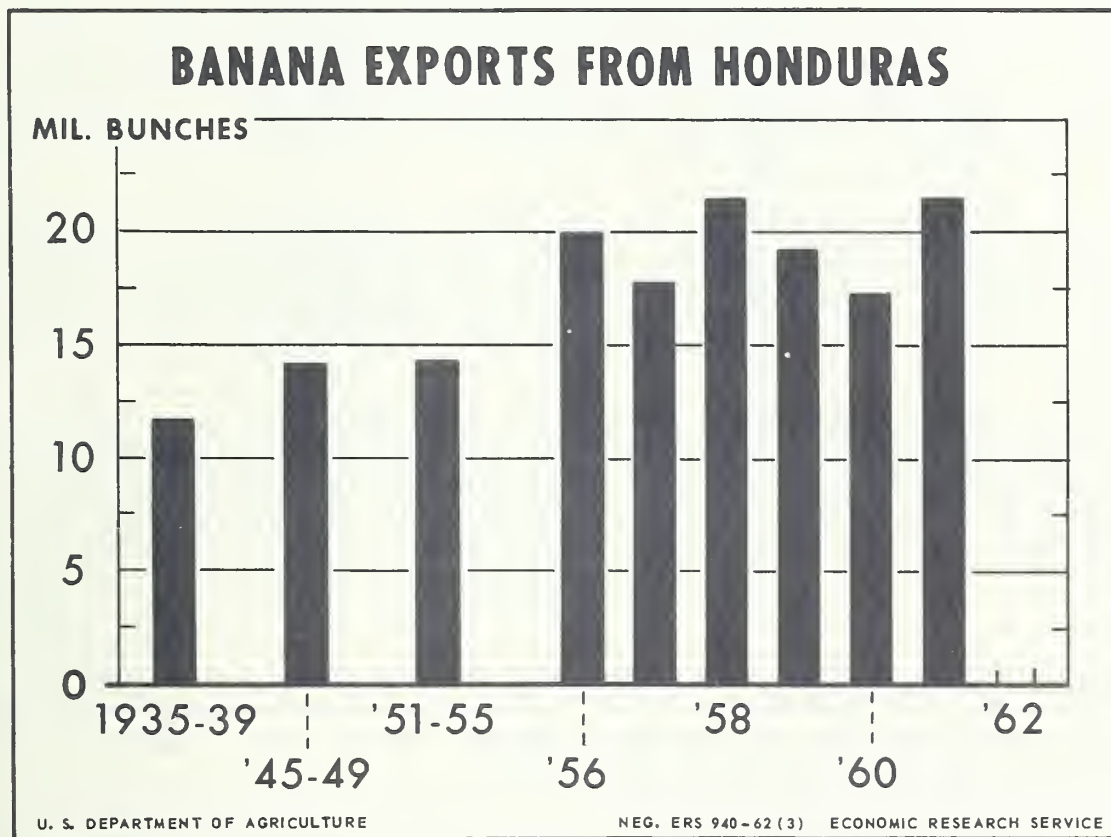


Figure 3

In contrast to banana production, which is a plantation-type, foreign-owned enterprise, coffee is produced on small farms owned largely by Hondurans. These small farms dot the mountain slopes and plateaus of the interior. The highland departments near the borders of El Salvador and Guatemala and the southern Department of Choluteca produce most of the country's coffee.

Honduras is the smallest coffee producer among the five chief Central American producing countries. However, its production almost doubled in the

1944-53 decade. Currently production runs around 300,000 bags of which 50,000 bags are consumed locally.

The Government favors expansion of coffee production, and administration policy in recent years has been to encourage increased coffee plantings without abandonment of old plantations. Many farmers, not able to buy new plants for increasing their acreage, have been given the new plants by the government. Honduras coffee experts have estimated that output could be expanded to 5 or 6 times its current level, so far as availability of suitable lands is concerned. Also coffee income could be greatly increased by better processing and more careful grading.

Two crops which have in the past been of some commercial importance are coconuts and abacá. Coconut palms grow wild along the country's north coast, and the fruit is the principal product of the Bay Islands. Total area in trees has been estimated at around 10,000 acres. The soil and climate are evidently well suited to the growth of the trees in the wild state and little effort has been made to cultivate them. Several thousand people gain their livelihood gathering coconuts.

Some of the fruit is processed into copra, but most of it is shipped as fresh fruit to the United States. Exports have declined because of increasing local consumption. Two vegetable oil plants at La Ceiba and Puerto Cortés produce vegetable lard, cooking oil, and soap from the copra for the domestic market.

During the 1944-58 period abacá fiber was an export of some importance. This fiber was grown in the Sula valley under a United States Government contract which ended in 1960. Production started in late 1942 and the first shipments were made 2 years later. Liquidation of the plantations began several years ago and final shipments were made in 1958.

#### Food Crops

Food crops produced largely for local consumption occupy a large proportion of the cultivated area. Corn is by far the leading crop and occupies 65 percent of the harvested acreage of annual crops. Grain sorghum, beans, and rice account for the bulk of the remainder.

Corn is grown in all parts of the country, mostly on small farms. Normally the country is self-sufficient and sometimes exports small quantities to El Salvador. Recently production has amounted to 10 to 11 million bushels (table 2).

Grain sorghum is an important crop in southern Honduras. A large part of the crop is interplanted with corn. Grain sorghum is used primarily for human food, but substantial amounts are fed to chickens and hogs when corn is plentiful.

Beans are the staple protein in the Honduran diet. The country usually produces an excess and the surplus is shipped to El Salvador.

All of the departments in Honduras produce rice although the northern half of the country is considered to be the heaviest producing area. There are no large plantings of rice; a typical "patch" is less than 6 acres. The small size of individual plantings, difficult terrain, and lack of capital discourage the use of agricultural machinery. These factors indicate that Honduras will continue to import rice in order to meet rising consumption needs.

Table 2.--Honduras: Estimated production of principal crops <sup>1/</sup> average 1950-54, annual 1958-60

Crop	Unit	Average 1950-54	1958	1959	1960
Corn <sup>2/</sup> .....	1,000 bu.	8,325	10,300	10,500	11,500
Grain sorghum <sup>3/</sup> ..	mil. lb.	108	119	121	123
Rice <sup>2/</sup> .....	mil. lb.	40.6	43.9	49.8	52.5
Wheat <sup>3/</sup> .....	1,000 bu.	31.7	41.0	55.9	53.4
Dry beans <sup>3/</sup> .....	1,000 bags	508	699	751	777
Potatoes <sup>3/</sup> .....	1,000 cwt.	42.6	45.6	44.0	38.5
Yuca <sup>3/</sup> .....	1,000 cwt.	267	321	330	343
Cotton <sup>3/</sup> .....	1,000 bales	2.2	16.4	7.4	6.1
Abacá <sup>2/</sup> .....	mil. lb.	<sup>4/</sup> 3.9	1.1	0	0
Tobacco <sup>2/</sup> .....	1,000 lb.	7,150	5,871	3,780	4,815
Coconuts <sup>3/</sup> .....	1,000 tons	10.0	11.9	11.5	10.5
Coffee <sup>2/</sup> .....	1,000 bags	212	330	350	275

<sup>1/</sup> Excluding bananas.

<sup>2/</sup> Source: Foreign Agricultural Service

<sup>3/</sup> Source: Dirección General de Estadística y Censos.

<sup>4/</sup> Average 1951-55.

#### Other Crops

Honduras produces a variety of other crops for local consumption and for export, among them sugar, wheat, cotton, various oil-producing seed and nut crops, tobacco, plantains, potatoes, yuca and other tubers, a variety of vegetables, avocados, mangoes and other tropical fruits, and citrus fruits.

Sugarcane is produced in nearly all sectors of western Honduras, with a few scattered plantings in the eastern Departments of Colón and Olancho. The sugar industry is expanding but the country is still a net importer of sugar. According to official statistics 1960 production of refined sugar amounted to 21,000 tons. Imports for 1960 amounted to 6,880 tons.

Small farmers all over Honduras plant a few acres of sugarcane from which they make panela for their own use. Many Hondurans, even those in urban areas, prefer panela to refined white sugar. Due to the nature of panela production there is no way of making an accurate estimate of total output.

Small quantities of soft wheat are produced in Honduras; production is limited to areas 5,000 to 6,000 feet in elevation. There is little likelihood of any material increase in output since the area on which wheat can be grown is limited. Furthermore there are no guaranteed prices or other incentives to encourage production. Crops of the last few years have yielded an average of 50,000 bushels.

Cotton is grown in the southern part of the country mostly on fairly large farms. Production expanded from 4,000 bales in 1955 to 18,000 in the peak year 1957 and 16,000 bales in 1958. In 1958 and 1959 cotton was the fourth ranking export, following bananas, coffee, and forest products. Subsequently, lower world prices forced many marginal producers out of business. However, acreage for the 1961-62 crop was expected to increase due to the special credit and technical assistance program of the National Development Bank.

One of the North American fruit companies in 1944 made a commercial planting of African oil palms in the coastal region near Tela. The area now totals around 5,000 acres. The African palm produces two types of oil. Pericarp oil is obtained from the fleshy substance around the kernels and is excellent for making food fats and soap. Palm kernel oil is extracted from the kernel itself. It is much thinner than pericarp oil and is used in making cooking oils. Oil output is sold to the Fábrica de Manteca y Jabón, Atlántida, S.A., at La Ceiba which produces fats and soap. Products of the plant are sold locally and exported to El Salvador.

Corozo palms grow wild in abundance throughout the hot, humid lowlands of the north coast and in the river valleys extending inland from the coast. The nuts are gathered and sold to the shortening and soap factories.

About 10 years ago the Fábrica de Manteca attempted to stimulate production of sesame in Honduras. It imported seed for planting which was distributed free to small farmers in the Olanchito valley in the hope that enough sesame would be produced to meet the needs of the fats and oils plant. Official statistics show that production now amounts to 1.0-1.5 million pounds of seed. Most of the crop is produced in the Pacific Coast Department of Choluteca where the dry season is steady and dependable.

Small amounts of cotton seed, coyol palm, peanuts, and citronella oil are produced in Honduras but none in significant quantities. Most of the cottonseed is exported to El Salvador rather than shipped into central Honduras.

Tobacco production is concentrated in the Department of Copán, on the Guatemalan border. The neighboring Departments of Ocotepeque and Santa Bárbara also produce small quantities. Production in 1961 amounted to 6.7 million pounds.

El Salvador is the chief market for Honduran tobacco leaf as well as for Honduran hand-rolled cigars. The cigarette company Tabacalera Hondureña imports leaf tobacco from the United States for blending.

The Tabacalera Hondureña has been experimenting with growing Oriental-type tobacco and has met with reasonable success. The company hopes to harvest its first commercial crop of Turkish tobacco by 1962-63.

### Livestock and Products

Livestock raising is one of the most important economic activities in Honduras. The agricultural census of 1952 indicated that cattle population almost equalled that of Nicaragua, where cattle numbers are said to almost equal the human population; also that the hog population of Honduras was the largest of the Central American countries. Cattle are fairly widespread, except for the extreme eastern part of the Department of Olancho and the Department of Colón (see dot map, fig. 4). Hogs, though only about half as numerous as cattle, were evenly distributed throughout the western half of the country. Poultry population was also distributed evenly over the western half of the country. Goats, horses, and mules were scarce and widely scattered.

Honduras is a surplus producer of livestock and livestock products. Pig raising is an enterprise of small farmers, in contrast to cattle raising, much of which takes place on the large farms. Dairying is most active in the Department of Francisco Morazán, in which Tegucigalpa is located, and in Cortés on the north coast, although butter and cheese are produced in all cattle regions.

Pasture is virtually the only feed available to cattle, although improved forage grasses have been introduced in Choluteca, El Paraíso, Francisco Morazán, and Cortés. The carrying capacity of pastures in the interior and southern departments is estimated at 1 head per 1.7 acres, but it is somewhat greater in the well-watered pastures of the north coast. The long and severe dry season in the interior and southern regions of the country handicaps the cattle industry. Dry season losses of up to 20 percent of the herd are commonly reported.

Somewhat better care is given to the dairy and beef herds near the larger towns. Sorghum, green corn, or Napier grass are fed during the dry season, and dairy cows are frequently fed rations of rice or wheat bran, cottonseed meal, ground corn, bananas, or green feed.

Generally little attention is given to combatting animal diseases or pests. Cattle ticks, the torsalo fly, internal parasites, blackleg, mastitis, and nutritional deficiencies are common. However, programs administered by STICA are showing the way toward the control or elimination of these problems.

Beef and pork consumption is highest in urban areas, especially Tegucigalpa and the north coast departments. Almost every cut of pork is more expensive than the comparable cut of beef. Still, pork is the favorite meat, and hog numbers are generally adequate to meet requirements. Mutton and goat meat are eaten only in the limited areas where the animals are produced. Meat consumption apparently is lowest in the highland departments bordering El Salvador and Guatemala.

Recently there has been an expansion in the meat packing industry in Honduras. In August 1961 a meat packing plant at Tela, operated by one of the

### HONDURAS: CATTLE NUMBERS, 1952



Most cattle in Honduras are raised on the open ranges. Better herd management practices instituted by the fruit companies have been adopted by a number of farms in the north coast region.

### HONDURAS: HOG NUMBERS, 1952



No special efforts are made to provide supplemental feed for hogs. Most forage for themselves and probably require two to three years to achieve a 200-pound weight gain.

### HONDURAS: POULTRY NUMBERS, 1952



Improvement and expansion of Honduras' poultry industry would provide an additional source for the protein now lacking in the diet.

Figure 4.--Dot maps adapted from Primer Censo Agropecuario, 1952. República Honduras.

fruit companies, began shipping frozen boned beef to the United States and Puerto Rico. A new slaughterhouse at San Pedro Sula began operations in October 1961 and is also licensed for export. Still another plant under construction at Catacamas plans to slaughter for export and should be completed early this year. Prior to this expansion only one plant, the Compañía Ganadera Industrial, S.A., at Tegucigalpa was licensed for export to the United States. Imports of chilled and frozen beef into the United States in 1961 from Honduras totalled 2.7 million pounds valued at \$1.1 million.

Total beef production is estimated at 35 - 40 million pounds and pork production at around 7 million pounds.

Hog lard is the favorite cooking fat of the Honduran people. Yearly production is estimated at 2.0 - 2.5 million pounds on the basis of a lard yield of 30 pounds per animal. As the vegetable oil industry on the north coast expands, hog lard may decline in importance in the future.

Tallow derived from slaughter in the larger cities is used in soap making. That produced in the smaller cities is often wasted, since transportation difficulties prevent its use by soap makers.

Milk production is increasing slowly but consumption is still far below desirable nutritional levels. Among the factors which restrict consumption are the limited purchasing power of the majority of the people, transportation and refrigeration problems, present food habits, and poor sanitation in handling and marketing.

Most observers believe that fluid milk production is in the neighborhood of 275 million pounds. Substantial amounts of cheese are made, both commercially and on farms. Butter is also produced, but on a much smaller scale and almost entirely on farms.

There are two pasteurizing plants in Honduras, one in Tegucigalpa and the other in San Pedro Sula. Their combined output is about 3,000 quarts per day. There are two re-combining plants in the capital and a drying plant in San Pedro Sula.

The Government, up until comparatively recent times, gave little attention to the livestock industry. However, in February 1954 a decree was enacted by the Honduran Congress to provide for the protection and development of the livestock industry and for the study, prevention, and eradication of animal disease. The Livestock and Veterinary Bureau was named as the organization responsible for the promotion of animal husbandry. It was also charged with placing animal products within reach of all consumers and with raising the standard of living of the small cattle raiser. The functions of this Bureau are now assigned to the Legal Section of the Ministry of Natural Resources.

The more progressive livestock farmers are much interested in obtaining purebred stock from the United States to upgrade their herds. Dairy and beef cattle and hogs especially are desired. The use of artificial insemination as a means of improving beef and dairy herds is gaining favor among cattlemen.

The fruit companies are important in the Honduran livestock picture. They maintain beef and dairy herds as well as hogs, and their management practices serve as a guide for Honduran farmers.

### Trade in Agricultural Products

During the 5-year period 1956-60 Honduran exports of the leading commercial agricultural products averaged \$55 million (table 3). Bananas and coffee were the principal exports, accounting for \$47 million out of a total of \$67 million for all products exported.

The United States is by far the biggest market for Honduran agricultural exports. In 1960 this country took almost 80 percent of the bananas and almost 60 percent of the coffee exported from Honduras. Canada and Western Germany are also important markets for the bananas and Western Germany and Italy for the coffee. These countries, together with neighboring Central American states, Cuba, and Venezuela, take the majority of Honduran farm and forest products.

Agricultural imports represent only a small share of total import value (table 4). Wheat flour, cereal preparations, dairy products, and sugar are the principal items. Some others are wheat, fruits and edible nuts and their preparations, vegetables and preparations, and certain animal and vegetable fats and oils. The United States is the chief source of the wheat flour and cereal preparations. Denmark and Holland are by far the biggest suppliers of dairy products and El Salvador supplies most of the sugar.

### DOMESTIC CONSUMPTION OF FOOD PRODUCTS

At present consumption levels Honduras is self-sufficient in most food items and is, in fact, a net exporter of certain food products. In addition to fruit - mostly bananas - Honduras normally exports some corn, beans, and livestock and imports sugar, wheat, and flour. Other food imports consist of items received in border trade with El Salvador, staple commodities imported for use of the fruit company employees, and high quality prepared foodstuffs imported for sale to wealthy Hondurans and foreign residents.

Aside from these the country depends almost exclusively on domestic production to meet its food requirements, and quantities produced have little significance compared with the total volume of food consumed.

According to a study made in 1958 <sup>3/</sup>, almost half of the calories in the daily diet were supplied by cereals, sugar, fruit, and vegetables. Meat, fish, dairy products, fats, and eggs supplied only 10 percent of daily per capita calorie intake.

Inadequacy of the Honduran diet may be attributed to several factors: habits and traditions of the people; deficiency in transportation which re-

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<sup>3/</sup> U.S. Foreign Agricultural Service. Food Balances in Foreign Countries. FAS-M-104, 22 pp., November 1960.



Table 3.--Honduras: Exports of selected agricultural commodities, 1956-60

Commodity	Unit	1956		1957		1958		1959		1960		Average	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Cattle	units	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
		1,573	1,615	1,791	1,791	1,791	1,791	1,791	1,791	1,791	1,791	1,791	1,791
Pigs	units	-	714	-	701	-	701	-	857	-	1,062	-	804
Dairy products	units	-	150	-	108	-	108	-	69	-	77	-	105
Corn	Bu.	502	333	218	333	521	858	992	1,767	690	929	585	930
Citrus fruit	units	-	67	-	130	-	109	-	205	-	111	-	111
Plantains	Lb.	1,639	31	3,601	73	6,644	136	5,989	150	6,316	130	4,838	104
Bananas	Stems <sup>1/</sup>	19,670	43,870	17,775	33,692	21,534	37,599	19,276	32,104	17,200	28,661	19,091	35,185
Pulses	Cwt.	126	680	123	525	166	915	200	1,111	207	932	164	833
Coffee	Bags <sup>2/</sup>	198	13,504	174	11,988	189	10,904	255	11,741	258	11,823	215	11,992
Edible fats, animal, vegetable or mixed	Lb.	961	231	586	141	696	160	1,027	231	2,318	528	1,118	258
Raw tobacco	Lb.	3,868	763	4,577	685	3,057	410	3,035	468	2,953	484	3,498	562
Raw cotton	Lb.	2,784	405	3,337	353	8,299	2,568	8,079	2,578	2,698	652	5,039	1,311
Abaca, includ- ing tow and waste	Lb.	5,254	1,153	5,195	1,422	1,765	419	0	0	0	0	2,443	599
Total, listed products		63,826	51,758	56,698	56,698	56,698	56,698	53,718	53,718	46,853	46,853	54,570	54,570
Total, all commodities		72,417	63,900	68,682	68,682	68,682	68,682	67,183	67,183	63,426	63,426	67,122	67,122
Agricultural ex- ports as percent <sup>1/</sup> of total ex- ports		88.1	81.0	82.6	82.6	82.6	82.6	80.0	80.0	73.9	73.9	81.3	81.3

<sup>1/</sup> FAS. Stems of 50 pounds.  
<sup>2/</sup> 132.276 pounds.

Table 4.--Honduras: Imports of selected agricultural commodities, 1956-60

Commodity	Unit	1956		1957		1958		1959		1960		Average	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
		1,000 units	1,000 dollars	1,000 units	1,000 dollars	1,000 units	1,000 dollars	1,000 units	1,000 dollars	1,000 units	1,000 dollars	1,000 units	1,000 dollars
Cattle .....	---	-	46	-	51	-	74	-	102	-	16	-	58
Meat and meat products .....	---	-	218	-	220	-	233	-	223	-	399	-	259
Dairy products .....	---	-	402	-	682	-	775	-	601	-	989	-	690
Wheat .....	Bu.	253	439	242	450	286	561	239	472	314	673	267	519
Rice .....	Lb.	295	18	1,353	84	6,098	378	2,428	193	3,071	257	2,649	186
Corn .....	Bu.	1	3	1	4	8	14	9	27	11	29	6	15
Wheat flour .....	Cwt.	172	753	201	828	197	843	210	853	192	975	194	850
Wheat and oats prepared: as breakfast foods .....	---	-	244	-	304	-	313	-	333	-	320	-	303
Malt .....	Bu.	157	346	169	370	151	324	128	267	118	271	145	316
Fresh fruit .....	---	-	133	-	148	-	162	-	191	-	209	-	169
Dried fruit and other fruit preparation,....	---	-	175	-	215	-	194	-	198	-	295	-	215
Vegetables and Preparations .....	---	-	336	-	378	-	394	-	454	-	539	-	420
Sugar, refined .....	Lb.	24,529	1,063	9,189	1,255	21,396	1,197	5,951	997	13,761	845	16,965	1,071
Margarine, animal, vegetable or mixed ..	Lb.	169	38	192	48	216	54	216	57	268	70	212	53
Lard, substitutes and similar edible fats,.....	Lb.	451	72	1,039	253	441	77	657	126	807	151	679	136
Raw tobacco .....	Lb.	283	216	151	117	114	89	111	85	99	73	152	116
Raw cotton .....	Lb.	35	3	32	2	20	1	2	1	1	1/	18	1
Fats and oils of animal or vegetable origin .....	---	-	296	-	340	-	248	-	264	-	634	-	356
Total, listed products .....	---	-	4,801	-	5,749	-	5,931	-	5,444	-	6,745	-	5,733
Total, all commodities .....	---	-	58,506	-	68,695	-	65,650	-	61,837	-	71,744	-	65,286
Agricultural im- ports as percent- age of total imports			8.2		8.4		9.0		8.8		9.4		8.8

1/ Less than \$500.

stricts movement of foodstuff from surplus to deficit areas; uneven distribution of population, with over-concentration in some areas while other areas remain sparsely populated; unequal distribution of income; and lack of storage facilities to carry over food supplies from flush to lean years or even to maintain stable supplies throughout one consumption year.

Bananas and plantains are produced for local use in scattered areas throughout the country in contrast to commercial production which is centered along the north coast. Coconuts, citrus fruit, and some rice are also shipped from the Caribbean departments. Sizable quantities of beans, corn, sesame, potatoes, wheat, and onions normally move from the southern departments into El Salvador.

Corn is the basis of the diet of most Hondurans. It is commonly consumed as tortillas. Grain sorghum and even wheat are used in tortillas when the corn crop has been used up. Potatoes are grown and consumed at the higher altitudes, while plantains, bananas, and yuca are important sources of carbohydrates at the middle and lower elevations. White bread is included in the diet of urban dwellers and those on the north coast.

Relatively little meat or fat is used by the majority of Hondurans; consumption is greatest among urban residents, inhabitants of the Caribbean coastal belt and the cattle producing regions. Consumption is lowest in the more densely populated highlands along the Salvadoran and Guatemalan borders. Consumption of beans partly compensates for the deficiency of animal protein.

Fresh fruits and vegetables, especially the latter, are not highly regarded, but substantial quantities of both wild and cultivated fruits and green vegetables are eaten in season.

A relatively small quantity of corn, grain sorghum, and root crops is fed to livestock. Wheat bran is the principal supplemental cattle feed.

#### EFFECT ON HONDURAS OF ECONOMIC INTEGRATION

Honduras has been interested in Central American integration since the beginning of the movement and has signed seven treaties and ratified five. **Four** of these treaties are in effect among the Central American nations: the Multilateral Treaty of Free Trade and Economic Integration of June 1958, the Tripartite Treaty of Economic Association of February 1960, the Constitutive Agreement of the Central American Bank of Economic Integration of December 1960, and the General Treaty of Economic Integration.

The Multilateral Treaty looks toward the ultimate establishment of a Central American customs union. The establishment of free trade in some 200 domestically manufactured items is one of the main provisions of the treaty. The number of items is to be expanded until a free trade area is established within 10 years.

The purpose of the Tripartite Treaty is to "accelerate the program of economic integration" and is in effect between Honduras, Guatemala, and El Salvador. The treaty provides for immediate free trade for natural

and manufactured products originating in the signatory countries, subject to certain limitations.

The third treaty ratified by Honduras provides for the establishment of a bank to finance projects for the uniform development of Central America and also to finance projects in pastoral industries. Such a bank was inaugurated in July 1961 in Tegucigalpa. Its initial authorized capitalization was \$16 million contributed by the member nations and an additional \$10 million from U.S. sources.

By its recent ratification of the General Treaty of Central American Economic Integration, which reaffirms the intention of the contracting parties to unify their economies and jointly to promote Central American development, Honduras is eligible to receive loans from the new bank.

There has been some apprehension among Honduran business and financial leaders that Honduras will become only a supplier of raw materials and that El Salvador will become the industrial leader among the Central American nations. Recently, however, many prominent business men, particularly on the North Coast, have begun to make investment plans and are coordinating their plans with those of El Salvador and Guatemala.

The role of raw material supplier is one which Honduras should be able to fill creditably. Since Honduras has possibilities for expanding production of farm and forest products, and since industrial expansion in the area will bring about a greater demand for raw materials, Honduras should find a ready market for many of its products within the Central American area. If the country's agricultural (especially livestock) and forestry potential is developed scientifically, Honduras could provide raw material for dairy, leather, plywood, and pulp and paper industries, to name a few, which are or will be operating in the Common Market area.

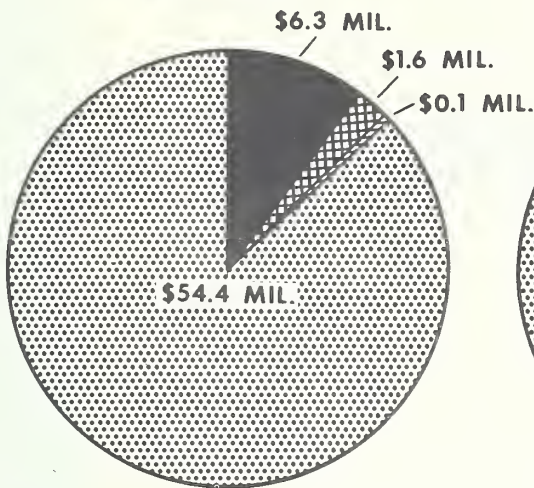
Honduras is now an exporter to the three countries that have ratified the General Treaty of Central American Economic Integration (fig. 5). Exports to El Salvador consist chiefly of food products (more than half) of which the most important are cattle, hogs, cheese, corn, and beans; tobacco and cigars; inedible raw materials such as cattle hides, crude rubber, pine lumber; and manufactures such as cement. Honduras imports from El Salvador sugar and preparations of sugar (which account for one fourth of the total), rice, potatoes, edible animal and vegetable fats, cottonseed and other oilseeds; manufactured articles such as textiles, clothing and hats, and construction materials.

Honduras exports to Guatemala cattle, hogs, edible vegetable fats, various vegetable oils, by-products of the processing of vegetable oils, and a few manufactured articles. Imports from Guatemala consist chiefly of fruit preparations (especially juice), sugar, crossties, paint, and cardboard boxes.

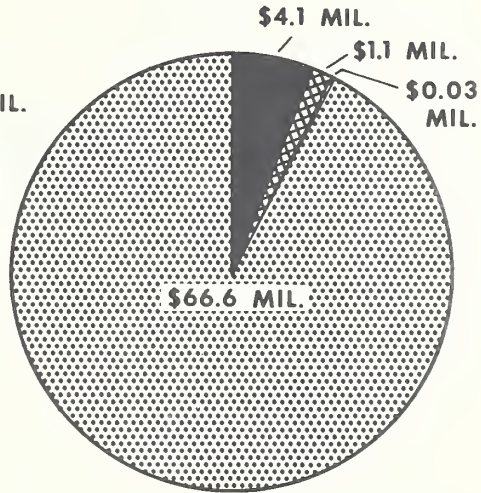
Chief Honduran exports to Nicaragua are meat, coconut oil, banana seeds and plants, and unspecified chemical products. Imports from Nicaragua are very minor, the largest being hides and skins, seeds, bulbs, rhizomes and live trees for planting, castor oil, sesame oil, sacks, metal tanks, and airplane parts.

# VALUE OF HONDURAS FOREIGN TRADE, 1960

EXPORTS  
(\$62.4 MIL.)



IMPORTS  
(\$71.8 MIL.)



El Salvador
  Guatemala
  Nicaragua
  All others

U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 941--62 (3) ECONOMIC RESEARCH SERVICE

Figure 5

UNITED STATES DEPARTMENT OF AGRICULTURE  
Washington 25, D. C.

POSTAGE AND FEES PAID

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Official Business