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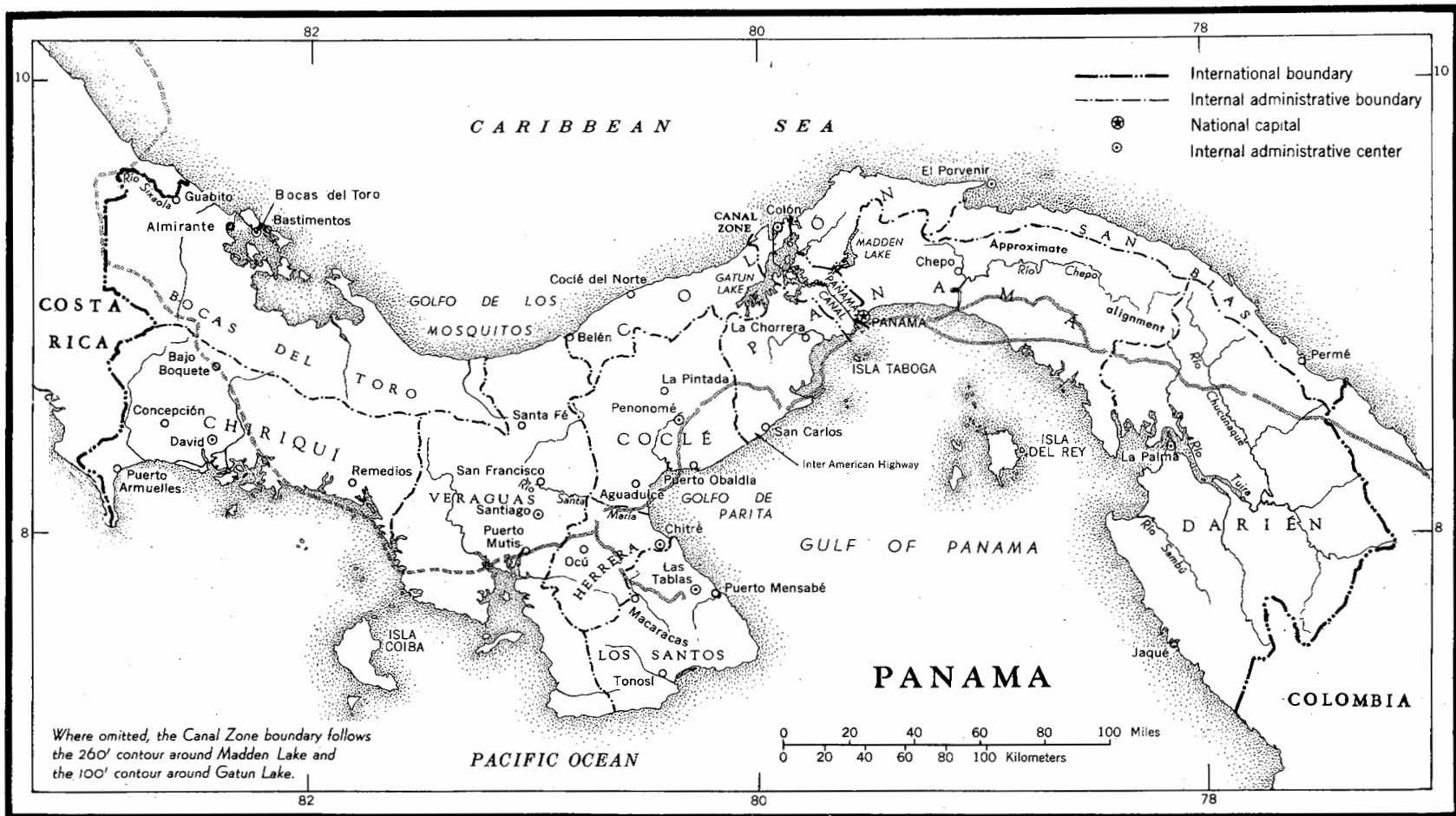
JAN 19 1961

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THE
AGRICULTURE
AND
TRADE OF

PANAMA

U.S. Department of Agriculture
Economic Research Service



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Metric Measures

<u>Unit</u>	<u>U.S. equivalent</u>
1 square kilometer	0.386 square mile
1 kilometer	0.621 mile
1 hectare	2.471 acres
1 metric ton	2,204.6 pounds
1 quintal	100 pounds
1 kilogram	2.2046 pounds

Washington, D. C.

January 1967

SUMMARY AND OUTLOOK

Panama's agriculture supplies one-fourth of the gross national product and employs almost half of the economically active population. Agriculture is a main source of livelihood for a large part of the population, despite the importance of the Panama Canal to the country's economy.

One of Panama's most valuable resources is its reserve of land potentially useful for agriculture. It also has sizeable timber reserves and a profitable fishing industry.

In the last decade, both total agricultural production and food production have lagged behind population growth. However, 1965 was a good year for agriculture, and both total output and food output forged ahead of population. Panama is deficient in average per capita food consumption, in terms of both calories and protein, but is near U.S. Department of Agriculture nutritional standards for an adequate diet.

Banana production for export fluctuated over the past 15 years, but gained significantly in 1965. Centrifugal sugar and milk output increased steadily in this period, but milk production dropped in 1965 because of a shortage of pasture. Rice production in 1965 was well above the 1950-54 average, and corn was up significantly, but bean production declined. Cocoa bean production dropped, but coffee output increased from a negligible amount to 4,000 metric tons.

Total exports and imports increased steadily from 1951-55 through 1964. Agricultural exports also increased through 1963, the last year for which complete official statistics are available, but imports declined slightly.

The U.S. share of Panama's total exports declined from 90 percent in 1951-55 and 96 percent in 1956-60 to 62 percent in 1963.

Although Panama's imports, both total and agricultural, have increased, the U.S. share has dropped. In 1951-55, Panama obtained 68 percent of its imports of farm commodities from this country, but the U.S. share dropped to 60 percent in 1963.

U.S. imports of agricultural products from Panama declined in both 1961 and 1962 from 1951-55 and 1956-60 but increased again in 1963, 1964, and 1965. Bananas, sugar, cocoa beans, and coffee are the chief items imported.

Panama normally is the best market in Central America for U.S. agricultural products. Wheat, flour and other cereal preparations, dairy products, meat preparations and lard, and fruits and vegetables and their products are the main products we sell to Panama. The value of these and other minor items increased from \$8.7 million in 1951-55 to \$14.5 million in 1965.

If Panama joins the Central American Common Market (CACM) it will probably have little effect on the country's total imports of U.S. farm products. However, the CACM area may supply some oilseeds or crude vegetable oils, some vegetable preparations, and some livestock feed.

For the immediate future, exports of U.S. dairy products, meats and meat products, and fruits and vegetables and their products, probably will continue at near 1965 levels. Lard exports may decline somewhat. Exports of feed grains and concentrates may increase as Panama continues to develop its beef and dairy industries.

Consumption of wheat flour and other wheat products is expected to increase in line with population growth and rising living standards in urban areas. The United States should continue to share in this increase and also to supply at least half of Panama's agricultural imports.

THE AGRICULTURE AND TRADE OF PANAMA

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INTRODUCTION

Resources

The Republic of Panama, excluding the Canal Zone, is 75,648 square kilometers in area--a little smaller than the State of South Carolina. It is a mountainous, S-shaped isthmus connecting Central America on the northwest with the South American continent on the southeast. The mountains enclose fertile, well-drained valleys and high plateaus. In fact, Panama's most productive lands are to be found in these mountain valleys and plateaus and along the rivers and coasts. The isthmus is bisected by the 16-kilometer wide Canal Zone at its narrowest part. A large part of the region east of the Canal, comprising about 36 percent of the total land area, is tropical jungle.

Of the total area of 7,565,000 hectares, less than one-fourth, or 1,806,000 hectares, was in farms of 0.5 hectares or more according to the 1960 census of agriculture. The Provinces of Chiriquí, Herrera, and Los Santos have the highest proportion of farmland to total land area; the ratios are 49.6, 68.2, and 63.9 respectively. Darién, with only 2.1 percent of its total area in farmland, has the lowest. The other provinces--Bocas del Toro, Coclé, Colón, Panamá, and Veraguas--average 21.1 percent.

Panama is entirely within the tropics. The coastal lowlands and interior valleys are always hot and humid. There is a dry season of varying intensity, lasting from mid-December to mid-May and, in the region to the north and west of the Gulf of Parita, it is almost totally dry. In other parts of the country there is usually some precipitation, even in the dry season. Similarly, the rainy season varies, with precipitation sometimes being inadequate in certain areas for the crops being grown.

Over an 11-year period, average rainfall ranged from 47 to 86 inches at Pacific coast stations; 90 to 95 inches in the central region; and 111 to 160 inches at Atlantic coast stations. The average annual temperature at Balboa Heights on the Pacific was 79.8° F. At Madden Dam, in the central part of the Canal Zone, the average was 78.9° and at Cristobal on the Atlantic it was 80.2°.

Panama's chief resources are its relatively large reserves of land that could be put to agricultural use; its forests; and its fishing industry. The Pacific watershed between the Canal Zone and the Costa Rican border is the most important agricultural region. In the extreme northern part of the country on the Atlantic side is another smaller area developed by the United Fruit Company and planted to bananas and cocoa. In addition, there are small cultivated areas on both sides of the Canal Zone but these have little effect on total agricultural production.

Two large areas of Panama, representing about half of the total area of the country, remain mostly undeveloped. These are the Atlantic slope in western Panama, and the Darién area in the eastern part of the country.

It has been estimated that at least 84 percent of the area from the Canal Zone southeast to the Colombian border is forested and that commercial forest land covers 70 percent of the national territory. About nine-tenths of the total area of four of the provinces is commercial-grade forest land. The provinces are Darién, with 1.5 million hectares; Panamá, with 1 million; Bocas del Toro, with .9 million; and Colón, with .7 million. The forests are said to contain more than 50 species of cabinet, building, and dye woods.

Since the beginning of forest exploitation, cutting mahogany logs for export to the United States has been the principal forest industry. Cutting of the more accessible stands of timber has left the land open to slash-and-burn cultivation which, in turn, has contributed to soil erosion.

Marine products are abundant and numerous species of fish are found on both coasts. Shrimp accounted for 13 percent of the total value of exports in 1963.

Minerals known to exist include gold, silver, copper, manganese, and bauxite, and there are indications of others also. Commercial mineral production is limited to salt, cement, and pottery clay.

Role of Agriculture

Like most Latin American countries, Panama is basically an agricultural country. However, operating and servicing the Panama Canal are sources of a large part of the country's income. But relatively few people are directly benefited by the Canal, and Panama's many poor and landless families depend on agriculture as a source of livelihood.

Agriculture provides about one-fourth of the gross national product and employs 46 percent of the economically active population. In 1963, agricultural products made up 36 percent of total exports compared with 79 percent in 1951-55. This drop does not reflect a decline in value of agricultural exports but a sharp increase in non-agricultural exports, mainly petroleum products.

Agriculture in Panama, aside from the banana plantations and a few of the larger farms producing rice, is carried on largely under primitive conditions. The small farm owners and squatters cut over a plot of ground, farm it for a few years, and then move on, allowing brush and undergrowth to reclaim the land. Many of the larger farms have sizable areas of unused land that could be farmed by the owner or rented to the small farmers or squatters for crop production, thus helping to boost total output.

All sectors of the economy, including agriculture, have shown some growth in recent years but total agricultural production has exceeded population growth in only 3 of the last 12 years, and food production is lagging. This lagging food production presents a serious problem. The need for feeding the people at a higher than subsistence level must be met. In addition, the food processing industries need an assured supply of raw agricultural products. Other needs for agricultural development are more and better farm-to-market roads, expansion of credit, improvement in marketing facilities, more and better technical services, better distribution of the land--in short, a well rounded rural development program.

To meet these needs, Panama, in cooperation with the U.S. Agency for International Development, has in operation a rural cadastral and natural resources survey, a comprehensive rural development program including agricultural extension, livestock

credit, and research; and feasibility studies covering other high priority projects. Programs being planned include a study of the feasibility of constructing wholesale market and storage facilities; loans to finance increased use of fertilizer; construction of roads to service agricultural regions; and irrigation and drainage projects to increase agricultural land.

AGRICULTURAL DEMAND AND SUPPLY

Demand

Population--Panama's population is growing at a compound rate of 3.0 percent--slightly less than the compound rate for Central America which is 3.2 percent. At the time of the 1950 census, the population numbered 805,285, and by 1960 had reached 1,075,541 (table 1). United Nations sources estimated the 1965 population at 1,209,000, an average density of 16 persons per square kilometer, although some parts of the interior are very sparsely populated.

There is some migration to urban areas as indicated by the fact that urban population rose from 36 percent of the total in 1950 to 42 percent in 1960 and 45 percent in 1965. However the population of Panama City, the largest urban area in the country, was augmented by the annexation of certain outlying suburbs into the city proper, in addition to natural growth and migration.

Panama City and Colón, adjoining the Canal Zone at either end, have populations of 273,440 and 59,598, respectively. Other cities with populations of over 10,000 are David (22,924); La Chorrera (13,696); and Puerto Armuelles (10,712).

Of the total population 10 years old and over, 78 percent are literate; this rate is one of the highest in Latin America. The Panama City area boasts the highest literacy rate in the country.

Official government policy stresses the importance of education and the biggest slice of the national budget goes to the Ministry of Education, which is also the largest among Government ministries in terms of personnel. In spite of this there is still a definite need for increased emphasis on vocational training--especially in agriculture.

Income--Among Latin American countries, Panama has a fairly high standard of living measured by its per capita gross national product, which in 1965 was estimated at \$511 (table 2). However, the distribution of income is unequal, being much higher in Panama City and Colón than in the interior, due to the influence of the Canal on economic conditions in those cities. According to the 1960 census, about 35 percent of those who depend on agriculture for a livelihood make less than \$50 per year and another 54 percent make less than \$100.

There is an emerging middle class in the large urban areas composed of merchants, professional people, Government employees, and immigrants. These people should contribute increasingly to stability and progress and help to fill the gap between the few wealthy, influential families and the large number of less fortunate people.

The origin of the gross national product according to data prepared by the United Nations from official Panamanian sources is shown in table 3.

Most of the country's small industries are located in and around Panama City. Among these are manufacturers or processors of beverages, food products, tobacco, wood and clay products, and cement. However, the largest single industry is the petroleum refinery located at Las Minas Bay near the Caribbean entrance to the Canal.

Table 1.--Panama: Urban and rural population, by provinces, 1950, 1960, and 1965

Province	1950				1960				1965 ^{2/}			
	Total	Urban	Rural	Percentage	Total	Urban	Rural	Percentage	Total	Urban	Rural	Percentage
	Number	^{1/} Number	Number	Percent	Number	^{1/} Number	Number	Percent	Number	^{1/} Number	Number	Percent
Bocas del Toro . . .	22,392	4,546	17,846	80	32,600	5,980	26,620	82	38,156	6,626	31,530	80
Coclé.	73,103	9,788	63,315	87	93,156	17,678	75,478	81	102,197	22,249	79,948	78
Colón.	90,144	52,204	37,940	42	105,416	59,598	45,818	43	110,079	61,477	48,602	44
Chiriquí	138,136	25,592	112,544	81	188,350	42,779	145,571	77	213,884	53,056	160,828	75
Darién	14,660	0	14,660	100	19,715	0	19,715	100	22,246	0	22,246	100
Herrera.	50,095	9,770	40,325	80	61,672	12,259	49,413	80	66,374	13,319	53,055	80
Los Santos	61,422	5,270	56,152	91	70,554	6,669	63,885	91	72,854	7,204	65,650	90
Panamá	248,335	174,604	73,731	30	372,393	289,328	83,065	22	441,491	359,312	82,179	19
Veraguas	106,998	7,923	99,075	93	131,685	11,922	119,763	91	141,719	13,998	127,721	90
Total	805,285	289,697	515,588	64	1,075,541	446,213	629,328	59	1,209,000	537,241	671,759	55

^{1/} Persons residing in places of 1,500 or more inhabitants. ^{2/} Distribution by province and between rural and urban estimated, based on 1950-60 trends.

Source: For 1950 and 1960 data: Panamá Dirección General de Estadística y de Censo. Censos Nacionales de 1960. Producción Agrícola. Segundo Censo de Agropecuario. Vol. IV. Oct. 1963. For 1965 total data: United Nations Statistical Bulletin for Latin America, Vol. II, No. 2. Aug. 1965.

Table 2.--Panama: Gross national product, total and per capita 1958-65

Year	Population	Gross national product	Per capita GNP
	<u>Thousands</u>	<u>Million dollars</u>	<u>Dollars</u>
1958	1,003	371.2	370
1959	1,038	390.3	376
1960	1,075	409.4	381
1961	1,102	455.5	413
1962	1,129	491.4	435
1963	1,157	543.3	470
1964	1,186	574.3	484
1965	1,209	617.7	511

Source: Gross national product estimates are based on International Monetary Fund data. Population estimated on the basis of census data for the years 1950 and 1960 and on estimate for 1965 published in Statistical Bulletin for Latin America, Vol. II, No. 2, United Nations, Aug. 1965.

Table 3.--Panama: Origin of gross national product by economic sector, selected years

Sector	1958	1964
	<u>Percent</u>	<u>Percent</u>
Agriculture, forestry, and fishing. . .	24.7	20.4
Manufacturing	12.0	16.5
Construction.	4.9	5.3
Commerce.	13.1	14.5
Public and private services	17.6	15.8
Services to the Canal Zone.	8.4	6.8
Other	19.3	20.7
Total.	100.0	100.0

Source: United Nations. Statistical Bulletin for Latin America, Vol. III, No. 1, Aug. 1965.

For 1963, the first full year of operation of the refinery, official export figures show exports of petroleum products amounting to \$24 million, or 49 percent of the total of \$47.8 million.

In 1963, the labor force amounted to 365,000 persons or about one-third of the population. Of these, about 55 percent were employed in nonagricultural pursuits. By comparison, in 1950 the labor force was about equally divided between agricultural and nonagricultural pursuits.

Consumption--In 1959-61, food consumption in Panama averaged 2,370 calories per capita per day. This is 80 calories less than the USDA-recommended minimum nutritional level of 2,450 calories for Central America, and 10 calories less than the 1956-58 average. Gains in starches, sugars, meat, and milk products were offset by a decline in fats, cereals, and pulses.

Cereal products, starchy crops, and sugar generally supply three-fourths of total calories consumed. Pulses, fruits, green vegetables, fats, meat, and milk make up the rest. In contrast with other Central American countries, whose chief cereal food is corn, Panama is a large consumer of rice. In 1959-61, 570 calories of the average daily diet were supplied by rice. Brazil, Trinidad and Tobago, and Cuba are the only other Latin American countries that approach Panama in per capita consumption of rice.

Domestic output of corn, rice, and beans has not been sufficient in recent years to meet local needs, although Panama was self-sufficient in rice in the late 1950's. Joint efforts of the Ministry of Agriculture, the Institute for Economic Development, and the Agrarian Reform Commission to step up production of corn and rice are beginning to show results. Panama is expected to attain self-sufficiency in these crops in the near future.

Production

Land use and tenure--The 1960 census reported 1,806,452 hectares of land in farms, or 24 percent of the country's total area of 7,565,000 hectares (table 4). This is an increase of 56 percent in farmland since the 1950 census. The number of farms also increased by slightly more than 10,000, or 12 percent.

Table 4.--Panama: Total area of the country and area in farms, by province, 1950 and 1960

Province	Total area	Area in farms			
		1950	1960	1950	1960
	1,000 hectares	1,000 hectares	Percent	1,000 hectares	Percent
Bocas del Toro	891.7	30.3	3.4	58.1	6.5
Coclé	503.5	123.8	24.6	184.0	36.5
Colón	746.5	35.7	4.8	72.1	9.7
Chiriquí	875.8	344.0	39.3	434.7	49.6
Darién	1,680.3	17.1	1.0	35.8	2.1
Herrera	242.7	122.5	50.5	165.5	68.2
Los Santos	386.7	168.2	43.5	247.0	63.9
Panamá	1,129.2	135.3	12.0	253.0	22.4
Veraguas	1,108.6	182.2	16.4	356.2	32.1
Total	7,565.0	1,159.1	15.3	1,806.4	23.9

Source: Panama Dirección General de Estadística y de Censo. Censos Nacionales de 1960. Producción Agrícola. Segundo Censo Agropecuario. Vol. I. Oct. 1963.

In 1960 more than half of all farms ranged in size from 5 to 100 hectares and occupied 949,000 hectares of farmland (table 5).

Land not in farms represented 76 percent of the country's area, or 5.8 million hectares. Of this, 1.5 million hectares are very rough mountain land not suited to agriculture.

Grains, vegetables, sugarcane, tobacco, and other annual crops occupied 205,000 hectares and 125,400 hectares were planted to permanent crops, such as citrus, pineapples, bananas, coffee, and cocoa (table 6). Pastures occupied 818,300 hectares and

657,700 hectares were fallow, covered with trees and brush, or otherwise not being used for crops.

Table 5.--Panama: Number of farms and land in farms by size of farm, 1960

Size of farms (hectares)	Farms		Area in farms	
	Number	Percent	Hectares	Percent
0.5 - 4.9	43,692	45.7	95,655	5.3
5.0 - 99.9	49,350	51.7	949,059	52.5
100.0 - 499.9	2,239	2.4	389,983	21.6
500.0 and over.	224	0.2	371,755	20.6
Total.	95,505	100.0	1,806,452	100.0

By far the greater part of the pastureland and unused land classed as agricultural was found on the large farms. This seems to indicate a large resource of undeveloped land that could be profitably used in Panama's agrarian reform program. On the very small farms, a much greater percentage of the land was under active cultivation.

One of Panama's most urgent agrarian problems is the land tenure situation--68 percent of the farms are occupied by persons not having title to the land. A factor contributing to this problem is that the Government reportedly retains ownership of most of the country's territory. Also, the availability of large areas of Federal land and the ease with which it can be occupied have led to the widespread system of simply moving on the land and setting up a farm. The process of acquiring land legally is cumbersome and too expensive for most farmers. Squatters can gain legal rights to land they have cultivated for 10 years, even though it is privately owned and the owners have paid taxes on it. One fundamental purpose of Panama's Agrarian Code enacted in 1962 is to legalize the tenure of these squatters in an effort to bring about better use of the land and to bring more farmers into the money economy.

The number of legal owners of small landholdings is low. The 1960 census indicates that legally owned holdings of up to 10 hectares represent 5 percent of the total number of farms and less than 1 percent of the area in farms.

A few families own most of the best land in the country. Their holdings are largely devoted to cattle raising, and much of the land is left idle.

Production practices--Methods of production, especially for subsistence crops, are still primitive. Slash-and-burn methods are employed by the large numbers of squatters. The chief implements used are a machete to cut off the brush, a stick for digging seed holes after burning the brush, and perhaps a hoe. After one or two seasons, the soil has lost whatever fertility it may have had and the squatter moves to another area to repeat the process.

By contrast, modern techniques are employed on the banana and cocoa plantations operated by the fruit company and on the sugarcane and coffee farms and larger farms producing rice.

A report prepared by members of the National Irrigation Commission in 1959 stated that at that time there were 10,100 hectares of land under irrigation. Most of this land was irrigated directly from the rivers, either by gravity or by pumping. The total number of hectares under irrigation was as follows: Bananas, 6,200; sugarcane,

Table 6.-- Panama: Number and area of farms according to type of occupancy and utilization, 1960

Type of occupancy	Total	Utilization 1/						
		Annual crops	Tree crops	Natural pastures	Cultivated pastures	Fallow	Forest and mountain land	Other
----- <u>Number</u> -----								
Individual ownership	10,265	7,242	7,704	2,084	4,878	4,404	3,984	944
Family property	1,820	1,502	1,541	262	473	889	679	139
Occupied without title for more than 30 years	11,414	9,506	9,640	2,101	4,892	5,233	4,092	939
Leased	5,706	5,136	2,961	423	754	1,230	925	300
Occupied without title for 30 years or less	48,107	42,473	37,707	5,863	13,902	19,433	14,993	3,632
Mixed forms of occupancy	18,193	16,824	15,307	3,760	8,624	8,133	7,079	1,631
Total number	95,505	82,683	74,860	14,493	33,523	39,322	31,752	7,585
----- <u>Area</u> -----								
----- <u>1,000 hectares</u> -----								
Individual ownership	494.1	19.9	15.2	64.5	223.1	42.6	123.1	5.7
Family property	15.6	3.1	1.9	0.7	2.7	3.5	3.4	0.3
Occupied without title for more than 30 years	161.3	21.6	13.4	9.5	56.7	27.7	30.2	2.2
Leased	43.6	11.9	3.8	1.3	15.2	3.9	7.0	0.5
Occupied without title for 30 years or less	532.6	97.7	49.3	20.8	139.5	88.9	130.9	5.5
Mixed forms of occupancy	559.2	50.8	41.7	38.0	246.4	56.4	120.5	5.4
Total area	1,806.4	205.0	125.3	134.8	683.6	223.0	415.1	19.6

1/ Does not add to total in the type of occupancy category, since census reported farms in multiple use separately.

Source: Panamá Dirección General de Estadística y de Censo. Censos Nacionales de 1960. Producción Agrícola. Segundo Censo Agropecuario. Vol. I. Oct. 1963.

1,800; pasture, 1,200; tomatoes, 350; other horticultural crops, 250; rice, 200, tobacco, 100. With the exception of the garden crops, this irrigated land was owned or managed by big enterprises. Producers of garden crops cultivated plots of 0.25 to 10 hectares.

Mechanization is also limited, both in number of units and in type of machinery. In the 1960 census, 88 percent of the farms reported that human muscle was the chief motive force; complete mechanization was reported on only 1.9 percent of the farms; and the rest used a combination of mechanical and animal or animal power alone. Most of the animal power was used in grinding cane by the trapiches, or small, on-the-farm sugar mills. Banana and sugar plantations made the greatest use of tractors, but they were also used to a limited extent in rice production and for preparing land for seed-ed pastures.

A U.S. team recently sent to Panama to evaluate a rural development loan proposal recommended that instead of equipping small farmers with animal-powered implements, as proposed by the Panamanian Development Institute, consideration should be given to small garden-type tractors and tillers. An investment of \$600 would be required to purchase animal-drawn machinery and a team of draft animals. This would enable a former "machete and hoe" farmer to cultivate about 12 hectares. However, in addition to the initial investment of \$600, which alone would be beyond the reach of many small farmers, the team of animals would have to be maintained all year for only a few months' work. The U.S. team suggested that for \$300 invested in a garden tractor and tiller the farmer could handle the same area.

The use of fertilizer in Panama evidently is increasing, but it is likely that the larger and more modern farms and the banana plantations are virtually the sole users of fertilizer. Since Panama does not produce fertilizer commercially, imports show the quantities consumed. Imports in recent years are shown in table 7 as reported in official Panamanian trade statistics, which do not further identify or define the products.

Table 7.--Panama: Imports of fertilizer materials

Fertilizer material	1958	1959	1960	1961	1962	1963
	-Metric tons-					
Natural sodium nitrate	20	18	2	32	10	24
Natural phosphate, ground or not:	4	4	3	1	2	5
Nitrogenous and nitrogenous prod- ucts not otherwise specified :	9,524	10,018	11,352	14,905	11,649	15,565
Phosphate and phosphate products:	517	328	527	685	1,577	1,228
Potash and potash products ex- cluding crude potassium salts :	244	232	286	457	460	579
Fertilizers not otherwise speci- fied	2,468	3,375	3,160	3,264	3,277	2,655
Total	12,777	13,975	15,330	19,344	16,975	20,065

Source: Panamá Dirección General de Estadística y de Censo. Anuario de Comercio Exterior. For the years shown.

Transportation and marketing--Panama's transportation system consists of the Inter-American Highway; the Trans-Isthmian Highway connecting Panama City and Colón; feeder roads; three narrow-gauge railroads, two of which are common carriers; international and domestic airline service; coastwise shipping by a fleet of small boats; and international shipping.

According to the Ministry of Public Works, the country had about 6,118 kilometers of roads at the end of 1963. Of these, 60 percent were dry-weather roads. Paved roads totaled 1,063 kilometers and another 1,272 kilometers were graveled. The Inter-American Highway is completed from the Costa Rican border to Panama City, but it is not yet paved throughout its length. East of the Canal, the only roads of any importance are the Trans-Isthmian Highway and the 48 kilometer all-weather extension of the Inter-American Highway to Chepo.

Preliminary investigations and surveys have been completed for routes for the Inter-American Highway across the Darién Gap, the last remaining impassable portion of this highway. Approximately 360 kilometers of this distance is in Panama.

Numerous feeder roads connecting with the Inter-American Highway are being pushed into agricultural areas, enabling more of the small farmers to get their surplus commodities to market. Potential agricultural areas will also be opened up along the Pacific coast between Panama City and the Costa Rican border.

Panama's rail system consists of two short lines operated by the Chiriquí Land Company and totaling just over 322 kilometers, and the National Railway of Chiriquí, a common carrier operated by the Government. The fruit company lines carry mostly the agricultural products of the company farms, but the Bocas del Toro division also offers public service. In addition, in the Canal Zone, a rail line owned and operated by the U.S. Government parallels the Panama Canal.

The Bocas del Toro division of the Chiriquí Land Company's rail system of approximately 150 kilometers, including branches, extends from the Caribbean port of Almirante to the town of Sixaola on the Costa Rican border. The Chiriquí Land Company also owns and operates about 148 kilometers of line in Chiriquí Province. This includes branch lines connecting with the National Railway of Chiriquí. About 24 kilometers of track between Puerto Armuelles and Progreso are leased from the National Railway. In addition to the fruit company lines, Chiriquí Province is served by the National Railway which connects the city of David with Boquete, a coffee-growing center and with the Pacific port of Puerto Armuelles. Panama's Tocumén International Airport is used by 18 international airlines and is an important link in intercontinental jet travel.

Facilities for marketing the agricultural output of the majority of Panamanian farmers are poor at best. The main agricultural areas are some distance from consumer centers and almost all produce has to be transported overland. Lack of roads and means of transportation to consumer centers reduce the farmer's earnings and weakens his incentive to produce more than his own needs.

Only farmers who are located on or near a road have much chance of getting their products to market. Some carry the load themselves, some have a pack animal or two, and others are able to sell to truckers who come through. Since these small farmers lack on-the-farm or cooperative storage facilities, their crops must be sold soon after harvest, which is when the price is lowest.

Among the more important rural commercial centers are the towns of David, Chitré, Aguadulce, and Penonomé. However, their share of the total domestic market is small. There is a central market in each of the chief cities, Panamá and Colón, but both of these markets are inadequate. They lack sufficient space for handling produce, and

grading and cold-storage facilities are inadequate.

Bananas and cocoa produced by the Chiriquí Land Company are marketed abroad directly by that company. The independent cocoa producers in Bocas del Toro have organized a cooperative which collects, grades, and exports their cocoa.

Production trends--An index of agricultural production in Panama, constructed by the U.S. Department of Agriculture, uses 1957-59 as the base period. It includes the following commodities: corn, rice, sugarcane, cocoa beans, bananas, coffee, beef, and milk. Separate indexes were constructed for crops, livestock (beef and milk), and food (excludes coffee). According to these indexes, the trend in production since 1954 has been somewhat irregular (table 8). Total agricultural output was at an index of 95 for 1955-59, and increased to 100 for 1960-62, and to 124 for 1965. For the same periods, food output was near this level, with indexes of 96, 99, and 124 respectively; comparative indexes for all crops were 95, 97, and 124; and output of livestock products was estimated at 95, 111, and 124 for the same periods.

Table 8.--Panama: Indexes of total and per capita agricultural output, average 1950-54, 1955-59, 1960-62 and annual 1963-65

(1957-59=100)							
Output index	: Average	: Average	: Average	: 1963	: 1964	: 1965	: <u>1/</u>
	: 1950-54	: 1955-59	: 1960-62				
<u>Total:</u>							
Crops <u>2/</u>	61	95	97	101	115	124	
Livestock <u>3/</u>	70	95	111	129	133	124	
Food <u>4/</u>	67	96	99	104	117	124	
Agricultural							
output	63	95	100	106	118	124	
<u>Per capita:</u>							
Crops <u>2/</u>	79	97	89	87	97	101	
Livestock <u>3/</u>	90	97	102	111	112	101	
Food <u>4/</u>	87	99	91	90	98	101	
Agricultural							
output	82	97	91	91	99	101	

1/ Preliminary. 2/ Corn, rice, sugarcane, cocoa beans, bananas, and coffee.

3/ Beef and milk. 4/ Not including coffee.

Source: Economic Research Service. Indices of Agricultural Production for the 20 Latin American Countries. U.S. Dept. Agr. ERS-Foreign 44. Rev. Jan. 1966.

On a per capita basis, the trends were similar. All four indexes stood at 101 in 1965, barely staying ahead of population growth.

The index of production is greatly influenced by the production of bananas, Panama's chief export crop; it is influenced to a much lesser degree by other export crops. While basic conditions, such as efficient production practices, are favorable for continuing increases in banana production, this crop is subject to influences which can change the production and export outlook very swiftly. Windstorms have sometimes almost totally destroyed whole plantations. Diseases of the banana plant must be fought constantly. Labor strife sometimes results in heavy losses in the year's output. However, compared with the early 1950's, banana production has increased significantly.

Cocoa bean production has declined steadily, but coffee and sugar have made significant gains.

Production trends generally have been favorable for corn, rice, beef, and milk, all important commodities for local consumption. However, Panama is still not producing enough to feed its people, and agricultural imports, most of which are food products, increase each year.

Government Policies

General--Panama's economic development planning antedates the Alliance for Progress, since a preliminary 5-year plan was published early in 1961. The plan has been revised from year to year, and in 1963 a revised and expanded 8-year (1963-70) program was published. This plan was reviewed by the Committee of Nine, chosen by the Secretary General of the Organization of American States to administer the Alliance for Progress in Latin America. In line with the suggestions of the Committee the plan was again modified and emphasis shifted from social development to development of productive sectors such as agriculture, livestock, and industry.

In the area of agricultural development and agrarian reform, high priority is given to completion of the rural cadastral and natural resources survey, which was about one-third complete in early 1966, and to resettlement projects, expansion of agricultural credit, improved marketing facilities, more irrigation projects, and agricultural research. The proposed plan for agricultural and other economic development will need extensive financing from foreign sources. Tax reform legislation, if successfully carried out, will shore up the Government's efforts to carry out its part of the burden of financing its economic development program.

Food and agriculture--Specific policies for food and agriculture are aimed at increasing the output of food commodities for home consumption and for export, and expanding the production of bananas and cocoa for export. The current administration of President Marco Robles has committed itself to a plan of financial aid for small farmers and cattlemen, and to a goal of more vigorous development of the interior of the country. This plan, called the Plan Robles, has the active support of the Agrarian Reform Agency, the Ministry of Agriculture, Commerce and Industries, and the Institute for Economic Development (IFE). Under the Plan Robles increased credit is being made available to farmers to obtain better seed and more fertilizer and pesticides to boost the production of the basic foods, rice, beans and corn.

IFE, an autonomous Government agency created by law on January 30, 1953, is responsible for implementing most phases of Government policy. The functions of the Institute are "to establish support prices for national production of agriculture and cattle" with "the fundamental objective--the development of national production." Actually, price support for some national products preceded this law; rice prices had been supported for some years prior to its passage by the Agricultural and Industrial Bank.

When IFE took over the price support functions of the Bank in 1953, support prices were being maintained for rice and highland coffee. Prices paid to producers for the 1953 rice crop were \$6.00 per quintal of long-grain rough rice and \$5.00 for short-grain rice delivered to the mills or other designated places. Previously prices had been set at \$5.50 and \$5.00, respectively, and the higher price was set by the Institute in an effort to encourage greater production of the better grade of rice. Price support at this level did encourage production in 1953 and 1954, to the point that Panama became a surplus producer. However, in recent years Panama has needed imports to supplement local production in supplying domestic demand.

Prices paid to rice producers were maintained at \$6.00 and \$5.00 until March 1, 1966, when IFE revised support prices for the 1966 crop. Under the new regulations the \$6.00 price was maintained for first quality long-grain rice, but a \$0.25 penalty was imposed for bags with shorter grains or a high percentage of broken grains. Short-grain rice is still supported at \$5.00 but with the same \$0.25 penalty for poorer qualities.

Support prices for corn first became effective in 1957, and IFE maintained prices of \$3.50 per quintal for corn delivered to silos in Panama City and \$3.00 per quintal at collection centers throughout the country. Early in 1966 the prices were raised to \$3.75 and \$3.25 respectively. In spite of these relatively favorable prices Panama still imports corn to meet local needs for feed and food.

The Panamanian Coffee Institute, established in December 1961, and the National Bank provided credit for coffee growers and handled processing and marketing of the coffee. The Institute was abolished in January 1966, and the Ministry of Agriculture and the Bank now have responsibility for all phases of coffee production and marketing. Support prices are no longer maintained.

An export tax on coconuts is now in effect to encourage the San Blas Indians, producers of most of the country's coconut output, to sell their products in Panama rather than to neighboring and more accessible Colombia.

Trade--Panama's import tariff is designed to protect domestic industries and to help develop national output of agricultural and industrial products. It is also an important revenue-producing measure.

A new import schedule went into effect on January 1, 1958, and an across-the-board increase of 1 percent was made in 1959. However, rates of duty on such items as animal feeds, fertilizer, and agricultural machinery remain comparatively low. Rates range upward to 20 percent ad valorem on certain manufactured products and 50 percent on specified products of animal origin and some wood products. The present duty on wheat is \$5.00 per 1,000 gross kilograms.

Rates are applied equally to all countries, except that a Tripartite Agreement with Costa Rica and Nicaragua represents a departure from this rule. Panama's association with the Central American Common Market would also alter this position.

The Office of Price Control is the agency responsible for issuing import licenses. Those items requiring import licenses are mostly foodstuffs, including certain fresh or canned fruits and vegetables, coffee, copra, eggs, chickens and baby chicks, and slaughter cattle. In addition, import quotas are set for a wide range of commodities, which includes tomatoes in practically any form, condensed and evaporated milk, rice in any form, hatching eggs, edible fats and oils, lard substitutes, flour (but not wheat), and many others.

Export controls which apply to agricultural products consist of permits for coffee in any form, coconuts or copra, and beef cattle and meat. The export of wheat flour is prohibited and an export tax is levied against each stem of bananas and each thousand coconuts; also on animal wax, nispero gum, ipecac root, and rubber.

Export licenses must be obtained from the Ministry of Finance and Treasury for those products which are assessed an export tax.

AGRICULTURAL PRODUCTION AND TRADE

Production

Panama's agricultural production follows the pattern of the other Central American countries. A few crops for export are produced with the help of good, modern farming methods. In Panama, these are limited mostly to bananas and cocoa beans, the production of which is largely in the hands of a foreign company, the Chiriquí Land Company. Other commodities which have ranked as minor exports in the recent past but have shown marked improvement are coffee, sugar, and live cattle.

Other agricultural output includes those commodities produced for domestic use, the more important of which are rice, corn, beans, tubers, vegetables, beef, and milk.

Export commodities--Until 1962, agricultural products accounted for almost three-fourths of Panama's foreign trade earnings. Bananas continue to be by far the most significant agricultural export commodity. Commercial banana production is centered in two areas of Panama--on the Caribbean side near Almirante in Bocas del Toro Province and around Puerto Armuelles in Chiriquí Province on the Pacific. In 1955, the Armuelles division of the fruit company shipped 6.6 million stems of top-quality fruit produced at the lowest cost. At that time, company holdings in Panama totaled about 4.5 percent of all land devoted to crop production. About 11,000 hectares were in bananas being produced by the company and an additional 9,300 hectares were under company contract with individual growers.

By the end of 1957, company land planted to bananas had increased slightly to 11,947 hectares. Of this, 8,818 hectares were on the Pacific coast and 3,129 on the Caribbean coast. Other company lands were utilized as follows: 700 hectares in teak, 337 in mahogany and other fine woods, and 47 hectares in cocoa and fruit, all on the Pacific coast. Near Bocas del Toro on the Caribbean coast there were 1,193 hectares in cocoa and 21 in fruit.

The 1960 census reported the area planted to bananas throughout the country as 28,301 hectares, from which 12.1 million stems were harvested. Of this reported output, almost 60 percent came from Chiriquí and Bocas del Toro.

On the Caribbean side the operation was completely closed down in 1936 because of losses from Panama disease. Rehabilitation was begun in 1953 and present acreage is estimated at around 4,900 hectares. The flood fallow method of control of this disease is practiced and new varieties resistant to Panama disease have been planted; helicopter spraying has been introduced to control sigatoka more efficiently.

Given a reasonable amount of freedom from disease, this area has good potential for increased banana production; its soil is quite rich, and there is an adequate amount of rainfall, well distributed throughout the year. Usually there is little damage from high winds, in contrast to the Pacific side where capricious storms often destroy whole plantations loaded with mature fruit.

Exportable production of bananas in 1964 was estimated at 291,000 metric tons, compared with 1950-54 average annual exports of 177,000 tons (table 6). For 1965, exports were estimated at 350,000 tons.

Cocoa is still an important agricultural export, but it dropped from second place in terms of value in 1951-55 to fourth place in 1963. The Chiriquí Land Company, Bocas del Toro division, produces, processes, and markets about 95 percent of Panama's cocoa output. Of the approximately 4,200 hectares planted to cocoa 1,214 hectares are fruit company holdings. The company manages only about 300 hectares and rents the rest to individuals who are under contract to sell all of their crop to the company.

Members of a cocoa cooperative own about 1,000 hectares and another 2,000 are owned by independent producers.

Production of cocoa has declined since the 1950's (table 9). Unfavorable weather probably was directly responsible for some losses, but relaxing of necessary good cultural practices as a result of falling prices also contributed to the decline. The total 1964 crop was estimated at around 800 tons, and the 1965 output was near that level.

Table 9.--Panama: Estimated production of principal crops and livestock products, average 1950-54 and 1955-59, annual 1960-65. 1/

Product	:Average:	Average:	1960	1961	1962	1963	1964	1965
	:1950-54:	1955-59:						
	: - - - - - <u>1,000 metric tons</u> - - - - -							
Bananas <u>2/</u>	177	275	263	271	250	253	291	<u>3/</u> 350
Cocoa beans	1.4	1.5	1.4	1.2	0.6	0.7	0.8	0.8
Coffee	<u>4/</u>	3	4	5	4	5	5	4
Centrifugal								
sugar, raw	17	23	27	27	36	49	49	57
Rice	95	104	97	110	111	113	130	140
Corn <u>3/</u>	71	77	59	74	72	77	83	83
Beans <u>5/</u>	6	- 5	5	7	7	5	4	4
Beef <u>3/</u>	14	18	19	23	24	25	25	24
Milk <u>3/</u>	<u>6/</u> 30	42	43	48	54	57	60	55

1/ Years refer to crop years beginning with year shown, except for bananas, tobacco, beef and milk. 2/ Exports. 3/ ERS estimate. 4/ Negligible. 5/ Official statistics. 6/ 1952-54 average.

In 1962, coffee was Panama's second ranking agricultural export. It is produced throughout the country, but the mild highland coffee that is exported is grown in Chiriquí Province. About one-third of the total crop comes from around Boquete and similar highland areas. Only in recent years have efforts been made to improve the quality and increase the size of the coffee crop. SICAP, the cooperative agricultural extension service in Panama, introduced better cultural methods, such as the application of fertilizers, control of disease, and use of more suitable varieties of trees. Production has shown a slight increase, and in years of high output, the surplus is exported.

Panamanian coffee finds a good market in Western Germany; small quantities are sold to the Netherlands, and the United States. Regular sales are also made to the Canal Zone. Local consumption is estimated at 3,500 to 4,000 metric tons annually, with current production at 5,000 tons (table 9).

Sugarcane is produced in all the Provinces but the 1960 census showed that, for that year, 79 percent of the 16,312 hectares planted, or 12,908 hectares, were in the Central Provinces--Coclé, Los Santos, Herrera, and Veraguas. In 1963, the area planted had increased to 20,440 hectares, of which 16,630 were in the Central Provinces.

Two large companies dominate commercial refined sugar production: Azucarera Nacional, a cooperative, and the privately owned Cia. Azucarera La Estrella. Both are located near Aguadulce in Coclé Province. The cooperative produces about one-third of the cane it grinds and purchases the remainder from the 700 members, La Estrella produces almost 75 percent of its cane requirements and purchases the rest from other

growers. Panama's output of sugar has increased sharply since 1950-54, when 17,000 tons were produced (table 9). In 1964, 49,000 tons were produced and the 1965 output reached 57,000 tons. Expanding local demand accounts for much of the growth of the sugar industry. Consumption, including sales to the Canal Zone, is now estimated at 28,300 tons. Increased quotas from the United States also helped to spur production. Panama's initial quota for 1966 was 22,909 metric tons which was subsequently increased to 28,829 tons. However, due to drought in 1965 and early rains in 1966, which limited the 1966 crop, Panama was unable to fill its quota and a deficit of 17,036 tons was declared, leaving a balance to be supplied of 11,793 tons as of October 6, 1966.

Panela (called raspadura in Panama), the coarse brown sugar made by small farmers throughout Central America, is produced and consumed in remote rural areas. Output is believed to be declining and is now estimated at 5,000 tons. A great deal of sugar goes into the manufacture of rum and large quantities of molasses are mixed with cane leaves and rice hulls to make feed for livestock.

The 1964 cane harvest of 853,600 tons was utilized as follows: Sugar mills and distilleries, 488,000 tons; panela and molasses for human consumption, 296,300 tons; and livestock feed, 69,300 tons.

Another enterprise with commercial potential is a planting of some 4,047 hectares of orange groves in Chiriquí Province, which when completed, is expected to comprise 1 million trees. Plans call for a processing plant to be constructed on the property to process and pack frozen orange concentrate in bulk for export, probably to European markets.

In addition to its crops produced for export, Panama also exports livestock, mostly slaughter cattle. Panama's livestock population consists mainly of cattle, hogs, and poultry. Trends in livestock numbers are shown in table 10.

Table 10.--Panama: Livestock numbers, 1950-65

Year	Cattle	Hogs	Poultry
	1,000 head		
1950	570.0	182.0	1,742.5
1955	578.0	214.6	1,946.2
1960	665.6	247.7	2,417.4
1961	760.9	222.3	2,489.1
1962	835.4	204.0	2,410.1
1963	842.4	212.9	2,376.7
1964	890.6	188.7	2,269.0
1965	968.6	176.0	2,504.9

Compiled from official Panamanian statistics and U.S. Embassy reports.

Cattle numbers may be underreported, since some large ranchers tend to underestimate numbers to avoid paying higher taxes.

Cattle raising is practiced throughout the republic; however, 30 percent of the total population is in Chiriquí Province and nearly 60 percent is in the Central Provinces of Los Santos, Veraguas, Herrera, and Coclé. Cattle are mostly of the native (criollo) breeds or criollo crossed with Brahman. Except on the large commercial dairy farms, cattle are produced for both beef and milk, as well as for herd replacement and for draft animals.

Some of the problems confronting the livestock industry are a need to upgrade cattle herds and to improve feeding and other management practices; a need to produce better quality meat and milk, while increasing the yield per animal; and a need to increase the calf crop and to raise more calves to maturity. The cooperative agricultural program between the governments of the United States and Panama (which terminated at the end of 1962) initiated and demonstrated methods of solving these problems, with particular emphasis on beef cattle. Over the years, the beef herds have been upgraded and yields of meat have increased somewhat. Most beef cattle in Panama are still grass fed; only calves and dairy cows near the Canal Zone are given additional feed. Pastures for dairy cattle have also been improved, but little has been done to improve the beef cattle rangeland and losses occur during severe dry seasons.

For the first time in its history, Panama had an exportable surplus of its own cattle in 1955. "Exports" made to the Canal Zone in some earlier years were in large part imported from neighboring countries. The Economic Development Institute (IFE) assists in finding foreign markets for cattle after the Office of Price Control has determined that there is a surplus above the number required to supply domestic needs. IFE helps upgrade the local beef herds, and has imported purebred sires from the United States for this purpose. As of late 1965, the demand for breeding stock was well ahead of the supply. IFE also buys high-grade local animals and sells them to smaller cattlemen.

Domestic-use commodities--Of the crops produced in Panama for domestic consumption as food, rice and corn are the most important, providing more than one-third of the calories in the daily diet. Other important domestic food crops include red beans, tubers, and vegetables. Meat, mostly beef, and milk are also important for the domestic food supply.

Rice is the most widely grown of all crops, although in the 1964/65 crop year two Provinces, Chiriquí and Veraguas, each produced 24 percent of the crop. Two crops per year are grown; the first, accounting for around 90 percent of total output, is planted in April and May and harvested in August and September. The second crop is planted in August and September and harvested in December and January. On some of the larger farms producing rice the use of machinery is fairly widespread, but around 80 percent of the crop is still produced by primitive methods. Production of rice averaged 95,000 tons a year in 1950-54; by 1965 production had increased to an amount estimated to be more than 138,000 tons (table 9). Increased output over the years has resulted from an all-out campaign by the Government for national self-sufficiency. Guaranteed prices that are maintained at a relatively high level, a high protective tariff, and technical assistance from the United States, as well as increased acreage, have been largely responsible for Panama's progress in rice production.

Panama achieved self-sufficiency in rice in 1953. However, this was a short-lived triumph and several years later, imports were again necessary. Yields per acre began to decline as some of the rice soils became exhausted. These soils were of volcanic origin and were not entirely suited to rice production. Fertilizer applications promoted heavy weed infestation which restricted the growth of the rice plants. Now the Government and IFE have stepped in again with technical assistance and credit aid--especially to smaller producers--in an effort to reverse this trend. This intensive assistance program, along with acreage expansion, was the reason for the bumper crop and sizable surplus in 1965.

Two corn crops are produced in Panama, with planting and harvesting seasons approximately the same as those for rice. Eighty percent of the crop is produced in the Central Provinces and Chiriquí. Corn is the second ranking grain for human consumption, but it is also used as feed for poultry, dairy cattle, and young calves. An estimated 42 percent of the 1962 crop went into livestock feed. Production methods are crude; little fertilizer and few weed control agents are used.

IFE encourages corn production by maintaining support prices. The Government also supplies certified seed and tries to promote better production methods through the use of films and pamphlets. In spite of these incentives, corn production is lagging behind demand and imports are needed for both food and feed. The 1965 crop was estimated at 83,000 tons, the same as in 1964 and 17 percent above 1950-54 average production of 71,000 tons (table 9).

Pulses, chiefly red beans, are an important source of protein in the Panamanian diet. They supply close to 10 percent of protein from sources other than livestock products. Official production statistics show that annual output of beans declined from an average of 6,000 tons in 1950-54 to 4,000 tons in 1965 (table 9). Low yields account for declining production, since the soils, except in Chiriquí Province, are not particularly suited to bean culture. In addition, little attention is given to controlling diseases and insects, and little use is made of fertilizer and irrigation. There is sharp competition with other crops for land in Panama's Central Provinces and Chiriquí,-- the source of the greater part of the country's agricultural output.

Panama produces a variety of tubers and vegetables for home consumption. Root and vegetable crops listed in the 1960 census were potatoes, yuca (cassava), yams, guandu, sweet peppers, tomatoes, lettuce, cabbage, and carrots. With the exception of potatoes and tomatoes, which amounted to 4,000 and 8,000 tons respectively, the quantities of other vegetables produced were insignificant. Some of these vegetables are now marketed in the Canal Zone. If quality could be improved through better production and marketing practices, and if adequate transportation could be assured, the Canal Zone could absorb a greater volume of local vegetable output.

Beef output has increased, generally following the upward trend in cattle numbers (table 9). Production is estimated to have been 14,000 tons a year in 1950-54, increasing to 18,000 tons in 1955-59 and 24,000 tons in 1965. Drought in 1965 had an adverse effect on meat output, although herd buildups continued.

Milk production in Panama has shown a steady upward trend since 1950 (table 9). Upgrading of dairy herds and improvement in the management of dairy farms have contributed to this increase. However, drought in 1965, along with high feed costs and low milk prices, reduced output an estimated 8 percent from the 60,000 tons produced in 1964. Cows kept for milk production at the end of July 1965 were reported at 67,860 head, compared with 34,577 head in December 1950.

Little fresh fluid milk is consumed in rural areas, but the cities of Panamá and Colón and the Canal Zone constitute a good market for fresh milk. Panamanian dairymen in the area have an arrangement to furnish a stated amount of milk of acceptable quality to the Canal Zone and are reported to be trying hard to maintain this market for their milk.

Excess fluid milk in Chiriquí Province is processed into evaporated milk, dried whole milk, and butter at the Compañía Chiricana de Leche, S.A., near Concepción. The Nestlé plant at Natá, in Coclé Province, produces evaporated, condensed, and dried whole milk, and butter. Another plant at Penonomé specializes in different kinds of cheese, but also produces pasteurized milk, butter, skim milk, and buttermilk. Still another plant, Industrias Lácteas, supplies Panama City and the Canal Zone.

Trade

Panama, mainly an agricultural nation, depends on revenues from its international commercial transactions for a significant part of its budget funds. Both exports and imports have risen steadily since 1951-55 (tables 11 and 12). During that period, imports averaged \$71.5 million, compared with an estimated \$168 million in 1964; exports averaged \$15 million and increased to around \$67 million in 1964.

Table 11.--Panama: Value of agricultural and total exports to the world and to the United States, 1951-64

Tariff group No.	Commodity	Average 1951-55		Average 1956-60		1961		1962		1963		1964 ^{1/}	
		Total	U.S.	Total	U.S.	Total	U.S.	Total	U.S.	Total	U.S.	Total	U.S.
----- 1,000 dollars -----													
<u>Food</u>													
00	Live animals	17.5	0.1	171	0	45	0	806	0	466	0	824	
011	Meat	0.8	0.8	53	51	59	4	85	23	155	130	0.2	0
021	Dairy products	0	0	0.4	0	2/	0	0.1	0	3	0		
025	Fresh eggs	0	0	2	0	24	0	8	0	17	0	22	
03	Fish ^{3/}	1,844	1,844	5,265	5,265	5,952	5,950	7,959	7,957	6,207	6,122	7,405	7,405
04	Cereals & prep.	1.6	0	29	0	0.1	0	0.4	0	1	0	13	
05	Fruits & vegetables and prep.	8,383	8,211	12,275	12,123	13,448	12,355	11,784	11,356	13,753	13,716	30,919	
	Bananas	(8,201)	(8,201)	(12,182)	(12,079)	(13,394)	(12,323)	(11,685)	(11,286)	(13,634)	(13,621)	(30,840)	
06	Sugar and prep.	379	55	411	372	780	768	534	518	1,564	1,558	2,488	2,482
	Refined sugar	(370)	(46)	(411)	(372)	(780)	(768)	(534)	(518)	(799)	(793)	(562)	(557)
071	Coffee	214	176	546	483	258	128	1,412	0	392	0	1,448	74
072	Cocoa ^{4/}	1,300	1,299	915	915	507	444	483	255	455	455	382	306
08	Animal feed	0	0	68	39	190	11	158	34	206	0	235	
09	Misc. food prep.	1.7	2/	4	0.2	2/	0	2/	0	75	0		
11	Beverages	2.0	0.1	9	9	1	0.5	0.7	0	9	0.8		
<u>Agricultural raw materials</u>													
121	Unmfgd. tobacco	0	0	0.4	0.4	0	0	0	0	0	0		
21	Hides and skins	172	10.3	77	2	8	8	27	10	37	12		
231	Natural rubber	45	45	44	31	61	30	15	9	30	24		
261-265	Natural fibers	1,043	1,043	0.6	0	0	0	0.1	0	0.1	0		
29	Crude animal & veg. products, n.e.s.	247	208	118	100	64	63	74	45	69	40		
4	Animal & veg. fats and oils	0	0	0.4	0	0	0	0	0	0	0		
Total agricultural		11,806.6	11,048.3	14,723.8	14,125.6	15,445.1	13,791.5	15,387.3	12,250.0	17,232.1	15,936.8	36,331.2	
Total exports		15,003.0	13,431.5	20,370.4	19,636.6	21,686.8	19,889.6	37,619.4	25,492.0	47,768.0	29,460.0	67,200.0	
----- Percent -----													
Agricultural exports as percentage of total exports		79	82	72	72	71	69	41	48	36	54		

^{1/} Preliminary. ^{2/} Less than \$50. ^{3/} Not included in agricultural total. ^{4/} Domestic exports only. Excludes exports of cocoa beans from the Sixaola region of Costa Rica after processing in Panama.

Note: Figures in parentheses show value of most important items in group and are included in group totals.

Sources: Panamá Dirección General de Estadística y de Censo. Anuario de Comercio, 1953-63; and Estadística Panameña, Jan. 1953 and Mar. 1954. U.S. Embassy reports.

Table 12.--Panama: Value of agricultural and total imports from the world and from the United States, 1951-64

Tariff group No.	Commodity	Average 1951-55		Average 1956-60		1961		1962		1963		1964 ^{1/}	
		Total	U.S. ^{2/}	Total	U.S.	Total	U.S.	Total	U.S.	Total	U.S.	Total	U.S.
-----1,000 dollars-----													
	<u>Food</u>												
00	Live animals . . .	171	57	133	27	13	4	37	7	9	9	-	
011	Meat & prep. . . .	949	646	1,332	922	1,634	1,121	1,461	942	1,681	1,016	1,985	
02	Dairy products, eggs and honey . .	2,159	1,224	1,736	921	2,053	1,088	2,123	1,196	2,201	1,170	2,171	
	Butter	(617)	(45)	(716)	(17)	(824)	(5)	(761)	(30)	(827)	(57)	(931)	
	Cheese	(271)	(178)	(408)	(327)	(435)	(337)	(505)	(416)	(505)	(385)	(628)	
03	Fish ^{3/}	650	238	736	173	874	168	371	116	858	109	1,115	
04	Cereals & prep. . .	3,046	2,074	3,359	2,447	4,591	2,922	4,293	2,361	5,078	3,109	5,430	
	Wheat	(0.2)	(0.2)	(2.5)	(2.5)	(0.6)	(0.6)	(19)	(19)	(1,044)	(1,044)	(1,913)	1,756
	Wheat flour . .	(1,704)	(1,103)	(1,957)	(1,386)	(2,275)	(1,548)	(2,214)	(1,375)	(1,517)	(842)	(453)	290
05	Fruits & veg. & prep.	2,533	2,225	3,386	2,743	3,461	2,600	3,369	2,562	3,662	2,788	3,707	
06	Sugar & prep. . . .	236	326	416	335	370	332	418	374	419	362	484	
07	Coffee, cocoa, tea and spices	299	179	498	262	567	387	582	379	600	348	636	
08	Animal feed	399	327	428	339	387	288	461	364	496	370	404	
09	Misc. food prep. .	2,117	1,617	1,355	1,238	1,136	1,025	943	813	929	743	755	
	Lard	(1,107)	(1,105)	(756)	(691)	(426)	(396)	(424)	(385)	(368)	(310)	(424)	
11	Beverages	1,243	74	1,471	43	1,700	6	2,717	4	557	3	-	
	<u>Agricultural raw materials</u>												
121	Unmfgd. tobacco .	143	205	384	263	458	389	419	390	369	369	294	
21	Hides and skins . .	15	8	20	17	2	0	4/	0	0	0		
22	Oilseeds	124	52	408	58	839	1	1,042	1	1,334	86		
231	Natural rubber . . .	0.2	0.2	0.4	0.2	0	0	1	0.6	0.1	4/		
261-265	Natural fibers . . .	76	78	115	93	112	81	109	86	135	103		
29	Crude animal & veg. products .	169	134	173	75	119	38	142	55	132	41		
4	Animal & veg. fats and oils	339	305	345	252	424	179	448	239	434	232	368	
	Total agricultural .	14,018.2	9,531.2	15,559.4	10,035.2	17,866.0	10,461.0	18,565.0	9,773.6	18,036.1	10,749.0	16,234.0	
	Total imports	71,473.4	45,395.5	96,259.2	53,474.9	123,875.8	63,099.6	145,211.5	66,402.5	162,776.1	73,955.8	168,100.0	72,700.0
	Agr. imports as percentage of total imports	20	21	16	19	14	17	13	15	11	15		

^{1/} Preliminary. ^{2/} 3-years only. ^{3/} Not included in agricultural total. ^{4/} Less than \$50.

Source: Panamá Dirección General de Estadística y de Censo. Estadística Panameña, Feb. 1952 and Feb. 1953. Anuario de Comercio Exterior, 1953-63. U.S. Embassy reports.

At present, there is little competition between agricultural products of Panama and those of the United States in world markets, nor is there likely to be much. If its present rate of population growth continues, Panama is likely to be a market for at least its current volume and variety of agricultural imports for some time to come.

Exports--Since 1951-55, agricultural products have supplied a declining percentage of Panama's total exports. During those 5 years, 79 percent of all exports were agricultural products. Bananas represented 69 percent of the value of farm products exported; cocoa beans, abaca fiber, sugar, and coffee accounted for another 25 percent. The United States is still the principal market for Panama's agricultural exports, though the percentage declined from 94 in 1951-55 to 92 in 1963.

In 1963, bananas accounted for 79 percent of the total agricultural commodities exported. The United States takes most of the banana exports, but in 1964, West Germany and Switzerland took small quantities.

Refined petroleum products, which entered the export market in 1962, have reduced the importance of agricultural products in the total value of exports.

Coffee exports vary in accordance with the surplus of the high-quality Boquete crop. The value of shipments in 1964 was \$1.45 million, the highest on record. West Germany buys most of the coffee; small quantities are also shipped to the United States, Netherlands, and the Canal Zone.

Live cattle exports increased in value from \$17,500 in 1951-55 to \$824,000 in 1964. Cattle sold abroad are slaughter animals; most go to Peru and Curacao with occasional shipments to Costa Rica.

The trend in sugar exports has been steadily upward, except in 1962, when exports were prohibited for 7 months to forestall a shortage in supplies for domestic consumption. Value of exports averaged \$379,000 in 1951-55 and reached \$2.5 million in 1964. Under the U.S. sugar legislation of 1965, Panama was allotted a basic quota of 13,374 tons, which was more than doubled for 1966, with the addition of deficit allocations and prorations of the quotas other countries cannot fill. Practically all sugar available for export goes to the United States.

The value of cocoa bean exports declined steadily from \$1.3 million in 1951-55 to \$455,000 in 1963, placing cocoa beans fourth among agricultural exports in terms of value. By 1964 the value of exports of cocoa beans had declined still further to \$382,000. The United States is the principal market, with Colombia second.

The above five commodities--bananas, coffee, live cattle, sugar, and cocoa beans--made up 96 percent of total agricultural exports in 1963. The rest consisted of miscellaneous items such as beef, fresh eggs, hides and skins, natural rubber, and other products. Abaca fiber, once important, is no longer produced commercially.

Imports--Panama's imports of farm commodities have increased steadily, but their importance in relation to other imports has declined. In 1951-55, agricultural products accounted for 20 percent of all imports, but by 1963 they accounted for only 11 percent of the total. This percentage drop is due partly to increased local production of some of the basic food grains but mostly to a rather sharp increase in imports of consumer goods such as automobiles and household furnishings and certain other non-agricultural items.

The chief agricultural imports in 1963 were meat preparations, dairy products, cereals and cereal preparations, fruits and vegetables and fruit and vegetable preparations, sugar and sugar preparations, coffee, cocoa, tea and spices, miscellaneous food products, beverages, oilseeds, animal feed, unmanufactured tobacco, natural

fibers, unspecified crude animal and vegetable products, and animal and vegetable fats and oils. Imports of minor importance were live animals, natural rubber, and hides and skins.

Cereal and grain imports formed the largest group of agricultural imports, totaling \$5.1 million. In addition to wheat flour, this category included rice, corn, malting barley, and other whole grains, flour and meal made of corn and other grains, and a variety of cereal preparations. The United States supplied 61 percent of these commodities. Other large suppliers were Canada (flour, oats, and malt) and Ecuador (rice).

Wheat and wheat flour accounted for 14 percent of the total value of agricultural imports in 1963--\$2.6 million out of a total of \$18.0 million. A flour mill began operations in 1963 and provides about 80 percent of Panama's flour needs. Imports of specialty flour ranging from 3,000 to 4,000 tons are expected to continue. The United States supplied 56 percent of the flour imported in 1963 and has supplied practically all of the wheat imported by the flour mill.

Next in importance in terms of dollar value at \$3.7 million was the fruits and vegetables group--temperate-zone fresh fruits, edible nuts, dried fruits, canned and preserved fruits and juices, pulses, onions and garlic, and a variety of canned vegetables and vegetable preparations. The United States supplied \$2.8 million or 76 percent of this group. Other suppliers were Netherlands (seed potatoes) and Chile (pulses, onions, and garlic).

Beverages (largely alcoholic beverages), at \$2.7 million ranked third in value in 1962 among agricultural imports, but dropped to \$0.6 million in 1963. In official statistics, most wines, whiskies, brandies, and other beverages are reported as being imported from the Colón Free Zone or withdrawn from bonded Government warehouses.

Dairy products remain an important agricultural import, in spite of high import duties and import quotas. Evaporated, condensed, dry whole, and skim milk, and cream and cheese are subject to quotas. The United States supplied more than half of the total, or \$1.2 million out of \$2.2 million, in 1963. Cheese and infant food were the chief dairy products imported commercially from the United States; in addition, 1,206 tons of nonfat dry milk valued at \$260,000 were imported under P.L. 480. The principal competitors of the United States in this market were New Zealand for butter and Argentina and Netherlands for cheese.

The meat preparations imported by Panama consist largely of canned hams, and other pork products, canned or not. Small amounts of fresh beef, pork, mutton and poultry are also imported. Almost two-thirds of this group came from the United States in 1963. Most fresh meat, cured pork, deviled ham, and meat-based soups were supplied by this country. Denmark was the source of the greater part of the canned ham.

The oilseed group, with a value of \$1.30 million in 1963, was made up almost entirely of copra, which originated in the Orient, the Dominican Republic, and Mexico.

A wide range of miscellaneous food products, including lard, sauces, vinegar, yeast, and similar products was valued at \$0.93 million in 1963. The United States supplied 80 percent of the total. Chocolate products, such as confectionery, and spices dominated this group of imports which was valued at \$0.60 million. The United States supplied more than half of these commodities and the United Kingdom most of the rest. Animal feed valued at half a million dollars was supplied in large part by the United States. The most important components of this group were ingredients for poultry feed, vitamin supplements for mixed feed, and cottonseed and soybean meal. Imports of fats and oils of animal and vegetable origin were valued at \$0.43 million and consisted largely of crude and refined edible vegetable oils. Slightly more than

half came from the United States and most of the rest from Spain and the Netherlands.

Unmanufactured tobacco imports amounted to \$0.4 million and virtually all of it came from the United States. That listed as coming from the Colón Free Zone probably originated in the United States.

U.S. AGRICULTURAL TRADE WITH PANAMA

Total U.S. trade with Panama has expanded almost continuously since 1951-55. Exports in 1965 were up 63 percent above the 1951-55 average, with agricultural items showing even greater gains. Total imports increased by 265 percent and imports of agricultural products, by 194 percent (table 13).

Table 13.--United States: Value of trade with Panama, 1951-65

Trade	Average : 1951-55	Average : 1956-60	1961	1962	1963	1964	1965
: - - - - - Million dollars - - - - -							
<u>U.S. exports to Panama</u>							
Dairy products	0.9	0.8	0.9	1.0	0.9	0.8	0.8
Meats & preparations	0.6	0.8	0.7	0.7	0.8	0.9	0.9
Lard	1.1	0.7	0.4	0.5	0.4	0.5	0.4
Fruits & preparations	1.0	1.3	1.2	1.2	1.3	1.5	1.6
Wheat flour	1.0	1.4	1.5	1.2	0.8	0.5	0.3
Wheat	0	<u>1/</u>	<u>1/</u>	<u>1/</u>	1.3	1.9	1.9
Other grains & preparations	1.1	1.2	1.7	1.5	1.3	1.5	1.4
Vegetables, canned	0.6	0.7	0.4	0.3	0.4	0.4	0.5
Other vegetables & prep.	0.7	1.0	1.2	1.3	1.2	1.8	1.4
Other agricultural products	1.7	2.1	2.3	2.6	2.5	2.3	<u>2/5.3</u>
Total agricultural products	8.7	10.0	10.3	10.3	10.9	12.1	14.5
Other products	67.2	72.8	96.4	93.9	97.6	97.5	109.3
Total exports	75.9	82.8	106.7	104.2	108.5	109.6	123.8
<u>U.S. imports from Panama</u>							
Cocoa beans <u>3/</u>	1.7	1.8	1.3	1.1	1.2	1.2	0.7
Coffee	0.2	0.5	0.3	<u>1/</u>	1.1	0.2	0.4
Bananas	9.0	12.8	10.9	9.3	11.7	20.9	33.4
Sugar, cane	0.1	0.4	0.9	0.3	1.4	2.4	2.1
Other agricultural products	1.6	0.3	0.2	0.4	0.3	0.5	0.2
Total agricultural products	12.5	15.9	13.6	11.1	15.7	25.2	36.8
Other products	3.7	7.6	9.1	11.9	16.1	15.0	22.7
Total imports	16.3	23.5	22.7	23.0	31.8	40.2	59.5

1/ Less than \$50,000. 2/ Includes \$1.2 million of feeds and fodders and \$1.8 million of miscellaneous food products. 3/ Includes cocoa beans (from the Sixaola region of Costa Rica) exported from Almirante, Panama, to the United States.

Sources: U.S. Bureau of the Census. U.S. Exports of Foreign and Domestic Merchandise, FT 410, 1951-53; U.S. Imports of Merchandise for Consumption, FT 110, 1951-53. U.S. Dept. Agr., Econ. Res. Serv. Foreign Agricultural Trade of the United States, 1954-65.

Imports

Farm commodities imported into the United States from Panama represent less than 1 percent of all U.S. agricultural imports. These commodities include mainly bananas, sugar, cocoa beans, and coffee. In 1951-55, agricultural imports were valued at \$12.5 million, and accounted for 77 percent of total imports from Panama. Agricultural imports in 1965 reached \$36.8 million, and accounted for 62 percent of the total.

Banana imports increased from \$9.0 million in 1951-55 to \$12.8 million in 1956-60, but declined to \$10.9 million in 1961 due to labor strife in Panama in the first part of the year, and declined further to \$9.3 million in 1962 due to heavy losses from blowdowns. Banana production staged a rapid recovery and shipments to the United States reached a record \$33.4 million in 1965, when Panama was the third most important supplier, after Ecuador and Honduras.

Sugar imports from Panama increased from \$0.1 million in 1951-55 to \$2.4 million in 1964, but dropped to \$2.1 million in 1965. Declining cocoa bean production in Panama is responsible for the drop in U.S. imports to \$0.7 million in 1965, compared with \$1.7 million in 1951-55 and \$1.8 million in 1956-60.

The value of coffee imports from Panama has varied from less than \$50,000 in 1962 to \$1.1 million in 1963; in 1951-55, imports averaged \$0.2 million. West Germany is Panama's biggest coffee market.

Exports

Among the Central American countries, Panama is usually the best market for U.S. agricultural products; over the past 15 years it has taken an increasing amount of these products. Wheat flour (now replaced by wheat), other grains and grain preparations, dairy products, meat and meat preparations, lard, fresh and canned fruits, fresh and canned vegetables, and vegetable preparations are the traditional farm commodities that the United States sends to Panama.

U.S. exports of wheat flour to Panama averaged \$1.0 million in 1951-55. In 1956-60, this country shipped a negligible amount of wheat, which presumably was used as feed. The value of flour and wheat exported reached \$2.1 million in 1963 and \$2.4 million in 1964 but dropped slightly to \$2.2 million in 1965. The U.S. supplied practically all of the wheat used by one flour mill in Panama.

U.S. exports of dairy products to Panama consist mostly of cheese, dietetic foods, and milk-based baby foods. The value of these exports was \$0.9 million in the years 1951-55 and 1965, with slight variations above and below this amount in some years.

The value of meat products exported to Panama--mostly cured pork and pork products--increased slightly from \$0.6 million in 1951-55 to \$0.9 million in 1965. Import restrictions imposed by Panama in 1959 have cut into U.S. lard exports which amounted to \$1.1 million in 1951-55 but fell to \$0.4 million in 1965. Demand for locally produced vegetable oils also is apparently quite strong.

Exports of a limited quantity of fresh vegetables--chiefly onions--canned vegetables, pulses, and canned vegetable preparations have remained fairly well stabilized at around \$1.3 million over the last 15 years.

Miscellaneous agricultural exports to Panama have shown an upward trend since 1951-55. In 1965, exports jumped sharply to \$6.0 million, compared with \$2.3 million in 1964. Much larger exports of flavoring syrups and cattle feed concentrates are largely responsible for the increase in export value of this miscellaneous group.

Outlook

Prospects for exports of U.S. agricultural products to Panama appear to be favorable. If Panama joins the Central American Common Market (CACM), its potential as a market for U.S. farm products is not expected to be greatly curtailed, since the CACM countries are themselves lagging in the production of basic food grains, certain dairy products, and pork.

These countries may at some future time be able to supply Panama with cottonseed or cottonseed oil, African palm oil, pork products, and canned vegetables and vegetable preparations. Meanwhile, U.S. exports of wheat and specialty flours should increase somewhat, in line with population growth and increase in per capita income. Exports of other grains and grain preparations will probably continue at near current levels except in years when Panama has a short corn crop.

Panama's demand for dairy and meat products likely will continue at near current levels, but lard exports will probably decline further, as the consumer taste in Panama turns further to vegetable oils and fats.

U.S. exports of fruits and fruit preparations to Panama consist largely of temperate-zone products, which are luxury foods in Panama. Such exports are expected to increase at approximately the same rate as in recent years. For the immediate future, exports of vegetables and vegetable products, and miscellaneous agricultural commodities will likely maintain the pace of recent years. The sharp increase in the miscellaneous group probably will not be repeated within the next several years.

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