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AGRICULTURAL ECONOMY IN BRIEF

By Snider W. Skinner

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SUMMARY

Liberia is rich in rubber, iron ore, and timber. Rubber is by far Liberia's most important agricultural export. In 1963, rubber exports valued at \$23,916,000 made up 32 percent of the total exports, which were valued at \$75,862,000. Other agricultural exports, chiefly coffee, palm kernels, cocoa, and piassava (palm fiber), brought the percentage of agricultural exports up to 35 percent.

The major part of Liberia's agricultural exports is produced on plantation concessions operated by American and European companies.

Iron ore is by far the most important nonagricultural export. Iron ore exports in 1963 were valued at \$45,021,000.

Liberian rubber plantations and iron mines have in large measure been developed with U.S. capital. Ever since its founding, Liberia has had close political,

Note: Use of names of commercial enterprises in this report is for evaluation of the agricultural economy of another country and does not constitute endorsement by the U.S. Department of Agriculture of the enterprises named or imply discrimination against other enterprises.

cultural, and economic ties with the United States.

Agricultural imports, valued at \$17,159,000 in 1963, comprised 16 percent of total imports of \$107,796,000. Rice, a major food item, made up over a third of Liberia's agricultural imports. The United States supplied 53 percent of Liberia's imports of farm products that year.

When Liberia's vast reserves of iron ore begin to be depleted, it is expected that Liberia's economy will again become mainly dependent on production of rubber and other tropical tree crops.

POPULATION

The mid-1967 population of Liberia was estimated at 1,110,000. If the population were evenly distributed, the density would be 26 persons per square mile. Monrovia, the capital, has about 81,000 people and is the only city of any size. Population is increasing at a rate of about 1.6 percent per year.

Liberia's population is nearly all African. About 2 to 3 percent are descended from American Negro settlers.

The indigenous peoples of Liberia belong to the Bassa, Gola, Grebo, Kissi,



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Kpelle, Kru, Mandingo, and other tribes-- 23 in all. The tribal affiliations of the Americo-Liberians are not known, nor is it known from what parts of Africa they came originally.

In 1963, there were 21,075 aliens registered in Liberia. These aliens included 5,777 Ghanaians, 3,527 Lebanese, 2,391 Americans, 1,255 Italians, 1,226 Spaniards, 1,208 Dutch, 1,060 British, and 1,011 Germans.

LAND CHARACTERISTICS AND USES

Liberia is bordered on the east by the Ivory Coast, on the north by Guinea, on the northwest by Sierra Leone, and on the southwest by the Atlantic Ocean.

Liberia has an area of 43,000 square miles, slightly larger than Tennessee. Of the total land, about 50 percent is suitable for cultivation, particularly of tropical tree crops. The best agricultural land is

found along the 350-mile coastline. Further inland, hilly country rises to poorly defined plateaus.

The climate is tropical. There are two distinct seasons--the rainy season from mid-May to mid-November, and the dry season, which makes up the remainder of the year. The country has a rather warm temperature and high humidity throughout the year. Yearly rainfall averages from 150 to 170 inches.

To a Wisconsin dairy farmer or a North Carolina tobacco farmer, farming under these conditions in Liberia would probably appear "impossible." However, for tropical tree crops such as rubber, coffee, and oil palms, the soils and climate of Liberia are admirably well suited.

AGRICULTURAL STRUCTURE

Farms in Liberia show wide contrasts, ranging from small, primitive, subsistence farms to the very large and efficiently managed plantations operated by foreign concessionaires. In between are rubber groves of intermediate size operated by Liberian farmers. Livestock farming is almost nonexistent, due mainly to the prevalence of the tsetse fly. There are a few poultry farms.

The operators of rubber plantations use or sell their product abroad and also act as agents for independent Liberian rubber growers.

The Liberian Produce Marketing Corporation was established in 1962 as the exclusive export agency for coffee, cocoa, and palm kernels. LPMC is jointly owned by the Government of Liberia and the East Asiatic Company, of Copenhagen, Denmark. Management of the organization is almost entirely in the hands of East Asiatic officials. Operating profits are shared equally by the Government of Liberia and East Asiatic.

Prices paid to local producers by LPMC for coffee, cocoa, and palm kernels are generally above those paid in other West African countries, and as a result, sizable quantities of coffee from neighboring countries have entered Liberia in

past years. In general, the coffee from neighboring countries has been advantageous to LPMC, in that it has enabled the company to handle a larger volume of business than would otherwise have been possible.

PROGRESS IN FARM TECHNOLOGY

Firestone Rubber Company, which operates rubber plantations in Liberia, is increasing production without enlarging its acreage of rubber trees, but by replacing a specified acreage each year with higher-yielding varieties.

AGRICULTURAL PRODUCTION

To date, rubber is the only export crop that has been much of a success in Liberia. During World War II, Liberia furnished more than a fifth of the U.S. supply of scarce natural rubber. The experience of farmers in nearby countries would seem to show that the soil and climate of Liberia would be suitable for such tropical crops as African oil palms, bananas, coffee, cocoa, and pineapples (table 1). In fact, surveys within the country have indicated that these crops could be grown commercially with success. Actual experiences by farmers with these crops--particularly coffee and oil palms--have often been successful; however, pilot operations with careful soil surveys and observations of rainfall, temperature, and wind are advised before large-scale plantings are attempted.

Since Liberia has no cold, dormant season, it is not possible to grow apples, pears, apricots, peaches, cherries, and other deciduous fruits. Nor is the Liberian climate suited to such vegetables as potatoes and celery.

In 1966, the U.S. agricultural attache stationed at Monrovia estimated Liberian livestock inventory numbers as follows:

	<u>Thousand</u>
Cattle	13
Sheep	10
Goats	15
Hogs	20

Table 1.--Liberia: Production of principal crops, average 1959-61, annual 1966 and 1967

Crop	1959-61 average	1966	1967 (preliminary)
	1,000 metric tons ^{1/}		
Cassava (manioc)	225	228	225
Rice, paddy	148	150	152
Rubber, crude	44	53	62
Bananas	55	56	57
Plantains (cooking bananas)	22	22	22
Palm oil	11	16	17
Palm kernels	16	12	15
Corn	11	11	11
Cocoyams	9	9	9
Sweetpotatoes	8	8	8
Yams	6	6	6
Sugarcane ^{2/}	4	5	5
Citrus fruits	5	5	5
Pineapples	4	5	5
Coffee	1	3	3
Peanuts, unshelled	3	2	2
Cocoa	1	1	2
Piassava (palm fiber)	2	1	1

^{1/} 1 metric ton = 2,204.63 pounds.

^{2/} Raw sugar equivalent. Sugar is consumed as sweet juice or fermented beverage.

These small inventory numbers show that there is very little commercial live-stock production in Liberia. Meat for local consumption is mostly supplied by slaughter animals imported from Mali or elsewhere, or by meat imports from the United States and Europe. The cattle from Mali are usually driven overland through Ivory Coast or Guinea to Liberia.

A slaughterhouse in Monrovia, built with Yugoslav credit, has recently been put into operation. The first animals slaughtered were 300 cattle and 300 sheep shipped in from Ireland in September 1966.

Liberia has no commercial dairying. It has several poultry farms, which supply most of Liberia's limited market for eggs. A considerable quantity of poultry meat is imported each year.

AGRICULTURAL TRADE

Agricultural exports now make up a

less important share of Liberia's total exports than formerly, due to larger exports of iron ore. In 1963, agricultural exports worth \$26,642,000 made up 35 percent of total exports of \$75,862,000 (table 2). The United States was by far the best customer for agricultural commodities, taking 82 percent, or \$21,851,000. Other customers for farm products included the United Kingdom, Netherlands, and West Germany; all were much less important customers than the United States.

Agricultural imports in 1963 (\$17,159,000) made up 16 percent of Liberia's total imports (\$107,796,000) (table 3). This is about the usual proportion of agricultural imports by West African countries. The United States supplied 53 percent of Liberia's imports of farm products that year; other suppliers of some importance included the United Kingdom, Netherlands, Denmark, and Nyasaland (now called Malawi).

As reported by the U.S. Bureau of the

Table 2.--Liberia: Quantity and value of principal agricultural exports, by principal countries of destination, average 1959-61, annual 1963 1/

Commodity and country	Quantity		Value		All agricultural exports, 1963
	1959-61 : average	1963	1959-61 : average	1963	
	1,000 metric tons		1,000 dollars		Percent
Rubber	44.7	41.3	31,762	23,916	89.8
United States	39.4	35.8	27,673	20,458	
United Kingdom	2.1	1.8	1,628	1,067	
Coffee	1.0	3.7	513	1,545	5.8
United States .....	.7	3.3	353	1,391	
Netherlands .....	.3	.1	131	36	
Palm kernels	15.8	6.0	1,781	666	2.5
Netherlands	10.3	3.4	1,122	353	
West Germany	5.4	1.5	647	193	
Cocoa .....	.8	1.0	427	424	1.6
Netherlands .....	.6	.8	317	319	
West Germany .....	.2	--	97	--	
Piassava (palm fiber).....	2.3	.6	230	58	.2
West Germany.....	1.7	.5	157	42	
Other agricultural exports	--	--	101	33	.1
Total agricultural exports	--	--	34,814	26,642	100.0
To United States	--	--	25,420	21,851	
All exports (agricultural and nonagricultural)	--	--	67,864	75,862	--

1/ Detail may not add to subtotal because figures for minor importing countries are not included

Census, the United States in 1966 exported commodities worth \$38,134,000 to Liberia, of which farm commodities were worth \$8,394,000. The chief agricultural exports were rice, fruits and vegetables, meat and meat preparations, and vegetable oils.

In 1966, the United States imported products worth \$58,923,000 from Liberia. Of this amount \$32,092,000 was of agricultural commodities, consisting of rubber worth \$20,958,000 and coffee valued at \$11,134,000.

Liberia's money and banking system facilitates trade with the United States. The main banks in Liberia are affiliated with strong international banks, including several in the United States. The

U.S. dollar is the monetary unit used in Liberia. U.S. currency and coins are imported for use in the country. Liberia also has some coins of its own. The Liberian coins are of the same denominations as U.S. coins but have slightly different physical proportions. Liberia does have a 2-cent coin in addition to 50-, 25-, 10-, 5-, and 1-cent coins. Before 1943, Liberia used British pounds, shillings, and pence.

GENERAL FOOD SUPPLY SITUATION

Rice, cassava (manioc), palm oil, yams, and sweetpotatoes are commonly found in Liberian diets. Liberians eat over 230 pounds per year of rice, their favorite food. They eat even more cassava but, since cassava is less nutritious, they secure fewer calories

Table 3.--Liberia: Quantity and value of principal agricultural imports, by principal countries of origin, average 1959-61, annual 1963 1/

Commodity and country	Quantity		Value		All agricultural imports, 1963
	1959-61 : average	1963	1959-61 : average	1963	
	1,000 metric tons		1,000 dollars		Percent
Rice	20.2	35.9	2,449	6,042	35.2
United States	13.8	35.4	1,826	5,942	
Italy	2.9	2/	255	1	
Meat and its preparations	2.1	1.9	1,009	1,908	11.1
Denmark .....	.8	1.0	296	707	
United States .....	.6	.4	332	461	
Beer and wine (1,000 U.S. gal.) ..	1,326	1,607	1,229	1,589	9.3
United Kingdom	340	655	313	959	
West Germany	616	467	537	190	
Netherlands	252	193	234	189	
Dairy products and eggs	2.2	2.2	810	1,285	7.5
Netherlands	1.1	1.1	302	500	
United States .....	.3	.4	134	272	
Denmark .....	.1	.2	111	169	
Cereals and preparations (excluding wheat flour and rice):	1.9	3.1	431	1,111	6.5
United States	1.2	.7	230	244	
United Kingdom .....	.2	.1	59	101	
Netherlands .....	.1	.2	33	64	
West Germany .....	.3	.1	50	50	
Vegetables & their preparations ..	2.1	5.8	479	878	5.1
United States .....	.8	.9	228	343	
Netherlands .....	.6	.8	96	127	
Italy .....	.2	.3	59	86	
Tobacco, unmanufactured .....	.4	.5	413	616	3.6
Nyasaland .....	.2	.4	265	503	
Wheat flour	3.2	3.3	301	542	3.2
United States	3.0	1.7	262	294	
Canada .....	.2	1.5	28	216	
Fruits and their preparations ...:	.8	.9	332	491	2.9
United States .....	.6	.6	227	315	
Sugar	1.4	2.7	288	462	2.7
France .....	.5	.9	77	166	
United Kingdom	n.a.	1.0	n.a.	124	
United States .....	.9	.2	183	70	

-- Continued

Table 3.--Liberia: Quantity and value of principal agricultural imports, by principal countries of origin, average 1959-61, annual 1963--Continued

Commodity and country	Quantity		Value		All agricultural imports, 1963
	1959-61 : average :	1963	1959-61 : average :	1963	
	1,000 metric tons:		1,000 dollars		Percent
Live cattle (number)	3,249	5,072	180	377	2.2
Ivory Coast	3/941	3,849	3/ 57	299	
Guinea	2,261	913	128	57	
Sierra Leone	91	213	5	14	
Animal feeds	1.9	1.4	135	334	1.9
United States	1.1	.9	83	246	
Netherlands	3/ 1.1	.5	3/ 62	81	
Vegetable oils (1,000 U.S. gal.) ..	117	443	126	266	1.6
United States	97	324	100	163	
Beverages, nonalcoholic (1,000 U.S. gal.)	197	199	149	256	1.5
United States	86	67	72	118	
United Kingdom	92	31	66	48	
Margarine and shortenings .....	.3	.4	142	219	1.3
United Kingdom .....	.1	.2	48	114	
United States .....	.2	.1	89	84	
Other agricultural imports	--	--	310	783	4.6
Total agricultural imports	--	--	8,783	17,159	100.0
From United States	--	--	4,122	9,060	
All imports (agricultural and nonagricultural)	--	--	67,589	107,796	--

1/ Detail may not add to subtotal because figures for minor exporting countries are not included.

2/ Less than 50 metric tons.

3/ 1960-61 average.

n.a. -- not available.

from it than from rice. In common with the rest of West Africa, the Liberian's diet is high in starches and low in meat. Almost no milk is used. Large quantities of rice and other foods are imported; therefore, Liberia has only a moderate degree of self-sufficiency in food.

The most recent food balance prepared by USDA, for 1959-61, 1/ showed a reasonably adequate caloric intake of 2,430 calories per day.

AGRICULTURAL AND TRADE POLICY

Granting concessions to foreign enterprises sparked Liberia's commercial agriculture. The Firestone Rubber Company received its concession to grow rubber in 1926. For many years, this company dominated the

1/ U.S. Department of Agriculture, Food Balances for 30 Countries in Africa and West Asia, 1959-61. Economic Research Service, ERS-Foreign 119, p. 26. March 1965.

Liberian economy and is still very important to the country. Firestone now has 87,000 acres planted in rubber trees. The company pays the Government of Liberia a maximum of 25 percent income tax on its operations within the country.

Goodrich and several other U.S. concessionaires are also growing rubber in Liberia. Goodrich has planted rubber trees on 12,000 acres and made its first shipment of rubber in 1963.

The U.S. Rubber Company (now called Uniroyal) has purchased the Liberian Agricultural Company, the concession of the Vianini interests of Italy. In 1965, this concession had 20,000 acres of young rubber trees in Grand Bassa County. Uniroyal began a food crop production program in 1967, which included 530 acres of upland rice, 130 acres of corn, and small plantings of other crops. It was planned to eventually increase corn acreage to 1,000 acres or more. About 50 acres of cigar-wraper tobacco are grown each year.

In 1965, the Government of Liberia signed a 40-year concession agreement with the Tidewater Oil Company. Tidewater plans to plant 34,000 acres of African oil palms on the New Cess River in Grand Bassa County.

In earlier years, the Government of Liberia granted concessions to various other European and American companies. These enterprises have met with varying degrees of success.

Soon after World War II, the Liberia Company, a concession holder, began planting 25,000 acres of cocoa trees at Saglepie, near Ganta. Not all of the company's land was found suited to the exacting demands of cocoa (as to climate and soil) and some plantings were replaced with Robusta coffee and rubber. By 1967, the Liberia Company had removed all cocoa trees from its concession area and was replanting the cocoa area with rubber trees. Plantings of tree crops, in total, have not reached the 25,000 acres originally planned for cocoa trees.

Among other concessions granted were:

LeTourneau of Liberia, Ltd. (U.S.),

which received a 500,000-acre concession in 1952 at Baffu Bay to engage in agricultural and mineral development. This operation was discontinued early in 1967 and existing buildings and equipment were turned over to the Liberian Government.

African Fruit Company (West German), which received an 80-year renewable concession on 600,000 acres at Greenville to grow bananas and other tropical fruits. Their bananas were struck by Panama disease and the plantations were never reestablished. The company now limits its commercial activity to the growing of rubber.

The Society for the Utilization of Vegetal Raw Materials (German), which was given a 40-year renewable concession on 250,000 acres on which the society planned to grow African oil palms. This concession is now inactive.

Juan Ramas Plantation Associates (Spanish), which received an 80-year renewable concession on 100,000 acres. This concession is now inactive.

Other important concessions have been granted for mining and timbering.

GENERAL ECONOMIC SITUATION

Liberia's economic infrastructure has lagged behind that of some other countries in West Africa. However, considerable progress is now being made.

Liberia's main port, the free port of Monrovia, was built in 1948 under the U.S. Lend-Lease Program. This port handles exports of iron ore, rubber, and other commodities. Monrovia is also Liberia's main port for imports.

A second major port has been constructed at Buchanan, chiefly for loading iron ore shipped by rail from Mount Nimba. Minor ports are located at Greenville and Harper.

On paper, at least, Liberia has the world's largest merchant fleet. However, nearly all the ships are foreign vessels flying "flags of convenience." Ship registrations and port fees do bring some money into Liberia's treasury. Liberia has good service from ocean freighters, as do the

other countries of West Africa.

Liberia has no common carrier railroads; all were built to haul iron ore. The total rail mileage has now reached 322 miles. The 45-mile rail line from Monrovia to the iron mines at Bomi Hills has been extended 52 miles to another mine near the Sierra Leone border. Another line, 60 miles in length, extends from Monrovia to the Bong Mountain mines.

Liberia's longest railroad is the 165-mile line from the Nimba Mountains mine to the new port of Buchanan. Part of the track and equipment for this line was obtained from the liquidated Lehigh and New England railroad in the United States. When this line is opened to general freight service it will be useful to adjoining areas of Guinea and Ivory Coast as well as to Liberia. In fact, agreements between the Governments of Liberia and Guinea, and between IAMCO (Liberian-American-Swedish Minerals Company) and Guinea, were concluded recently under which Guinea would ship certain commodities, mainly timber, to the port of Buchanan via the Nimba Mountains-Buchanan railway and receive petroleum on the backhaul. However, movement has not yet commenced under the agreement and it is too early to determine what quantities will be involved when implementation of the agreement begins.

Some economists believe that use of Liberia's other railroads as public carriers would add considerably to the country's economic progress.

For many years, Liberia's progress was hindered by the lack of roads. People carried loads on their heads along forest paths. Now, however, the country has a fairly adequate road system and additional trunk roads are under construction. As of 1964, Liberia had 1,400 miles of surfaced roads (of which 250 miles were paved), plus an additional 480 miles of unimproved roads.

Except near the coast, Liberia's rivers consist of almost continuous rapids. Thus, they are not useful for river freighters. The Cavalla, which forms much of the country's border with Ivory Coast, is the most likely candidate for

economic river freighting.

Roberts International Airport serves a rather surprisingly large number of scheduled planes of various international airlines. While air freight handled is negligible, these rather frequent air schedules do permit foreign investors to come to Liberia to inspect their concessions. The airport, 40 miles east of Monrovia, is close to Firestone's headquarters at Harbel. The airfield was built by Firestone and taken over by the U.S. Army Air Force during World War II. Roberts Field, as it was then known, was a strategic stop for U.S. warplanes being flown via Brazil and Liberia to north Africa, southern Europe, and southeast Asia. The airfield was turned over to the Government of Liberia under terms of a 1955 treaty with the United States.

The United States has been the chief source of economic and technical assistance to Liberia. Such aid may be said to have begun in 1944 with the arrival in Liberia of the United States Economic Mission and the United States Health Mission, several years before foreign aid was adopted as an integral part of U.S. foreign policy.

American agricultural technicians have had limited success in Liberia. Their main achievement has been in the development and improvement of rubber production. A project to improve poultry production was also successful, but efforts to improve swamp rice production have so far not been productive. The results of a reconnaissance soil survey, published in 1951, have been of lasting benefit.

Approximately 20 percent of U.S. aid expenditures from 1951 to 1961 went into agriculture. However, the proportion of U.S. aid spent on agriculture has declined substantially in recent years. Currently, there are only four U.S. technicians directly involved in agricultural development, including a food and agricultural officer and a National Farmers Union contract team consisting of a specialist on cooperatives, a specialist on agricultural credit, and a crop specialist.

Other technical assistance in agriculture is furnished by Nationalist China (about 15 rice technicians), FAO (two rice specialists and one soil scientist), West Germany

(a forest inventory team and a specialist on cooperatives), and the U.N. Special Fund (six faculty positions in the School of Agriculture, University of Liberia).

LONG-RANGE OUTLOOK FOR AGRICULTURE

If utilized at the present rate, Liberia's great resources of iron ore will in time be depleted. Since the country's chances of significant industrialization appear bleak, the economy will in time again depend largely on agriculture, particularly the cultivation of tropical tree crops. Rubber will, no doubt, continue to be Liberia's most important crop. African oil palms will become increasingly significant as an export crop. Liberia will probably grow more coffee and could become a significant exporter of pineapples and bananas.

More and more individual Liberians will become commercial farmers.

Prospects for cattle for beef and milk production appear unfavorable.

Liberia's wealth of forest resources will make a considerable contribution to the economy. The country's forests have been thoroughly surveyed and feasibility studies made of the various species of trees.

Liberia's trade with the United States will, most likely, increase in terms of millions of dollars. However, the U.S. share of Liberia's exports and imports may decrease, as Liberia trades with more and more countries.

Economic and technical assistance money could be spent on such needs as general education, building and surfacing of farm-to-market roads, rural electrification, building of telephone lines or radio-telephone circuits, low-cost housing, and a broad range of public health programs.

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