

AGENCY FOR INTERNATIONAL DEVELOPMENT
 WASHINGTON, D. C. 20523
BIBLIOGRAPHIC INPUT SHEET

FOR AID USE ONLY
Batch 70

1. SUBJECT CLASSIFICATION	A. PRIMARY	Food production and nutrition	AE10-0000-G362
	B. SECONDARY	Agricultural economics--Panama	

2. TITLE AND SUBTITLE
 Panama agricultural sector assessment

3. AUTHOR(S)
 Shearer, E.B.

4. DOCUMENT DATE	5. NUMBER OF PAGES	6. ARC NUMBER
1976	88p.	ARC

7. REFERENCE ORGANIZATION NAME AND ADDRESS
 AID/LA/USAID/Panama

8. SUPPLEMENTARY NOTES (*Sponsoring Organization, Publishers, Availability*)

9. ABSTRACT
 To identify the types of assistance needed in LDCs, A.I.D. staff members in those countries periodically conduct studies of particular sectors. This report presents the results of an assessment of the agricultural sector of Panama. Sections of the report discuss the overall economy, the state of agriculture, land capability and climate, key characteristics of farming and land use, the agrarian structure and rural population, agricultural production and trade for the period 1950-1975, programs for rural development since 1970, sectorial planning, rural development goals and strategy, constraints on development, and the role of A.I.D. The chief structural constraint is the land tenure structure. As long as some of the crop land is still in extensive pasture under the control of owners not motivated to use it for more productive purposes, subsistence campesinos will have to continue eking out a living on the hillsides. A.I.D. programs in rural development will continue to support rural-oriented education and health activities. A.I.D. will also continue joining other external donors in supporting area-specific agricultural development programs designed to create more productive use of the underutilized natural and human resources.

10. CONTROL NUMBER	11. PRICE OF DOCUMENT
<i>PN-AAE-495</i>	
12. DESCRIPTORS Panama Sector analysis	13. PROJECT NUMBER
	14. CONTRACT NUMBER AID/LA/USAID/Panama
	15. TYPE OF DOCUMENT

PN-AAE-495

P A N A M A

AGRICULTURAL SECTOR

ASSESSMENT

E. B. Shearer
USAID/PANAMA
March 1, 1976

CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. OVERVIEW OF THE ECONOMY	2
III. AGRICULTURE IN THE ECONOMY	4
IV. LAND CAPABILITY AND CLIMATE	7
V. KEY CHARACTERISTICS OF FARMING AND LAND USE	10
VI. AGRARIAN STRUCTURE AND THE RURAL POPULATION	15
A. Land Tenure	15
B. Land Taxation	19
C. Rural Income Distribution and Rural Poverty	20
D. Social Indicators of the Rural Population	24
E. Population and Employment Dynamics	25
VII. AGRICULTURAL PRODUCTION AND TRADE 1950-1975	29
A. The Trends 1950-1972	29
B. Farm Production 1973-75	33
C. Foreign Trade in Agricultural Products	36
VIII. POLICIES, PROGRAMS AND INSTITUTIONS FOR RURAL DEVELOPMENT SINCE 1970	38
A. Background	38
B. Phase I: The Beginning of Rural Development: Agrarian Reform 1970-72 and the Institutional Changes of 1973	39
1. Campesino Organization	39
2. Land Acquisition	40

	<u>Page</u>
3. The New Settlements	42
4. The New Public Institutions	44
C. Phase 2: The Drive Towards Agricultural Self-Sufficiency	46
1. Local Participation	46
2. Public Enterprises	47
3. MIDA reorganizes again and moves up-country; a military Minister takes over	48
4. Public Sector Funding	50
5. Farm Credit	52
6. Marketing and Prices	55
IX. SECTORIAL PLANNING	58
A. Outline of the 10 year Perspective Plan	59
X. RURAL DEVELOPMENT GOALS AND STRATEGY	64
XI. CONSTRAINTS	69
A. Structural Constraints	69
B. Socio-Cultural Constraints	70
C. Economic Policy Constraints	71
1. Farm Management and Accounting	71
2. Employment Policy	72
3. Prices and Subsidies	74
D. Institutional Constraints	77
E. Infrastructure Constraints	78
F. Technological Constraints	79
G. Financial and Political Constraints	81
XII. THE ROLE OF AID	83

	<u>Page</u>
CHART I -	
MIDA Organization Chart	51
REFERENCES	86

PANAMA

AGRICULTURAL SECTOR ASSESSMENT

I. INTRODUCTION

About 1970 Panama's rural areas and its agricultural sector began to emerge from the traditional neglect to which they had been subjected owing to a combination of natural, demographic and historical factors ever since the birth of the nation.

The power structure which ruled before the revolution of 1968 hardly looked beyond the confines of the narrow metropolitan corridor running along the Canal between the cities of Colon, on the Atlantic side, and Panama City, on the Pacific. Accumulation of wealth and economic growth came principally from expanding services to the Canal Zone and other service exports from the urban communities which thrived on the country's open economy and the Panama's dollar-based monetary system.

Much of the food consumed in the metropolitan area was imported. The bulk of the generally sparse agricultural population living in the hinterland fed itself and indeed had very little opportunity to bring produce to market. Most of the rural areas were inaccessible by land and devoid of most essential infrastructure and services. The vast bulk of commercial agricultural production came from the foreign owned banana plantations, confined first only to the Atlantic, but later expanded also to the Pacific coast, in the extreme west of the country. This activity produced little benefit to the nation per se except in terms of the considerable employment which it created in that part of the country. The bulk of the rural population lived as subsistence farmers, many in semi-nomadic fashion moving from parcel to parcel of newly slashed-and-burned land.

Even though good crop land is scarce in Panama, the low population density and the ready and free availability of public domain for slash-and-burn farming and/or cattle raising, and an apparently low level of expectations among the rural population, prevented any social symptoms of land hunger from becoming manifest, but at the expense of an inexorable - and partly irreversible - degradation of large portions of the Pacific slope.

II. OVERVIEW OF THE ECONOMY 1/

Panama is relatively well off compared to other developing nations, with a per capita Gross Domestic Product (GDP) of B/.1,075 in 1974 -- one of the highest in Latin America. Its principal resource and basis for economic growth is its strategic location and the presence of the Canal. There are also substantial fisheries and resources tropical forest to be further exploited, but with considerable investment, and two major copper deposits have been discovered recently. However, good crop lands are scarce, outside the limited commercial banana, sugar and rice areas.

The economy is quite open (the currency - though denominated "balboa" - is the U.S. dollar) and has become increasingly dominated by a service oriented metropolitan sector which has developed near the Canal, linked to international trade and finance. In 1974, the services sector (excluding the Canal Zone) accounted for 54 percent of Panama's total output manufacturing 17 percent, agriculture 16 percent, construction 7 percent, and the Canal Zone 6 percent. The 1974 population of 1.6 million has been drawn steadily--but not massively--toward the metropolitan sector. By 1974 roughly 30 percent lived in Panama City, another 20 percent in other urban areas, and 50 percent in rural areas--mostly on marginal family farms. Total population increased by an average 2.9 percent annually during the 1960's. As a result of rural-urban migration--mostly to the greater Panama City area-- the urban population grew by 4.4 percent while rural population increased only 1.8 percent. These trends have remained relatively unchanged in the early 1970's.

Notwithstanding Panama's comparatively high overall per capital GDP and steady rural-urban migration, there remain vast differences in income and productivity between its rural and urban sectors, which are aggravated by the continued wide dispersion of the rural poor. Per capita GDP in agriculture was an estimated B/.474 in 1974 compared to B/.1,417 in the non-agricultural sector, and output per worker B/.1,835 in agriculture compared to B/.4,360 for the rest of the economy.

1/ Contributed by Carl Gleason

About a quarter of GDP is currently produced within the public sector, a proportion that is steadily rising due to heavy public sector investments in economic enterprises as well as social services. In addition to the central government, there are approximately 36 autonomous government agencies, the largest of which is Social Security (coverage now being extended to members of peasant asentamientos - see below). Among the others, public utilities are by far the most important. Central government expenditures are budgeted at B/.433 million for 1976 (75 percent current, 25 percent investment), financed as follows: current revenues B/.321 million (74.1 percent); net domestic borrowing B/.9.1 million (2.1 percent); and net foreign borrowing B/.101.5 (23.4 percent). In addition, B/.365 million are budgeted for investment by autonomous public agencies, a substantial portion of which is expected to be funded from external borrowing.

Panama's balance of payments traditionally shows a large trade deficit--B/.489 million in 1974 resulting from imports of B/.736 million against exports of B/.247 million. Principal imports are manufactured products (B/.336 m) and crude petroleum (B/.247 m); food imports totalled B/.41.6 million). Bananas (B/.50 m), sugar (B/.28 m) and petroleum products (B/.86 m) are the major exports. The trade deficit is covered in part by substantial services earnings (B/.227 m in 1974) and the remainder through foreign borrowing--increasingly through the commercial banking system. Transactions with the Canal Zone are always in surplus (B/.212 million in 1974) with salaries and wages to Panamanian employees the largest single item.

Panama's foreign debt has risen sharply in recent years as a result of unrestrained consumption and growing public outlays not compensated by current revenues. Though Panama has no true foreign balance of payments, this is a cause for some concern in view of Panama's still growing need for foreign financing, especially since the maturity structure of the debt has worsened markedly. Almost two-thirds of the public sector's foreign debt is now in the five to ten year maturity range despite recent increases in concessionary borrowing.

Panama's economic growth was quite rapid during most of the past fifteen years, based principally on the continued development of service industries. Additional dynamic elements were the development of manufacturing for import substitution

(through sharply constrained by the small market), a construction boom, and expansion of export oriented banana and sugar output. Overall expansion was particularly strong during the 1960's, averaging 7.7% annually. Agricultural output grew by 5.3 percent annually, manufacturing 11 percent, construction 9 percent, and the large services sector 8 percent.

The overall growth rate slowed to 6.7 percent annually in 1972-3, and to about 3.5 percent in 1974 and 1975. The growth of the direct contribution the Canal Zone makes to Panama's economy tapered off around 1970 and is now actually declining. Overall employment grew at a satisfactory average annual rate of 6.6 percent in 1960-75.

III. AGRICULTURE IN THE ECONOMY

In Panama, agriculture has never been the traditional motor for growth. In 1950, agriculture constituted barely 29 percent of GDP, and it has declined since the mid-1960's to 16 percent in 1975. While agriculture continues to employ about one-third of the labor force, Panama is also exceptional in that employment in this sector has declined absolutely, whereas in most other Latin American countries--including some with a substantial rate of overall growth--the population depending on agriculture for a living is still rising in absolute terms.

GDP, Agriculture and Employed Population, 1950-1974.

	<u>Percent of Total</u>					<u>Average Annual Growth (percent)</u>		
	1950	1960	1965	1970	1974	1950-60	1960-70	1970-74
GDP	100	100	100	100	100	5.1	8.0	6.2
Agriculture	29	23	21	18	16	2.5	5.3	2.3
Total Employment	100	100	100	100	100	2.2	3.7	5.6
Agricultural Employment	55	50	47	36	35	1.3	0.5	-1.3

Source: Controller General, Department of Statistics and Census

Agricultural output, however, has been by no means stagnant; the sector's overall annual real growth rate of 5.3 percent in the 1960's (more than double the previous decade's rate) was matched by few other Latin American countries. Per capita output in the agricultural sector went up nearly twice as fast as in non-agricultural activities (4.8 percent versus 2.5 percent per year from 1960 to 1970) while the gap between the respective products per worker decreased from a ratio of 3.3:1 in 1960 to 2.4:1 in 1971. ^{1/}

Value Added Per Worker
(Balboas at current prices)

	1950	1960	1970
Agriculture	558	638	1,393
Other Sectors	1,680	2,134	3,333
All Workers	1,074	1,386	2,660
Ratio of non-agriculture to agriculture	3.0	3.3	2.4

Source: Controller General, Department of Statistics and Census

This global analysis, however, hides a number of features of Panama's agricultural sector and its performance. Historically wide-spread rural poverty was accompanied by domination of commercial agricultural output and exports by one large foreign plantation complex. On the other hand, the country's relatively poor land resources and recently static agricultural labor

^{1/} At current prices; in constant prices, the ratio was 2.6:1 in 1971, suggesting an improvement in agriculture's internal terms of trade.

force must be viewed against the backdrop of an exceptionally open economy and the dollar-based monetary system.

IV. LAND CAPABILITY AND CLIMATE

Panama has very little good, flat land suitable for mechanized agriculture or intensive cattle raising in areas hospitable for human settlement. This partially accounts for the historical pattern of settlement and land use, the generally low productivity of land and -- in the case of traditional cropping systems -- of labor, and the large numbers of migratory subsistence farmers who compounded the niggardiness of nature by destroying the forest. Moreover, past failure to correct unequal access to land and modern technology for the rural population has prevented use of the limited good land in accordance with its capability.

Most of Panama's settled area was originally a "tropical moist" forest, now largely deforested, which covered about one-third of the country. 1/ The best soils are found in the alluvia of lower Chiriqui in the west and the Bayano Basin 2/ in the east, but there are preliminary indications that the Chucunaque and lower Balsas and Tuirá valleys in the Darien may have similar capability.

Despite recent expansions of the crop area, a sizeable proportion of the plains is still taken up by grazing land carved out from the original forest and covered with faragua grass. Because of its tropical formation and frequent burning over, the topsoil mantle is usually thin and unstable and must be treated with a great deal of care to avoid irreversible erosion, especially through trampling by cattle. The higher altitude non-volcanic soils in this zone are unsuited for agriculture because they are very susceptible to leaching and erosion.

Eighteen percent of the land area is classified as a "premontane wet forest" life zone. This is found mostly on the Pacific side and is not considered apt for most agriculture, with the exception of the volcanic soils in the higher altitudes of Chiriqui. These latter areas are some of the most productive agricultural regions, where coffee, fruits, vegetables, and

1/ See Map 1 in Vol. 2.1 of Reference 1 in reference annex.

2/ Already largely preempted by the country's first large hidroelectric reservoir due to begin filling up in 1976.

milk are produced profitably. About one-fourth of the rest of this zone may be suitable only for bananas and plantains. Nevertheless, much of it has been colonized and is in private hands, and serious soil degradation has occurred.

Nearly 1.1 million hectares - over 13 percent of the land area - are classified as "tropical wet forest" and are mostly still forest-covered. The bulk of this zone is on the Atlantic slope, with other portions found along the coastal areas of Veraguas province and northern Chiriqui. There are sound ecological reasons why human settlement has been limited to the Pacific watershed. As in the rest of Central America, the Atlantic side is extremely humid, with annual rainfall of 3,000 mm or more and no pronounced dry season.

There are also sound ecological reasons why much of the hills and mountains of the Pacific slope should have remained in forests. The subsistence needs of a growing rural population have led to an indiscriminate cutting of primary forest, mostly during the present century. This has exposed a wide band of land, approximately 12,000 square kilometers, or 16 percent of the total land area, to erosion ranging from serious to irreversible. This band begins just west of Panama City and extends to Tolé, at the western end of the Azuero peninsula. At least 500,000 has. of land presently in "farms" are estimated to be concerned.

While the Atlantic (North) coast is generally considered too humid for most field crops - and perhaps for cattle as well - the Pacific (South) side has a very pronounced dry season from December through April which is in some areas accompanied by hot dry winds. On the other hand, the high rainfall during the wet season (a minimum average of 1,000 mm even in the driest zones), its concentration in the form of heavy afternoon and evening showers and the extremely high relative humidity impose other limitations. The major problems are heavy runoffs on sloping land (especially where forest cover has been destroyed), waterlogging of flat land, and insects and plant diseases. A favorable "moisture balance" in the soils of most of this region is found for only about one month each during the early

and late periods of the rainy season, 1/ These ecological conditions accentuate the need for good soil management if the land is to be used productively.

Overall it is estimated that only about one-fourth of the total land (or about 1.5 million hectares) is suitable for crops and that only about one half of this area is unquestionably suitable for mechanized field crops. This includes the two narrow parallel strips around the Gulf of Parita on the Pacific coast and running along the eastern shore of the Azuero Peninsula.

This region appears to have a more favorable moisture balance than other areas because of less intense rains and is more heavily cropped than any plains region outside Chiriqui. But the full realization of its agronomic potential requires supplemental irrigation as already practiced on sugar cane.

Panama has no land of Class I and less than 200,000 hectares (three percent of the country) of Class II. 2/

Sixty percent of the Class II land is located in three Provinces: Chiriqui (with one-third), Coclé and Veraguas, but the largely unexplored Darien is thought to contain nearly one-third of all the Class III and IV land in the country.

1/ Reliable soil (mostly reconnaissance) and rainfall data exist for only about one-third of the country - roughly the western Pacific watershed. For virtually the entire Atlantic side (with the exception of a narrow strip on both sides of Lake Gatun), as well as the eastern part of the country from about Chepo in Panama province to the border with Colombia, and two thirds of the Azuero peninsula, there are only scanty climatic data, and soil and native vegetation information is based almost solely on aerial reconnaissance at a scale of 1:250,000. Generalizations regarding the agricultural potential of the Atlantic slope and of the western jungles are thus at best preliminary.

2/ Class II has capability for virtually all uses, but requires special, though easily applicable, soil conservation and management practices. Beyond Class III, the land is usually unsuitable for annual crops.

V. KEY CHARACTERISTICS OF FARMING AND LAND USE

Panama's agriculture is today in an advanced transitional stage from primitive farming of the slash-and-burn type with sporadic cattle ranching, to a commercial activity. Large-scale cutting and burning of the forests which covered much of the country began only about 50 years ago. At the end of the 17th century, the entire area which is now Panama had a population of slightly over 20,000. By the end of the 19th century, 200 years later, the population was still only 300,000, and was heavily concentrated in the urban areas around the ancient ports and site of the present Panama Canal Zone. The hinterland was very sparsely inhabited. In one relatively populated zone in the now agriculturally important province of Coclé, population density was only 7 inhabitants per km² until 1911.

The steep increase in Panama's population following 1911, to its present 1.6 million, began to stimulate settlement of the hinterland and the production of crops for the domestic and export markets. Not until bridges and all-weather roads had been established between east and west in the second quarter of the present century could the terminal cities communicate easily with the western portion of the country. As a result, agricultural activities until the early part of the 20th century were essentially confined to cattle raising in a few areas of natural savanna, with the cattle ranches surrounded by sporadic subsistence settlers who cut and burned the tropical forest on the slopes for farming plots.

As in the other Latin American countries, the historically low density of population and the colonial and post-colonial land grant policies naturally led to an occupation of the limited flat land by cattle ranches. There is no evidence that campesinos were forcibly excluded from occupying these areas. The type of agriculture practiced - and the technology employed - by slash-and-burn colonists led them to prefer sloping land. This same technology is still used today by thousands of subsistence farmers. Crops are planted with sticks, which help reduce the soil's exposure to erosion. No fertilizer is used since the soil's natural fertility lasts for the two or three crop years of the usual cycle, and planting is normally done on hillsides to take advantage of natural drainage. This drainage not only prevents downing of the young crop during the rainy season; it allows the campesio-

nos to control weeds by machete, which is impossible on flat, recently deforested and poorly drained land under humid tropical conditions.

Until recently, as in other tropical Latin American countries, there existed a symbiotic relation between cattlemen and slash-and-burn campesinos. The campesino cleared a piece of hillside forest on public land, where he grew subsistence crops for a few years, leaving the area seeded in faragua pasture, selling the "improvements" to a cattleman and moving on. However, as population pressure increased, at least in the accessible areas of the country, less and less of the cutover land has tended to go into pasture. It either became eroded and virtually useless for future use, or reverted to brush or secondary forest. Moreover, as the supply of virgin land in the Pacific watershed became exhausted, increasing numbers of campesinos remained on their subsistence plots.

Government interest in promoting agricultural production during the depressed early 1950's and the improving road system provided new incentives for commercially oriented farmers of all sizes to expand or engage in the production of various new lines. A number of owners of relatively high quality lands in the cattle-ranching areas plowed up limited areas, or rented fields to urban-based entrepreneurs who began to grow upland rice with total or partial mechanization of operations. Some of these speculators lost money and quickly withdrew. At about the same time a few wealthy families established sugar mills on their estates and converted a good deal of the better crop land to sugarcane in the western and central parts of the country. There they also established irrigation for the first time, pumping water up from the nearby rivers. In the late 1950's and 1960's, a number of small scale enterprises began to be established in the western and central portions of the country for the production of vegetables, mostly potatoes, onions and tomatoes, to supply the fresh produce market and a few processing plants. Meanwhile, meat and milk production continued to expand at a fairly steady rate in response to increases in demand.

As a result of the ample availability of public land, increases in agricultural output during the 20 years 1950-70 took place, with very few exceptions, by putting unused land

into crops or pasture. The notable exceptions are the conversion of former grazing lands to commercial rice and sugarcane production, and the establishment of small vegetable plots. The increase of farm production by clearing virgin land was particularly evident in cattle ranching. All the increase in meat and virtually all the increase in milk production have been from expanded pasture acreage.

Relative Increase in Acreage of Improved Pasture

and in Heads of Cattle

(percent)

	<u>1950 to 1960</u>	<u>1960 to 1970</u>	<u>1950 to 1970</u>
Increase in Pasture	60	41	125
	<u>1952 to 1962</u>	<u>1962 to 1972</u>	<u>1952 to 1972</u>
Increase in Heads of Cattle	51	55	133

Source: Censuses of 1950, 1960 and 1970.

During the 1950's land in farms expanded at 1.5 times the rate of population growth, whereas in the 1960's acreage expanded at only half that rate. This reflects the gradual use of most accessible land, which in turn contributed to the slower rise of the agricultural population in the early 1960's and the absolute decline which began in the latter part of the decade.

	<u>1950</u>	<u>1960</u>	<u>1970</u>
All land in farms (1,000 has.)	1,159	1,806	2,098
Annual rate of increase (%)		4.5	1.5
Percent of total land area	16	25	29

In the increasingly commercialized central provinces, land in farms continued to increase in the 1960's at one-third the rate of the 1950's. The rate of land expansion was only one-fifth the earlier rate in the heavily populated Azuero peninsula. Acreage hardly increased in some frontier provinces and even declined in others. This indicates a greater recent impetus to commercial agriculture as slash-and-burn migration slowed down. During the 1950's improved pastures and forest land rose sharply, by over a quarter of a million hectares each. In the 1960's the pattern changed, as previously occupied forest land was converted to pasture. While the farm land in forest declined, pastures increased again by more than 280,000 hectares. There was only a negligible addition to field-crop land, and acreage in permanent crops actually declined.

Changes in Land Use
(1000 hectares)

	<u>1950 to 1960</u>	<u>1960 to 1970</u>
Temporary crops	n.a.	+9
Permanent crops	n.a.	-14
<u>All crops</u>	<u>+93</u>	<u>-5</u>
Improved pasture	+256	+281
<u>Crops and improved pasture</u>	<u>+350</u>	<u>+276</u>
Natural pasture and fallow	+20	+36
Forest, woodland and other	+278	-20
<u>Total:</u>	<u>+647</u>	<u>+292</u>

Source: Censuses of 1950, 1960 and 1970

Existing information indicates that roughly 1.5 million hectares of Panama's land area are suitable for various types of crops, including perennials and tree crops, and 3 million hectares are suitable for grazing land. The total, 4.5 million hectares, is equivalent to 60 percent of the total area. But

only 21 percent and 46 percent, respectively, of the estimated potential crop and grazing land were in such actual use in 1970 and the combined proportion was only 28 percent. There are no studies yet to show the degree of optimum utilization of existing crop and pasture lands in relation to their theoretical potential.

More than half the country's surface is still covered by forests and woods, but little more than half of this can be considered commercially utilizable. Moreover, recent surveys in the Darien indicate that the major part of the commercially valuable timber, even in some of the presumably less accessible areas, have already been cut. On the other hand, reforestation of the Pacific slope with commercially usable species, such as Honduras pine, is only beginning.

VI. AGRARIAN STRUCTURE AND THE RURAL POPULATION

A. Land Tenure

Almost all farm families own, or at least occupy, a parcel of land. Panama has no large mass of migrant, landless farm laborers. Virtually all land is owner-operated (directly or through hired managers); only five percent of the farmland is rented. However, the absence of a land policy and the prevalence of slash-and-burn farming are reflected in the fact that almost half of the land in farms, and nearly three-quarters of the farm units, have no legal title.

Some 3,000 farms with over 100 hectares controlled nearly half the occupied farmland in 1970, and the 200 largest farms - those with 500 hectares or more - covered nearly one-fourth of the land in farms. 1/

Percentage Distribution of Farms and Farmland according to Size Groups, 1970

	<u>S I Z E G R O U P S (hectares)</u>							
	<u>Less than 1</u>	<u>1-4.9</u>	<u>5-9.9</u>	<u>10-19.9</u>	<u>20-49.9</u>	<u>50-99.9</u>	<u>100-499.9</u>	<u>500 & more</u>
	<u>P E R C E N T</u>							
Farms	19	33	13	14	13	5	3	<u>1/</u>
Area	<u>1/</u>	3	4	9	20	17	24	<u>23</u>

1/ Less than 0.5%

Source: Census of 1970

1/ These are census farm units and not properties. Thus, the true concentration of ownership may well be even greater than indicated by the census data.

This calculation excludes the 20,000 "farms" of less than one hectare because these "farms" are essentially residential plots for agricultural and other laborers 1/ where some produce for home consumption is grown. The fact that the number of farms of less than one hectare equals the active farm population identified as being principally farm laborers may well be more than a statistical coincidence. Even disregarding these micro-holdings, over 40 percent of the remaining farms, i.e., those with less than 5 hectares, cover only three percent of the farmland. Their total number in 1970 exceeded 34,000. Assuming that in general terms a potentially viable family farm comprises between five and 100 hectares, there were in 1970 nearly 50,000 such farms (45 percent of farms) and they occupied half the farm land. 2/ This is unusual for Latin America, where in most countries the middle-sized farms are less important.

However, during the twenty years 1950-1970 there has been a clear trend towards larger farms, a phenomenon which is in harmony with the proportionate decline of the farm population during the two decades. This trend also follows the rise in wage levels, which trends to make the small subsistence farm increasingly marginal as an acceptable living alternative.

1/ In 1960, one-third of all "farmers" with 0.5 to 0.9 hectares - and more than half of such "farmers" in Coclé and Panama provinces - worked primarily in non-agricultural activities.

2/ The Census does not distinguish between farms and ranches. However, the average proportion of land in crops drops to a relatively negligible level among "farms" of 100 hectares or more, and there were only about 3,000 farms above this size in 1970.

Percentage Changes in Numbers and Area of Farms, by Size Classes, 1950-1970

	Farm Size (Hectares)						All Farms	
	<u>1-4.9</u>	<u>5-9.9</u>	<u>10-19.9</u>	<u>20-49.9</u>	<u>50-99.9</u>	<u>100-499.9</u>		<u>500 & more</u>
	(Per Cent Change)							
<u>Number</u>								
1950 to 1960	-13	+8	+22	+46	+80	+109	+45	+6
1960 to 1970	-11	-23	-5	+17	+28	+15	+42	-6
1950 to 1970	-23	-17	+16	+72	+130	+139	+107	0
<u>Area</u>								
1950 to 1960	-3	+11	+26	+50	+82	+92	+79	+56
1960 to 1970	-22	-24	-5	+17	+93	+25	+29	+16
1950 to 1970	-25	-16	+20	+75	+133	+141	+131	+81

Source: Censuses of 1950, 1960, 1970

There was a substantial increase in the average size of the largest farms between 1950 and 1960. The average size of farms exceeding 1,000 hectares increased by 723 hectares from 1950 to 1960. After 1960 the growth of farms between 500 and 1,000 hectares was predominant. Most of these medium-large farms are cattle ranches.

Comparison of Number, Area and Average Size of Largest Farms, 1950 & 1970

	Size Class (Hectares)					
	1950		1960		1970	
	500-999.9	1000 & more	500-999.9	1000 & more	500-999.9	1000 & more
Number	93	61	133	91	211	106
Area (100 has.)	61.2	146.5	87.3	284.5	138.5	341.2
Average size (has.)	658	2402	650	3125	656	3159

Source: Censuses of 1950, 1960, 1970

The largest farms (over 500 hectares) control considerable amounts of arable land. The 1970 census reports 33 farms with more than 2,500 hectares covering a total of 235,000 hectares. The foreign-owned banana plantations in Chiriqui and Bocas del Toro province, as well as the plantation of the then foreign-owned Chiriqui Citrus Co., are included in this figure. United Fruit owned in 1970 slightly over 50,000 hectares ^{1/} and the citrus company about 6,000 hectares. The remaining 30 large farms (i.e., ranches or sugar plantations) with over 2,500 hectares would thus have averaged about 6,100 hectares. The proportion of the total farm acreage occupied by the largest farms rose by more than one-fourth, from 18 percent in 1950 to 23 percent in 1970. Their total land holdings increased 133 percent during the twenty years, compared to an overall increase of only 81 percent in total farmland, but in about the same proportion as the increase in land of middle size farms (50-500 has.).

The rural cadaster undertaken in the late sixties shows a similar land distribution. Eleven percent of the land

^{1/} In 1969 the company ceded 3,000 hectares to the public domain, and sold 2,500 hectares to the Government and 5,400 to 27 former employees, for a total of 10,000 has. all in Chiriqui province. (In a public brochure the company states that it had disposed of 25 percent of its 1960 land holdings of nearly 70,000 has.)

parcels (not consolidated by owner) - a total of about 6,500 - represent 51 percent of the total value. The 55,000 parcels with a value of B/.500 or less comprised only six percent of the total value.

Lack of title is a pervasive phenomenon in Panama. Overall, 72 percent of the farms and 44 percent of the farmland were untitled in 1970. Close to 80 percent of all the land in farms of less than 10 hectares lacks legal title, as compared with 63 percent in middle size farms and only 25 percent among holdings over 200 hectares. Lack of title affects both older and more recently settled provinces. In the frontier province of Darien, two-thirds of the 1300 farms existing in 1970, and 95 percent of the land they occupied, were untitled. But even in areas of less recent settlement the lack of titles is notable; for instance, in Veraguas province three-fourths of the farms and nearly 60 percent of the land have no title.

Lack of title reflects mostly the traditional lack of concern with formal ownership rights stemming from the ample frontier. Nevertheless, it is becoming a problem for the small, if not for the large farmers. The absence of valid titles for smallholders implies constant tenure insecurity. With the ending of the land frontier, titling will become even more important, since the land that is now in use must be improved. In general, commercial orientation of the farmer coincides with the existence of a title. The considerable expense entailed in obtaining a title pre-supposes a minimum (at least potential) cash income. The direct cost of obtaining a title to a 20 hectare farm, including survey, is over B/.200, to which must be added the value of the occupant's time spent in the various bureaucratic procedures. The cost is usually beyond a small farmer's means.

B. Land Taxation

Despite the completion of a thorough rural cadaster in 1969 and the submission of detailed recommendations regarding

land tax reform, 1/ no legal or administrative action has been taken to implement a reform of the land tax system. The existing system is antiquated and cumbersome, produces only an estimated B/.350,000 per year in revenues from rural properties, 2/ and has no visible impact on land use or income distribution. The Government's concern for the small holder has made it reluctant to change the existing system. There already exists a legal exemption from land taxation of properties valued at less than B/.500 (equivalent to 17 hectares at the present flat valuation of B/.30 per hectare), which could of course be modified upward or downward. Hence, a change in the land tax could easily be designed in such a way as to reinforce measures by introducing higher tax rates than those presently in force. This would oblige larger landowners to use their land more intensively and thus create more employment or force non-managerial owners to part with their land.

C. Rural Income Distribution and Rural Poverty

In 1970, nearly 50,000 rural households - about one-third the total number - were living below the Panamanian poverty line, with gross sales of less than B/.500 per year. At the other extreme a mere 1,300 farm operators had gross sales averaging B/.70,000.

Of the 83,000 farms (with more than one hectare), 30,000 sold no produce whatever. The remaining 53,000 had 1970 sales as follows:

-
- 1/ Final Report on Contract Extension Activities of CATAPAN, submitted August 12, 1970. The recommendations were exclusively revenue-oriented.
- 2/ The tax administration is unable to separate rural from urban tax rolls and collection data.

Value of Annual Sales

Balloas

	Less than 100	100-499	500-999	1,000-2,499	2,500-4,000	5,000 & More
Number of farms (1,000)	28.6	15.3	3.9	3.1	1.2	1.3
% of farms	54	29	7	6	2	2

Source: Census of 1970

The 1,300 largest farms produced about 90 percent of the gross value of marketed farm output (excluding export bananas). This amounts to a total value of about B/.126 million. The mean gross sales of the 19,000 commercially oriented family farms amounted to about B/.700. But even within this class of farms there is considerable inequality; the median farm's sales were only about B/.365.

Of the 154,000 workers in agriculture (15 years or older, including forestry but excluding fishing) 1/ in 1970, 56 percent were employers or self-employed, 19 percent were wage workers 2/ and 25 percent unpaid family labor. Nearly one-half of the wage workers (about 15,000) were employed in the export banana areas and other plantations. The remainder -about 14,000- were probably either permanently employed hired ranch or farm hands, or peasants whose main occupation was farm day labor who had a subsistence parcel of land.

1/ An estimated 4,000 workers were engaged in fishing. Thus agriculture and forestry alone employed, in 1970, 35 percent of the total employed population.

2/ Assuming all of the 4,000 fisheries workers were wage workers.

Most Panamanian farmers exploit their own land. Of nearly 103,000 farms covered in the 1970 census, 85 percent were worked exclusively by the operator and his family.

	<u>Number</u>	<u>Percent</u>
Only operator and family	87,380	85.0
Mostly operator and family	9,350	9.1
Mostly wage labor	6,065	5.9

In 1960, 90 percent of the operators of farms of one hectare or more declared that agriculture was their customary occupation. In 1970, there were 88,600 families, all of whose members worked in agriculture, plus 19,100 families where part of the family worked in agriculture. The total, 107,700, compares closely with a total of 105,300 farms enumerated by the 1970 census. It can thus be inferred that except for an estimated 14,000 permanent banana plantation workers, virtually all of the agricultural wage workers belong to families with some land of their own.

According to 1970 labor statistics, there were 89,600 full or part time operators of farms, with the following characteristics:

	<u>No.</u>	<u>Percent (%)</u>
Operators with three or more wage workers	1,100	(1)
Operators with fewer than three wage workers or none	<u>88,500</u>	<u>(99)</u>
Total	<u>89,600</u>	<u>(100)</u>
Of whom:		
Produced mostly for home consumption and had no outside employment	25,200	28
Had outside employment	23,900	27
Had no farm sales and no outside employment	13,400	15
Sold most of the produce and had no outside employment	9,800	11
Sold one-half the produce and had no outside employment	5,700	6
Had a farm in addition to main occupation	6,700	7
Less than one year on the farm	3,800	4

Source: Controller General

These data suggest that: (a) there were about 40,000 subsistence- farmers representing over 40 percent of the total number of farm families-- almost entirely outside of the money economy; (b) there were only 15,000 to 20,000 even partly commercially oriented farms in the entire country. Moreover, of these only about 10,000 had gross annual sales of B/.500 or more.

Thus, the true rural poverty problem concerned, as of 1970, approximately 50,000 families or unattached workers, or about one-third of all farm families. Of these, about 10,000 are primarily farm laborers with land parcels of less than one hectare, and 40,000 are subsistence farmers without any outside employment. The median sales volume of all farms with sales was only B/.62 per year. The average weekly farm wage in the area near Panama City was B/.12. Assuming that the average weekly agricultural wage outside of the Panama City and banana areas was B/.10 ¹/₁, and that the most energetic worker had 30 six-day weeks of employment (which is high), the maximum annual wage earnings of the non-banana farm laborer was only B/.300. Thus, even if there were an average of 1 1/2 wage earners per household, the total annual cash income of the upper stratum among the 50,000 poor rural households would have hardly exceeded B/.500. With an assumed average of 5 members per household, this signifies a per capita cash income of approximately B/.100 per year. Most of the rural poor reside in the central provinces.

There is an important difference in the nature and degree of rural poverty between Panama and many other countries of the region. In Panama, there is a virtual absence of what might be termed "abject misery". Malnutrition is of course a widespread, medically identified phenomenon, but it is not acute and is typically based on nutritional and/or agronomic ignorance. With ample, relatively accessible land available until recently for growing subsistence crops and producing animal proteins for home consumption, no campesino family has had to go hungry. And poverty is in general borne with

¹/₁ The conventional farm wage in 1975 was about B/.,3 per day, but this is not always paid except at seasonal peaks of demand for labor, when it may even be exceeded.

dignity, if not with a certain fatalism, especially among the indigenous population 1/ which is just emerging from relatively (and sometimes absolutely) isolated tribal life. Though sociological studies are lacking, indications are that rural poverty in Panama has important socio-cultural ramifications, compounded by, and perhaps stemming from, physical isolation and the tropical climate. These assumptions are supported by demographic and employment trends as analyzed in Section V-E below.

The general impression of unusual reluctance among Panamanian campesinos to trade the supposed hardships of rural life for the supposed attractions of the big city is confirmed by an official 1967 labor survey. This found that more than half the unpaid family workers on farms preferred their farm work to other kinds of employment, and another 11 percent were indifferent. There was no significant difference among age groups.

D. Social Indicators of the Rural Population

Past official neglect of the rural areas was reflected in certain statistics. But massive government programs have begun to make a difference, as shown in the following comparisons between 1970 and 1974 data:

	<u>Total Population</u>		<u>Rural Population</u>	
	<u>1970</u>	<u>1974</u>	<u>1970</u>	<u>1974</u>
Gross birth rate (0/100)	37.2	32.6	36.7	33.0
Gross death rate (0/100)	7.1	5.6	8.4	6.0
Natural rate of increase (0/100)	30.0	27.0	29.7	27.0
Infant mortality (0/100)	40.5	32.9	48.8	37.2
Roads per sq. Km (Km)	0.024	0.095	-	-
Social Security coverage (000)	324	344.4	n.a.	n.a.
Rural Health Centers (No.)	-	-	72	361
Rural Schools (No.)	-	-	2,150	2,658
School Attendance (%) <u>2/</u>	70.4	82.7	a)	74.3
Literacy rate (%)	79.3	n.a.	64.5	n.a.

a) Incomplete

1/ This population is usually excluded from census and other official data.

2/ Based on number of children 6 to 17 years old.

These data, of course, include both developed and underdeveloped or undeveloped rural areas. The data being presented in an Interim Report for integrated rural development impact areas in March 1976, illustrate the sharp interregional differences.

E. Population and Employment Dynamics

Based on comparisons between census data for 1960 and 1970, three demographic phenomena stand out in Panama:

1. A static to declining population employed in agriculture since the late 1960's.
2. A rate of migration to the more important provincial population centers at least as high as, or higher than, to Panama City.
3. Continuing migration from high density rural provinces to the frontier areas.

Not only did the proportion employed in agriculture (including forestry and fisheries) drop from 50 percent in 1960 to one-third or less in 1974; the absolute number of workers in this sector in 1974 (150,000) was approximately the same as three years earlier. ^{1/} The narrowing of the gap in value added per worker between agricultural and non-agricultural activities indicates that Panamanian agricultural output is capable of growing with a declining labor force.

As in most other countries that are not burdened with large numbers of landless farm laborers, there is virtually no open agricultural unemployment in Panama. But underemployment (i.e., seasonal unemployment) according to the most recent calculations was equivalent to an unemployment rate of about 37% of the agricultural labor force in 1970/71, with a peak of nearly 50% during the three most idle months. However, non-agricultural employment in the provinces (i.e., outside the metropolitan area) was rising at a rate of 10 percent

^{1/} By way of comparison agricultural population increased from 1960 to 1970 by an average 2.5 percent in the five Central American Common Market countries, and 3.5 percent in neighboring Costa Rica.

per year between 1965 and 1970. The increased provincial urban employment was generated about equally in construction, manufacturing, and commerce; the relative growth in other services lagged behind.

This trend towards provincial urbanization is also shown by demographic data. The annual growth rate for the greater Panama City area (Panama City, plus San Miguelito) between 1960 and 1970 was 4.3 percent, while important provincial towns, such as David (4.5%), Santiago (5.2%), and La Chorrera (6.6%), grew faster. This reflects a tendency for the population to concentrate in larger centers, but not exclusively in the terminal cities.

Changes in active agricultural population during the ten years 1960-1970 indicate a sizeable shift among certain groups of provinces. The proportion in the underpopulated northern and eastern parts of the country almost doubled, at the same time as it declined in the more densely settled Azuero provinces and held its own in the rest of central Panama, and especially in the west, where soil and climate have permitted considerable land use intensification.

The high mobility of the Panamanian peasantry in the 1960's is shown by the relatively heavy rate of migration from one rural area to another. The main area of expulsion was the overpopulated Azuero peninsula (the provinces of Herrera, Los Santos and part of Veraguas); the principal poles of attraction were the Atlantic coast, eastern virgin areas (including the eastern part of Panama province), and Chiriqui in the extreme west. There is a basic difference in development patterns between the poles, however: the eastern area is being settled by slash-and-burn colonists who penetrate along with-- or even independently of-- highway construction crews, while in Chiriqui it is essentially the intensification of land use which seems to be attracting more farming population.

In the 1960's, more than 13,000 of the economically active farm population apparently moved from one province to another to farm. A larger number, however, left farming for the cities. In the frontier provinces, 86 percent of the growth in the agricultural population was from immigration. In the central provinces, an average 13 percent of the agricultural population growth -- and in the Azuero peninsula, over 20 percent -- found an outlet in farming or ranching in other provinces during the decade. There appears to be a "traditional" pattern of migration of campesinos of all classes from Los Santos Province (especially from around Las Tablas) to eastern Panama Province.

Economically Active Population Engaged in Agriculture 1/ by Provinces

1960 and 1970

	1960		1970		Change from 1960 to 1970	
	(000)	Percent of Total	(000)	Percent of Total	(000)	%
Bocas del Toro	5.4	3.4	11.6	6.4	6.2	115
Colon	5.1	3.3	11.4	6.2	6.3	123
Darien	<u>3.1</u>	<u>2.0</u>	<u>6.1</u>	<u>3.3</u>	<u>3.0</u>	<u>97</u>
Total, Group I (North + East)	<u>13.6</u>	<u>8.7</u>	<u>29.1</u>	<u>15.9</u>	<u>15.5</u>	<u>114</u>
Cocle	19.6	12.6	21.7	11.9	2.1	11
Chiriqui	35.3	22.7	41.4	22.8	6.1	17
Panama <u>2/</u>	20.3	13.0	23.8	13.0	3.5	17
Veraguas	<u>35.6</u>	<u>22.9</u>	<u>37.9</u>	<u>20.7</u>	<u>2.3</u>	<u>6</u>
Total, Group II (Center - West)	<u>110.8</u>	<u>71.2</u>	<u>124.8</u>	<u>68.4</u>	<u>14.0</u>	<u>13</u>
Herrera	14.2	9.1	13.4	7.3	-0.8	-6
Los Santos	<u>17.2</u>	<u>11.0</u>	<u>15.3</u>	<u>8.4</u>	<u>-1.9</u>	<u>-11</u>
Total, Group III (Azuero)	<u>31.4</u>	<u>20.1</u>	<u>28.7</u>	<u>15.7</u>	<u>-2.7</u>	<u>-9</u>
TOTAL AGRICULTURE	<u>155.7</u>	<u>100.0</u>	<u>182.7</u>	<u>100.0</u>	<u>27.0</u>	<u>17</u>
TOTAL ECONOMICALLY ACTIVE POPULATION	<u>337.00</u>		<u>488.7</u>		<u>151.7</u>	<u>45</u>

1/ Ten years old and over, hence differs from current labor statistics which use 15 years or older.

2/ Eastern portion borders on Darien.

Source: Censuses of 1960 and 1970.

Apparent Migration of Active Agricultural Population from and to Provinces

<u>Provinces</u>	1960 to 1970 <u>Apparent Migration</u> (000)	<u>Migration as proportion</u> of increase in <u>Agricultural population</u> %
<u>With In-Migration</u>		
Bocas del Toro	+5.3	85
Colon	+5.4	86
Darien	+2.6	83
Total	<u>+13.3</u>	<u>86</u>
<u>No change</u>		
Chiriqui	0	-
Panama	0	-
<u>With out-migration</u>		
Cocle	-1.3	6
Veraguas	-3.9	9
Herrera	-3.2	19
Los Santos	-4.9	24
Total	<u>-13.3</u>	<u>13</u>

Source: Calculated from Censuses of 1960 and 1970.

VII. AGRICULTURAL PRODUCTION AND TRADE 1950 - 1975

A. The Trends 1950-1972

Bananas and livestock represented about one-fourth each of the total value of agricultural production in 1970-72. The growth performances of these two sub-sectors had been nearly the same during the 23 years 1950-72, and at a level substantially above that for crops for domestic consumption.

Relative Importance and Growth Rates of Agricultural Sub-Sectors
(In percent, based on gross value of production at constant prices) /1

	Percent of Total Value	Average Annual Growth Rate		
		Average 1950/52	1960/62	1970/72
Crops for domestic consumption	49	2.8	4.0	3.4
Export crops (bananas and cacao)	26	4.7	5.3	4.3
Cattle	10	4.2	5.3	4.8
Other Livestock	15	5.5	3.4	4.5
TOTAL CROPS AND LIVESTOCK	100	3.7	5.0	4.3
Forestry	1	6.1	3.7	4.9
Fisheries	6	10.3	2.8	6.5
TOTAL AGRICULTURE SECTOR	100	4.1	4.8	4.4

/1 No breakdown for value added is available.

The economic and social impact of the two growth sub-sectors, however, differed. Cattle are produced by a large number of ranches - large and small - owned mostly by Panamanians. The banana economy had been almost exclusively in the hands of one foreign company, and its activities were estimated to constitute approximately one-fifth of the total value added in the agriculture sector.

The impact of this one banana enterprise on the overall agricultural picture has been substantial. For instance, between 1962 and 1969, sales of the banana company tripled and employment rose over 70 percent to a total of 14,400 workers (including those of independent growers), nearly 10 percent of the total Panamanian agricultural labor force. The gross value of banana production for export represented nearly 60 percent of the total value of saleable crop output. Thus, any change in employment, output and production per worker produced a sizeable statistical impact in the "agricultural sector".

Apart from bananas, the most dynamic important sub-sector was livestock. There was a steady growth of the cattle herd as well as of slaughter. Other types of livestock (mostly poultry and pigs) remained about 60 percent of the total gross value of livestock production, and their combined rate of growth was almost as great as that of cattle.

Cattle production rose at a compound yearly rate of 5.3 percent between 1960-62 and 1970-72, i.e., one percentage point more than the apparent annual increase in consumption. This margin was reflected in slowly rising but still modest exports since 1966 averaging around 2,000 metric tons only about 5 percent of total carcass weight slaughtered. Milk production rose at a similar rate - an average of 5 percent per year from 1960 to 1970 - but average productivity per cow is relatively much lower than for meat.

Pork production increased at only one-half the rate noted for the cattle sector: 2.4 percent per year from 1950 to 1971. Since then production has stagnated, partially because of high feed costs. But output of eggs, which had increased very little from 1950 to 1960, rose at an average annual rate of 4.6 percent during the following decade, and a "chicken explosion" began in 1970. The number of chickens on farms increased by 28 percent in 1971/72 over the average

number for the preceding two years, compared with an annual rate of growth of 3.1 percent from 1950 to the 1966-68 average.

The 4.9 percent growth rate of forest production does not amount to much in absolute terms since it is based on an initial output level of barely B/.0.5 million, which tripled to about B/.1.5 million, all for domestic use. This level is negligible compared to the remaining five million hectares of forest covering 70 percent of the total land area. However, their value for commercial exploitation is still in doubt, and may depend on technological and entrepreneurial factors in the industrial field.

Two major crops, sugarcane and tomatoes, grew substantially in importance during the 1960's. In response to a steep rise in domestic demand and a liberal U.S. import quota, sugarcane output more than doubled from 1960 to 1971. In 1950/51, only about 18,000 tons of sugarcane were cut from 400 hectares. By the mid-1950's, 11,000 hectares were being harvested and production of cane was around one-half million tons per year. In 1972/73, harvested area was approaching 25,000 hectares and well over one million tons of cane were being cut. The total value of tomato production in 1970/71 of B/.4.5 million was nearly equal to that of corn (the second most important crop in terms of acreage).

Against this, the poor performance of the three traditional staples - rice, corn and beans was reflected in the substantial 1971 import bill of nearly B/.6 million for these products, compared to about B/.300,000 worth of beans - and no rice and corn - imported in the late 1950's. The Government's limited efforts in price supports, marketing, preferential credit, and technical assistance had been mostly directed to these three crops, but the long-term trends in acreage, production and yields of corn and beans were negative. This poor performance is thought to have been the result of the combination of the following factors: (1) increasing soil exhaustion in the traditional farming areas and abandonment of marginal land; (2) low and partly ineffective support prices that discouraged entrepreneurial production on the better land, and (c) lack of appropriate technology for increasing yields of corn and beans. Indeed a 1970/71 farm management survey indicated that under prevailing cost/price relationships, production of corn and

beans was not profitable at any level of existing technology and production unit.

Trends in Area, Production and Yields of Rice
Corn and Beans, 1950-72

	<u>1950-52 Average</u>			<u>1970-72 Average</u>			<u>Average Annual Rate of Change</u>		
	<u>Area</u> (000 ha)	<u>Produc- tion</u> (000cwt)	<u>Yield</u> (cwt)	<u>Area</u> (100 ha)	<u>Produc- tion</u> (000cwt)	<u>Yield</u> (cwt)	<u>Area</u>	<u>Produc- tion</u>	<u>Yield</u> (percent)
Rice	66.8	1,908	28.6	98.0	2,885	29.4	2.0	2.1	0.1
Corn	77.1	1,471	20.7	64.6	1,138	17.6	-0.5	-1.3	-0.8
Beans	13.6	150	11.1	12.0	71	6.0	-0.6	-3.7	-1.5

Rice production increased at an annual rate of a little over 2 percent, but entirely as a result of an expansion of rice area; there was no appreciable increase in average yields. The most dramatic decline in grains area and production took place since 1966 when even rice output went down.

Changes in Three Basic Staples and in Other Agricultural
Output, From 1965-67 to 1970-72

(P E R C E N T)

	Area	Production	Yield
Rice	-5.7	-2.3	3.6
Corn	-9.9	-9.7	0.2
Beans	-10.3	-14.3	-3.8
<u>Gross Value of Production at Constant Prices</u>			
Crops for domestic consumption		3.0	
Export crops		7.4	
All crops		4.3	
Cattle		4.0	
Other livestock		2.8	
All livestock		3.3	
Total Agriculture		4.1	

The secular decline in area and output of these three crops which began in the mid-1960's was aggravated by the serious drought that affected most of the country in 1972; output of rice, corn and beans dropped 9 percent, 17 percent and 6 percent respectively in the 1972/73 crop year. The 1972 drought, however, does not seem to have affected overall output of most other crops, although it did have a slight measurable effect on output of cattle, which declined 1 percent, as against an average annual growth of 5.3 percent during the 1960/62 - 1970/72 period.

B. Farm Production 1973-75

Largely owing to a combination of government policies initiated since 1970 (see below), there has been a sharp increase in output of certain crops in the past three years from the "national" portion of the sector, compared to the previous trend. At the same time, production of bananas for export declined substantially as a result of the dispute between the governments of the exporting countries and the banana companies over export taxation. Thus, overall performance of

the sector was poor, with an increase of real agricultural GDP of only 3.4% from 1972 to 1973, followed by 1.5% decline in 1974. Overall growth of the sector in 1975 according to preliminary data, was 6.2%; the value of crop production in agricultural GDP rose 8.1% in real terms.

ESTIMATED PRODUCTION OF SELECTED CROPS 1971/72 - 1975/76
(Metric Tons)

	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76^{a/}</u>	<u>% Change 1971/72- 1975/76</u>
Rice	136,150	125,200	162,100	178,300	198,400	+ 45
Corn	54,100	44,300	54,800	59,400	67,100	+ 24
Beans	3,300	3,100	3,500	4,100	4,400	+ 33
Tomatoes	24,100	21,200	15,500	26,400	NA	+ 10 <u>b/</u>
Potatoes	12,000	12,900	16,400	16,400	"	+ 37 <u>b/</u>
Onions	NA	2,850	5,100	4,100	"	+ 43 <u>c/</u>
Sugar Cane	1,188,000	1,357,900	1,437,600	1,728,000	"	+ 47 <u>b/</u>
Bananas for export ^{d/}	22,916	23,603	23,107	18,476	"	- 20 <u>b/</u>

a/ Preliminary Mission estimates. Grains estimates based on Oct. 1975 first crop survey which preceded unusually heavy rains at harvest time.

b/ 1971/72 - 1974/75

c/ 1972/73 - 1974/75

d/ 1,000 stems

The continued heavy weight of export bananas in the agricultural GDP makes the latter appear rather static in the last two crop years despite the substantial advance registered by other crops.

Virtually all this gain in output originated, as in the past, at the extensive margin, i.e., by bringing new land into crop production. Average yields of rice are rising, of course, because virtually all incremental production is from mechanized lowland farms using modern technology.

In rice, Panama thus seems to be moving to a slight surplus position. On the other hand, output of corn and beans continues to lag substantially behind domestic requirements. At current yield levels (and prices - see below), these crops are not competitive with rice, and dry-season planting after rice is still very limited. The expected sharp expansion of sorghum as a dry-season follow-up crop has not yet materialized; only about 5,000 hectares are estimated to have been planted in 1975.

Output of tomatoes, potatoes and onions is approaching, or even exceeding, demand ceilings at present prices. In the case of onions, the main demand constraint is lack of storage space for seasonal carryover. The 1974/75 potato harvest was reduced from earlier forecasts by unfavorable weather in the production area.

The steep rise in output of sugarcane reflects the production for the new Government-owned mill in Veraguas Province (see below) beginning in 1973.

Estimates of output of livestock products are considered comparatively unreliable, at least as regards year-to-year fluctuations. Nevertheless, it appears evident that this sector has been static or declining. Aside from the 1972/73 drought which seriously cut into the number of breeding cows on range, domestic price controls, export quotas, foreign and domestic demand constraints, and continued reported monopolization of the beef export trade and structure-related management problems have prevented cattle numbers and slaughter from evolving at a rate commensurate with Panama's long term potential in this sector. Cattle numbers increased only an

estimated 1.6 percent in 1974, continuing the declining trend in the herd growth rate that began in 1972.

Owing to milk price controls, a liberal import policy and the low productivity of Panama's dairy herds, milk output is estimated to have dropped 16 percent from its 1971 peak to 1974. Broiler and egg output seems to have leveled off, possibly reflecting the relatively high retail price as compared to beef, on the one hand, and the cost/price squeeze resulting from sharply increased world feed prices, on the other.

C. Foreign Trade in Agricultural Products 1/

In the late 1950's bananas made up over 80 percent of total exports of farm products which amounted to less than B/.15 million. By 1965, export volume of bananas had increased 75 percent over the level of the late 50's and their value had nearly tripled. At that time, bananas represented over 90 percent of the total value of agricultural exports. Banana exports peaked in the years 1970-72 at a level of over 22 million bunches, and a value of about \$62 million. Even though exports of other agricultural products, principally sugar, meat and coffee, had begun to rise, bananas still represented 85 percent of the total value of 1972 agricultural exports. As exports of bananas declined slightly in 1973 and 74, (but picked up again in 1975) exports of sugar began to become more important in the foreign trade picture. The quantity of sugar exported in 1974, at 58.3 thousand metric tons, was 82 percent above 1970. Sugar exports for the first nine months of 1975 were double those of the same period in 1974. In terms of value, sugar exports in 1974 of B/.27.5 million were equivalent to 56 percent of the value of banana exports in that year.

Exports of meat began only in 1966 and remained at a level of less than 2000 tons through 1969. However, the upward trend did not continue. Indeed, exports have fluctuated rather erratically and even in the peak year of 1972 only

1/ This discussion excludes exports of fisheries products.

about 2,400 tons of beef were exported. This volume dropped back to 1,000 tons and 1,200 tons respectively in 1973 and 1974. In addition, about 1,000 head of live cattle were exported in the latter year. The total value of beef and cattle exports in 1974 reached only 2.4 million dollars. Indeed, since 1970 the value of exports of coffee has been virtually equal to or even larger than that of beef, even though coffee is produced in only very limited areas of the country.

The trend in imports of products of agricultural origin has been sharply upward. The single most important item has been and continues to be wheat, accounting for over 12 percent of total agricultural import value in 1973. In the present state of the art, wheat is not a substitutable product in Panama. The outstanding items in the category of products which, at least ecologically speaking, could be produced in the country are feedgrains and feed concentrates, fats and oils, and milk products. Lumber imports are also substantial, amounting to \$3.3 million in 1973, and these too are of course theoretically substitutable in Panama.

Imports of agricultural, fisheries, and forest products have grown apace with the overall increase in import value (140 percent from 1965 to 1973). But they continue to represent only a little more than 10% of the country's total import value. This makes any discussion of import substitution of agricultural products of relatively minor importance with respect to Panama's balance of payments.

Efforts at import substitution can be justified by comparative advantage and/or by rural development and employment objectives or strategic considerations. It is estimated that about 65% of the current value of imports of agricultural raw materials and processed commodities could be substituted by domestic production. Such substitution would signify an increase of 13% in the agricultural GDP.

Recent efforts at import substitution are discussed in the following section.

VIII. POLICIES, PROGRAMS AND INSTITUTIONS FOR RURAL DEVELOPMENT SINCE 1970

A. Background

There was only limited Government emphasis on agricultural or agrarian policy until the 1950's, when concern with promoting farm production and employment led to the creation of the Instituto de Fomento Económico (IFE). Until its abolition in 1973, IFE's principal tasks were in the fields of farm credit, marketing and price support. IFE set domestic prices on livestock and the three basic staples, as well as controlling imports of the latter (rice, corn and beans). However, IFE had insufficient funds for construction of storage facilities and for purchasing the commodities covered by the nominal support prices. In the 1960's and early 1970's, IFE's loans helped a number of small and medium sized farmers and ranchers to improve their incomes materially, and, at least initially, had a certain impact on output of basic commodities as well as of milk, fruit and vegetables. But the program never reached more than about 3,500 farmers in its peak years of operation, and these belonged to the middle stratum of commercially viable entrepreneurs.

Agricultural policy and technical services were the responsibility of the Department of Agriculture of the Ministry of Agriculture, Commerce and Industry until 1968. This department had a budget of B/1.2 million in 1965, only 2 percent of Government expenditures, and its activities were limited essentially to operation of a moderate-sized but active extension service. Even after the Ministry of Agriculture became independent in 1968, IFE's programs and personnel continued to be stronger. The agricultural extension service of the Ministry was limited in effectiveness. Since its work was not coordinated at the field level with the credit programs of IFE, the latter employed its own technicians for loan processing, supervision, and technical assistance.

Concern over the emerging agrarian problem caused the National Assembly to pass a detailed and far-reaching Agrarian Code in 1962, and an independent Agrarian Reform Commission (CRA) was created to implement this legislation. Although the law enabled the Government to undertake an extensive agrarian reform, the visible activities of the Commission through 1968 consisted mostly of the issuance of a few thousand land titles and the acquisition of one 4,000 hectare property.

The October 1968 revolution created a break with previous policies towards agriculture and the rural population. Initially, the new strategy was primarily directed towards raising the living levels of the poorest campesinos, and integrating them into the political life of the nation. Subsequently, this concern began to be accompanied by heavy emphasis on greater output and, most recently, on rationalization of technology. The policies, programs and institutional changes initiated by the new Government since 1968 and the changes they are bringing - or promising to bring - are designed to change the face of rural Panama. This is reflected in virtually all public programs, such as education, health, roads, community development, etc., as well as in the fact that the combined public sector investment programs for 1976 are split almost evenly between the metropolitan area and the rest of the country.

B. PHASE 1: The Beginning of Rural Development: Agrarian Reform 1970-72 and the Institutional Changes of 1973.

A good deal of the new strategy was based on implementation for the first time of important parts of the Agrarian Code of 1962. The principal measures for implementing this strategy have been:

- (i) Organizing the campesinos for joint action.
- (ii) Settling groups of poor squatters stably on land acquired by the Government from private estates through various arrangements (see below).
- (iii) Channeling public resources and services preferentially to campesino groups organized for collective farming.
- (iv) Establishing publicly-owned agro-industrial complexes to be turned over gradually to cooperative campesino and worker management.
- (v) Giving priority to rural economic and social infrastructure of direct benefit to the rural poor, especially access roads, health facilities (including water supply) and education.

1. Campesino Organization

Resource-poor local groups of campesinos were encouraged to join together for (a) the pooling of their land resources, if

they had any, into an Agrarian Production Association (Jurta Agraria de Producción), or (b) registering a claim to unused or underused land in their neighborhood, or to land which some or all of the group were occupying without title, with a view to establishing a settlement (Asentamiento) on such land. In both cases, the assurance of essential public services, available only on a group basis, was an important incentive. Such joint initiatives were frequently promoted directly by field officers of the Agrarian Reform Commission, which was responsible for the program prior to 1973.

The existing, relatively ineffectual, extension service was dissolved and field agents were assigned as "production coordinators" to one or more "organized groups". "Social coordinators" were also appointed.

As the number of asentamientos rose, provincial federations were created with officers elected by the representatives of the constituent local units. Simultaneously, the Government supported the creation of a National Confederation of Campesino Asentamientos (CONAC) whose constituent units, in turn, are the provincial federations. CONAC acts both as a central channel of communication - including joint planning - with central Government authorities and as a political pressure group. It has 15 of the 505 representatives in the Legislative Assembly.

2. Land Acquisition

The process of land acquisition typically began with a formal or informal land claim by an organized group of campesinos. When a specific piece of land was claimed, the claim was sometimes preceded by "invasion" of the private property concerned (to which the owner may or may not have legal title). Many of the groups - or parts of them - were in fact farming the claimed land for some years and wished to establish security of tenure in addition to receiving public supporting services.

Where titled property is concerned, negotiations may be initiated with a view to purchase by the Government. Should this fail, expropriation is resorted to, under legal authority and processes based on a combination of various provisions of the Agrarian Code and of Article 46 of the Constitution of 1972. The combination is designed to maximize the Government's legal advantages vis-a-vis the owner with regard to speed and compensation. In case of purchase, three appraisers (one each for the Ministry, the owner, and the Con-

troller General) determine the price to be paid on the basis of Article 49 of the Code. The level of compensation, in case of expropriation, is governed by Article 45, which provides that the price will be the average value declared for tax purposes since 1957.^{1/} Fixed improvements are appraised separately.

Private land can also be taken over through tax auctions, with the Government allowed to bid. In all cases of purchase or expropriation, outstanding land taxes are deducted from the compensation. Most net compensation due for purchased or expropriated land to date has been paid in the form of bonds. Their issuance is authorized by ad hoc decrees in small lots as required. Only the banana company received more tangible payment: a deduction from its income taxes amounting to the land value.

Since 1969, a total of 431,000 hectares of land have been acquired representing only 363 individual properties.^{2/} Of the 350,000 hectares acquired through 1972, less than one-third was of class IV or better. The procedures used to obtain the land were as follows:

Tax Auction	-	59 percent
Expropriation	-	21 percent
Donation	-	5 percent
Purchase	-	14 percent
Withdrawal of Title	-	1 percent

The total net price paid for the auctioned, expropriated, or purchased land (i.e. after adjustment for taxes due) through 1975 is approximately B/3.5 million, for an overall average of only B/8 per

^{1/} Pending reform of the land tax system at some future date on the basis of the cadaster concluded in 1971, all land is valued for tax purposes at B/30 per hectare. (See VB above).

^{2/} This includes 154,000 hectares of abandoned former coconut plantations in Veraguas belonging to the Boston Panama Corporation, on which 2,000 squatter families were living and which were acquired through tax auction, as well as 4,000 and 3,000 hectares sold and donated, respectively, to the Government by the banana company in Chiriqui Province.

hectare acquired. The proportion of land affected by the government land acquisitions since 1968 is equivalent to 21 percent of the land in farms in 1970. Significantly, the smallest proportion of "reformed" farm land - aside from the Azuero peninsula - is in the richest and most conservative area: Chiriqui. Even if the 7,000 hectares from the banana company are added it amounts to only three percent of the land in farms in that province.

It is sometimes asserted that there are no large properties in the Azuero peninsula. Little land acquisition has taken place in the Azuero provinces of Herrera (4,400 has.) and Los Santos (145 has.). Yet, the 1970 census shows three farms with a total of nearly 14,000 hectares in Herrera and three with 8,500 hectares in Los Santos. Most of the tax delinquent land acquired in Darien was unexploited jungle, as was some of the land acquired in eastern Panama province. Eighty-four percent of the land acquired by the government is located in the provinces of Veraguas and Panama.

3. The New Settlements

There were, in mid-1975, 201 asentamientos comprising 5,688 campesino families. There were also 68 Juntas with 1,462 families. The total is equivalent to about 15 percent of the rural poor. The process slowed down considerably after 1972. Total land acquisitions between March 1973 and August 1975 amounted to less than 88,000 hectares, of which 80 percent was effected in Eastern Panama province, mostly for the reservoir of the Bayano dam and the watershed conservation and State farming project surrounding it. Only 15 new asentamientos and 19 juntas agrarias were created between October 1974 and August 1975, with a total of 1,090 families.

Where the campesinos had not established individual plots as squatters prior to the establishment of the asentamiento, virtually all the cleared cropland is worked collectively. Elsewhere, the members pool a portion of their parcels for mechanized collective farming or for grazing land, retaining family plots of varying size, in accordance with the land capability and the existence of perennial crops such as plantains, bananas, or fruit trees. Chiriqui province, which has the largest number of asentamientos as well as the most advanced type of membership (many are former organized banana workers), also shows the most active response to government efforts. The provincial federation of asentamientos (FEDACHI) has built its own rice mill and bought rice harvesting combines and trucks with government-backed credit from private banks. The Federation has also set up a

central tractor repair shop.

What kind of tenure arrangement will ultimately emerge is not yet clear. For the moment, the Government owns the land and the members of asentamientos have only informal and collective, temporary occupancy rights. The regulations provide for a five-year trial period during which unsuitable members can be expelled by majority decision, and following which definitive title is to be issued and the groups are to be converted into cooperative production societies. The question of repayment of the price of the land and improvements paid by the Government (whether, how much and at what terms) has also not yet been defined.^{1/}

Internal organization of the asentamientos is in the hands of an annually elected directorate composed of a president, vice-president, secretary and treasurer. Work turns are assigned in rotation and the net profits from sales (after repayment of loans) are distributed proportionally in accordance with the number of days of labor contributed by each member family. Most members spend only part of their time on the collective work, and the rest on their private plots or as day laborers for other farmers. The members' interest in collective work seems to be largely determined by the level of daily "take-home income" provided through official credit. There is, therefore, on the part of asentamiento members a preference for mechanization (which increases the rate of daily income) against spreading the collective work over more days per year (at lower daily income), even though the annual net income from the collective land might be greater in the second case.

In terms of new land cleared for crop production and output, the results of the asentamientos and juntas agrarias have been impressive, especially in view of the relative overall stagnation that had been in evidence in agricultural production. In 1974/75, these group farming projects harvested nearly 13,000 hectares of rice, with a total output of almost 25,000 M.T., equivalent to 20% of marketable domestic rice production. They also produced minor quantities of corn and beans for the market, in addition to food crops for on-farm

^{1/} The Agrarian Code provides that land may be sold or granted to reform beneficiaries, at the option of the Executive. In the former case, the Code provides that the price may not be less than B6 per hectare, that payment may be made over 20 years, and that no interest will accrue on such debt.

consumption on the family parcels. A few asentamientos in Veraguas and in the Azuero peninsula are mainly specialized in beef cattle. About 20 have small (5,000-bird, broiler enterprises, typically run by the women, which market 100,000 chickens every three months, about 7% of total current marketings.

There appears to be a great variation in the performance of individual asentamientos depending on their managerial abilities and land resources. The government effort has been mostly concentrated on the provision of credit for specific crops with little analysis of each asentamiento's best output potential. The collective members' preference for higher wages for short periods over less capital-intensive output processes derives to some extent from alternative employment possibilities and the present planning system. The abundant and subsidized credit and, in some cases, even free machinery services that had been provided by the Government to the asentamientos, however, may explain a part of this preference. 1972/73 was the first crop year with ample public credit for the asentamientos and juntas (see below). About 61 percent of the credit for asentamientos under the 1972/73 production plan for crop production was for annual inputs; this, in turn, was equivalent to 85 percent of the reported gross value of production. One year's amortization of the B/845,000 for machinery and land clearing (assuming a four-year average at 8 percent interest) added to the crop loans, indicates that the total debt burden may have been equivalent to 100 percent of the gross value of asentamiento crop production. Yet, by the end of March, 1973, 75 percent of the value of loans falling due had been repaid, and virtually all of the 126 overdue loans had been delinquent for less than three months.

4. The New Public Institutions

In December, 1972 a complete reorganization of the public institutions for the agricultural sector was announced. This was formalized by Laws Nos. 12 and 13 of January 25, 1973 which, respectively, created the Ministry of Agricultural Development (Ministerio de Desarrollo Agropecuario - MIDA) and the Agricultural Development Bank (Banco de Desarrollo Agropecuario - BDA). These laws in effect abolished both the old IFE and the Agrarian Reform Commission (CRA). IFE's marketing functions were absorbed in the Ministry's new National Marketing Bureau and the CRA's former functions were redistributed among the Ministry's new National Directorates for Agrarian Reform (land acquisition, surveying and allotment), Production (all technical services except engineering and natural resources), and Social Development.

The credit functions of IFE were transferred to the BDA, as was complete responsibility for the USAID-financed small farmer loan program formerly handled by the Ministry. The Minister of Agriculture is both the Bank's legal representative and Chairman of its Executive Committee which, in addition, includes the Minister of Commerce and Industry and the Manager of the National Bank of Panama (BNP), as well as a representative each of "independent" and "organized" producers. BDA was left only with functions dealing specifically with the approval, disbursement and collection of credit. Production and credit planning, technical assistance and supervision became the responsibility of the field officers of MIDA's National Directorate of Production. The Ministry's regional offices and those of the IFE were reorganized into eight Regional Bureaus, respectively of MIDA and of the BDA, with close liaison between the two in each region.

Implementation of the new structure began only in March, 1973. In April and May the agencies and their personnel were being reorganized, both in the capital and in the field. Though responsibilities were often unclear, the system was already functioning with surprising efficiency by mid-1973. Each asentamiento, or group of neighboring asentamientos, had coordinators assigned for production and social assistance, most of whom spent almost the entire working week in the field. Production plans for 1973/74 had been prepared and submitted to the BDA. Investments were proceeding, such as land clearing, construction of wells, water tanks, chicken houses, pigpens, purchases of livestock and chicks.

With the heavy emphasis on support for the group farming projects, extension-type technical assistance previously provided to individual small and middle-size farmers (including the subsistence farmers who had been the target group of AID's Loan 034) dwindled. However, it had not been making a high impact in previous years.

Another important aspect of the 1973 reorganization was the substantial strengthening of MIDA's marketing department (see C-6 below). Following the promotion of its former director to Vice Minister, a field-grade officer of the Guardia Nacional was put in charge - the first time a military officer had been appointed to a top-level job in the civilian bureaucracy. Increased emphasis was placed not only on the public sector's role in buying, storing and selling farm products, but also on its entry into the field of agro-industries,

largely in support of the reform-related group farming schemes. A number of processing plants for both farm outputs and inputs began to be constructed or planned (see below). As in the case of publicly owned sugar complexes such as La Victoria, these plants were to be initially run by MIDA's Directorate of agro-industries, but were to be ultimately turned over to second degree cooperatives of small farmers and/or asentamientos^{1/}.

C. PHASE 2: The Drive Towards Agricultural Self-sufficiency

Beginning in 1973 there was far less rhetoric in relation to agrarian reform and, as the figures reported earlier indicate, the takeover and redistribution of privately-owned land slowed down markedly. Nevertheless, the "consolidation" phase of agrarian reform settlement units continued, as did the emphasis on assisting small farmers, particularly those in organized groups, in virtually all aspects of public agricultural policies and programs. And support for conventional agricultural cooperatives composed of small farmers, for production, marketing and inputs, began to increase. (For full analysis of the agricultural and general cooperative movement, see Capital Assistance Paper "Panama-Cooperative Development Loan", AID-DLC/P-2042, June 6, 1974).

But a new concern with pushing domestic farm production from existing resources to the utmost began to be evident, both in public pronouncements and in actual policies and program implementation. Perhaps in part because this originated during the period of skyrocketing world prices of key agricultural commodities, there has been little or no concern with the costs of the incremental production, in terms either of amortizing the capital investments or of comparisons with international prices. For a nation that thrives, and expects to continue to thrive, on an open economy, this appears rather surprising.

1. Local Participation

On the other hand, rural development, including its agricultural component, continued to be heavily related to building up local participation at all levels. This includes for example the creation of a new type of production unit known as the junta comunal de pro-

^{1/} This policy was implemented for the first time in late 1975, when management of the newly inaugurated feed mixing mill near Chitré was contracted for two years with COAGRO, the federation of agricultural cooperatives, with an option to buy.

ducción.^{1/} Rather than collective units composed of individual small farmers, these are actually commercially oriented production projects undertaken by a municipality or village council on communal, public or rented land. The net proceeds from the sales of the produce are earmarked for community development investments. Over 100 such juntas existed at the end of 1975. Provincial technical coordinating committees were created to plan and coordinate all public investments and programs at the provincial level and these were supplemented in late 1975 by the creation of provincial agricultural committees designed to serve as permanent participatory and liaison units with the regional offices and field personnel of the MIDA.

2. Public Enterprises

Several virtually autonomous regional development corporations were established between 1970 and 1975. These are discussed in Section IX below. The public sector expanded its directly productive activities further during the past two years in several important ways:

- (i) MIDA took over a 5,000 hectare orange plantation and concentrate plant (Chiriqui Citrus Company) that was being abandoned as unprofitable by the American investor who had created the complex in the 1960's.
- (ii) A series of agreements were concluded with United Brands and issued as Law No. 5 of January 7, 1976 for the sale of all its land to the Government at a nominal price. Such lands as are required for banana or other production are leased back

^{1/} At the same time, the Ministry of Education created "Basic Cycle Production Schools" in the rural areas. Each has a plot of land of varying size for a school farm for the twin purpose of teaching practical farm technology and contributing to the national production effort. At the end of 1975, 67 such school-farms were reportedly in operation and 58 more are slated to be created through 1978 with the support of AID and IDB loans. They are beginning to participate in the BDA's group credit program and are also supposed to receive technical guidance from MIDA field officials. (See Education Loan II CAP, Doc. No. AID-DLC/P 2096 of 7/31/75).

to the corporation under automatically renewable five-year leases. The corporation guarantees minimum exports of 22 million boxes per year. It also undertakes to buy up to 30% of its exports from independent producers or to authorize these producers to sell to the Government for export on Government account. The corporation's non-land fixed assets (including standing banana plantations) remain in its possession for the duration of the contracts.

(iii) Four new sugar complexes were under construction or on the drawing boards, of which two are to be publicly owned and managed by La Victoria Corporation, while the other two are to be mixed public-private enterprises.

(iv) New agroindustries plants were being planned or designed. The feed mill and poultry processing plants near Chitré were completed and in operation, at a total investment of over one-half million dollars. Under construction were two cassava processing plants for over \$300,000, due to begin operating in 1975; an agricultural lime plant (\$210,000), also due to begin operating in 1975; improvement of one pilot fruit and vegetable processing plant and establishment of a new one, both in Veraguas Province (estimated investment in the latter \$1.3 million, due to initiate operations in 1976). Projects under consideration for 1976 and 1977 included plants for plywood, for banana and vegetable dehydration, jelly and jam processing, but there were no budget funds authorized for investment in 1976, indicating perhaps a decision to slow down the pace of creation of publicly owned and financed enterprises.

The Bayano project had a budget of B/9 million in 1975. Investments of B/1.6 million were projected for 1976 and an additional million in 1977. Between 1978 and 1980 annual investment in this project was projected to amount to over B/12 million. It is slated to be essentially a capital-intensive state-farm development producing mostly rice, cattle and timber. The need to protect the huge watershed of the hydroelectric reservoir has led to the expropriation of virtually all privately held land and to the exclusion of private settlers.

3. MIDA reorganizes again and moves up-country; a military Minister takes over.

Meanwhile a substantial reorganization has been taking place in both the planning and program implementation spheres of MIDA. Liaison and coordination among the various units of the Ministry and

its field offices and with various other so-called decentralized agencies operating in the sector had been more or less ad hoc. In 1975 three important coordinating bodies were created: (1) the Permanent Coordination Council (COPECO), composed of six top officers of the Ministry appointed by the Minister; (2) the General Council of Directors (COGDI) which meets four times a year and includes all departmental and regional directors, regional planners, directors of independent corporations, State enterprises and national projects and integrated development projects; (3) the General Council of the Agricultural Sector (COGSA), with the participation of all top public executives in the sector as well as representatives of individual and associated agricultural producers.

A most significant development in 1975 was the political decision -- personally inspired by Gen. Torrijos -- to transfer MIDA to the mid-country provincial capital of Santiago de Veraguas. The move was ostensibly designed to serve two purposes: (i) to bring public agricultural administration geographically and functionally closer to the main farming areas, and (ii) to promote the development of Santiago as a "growth center", in accordance with broad development directives, as in the case of the transfer of the Public Works Ministry to David. In the short run, the move was bound to interfere with the smooth functioning of the only recently reorganized Ministry. Many officials and clerical personnel initially indicated their unwillingness to make the move; even though there were few actual resignations among professional personnel, many left their families behind in Panama City and commute every weekend. There is no commercial air service to Santiago and the overland car trip takes about four hours. Telephone lines are scarce. And some key related agencies, notably the BDA and the Marketing Directorate (now Institute -- see below) were left in Panama City, at least for the time being. Liaison between MIDA and these agencies as well as with other Government ministries and agencies and board meetings thus force the Minister, Vice Minister and other officials at all levels to spend an inordinate amount of time traveling back and forth in three small aircraft and by land. But all these difficulties are being taken in stride and it is expected that longer-term benefits from the move will begin to be felt soon.

Following the appointment of the former Minister of Agriculture Gerardo Gonzalez (1972 to 1975) to Vice President of the

Republic, Lt. Col. Ruben Dario Paredes of the Guardia Nacional was appointed Minister in September 1975. This is the first time in Panamanian history that a military officer was appointed to the Cabinet. Lt. Col. Paredes had been in charge of the Bayano development project, which is of high priority to the Government and in which he developed a great deal of experience and interest in agricultural development and problems.

The new Minister almost at once proceeded with a substantial administrative reorganization of the Ministry, with a tightening of administrative procedures and with the imposition of greater personnel discipline. Indeed, in October several Ministry officials were publicly dismissed for negligence in connection with the deaths of a number of imported breeding cattle. In addition to transferring Guardia Nacional Major Mina, who had been National Director of Marketing (see below) to be Director General of Administration of MIDA, the Minister also appointed a military officer to head the Ministry's machine service.

The reorganization concerned principally a slight reshuffling of field regions, and the creation of the posts of (a) Secretary General (filled with a lawyer), (b) overall Coordinator of Production including both crops and livestock, and (c) a Regional Coordinator, to whom the regional directors are directly responsible. The Minister also shifted personnel around substantially, including replacement of every Director General. Significantly, the Directorate General of Planning has been further strengthened. The new structure of MIDA is reflected in Chart 1.

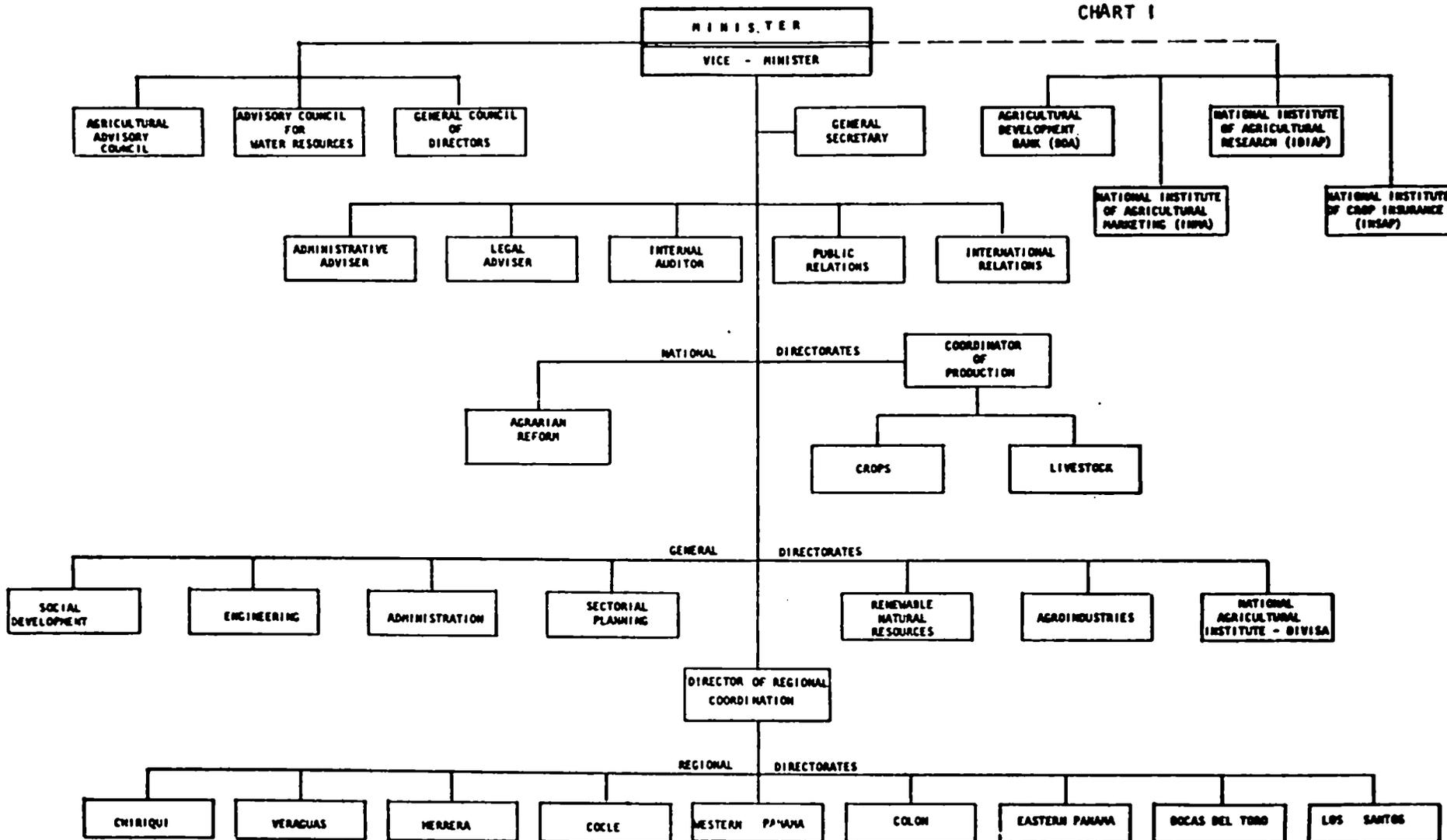
The new Minister also accelerated the move of the few remaining MIDA units and personnel to Santiago, a process which had been virtually completed under his predecessor. Only a small liaison office for the Minister and Vice Minister and for international organizations remains in Panama City as of February, 1976.

4. Public Sector Funding

Allocation of public funds to agricultural development has increased substantially over the levels of previous years. Nevertheless, even though the Ministry of Agriculture has gained a great deal in terms of prestige, capability and

MINISTRY OF AGRICULTURAL DEVELOPMENT

CHART I



50a

scope, its operating budget in 1975, of B/.11 million, was equivalent to only 3 percent of the total Central Government operating budget. And this represented an increase of only 10 percent over the previous year, barely enough to absorb increased costs, compared to an overall Central Government operating budget increase of 22 percent. Investment activities of MIDA received an additional B/.13 million in 1975.

The overall agricultural investment budget, including also agencies and corporations other than MIDA, ^{1/} was B/.66.5 million in 1975, also an increase of 19 percent over the previous year, as against an overall public sector rise of 22%. The agricultural sector was allocated 16 percent of the total public sector investment budget in 1975, down from 19 percent the previous year.

A summary, preliminary analysis of the Government's budget for 1976, published on January 29, shows a further, austerity-level increase of about 10% in both operations and investments over the previous year. The breakdown of central government budget funding for the agricultural sector for 1976 looks approximately as follows:

^{1/} These data are taken from the 1974-75 annual report of MIDA and do not reflect all public sector agricultural investments, such as those of the sugar complexes (which are under the Ministry of Commerce and Industry) and the regional development corporations except the Bayano Project.

	<u>Current</u> <u>Expenditures</u>	<u>Investment</u> <u>Expenditures</u>
	(1,000 Balboas)	
MIDA	10,199	8,355
Banco de Desarrollo Agropecuario (BDA)	1,250	31,613
Banco Nacional de Panama (BNP)	a/	17,500
Instituto de Mercadeo Agropecuario (IMPA)	1,000	14,965
Instituto de Investigaciones Agropecuarias (IDIAP)	625	195
Universidad de Panama	a/	305
Corp. Citricos de Chiriquí	-	155
Instituto de Seguro Agropecuario	n.a.	150
TOTAL	13,074	73,238

a/ No breakdown for agricultural activities available

Additional investments of B/.82,435,000 were authorized for the public La Victoria Sugar Corporation. The total of over B/.155 million is equivalent to one-third of the overall investment budget.

5. Farm Credit

The bulk of the public sector's new resources for agriculture (65 percent) went to the two official banks for agricultural credit (the BDA and the BNP). Indeed, the annual infusion of new resources into the official agricultural banking system over the past few years (virtually all from official external loans and short-term borrowing from private banks) has permitted the official system to more than triple its lending to the agricultural sector since 1968. In the same period the private banking system also multiplied its lending to agriculture 2 1/2 times. Official lending continues to represent about 30 percent of total credit to the agricultural sector, which amounted to over B/.97 million in 1974, equivalent to 9% of the 1974 agriculture GDP at current prices.

Both the private banks and the public National Bank of Panama (BNP) directly lend almost entirely to large commercial producers of both cattle and crops, including the

sugar companies. Indeed until recent years availability of credit resources was limited to a relatively small number of commercial farms and ranches. The 1971 census shows that only 7,500 ^{1/} farms received institutional credit in the 1970/71 crop year. That year, the SDA's predecessor agency - IFE - lent B/.6.5 million to 3,700 small and medium farmers (an average of B/.1,750 per loan), largely from IDB loans. Thus, the bulk of 1970 farm credit, B/.28 million ^{2/} from the BNP and private banks, presumably went to fewer than 4,000 producers, with an average size loan of more than B/.7,000.

The predominance of demand for cattle credit (including small amounts for dairy herds) is shown clearly in the breakdown of all lending by subsectors. Beef production represents only 10 percent of the value added in agriculture but obtained 65% of all agricultural loans in 1974, with very limited results for the economy. The private banks maintained roughly a one-to-one ratio between crops and livestock in their short-term loans to large producers, but over 80 percent of the BNP's farm lending is for cattle ranches, including a 1973 IBRD loan that has been fully disbursed.

A new element is the credit extended to agrarian reform collectives (see B-3 above), which began to be dispensed on a relatively large scale in 1972 through the "Sectorial Production Plan" (PSP). The financing of this program has so far relied on an ad-hoc assembling of resources from the Government budget, private banks (both as direct loans for machinery purchases and discounts to official banks and suppliers of machinery and inputs). The total loans made in the program's first year, 1972, of B/.3.5 million, were equivalent to more than one-half of Panama's entire agricultural lending activity only 12

- ^{1/} This is equivalent to only about three-fourths of the number of farms with annual sales of B/.500 or more; assuming only such farms were among the borrowers, the remaining 17,000 farms with sales of B/.100 or more - and the 30,000 with less than B/.100 of sales - had no access to institutional credit except a few hundred marginal farmers who shared in the Ministry's AID-financed program. According to the census less than 3,000 farmers had credit from other than banking sources.
- ^{2/} Excluding the B/.8 million for sugar; this was almost 80 percent of 1972 bank credit for agriculture.

years earlier. This program was instrumental in holding the drop in rice production due to the 1972/73 drought to only nine percent below the previous year's output.

According to its latest annual report, the BDA made nearly 6,000 loans to individual producers totaling over B/14 million in the 12 months that ended June 30, 1975. Of this, two-thirds went to crop production, and all of the balance (except 3% for other animal projects) were for cattle.

Group credit for joint or community production schemes and cooperatives are the responsibility of the BDA's Development Department. (Individual loans are under the Credit Department). Between July, 1974 and June, 1975, group credit exceeded the amount allotted to individual loans by B/.2 million, as follows:

<u>Type of Group</u>	<u>Number of Loans</u>	<u>Million Balboas</u>
Asentamientos and Juntas Agrarias	204	10.6
Juntas Comunales	74	1.5
Cooperatives	22	1.4
Basic Cycle Schools	4	0.1
Others	<u>21</u>	<u>2.6</u>
TOTAL	325	16.2

Of all loans made from January to August, 1975, two-thirds were for working capital, and the balance for investments.

The bank's total resources increased by more than 75% in 1974/75, to a total of B/.35.4 millions. Of this, nearly 10 million came from short-term borrowing from local branches of foreign banks. In part owing to a 38% increase in operating costs over the previous year (to B/.2.2 million), the bank showed an operating loss of B/.736,000. This is normally absorbed by a central government subsidy, which in 1974/75 amounted to B/.1.4 million.

Outstanding loans on June 30, 1975 amounted to B/.36.6 million.

New official external loans for agriculture ^{1/} negotiated during this period totaled B/.14.7 million: B/.8 million from IDB for individual credit and B/.6.7 million from AID for a revolving fund for cooperatives ^{2/}. The revolving fund, disbursements from which began in the second half of 1975 and which includes new national counterpart resources of B/.500,000, is materially strengthening the Bank's capability for supporting rural cooperative development.

There is no substantial problem with repayments by borrowers. Overall, tardy and delinquent loans represent only a small proportion of the Bank's portfolio. However, it is understood that refinancing of overdue or delinquent loans to production groups is relatively common, thus hiding the real problem that is said to exist in many of these loans.

An interest rate subsidy for all agricultural credit in Panama was introduced in 1974. The rate to the borrower is pegged at 2 percent points below the prime commercial rate; the banks are compensated by a 1/2 percent levy on personal loans. The effective rate during the first quarter of 1976 was 8%.

A law to introduce a crop insurance scheme was issued at the end of 1975, and an autonomous institution is being created to formulate policies and regulations and to administer the program.

6. Marketing and Prices

As indicated in the analysis provided in the recent Capital Assistance Paper for the Grains and Perishables Marketing Systems Loan (AID-DLC/P-2109 of June 18, 1975) the structure, functioning and physical facilities of the existing marketing system appeared as a major bottleneck when public policy began to promote sharply increased farm production. With most basic food staples both price-supported and imported by the Government, the public sector finds itself increasingly obliged to provide purchasing and sales services as well as storage facilities in order to make good on its announced support and

^{1/} Not including an IDB loan of B/.3.5 million for artisan fisheries.

^{2/} The total loan is for B/.8.1 million but B/.1.3 million is for technical assistance and training.

supply programs. It also became evident that, if a major breakthrough were to be made in supplying domestic needs of perishable products and entering into exports markets, the public sector had to take a certain amount of initiative in view of the primitive state of the perishables system in private hands and the obvious reluctance of private investors to undertake the necessary improvements and expansion.

Shortly after the appointment of the new Minister of Agriculture and about the same time as the AID Marketing Loan Agreement was signed with the Government in September, 1975, a policy decision was also made to create an autonomous marketing agency, in the realization that the complex task and the sizeable financial management problems involved could not be efficiently performed by a Ministerial bureau. The Vice Minister (who had previously been in charge of Marketing) was appointed to reorganize the service under a new institutional arrangement. The law creating a new marketing institute (Instituto de Mercadeo Agropecuario) was approved in December 1975 and a young economist, formerly in charge of the Office of Price Regulation, was named to head the Institute. Among other important changes, it is expected that the funding of the price support program will become more rational and reliable than it has been during the last three hectic years, when it relied mostly on short-term borrowing from private banks. The agency is also expected to be substantially more cost and efficiency conscious.

Until the new institute develops adequate capability for analysis and detailed presentation of alternatives and their possible effects, price decisions will probably continue to be made in a rather *ad hoc* fashion. The sharp increases in support prices announced in 1974 apparently helped call forth substantial additional output. However, the resulting prices to consumers (both direct and intermediate) flew in the face of certain demand constraints which more thorough previous study might have been able to predict. The doubling of the retail prices of beans apparently caused a sharp drop in consumption with the result that the Government was left with large stocks of beans and a substantial loss from spoilage.

In the case of rice, a sudden political decision resulted in a reduction of the retail rice price by about 15

percent. Since the previous price spread had been calculated in accordance with assumed storage, handling and processing costs, this decision implied a subsidy of close to 1¢ per pound. Aside from a certain confusion and complaints which this measure caused in the rice milling industry, the overall cost of this subsidy is not yet quite clear. Moreover, it appears that the 1975/76 crop will leave a substantial surplus for export (probably at least 10,000 tons and perhaps as much as 25,000 tons). But the national support price is still substantially above the current world price, and quality not up to international trade standards. Thus, exports will have to be subsidized even more than domestic consumption. According to a public statement by the Minister of Agriculture, some exports may be attempted under barter arrangements.

At the end of October 1975, domestic price supported corn cost 60 per cent more than imported corn (B/.8.50 per cwt as compared to B/.5.30). Yet, despite the high prices of poultry and pork stemming largely from the price of feed, the Government continues to sell all corn at the domestic price. In 1974, nearly 80 percent of all Government handled corn was imported. The domestic price for sorghum is B/.1.00 per cwt. lower than for corn. Even so, there is resistance to sorghum among domestic feed millers. A recent 25¢ per cwt. discount in the imported corn price to buyers who purchase one-half cwt. of sorghum for each cwt. of corn has apparently had little if any positive effect on demand for sorghum.

The pricing policy and mechanism for imported edible oil is not quite clear and this in itself is significant. The GOP marketing agency is the sole importer, through contracts awarded to the lowest bidder. The agency resells the crude degummed oil to one of the two local refineries; the latest sale is reported to have been made at twice the estimated landed price. Presumably, the resulting high tax on the consumer is not justified solely by the revenue accruing to the marketing agency. But there is at present - and for the foreseeable future - no domestic oil seed or oilfruit production to protect (see IX below).

Price policies as constraints are discussed in Section XI.

IX. SECTORIAL PLANNING

A major development during 1975 was the implementation of the long-gestating agricultural planning exercise with the UNDP-funded technical assistance from FAO and the contribution of five experts by AID. The project became operational in February 1975. Each technical assistance expert had at least one local counterpart. In September 1975 a draft report entitled "Perspectives for Agricultural Development in Panama" was submitted for review and comments. This report consists of a summary volume, the complete texts of the Sector Assessment and of a 10-year Perspective Plan, respectively; two volumes of statistics; one on provincial data, and one containing the project methodology. A complete set was forwarded to LA/DR/RU and the Chief, Rural Sector of the AID Mission to Panama provided written comments on the Summary volume to the then Acting FAO Project Director. The draft report is in itself an extremely useful document (see below) but it reflects the excessively short time that had been allotted for its completion. Two commodity reports for palm oil and milk respectively, were also issued in December, 1975, in addition to a volume of indicative norms for geographic specialization of farm production and two specific regional projects (milk in Chiriqui and African palm in Colon). A report on cassava production potential will also be issued shortly.

The GOP has applied to UNDP for a two-year extension of the project beginning in 1976 for the purposes of (a) preparing medium and short-term plans as further refinements of the perspective plan, and (b) helping to create a permanent capability for continuous agricultural planning in MIDA. UNDP has not found it possible to fund such a project in 1976, although prospects are good that it will be revived in 1977. The GOP, AID and the IDB are providing for a joint "bridging operation" during 1976 in order to avoid losing the impetus of the effort and the dispersion of the national team. The GOP submission to UNDP also contemplates the contribution of the equivalent of 50 man/months of consultants by AID during the two-year extension.

During 1975 the project had been headquartered in Panama City under a special MIDA project co-director and was only loosely coordinated with MIDA's Planning Directorate. With the temporary departure in December, 1975 of virtually all

international consultants, the national staff of about 30 professionals was transferred to Santiago and put directly under MIDA's Director of Sectorial Planning, who was also appointed as national project co-director. Moreover, the MIDA staff assigned to the Integrated Rural Development Projects (see below) is also being moved to Santiago, where they will be working under Sectorial Planning, thus assuring functional integration of the overall and regional planning work. The consultants being contracted by AID will serve as advisers to both activities.

A. Outline of the 10 year Perspective Plan

The GOP's obvious desire to reach maximum reasonable self-sufficiency in agricultural products is reflected not only in on-going programs but also in the ten year projections to 1985 contained in the draft Perspective Agricultural Plan. Briefly, the complex methodology which has gone into these projections and their implications in terms of changes in acreage, yields, technology, etc. is:

1. The demand projections are based (a) on a rate of population increase of 2.9 percent per year; (b) the "low" hypothesis as regards GDP growth and, hence, private consumption; (c) the best available income elasticity coefficients and income distribution data.
2. Supply projections from domestic consumption assume complete import substitution of all major commodities currently imported with the exception of wheat and edible fats and oils.
3. As regards exports, it was decided to project historical trends rather than make normative projections.

Assumptions for Demand Projections, 1973-85

<u>Average Annual Rates of Growth (%)</u>		<u>Export Levels</u>	<u>Composite Hypothesis</u>
Population	Per capita private <u>a/</u> consumption		
2.9	2.5	Historical	Low
2.9	3.9	Normative	High

a/ Aggregate PC growth rate assumed to equal GDP growth rate

4. A comparatively sophisticated methodology was employed to project acreage and yield goals related to the production targets. A very important consideration in these calculations was the underlying objective of taking as much degraded or degradable land out of agricultural production as possible. Only land deemed to be suitable for continued agricultural use (either for crops or pasture) under four different levels of technology, ranging from traditional to high, was assumed to be in farms, and acreage values were assigned to each technology level. Moreover, on the basis of the best available (but relatively underdeveloped) farm management-type information, average returns to land and labor for different levels of technology were estimated in order to test the economic validity of the technology-based projections. (1973 price levels were assumed for this exercise).

Moderate to substantial annual growth rates of both demand and domestic production are thus projected for virtually all currently produced major agricultural products with the exception of dry legumes and bananas. In some cases (sugar, tropical fruits and pork) the rate is 10 percent or more. (Table 1).

Overall, if the technological and economic assumptions are correct, if suitable policies and programs are adopted and implemented and if Panamanian producers respond to them, a substantial reduction in producing farm acreage can be achieved. Depending on whether the low or high demand hypothesis is applied, this reduction could amount to as much as one-third to one-fourth below the estimated area in farm production in 1973 (Table 2)^{1/}.

^{1/} These data differ from the census-based data for land in farms inasmuch as they do not include fallow land, woodland and wasteland.

TABLE I
 PROJECTED INCREASE IN TOTAL DEMAND FOR SELECTED FARM COMMODITIES
 1973-1985

Commodity	Demand			Average Annual Rate of Growth	
	1973	1985		Low	high
		Low	High		
		Hypothesis			
		(000 M.T.)			
Corn and Sorghum	80.6	104.8	113.7	2.2	2.9
Rice	142.0	226.5	273.5	4.0	5.6
Potatoes	14.3	23.4	24.6	4.2	4.6
Yucca, Ñame and Otoe	62.4	129.6	138.3	6.3	6.9
Sugar	88.8	197.5	318.5	6.9	11.2
Dried Beans and Peas	6.6	6.9	6.1	0.4	-0.7
Onions	8.3	18.0	20.5	6.4	7.8
Tomatoes	29.7	51.4	58.4	4.7	5.8
Bananas	963.7	1026.6	1507.5	0.5	3.8
Other Tropical Fruit	37.2	97.1	114.0	8.3	9.8
Beef	38.9	71.5	80.7	5.2	6.3
Pork	3.8	13.9	14.6	11.4	11.9
Poultry Meat	8.1	16.6	19.4	6.2	7.5
Eggs	12.8	26.6	32.0	6.3	7.9
Milk	86.2	147.4	157.1	4.6	5.1
Coffee	4.4	6.5	7.3	3.3	4.3

Source:

Adapted from FAO/GOP Agricultural Sector Planning Project,
 "Perspectivas para el Desarrollo Agropecuario en Panama", Resu-
 men (Vol. 2.3), pp. 107 & 108.

The combination of high growth rates for production and a sizeable reduction in acreage, of course, implies a substantial growth in average yields. Indeed, achievement of increase in average yields required for certain crops would be phenomenal when viewed against the experience of the past 25 years.

Projected Average Yields per Hectare and Average Annual Rates of Growth of Yields of Selected Crops, 1973-85

<u>Crop</u>	<u>Yield per ha., 1985 (M.T.)</u>	<u>Average Annual Rate of Increase</u> %
Rice	2.6	4.5
Corn	3.0	11.5
Beans	1.3	13.3
Potatoes	20.8	5.3
Yucca	17.4	7.1
Tomatoes	17.2	1.7
Onions	11.5	2.1
Sugar cane	61.6	2.5
Bananas	37.9	3.7
Coffee	1.0	12.3

In view of the limited resources of good crop land in Panama, a strategy based on raising production on the intensive margin - though flying in the face of Panamanian tradition - would seem theoretically justified. Indeed, only thus could import substitution, not to speak of exports, be justified in the long run on the basis of comparative advantage. Moreover, such a strategy would give the nation an opportunity to protect its remaining untouched land and forest resources and at the same time attempt to rehabilitate the already eroded or degraded areas, in the virtual certainty that the pressure of the agricultural population on the country's land resources is unlikely in the foreseeable future to reach proportions similar to those which prevail in certain other Central American countries.

Table 2

Land Area Required for 1985 Production Goals Compared
With Estimated 1973 Land Use in Farms

Commodity Groups	Area Required 1985 Demand Hypothesis		1973 Land Use (000 has.)	Percentage Change 1973-1985	
	Low (000 has.)	High		Low	High
Grains & Dry Legumes	126.9	165.2	160.7	-21	3
Root Crops	10.5	10.3	6.8	54	51
Vegetables & other annuals	<u>8.2</u>	<u>9.9</u>	<u>3.7</u>	<u>122</u>	<u>168</u>
Sub-Total Annuals	<u>145.6</u>	<u>185.5</u>	171.2	-15	8
Sugar Cane	43.7	67.1	31.2	40	115
Bananas	27.1	39.8	39.2	-31	2
Other Perennials	<u>31.9</u>	<u>39.6</u>	<u>15.8</u>	<u>102</u>	<u>151</u>
Sub-Total Perennials	<u>102.7</u>	<u>146.5</u>	<u>126.2</u>	<u>-19</u>	<u>16</u>
Total Crops	<u>248.4</u>	<u>332.0</u>	<u>297.4</u>	<u>-16</u>	<u>12</u>
Dairy pasture	117.2	124.9	-	-	-
Beef pasture	<u>618.2</u>	<u>700.9</u>	-	-	-
Total Pasture	<u>735.4</u>	<u>825.8</u>	<u>1,257.4</u>	<u>-42</u>	<u>-34</u>
Total land in farm production	<u>983.8</u>	<u>1,157.8</u>	<u>1,554.8</u>	<u>-37</u>	<u>-26</u>

Adapted from
Source: /FAO/GOP Agricultural Sector Planning Project, "Perspectivas para
el Desarrollo Agropecuario en Panamá", Resumen.

X. RURAL DEVELOPMENT GOALS AND STRATEGY

The basic goals of the Government's new regional development policies are "to improve the quality of life of the campesino through increasing his income, offering greater employment opportunities, increasing agricultural production and incorporating him into the market economy, and to move toward a more equitable distribution of the benefits of development".^{1/} Panama's focus on equity-based rural development coincides with AID's legislative mandates.

The overall strategy emerging at this time addresses a continuously evolving blend of goals of an economic, social and political nature. The three principal pillars of this strategy, the relative emphasis of which shifts with time, are: (1) raising income and living levels of the rural poor; (2) maximizing agriculture's contribution to the Nation's economy through import substitution and exports; and (3) incorporating the hinterland - and especially the more backward rural areas - into the political, social and economic mainstream of the nation. A natural concomitant of these goals for the long term is to preserve and/or rehabilitate the renewable natural resources by encouraging their most economically and ecologically sound use.

In an effort to redress the imbalance between the development of the metropolitan area and that of the hinterland, the Revolutionary Government initiated in 1970 a series of measures designed to improve the economic infrastructure and social levels of living of the rural population, especially in the more marginal rural areas. These have included road building; integration of public health services and expanding the outreach of these services - particularly drinking water supplies; providing greater access to, and better quality of primary education, and electrification. Moving the Ministries of Public Works and Agriculture away from Panama City was another measure in this pattern.

In recent years Panama has been drawing heavily on external assistance to help implement its policy of developing the rural areas and the agricultural sector. There is a growing awareness that these efforts call for an overall strategy and new institutional tools which would incorporate an agriculture policy within a broader national rural

^{1/} Ministerio de Planificación y Política Económica, Síntesis de la Estrategia de Desarrollo Regional de Panamá a Mediano y Largo Plazo. (Documento preliminar, October 1975).

development strategy. Such a strategy, together with a broad regionalization of the country, are being developed in the Ministry of Planning with the assistance of a small resident UNDP advisory team and of a short-term ILPES mission. Towards the end of 1975 the emerging strategy was publicly summarized in a preliminary document.^{1/} The regional development strategy of Panama, in the words of the introduction to this summary, "is based on the need to utilize, for the advantage of all regions of the country, the economic and social benefits that the center is capable of generating."

The following set of principles underlies this strategy:

1. Increase the State's responsibility in regional development.
2. Utilize and reinforce popular participation.
3. Establish an interrelation and balance between integral development of rural areas and the reinforcement of growth and service centers.
4. Harmoniously combine the expansion of activities in the developed urban centers with the creation of new activities in the not yet incorporated areas.
5. Create mechanisms to assure that the benefits produced by the exploitation of natural resources accrue to each region, and
6. Coordinate the actions of the State in favor of people (education, health and housing services) as well as those that favor geographic places (roads, public buildings, creation of new jobs).

The main national objectives deemed susceptible to a regional approach are:

- a. Reduce unemployment and marginality.
- b. Improve the distribution of income.
- c. Promote economic growth by balancing production and consumption.
- d. Strengthen national self-determination.

^{1/} Ministerio de Planificación y Política Económica, op. cit.

e. Strengthen national motivation and personality.

The integral development of the rural areas is the number one basic policy enunciated for the attainment of both the regional development objectives and the basic goals.

Achievement of the Government's goals "towards a more equitable distribution of the benefits of development", the Minister of Planning states,^{1/} "implies, in the final analysis, a transformation of the Nation's system of values." Implementation of these policies includes "recognition that inequalities must be treated unequally ^{2/} because to remain neutral would mean aggravating a social situation that is out of tune with the times and with the capacity acquired by humanity through science and technology to achieve an overall improvement."

While praising the great efforts that have been made in the last seven years in improving health, education, agrarian reform, community development, agricultural production, electrification, penetration roads and potable water in the rural areas, the Minister's report points out that the results

"have not covered all the needs and have not been sufficiently integrated locationally or administratively. The national government is now initiating an additional effort for the integration of these services and their extension in twelve sub-regions that are among the poorest and most marginal in the country. On the other hand, coordination of these programs in the already incorporated regions will continue to be strengthened."

The main thrust of regional development implementation to date has been decentralization of planning and implementation, through the creation of new political and administrative institutions such as - starting at the bottom - the Juntas Locales and Comunales, the Representantes de Corregimientos, Provincial Coordinating Councils and Regional Development Corporations. As indicated earlier, five such corporations have already been created. The most active of these to date are those dealing with the development, respectively, of the Bayano basin in eastern Panama province (Corporación del

^{1/} Ministerio de Planificación y Política Económica, op. cit.

^{2/} Underlined in original.

Bayano - see VIII-C-2 above), and of the northwestern portion of Chiriquí province bordering on Costa Rica (Corporación de Desarrollo Fronterizo). A companion corporation of the latter, managed out of the same offices, is the Corporación de Desarrollo de Oriente de Chiriquí, which deals with the mountain areas of eastern Chiriquí and western Veraguas, inhabited by important groups of Guaymí Indians. More recent creations are the development corporations for Bocas del Toro province (western Atlantic coast) and for the Districts of Alanje and Barú in the lowlands of Chiriquí. In addition to income from direct investments, these five corporations were allotted a total of more than B/.6 million for current expenditures and investments for 1976 by the central government, the bulk of which will be for the Bayano project.

A smaller regional development project, covering the Rio Hato area in southern Coclé province and at present mostly agriculture-oriented, is being managed by the Guardia Nacional with technical help from MIDA, from the University's Faculty of Agronomy and from a Taiwanese agricultural mission.

Another relatively recent initiative, under the sponsorship of the Directorate of Natural Resources of MIDA, is designed to achieve the twin objectives of natural resource rehabilitation and productive employment of idle manpower resources, without, however, attempting to make more than an occasional short run impact on overall agricultural production. With a minimum of overhead and capital investment, local groups of campesinos in the partially degraded and eroded Pacific slopes of the central cordillera are being encouraged and helped to improve the cultural practices related to their traditional crops, to grow some vegetables and fruit trees and to participate in small-scale reforestation efforts in their neighborhoods. A small number of such projects, called "agro-forestales" are already in operation and thought is being given to extending this approach throughout the central cordillera, perhaps in the form of a centrally planned but locally implemented soil conservation and forest industries program.

While continuing to address itself to the constraints and opportunities in the agricultural sector as an economic activity, the Government is moving increasingly towards an integrated approach to rural development. In the short run, the emphasis will be on agriculture (especially because too little is known so far regarding non-agricultural resources and opportunities). The point is that the Government of Panama is among the few countries of Latin America which not only has recognized the need for a regionally and integrally conceived process of development of the rural areas but is also

beginning to implement such a strategy on a national scale, and with an explicit focus on both interregional and intraregional income distribution.

At the institutional level, the new strategy is evidenced, on the one hand, by the first attempt at regional (in this case provincial) disaggregation of agricultural production and resource potential in the Perspective Plan and, on the other hand, by the primary role played by MIDA in the design of integrated rural development projects under the overall coordination of the MPPE. The strategy of these integrated projects is the mobilization, through institutional coordination, of resources in specific and well-circumscribed areas that combine a general state of rural poverty with a substantial development potential.

XI. CONSTRAINTS

Substantial constraints must be overcome if the strategies that the Government is developing are to be successfully implemented, particularly in view of the fundamental limitations imposed by the nature of the land and climate. These constraints can be divided into seven distinct but largely interrelated groups: Structural, institutional, social, economic policy, infrastructural, technological and financial. Political constraints of course underlie a number of these.

The constraints that are easiest to identify and to overcome, especially through activities in which external assistance agencies can participate, are, as usual, those related to infrastructure, technology and financing. They will be discussed last.

A. Structural Constraints

The land tenure structure continues to be a serious impediment to attainment of all three major objectives. As long as some of the crop land is still in extensive pasture under the control of owners who tend not to respond to existing incentives for more intensive land use, the subsistence campesinos will have to continue eking out a living on the hillsides. The present pattern of distribution of control over land will make it difficult to allocate the country's land and labor resources in a manner commensurate with the national interest - as outlined in the Perspective Agricultural Plan - in terms of greater production at lower costs, higher and better distributed incomes, and resource conservation and rehabilitation. It will also seriously constrain the enunciated policy of incorporating the bulk of the marginal rural population into the economic and political life of the Nation and assure better seasonal distribution of productive employment. The absence of acute agrarian pressures - economic, social or political - at this time would seem to give the Government time and opportunity to plan and implement a comparatively rational restructuring at a moderate political price and without paying the economic price frequently associated with massive, rapid agrarian reforms.

The lack of a clear, overall land policy including the virgin areas of public domain, together with the still backward land title registration and land taxation systems, also threaten to become serious constraints in the near future, with implications for equity-based regional development, productivity and public finances.

These structural constraints are perhaps the most difficult to overcome on a national level. The very lack of urgent socio-political pressure to implement a nationwide agrarian reform encourages inaction. At the same time, however, it gives the Government an opportunity to focus on a regional project-related restructuring of land tenure to achieve specific quantifiable objectives as a politically and technically feasible alternative. The technical advantages are that the tenure problem can be studied thoroughly from all points of view and alternative solutions adapted to the specific problems can be elaborated and even tested. Fundamental, rather than ephemeral, improvements in the status of the marginal rural population, and incentives for the development of productive campesino enterprise, can be more easily assured. Moreover, the extent and impact of the land title problem can be more easily determined and, if appropriate, remedial action can be provided on a block basis over a short period of time.

B. Socio-cultural Constraints

Socio-cultural patterns as obstacles to "development" are more difficult to identify and to overcome than relatively objective constraints such as land tenure. Legitimate questions may be raised as to how far national objectives are served by inducing or forcing population groups (especially indigenous tribes) to change their way of life for the sake of "progress". However, assuming that the trend is inevitable, rural development planning must at least take into account the relative attitudes towards work, leisure and cash earnings of the population groups that are to be "developed". Such considerations apply across the board, from the isolated indigenous tribe and non-indigenous subsistence farmer to the urban-based entrepreneur who attempts to administer a commercial farming or ranching activity. Strategies that implicitly assume a hypothetical clientele whose values reflect another cultural world contain the seed of potential failure. Incentives and investments must be designed in such a way as to have a reasonable chance of producing the desired results among the Panamanian target group. If this were to be done on a national basis it would above all call for a capability in anthropological and/or socio-psychological research which simply does not exist in Panama at this time. On a regional basis a more empirical approach to the socio-cultural constraints can be applied in more homogenous environments. Development planning and implementation, including beneficiary participation, can be designed on the basis of objective observations rather than from theoretical parameters. In Panama, the scarce sociological expertise can thus be utilized more efficiently through local projects.

C. Economic Policy Constraints

Admittedly, the recently published draft of a ten-year Perspective Plan for agriculture represents but a first step, a kind of general framework (with the exception of the specific commodity and regional projects) for the kind of shorter-run decisions with which the political system tends to be more comfortable. The next step is reducing the planning horizon to five years, within the very general guidelines offered by the draft Five-Year Plan presented by the Government to the CEPICIES Review in December, 1975. The current process of revision of this operational plan is the joint responsibility of the MPPE and MIDA, with the advice of outside experts being provided in 1976 through funding by the Government, the IDB and AID (see IX above).^{1/} This is to be followed, or perhaps accompanied, by the preparation of a Two-Year Operational Plan translatable into more meaningful manpower, institutional and financial requirements than heretofore.

Present and future planning will need to pay far greater attention to the medium and long run economics of agricultural activities in relation to the rest of the economy, both public and private, and to the employment aspect within and outside agriculture.^{2/}

1. Farm management and accounting

Application of farm management and accounting principles in private as well as public agricultural enterprises and institutions is still in its infancy. There is little or no knowledge or awareness of the relative impact of factors such as alternate land uses, cropping patterns and price and subsidy decisions on net farm income, seasonal distribution of employment and intrasectoral resource allocation. At the micro level, all too often credit "projects", whether for individual farmers or organized groups, still look only at the input requirements

^{1/} An ILPES team also gave intensive advice to this activity in January-February, 1976.

^{2/} For example, the foreign earnings expected to accrue from copper exports beginning about 1981 may, depending on world market conditions, lessen the pressure for all-out farm production for balance of payments reasons.

and repayment capacity of the specific product to be financed rather than at optimization of net income and long-term development potential of the enterprise as a whole.^{1/}

Lack of attention to such planning parameters has led to a largely indiscriminate promotion of increased production for its own sake, with little or no attention to what happens to farm income and its distribution, or, for that matter, to employment.

2. Employment policy

Panama still has ample land resources in relation to the existing population and even in relation to the expected population increase during the next quarter century. However, only a small proportion of this land resource is suitable for labor intensive cropping at least without supplemental irrigation, the economic feasibility of which must be studied case-by-case. On the other hand, there is little open rural unemployment in Panama. At the same time, the wage structure, largely determined by the Canal Zone and the banana plantations along with the metropolitan area's international financial and commercial sector, is unusually high.

Massive new employment in an area of rural poverty is expected to be generated by the opening of the large copper mines in the mountains of eastern Chiriquí. Preliminary estimates are that construction (to start in 1976) will require up to 5,000 workers, and operation (to begin in 1981) about 2,000, which, in turn, will have a multiplier effect in terms of new services. Wages in these activities are likely to reflect urban, rather than rural, patterns. Thus, additional pressures on agricultural wage rates and labor availability will be generated during the next few years.

Wages in the traditional agriculture sector reflect that sector's low marginal productivity; they are considerably

^{1/} A beginning is being made in the introduction of elementary farm management principles among both field technicians and leaders of cooperatives and organized farming groups via a recently inaugurated school supported by the Inter-American Development Bank and the Government of Israel (with marginal assistance from AID), and in the introduction of systematic annual planning ("PLEX") among the organized production groups with the help of a recently terminated UNDP/FAO project.

lower than urban wages. Despite this duality, farm wages in Panama are a good deal higher than in neighboring Latin American countries.

Most Panamanian agricultural cropping is of a highly seasonal nature; cattle ranching is quite labor extensive.

With peak farm labor demand determined almost entirely by climatic factors, this peak demand occurs almost simultaneously for virtually all important crops. As a result, there is an acute labor shortage during planting and particularly during harvesting time. This shortage is reflected in comparatively high wages during peak periods and even results in occasional unavailability of harvest labor. As a result, in both the private and the public agricultural enterprise sectors the introduction of modern farm technology has invariably included a very high degree of mechanization. The heavy emphasis on rice and sugar cane, of course, provides a number of micro-economic efficiency justifications for such heavy mechanization (extending even to aerial seeding, fertilization and spraying). The hoped-for addition of sorghum to rice operations in the more humid areas as a dry season follow-up crop will not materially increase labor requirements; the same combines used for harvesting rice can and will be utilized for reaping sorghum.

Labor intensive technology is, of course, the rule in the limited highland and lowland areas producing vegetables for the market and in the only large-scale fruit production enterprise outside the banana plantations (Chiriqui Citrus - see VIII-C-2). And labor-intensive technology for growing new types of vegetable crops in the hot lowlands is being introduced by a Taiwan mission. But the additional prospective markets for such Panamanian products do not appear to justify expectations of massive agricultural employment creation. On the other hand, dairy farming is to be expanded. This activity can provide a good deal of additional year-round employment, especially if forage conservation and hand milking are contemplated.

The static or even slightly declining absolute number of the employed population working in agriculture appears to be a positive developmental symptom. Yet, there remains a sizeable hard core of rural poverty represented by subsistence farmers on marginal land - including perhaps as much as one-third of the total agricultural labor force. However, unlike some other countries in Central America, this population does not appear to provide a pool of migratory labor available during peak periods for the more commercially-

oriented production areas.

Implementation of a strategy such as suggested by the 10-year Perspective Plan could call for development and application of an employment policy consistent with Panama's economic and social realities. Large-scale abandonment of marginal land entails finding alternative employment for marginal farmers either in agriculture or elsewhere. If the substantial increase in land productivity follows the present, essentially capital-intensive, pattern, new jobs will have to be created in the other sectors. And, in line with the Government's policy of developing the non-metropolitan areas, the bulk of these new jobs would have to be created in the provincial urban centers.

3. Prices and subsidies

In accordance with enunciated Government of Panama policy, as reflected for example in the 1975 Economic Report of the Minister of Planning, the urban-metropolitan sector should and will continue to subsidize the rural sector for a transitional period. At the same time the Government will obviously continue to seek to protect the urban consumer against undue increases in the price of foodstuffs, partly for reasons of equity and partly to avoid further inflationary impact on an already relatively high wage structure. In any economic and political context it is not easy to make these two objectives converge rationally and without a substantial impact on the public treasury.

In Panama, policies and measures designed to achieve these objectives are introduced or modified from time to time in an ad hoc fashion and with perhaps less previous study of their probable impact than would be the case in a more sophisticated bureaucracy (see D below). In fact, there exists at this time no study to indicate the overall intersectoral effect of the various explicit and implicit subsidies to the rural sector or to the agricultural sector per se.

Aside from such obvious resource transfers as public expenditures for free social overhead and services, the principal elements of agricultural sector subsidy are the (a) concessional interest rates on farm credit, (b) support prices (to the extent that they exceed landed prices of imported commodities) and related import policies, and (c) the negligible level of land taxes and the difficulty of collecting meaningful income taxes from agricultural producers.

The Panamanian consumer largely pays for the subsidy inherent in support prices out of his own pocket, although a portion of such implicit subsidies is presumably paid by the middleman because of the tight control exercised over margins between the farm support and controlled retail prices of key commodities.

On the other hand, the agricultural sector at times also subsidizes the urban sector, as in the case of the control over domestic sugar prices at a time when world prices were substantially above the domestic ceiling, and during the years when the official beef ceiling prices for Panamanian consumers were lower than the prices that prevailed in the export market.1/

Analyses of the impact of price supports and controls and of subsidized interest rates on the various social and economic groups concerned, as well as on the economy and on the treasury, are needed with increasing urgency as farm production growth accelerates and the public and private marketing systems become more sophisticated.

Questions can be raised regarding the rationality of the setting of support prices and the choice of commodities to be supported. The concept of "cost of production", which is still the basis of price support determination in Panama, has been abandoned by other Central American countries. Moreover, aside from the arguability of this concept as a basis, the cost data which underlie the price setting process are open to question. The high support price and other measures resulted in 1975/76 in a sizeable rice export surplus which can only be sold with a substantial Government subsidy.2/

1/ Yet, on February 25, 1976, the news media published a letter from the Director of the Marketing Institute to the Minister of Agriculture suggesting that "support" prices for beef (that do not in fact exist) be eliminated in order to stimulate domestic consumption and absorb the temporary surplus of beef due to the U.S. and EEC import restrictions.

2/ And the Agricultural Marketing Institute was born with the legacy of the relatively unplanned, short-term expansion of the predecessor institution's operations that had not been accompanied by analysis or prognosis of the real cost of the various operations or a discrimination between avoidable operating losses and explicit subsidies.

Even where the Government's role in determining price levels is only that of a broker, as in the case of delivery contracts for industrial tomatoes to a private processing monopoly, prices had been set so high that output in 1975 exceeded the capacity of the plant, and the surplus tomato paste cannot now be exported without a subsidy.

As was pointed out in Section VIII-C-6, domestic corn support prices are presently above world price levels, without any noticeable positive effect on output, but in the final analysis with a negative effect on consumption and production of livestock products owing to the fact that even imported corn is sold at the domestic support level. Similar considerations apply to beans. The price of imported crude vegetable oil to local refiners is substantially above the landed price even though there is as yet no domestic production to protect. On the other hand, it appears that the lack of tariffs and/or quantitative restrictions on dried milk imports largely defeats the purpose of the officially approved minimum farm prices for fluid milk, i.e., to encourage greater domestic production.

These examples are not meant as criticisms of specific measures. Rather, they are intended to illustrate the constraint inherent in the absence of consistent price and related market policies for agricultural products. And these, in turn, can be formulated only by way of an institutional capability for surveys, data analysis and formulation of policy alternatives and appropriate measures. Such analyses and policy alternatives are needed particularly to implement the Government's equity focus on rural development, in view of the differential impact of subsidy and price measures on the main target groups, viz., subsistence farmers, organized small farmers and small and medium sized independent producers.

In the short run, the principal economic policy constraints are likely to be overcome most effectively through local project level action and experience. The scarce farm management advisory talent can be brought to bear in a concentrated fashion on specific problems identified by the surveys that underlie overall project planning. Indeed, such data are already becoming available in the PRINDER project areas. Employment considerations, in conjunction with the foregoing, can be incorporated into detailed project and farm enterprise planning. And the observations regarding the effects of price policies arising from studies in the project microcosm may well lead to longer-range changes in overall policies.

D. Institutional Constraints

Institutional constraints are at the root of most of the development constraints discussed in this section. Many of these constraints are already beginning to be solved through the kinds of institutional reforms described earlier. The No. 1 institutional problem, however, remains the acute shortage of trained and experienced personnel to staff both the more traditional institutions and those being newly created. The rapid expansion of public development activities - especially in the agricultural/rural field - in the last few years has far outrun the available supply of trained technicians and managers and was not preceded by adequate manpower planning. There is no formal civil service system yet. Public sector salaries, though measurably higher than in neighboring countries, are not sufficiently competitive with those of private banking and business. This makes it difficult to attract and maintain certain key types of expertise in the public sector. There is also keen competition among public agencies for the most talented and best prepared personnel, even though there is said to exist an informal "anti-raiding" policy. Since many important programs and activities tend to depend on a few key persons, inter-agency moves and loss of such personnel to the private sector can cause serious short-term disruptions. The effects are usually qualitative; hence, they may not become evident for some time.

Adequate formal training, followed by the inevitable trial-and-error process of on-the-job experience is a time-consuming process for which there are few short-cuts. Moreover, public institutions are understandably reluctant to "spare" key personnel for extended training. Hence the manpower constraint is likely to be the main bottleneck to accelerated rural development for some time.

The manpower constraint is reflected in serious institutional limitations regarding data collection, collation and analysis, and record keeping. It affects "institutional memory" including the maintenance of reference libraries and adequate utilization of technical assistance advice (both informal and formal). It impedes the proper planning, design and implementation of development programs and projects and a satisfactory level of absorption of external assistance in these activities. All this leads, inter alia, to a cyclical repetition of technical assistance for the same activity.

The policy making process is also gravely constrained by the various effects of the manpower shortage. Decisions must of course be made when they are politically due. The time constraint is compounded by the personnel shortage in several ways: (a) problems often

do not surface until the last minute because there is no long-range research and policy planning staff; (b) neither staff nor data are adequate to provide the analytical input required for rational policy choices; (c) the decision makers are subject to such great time pressures owing to excessive centralization of routine activities (another phenomenon partly derived from the qualitative and quantitative staffing deficiencies) that they are typically unable to devote to important decisions the time ideally required for adequately weighing the alternatives.

The impact of a geographic area approach in solving institutional constraints promises to be far greater than that likely to be produced by employing the same resources in attempts to improve public administration from the top down. The problems can be identified much more clearly at the level of specific local project implementation. Remedial action in terms of new procedures, external advisory services and training can be introduced more quickly and effectively, and with far less risk of arousing institutional and political sensitivities. And the process is likely to lead to a good deal of re-examination of central policy making and implementation processes. Moreover, it can be assumed that the experience gained by field level administrators will be reflected in the future in central administration as such personnel moves up the hierarchical ladder.

E. Infrastructure Constraints

As indicated in previous sections, the lack or inadequacy of rural infrastructure is the principal tangible impediment to a more rapid improvement of economic and social conditions for the bulk of the rural population.

Accessibility is the No. 1 problem. In many areas, the constraint takes the form of primitive water transport and lack of docking and harbor facilities. Elsewhere, there are no access or penetration roads, or existing roads are completely impassable during the rainy season or accessible only by four-wheel drive vehicles even during the dry season. Produce can move to market only at a high price under such conditions, and government services such as credit and technical advice arrive only sporadically. This limits sharply the incentives for the existing campesinos to produce for the market and for new settlers to move into potentially productive areas. There is qualitatively and quantitatively insufficient storage space for the current and projected farm production. These marketing constraints are being addressed by the Government of Panama through a facilities construction program supported by AID Loan 525-T-042.

Equally important is the difficulty of providing social investments and services under these conditions. And without such services Panama's remaining rural population - especially the young - are unlikely to resist the lure of the metropolitan area much longer.

Indeed, the Government's regional development strategy broadens the concept of "rural" infrastructure to comprise all "urban" population centers in the interior. The twin objectives of this strategy are to keep people on the land and to create conditions that will attract surplus agricultural population to the provincial towns rather than to the metropolitan area, thus reinforcing the 1960 to 1970 demographic and employment trends. The inadequacy of the economic and social infrastructure is notable in communities of virtually all sizes. Approximately ninety percent of the country's industrial capacity is still concentrated around the metropolitan area because of a shortage of power, water supply, industrial parks, skilled labor, housing, etc. in the provinces. Entrepreneurs, professionals and skilled workmen and their families are reluctant to live under conditions of hardship compared to the amenities offered by the capital city, amenities which include such basics as adequate educational opportunities and health services. The inadequate land and air transport infrastructure makes frequent business travel and even weekend commuting to the capital at best an excessively time-consuming pattern of life despite the small size of the country.

Overcoming infrastructure constraints through regional projects would seem to have definite advantages. Already, the PRINDER planning exercise, with the technical guidance of the UNDP regional planning project, is acquiring the kind of experience in integrated physical planning that would be impossible to reproduce on a national scale in the short run with the limited available manpower. The methodology, together with the discipline required for - and supported by - the prospective AID and IDB financing, promises to lead to a greatly more cost-effective approach to infrastructure provision and services than has been possible by way of nationally planned programs.

F. Technological Constraints

The ambitious, agriculture-centered rural development plans of Panama are sharply circumscribed by technological bottlenecks.

Compared to recent efforts in other Central American countries and some smaller countries in South America, Panama shows a sizeable agro-technological lag. The only recent true "breakthrough" in farm productivity to which Panama can point is in rice. The introduction of tomato, potato and onion growing on a commercial scale reflects

praiseworthy efforts to attain national self-sufficiency. But Panama has yet to demonstrate that these crops (as well as perhaps rice) can be produced on this scale at internationally competitive costs. And, as pointed out in Section VII, virtually all increases in farm production during the past 25 years - including sugar cane - have taken place at the extensive margin. This is particularly unfortunate in view of the policy focus on the marginal rural population. Even if the country's horizontal land frontier could still be expanded economically on a large scale (which is doubtful), and even if all arable grazing land were to be redistributed to land-poor campesinos, there would not be enough land to provide each family with a reasonable income at present average land productivity levels; moreover, all newly incorporated producers would have to join heavily mechanized group production or even state farming schemes.

The GOP has undertaken a project of great potential significance to strengthen the presently inadequate national institutions both for agricultural research and for the dissemination of its results. Growing concern over the static situation of agricultural technology in the country, and the acute shortage of trained manpower led the Government to revamp the organization and structure of public agricultural research activities substantially in late 1975. A new, semi-autonomous Agricultural Research Institute (IDIAP) was created by law. All research facilities, personnel and funds previously assigned to a number of public institutions are being transferred to the Institute, with the exception of those belonging to the Faculty of Agronomy of the National University. Moreover, the research activities of the new Institute and of the Faculty are to be almost completely integrated under the new scheme. (The new setup and the present status of agricultural research and technology transfer are outlined in greater detail in a Project Review Paper submitted to AID/Washington in December, 1975.)

The new focus of agricultural research will be on applications to specific target groups, principally small and medium-sized farmers, including the organized groups, with emphasis on the process of the transfer to the target groups of the technology resulting from the applied research. Out of this new effort there may well arise a real core of technology disseminators in the modern sense. They will be expected to provide for various types of clientele the kind of technological packages that are presently either not available or being applied in a comparatively unsystematic and dispersed fashion.

Transfer of technology, where there is sufficient knowledge, can also be more efficiently implemented through area-specific projects. There is greater assurance (a) that the field technicians constitute a coordinated pool and are assigned according to priorities regarding target groups and products; (b) that they are adequately, specifically

and uniformly trained in both subject matter and dissemination methods; (c) that their activities are limited exclusively to technical assistance; (d) that producers are adequately organized to receive maximum impact from the available technical assistance, and finally (e) that technological packages are available to be disseminated by the field personnel without risk of failure.

The constraint represented by the extremely inadequate national institutions for agricultural research and its dissemination has led AID to propose devoting substantial grant resources to their immediate strengthening, in conjunction with other donors, such as IDB, IICA and perhaps certain other bilateral programs. Owing to the institutional economies of scale in agricultural research its atomization into isolated regional projects would be patently absurd, although there is a frequent need for local adaptation of the technological innovations provided by a central facility. In fact, IDIAP's program envisions a regional decentralization of field trials and dissemination designed to be of maximum service to the existing regional structure of MIDA as well as to the integrated development projects.

G. Financial and Political Constraints

As in all public administrations, financial constraints play an important role, especially during an inflationary period. Indeed, the Government introduced relatively stringent austerity measures in its public administration in 1975, as reflected for example in the limitation of MIDA's budget increase to 10% in each of the last three years.

The financial constraints are intimately related to the economic policy problems outlined under C above. Inadequate private and public accounting and the lack of economic analyses prevent decision makers from exercising informed options with regard to financial priorities, since the real parameters and costs are not known. Yet, the politico-bureaucratic momentum of programs, once initiated, is such that good money tends to be thrown after bad. Moreover, the atmosphere of mutual lack of trust between the public and private sectors leads to a vicious circle: private enterprise is not making the investments for which it is best fitted, with the result that they are made and managed by the public sector, probably with less economic efficiency not necessarily offset fully by social benefits. The waste inherent in inefficient and largely unaccountable public enterprises could probably be re-allocated to everybody's benefit to those priority activities that lie clearly in the public sphere.

The opportunities for mobilizing substantial additional domestic resources for public sector "rural development" are constrained by economic and political realities. Thus, the Government continues to rely heavily on foreign borrowing, both official and private, in order to finance its ambitious development programs. The urban-metropolitan and rural clienteles will continue to make vociferous claims on the public sector. The political choices will not be easy. The availability of external resources at concessional terms specifically for investment in priority rural development efforts focused on the lower-income population can weigh heavily on the decision making scale.

The economic report for 1975 of the Minister of Planning contains a series of poignant and frank statements regarding the rationale and the policy thrust of the Government's new focus.^{1/} Under circumstances such as those prevailing in Panama, the Minister explains,

"it is very difficult to channel sufficient attention and resources to the solution of the problems of the marginal and rural population in the face of such a large monopoly of power and possibilities in the large cities. The new national political system seeks a possibility of partly balancing the Panamanian situation, with its capital and its transit center, through the reinforcement of local governments and greater representation for the outlying regions of the country."

Such representation, the report goes on to point out, is already evident in the role of the representantes de corregimientos in supervising the implementation of the investment budget with respect to their communities.

A phased, regional program for developing the rural areas has the advantage of "rationing" financial resources for maximum impact. At the same time, the regional approach provides an opportunity to test innovative participatory mechanisms at the local level before adopting them on a national scale.

^{1/} Ministerio de Planificación y Política Económica, Informe Económico 1975, October, 1975.

XII. THE ROLE OF AID

The central criterion governing AID's programs in rural development will be to continue making the most meaningful possible contribution to the agricultural and rural development objectives and strategies of the Government of Panama. Under this overall guideline, there has been mutual agreement to continue, on the one hand, the support of the rural-oriented education and health activities and, on the other, to join other external donors in concentrating on the key constraint to rural development through an increasingly integrated agriculture-based, area-specific approach, and identifying and helping to overcome the main technological bottlenecks impeding more productive employment of the underutilized natural and human resources. Both activities will be designed to benefit primarily the marginal rural areas and populations.

The financial support for the implementation of nine initial projects of integrated rural development in central and western Panama, projected to cost perhaps \$50 million, will come from both the IDB and AID. This financing will be extremely important for the Government of Panama ^{1/} and the concessional nature of the loans will be in keeping with the inherently delayed economic payoff of the investments in this kind of project. Aside from the obvious financial benefits to the borrower the Mission expects that the principal benefits will come from institutional development. Experience will be gained at all levels of government in planning and implementing a process of overcoming an interlocking set of national constraints to development at a location-specific level. The experience, to be limited initially to nine different regions, under a continuous process of evaluation and adjustment, is designed to build up an institutional capacity for broadening this approach to many more, similar rural areas in subsequent years.

Were it not for the Government's explicit decision to move in the direction of geographically defined, manageable integrated development projects, a theoretical rationale for concentrating AID resources on particular constraints at the national level could no doubt be marshalled. (To "push" a bureaucracy into such institutional

^{1/} The IBRD has also been approached with respect to its possible participation in the integrated development of the Bayano region. Exploratory missions have visited Panama to look into the feasibility of the proposal.

complexity would be counter-productive.) Similarly, it could be argued that AID should restrict its assistance in rural development projects to agriculture-related activities. From a strictly operational point of view, such "projects" would be easier to implement. Each agency and its AID technical counterparts would continue to pursue their relatively well-defined set of objectives, with coordination at the national level, without being burdened by the continuous need for coordinated planning and implementation at the grass roots level. However, the Mission and the GOP believe fundamental development objectives would be better served through the integrated regional approach than by way of more "traditional" projects.

The proposed approach would appear to achieve two important purposes: to identify developmental interrelations and priorities at the local level, while assuring the kind of resource transfers at the national level usually associated with sector loans.

More important, the integrated, geographically limited project facilitates immensely the assurance that primary benefits accrue to a predetermined target group such as the rural poor. It also makes it possible to sharply define the constraints and thus putting the development tools to work accordingly. This is more difficult when one attempts to attack the constraints on a national scale.^{1/}

Such considerations apply to virtually all of the key constraints identified above. Regardless of whether they are of an institutional, physical or policy making nature, the constraints are more easily pinpointed, and their solutions are more feasible within a given time frame, if they are approached at a location-specific level.

Although other international donors appear willing to finance integrated development projects in Panama, AID's role cannot be perceived as being merely "another financier" in this area. AID's

^{1/} For example, the Perspective Agricultural Planning group has issued two supplementary reports, one entitled "Possibilities for Producing Milk in Panama", and the other, "Specific Project for Milk Production in the Province of Chiriquí." The former is impossible to implement as a technical and financial assistance project. It merely provides a conceptual framework and quantitative and qualitative parameters. The latter, on the other hand, is of immediate, practical use in the design of a regional development project in the northwestern part of the province that is to be financed by the IDB.

assistance, guidance and urging have been key elements in the development of the draft 10-year Perspective Agricultural Plan which MIDA recently completed with the assistance of FAO and AID. Thus AID has been involved in integrated rural development from its inception. Further, the integrated development areas require that AID's education, health, marketing, cooperative and municipal loans inputs be coordinated in the planning and implementation of development of the impact areas.

In sum, integrated rural development - meaning the concentration of scarce national resources on selected poverty areas which have production potential in order to bring them to a point of self-sustained growth - represents an innovative approach. It allows focusing national and external resources on constraints that can be overcome locally but that could be insurmountable if attacked on a national scale. The new, integrated approach is an ideal seedbed for increasingly coordinated and even closely meshed economic assistance from the various multilateral and bilateral programs that operate in Panama. And the many institutional, manpower and policy formulating constraints point to the urgent need for ever more sharply focused, selective and coordinated technical assistance and training to accompany, and even to precede, the financial aid. In this endeavor Panama finds itself in an initial stage of a long and evolving process that will need to be continuously evaluated - within a continuously evolving strategy - in order to adapt policies and programs to the issues that will be uncovered during the process.

Principal References

1. Gobierno de Panamá - PNUD/FAO/USAID,
Proyecto de Planificación de Desarrollo Agrícola,
Perspectivas para el Desarrollo Agropecuario en Panamá,
August, 1975. (In seven volumes).
2. International Bank for Reconstruction and Development (IBRD),
Report on the Economy of Panama (No. 275 - PAN),
Washington, D.C., Nov. 13, 1975, Vol. III (Agriculture)
and Vol. IV (Statistics).
3. W. C. Merrill, L. B. Fletcher, and R. A. Hoffmann,
Panama's Economic Development, The Role of Agriculture,
Iowa State University Press, Ames, Iowa, 1975.
4. Ministerio de Desarrollo Agropecuario (MIDA),
Memoria 1974-1975, Panama, Oct. 11, 1975.
5. Banco de Desarrollo Agropecuario (BDA),
Memoria que Presenta a la Honorable Asamblea de
Representantes de Corregimientos el BDA, Panamá,
Oct. 11, 1975.