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INTERNAL STRUCTURE, ROLE OF THE GOVERNMENT AND EFFICIENCY
IN THE USE OF RESOURCES IN SEMI-COLLECTIVE PRODUCTION CO-
OPERATIVE ORGANIZATIONS: THE CASE OF THE ASENTAMIENTOS
CAMPEÑINOS IN PANAMA

by

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Introduction

This paper has been elaborated in an effort to set the basis for a research on a semi-collective production cooperative program in Panama.

Three aspects are considered to be important when studying the program: the internal organization of the semi-collective cooperatives to be analyzed; the role of the government in promoting and supporting the program and the efficiency in the use of resources that the new type of agricultural organization will bring. Thus, these are the elements on which the present proposal emphasizes.

A general explanation of the program to be analyzed is presented in Chapter II, section C. Due to some difficulties regarding the sources of information, a very detailed explanation about the nature of the program is not included in the proposal. The omitted information is mostly related to the specific way in which the semi-collective cooperatives are internally organized and the specific governmental policies regarding the program. Therefore, the questionnaires presented in this proposal (Chapter V. - Methodology) are considered to be tentative and subject to modification once a complete and detailed picture of all the aspects of the program is obtained. The questionnaires presented at this time are based, mainly, on the ideas and facts obtained through the overall Latin American experience presented in Chapter I. - Review of Literature.

I. REVIEW OF LITERATURE

I. Review of Literature

Production cooperatives are distinguished by the fact that they directly involve the productive operations of the participation units, while service cooperatives affect only the units' relation with the outside world.

Production cooperatives fall into three main categories regarding land management:

1. Cooperative farming with individual land parcels. In this type of cooperative joint production decisions and common operations are carried out without affecting the distinction of the individual farm units.

2. Cooperative with joint land management. This type is characterized by the merger or absence of individual farms in favor of a larger collective in which the link between the membership and specific parcels of land disappears.

3. Semi-collective cooperatives. This category is represented by systems in which some features remain individual, while others are carried out on a collective basis. Generally, peasants hold some private land for subsistence and operate other acreage jointly for commercial production.

The last two types appear to be of great importance in Latin America in at least three contexts:

- a. A considerable amount of land is currently operated under various forms of communal or semi-communal management, especially in areas of traditional culture. There are also cases in which individuals have or own private plots and, in addition, also operate considerable acreages of communal property, especially pasture and forest land. The modernization of these systems may be accomplished in a more satisfactory way by maintaining some joint land use, especially where ecological and technical factors favor it.

- b. Land pooling and consolidation is seen as one of the solutions to the minifundia problem, through which economics of scale may be achieved.

- c. Various agrarian reform efforts are faced with the problem of taking

over large estates which are difficult or inconvenient to divide. In such situations, temporary or permanent models of joint land use have been created. Experimentation to find viable solutions are likely to continue under different ideologies and political systems.

The most important experience in Latin America with production cooperatives including joint land management is found in the collective ejidos in Mexico. Thus, it seems appropriate to review some individual cases regarding the ejido experience.

Quechhueca,^{1/} in the state of Sonora, is one of the sixteen original ejidos which were created in 1937 as part of a land distribution program. The land formerly belonged to a United States company. Prior to land distribution, strong unions of agricultural workers already existed which had fought for collective contracts. The sixteen original ejidos started as fully collective enterprises but Quechhueca has been the only one which has maintained the pattern of completely joint land use; the rest have changed to semi-collective systems.

Quechhueca has undergone considerable internal struggles with dissident minority groups. The core group of loyal ejidatarios is affiliated to the UGOCM (General Union of Laborers and Peasants of Mexico) with the ejido leader an important regional official. Much of the success of the collective is attributed to the exceptional ability and honesty of this leader.

The major economic activities are centralized. The land management program includes food crops both for sale and for home consumption; these latter are redistributed to the members throughout the year. The ejido also operates its own store where members can purchase on credit; accounts are settled at the end of each year, when profits are distributed.

Quechhueca also provides consumer credit for gas stoves, radios and refrigerators purchased wholesale for members; payments are also deducted

regularly from the member's share of profits. Apparently, the access to consumption goods has been an important element in the collective's success.

A feature which has contributed to an atmosphere of trust in the integrity of the management is that the books of the cooperative are kept on display in the office and financial matters are openly debated.

In summary, four conditions which are present in the Quechehueca ejido seem to be of great importance for the success of the collective:

1. The collective's affiliation to a legal organization (UGOCM) which provides the cooperative with institutional strength and power;
2. the leadership required to maintain the solidarity of the cooperative's members;
3. the availability of consumption goods which provide the ejidatarios with a decent standard of living and keep them satisfied with collective ideals;
4. an adequate and honest accounting system which strengthens the financial situation of the ejido and makes it solvent to afford future operations, contributing to create an atmosphere of trust in the integrity of the management.

Cananea^{2/} is another example regarding the ejido experience. The formation of Cananea followed a long struggle which included repeated land invasions and culminated with the expropriation of the 260,000 hectares of a foreign-owned estate of the Cananea Cattle Company in 1958. Seven collective livestock ejidos were subsequently formed which established an efficient series of cattle enterprises under the technical direction of the Secretariat of Agriculture and a special department of the Ejidal Bank.

The experience of the former cowboys of the private cattle ranches, together with the fact that a number of ejidatarios had considerable education and urban experience, was very helpful in setting up the structure of the new collective based on appropriate division of labor.

Each ejido has a three-man Administration Committee and a Control Committee. These groups work closely with the representatives of the Bank and the Secretariat of Agriculture, thus enabling the seven presidents of the Control Committees to have an important voice. Thus, the ejidatarios share considerable control in all aspects of management with government technicians.

Accounts are kept by an independent accountant who checks all operations; he is paid by the seven ejido societies and is responsible to them.

Most of the leaders of the various Committees in the Cananea ejidos belong to the more vigorous UGOCM federation, but more and more of the local leaders are being elected on the basis of their technical skills dealing with specific problems rather than because of their political abilities or affiliations.

In summary, four factors can be considered the reason why the Cananea ejido can be regarded as a successful production cooperative experience:

1. the previous experience of the people who became ejidatarios which set the basis for the successful and profitable operations of the ejido since its creation;
2. the ejido has never been under complete control of the government and its members participate in the management. There have never existed a total dependence on the government;
3. the accounting operations are kept by people who do not have any relationship with the ejido; this fact reduces to a minimum the possibility of distrusting the management of the ejido in the event of financial problems and consequently strengthens the internal organization of the cooperative.
4. the fact that the selection of leaders is more and more being based on technical skills shows the beginning of separation between a politically sensitive leadership and a technically competent management.

After having exposed the individual cases of the Quechhueca and the

Cananea ejidos — which is considered among the most successful experiences regarding collective ejidos — it seems appropriate to make some general comments regarding the Ejidos movement as a whole.

The bulk of the collectives was formed between 1936 and 1939. Their history is intimately bound up with ideological and political struggles in Mexico during the past three decades. Their initial success and later decline is closely associated with the course of official policies. These policies have fluctuated between encouragement and support of collectives to indifference and outright hostility in later periods.

In addition to the difficulties created by official policies, the issues of internal organization, from the beginning, created serious problems.*

The creation of an effectively functioning collective discipline has been difficult. The establishment among unlettered peons of collective types of organization, requiring management of a high order, has not been accompanied by sufficient cooperative education, or training of local leaders. Part of the difficulty of achieving effective leadership has been due to the prevalence of certain cultural traits such as the system of "compadrazgo" and the entrenched beliefs in the dishonesty of leaders, even in cases without substantiating evidence.

The fact that accounting was not always open and available for inspection often aggravated this atmosphere of suspicion. A number of leaders abused their power which caused frequently documented situations of graft and corruption. Another major internal problem was the inability of the collectives to reward effort in proportion to the members' actual contribution. The system of "anticipos" (or advanced sales proceeds) which the Ejido Bank paid to the ejido members in some instances became completely disassociated from

*This section is based on Carroll, Thomas F. Peasant Cooperation in Latin America; in : Carroll T., Etienne G., Flores X. and Von Muralt J. A Review of Rural Cooperation in Developing Areas. UNRISD, Geneva, May 1969.

effort, and in others fostered an atmosphere of dependency from the Ejido Bank and a feeling of being employees rather than co-participants in a system. The institutionalization of the "anticipos" often fostered a negative attitude toward hard work and initiative and, worse, prevented most of the "ejidatarios" from developing behavior which would have favored the long-run economic success of their joint undertaking over short-run personal benefits.

These internal reasons were doubtless important; but the disintegration of the collective ejido system was due essentially to an external reason, i.e., the unfavorable government policy after 1940. The Ejido Bank, which had previously been assigned the double function of organizing and assisting the ejidos in their economic and productive systems and administering the credit, has gradually abandoned the development objective and concentrated in the control function. As is expressed by Galeski, "In fact, ejidos could be regarded as large holdings operated by banks." ^{3/}

Part of the official hostility was due to ideological struggles. Many of the collective leaders and their "sindicatos" (Unions) have identified themselves with leftist parties. These parties were then considered dangerous by the national power hierarchy, especially by the private commercial interests of the non-ejido agricultural sector. Every effort was made to penetrate, split and weaken the collective ejidos and their supporting institutions, such as the regional "sindicatos." New rival factions were created and splinter groups were encouraged to break up the collectives. These efforts encouraged and accentuated the latent or underlying divisive factors within the ejidos and created a vicious circle of adverse forces. The withdrawal of official support has frequently forced ejido leaders to adopt even more radical policies than they otherwise might have adopted. ^{4/}

In terms of semi-collective production cooperatives more recent experiments have emerged from the Colombian agrarian reform.

An example is the Caney case.^{5/} Three events should be underlined in the history of Caney:

1. In 1954-56, the Caney region was one of the most affected by the wave of social upheaval and political struggle in Colombia known as "la Violencia";
2. in 1961, another social upheaval broke out during which there were many invasions of haciendas by peasants;
3. in 1962-64, the government's specialized institute INCORA (Colombian Institute of Agrarian Reform) set under way agrarian reform projects in an effort to solve the local socio-economic and political problem.

In 1962, Caney became a technical, social and economic laboratory. A cattle raising cooperative, the first one of its kind in Colombia, was created by INCORA in that year. It was integrated into a general plan of economic development to stop local land invasions which were made by small owners or landless workers. Three haciendas with about 2,500 hectares each, were purchased by INCORA and distributed to 102 "parcelarios" (or occupants), three hectares each; the cooperative itself utilized about 1,700 hectares of pasture for cattle.

Both individual and cooperative land were to be paid for (to INCORA) within a period of fifteen years. At the same time, INCORA became the principal associate member of the cooperative, owing to its capital contribution.

The first stage of this cooperative was a trial run for agrarian reform, with additional services like medical care and a consumer store. There were no clear objectives for the cooperative except for the most general and comprehensive ones discussed in learned circles and those approved by the Technical Committee of INCORA. Policy directives on land improvement and better cattle practices had been made available. The application of these principles tended to imply an organization fully controlled by INCORA. The individual entre-

preneurship spirit persisted among the members of the group, which worked against good cattle management in the commons. This failure, as well as the consequent peasants' pressure to enlarge their individual plots, led the director of the project to redistribute the land, enlarging the lots originally granted at the expense of communal pasturage.

A new policy of supervised credit conditioned the second stage of the cooperative. This policy had international linkages: USAID, acting for the Alliance for Progress, footed the bill and set the ground rules. A goal for this policy was to stimulate agricultural diversification by promoting the cultivation of products like coconuts, cocoa and citrus fruits. This was done in disregard of peasant opinion. Most farmers did not believe such a change in agriculture was possible in the area. INCORA had to impose the new policy. Some technical personnel who were also unconvinced of this new policy were dismissed.

The peasants finally "accepted", but got into heavy debts on their farms. After three years experience, the policy resulted in a fiasco: the peasants apparently had been right. But now they were in debt with INCORA, unable to pay even a fraction of the large investment made through supervised credit.

A return to cattle raising was thought necessary to be made. But this time each farmer, having lost confidence in the cooperative, wanted to have full control of his own cattle. Individualism was rampant. Besides, medical assistance, which was the only real service left in the cooperative, was suspended in January 1969, confirming the impression that the cooperative no longer existed.

In summary, the following facts seem to be of key importance when analyzing the Caney Case:

1. the land was not expropriated but bought by INCORA, which determined an initial debt of the cooperative members to INCORA;

2. the peasants were induced to affiliate themselves to the cooperative with hardly any preparation, information or education, fact which did not help to strengthen the collective spirit in the cooperative;

3. all administrators of the cooperative (manager, auditor, accountants) were paid by INCORA, and therefore did not have much sense of identification with the cooperative as a peasant organization. All of them were outsiders to the area; some of them stole funds or were irresponsibles, and did not understand the peasant mentality. The only leaders who occupied certain responsible posts in the cooperative were former administrators or "mayordomos" of haciendas who had experience with cattle raising. But once within the machinery of INCORA, they became another of its elements, and usually worked in cooperation with outside agents. Thus, the only institution left with any real responsibility was INCORA. The institute became a real "patrón", dominating and controlling all leaders and employees.

4. INCORA developed a strategy of imposition without much consideration of the cooperative members' opinion. This could be done because of the excessive control that it had in the collective administration and management.

The emergence and development of production cooperatives should not be studied as an isolated event. Production cooperatives are part of the whole process of cooperativism that started in Latin America in the early years of the 20th Century principally with the promotion and creation of service cooperatives — consumers', marketing, credit. Consequently, a look at the main directions followed by the overall cooperative movement in Latin America will frame the production cooperatives development process into a broader context which will help the analyst to assume a more critical attitude when studying production cooperatives.

Three main characteristics identify cooperativism in Latin America^{6/}:

1. it has been a form of intellectual colonialism

2. it has been a typical case of "top to bottom" policy
3. it has been used as a means to overcome periods of political and economic crisis.

Cooperativism was not indigenous to Latin America but was imported from Europe. The Latin American cooperative movement did not emerge from a need felt in the Latin American countries. It was nothing more than an imitation of the European patterns without sufficient adjustment to the Latin American reality.

The idea of consumer cooperatives was borrowed from England, that of savings and credit cooperatives of the Raiffeisen type was imported from Germany. In both cases, experiments were involved which originated in economic and social traditions and local situations that differed from those of Latin America.^{7/}

In adopting European models, attention was naturally directed to the "most advanced" cooperatives, i.e., to those of the twentieth century which represent the culmination of a whole process of social change, legal adjustment and decantation of utopian ideals. It was forgotten that European farmers and industrial workers (constituting the main membership of the cooperatives) had already experienced cultural processes requiring a new type of technical skill, new basic forms of solidarity and a more impersonal and less immediate approach to market and prices that had prevailed in the early stages of the movement in the nineteenth century.

The cooperative movement in Latin America did not emerge from the peasants; cooperatives were generally imposed from above. Laws were made before having any practical experience in cooperation.

In Europe, the creation of cooperatives was consolidated after several decades of experience by legislation which was in keeping with local requirements. In Latin America, a start was made with legislation before there was

a single operational cooperative functioning anywhere. This gave rise to inconsistencies and aberrations as may be illustrated by the case of Mexico (Act of 1927) and Colombia (Provisions of 1918).^{8/}

In any case, the cooperative movement was imposed from above as a paternalistic and authoritarian act; it was not a result of popular conviction based on democratic participation or popular enlightenment.* Consequently, it is not surprising to find that such situations as the following are tolerated in Latin America: state cooperatives and cooperatives run by private enterprise which the member is forced to join, without orientation of any kind; the use of cooperatives as launching pads for minor local politicians; the transformation of cooperatives into political cells under the control of national parties; and so on.

Cooperativism in Latin America has also been identified as a tactic used by governments as palliatives to overcome peasant dissatisfaction during periods of political and/or economic crisis. Cooperatives have often been presented to the masses as instruments to achieve lofty goals, including the creation of a new social order. However, this has just been a strategy used by governments to calm the people and after calmness is assured, coops are taken out of the governmental issues and no support is given to them.

It is held that rural cooperatives as presently established constitute a good example of promotion of marginal change — not significant or structural — which may do some limited good but not enough to threaten established rural systems that block significant progress. As Fals Borda points out, "In Latin America, coops have generally been encouraged for political purposes: as a means to pacify an aroused peasantry, to soothe the adverse effects of depressions, to promote or promise a new life in unstable backward areas, or to

*Cases of Argentina (Decree 11388 of 1926), Colombia (Law 134 of 1931), Chile (Law 596 of 1932), Brazil (Decree 22239 of 1932), Mexico (Laws of 1933 and 1938). In these cases, in addition to be imposed, the acts are mostly a copy of the European patterns and ideals.

feed the appetites of political clienteles. For this reason, the major campaigns to promote the cooperative movement in Latin America have mostly occurred in periods of economic crisis, violence or threats of rural violence"^{9/}

As a matter of fact, the main campaigns of cooperative promotion in Latin America have emerged in periods of economic crisis (between 1927 and 1936), in the postwar period (1940's), in times of rural violence (such as in Colombia between 1948 and 1957).

The literature reviewed in this chapter shows that two kinds of factors -- external and internal -- have played an important role in the emergence and further development of production cooperatives in Latin America. The way in which these factors are handled and the interaction between them have had a tremendous influence in the performance of the cooperative.

In terms of Government Policy toward production cooperatives -- the main component of the external factors -- cooperative education, financial aid and technical assistance have been the most important issues.

It has been a common practice among Latin American governments to promote and initiate cooperative programs without providing the peasants who will become the cooperative's members with enough orientation and preparation in terms of cooperative ideals, role of participants in collective activities and cooperative education in general. This has resulted in the proliferation of cooperatives with bad prospects for success since the lack of consciousness of their members has weakened the collective spirit and has turned individualism unrestrained. Thus, to improve performance of production cooperatives in Latin America, public policy regarding cooperative education is to be reinforced; governmental agencies jointly with cooperative units must develop new strategies to provide peasants with enough cooperative knowledge to assure the achievement of the cooperative program's goals. More coordination between the agency which promotes the cooperative program and the governmental agency in charge of educational programs could be a way to develop cooperative educational programs that reach the peasants and help to meet cooperative's goals. The degree of coordination established between the governmental agencies and the strategies to be developed will vary from country to country depending on the way in which governmental agencies interact between each other (institutional interrelations in the government) and on the importance of the cooperative program within the governmental activities.

Financial aid and technical assistance are also in great need of reinforcement. Such reinforcement should be guided, mainly, to the conditions and stipulations set by the Government when providing such aids.

There has been the tendency in part of governments to take advantage of its role as provider of agricultural credit and technical personnel; there are several cases in which government has used these services as a mean to obtain control of the cooperatives. This creates a situation in which cooperatives become almost completely dependent on government (managerial positions are in hands of government officials and cooperatives' operations are mostly financed by government making the cooperative indebted to the government) situation which originates an apathetic attitude of the members towards the activities of the cooperative, because they do not consider themselves members of a cooperative organization but employees of a government enterprise. Thus, technical assistance offered by the government should be limited to provide the peasants with the technical and organizational knowledge necessary to run the cooperative as an efficient economic unit without displacing the cooperative's members from the positions they are supposed to be in accordingly to the nature of a cooperative enterprise.

In relation to financial aid, there is a need to encourage the private sector to cooperate in the development of cooperative programs, providing the cooperatives with additional financial sources; this fact will help to avoid situations in which cooperatives become totally indebted to the government. In order to make this alternative workable, the conditions set by the private institutions financing cooperative programs should be flexible enough to avoid production cooperatives to fall under control of such institutions.

The internal factors affecting the performance of production cooperatives are various.

The land distribution pattern seems to be a crucial element. Production cooperatives with joint land management (all the land held in common) seem to have a better perspective of success than semi-collective units. The mere existence of individual parcels make the cooperative members to keep individualistic expectations in terms of property of the land, fact which limits the possibility for a better understanding and acceptance of cooperative ideals. If the land distribution pattern does not include individual parceling the cooperative members, since the initiation of the program are able to join efforts and work collectively for the cooperative without having in mind the alternative of individual property. This will reinforce the collective spirit and due to the fact that individual land management is out of scope, the prospects for collective activity are to be more promising since every effort will concentrate in that direction.

Three additional internal elements seem to be relevant in the development of production cooperatives in Latin America.

An honest and adequate accounting system has proved to be good not only to the future financial operations of the cooperative but to make the members more confident in the cooperative ideals.

A proper way of distributing benefits accordingly with members' contribution will encourage peasants to assume a positive attitude toward hard work and to behave in a suitable way to improve the economic situation of the cooperative in terms of production mainly.

Improving the standard of living of the cooperative members serve to strengthen the collective spirit and goals because when the peasants compare their current living conditions to the previous situations they experienced when they were landless peasants working for a landlord, they realize that cooperative organization has been a right way for social and economic improvement.

Leadership is one of the factors that has played one of the most important

roles regarding the cooperative movement in Latin America.

The Latin American experience has varied broadly within two extremes: leaders totally identified with cooperatives ideals who make the members assume a very solidar attitude in terms of cooperative goals and, on the other hand, leaders who are more identified with political interests and do not care too much about cooperative goals. Nevertheless, peasants seem to be aware of the importance that leadership has for the cooperative performance and it also seems to be a tendency among cooperative members to avoid selection of leaders in terms of political affiliation instead of in terms of their technical skills.

It is necessary that in the same way that better cooperative education is needed for the members of the cooperative, training regarding leadership should be also improved to better the quality of leaders and favor in that way the overall cooperative performance.

The review of literature presented here has been based on the case study approach; cases considered representative of the Latin American experience regarding production cooperatives were obtained through different sources and the main features regarding their creation and development were summarized.

In order to help stress the validity of the findings shown by these cases, it was also intended to expose some information regarding the methodology used to conduct such studies. Unfortunately, the Caney Case study -- the one conducted under UNRISD sponsorship -- was the only one for which some general information in terms of methodology was obtained.

The main purpose of the Caney study was to identify some strategic policy issues in the introduction, growth and functioning of this semi-collective production cooperative. Among the many aspects and variables which play a role in rural cooperation, the human, organizational and institutional elements were stressed over technological and economic variables.

The study of the Caney cooperative was part of a program of field observations made between 1968-1969 in eleven Colombian, Ecuatorian, and Venezuelan peasant communities on the subject of rural cooperatives; the study covered the most important types of rural cooperative found today in such countries: production, marketing, credit and consumption.

The field work was performed by national teams of social scientists and it was based on a combination of research techniques, within the case study approach. There were:

1. A study of the history and the social and economic background of the region in which the community was found, including analysis of documentation on relevant national (and international) policies concerning cooperatives and of the diverse ideologies expressed in literature on the cooperative movement;
2. A study of documents, letters, and other archival materials related to the development of each individual cooperative since its founding;
3. Special interviews with open-ended questions administered to a total of 317 persons, on pertinent subjects related to the central hypotheses established for the research as an initial line of departure; 184 of these interviews were converted into intensive systematic conversations, involving 13 national cooperative administrators, 15 regional promoters or campaign managers, 42 cooperative managers, leaders or officials, 65 members of cooperatives and 49 non-members living in the respective communities;
4. Daily journals kept by researchers to record their observations in the communities during the period of actual fieldwork (about four months); this provided additional insights as the research personnel became involved in actual cooperative process, sometimes giving a hand in policy making or educational campaigns, and scrutinizing the local structure of group action.

As the Caney Case, the rest of the cases shown in this chapter were conducted with the main purpose of identifying some strategic issues in the introduction, growth and functioning of production cooperatives, emphasizing on the human, organizational and institutional aspects.

It was also intended to present in this chapter some empirical evidence regarding efficiency in the allocation of resources in production cooperatives in Latin America. Nevertheless, it was not possible to get information to this respect since studies of production cooperatives in Latin America have concentrated in the organizational and institutional aspects.

II. IDENTIFICATION OF THE PROBLEM

II. Identification of the Problem

A. The Panamanian agricultural sector.

Food activities and agricultural organization are controversial topics in underdeveloped countries. Such countries are more and more involved in designing adequate strategies to develop the agricultural sector and to achieve a higher level of economic growth. For developed countries, which have already achieved a high degree of economic growth and where advanced technological development has made possible the existence of food surplus, the immediate goal is to maintain such a high level of agricultural and economic growth.

1. Share of Gross Domestic Product (GDP)

Panama, an underdeveloped country with a population of 1,428,082^{1/} (Census of Population 1970) and with an annual rate of population growth of 3.1%, is facing the problems common to other countries in the same stage of development.

Table 1 shows the composition of the GDP by sector.

In terms of share of GDP, the agricultural sector is the largest production sector. Nevertheless, in terms of growth in output, it has the lowest rate of growth per year except during the years 1950-52 to 1959-61 when the Canal Zone sector had an even lower rate of growth.

Such a decreasing rate of growth in output can be interpreted as the result of two factors:

- a) the general economic policy of the country in the last two decades emphasized industrial development as the main way to achieve economic growth*, and

*First, emphasis on import substitution policy and after the failure of that approach, emphasis on exports promotion policies which have provided limited benefits to the agricultural sector.

Table 1. Sectoral Composition of Output

Sector	GDP by Sector			Growth in Output		
	1950-52	1959-61	1969-71	1950-52	1959-61	1950-52
	%			to	to	to
				1959-61	1969-71	1969-71
Agriculture ^a	27.2	23.7	18.2	3.82	5.06	4.32
Manufacturing ^b	10.3	13.4	17.4	8.57	10.73	9.69
Construction	4.2	5.4	6.1	8.52	9.10	8.84
Trade	13.7	13.5	13.9	5.35	8.17	6.84
Transportation ^c	3.9	4.7	6.6	7.80	11.50	9.73
Finance ^d	1.9	2.5	3.8	8.40	13.15	10.69
Services ^e	20.6	19.6	16.2	4.87	5.88	5.40
Utilities ^f	1.3	1.9	2.9	9.91	12.62	11.38
Housing	9.1	8.2	6.7	4.08	5.79	5.00
Canal Zone	7.8	7.1	8.2	3.13	9.06	6.79
Total	100.0	100.0	100.0	5.45	7.85	6.71

Source: Merrill, William C. and others, 1975, p. 8

^aIncludes crops, livestock, forestry and fishing.

^bIncludes mining.

^cIncludes storage and communication.

^dIncludes banking, insurance, real estate, and other financial activity.

^eIncludes public and private services and public administration.

^fIncludes electricity, gas, water and sewage.

b) the problems and inefficiencies faced by the agricultural sector per se, which are partially a consequence of point a) above.

This emphasis of the economic policy toward development of non-agricultural sectors in Panama. A closer look at the sector, analyzing some of its characteristics will show the serious problems it faces and the urgent need to speed up its development to improve the economic development of the country.

2. Meeting food demand

Let's examine the prospects of the agricultural sector to meet demand for food in the near future.*

Table 2 shows supply and demand balances for different agricultural products for 1975 and 1980.

Domestic demand for rough rice is growing at a rate of nearly 5,400 metric tons annually. On the basis of past trends in production and consumption, Panama will have a small surplus in production in 1975 and 1980 (Table 2). The demand projections developed by the SSC (Sector Study Committee), however, suggest that future demand for rice is likely to exceed past demand. The SSC projected the 1980 apparent consumption of rough rice to be 250,000 metric tons, compared to the trend projection of 213,500 metric tons. The trend projection for rice should be interpreted as a low projection. If actual demand in 1980 is as low as 3% above the trend, Panama will have a rice deficit unless production can be increased more rapidly than it was during the 1960s.

Excluding the potential increases in demand for corn in livestock and poultry feeds, the trend projections of the supply and demand for corn in 1975 and 1980 indicate that Panama will be self-sufficient in corn production during most of the 1970s (Table 2). Corn is being imported for poultry feeds, and increased imports will be needed if the poultry industry is to continue to grow at past rates. Sorghum can be substituted on nearly a one-to-one basis for corn in poultry feeds. The government's price support program for sorghum has encouraged some rice producers to plant sorghum

*This section is based upon Merrill, William C. and others, Panama's Economic development: The Role of Agriculture. Iowa State University Press, Ames, 1975, Chapter 4.

Table 2. Projected supply and demand balances for some agricultural products, 1975 and 1980

Item	Production		Apparent Consumption		Surplus (Deficit)	
	1975	1980	1975	1980	1975	1980
	(000 MT)		(000 MT)		(000 MT)	
Rice (rough)						
Trend	189.5	218.3	186.6	213.5	2.9	4.8
Potential ^a	207.1	213.8	205.0	250.0	2.9	(38.2)
Corn and sorghum						
Trend ^b	86.0	91.0	86.0	89.5	--	1.5
Potential ^a	106.9	159.2	122.6	159.2	(15.7)	--
Beans						
Trend	3.9	3.0	9.7	9.8	(5.8)	(6.8)
Potential ^a	5.7	5.8	9.1	10.8	(3.4)	(5.0)
Beef						
Trend ^c	41.9	49.2	37.5	43.7	4.3	5.5
SSC ^d	42.1	49.5	38.8	44.0	4.3	5.5
Pork						
Trend	3.7	3.9	3.7	3.9	--	--
SSC ^d	3.6	3.8	5.3	7.0	(1.7)	(3.2)
Poultry						
Trend	7.5	8.8	7.5	8.8	--	--
SSC ^d	7.0	8.8	10.9	15.3	(3.9)	(7.2)
Fresh Milk						
Trend	96.3	112.9	96.3	112.9	--	--
SSC ^d	101.1	120.0	113.4	144.8	(12.3)	(24.8)
Eggs						
Trend	7.0	7.6	7.1	8.0	(0.1)	(0.4)
SSC ^d	7.8	8.7	9.0	11.3	(1.2)	(2.6)
Pineapples						
Trend	6.3	7.1	6.3	7.1	--	--
SSC ^d	8.4	10.1	10.4	13.3	(2.0)	(3.2)
Potatoes						
Trend	7.9	8.3	8.1	8.5	(0.2)	(0.2)
SSC	10.0	11.2	12.5	14.9	(2.5)	(3.7)
Tomatoes						
Trend	34.2	41.2	34.2	41.2	--	--
SSC	34.5	41.4	43.2	47.4	(8.7)	(6.0)
Onions						
Trend	6.0	7.7	7.2	8.3	(1.2)	(0.6)
SSC	6.0	8.0	8.7	10.6	(2.7)	(2.6)
Coffee						
Trend ^e	5.5	5.8	4.6	5.2	0.9	0.6
SSC ^d	5.5	6.0	7.0	8.4	(1.5)	(2.6)

Source: Merrill, William C. and others, 1975, pp. 96, 99, 111, 118.

^aPotential projections are based on Phillips, Richard., Needs and opportunities for improved grain marketing in Panama during the decade ahead. Report 28, Food and Feed Grain Institute, Kansas State University, Manhattan, October 1971. The projections of potential corn production in 1980 include 85,700 tons of sorghum. The projections of potential corn consumption include estimates of the amount of corn and sorghum required for livestock and poultry feeds.

^bThe trend projections of corn consumption do not allow for additional corn or sorghum needed to supply an enlarged livestock and poultry production.

^cThe linear trend projections are based on data from the Direccion de Estadistica y Censo, C ntraloria General de la Republica, Panama.

^dThe projections are presented in: Randall A. Hoffmann, Agricultural Sector Analysis and Planning, Panama, end of tour report, USAID, April 1971.

^eBased on 1960-70 data.

as a second crop. The initial results of this program are encouraging. It seems likely that within the next five years, producers will develop enough knowledge of different varieties, proper timing, and disease control to produce sorghum successfully. If so, the annual combined production of corn and sorghum could be nearly 160,000 metric tons by 1980. If this is the case, there will be no need to import corn for poultry feeds by the late 1970s.

The possibility of eliminating the projected deficit in bean production seems remote. The projections of imports in 1975 range from 3,400 to 5,800 metric tons, while those for 1980 range from 5,000 to 6,800 metric tons.

Prices of edible beans are likely to increase, but this is not expected to have a significant impact on production.^{2/}

In regard to egg production, it is projected to continue to be less than demand. It is estimated that by 1980 egg imports will account for 5% to 20% of total consumption, depending on the vigor of the government's efforts to maintain stable egg prices.

For potatoes, onions and other items shown in Table 2, the need to improve their production conditions is obvious.

In a broad sense, it is clear that in regard to the capacity of the agricultural sector to meet the demand for agricultural products in the near future there is much to be desired.

3. Employment situation

A look at the agricultural sector in terms of employment characteristics will be useful to stress the need to promote its development.

Table 3 indicates the sectoral composition of employment in Panama.

Total employment rose from 300,000 in 1960 to 433,000 in 1970, an increase over the entire period of almost 50%, or an average annual increase of

Table 3. Sectoral composition of employment

Sector	Employment by sector				Growth per year 1960-70 (%)
	1960		1970		
	No. (000)	%	No. (000)	%	
Agriculture ^a	150	50.0	158	36.5	0.52
Manufacturing ^b	22	7.3	48	11.1	8.11
Construction	10	3.3	24	5.5	9.15
Trade	26	8.7	49	11.3	6.54
Transportation ^c	9	3.0	16	3.7	5.92
Finance ^d	3	1.0	7	1.6	8.84
Services ^e	59	19.7	105	24.2	5.94
Utilities ^f	1	0.3	4	0.9	14.87
Housing	--	--	--	--	--
Canal Zone	18	6.0	22	5.1	2.03
Total	300	99.3 ^g	433	99.8 ^g	3.74

Source: Merrill, William C. and others, 1975, p. 9

^aIncludes crops, livestock, forestry, and fishing

^bIncludes mining

^cIncludes storage and communication

^dIncludes banking, insurance, real estate, and other financial activity

^eIncludes public and private services and public administration

^fIncludes electricity, gas, water, and sewage

^gNot equal to 100% due to rounding.

almost 4%.*

More workers are employed in the agricultural sector than in any other. Nevertheless, the share of the labor force working in agriculture has declined substantially from 50% in 1960 to 36.5% of total employment in 1970. The number of farm workers rose only slightly from 150,000 in 1960 to 158,000 in

*These data pertain to the labor force defined to include persons 15 years old or older.

1970. This change corresponds to an average annual increase of only 0.5%.

In addition to the fact that the agricultural sector has the lowest rate of annual increase of employment compared with the other sectors of the economy, a high level of underemployment is present in the agricultural labor force. Clearly, family workers on farms of size considered small, are unlikely to be fully employed. While some of this excess labor is utilized as hired labor on large farms and in off-farm employment, substantial underutilization surely remains.

Results of a study made by ILO (International Labor Organization) indicate that 23.6% of available work time of the agricultural labor force was not required for production in 1970; it represents the equivalent of about 44,000 full-time workers.^{3/} Underemployment was defined as the percentage by which available labor time exceeded labor requirements. This provides some indication of the amount of labor that could be withdrawn from the agricultural sector without reducing production and without substituting other inputs. These facts give us an idea of the need to develop economic strategies to make the agricultural sector work more efficiently. However, development of the agricultural sector should not be taken as an isolated goal; collateral strategies of industrial development are required to assure not only agricultural growth but overall economic growth. The following facts will help to stress this point.

Since the 1950s there has been a strong migratory movement from the rural to the urban areas especially the cities of Panama and Colon, where the industrial development of the country has been concentrated.* Even though the

*Some attempts--laws offering special economic incentives to promote establishment of industries in the countryside--have been made to decentralize the industrial activities in the country and to help solve the migration problem; but in general terms these attempts can be considered unsuccessful. Although several industries have been established in the countryside, they are

government has made efforts to incorporate these people who have already left for the urban areas due to the inadequate conditions of the rural areas (promoting development of the manufacturing, construction and other sectors in the economy), the attempts have not been enough to solve the problems. The socio-economic situation in urban areas gets worse. The national unemployment rate is about 7% of the work force. In the metropolitan area, however, 10% or more of the labor force is unemployed.^{4/}

Furthermore, it is considered that even though the manufacturing sector continues its dynamic growth (see Tables 1 and 3) the problem will continue in the metropolis since the migrants from the rural areas are unskilled labor and so far adequate training programs have not been provided or organized by the government to overcome this difficulty. This point is complemented by Merrill when he states ". . . in the 1970s unskilled, rural migrants are likely to find, even more than in the past years, that low income service and trade occupations offer their only point of entry into the urban work force."^{5/}

It should also be remembered that this migratory movement and the inability of the economy to incorporate the migrants to economic activities have caused serious problems in the metropolis in regard to education, health and housing, the latter presenting the most difficulties.

In conclusion, it is obvious that the Panamanian agricultural sector is facing serious difficulties. These problems, far from being particular to the sector, originate, at the same time additional difficulties in other sectors of the economy. Consequently, a need exists not only to design adequate

*con't.

capital intensive industries, and even though some degree of decentralization has been achieved, the migratory movements have not been stopped. The reason seems to be that the economic incentives offered by the government have been guided to favor capital intensive and no labor intensive industries.

economic strategies to develop the agricultural sector but to develop an integrated economic policy to help the agricultural sector overcome its critical current situation and, at the same time, to avoid or to reduce at a minimum any dislocation that the development of the agricultural sector may cause to the other economic sectors.

B. Failure of previous attempts to solve the problem of the agricultural sector

Selecting a strategy to aid development of the agricultural sector in a country depends heavily on the conditions that characterize the sector and, of course, on the national economic goals to which the government has assigned priority in its development strategy.

In Panama, several attempts have been made to improve the conditions of the agricultural sector. These attempts have concentrated mostly in government price support programs, import restrictions for different products to encourage their production, and credit programs. These programs, however, have been implemented in an isolated way without much concern with the structure and organizational base of the agricultural sector. Consequently, the gains obtained from them have been very limited and have just favored a small portion of the sector.

Table 4 shows the number and size of farms in Panama for 1960 and 1970.

As can be seen from Table 4, in 1970 there were 12,689 farms with less than 0.5 hectares. This group of farms included a total of 1,372 hectares, an average of .1 hectares per farm. Most of these farms are small plots used for family subsistence. Some of these farmers are employed in other work, mostly as laborers on large farms.

Table 4 also shows that in 1970 the largest number of farms was in the 0.5 - 4.9 hectare size class. This class contained more than 45% of the

Table 4. Number and Size of Farms, 1960 and 1970

Hectares	1960				1970			
	Farms		Area		Farms		Area	
	No.	%	Ha.	%	No.	%	Ha.	%
Less than 0.5 ^a	<u>12,441</u>	--	<u>n.a.</u>	--	<u>12,689</u>	--	<u>1,372</u>	--
0.5 - 4.9	43,692	45.8	95,655	5.3	41,307	45.5	75,110	3.7
5.0 - 49.9	45,021	47.1	664,622	36.8	41,145	45.2	662,019	32.8
50.0 - 499.9	6,568	6.9	674,420	37.3	8,200	9.0	838,460	41.5
500 and more	<u>224</u>	<u>0.2</u>	<u>371,755</u>	<u>20.6</u>	<u>290</u>	<u>0.3</u>	<u>443,779</u>	<u>22.0</u>
Subtotal, 0.5								
Ha. and larger	95,505	100.0	1,806,452	100.0	90,942	100.0	2,019,368	100.0
TOTAL	107,946	--	--	--	103,631	--	2,020,740	--

Source: Merrill, Williams C. and others, 1975, p. 61.

^aNo information on land use by these microfarms was reported in the 1960 census nor in the preliminary results of the 1970 census.

farms but less than 4% of the land area in farms. The 5.0 - 49.9 hectare size class also contained 45% of the farms but accounted for 33% of the total farmland. Taken together, these two small-farm size classes included 99% of the farms but only about 37% of the farmland.

Large farms in 50.0 - 499.9 hectares size class accounted for 9% of the total farms and over 40% of the land area in farms. Only 0.3% of the farms were 500 hectares or larger; yet, these included 22% of the total farmland. Taken together, the two large-farm size classes contained about 10% of the farms but more than 63% of the land area in farms.

The data above expose clearly the fact that land distribution is very uneven. It is also a fact that "income potential is related to size of farm..."^{6/} These facts help explain why government price support programs, import restrictions, and credit programs have benefitted a limited number of farmers.

In the case of credit programs it is known that the financial institutions and agencies' requirements are very rigorous; in order to get loans the farmer has to prove that he can pay them back. In this case benefits of credit programs go mostly to large farms due to the fact that farmers owning them are the ones who meet the requirements needed to get financial assistance. The small family farms which are in great need of improvement have been almost completely at the margin of these programs.

In regard to price support programs and import restrictions they are good for farmers with capacity to produce such protected products on a commercial scale obtained a marketable surplus through which the benefits of such programs are achieved. This, again, does not benefit the bulk of the farmers; figures shown in Table 5 support this point.

Table 5.- Value of Sales by Farm Size, 1970.

Farm Size Class (ha.)	Number of Farms	Number of Farms with No Sales	Number of Farms with Sales Between:			
			B/1-99	B/100-499	B/500-4,999	B/5,000 & more
Less than 0.5	12,689	10,609	1,717	300	52	11
0.5 - 4.9	41,307	21,728	13,320	5,068	1,155	36
5.0 - 49.9	41,145	14,527	11,806	9,320	5,204	288
50.0 - 499.9	8,200	2,266	906	1,483	2,732	813
500 & more	290	66	3	11	30	180
TOTAL	103,631	49,196	27,752	18,882	9,173	1,328

Source: Merrill, William C. and others, 1975, p. 67.

Note: B/1.00 = \$ 1.00

Of the total of 103,631 farms, 95,141 (92%) are in the first three categories which form the group of small farms. 49% of those 95,141 farms had no sales in 1970, 28% had sales from B/1-99, 15% had sales from B/100 - 499, 7% had sales from B/500-4,999 and .003% had sales of B/5,000 and more.

In relation to large farms, 27% of them reported no sales, while the rest (73%) reported sales in the different ranges shown in the table.

It seems reasonable that a solution to the problem would be to increase the size of the farm unit. Indeed, this would help to solve the problem but two things should be taken into account: first, it is a necessary but not a sufficient condition to the problems of the agricultural sector; second, some guidance (particularly from the government) is necessary if good results are to be achieved. The latter becomes very important when we look at past experiences in Panama: "the process of land redistribution that took place between 1960 and 1970 appeared to follow a pattern. The number of small farms decreased somewhat as farmers with insufficient land migrated to the urban areas. Other small farmers relocated in newly

opened areas... these changes represent the classic progress by which small farmers move out and their lands are consolidated by other farmers into larger units."^{7/} Obviously this land redistribution approach described by Merrill only helps to worsen the problems mentioned earlier regarding the consequences of rural migration.

C. Current government strategy to solve the agricultural problem.

Some action was required to promote the development of the agricultural sector. Cooperative farming has been the most recent strategy followed by the government. In 1969, after the military coup, the government initiated a program to establish semi-collective production cooperatives (called asentamientos) as the basic economic unit in the agricultural sector.

The program, based on a process of land expropriation whereby land is redistributed among peasants to assure a more equitable distribution of the resource (see Table 6), is to be developed in three phases:^{8/}

1. The first stage is called "pre-asentamiento" and begins when the land is expropriated. This phase is supposed to last from 2 to 3 months, during which information is obtained about the people who will be settled in the asentamiento. Afterwards, these people are instructed about the program and their role in the process. In this stage, the main goals are the "concientizacion"* of the peasants and the organization of the asentamiento.

2. The second stage begins when all the members of the asentamiento sign the legal document which states the formal

* This term refers to the process of orientation to make the members of the asentamiento conscious about the nature and importance of the program in which they are going to participate as well as their role in the overall process.

Table 6. Land Tenancy by Size of Farm, 1970

Farm Size Class (ha.)	Total		With Title ^a		Rented ^b		Without Title	
	Farms	Area	Farms	Area	Farms	Area	Farms	Area
0.5 - 4.9	41,307	75,110	4,751	8,985	5,913	10,567	30,643	55,558
5.0 - 49.9	41,145	662,019	9,221	174,399	2,444	34,573	29,480	453,047
50.0 - 499.9	8,200	838,460	3,908	479,321	296	30,967	3,996	328,172
500 and more	290	443,779	239	327,315	19	126,231	32	66,340
TOTAL	90,942	2,019,368	18,119	990,020	8,672	202,338	64,151	903,117

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Source: Merrill, 1975, p. 64.

^aIncludes mixed tenancy if farmers owned some land

^bIncludes farms with some land rented and some farmed without title

creation of the Asentamiento (Acta de Asentamiento) and elect the first committee (Comite de Asentamiento) which will represent them before the land reform agency (Comision de Reforma Agraria). During this phase, which should not last longer than five years, the government is committed to support the program providing technical assistance, cooperative education, agricultural credit and any other kind of assistance needed by the peasants in terms of the organization of the asentamiento and the economic operations and activities regarding production. During this period, the land reform agency retains title to the land.

3. The third phase is crucial for the program. In this stage, the members of the asentamiento together with the land reform agency, will decide if the asentamiento is to be operated as a permanently cooperative semi-collective enterprise or subdivided into individual farms.

III. OBJECTIVES AND HYPOTHESES OF THE RESEARCH

III. Objectives and Hypotheses of the Research.

The objectives of the research are:

1. To study the emergence and development of the semi-collective production cooperatives program sponsored by the Panamanian government ("asentamientos"), with special reference to:
 - a) the way in which the process fits within the overall process of cooperativism in Latin America
 - b) the role that the Panamanian government has played in the process
 - c) the way in which the semi-collective cooperatives are internally organized
2. To find out if the new way of organizing agricultural production (creation of semi-collective production cooperatives) has brought efficiency in the use of resources
3. To suggest ways of actions to be taken in both the internal organization and public policy aspects to improve the semi-collective production cooperatives' performance.

Three hypotheses are to be explored:

1. The creation of the "asentamientos" program has achieved some degree of efficiency in the use of the factors of production
2. Specific revision in the public policy regarding the "asentamientos" program can be identified which would improve the semi-collective cooperatives performance
3. Specific revision in the internal organization of the "asentamientos" can be identified which would improve their performance

IV. TABLE OF CONTENTS FOR THE RESEARCH

IV. Table of Contents for the Research.

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Explaining the Table of Contents.

Introduction

The introduction will consist of a brief explanation regarding the purpose of the research, the reasons why the subject selected was considered important and the methodology to be followed while doing the research.

Chapter I. General trends of cooperativism in Latin America

In this chapter, what we consider the main directions that cooperativism has followed in Latin American countries will be exposed.

First, cooperativism will be identified as a form of intellectual colonialism. In the first section of the chapter it will be shown - through some historical background - that the cooperative movement in Latin America was nothing else than an invitation of the European patterns without enough or no adjustment at all to the Latin American reality.

Second, cooperativism will be analyzed as an example of "top to bottom" policy in Latin America. It will be explained that the cooperative movement in Latin America did not emerge from below and that cooperatives were generally imposed from above.

Third, cooperativism in Latin American will be studied as a tactic used by governments as palliatives to overcome peasant dissatisfaction during periods of economic or political crisis.

Finally, some comments regarding the emergence and development of production cooperatives in Latin America will be made. Thus, the specific case of production cooperatives, which are of capital importance for the purpose of this research, will be explained in a more detailed way to provide the background and insight necessary when studying the Panamanian case.

The purpose of this chapter is to present a general framework within which the cooperative movement in Latin America has emerged. This will show its main weaknesses and will provide a general basis for a better understanding of the reasons why many cooperative programs have failed in Latin America. This will provide the analyst with the background necessary to make a more critical and reliable evaluation of any cooperative program, by taking into account not only economic factors in the analysis, but also the social and political considerations that have played a very important role and affect the program performance.

Chapter II. Production cooperatives in Panama.

The purpose of this chapter is to study the emergency and development of production cooperatives in Panama and to compare it with the Latin American experience.

It will include a detailed explanation regarding the nature and development of the specific program that is the subject of this research - the "asentamientos" program - , but also a general description of previous attempts, which culminated with the emergence of the program studied, will be done.

To finish, a comparison between the overall Latin American experience and the Panamanian case will be made to show how the latter fits within the former. Having stated in the previous chapter the main factors influencing the development of cooperatives in general and of production cooperatives in specific, this comparison will help to identify the relevant factors to be included when analyzing the Panamanian case.

Chapter III. The "asentamientos" program and the achievement of efficiency in the allocation of resources. Theoretical economic framework.

The purpose of this chapter is to expose the theoretical basis relating large-scale units and efficiency in the allocation of resources. An exposition of theoretical positions regarding the topic is to be made to show the main lines of thought to this regard, the limitations and advantages of large-scale units in the achievement of efficiency in the allocation of resources and in overall economic efficiency.

Chapter IV. Case studies.

In this chapter we will study a sample of the "asentamientos" that operate in Panama.

For each case, we will study aspects of their internal organization as well as the role the government has played in promoting and supporting it. The inclusion of these two aspects when analyzing the different "asentamientos" is based on the importance that these aspects have for the economic performance of the "asentamientos."

Also, an idea regarding efficiency in the allocation of resources for each of the individual cases is intended to be given and, finally, it will be tried to measure if efficiency in the allocation of resources has been obtained by the "asentamientos" program as a whole.

V. METHODOLOGY

Methodology

V.

General Approach

The general methodological tool to analyze the asentamientos program will be the study of cases. This method is thought to be the most appropriate for mainly two reasons:

First, the Asentamientos program began to be an issue of Agricultural Economic Policy in 1969 and it was not until the end of that year that the creation of asentamientos was initiated. As it was stated before when explaining the nature of such a program (Chapter II. - Identification of the Problem), the first years after the creation of the cooperative are mostly spent dealing organizational matters. Furthermore, the last Agricultural Census in Panama was done at the middle of 1971, roughly one and a half year after the Asentamientos program was created and when such a program was passing by the organizational stage to which we referred above. Thus, it is obvious that in the census material — and consequently in the governmental agency in charge of statistical activities — there is not sufficient information regarding some of the economic information needed to analyze the problem at hand.

Second, there does not appear to be studies available that concentrate on the Panamamian asentamientos at the desired level of inquiry, i.e. studies that will describe and analyze the economic conditions of the asentamientos and, at the same time, provide an understanding of some of the non-economic variables that influence the asentamiento as an economic unit.

Three aspects of the asentamientos program are important to this research: the internal organization of the cooperative, the role of the government in the promotion and support of the program, and the efficiency in the allocation of resources that the new kind of agricultural organization (production cooperative) provides.

For the first two aspects the emphasis of the research will be mainly in understanding not on measurement. The way in which the internal organization of the coop is influencing its performance as well as the member's viewpoint regarding the internal organization will be explored. The same approach is to be made for the case of the role of government. The information regarding these aspects is to be obtained through questionnaires and interviews. A complete description of the organization of the asentamiento and the participation of government will be made before starting to analyze each of the case studies. The questionnaires are applied to find out about the member's and manager's opinion on the already described structure and government role.

For the last aspect — efficiency in the allocation of resources that the new kind of organization provides — questionnaires and regression analysis constitute the basic tools to obtain the necessary information and to analyze the situation.

Descriptive indicators of efficiency for the overall operations of the asentamiento* are to be given and a slight comparison with the situation of the peasants before becoming members of the cooperative will be included. The information necessary regarding the asentamientos and the previous situation of the cooperative members is to be obtained through questionnaires.

The indicators which are thought to be adequate in showing efficiency in the overall operations of the asentamiento are yield per hectare of land harvested and yield per man/day of labor utilized; residual labor earnings; ratio of sales to production; return on investment; net real income and gross income.

For the first two indicators, total production is to be divided by total hectares harvested and by total amount of man/day used, respectively.

*Efficiency in the overall operations of the cooperative is assumed to be obtained because of the efficiency in the use of resources that the new kind of organization provides; thus, such indicators will show, at the same time, efficiency in the allocation of resources.

Residual labor earnings (net real income + imputed labor costs) gives an idea of that which is residual after the contribution of all other factors has been accounted for, either explicitly or implicitly. Such an estimate provides a measure of the payment to the cooperative members for both his routine services and his entrepreneurial functions. Ratio of sales to production (total sales \div total production) will provide us with some idea regarding the trends of marketable surplus production.

Estimated return on investment (real net income \div value of machinery, tools and implements) will give an idea of the return per unit of capital invested. It excludes the value of the land used since land is not bought by the asentamientos and decisions with regard to investment is whether or not to buy capital goods.

Net real income (total production - total expenses - imputed costs of land and labor) gives us the net profit after all money and implicit costs have been subtracted from the value of total production. As such, this figure represents the value added to national output by the cooperative as a whole. It represents the contribution of the cooperative to the economy during the period studied.

Gross income (total production - total money expenses) gives us an estimate of the income that accrued to the cooperative during the period under consideration. While real net income is taken to indicate the relative "pay-off" to the economy as a whole resulting from the activities of the cooperative, the figure of gross income represents the "pay-off" to the cooperative members themselves.

It should be kept in mind that the cooperatives to be included in the sample do not necessarily have to be in the same stage of development since they were not created at the same time; thus, intercooperative comparisons are to be

made to help understand the outcoming of the efficiency indicator for different cases to be analyzed.

The general test for efficiency in the use of resources is indicated by the equation:

$$\frac{MP_a}{P_a} = \frac{MP_b}{P_b} = \dots = \frac{MP_n}{P_n}$$

where

MP_a = marginal product of factor a

and

P_a = price of factor a,

which signifies that the ratio of the marginal products of the various factors to their prices should be equal in order to achieve the best allocation of the factors.

This general test of efficiency in the allocation of resources is to be made by means of regression analysis. The variables to be included are: total production as the dependent variable; total hectares of land cultivated; total man/days worked, and capital as the independent variables.

The regression coefficients provide us with the estimates of the marginal products of the various factors since the partial derivatives of the total function with respect to any factor yields the regression coefficients.

Then, by obtaining the ratios of $\frac{MP_x}{P_x}$ for the three factors included in the regression and comparing them, an indicator of efficiency in the allocation of resources for the whole sample studied will be obtained.

At this point, it is necessary to reconcile the previous measures of so-called efficiency obtained for the individual cooperatives and the one obtained by regression analysis for the entire sample, to draw conclusions regarding the allocation of resources. Also, insights obtained regarding the internal organization of the cooperative and the role of the government are to be taken into account at this point since they are of great influence for the economic performance of the cooperatives.

Selection of The Sample

Sampling operations for this research are to be done at two levels: first, at the asentamientos level to determine which asentamientos are to be analyzed; second, at the cooperative members level, to determine to which members of the asentamientos already selected are the questionnaires going to be applied.

Regarding the selection of the sample at the asentamientos level, we have to decide about the agricultural activity of the asentamientos to be analyzed. Will the sample include cooperatives dedicated to different productive activities or are the asentamientos studied to be involved in the same agricultural operations?

To this respect, it is thought that since most of the asentamientos are dedicated to rice production — in 1972, 92% of the cultivated land under the asentamientos program was dedicated to rice production^{1/} — the sample selected should include only asentamientos performing this activity. Thus, conclusions obtained in the study would be representative of the whole asentamientos program and the study would also be of great importance for the Panamanian Economy since

rice is one of the main crops of the country and a basic component of the Panamamian daily diet.

Once this decision is made, the way in which the samples are going to be selected is relevant. For both the asentamientos sample and the cooperative members sample, the selection will be done in a completely random manner. The Comision' de Reforma Agraria (Land Reform Agency) have the registration records of creation of the asentamientos as well as their economic activity and the number and names of members. Thus, regarding the asentamientos to be studied, a random sample of rice producers asentamientos will be drawn from the Land Reform Agency list; then, from the list of members forming the asentamientos already selected, a random sample will be drawn to choose the members to whom the questionnaires are to be applied.

In relation to the sample size, no information can be given at this point since it heavily depends on time and budget considerations, aspects which are not out of the scope of the present proposal.

It should be emphasized at this point that the sample will include only asentamientos which are in Stage 3 (see Chapter II. Section C, that is, Permanent Semi-Collective Production Cooperatives).

Questionnaires and Interviews

After studying and searching on the nature, emergence and other factors related to the asentamientos program to gain a good understanding of it and after having reviewed other studies referring to programs of the same nature (principally in other Latin American regions) the interviews to be made and the questionnaires to be applied will be designed having in mind, also, the general objectives of the research.

Two questionnaires are to be designed. One, which will be applied to the

managers/administrators of each of the asentamientos included in the sample of asentamientos that will be studied. This questionnaire will have three sections dealing with economic aspects of the cooperative, internal organization and role of government, respectively. The purpose of this questionnaire is to get some information needed to draw conclusions regarding efficiency in the allocation of resources in the cooperative besides other general economic information and to obtain, also, the opinion and comments of the staff of the cooperative regarding its internal organization and the government role. This questionnaire is to be applied to the managers/administrators for two reasons: first, because we are interested in knowing their opinion regarding two of the important aspects of this research and, second, because being a cooperative organization the economic unit of this research, the records are kept commonly for the whole asentamiento by the administration and not by the members of the cooperative individually.

The second questionnaire will be applied to the members of the cooperative which are included in the members sample selected in each of the cooperatives to be studied. The purpose of this questionnaire is to obtain a general idea about the economic situation of the peasants before becoming members of the cooperative and to know about their opinion of its internal organization and the role of government. It is thought that comparing the figures on the economic situation of the cooperative and the ones provided by the peasants regarding their previous situation some comments and generalizations on efficiency and improvement can be made.

In addition to the questionnaires that will be applied to the members and managers/administrators of the cooperatives, some interviews will be made to functionaries of Government Agencies somehow related to the Asentamientos program. Depending on the relationship of the Agency with the asentamiento.

the content and focus of the interviews will vary. The government agencies whose functionaries are thought to be subject to interviews are: Comision' de Reforma Agraria (Land Reform Agency), MIDA (Ministry of Agricultural Development), Banco Agropecuario (Agricultural Bank), Banco Nacional (National Bank), Oficina de Regulacion' de Precios (Price Regulation Agency).

Tentative examples of the two questionnaires referred to above follow. Examples of the interviews to be made to functionaries of government agencies are not added because of the lack of knowledge of the relationship of such agencies with the program studied.

QUESTIONNAIRE TO MANAGERS/ADMINISTRATORS

1. Total area occupied by the "asentamiento"? _____
 a. Communal land dedicated to rice production? _____
 b. Individual plots? _____
2. How many families form the "asentamiento"? _____
3. Machinery and equipment in the "asentamiento"? _____

Item	# of units	Original Value	Present Value	Age	Deprec.	Days used during the per. consid. in study
Vehicles						
Harvestors						

4. Use of Improved Inputs

Item	Quantity Used	Total Cost
Seeds		
Insecticides		
Fertilizers		
⋮		

5. Water Use

Origin	Volume	Cost	Area Irrigated

6. Labor

Type of Worker	Days Worked	Daily Wage	Total Wages Paid or Imputed
Asentamiento Members			
Non-members			

Asentamiento Members			
Non-members			

7. Production

Variety	Total Production	Hectares Harvested	Yield/Hectare

8. Commercialization of Production

	Sold to			
	Government	Intermediaries	Consumers	Other
Amt. of sales				
Value of sales				
Price Per Unit				
Place of Sales (asentamiento, local market, etc.)				
Means of Transportation				
Cost of Transportation				

9. Cash Expenditures

Unimproved seeds	_____
Renting of machinery	_____
Electricity	_____
Gasoline & other fuels	_____
Taxes	_____
:	_____

10. Credit

Origin (source)	Amount	Utilization	Interest Charged

11. Is the "asentamiento " making any plans to expand its operation beyond the phase of rice production? (rice milling, etc.)

Which plans are they?

12. If you could introduce some changes regarding the organization of the "asentamiento ", would you emphasize on;

Land distribution pattern _____

Ways of selecting managers/administrators _____

Ways of distributing benefits among members _____

Participation of members on the "asentamiento. " activities _____

Other _____

13. For each of the aspects checked above, ask:

What changes would you introduce?

14. Do you think that the government has provided enough support in terms of:

Cooperative education _____

Financial Aid _____

Technical Assistance _____

Infraestructure _____

Price Stabilization Policies _____

15. What new lines regarding the aspects above do you think would be necessary to improve the "asentamiento " operations?

NOTE: Questions 12 - 15 can be regarded as interview-type questions.

1. Activity you were enrolled in before becoming a member of the
asentamiento _____.

3. Was the plot:

Owned _____ Rented _____ Other _____

4. Area cultivated _____ Area harvested _____

5. Yield _____

6. Labor

Kind	# of persons	# of months	Days worked	Daily wage	Total wage
------	--------------	-------------	-------------	------------	------------

Family
Labor

Father

Mother

Children

Others

Non-family
Labor

7. Machinery and equipment.

Kind	Cost
------	------

8. Other expenditures

Gasoline _____

Renting machinery _____

:

9. Sales

Quantity _____ Value _____

10. Estimated profit _____

Note: Questions 1 to 9 refer to figures of the last time the cooperative member was enrolled in agricultural activities before becoming a member of the asentamiento. The figures should refer to a period equal to the one considered in the study.

B. Questions regarding his life in the asentamiento and his opinion on several topics regarding the asentamiento's activities.

11. Time spent by you and your family working in the asentamiento.

Member	Days

12. Persons hired by the member to substitute him in his duties (labor quota) in the asentamiento. Yes _____ No _____

If yes,

Days worked _____ Wage _____

13. Do you or any member of the family work outside the asentamiento?

Yes _____ No. _____

If yes,

Member	Days worked	Wage

If no,

What sources of income, in addition to the participation in the
asentamiento profits do you have?

14. Which of the following items do you own: Stove _____
Radio _____
Refrigerator _____
:

15. What appliances would you like to have _____

16. Why you don't have it _____

Note: Questions 11 to 13 are important to show the degree on which
the member depends of the asentamiento. Questions 14 to 16 will give
an idea about the standard of living of the members.

C. Questions regarding the member opinion on the internal organization of the
asentamiento.

17. Do you think that you and your family are effectively participating in:

Production activities Yes _____ No _____

general administrative activities (participation on meetings, committees,
etc.) Yes _____ No _____

18. Do you think administrative activities are:

too centralized in managers/administrators _____

fairly shared among managers and members _____

19. Are the managers/administrators:

genuine representatives of the members' interests _____

working for their own interests _____

working for another people's interests _____, whose _____

20. Do you think that whenever a member wants to know about the financial operations of the asentamiento:

does he have enough access to the information _____

has little access _____

has no access at all _____

21. Regarding the land distribution pattern, do you think it would be better if:

all the land were collectively owned and cultivated _____

the land continues semi-collective as actually is _____

no asentamiento at all, and everybody would have its individual plot _____

22. Do you think the benefits that you and your family get from the asentamiento are:

what you deserve for your participation in the asent. _____

more than what you deserve _____

less than what you deserve _____

D. Questions regarding the member opinion on the role of government.

23. Do you think that the government:

has been of great help to the asentamiento _____

has been of little help _____

has been of no help at all _____

24. At the creation of the asentamiento, some orientation was given the members. Did you participate in such orientation process?

Yes _____ No _____ If no, why _____

25. Do you think the orientation emphasized more on:

understanding the new process in which you would participate _____

learning how to use and apply technical innovations (machinery, insecticide, etc.) _____

other _____

26. Regarding its effect in your activities in the asentamiento, how do you evaluate the orientation received:

Useful (of some or great importance) _____

Indifferent (no great importance) _____

Useless (no importance at all) _____

27. After the asentamiento began operations, have you and the other members in general received help from agronomists, extension agents, etc. regarding production activities:

often _____

scarcely _____

not at all _____

28. In terms of credit, do you think the asentamiento:

requires more credit to improve its economic situation _____

it is receiving enough but it has not been used properly _____

29. Has the government provided the asentamiento with enough:

accessibility roads, Yes _____ No _____

electricity, Yes _____ No _____

water installations, Yes _____ No _____

30. What do you think is more important to improve the situation of the asentamiento:

More credit _____ How to be used: Machinery _____

Improved inputs _____

other _____

More technical assistance _____

Schools and more education _____

More land _____

Other _____

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