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POSSIBILITIES FOR THE ECONOMIC REORGANIZATION OF MINIFUNDIA IN A HIGHLAND REGION OF COLOMBIA

BY

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All interpretations, recommendations, and conclusions are those of the author and not necessarily those of the supporting or cooperating organizations.

I. Introduction *

> When little is known, or only trivial items publicized, or when myths prevail, then plain description becomes a radical fact--or at least is taken to be radically upsetting.
>
> C. Wright Mills

People in the developed communities often have little or no understanding of the plight of their impoverished contemporaries. Above all, there is a failure to recognize the relationships between peasants and the greater society. Assistance programs usually ignore these important linkages with the result that outside development efforts often slight the rural masses--if not stymie them--in their struggle for a better life.

This report is an attempt to describe the mechanisms which link peasant families to other individuals and groups within the community

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and the larger society, and to document the consequences of these linkages.

Like many less-developed countries, Colombia is experiencing an increased crowding of peasants onto the land despite unprecedented flows of migrants from rural areas to cities and towns. Faced with limited employment opportunities in more progressive agriculture and in the incipient industrial sector, thousands of peasant families are being absorbed annually into the already densely settled rural areas of the country through continued land fragmentation, informal tenancy arrangements, land use intensification, and in some instances, declining levels of living. The vast majority of rural families do not earn sufficient incomes to provide their members with adequate levels of nutrition, housing, medical care, and education.

The Agrarian Reform Institute of Colombia (INCORA) claims to have given titles to 47,688 rural families and supervised credit to 11,169 families during its first five years of operation.[1] Even if the list of beneficiaries is extended to include those families who receive indirect benefits from INCORA, such as the construction of new roads, and to those who receive services from other agricultural assistance programs, the number still seems insignificant when compared to INCORA's estimate that 1,000 new rural families are being absorbed weekly into the agricultural sector.[2] The fact that most public assistance programs to rural people are promised either formally or informally on land ownership automatically excludes more than 450,000 landless worker and tenant families who represent 32.9 percent of Colombia's rural families.[3] In practice,

another one-third of the country's rural families (33.2 percent) who own "sub-family" size farms are also largely precluded from these programs.

This paper deals primarily with these two groups of rural Colombian families--the forgotten two-thirds who operate 57 percent of the country's agricultural land, but own only 6 percent of it. More specifically, the study examines possibilities for increasing agricultural production and improving family levels of living on peasant farms in the municipio[4] of Fómeque, located in the eastern part of the departamento (province) of Cundinamarca, in which most of the population is dependent upon minifundia agriculture. The major thrust of the analysis is directed toward the possibilities for increasing agricultural production and family incomes on these small agricultural units. An underlying premise is that the potential for increased performance of the minifundia hinges chiefly upon popular institutional reforms designed to improve the economic, political, and social linkage of the peasant families within the community and the greater society.

The Problem

While the long run structure of Colombian agriculture is likely to take the form of relatively large irrigated and mechanized production units located in the extensive intermontane alluvial basins of the country, the pattern for the foreseeable future will be a dualistic agricultural sector composed of both large farms and minifundia. The nonagricultural sectors of the economy are not providing effective alternatives for the labor force increase in zones of small-scale agriculture, and even fewer opportunities for the residual core of peasant families.

Despite an estimated average annual flow of approximately 200,000 rural-urban migrants[5] and a continued relative decline in the agricultural population, thousands of new rural families are being absorbed annually into the densely settled areas of the country through the process of land fragmentation. This demographic pressure not only adds further menance to the rapidly depleting resource base in minifundia regions, but appears to be leading toward decreased average levels of living in some areas.

In many communities, fragmentation has advanced to the point where further property divisions are not possible without declining levels of living unless yield-increasing technology is introduced simultaneously. And unless such technology is combined with a high level of conservation practices, intensive agriculture may only accelerate the soil depletion processes. Furthermore, fragmentation and intensive farming of the cloud forest zones in the higher altitudes of minifundia communities severely disrupts the hydrological system and hence agricultural production in the lower areas.

Many of the larger estates which once provided considerable employment to minifundia families through traditional patrón - client linkages have been subdivided into smaller parcels. Others are devoted to extensive grazing activities or mechanized agriculture and probably employ fewer people than in the past. To some extent, these traditional alliances have been replaced by informal contractual arrangements between landowning professionals and merchants of the village and small landowners or landless peasants of the hinterland. Handicraft activities which once offered viable employment alternatives to peasant families

appear to be facing strong competition from new urban industries.

Likewise, seasonal migration of agricultural laborers as a supplementary source of employment for minifundia families is being threatened by increased mechanization and labor surpluses in the former deficit areas. Even permanent migration to other rural areas or to urban areas does not provide a very remunerative alternative to minifundia agriculture if it offers no more than subsistence production and isolation on the frontier or continual unemployment and personal insecurity in the cities.

These pressures together with an increased exposure to the outside world are creating great frustrations among the peasantry as to how they can improve their position relative to other segments of society, or at least, resist further declines in their levels of living. These frustrations, in turn, suggest inevitable changes in the social order which, if not guided by rational policy decisions, are likely to be accompanied by more violence than would otherwise be necessary to grant a more complete economic and political citizenship to the peasants.

Professor Lauchlin Currie has attracted a considerable following with his "breakthrough plan" in which he advocates a rapid absorption of the peasantry into urban centers based largely upon middle class consumer goods industries, housing construction, and investment in urban infrastructure.[6] In this manner, he argues, excessive competition caused by too many small producers in the agricultural sector would be eliminated, and large-scale producers would be motivated to organize their farms like those in the developed countries.

On the other hand, research conducted in Colombia by the Land Tenure Center shows that the reluctance of many large landowners to make greater investments in their agricultural operations is not because of competition from minifundia, but because their primary interest in the land tends to be for power and prestige, an inflationary hedge, income diversification, and tax write-off purposes rather than for production.[7] For others, investment in agriculture appears to be thwarted by the paucity of managerial talent, relevant technical information, and remunerative inputs.[8] The limited size of the domestic and world markets for agricultural products under the present income distribution also constitutes a drag on agricultural investment, and investment incentives are further stifled by certain characteristics of the internal product market structure--the wide price fluctuations for most commodities, a minimum amount of product grading, and limited processing and storage facilities. Historically, however, the large landlords have controlled the country's best land resources[9] as well as most of the agricultural credit[10] and technology.[11] Over one-third of the country's agricultural land is owned by absentee landlords,[12] and the proportion commonly exceeds one-half in some of the best agricultural areas of the country.[13]

Research in the urban areas of Colombia indicates that additional employment opportunities in manufacturing are not keeping pace with the internal growth of the cities--let alone the rural-urban migration--and that most new jobs are being created in the relatively unproductive

services sector.[14] In view of the unprecedented national population growth rate of 3.2 percent and the backwash effects created by the mechanization of formerly labor-intensive operations, it seems likely that the agricultural sector will continue to absorb increasing numbers of peasants until more remunerative employment alternatives are generated in the nonagricultural sectors of the economy.

Objectives of the Study

The purpose of this presentation is not to specify the types of economic organization and peasant linkage which would be necessary to maintain small-scale intensive agriculture into perpetuity. Rather it is: 1) to describe the internal and external influences which have molded the contemporary setting; 2) to recognize existing and potential conflict situations of manifest differences between reality and the felt needs of the peasantry; and 3) to evaluate the alternatives for satisfying their changing set of expectations. Thus the study emphasizes how a better understanding of the processes of change in a peasant community can suggest more effective policies for increasing the participation of the rural masses in the greater society. Changes in the economic organization of the peasantry are considered at two levels of analysis: 1) the production unit and the peasant family, and 2) the community and the larger collectivity.

The specific objectives are:

1) to describe the present economic organization of the minifundia, including the types and combinations of inputs used in the family and farm concerns and the institutional arrangements which influence the

II. THEORETICAL AND CONCEPTUAL FRAMEWORK

Some Impediments to Change

Under the present circumstances the Colombian peasantry is confronted with a number of highly interrelated cultural, sociological, and psychological impediments to the widespread supply and continuous innovation of high payoff factors of production. Foster describes these impediments as "an outmoded world view", meaning that the peasants' implicit assumptions concerning the conditions which delimit and determine their everyday affairs are increasingly outdated in relation to contemporary situations. Foster also mentions other barriers to change, including the lack of knowledge and restricted access to information about the contemporary world coupled with continuing exploitation of the peasantry by the superordinate groups of society.[15] Moreover, there are physical and economic constraints to the supply and adoption of new agricultural inputs, including the natural limitations of climate, soils, and location as well as the external demand for the products of an area.

In a modern society, where both economic sucesses and failures are permitted through constantly changing opportunities, peasants are ill-equipped to evaluate new situations and select fruitful alternatives. The process of development involves changes in an individual's understanding of the roles and conditions that govern his life. Development also implies changes in the rules and conditions themselves; old customs and institutions are modified or abandoned and new forms of behavior are adopted. New interpersonal relationships, a different

set of roles and expectations for behavior, and changes in the cognitive orientation of individuals make possible new resource combinations or new resource proportions of complementary and limiting factors.[16]

Commons referred to these rules which guide and restrain individuals in their (economic) transactions as the "working rules of going concerns".[17] In his words, "... the working rules of associations and governments, when looked at from the private standpoint of the individual, are the source of his rights, duties and liberties, as well as his exposures to the protected liberties of other individuals."[18] All societies have working rules which govern individuals in their transactions, but the particular form in which the rules exist varies substantially from one society to another or among groups within a society. There are both <u>implicit</u> rules including norms, customs, and common laws and <u>explicit</u> rules such as statute laws and organizational regulations. Working rules are further distinguished by an <u>ideal</u> set of expectations which, in turn, contributes guidelines for manipulating the <u>real</u> or operational set of expectations.

Potential conflict situations exist when transactions occur between individuals or groups who do not share the same set of working rules, or when there is wide divergence between the ideal and real sets of expectations in transactions between individuals or groups sharing a common set of working rules. Even though the development process itself seems to derive at least some of its momentum from potential or actual conflict situations,[19] a successful development program must include the means for resolving conflicts by fostering

the kinds of cognitive orientation and working rules that encourage new resource combinations and higher levels of living for the masses of society. An examination of the conflict situations in peasant communities can provide some understanding of which institutions are hindering development and which working rules might be modified to accelerate the development process.

Perhaps no other working rules influence peasant agriculture to the extent that land tenure institutions do. The patterns of ownership and control of land resources in peasant communities vary from those in which most of the peasants are landless laborers, service tenants, or share tenants on haciendas or plantations to those where the majority of the peasants are owner-operators or renters of small parcels of land created through the subdivision of traditional estates or indigenous communal lands and further fragmented by inheritance. In both extremes, however, the peasants are asymmetrically linked to the greater society through dominant groups--landlords in the former case, and merchants, peddlers, moneylenders, teachers, doctors, lawyers, and priests in the latter case--who extract surpluses from the peasantry to underwrite their own levels of living and positions of power and prestige.

Peasants with little or no permanent access to land are not only at the mercy of their superordinates for income-earning opportunities, but also are effectively denied the political and social rights associated with the ownership of a viable economic unit. These latter rights are what Penn calls the "ownership of govennment--the right to tax, the right to judge, the power to enact and enforce police regulations."[20]

Closely related to land tenure institutions, then, are those working rules by which local people organize to provide collectively the infrastructural needs which cannot be supplied individually. The political power in most peasant communities usually is concentrated in the hands of a few authority holders who make most of the decisions regarding the collection and disbursement of local revenues. Instead of being channeled into rural projects for which peasants express a need, a disproportionate share of public funds are used to support a local bureaucracy and projects in the village.[21]

Concurrently, there is an absence of real cooperative mechanisms through which peasants could formulate specific goals and execute action programs to attain these goals.

However, examples of instrumental peasant organizations do exist in Colombia. In a study of a peasant community in southern Antioquia where the traditional latifundia-minifundia complex had been disintegrated, Havens documented the role of several instrumental voluntary associations in the development of the community.[22] Acción Comunal, the government-sponsored community action program, has involved peasants in a number of economically successful community development projects throughout the country.[23] Unfortunately, the demise of these voluntary associations has often been cooptation or frustration by local and national elites.[24]

The imperfect political linkage of peasants to other groups in society severely restricts the scope and quality of the agricultural service structure in peasant communities. Agricultural service institutions normally taken for granted in the developed countries are gros-

sly inadequate and outmoded for modernizing the agriculture in peasant communities.[25] While modern agriculture becomes increasingly dependent upon off-farm conditioning factors--research, communication media, transport and marketing facilities, credit and financial services, legal assistance, and social services--very little research is directed specifically to the problems of peasant agriculture. In Colombia, the development, importation, and supply of most new agricultural technology is controlled by the country's powerful landowning interests and the federated commodity corporations.[26] In those peasant communities where new inputs are available, they are frequently of inferior quality or not supplied in high payoff combinations. Furthermore, low product prices fixed in the interest of urban consumers, unstable product prices, a high incidence of natural calamities, and heavy traditional liens against peasant production create unremunerative cost relationships.

These deficiencies in the agricultural service structure force peasants to commit their own limited land and capital resources to traditional subsistence enterprises and to supply their excess labor to the production of commercial enterprises through informal contractual arrangements with village merchants, middlemen, and professionals. While these liaisons may benefit peasants by reducing the risks of commercial production and providing income-earning opportunities for their surplus labor, such links also represent a continued exploitation of the peasantry by unscrupulous individuals who monopolize the political processes of the community.

Social institutions set the affective and cognitive orientations

of an individual and, in turn, these influence his evaluations of new situations and his selection of alternatives.[27] As peasant communities are subjected to an increasing number of endogenous and exogenous forces of change, individual orientations are altered. But when the major institutions of socialization--the family, religious, educational and health systems--are strongly influenced by elite groups as in peasant communities, changes in individual orientations occur very slowly. For example, the peasant family, because of its precarious economic position, socializes its members with traditional norms and values which are reinforced by customary horizontal and vertical linkages. The Church also plays an important role in the socialization of the individual through the dissemination of religious doctrine and control over the accumulation and reinvestment of wealth in peasant communities. Likewise, the educational and health systems of peasant communities are often used by elites to maintain the traditional social order.

Perhaps the most important types of individual reorientation result from educational and employment experiences outside the community and from an infusion of ideas, customs, styles, and technology into the community. These contacts with the outer world, especially the urban areas, encourage new forms of individual and collective behavior which threaten the existing social order.[28] If this deviant behavior occurs on a wide front and is not dissipated by the elites through frustration or attrition, it can catalyze irreversible change in the social structure and foster a thorough-going economic reorganization of peasant agriculture.

The Process of Economic Reorganization

The foregoing discussion suggests that peasants are locked into a chronic state of poverty which previous development schemes have failed to alleviate. Unless an entirely new development approach is implemented to provide remunerative income-earning opportunities and higher levels of living for the rural masses, the resulting conflict situations are likely to evoke violent means of change. A successful development policy within a democratic framework must supply the means by which the rural masses can participate actively in the resolution of conflicts and in the creation of working rules that stimulate new resource combinations.

Changes in the behavioral and physical relationships of peasant agriculture are the essence of the economic reorganization process of the minifundia. Through the erosion of traditional barriers to change and the creation of a different incentive system, new sources of permanent income streams are generated. As the peasants recognize the profitability of these new factors of production they will adopt the improved technology[29]--with profitability as the difference between perceived benefits and costs measured in terms of economic, political, and social criteria.[30]

The modernization of peasant agriculture depends to a large extent upon the availability and cost of nontraditional agricultural inputs. For this reason, Schultz has suggested that the suppliers of these new factors play a key role in the transformation process.[31] Unless they succeed in developing and distributing new factors of production with remunerative prices, improvements in the economic organization of

minifundia will not take place. Unlike larger business establishments which exert sufficient control over the marketing processes to extract an economic margin for their research efforts, peasant families and smaller producers of new inputs can ill-afford the risk and expense of experimentation.

Furthermore, the types of new technology needed to induce a favorable reorganization of peasant agriculture require complex research concerns which can amass the necessary personnel and equipment to produce high payoff factors of production. The inability of smaller firms to reap the benefits of their research endeavors and the indivisibilities of the research process mean that much of the burden for the development of technology relevant to the modernization of peasant agriculture must be assumed by public concerns.[32]

In less developed countries where the agricultural infrastructure is typically inadequate and controlled by local elites, the production and distribution of new inputs may have to be implemented by public agencies, at least in the initial stages of the transformation process. It is very important, therefore, that the users of new technology gain political strength in order to place their demands more effectively for improved inputs and services. They must be able to participate in the formulation of the working rules which govern the production and distribution of technological innovations. In particular, they must have the power to ensure a continual flow of new factors at remunerative prices.

Finally, if the process of economic reorganization of the minifundia is to satisfy the peasants' aspirations for higher levels of

living and to meet the national goals of increased flows of productive resources to the nonagricultural sectors of the economy, the peasants must participate in the policy decisions which will enhance the learning of new knowledge and skills required for continual innovation and capital accumulation.

III. THE PHYSICAL SETTING

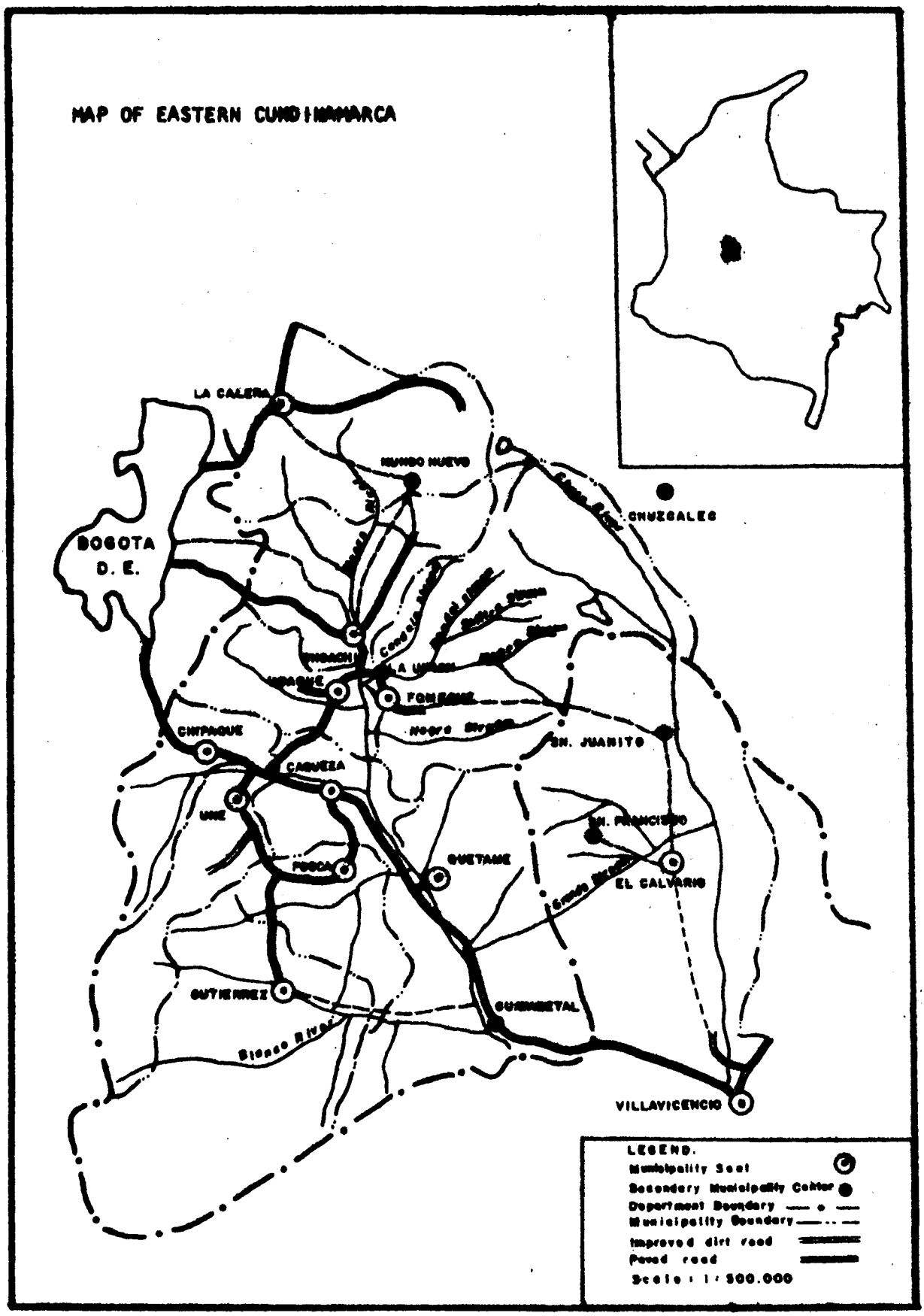
The municipio of Fómeque is located between the Río Blanco-Río Negro valley and the Chuza Cordillera in the eastern part of the departamento of Cundinamarca. This strategic location between Bogotá and the Llanos Orientales gave Fómeque early prominence in commerce--a distinction which prevailed until the 1930's when the road between Bogotá and Villavicencio was completed via Cáqueza.

The total area of the municipio is approximately 48,100 hectares (173 square miles)[33] about two-thirds of which is above timberline. The municipio is traversed by four major streams. All the rivers and the creeks which form the community's fluvial system are shallow and have steep gradients; they carry heavy loads of sediments from the intensively-cultivated watersheds.

The village of Fómeque is situated on the western side of the municipio where most of the population is concentrated. It is linked to the neighboring villages to the west, to Bogotá, and to the major highway to the Llanos Orientales via an all-weather, crushed-stone road which passes through the hamlet of La Unión--the only population nucleus and police station outside the village. Although the municipio has limited stretches of all weather, dirt penetration roads extending out of the village to the hinterland, there is no regular vehicular transportation service over these roads. Most of the residents in the rural hinterland are served by a network of rugged trails which are limited to human and animal traffic.

Climate and Natural Vegetation

Like many communities in the highland regions of Colombia, Fómeque


MAP OF EASTERN CUNDINAMARCA
LA CALERA
MUNDO NUEVO
CHUZGALEG
BOGOTA
D. E.
FOMEQUE
CHIPAQUE
CAQUEZA
UMB
FOSCA
GUETAME
SN. JUANITO
SN. FRANCISCO
EL CALVARIO
GUTIERREZ
GUAMBETAL
VILLAVICENCIO
LEGEND.
Municipality Seat
Secondary Municipality Center
Department Boundary
Municipality Boundary
Improved dirt road
Paved road
Scale : 1 : 500.000

encompasses a wide spectrum of altitudes and climatic conditions. The altitude ranges from approximately 4,500 feet above sea level along the Río Negro in the southwestern part of the municipio to nearly 12,000 feet in the Cuchilla del Cristal in the central part. There are three distinct climatic zones in the municipio: 1) the temperate zone, 2) the cold zone, and 3) the alpine zone.

The temperate climatic zone extends up to approximately 6,500 feet above sea level; this zone includes the village of Fómeque as well as the hamlet of La Unión. Since frosts never occur in this zone, a wide range of crops is possible, including tomatoes, peppers, cucumbers, beans, fruits, flowers, maize, and parsnips. The mean annual temperate ranges from about 64°F in the village to about 70°F in La Unión. Although this zone includes only 4,200 hectares, or nine percent of the total area in the municipio, it contains nearly 85 percent of the community's total population. Because of its relatively easy accessibility and favorable climate for habitation and diverse agricultural production, the temperate portion of the municipio has been fragmented to a much greater extent than the other climatic zones.

The cold climatic zone of the municipio extends from about 6,500 to 9,500 feet above sea level, and has a corresponding mean annual temperature range from 64°F to 48°F. It encompasses approximately 12,100 hectares, or 25 percent of the total area of the municipio. About 14 percent of the population lives in this zone. Since the area receives occasional light frosts, crops are limited primarily to natural pastures, potatoes, peas, and maize. The destruction of most

of the natural forest vegetation--coupled with intensive cultivation of the steep slopes and overgrazing of natural pastures in this zone--has severely disrupted the normal hydrological system of the area, thus accentuating both the humid and dry seasons. Many of the smaller streams which originate in the cold climatic zone are no longer fed during the major dry season extending from December to March, and residents in some parts of the lower lying temperate zone must transport water up to two miles for their household and livestock needs during this period.

The páramo, or alpine climatic zone, lying above timberline (approximately 9,500 feet above sea level), is the most extensive ecological area of the municipio. Extending over 31,800 hectares, or 66 percent of the total area in the municipio, this zone has less than one percent of the community's residents. A heavy cloud cover and cold temperatures throughout most of the year render the area quite undesirable for habitation. These climatic limitations, together with the highly acidic soils, also impose severe limitations on the agricultural production possibilities of the zone. The predominant land use is extensive grazing with some potato production during the dry season.

Precipitation

Although the amount of annual precipitation varies considerably within the municipio, the quantity is generally sufficient to support intensive agricultural enterprises. The mean annual precipitation for the village is about 31 inches, with the highest monthly precipitation coming in October and the lowest in February.[34] There are

normally two alternating wet and dry seasons per year. The dry seasons usually extend from the latter part of December through late March and the latter part of June through early August.

The nature of the rainfall, in combination with the widespread cultivation of intensive row crops on highly erodible soils, has resulted in severe sheet and gulley erosion throughout most of the temperate zone of the municipio.

Soils

Compared to the soils in many other densely-populated regions of the country, the soils of Fómeque are naturally poor because of climatic and geological factors; furthermore, they are rapidly deteriorating as a result of careless management practices. Unless the current rate of depletion is reversed through widespread usage of improved soil and water conservation practices, it is likely that within the next few decades the municipio will cease to be a productive agricultural area.

Most soils in the lower portion of the temperate zone (up to 6,000 feet) are characterized by moderately steep to very steep slopes including some escarpments with slopes greater than 75 percent. Included in the area are small expanses of alluvial and colluvial soils with nearly level to undulating slopes. Under high levels of management, clean-cultivated annual crops could be safely produced; however, these soils are best adapted to permanent crops such as soilage crops, sisal, and fruits.

In general, the soils in the upper portion of the temperate zone (6,000 to 6,500 feet) and the lower portion of the cold zone (6,500

to 7,200 feet) occur on rolling to very steep slopes, many of which exceed 100 percent. Because of the excessive relief, most of the soils of this area are erodible. The gentler slopes are quite adaptable to intensive crops such as tomatoes, beans, flowers, figs, and sisal. Although the soils are very strongly acid and are low in phosphorous and nitrates, they respond readily to improved fertility practices.

In the upper part of the cold zone (7,200 to 9,500 feet), most of the soils are what Jenny classified as cold humus soils.[35] The relief of this area varies from undulating to very steep and hilly. Both the topographical and the climatic conditions of the area impose severe restrictions upon its agricultural possibilities. Potatoes, parsnips, peas, and many small fruits do well with improved fertility practices. The area offers excellent possibilities for cattle production since the cooler climate facilitates disease and pest control, and improved pastures, especially kikuyo grass (Pennisetum clandestinum), have a high carrying capacity. With good range management, forage production has the added advantage of providing an effective runoff protection on the upper watersheds of the municipio.

The major portion of the municipio's soils lie in the inhospitable páramo zone where dry periods are absent, relative humidity is constantly high, and wide fluctuations in daily temperatures occur. While the páramo offers some possibilities for increased agricultural production, primarily potatoes and improved forage grasses, its relative isolation and high nutrient requirements usually render intensive farming economically infeasible. Undoubtedly, the most important

societal use of the area is a natural reservoir for the collection and distribution of water to the agricultural and urban areas at lower altitudes.

In sum, the soils with the highest agricultural potential in the community are those in the upper part of the temperate zone and the lower part of the cold zone. With the use of improved fertility and conservation practices, this area could sustain diversified, intensive horticultural crop production indefinitely. The same is true for a few scattered areas in the lower part of the temperate zone. In general, the best land use in the cooler climate zones would be improved pastures and forests in order to protect the lower areas from excessive runoff during the wet seasons and to provide them with a continuous supply of water during the dry seasons.

IV. THE CULTURAL SETTING

Population

According to the 1964 census, the municipio of Fómeque had a population of 11,524.[36] About one-fifth of the community's inhabitants were listed as residents of the village. The remainder, including those of the hamlet, were counted as rural residents, but in January 1967, only 31 families were residing permanently in the hamlet La Unión. The remainder of the municipio's population lives in dispersed households in the rural sector's 31 veredas (neighborhood groups). Ninety-three percent of the rural residents were born in the municipio of Fómeque.

The age and sex distribution of the population by place of residence demonstrates a substantial decline in the 15 to 29 year age groups for the rural males and the 15 to 19 year age group for the rural females suggesting considerable out-migration of rural young adults.

The effective fertility ratio (number of children under 5 years of age per 100 females in the child-bearing age group) is 71.8 for the rural areas compared to 47.0 for the village, or 64.4 when adjusted for the girls of child-bearing age in the village school system.

In 1964, there were 389 births in Fómeque (reasonably accurate records of births and deaths are kept by the local church and notary). This fertility rate (number of births per 1,000 females in the child-bearing group) was 148 compared to 138 in 1938. While the crude birth rate rose slowly from 31 in 1938 to 34 in 1964, the crude death rate declined from 14.5 to 10.7 during the same time span. In 1938, over 12 percent of the infants died before reaching one year of age; in 1966,

the comparable figure was about 5 percent.

Education

About 74 percent of the rural people over seven years of age have attended school; for most this education consists of one to three years at a veredal school. Despite high out-migration among those rural and village children who continue their education in the village school system, a substantial impact on literacy has occurred in the community. From 1938 to 1964, the literacy rate of the rural population over seven years of age increased from 39 percent to 74 percent.[37] The comparable percentages for the village were 68 and 90, respectively.

Occupational Status

Colombian population censuses do not include the kind of employment statistics usually wanted for a community study. At best, they provide a rough indication of occupational status. While the "economically-inactive" category for Fómeque does not measure unemployment, it does indicate the relatively large portion of the work-age population--53.9 percent of all persons more than 12 years old--which is economically dependent. Moreover, 87.5 percent of women older than age 12 are "economically inactive".

Over one-fifth of the male labor force is employed in salaried manual occupations--mostly as agricultural day laborers--and a nearly equal portion is classified as employers--primarily the larger land-owners and commercial crop producers. Only one-fifth of the male labor force is in the self-employed labor category, which consists mostly of minifundia operators and petty merchants.

While most rural households depend directly upon agricultural production as their principal source of income, very few families rely entirely upon these earnings. The most common types of supplementary employment among rural families are working as agricultural day laborers and peddling agricultural products. Likewise, most village families have diversified incomes. Although the majority receive income from nonfarm sources--especially small businesses, property rental, professional services, clerical work, and peddling--nearly two-thirds had incomes from direct agricultural production in 1966.

Land Tenure

As the employment statistics indicate, Fómeque's economy is overwhelmingly oriented towards agriculture. With the destruction of most of the community's forests, the discovery of richer and more accessible mineral deposits in other areas of the country, and the overbearing competition of urban industries upon local handicraft activities, the relative importance of agriculture has actually increased in the community. This trend has also been fostered by the creation of new commercial opportunities in agriculture--the increasing demand for agricultural products in the urban centers and the diffusion of new yield-increasing agricultural technology.

Approximately two-thirds of the agricultural production units and nearly one-half of the total agricultural land is owner-operated, according to DANE (see Table 1). All indications derived from this study suggest that these figures are exaggerated, while the number of units and the area operated under tenancy arrangements is understated. In particular, service tenancy seems to be much more prevalent

than indicated in the table. The most common tenancy arrangement is sharecropping, accounting for over 70 percent of the tenants and 60 percent of the tenant-operated land. Sharecropping is the predominant tenancy arrangement among part-owners as well, since many minifundia owners expand their operating units through informal share tenancy agreements with rural and village landlords.

Another striking feature of Fómeque's land tenure is the high degree of absenteeism. Table 1 shows that 46 administrators operate two-fifths of total agricultural land, or an average 250 hectares apiece (mostly pastoral estates in the cold climate and páramo zones). The majority of the landlords visit these haciendas infrequently--rarely on a weekly basis and in some cases but once or twice per year.

Many villagers also own smaller production units in the temperate zone and the lower part of the cold zone. Most of these units are operated by sharecroppers or service tenants who produce a combination of commerical and subsistence enterprises. About 60 percent of the village residents had agricultural holdings in 1966; over three-fifths of these holdings included more than one unit. Most of the holdings are small to medium in size; approximately three fifths of the village landlords have fewer than 10 hectares in their rural holdings. Of the 228 rural holdings controlled by village residents in 1966, about six percent were devoted primarily to subsistence enterprises, 30 percent to commercial crops, 44 percent to commercial crops and livestock, and 20 percent to extensive cattle operations.

Intensive demographic pressure on the land as a result of a sustained high population growth rate and limited economic opportun-

Table 1 Distribution of the Agricultural Production Units in Fómeque by Tenure and Area Operated, 1960[a]

Type of Tenure	Distribution of Production Units		Total Area (has.)[b]	
	No	%	No.	%
Owner-operated	1,379	65.1	14,040	48.5
Tenant-operated	394	18.6	1,616	5.6
Cash rent	(51)	(2.4)	(533)	(1.8)
Sharecropping	(285)	(13.5)	(938)	(3.2)
Service tenancy	(11)	(0.5)	(18)	([c])
Other forms of tenancy	(47)	(2.2)	(127)	(0.4)
Combination Owner-operated and Tenant-operated	292	13.8	1,668	5.8
Operated by Administrator	46	2.2	11,586	40.1
Other	6	0.3	12	[c]
TOTAL	2,117	100.0	28,922	100.0

[a]Adapted from DANE, Directorio Nacional de Explotaciones Agropecuarias (Censo Agropecuario), 1960, Vol. 1, pp. 21, 37, 42.

[b]Although virtually all of the commnnity's land area is claimed in private agricultural production units, the agricultural census reports only 28,922 hectares. This figure is substantially less than the official total area estimate of 48,100 hectares in the municipio.

[c]Less than 0.1 percent.

ities outside the community has catalyzed a pervasive land fragmentation, shown in Table 2 . Nearly one-fifth of the rural parcels are listed in the cadastral records as having no specified area, a listing which usually can be intrepreted as a very small lot. Sixty-two percent of the rural parcels have less than one hectare, and 89 percent are under three hectares in size.

During the past decade, an average of 168 new parcels per year were created. Cumbersome transfer procedures and inheritance patterns

have also fostered a kind of de facto fragmentation which tends to stack two or three generations of heirs on a single family property.

Table 2 Distribution of Land Parcels[a] in Fómeque by Size and Location, 1966[b]

Size Categories (has.)	Rural		Village	
	No. Parcels	%Total	No. Parcels	%Total
None (no area specified)	1,244	18.4	379	50.7
Less than .25	411	6.1	335	44.8
.25 to .49	892	13.2	15	2.0
.50 to .99	1,625	24.0	15	2.0
1.00 to 2.99	1,846	27.3	3	0.4
3.00 to 4.99	423	6.3	1	0.1
5.00 to 6.99	165	2.4		
7.00 to 9.99	65	1.0		
10.00 to 14.99	22	0.3		
15.00 to 29.99	32	0.5		
30.00 to 49.99	12	0.2		
50.00 to 99.99	8	0.1		
100.00 to 299.99	10	0.1		
300.00 to 499.99	3	c/		
500.00 to 999.99	6	0.1		
1,000 or more	-	-		
TOTAL	6,764	100.0	748	100.0

a/ A land parcel is defined as a physically integrated property for which there is a single deed.

b/ Cadastral records of Fómeque.

c/ Less than 0.1 percent.

Since local cadastral records are listed by parcels rather than family holdings, it is practically impossible to ascertain the actual ownership pattern by families. As a means of circumventing legal road-blocks and avoiding tax payments, land parcels are frequently registered under the names of various family members and

pseudonyms without any common family identification.

A partially successful attempt was made to group the municipio's land parcels according to nuclear families. Despite the fairly high rate of absentee ownership, the total of 4,007 separate family holdings remains too high. Also, because informants were more familiar with larger properties, the errors are likely to be greater in the smaller size categories.

Nevertheless, the attempt showed that more than 50 percent of the family holdings--representing less than five percent of the total land area--were under one hectare in size. More than three-fourths of the holdings are under three hectares in size, and these comprise only one-sixth of the total cadastral area. The holdings over 30 hectares in size comprise one percent of the total number and about 50 percent of the total area.

Land Use

The major types of land use in Fómeque are shown in Table 3. A large portion of the cold climate and páramo zone is included in the pasture land. Most of the area in the temperate zone and the lower cold zone is used for annual and permanent crop production. The forested area is limited primarily to the moderately productive timber resources of the inaccessible cold zone and the scrub forests of the upper cold zone and lower páramo. Besides roads, trails and building sites, there are extensive areas of land which have very limited utility for agricultural production, especially the steep escarpments of the temperate zone and the craggy peaks of the páramo.

Table 3 Major Types of Land Use in Fómeque by Area, 1959[a]

Land Use Category	Area	
	Hectares	Percent
Annual crops (planted)	1,744	6.0
Annual crops (fallow)	2,442	8.5
Permanent crops	408	1.4
Pasture	15,787	54.6
Forest	4,137	14.3
Other	4,404	15.2
TOTAL	28,922	100.0

[a] Adapted from DANE, Directorio Nacional de Explotaciones Agropecuarias (Censo Agropecuario), 1960, Vol. 1, p. 57.

Staple Crops

As the basic staple crop of the region, maize is overwhelmingly the most important crop, both in terms of the number of producers and the number of hectares grown. In 1959, eighty-seven percent of the community's agricultural production units grew maize, and it accounted for nearly one-half of the total cropland. In 1959, the average maize yield for the municipio was only 840 kilograms per hectare (about 10.7 bushels per acre) compared to 1,400 kilograms per hectare (17.8 bu./A.) for the departamento of Cundinamarca and 1,182 kilograms per hectare (15.0 bu./A.) for the entire country.[38] The eight to ten month maturation period required for maize production in Fómeque means that most of the land is essentially tied up for both of the annual growing seasons unless irrigation is available. To some extent, the low yields and lengthy production period of the maize crop are compensated by the intercultivation of other staple crops (pan coger) such as parsnips, taros (chonque), sago (sagú), broad beans (habas), and squashes. Since these crops and maize comprise the bulk of the local diet, most rural families strive to produce a sufficient quantity to supply their household needs.

Commercial crops

Tomatoes are the most important commercial crop of Fómeque; in 1959, the municipio had 243 hectares. In recent years, however, tomato production has been declining in Fómeque because of decreases in soil fertility, increased problems with diseases, and greater competition from other regions of the country. While tomato yields of 12,000 kilograms per hectare (about 178 bu./A.) are considered excellent in Fómeque, yields of 40,000 kilograms per hectare (594 bu./A.) are possible in the Valle del Cauca.

Since tomatoes are a highly perishable crop, production in Fómeque is further impaired by the heavy reliance upon pack animal transportation necessitated by an inadequate access road system.

Shell beans, peas, black-eyed peas, devil's cucumbers (pepinos), green beans, peppers, cucumbers, onions, cabbage, asparagus, and cut flowers -- all important commercial crops here too -- are also subject to many of the same problems which beset tomato production.

Most production units in Fómeque have an assortment of fruit crops which provide some household consumption as well as an important supplementary source of income. Sugar cane, sisal, and castor beans also provide income to a large number of peasant families in the temperate zone. Most farms in the temperate zone also produce soilage grass crops because of limited forage supplies, especially during the dry season.

Agricultural Techniques

With the widespread introduction of commercial crops to the municipio during the past three decades, a number of traditional agricultural practices have undergone change. In particular, the use of chemical fertilizers has become almost mandatory for the production of many commercial crops such as tomatoes because of decreases in natural soil fertility. The continual tillage of steep, erodible slopes with clean-cultivated commercial crops planted in rows perpendicular to the contour is accelerating soil depletion. In contrast, traditional subsistence crops such as maize are usually

intercultivated with several other crops which not only afford greater protection against rainfall impact and runoff, but often provide some complementary fertility effects. In 1959, nearly one-half of the agricultural production units were using chemical fertilizers; over one-fourth were using only organic fertilizers; and the remainder were using no fertilizer.[39]

Increased emphasis upon commercial crop production has also resulted in widespread adoption of chemical pesticides. Expanded acreages, continuous cropping, and destruction of natural predators are increasing the insect and disease threat to some commercial crops such as tomatoes to the point that they can no longer be produced without generous applications of insecticides and fungicides. Irrigation has also received additional impetus from commercial crop production. In 1959, about 15 percent of the production units were irrigating a total of 21.5 hectares, or about five percent of the total cropland area.[40]

Other agricultural production techniques, however, have changed little since the conquest period. The wooden plow, the hoe and the machete are still the basic agricultural implements on virtually all of Fómeque's production units. Nearly all of the land planted to annual crops is plowed and harrowed by ox-drawn implements. The hoe is used to break up large clods and to dig holes for planting tuber crops and nursery stock. Seeds such as corn, beans, and squashes are planted with a digging stick. Weeds are periodically grubbed out with a hoe or chopped out with a machete. The machete is also

used to remove heavy crop residues and to chop fodder for animals.

The rugged terrain of the municipio makes conventional mechanization practically impossible. There is only one farm tractor in the entire municipio, and there are very few stationary farm engines. Most of the sisal fiber is extracted by portable stripping machines powered with small gasoline engines, but all of the community's sugar cane crushers are powered by animals, and the entire coffee crop is processed with manual pulping machines. In spite of numerous advantages from small-scale mechanization, there has been no attempt to introduce garden tractor technology into the municipio.

Livestock

The distribution of various types of livestock on the agricultural production units of Fómeque is shown in Table 4 . In 1959, over four-fifths of the agricultural production units had cattle. Most of the bovine stock is multi-purpose; the animals are used for draft power and transportation as well as milk and meat, although most peasant families consume very little milk and meat. There is a limited fresh milk market in the village and the hamlet, but no fluid milk was marketed outside the municipio until the latter part of 1967.

While a high percentage of peasant families maintain one or two head of cattle for savings or prestige purposes, the majority of the community's cattle are concentrated on the large pastoral estates of the cooler climatic zones. Of those agricultural production units having cattle in 1959, two-thirds had fewer than five animals.[41] On the other hand, thirty-three farms (1.9 percent) had over 50 head and 14 (0.8 percent) had over 100 head of cattle.

Table 4 Distribution of Livestock in Fómeque by Number of Producers and Number of Animals, 1959[a]

Type of Livestock	Producers N=2,117		Animals	
	No.	%Total	Total No.	Average No./ Producer
Cattle	1,747	82.5	12,252	7.0
Swine	1,685	79.6	4,184	2.5
Horses	581	27.4	1,033	1.8
Mules	130	6.1	174	1.3
Burros	303	14.3	331	1.1
Sheep	130	6.1	448	3.4
Goats	32	1.5	58	1.8
Poultry	1,904	89.9	51,395	27.0
Bees	28	1.3	226[b]	8.1[b]

a/ Adapted from DANE, Directorio Nacional de Explotaciones Agropecuarias (Censo Agropecuario), 1960, Vol. 1, pp. 102, 106.

b/ Colonies.

About four-fifths of the agricultural production units had swine in 1959. Most peasant families purchase pigs with meager economic surpluses and fatten them on household scraps, sugar cane, crop residues, weeds, and small amounts of purchased feed concentrate. The animals are usually sold in the villlge market plaza when they are fattened or whenever funds are needed.

The most universal agricultural enterprise in Fómeque is poultry. In 1959, ninety percent of the agricultural production units had domestic fowl, mostly chickens. Most peasant families keep a few chickens to provide eggs and occasional birds for sale in the local market.

Around the village and the hamlet, there are also a number of large commercial poultry operations. Most of these units are linked directly

to factor and product markets in Bogotá.

Other important types of livestock in the municipio are the equine animals, which are used primarily as beasts of burden. Most peasant families cannot even afford to keep a mule or a burro. Rather, they rely primarily upon the human back to transport goods, and when heavier loads must be transported, they rent or borrow pack animals or use cattle as beasts of burden.

Agricultural Services

As economies develop, agricultural producers become increasingly dependent upon external factors--research, information, market facilities, financial services, legal aid, transportation systems, public utilities, protection of life and property, public policies, and a whole array of other rural services. From the standpoint of physical facilities, the agricultural service structure of Fómeque appears to be rather complete for a peasant community.

1) Research and Information. A community agricultural experimental farm is maintained by the Corporación Granja Agrícola de Fómeque--a local non-profit development corporation. The farm has acquired a wide variety of improved seeds and nursery stock to test under local conditions and to propagate for dissemination. In the past, the farm also kept improved breeds of livestock and provided selected sires to upgrade the quality of livestock in the community. Operated in conjunction with the boys' vocational and normal schools, the experimental farm is supposed to provide students with practical experience in agriculture. Advanced students are expected to develop farm plans and provide technical assistance to agricultural producers in the community. Unfortunately, the

students--most of whom are from urban and semi-urban areas--have expressed little enthusiasm for the training program, and their field work has been restricted to the farms of their teachers and other village landlords.

Since 1960, the departamento of Cundinamarca has maintained a small nursery on the village outskirts. It has an annual budget of U.S. $650, most of which has gone for the payment of workers' salaries. Initially, the nursery stock was given in limited quantities to anyone requesting it. In recent years, however, most of the seedlings--primarily fruit and timber trees--have been sold in big quantities to the large commercial landowners of the region. Purchase requisitions must be made directly through the office of the provincial Secretaría de Agricultura (Department of Agriculture) in Bogotá.

In 1964, INCORA initiated a supervised credit program in the community. As a part of the loan package, borrowers receive technical assistance including veterinary services. INCORA also assists its borrowers in the acquisition of improved cattle, and through its farm supply cooperative, it provides improved inputs to its clientele.

A few village landlords--particularly those with private agricultural supply stores--have also played an important role in the diffusion of technical information and improved inputs to the community by introducing a number of new commercial crops, chemical fertilizers, and pesticides.

2) Factor Markets. Most of the purchased farm supplies used on the community's agricultural production units are acquired from the six major agricultural supply stores in the village. These stores carry a fairly complete stock of basic seeds, fertilizers, pesticides, feed

concentrates, pharmaceuticals, and hardware items as well as common food staples, household supplies, and sundries. Many purchases are charged without interest if payment is made within a few weeks. Accounts for farm supply purchases are frequently not settled until the crops are harvested, in which case storekeepers usually charge a flat interest rate of two percent per month on the unpaid balance or receive a portion of the crop in payment. Sometimes they agree to purchase the entire crop at a price below the going market rate and pay the producer the difference between the total determined value and the cost of the inputs. Since the major farm suppliers are all rural landowners, they also enter into sharecropping arrangements with peasants to produce commercial crops and livestock enterprises.

Besides the private agricultural supply stores, the community has three other major farm supply centers--the Caja Agraria, the INCORA cooperative, and the community cooperative organized by the Corporación. All of these institutions also offer agricultural credit programs. The Caja Agraria store is the oldest and has the largest volume of business of any of the community's agricultural supply stores. Most of the patrons are previous or present recipients of Caja agricultural loans. The store carries a number of small agricultural implements and machines in addition to the basic supplies handled by the private stores. The INCORA cooperative store caters primarily to the supervised credit borrowers who are obligated to join the cooperative. Since INCORA is giving special emphasis to livestock enterprises in its supervised credit program, its store maintains the most complete inventory of livestock supplies in the community.

In 1966, the community consumer cooperative established a separate store with a general line of agricultural supplies. Like the Caja Agraria and INCORA, the community cooperative opened its agricultural supply store on a cash sales only basis. But in 1967, the community cooperative organized a credit union thus making it possible to obtain small loans for purchases made in its stores, a move which enhanced its competitive position with the other supply stores. In the early part of 1967, the prices of basic farm supplies in the INCORA and the community cooperative stores averaged about five percent lower than the prices of comparable goods in the Caja Agraria and the private stores.

3. Product Markets. Unlike most of the neighboring municipios where trunk roads facilitate roadside pickup of farm produce, Fómeque has only about a three mile stretch of major access road, which terminates in the village. Except for the larger commercial farms and minifundia around La Unión, most of the community's agricultural produce is sold in the village marketplaces, which attract many buyers and sellers from Bogotá and neighboring municipios as well as Fómeque.

The major weekly market is held on Saturdays; a small market is conducted on Wednesdays. The Saturday market begins about 5:00 a.m. with the sale of swine and occasional sheep in the vicinity of the livestock plaza; usually 100 to 300 swine are sold. Six or eight major outside buyers with trucks and about 12 or 15 local speculators and butchers purchase most of the market hogs and the mature animals, while most of the weaning pigs are bought by peasants and villagers to fatten.

Usually 100 to 250 cattle of all ages are sold on Saturday to 20 or 30 major buyers. As in the hog market, none of the animals are weighed,

and except for a voluntary dipping procedure, no precautionary measures are exercised for disease and parasite control. Sellers pay a local head tax on all cattle, swine, and sheep which they sell or slaughter. The revenue from these taxes is used to cover dipping and maintenance costs for the old livestock plaza, to finance a new plaza with improved facilities, and to amortize the costs of a new slaughterhouse, which handles 25 to 30 animals each week.

Poultry, eggs, and cheese along with smaller quantities of fruits, vegetables, and cut flowers are sold primarily by women in the general market plaza. Village families and institutions purchase some of the produce for local consumption, but most of it is sold to small middlemen. These small middlemen usually contract truckers or bus drivers to haul their goods to the open markets of Bogotá and Villavicencio where they resell to urban consumers or wholesalers. Many of the small middlemen are outsiders who purchase fresh products in several marketplaces throughout the region, but most are local residents who have other sources of income from direct agricultural operations and village businesses. Both the small and large buyers seem to operate under a set of implicit behavioral rules which result in considerable speculation and integration of marketing functions. Small middlemen tend to deal in specific commodities with specific clientele. In turn, they depend upon contacts with the large middlemen.

Peasants with larger quantities of fruits and vegetables to market usually sell them by the crate, sack (bulto), or load (carga),[42] in a physically separate marketplace in the village. Most of the major commercial crops such as tomatoes, peppers, cucumbers, devil's cucumbers,

green beans, shell beans, peas, cabbage, and potatoes are sold in this special products market plaza. At the peak of the tomato harvest, the special market plaza is very active on Saturdays and Wednesdays, and occasionally on Mondays. The special market has five or six principal buyers all of whom have their own trucks. In addition, there are usually 10 to 30 small middlemen--including a number of storekeepers in the vicinity of the special market plaza--who contract the truckers to transport their produce to Bogotá or Villavicencio.

4. Agricultural Processing Facilities. After some experience with asparagus production on the community experimental farm, the Corporación helped finance the installation of canning facilities for asparagus in the village home of a school teacher. In 1966, about 2,000 pints of asparagus were processed in the local cannery for the Bogotá market. Given the high retail price of 22 pesos (U.S. $1.30) per pint versus 5 pesos (U.S.$0.30) per pound for fresh asparagus in a country where continuous production is possible with irrigation, the domestic market for such a product would seem quite limited; nevertheless, the local industry was expanded in 1967.

The Corporación also financed the construction of a fruit processing plant which began operating during the early part of 1967. Initially, the plant began producing guava bars and guava paste. Future plans call for processing other fruits such as strawberries, blackberries, and figs, but the local industry faces a limited market and strong competition from large-scale processing plants in other areas of the country.

5. Transportation. The village and the hamlet are served by two private bus companies which provide a total of 12 trips per day to Bogotá via the two major routes. On Saturdays, additional buses and 25 to 30 trucks provide services between Fómeque and Villavicencio and Bogotá. Within the municipio, there are 15 privately-owned trucks and four trucks owned by the Corporación and the local Acción Comunal organization. Some of these vehicles are used to provide regular transportation services between Fómeque and other areas, primarily Bogotá.

Within the municipio, however, there is very limited transportation service. A few of the large commercial producers contract hauling services or use their own trucks to deliver inputs or pick up products at their farms, but the vast majority of rural families depend solely upon human and animal transportation between their production units and the village. In 1968, the municipio had nearly 30 miles of access roads, but almost one-half of this mileage was represented by the newly-constructed road to Lake Chingaza through the sparsely-populated cold climate and páramo zones. Numerous stretches of penetration roads have been carved through the rugged terrain of the temperate zone, but without maintenance, these roads rapidly revert to mule trails.

6. Supporting Infrastructure. Except for the 28 rural schools and the limited stretches of improved access roads, most of the community's physical infrastructure is concentrated in the village and the hamlet. A few rural families have houses in the village where they share electricity, running water, paved streets, sewerage, medical

care, vocational and secondary education, communication facilities, police protection, and numerous other services with the permanent residents of the village. The residents of La Unión and vicinity also have electricity, running water, a health center, and a complete primary school, and they have relatively easy access to other services in the village. But for most rural families, enjoyment of these services is severely constrained by great physical distances and limited monetary resources.

Migration

During the first half of the 20th century, permanent and seasonal migration to the Llanos and the coffee zone provided an "escape valve" for the burgeoning peasant population. But as these areas of new land settlement filled up with people, the migration opportunities diminished. And with the widespread civil disorders of the late 1940's and 1950's, the migratory movements came to a virtual standstill. By far, the most important movement of Fomequeños today is toward the cities, primarily Bogotá. Like the densely settled rural areas, however, the congested urban centers offer few remunerative employment opportunities for uneducated and unskilled peasants.

The opening of a new road to the village in the 1920's gave additional impetus to commerce in the municipio. This factor--coupled with the growing demand for agricultural products in the urban areas, especially Bogotá--stimulated a transition from the production of traditional crops such as maize, broad beans, parsnips, squashes, taros, and sugar cane to commercial enterprises such as potatoes, peas, black-eyed peas, shell beans, bananas, avocados, guavas, sweetsops, passion fruit, figs, coffee,

sisal, and castor beans as well as poultry, eggs, cheese, and swine. By the 1940's, even more important commercial crops had been introduced to the municipio. These included tomatoes, green beans, devil's cucumbers, peppers, cabbage, cucumbers, onions, gladiolas, and Easter lilies.

Like migration, these new commercial opportunities provided an "escape valve" to Fómeque's burgeoning population. But, for most peasants who owned no land or too little land to eke out a bare subsistence, and who lacked the information and new inputs required for the production of these commercial enterprises, the only manner in which they could participate in the commercialization of agriculture was to enter into tenancy arrangements with village landlords. A few peasants entered into sharecropping agreements with traditional landlords of the village and rural landowners to produce potatoes, parsnips, and peas in the cold climatic zone of the municipio. But most of the sharecropping arrangements were made with the new village elite--the merchants, middlemen, bureaucrats, professionals, and school teachers--who had purchased smaller holdings from peasants in the temperate zone or medium size units from the old hacienda heirs in the cold zone. The new elite not only had the means to acquire the necessary land to produce the new commercial crops, but they also gained control of the local factor and product markets. Hence, they were able to capture a substantial portion of the windfall profits from the new commercial enterprises by extracting large economic surpluses from the peasants to underwrite their positions of power, wealth, and prestige in the community.

The introduction of new commercial opportunities was only one of

several factors which catalyzed an elite substitution during the 20th century. In the first place, increased migration opportunities for the peasants had effectively reduced the potential labor supply on the traditional haciendas of the municipio. For most peasant families, seasonal employment outside the municipio or even permanent migration to other areas apparently provided better alternatives than service tenancy arrangements on the haciendas.

A more important factor which undermined the power of the village's traditional elite was the subdivision of the haciendas through inheritance. Faced with a smaller share of the traditional sources for power and prestige in the community, many of the heirs of the larger haciendas suffered a loss in relative status from that of their ancestors. As a result of this downward status mobility, many of the heirs adopted commercial crop enterprises and established local businesses to supplement their incomes from extensive livestock operations.

Another factor which apparently catalyzed a pathological decay of the large haciendas in Fómeque was the phenomenon of widespread land conflicts which began in the 1920's in other parts of the country and eventually prompted the passage of Law 200 of 1936 with its security of tenure clause.[43] Although the law was never enforced in Fómeque, the increased rate of new property formation during the 1930's suggests that many landlords were sufficiently intimidated by the new law and land invasions elsewhere that they initiated voluntary parcelization programs. Most of the remaining large estates in the temperate zone were subdivided during the 1930's and the 1940's, and voluntary parcelization programs were started on several haciendas in the cold zone

during this period.

Since 1940, the Caja Agraria has sponsored a number of parcelization projects in the cold zone such as the Hacienda "Santa Elena" located in the vereda of Coacha. In 1949, the owner sold the 126-hectare holding to a group of Bogotá businessmen who, in turn, successfully negotiated the resale of the property for 120,500 pesos (U.S. $61,455) to the Caja Agraria for a parcelization project in accordance with Decrees 1156 of 1940 and 1744 of 1942. The Caja parcelized the land into 19 lots, ranging from three to eight hectares in size, and offered 12-year acquisition loans at seven percent interest and intermediate production credit at nine percent interest to prospective buyers. Most of the parcels were purchased by members of the new village elite for an average price of 1,500 pesos (U.S. $765) per hectare.

During the early part of the 1960's, two families initiated voluntary parcelization programs on their haciendas. Most of the parcels range from 10 to 50 hectares in size and sell at the rate of U.S. $300 to $500 per hectare for land which is located two to three hours by horseback from the village. The usual terms given by the owners are 50 percent of the total price in cash at the time of purchase, 25 percent in six months, and the balance in one year after transaction. Thus far, most of the buyers are members of the new village elite, who finance purchase through loans from commercial banks.

Thus, with the disintegration of landholdings and the increased demand for farm products in the urban areas, commercial enterprises have replaced many of the traditional crop and livestock activities. Although these intensive enterprises have provided additional employ-

ment opportunities for the peasants, they have also helped create a new village elite. Because peasants lack the inputs and knowledge to produce these new enterprises, they must enter exploitative contractual arrangements with landlords, merchants, and money lenders who control most of the community's resources and who dominate the major decision-making processes.

V. AN EXPERIMENT IN COMMUNITY DEVELOPMENT

Since the Spanish conquest, Fómeque's resources have flowed mostly out of the rural areas to dominant groups elsewhere. The peasants' disproportionate contribution of resources might fuel the process of development, if these resources were channeled into productive investment, including the human and physical capital of the rural areas.

During its recent history, Fómeque has diverted many local resources--as well as outside capital infusions--into infrastructural development; however, an exploitative pattern of development still keeps the rural masses in perpetual poverty.

Many of the changes which have taken place in the community during the past three decades may be attributed to the efforts of Monseñor Agustín Gutiérrez, who served as the parish priest from 1936 until 1968.[44] Most of the projects under his leadership were executed through two instrumental organizations which he created shortly after coming to Fómeque.

The first was a program known as Acción Católica or Acción Parroquial. For each vereda, as well as the village and the hamlet, the Monseñor named juntas of Acción Católica and charged these local leaders with the responsibility of organizing the people in their respective neighborhoods for community development projects and instruction in catechism. These leaders planned bazaars to raise funds and collected individual quotas to be channeled into community development projects. They organized communal work days and solicited materials to construct schools, trails, and bridges in their own districts as well as village projects which were supposed to benefit the entire community.

The local leaders were also given the responsibility of "policing" their neighborhoods--settling minor disputes, reporting misdemeanors to the priest and civilian authorities, and helping the priest conduct his campaigns against free union and alcoholism.

The other organization in the Monseñor's community development program was the Corporación Granja Agrícola de Fómeque, established in April 1937 as an officially recognized stock corporation (sociedad anónima). Designed to complement the Acción Católica program through its financial, educational, cultural, and extension activities, the Corporación initially enlisted about 700 stockholders, most of whom were peasant families owning one or two shares. The local parish obtained a controlling interest in the Corporación by purchasing over 5,000 shares of stock while the next largest stockholder was the municipal government with 500 shares.

Because of its rather restricted budget, the Corporación's activities during its first few years of existence were limited primarily to small-scale projects such as the construction of trails, agricultural demonstration plots, schools, and sports fields. Through the demonstration plots, the Corporación played an active role in the introduction of tomatoes and other commercial crops to the municipio. Later, a livestock improvement program was sponsored by the Corporación, and another program involved the organization of sports teams and events in the community.

Realizing the limitations of the organization in meeting its original objectives as a profit stock corporation, the Monseñor and the other members of the board of directors decided that the entity should

be converted into a non-profit corporation which would, among other things, exempt it from taxes and remove the restriction barring it from public aid. Undoubtedly, the additional advantage of being able to concentrate the decision-making authority of the Corporación carried some weight in the conversion process. (Not a single peasant has ever served on the Corporación's board of directors. When asked about this lack of peasant representation, one Corporación leader replied that "it would be too inconvenient to relay meeting notices and other business communications to a member who lived in the rural areas." Moreover, he felt that the directors had always been cognizant of the peasants' interests and needs).

With governmental financial assistance, the new Corporación concentrated its efforts upon infrastructural development in the village, especially the creation of secondary and vocational educational facilities. Initially, the public appropriations were invested in village land which was to be used for subsequent development projects. The first major project was the Boys' Normal School, started in the late 1940's. Like the rural projects, most of the labor and materials invested in the new school were donated by the local people. With the promise of education for their children, the peasants contributed generously to the new projects. In spite of this widespread cooperation among the community's residents and supplementary public financing, the project moved very slowly. And while Fómeque remained relatively tranquil during "la violencia", which erupted on a national scale in 1946, public disturbances elsewhere eventually affected the activities of the Corporación by cutting off the national appropriations in 1950.

Some national appropriations were revived in 1952, rising in 1953

when Rojas Pinilla overthrew the presidency. Both national and departmental contributions to the Corporación remained high throughout the Rojas dictatorship, amounting to more than 1.5 million U.S. dollars.

Other projects completed during this period included a brick kiln, the Girls' Normal School, the Boys' and Girls' Vocational Schools, the village primary schools, the theater, and the Casa del Clero (House of the Clergy). The latter project--originally constructed as a center for training priests in rural community development--is now a tourist hotel operated by the Corporación. The Corporación also participated in the construction of a 120-bed hospital which serves the municipios of Ubaque and Choachí in addition to Fómeque.

In addition to these projects, the Corporación began channeling some of the outside funds into the rural areas, especially to construct schools and penetration roads. For nearly a decade, the development of infrastructure in the rural portion of the municipio had been neglected in favor of village projects.

The Corporación's renewed interest in the rural veredas was not limited to the construction of physical facilities, however. Through the cooperation of the local juntas of Acción Católica and the normal and vocational schools of the village, the Corporación also sponsored programs of home improvement. Families were encouraged to replace thatched roofs with tile or galvanized metal roofs, to develop springs for their household water needs, to plant fruit trees and vegetable gardens, and to keep a cow and raise rabbits for improving their diets.

With the end of Rojas dictatorship in 1957 and the return to constitutional government in 1958, public aid to the Corporación dwindled.

Other sources of funds were sought. Since 1957, an important source of income for the Corporación has been the sale of village real estate. Through a loan from the Caja Agraria for U.S. $26,726 the Corporación constructed 17 houses on village property which it had purchased in the 1940's. The houses were sold for U.S. $2,241 each to members of the new village elite--primarily teachers and bureaucrats--through individual home loans obtained from the Instituto de Crédito Territorial, an autonomous public agency created in 1939 to carry out governmental urban renewal and housing programs for low-income families. A second village housing development for about 20 units was initiated by the Corporación in 1966. Besides the houses, numerous vacant lots have been sold from the Corporación's original landholdings. The Corporación also receives income from custom work performed with its two trucks and bulldozer. The trucks are usually hired two or three days per week by village middlemen to transport produce to markets in Bogotá. For the past two years, the bulldozer has been rented to the municipio of Villeta. Meanwhile, the penetration roads in Fómeque have deteriorated to the point where less than half of the original extension constructed by the Corporación remains passable to vehicular traffic. Additional revenue is derived from the hotel and theater operations, as well as the sale of building supplies and agricultural produce.

Another important source of income for the Corporación is the operation of the Boys' Normal School which, as a semi-private institution, is permitted to charge tuition in spite of considerable public support. Inasmuch as only a few rural families in Fómeque can afford to pay the high costs of tuition, supplies, uniforms, room and board, more than 80

percent of the students are either from the village or from other municipios. The same pattern prevails to only a slightly less degree in the Boys' Vocational School and the girls' secondary and vocational schools.

Along with the financial barrier to entry into the village schools, most rural children fail to meet the metriculation requirements because only two to four years of comparatively inferior education are offered in the rural primary system.

The Caja Agraria

As a result of efforts by the Monseñor, a branch savings bank of the Caja Agraria was opened in Fómeque in April 1946.[45] At the same time, a regional agricultural credit program was initiated by the Caja Agraria branch in Une. In 1950, an agricultural supply store was added to the savings bank in Fómeque and in 1952, the regional office for the credit program was transferred to Fómeque. Loans up to U.S. $796 could be approved by the local manager and individuals could borrow up to U.S. $3,980 subject to the approval of a local committee consisting of the Monseñor, the politician Roberto Garzón, and the hacendado Jesús Rico. Larger loans required approval from the central office in Bogotá. During the first year of operation, loans totaling nearly U.S. $199,000. were made to about 400 individuals in eight municipios. In 1966, a total of U.S. $194,700 was loaned to 874 borrowers in three municipios--Fómeque, Choachí, and Ubaque. Fómeque had 324 borrowers (about 15 percent of the total number of rural families) who received a total of U.S. $84,547 in loans--an average of U.S. $261 per client. While the actual distribution of these funds was not disclosed by the local officials,

it was understood that a substantial amount was loaned to village residents for both agricultural and nonagricultural purposes. Over 60 percent of the agricultural loans and nearly 80 percent of the total funds for agricultural loans go for livestock enterprises. Most of the loans to peasants are short-term loans at 10 percent interest (9 percent basic interest charge plus 1 percent for insurance and miscellaneous charges) for 1,000 to 2,000 pesos (U.S. $59 to $118). Peasants who own little or no land are eligible for credit, but in practice most loans go to individuals who own more than three hectares.

The Supervised Credit Program

In July 1964, INCORA initiated a supervised credit program in Fómeque.[46] As one of the three representatives from the Catholic Church on INCORA's Board of Directors, Monseñor Gutiérrez played a major role in getting the credit program established in the municipio. In 1965, the program was extended to other municipios in the eastern part of Cundinamarca, and by the end of 1966, the project with its principal office in Fómeque included 329 borrowers in five municipios who held nearly U.S. $295,000 worth of loans.[47] As in other parts of the country, most of the INCORA borrowers were recruited from the more progressive, middle group of farmers who had successful borrowing records with the Caja Agraria.

In February 1967, the municipio of Fómeque had 124 INCORA borrowers (about 5 percent of the total number of rural families). The average amount of land owned by the borrowers was about 12 hectares -- more than twice the average farm size for the study sample. Nearly 40 percent of the borrowers owned 10 or more hectares of land. A number of borrowers

were part-time farmers and had sharecroppers or service tenants farming part of their land--conditions which are supposed to disqualify them for supervised credit. The feasibility study for the credit program in Fómeque had concluded that the program should be directed toward "family agricultural production units" defined as those farms with 3 to 10 hecatres of land.[48] In February 1967, about 10 percent of the rural families in this size group were receiving supervised credit.

And contrary to the preliminary study which recommended emphasis upon crop production--especially sisal, fruits, vegetables, and soilage grasses--the program has given major attention to livestock enterprises, particularly dairy. Potential borrowers are screened by a local selection committee which thus far has been comprised of village teachers and bureaucrats.

The Commerical Bank

Another source of institutional credit for agriuulture in the community is the Banco Popular. In 1966, about 60 percent of its approximately 200 loans and over one-third of the total value of its loans went for agricultural purposes. (By law, commercial banks in Colombia must allocate a minimum of 15 percent of their total loanable funds to agriculture.) Many of the agricultural loans go to livestock traders and other middlemen to finance purchases of animals and other produce. A few middlemen and landlords also borrow funds from a bank at a 12 percent annual interest rate to reloan at the going informal interest rate of two percent per month. Most peasants lack the collateral and the courage to solicit credit directly from the commercial banks.

Local Government

As in most rural Colombian communities, the local government of Fómeque tends to be unresponsive to the needs of the rural masses. Peasants are effectively excluded from most community decision-making processes and they have little or no recourse to actions taken by their superordinates. Local government officials are appointed, except for members of the Municipal Council, who nominate candidates from whom their successors are elected by the public. Throughout the past decade no fewer than five of the ten council members have resided outside Fómeque, and most of the mayors have been short-termed outsiders. Fómeque has never had an elected or appointed peasant representative to the local government.

As the community's major authority holder, the Monseñor played an important role in local political processes. Among the other means of control, he exerted a strong influence upon the appointment of local government officials, especially during his brother's governorship. He was thereby able to maintain an effective control over the community's major decision-making processes. And through the religious system, he was able to apply sanctions for a kind of token participation by the peasantry in the political system---exercise of suffrage, payment of taxes, and compliance with the law. He also encouraged close cooperation between the local government and the Corporación on infrastructural development. Together, the informal and formal political leadership of the community fostered projects which benefited primarily the village elite.

While property taxes are the principal source of revenue for most local governments in Colombia, the actual amount collected from this

source tends to be considerably less than the theoretical collection because of a high incidence of noncompliance. Moreover, property assessments tend to be low as a result of strong opposition by the major landowners to reassessment programs, cumbersome appraisal procedures, and continual inflationary pressures.

A reassessment program completed in 1967 increased the theoretical property taxes of the municipio by more than five times. But in context of the existing local political structure, peasants will have little incentive or justification for paying the additional taxes. With little or no peasant representation in the local government, there is no assurance that the additional revenue will be channeled into the much needed improvements in rural infrastructure. Given the fact that the village elite control most of the community's collective decision-making processes as well as a large portion of its taxable assets, it seems likely that most of the new fiscal resources will be spent in the village.

Expenditures for education during the eight-year period have averaged slightly less than the minimum 10 percent requirement established by national law. However, because of the local semi-private educational facilities, the total outlay for education in the community is considerably greater than that of most rural municipios. Most of the teachers' salaries are paid by the departamento.

Fixed costs account for a high percentage of total local government expenditures. In 1964, the combined costs of administration, justice, public order, and tax collection comprised 27 percent of the total disbursements by the local government. Most of this outlay goes

to support a local bureaucracy which, by and large, is indifferent toward the felt needs of the peasantry. In general, peasants have no opportunity to air a public problem before a local government official; they are not treated with justice in legal confrontations; and, they cannot even pay their taxes without a brusque or evasive treatment.

Political Opposition to Monseñor Gutiérrez

The considerable heterogeneity of interests and goals among the local elite is providing some impetus for change in the existing structure. Additional pressures for change are being created through increased contacts of both the dominant groups and the peasants with the outside world. On several occasions during the past three decades, the Monseñor's authority was challenged unsuccessfully by various internal and external leaders seeking to wrestle the loyalty of the peasants from him.

In recent years, there were indications that increasing numbers of peasants, as well, were becoming disenchanted with the Monseñor's stronghold upon the affairs of the community. While their respect for him as a religious leader was unfaltering, their political allegiance appeared to be shifting to other leaders. Because of the barriers to village services, especially educational and medical facilities, many peasant families felt that they had been betrayed by the Monseñor. Until his death, he continued to direct additional village projects for which most rural families expected to receive few benefits. Not surprisingly, the most notable center of oppos ition in the community was La Unión and the surrounding rural areas. The

hamlet residents pointed out that while they had participated actively in the Monseñor's fund drives for infrastructural improvements in the village and paid municipal land and service taxes, they received very few benefits in return. Furthermore, they accused the municipal government of retaining a portion of the transfer payments which were supposed to be channeled from the departmental government to the hamlet to operate the inspección de policía.

Acción Comunal.

In 1962, a local junta of Acción Comunal[49] was organized in La Unión under the leadership of Roberto Garzón--the local political boss who previously cooperated with the Monseñor, but later vied with him for the leadership of the community. In 1967, Sr. Garzón was elected president of the Municipal Council. Through his influence with national and departmental officials of Acción Comunal, he acquired two dump trucks and a bulldozer as well as annual operating funds to conduct a local community development program which is essentially competitive with the programs of Acción Católica and the Corporación.

Accion Comunal has completed a footbridge across the Río Blanco, and has constructed and maintains another road bridge. There was token cooperation between the village and the local junta in the construction of a new 115,000 pesos (U.S. $7,015) health center for the hamlet, although the junta leaders claim the achievement for themselves since they had to solicit all of the funds from outside sources. They point out that an additional 7,000 pesos (U.S. $413) solicited from departmental Secretary of Health for furnishing the center were received by the municipal treasury and spent on operations in the village hos-

pital instead of supplies for the new health center. A similar accusation against the Municipal Council was raised by junta officials regarding 6,500 pesos (U.S. $396) intended to equip the new school. The junta officials also accuse the village leaders of monopolizing the U.S. sponsored school lunch program supplies for the village schools, especially the semi-private normal and vocational schools, and charging the students for the food.

The End of an Era

Aside from the organized opposition in La Unión, there were other indications of widespread dissatisfaction with the Monseñor's programs throughout the municipio, including the village. Nearly all of the village leaders indicated that the enthusiasm for community projects had declined in recent years. As a result, the funds collected in many veredas were reported to be less than half the amounts formerly received. Whereas participation in the fund drives and the neighborhood bazaars was formerly universal, many families no longer cooperated. One respondent expressed his feelings in the following manner: "Instead of helping us, we have to help him [the Monseñor] because every little bit the peasants are asked to make donations to the Granja, the Corporación, the hospital, the cemetery, or the schools."

Besides this increasing apathy toward "community development", another sign of the Monseñor's faltering grip upon the people of the community was the increasing trend for couples to elope to Bogotá to be married rather than attend the church's premarital counseling sessions and pay their special mass. In addition, the practice of daily devotions in the home reportedly has declined.

And in spite of constant reminders in sermons about the iniquity of birth control, the two local druggists reported a growing business in the sale of contraceptives, primarily to women in the village. Five women in the rural sample confided that they had sought medical advice on birth control or purchased contraceptives in Bogotá. Abortifacient "remedies" are widely known, and the local resident physician feels that they are attempted with considerable frequency.

The Failure of Community Development

Among its other effects upon the community, the development projects under the leadership of the Monseñor caused a tremendous expansion of the local bureaucracy. For example, the community's school system includes more than 110 administrative and teaching personnel or nearly one for every 100 inhabitants--a ratio which exceeds that of most rural communities in Colombia by many times. Most of these personnel were recruited from village homes or from rural families who had actively supported the Monseñor's programs. Several outsiders ranging from administrative personnel down to construction workers and peons were hand-picked by the Monseñor for jobs in the local bureaucracy.

This swelling village bureacracy has replaced the decaying traditional privileged group as the community elite. Like the old elite, the new elite invest in land and exploit the peasants through various types of tenancy arrangements and intermediary activities. But unlike the traditional elite, they are not entirely dependent upon economic rents from land and surpluses extracted from the peasantry. Many of them have invested heavily in commercial agricultural enterprises and private agricultural services.

Perhaps even more important is the fact that most of them were

initially established as a result of an abortive community development program fueled by an effective system of informal taxation through the ceremonial-religious system and by massive infusions of funds from the outside.

The basic structure of relationships between the dominant groups and the masses of the community remains essentially the same. Collectively, the new elite control most of the community's resources; they run the local government; and, they manipulate the local services to their own advantage.

Except for the neighborhood leaders, their families, and wealthier rural families who own houses in the village, few people in the rural hinterland reap the benefits of the rather elaborate village infrastructure. The village schools, the theater, the hospital, the experimental farm, the nursery, the market plaza, the parks, the aqueduct, the public housing projects, the slaughterhouse, the agricultural cooperative, the agricultural credit institutions, the agricultural processing plants, and many other material achievements of the community under the leadership of Monseñor Gutiérrez have failed to transform the peasants into farmers. Their participation in the extensive community development program remains essentially that of contributing generously to a one-way flow of resources from the rural hinterland to the village. Not only have they made financial and material contributions to the village projects, but they have also supplied the resources to sustain growing numbers of village elite, a few of whom have been recruited from their own ranks.

VI. METHODOLOGY AND SAMPLE CHARACTERISTICS

The Sample Site

Upon initial contact, Fómeque had seemed to be a community well-served by locally-sponsored education, health, extension, and other services. However, it became increasingly evident that the rural population was not the major beneficiary of these community development programs. It was also concluded that a thorough study of one community would yield more conclusive results about the process of economic reorganization than a less detailed study of more communities.

A probability area sample was used by superimposing a numbered grid system upon an aerial photograph of the inhabited portion of the municipio and randomly selecting the blocks to be interviewed. The sample was designed to include about 10 percent of the total number of rural households in the municipio. Blocks in which no houses appeared in the photograph were excluded from the sample unless the land obviously corresponded to a house in an adjacent block. The sample, then, was the families living in the randomly selected blocks. When the household head was absent or inaccessible, the spouse or other adult living in the household was interviewed. Interviews were conducted in 52 blocks, each approximately a quarter section in area.

The more obvious limitations of this sampling procedure include a high probability of blood relationship among neighboring households, rapid communication of the research questions among families within a block, uninhabited blocks or absentee ownership, and incomplete blocks on the political boundaries of the municipio. Given the absence of a complete listing of the families in the municipio, together with the

ease of sample location and convenience of data cross checks from neighboring families, the method used did seem the best alternative.

In general, cooperation from the peasants and the community leaders was good. A total of 209 interviews with peasant families were conducted; eleven interviews were not completed for various reasons.

The Village Census

In order to learn more about the agricultural service structure of the community and document the relationships between residents of the village and the hinterland, a complete census was made of village households and businesses. Unfortunately, two exogenous events made it necessary to rely heavily upon key informants and other indirect methods for the collection of this data. The first event was the announcement of the previously mentioned sharecropper decrees by the national government late in 1966. The other incident with strong implications for the study was the annoncement in early 1967 of an imminent land reassessment program in the municipio. Since more than one-half of the community's land is owned by village residents, many of whom have sharecroppers, they naturally suspected that the study was somehow connected with the two events. Through a combination of key informants, unstructured interviews, daily observations, and records from various sources in the village, most of the desired information was obtained.

Other Data

As a means of substantiating and qualifying the results obtained from the major study community, comparative data were collected on a

more limited scale in five neighboring communities. Interviews were conducted with informal and formal leaders, merchants, businessmen, teachers, extension workers, and peasants, giving particular emphasis to any similarities and differences in the economic organization of minifundia, the service structure, and migration patterns between these communities and Fómeque. A research schedule containing questions about the types, quality, and history of local services was completed for each of the communities.

There were 1,098 persons distributed among the 203 households in the rural sample, or an average of 5.4 individuals per family. These families operated a total of 852 hectares of land, or an average of 4.2 hectares. Because the study sample was designed to represent the more densely settled temperate and cold climatic zones of the municipio, it included about 12 percent of the municipio's total rural population living on a mere 2 percent of the total area. Hence, the average population density of the rural sample was rather high--129 persons per square kilometer (358 per square mile).

Age and Sex Distribution

There were 563 males and 535 females in the sample population. The predominance of males in the sample is apparently the result of a slightly higher migration rate for females, who seem to move out of the rural areas at somewhat earlier ages than the males because of more schooling, earlier marriages, and greater employability in menial urban services than their male counterparts. On the other hand, a pronounced lobe occurring between the 35 and 45 year age intervals in the female population suggests that a number of women migrants may eventually return to the rural areas.

Education

Ninety-six percent of the girls aged 10 through 19 were literate compared with 91 percent of the boys of the same age group. This high literacy rate contrasts sharply with the sample population aged 65 years and over in which a mere 29 percent of the men and 16 percent of the women could read and write. All of the sample households were located within 45 minutes' walking distances of a two - to four-year rural school or the five-year primary schools in the village and the hamlet.

Occupational Status

As Table 5 indicates, most of the sample population aged 12 years and above was engaged either directly or indirectly in agriculutral pursuits. Males who performed direct agricultural operations and shared in the distribution of the product were classified as agricultural producers. Other male household members who assisted in the direct agricultural operations of the family were indentified as farm helpers. In addition to domestic duties, most housewives and other female household members performed a number of routine farm chores such as tending livestock, and they assisted the men in crop operations, especially during peak planting and harvest periods.

Agricultural wages in the community tended to vary little from the subsistence rate of five pesos (U.S. $0.30) per day plus meals. Although most respondents indicated that the going cash wage for agricultural labor was 15 pesos (U.S. $.89) per day, none in the sample population had been paid strictly in cash wages for farm work in 1966. A few individuals did earn 15 pesos per day for unskilled nonagricultural labor.

Even if peasants were willing to work regularly at the subsistence wage rate--which they obviously could not afford to do if they had many

Table 5 Primary and Secondary Occupations[a/] of the Rural Sample Population Aged 12 Years and Over

Occupations	Household Heads	Wives	Children	Other Household Members	Total
Agricultural Producers and Farm Helpers	93		74	11	178
Part-time Agricultural Producers and Farm Helpers	73		59	7	139
Agricultural laborers	(41)		(47)	(7)	(95)
Unskilled nonagricultural laborers	(2)		(6)		(8)
Petty merchants	(18)		(5)		(23)
Livestock traders	(5)				(5)
Craftsmen	(4)		(1)		(5)
Handicraftsmen	(3)				(3)
Housewives and Household Helpers	19	118	75	20	232
Part-time Housewives and Household Helpers	10	46	16	2	74
Agricultural laborers		(6)	(7)		(13)
Unskilled nonagricultural laborers		(1)	(1)		(2)
Petty merchants	(3)	(16)			(19)
Livestock trader		(1)			(1)
Craftsmen		(5)	(1)		(6)
Handicraftsmen	(2)	(8)	(1)	(1)	(12)
Domestic workers	(5)	(8)	(6)	(1)	(20)
Professional		(1)			(1)
Agricultural Laborers	1		3	1	5
Unskilled Nonagricultural Laborers	2		2		4
Semi-skilled Laborers			2	1	3
Petty Merchants	1		2	1	4
Craftsmen	4		3	1	8
Domestic Workers			6	4[b/]	10
Students[c/]			30		30
TOTAL	203	164	272	48	687

a/ Only 11 individuals had tertiary occupations; These are omitted here.

b/ These four individuals were employed as domestic servants in 3 of the sample households.

c/ Most students assumed only minor responsibilities around the household & farm. One girl worked part-time as a domestic servant.

dependents to support -- the larger landowners would not likely provide sufficient employment opportunities to absorb the potential labor supply. And the peasants, themselves, usually don't hire labor unless they are obliged by social pressure to employ a relative or friend. If they need additional help, they generally exchange labor with neighbors. Hence their farm operations are not only programmed according to their own family needs and resources, but often with respect to their neighbors' situation as well.

A majority of peasant families seek additional income-earning opportunities either by expanding the productive capacity of their farms with additional land and/or yield-increasing technology, or by selling their labor outside the family production unit. During 1966, nearly three-fifths of the sample households operated land under tenancy arrangements; four-fifths received some income from sources other than their agricultural production units. Thirty-five percent of the 12-years-and-older sample population worked off the home farm in 1966, for an average of 107 days apiece. Assuming 250 work-days in a year (except for those peasants involved in commercial activities, most Fomequeños limit their work to routine farm and household chores on holidays and Sundays), off-farm work averaged a little over two-fifths time for those having outside employment. For the total sample population, it ranged from an average of about one-tenth time for wives to one-fifth time for household heads.

Because of the chronic shortage of income-earning opportunities for persons lacking nonfarm skills, a large portion of the off-farm employment was concentrated in menial tasks. Agricultural labor and

domestic service accounted for one-half of the total number of days devoted to off-farm employment. The more remunerative types of employment were represented primarily by merchants (livestock traders, hucksters, butchers, storekeepers, etc.) and craftsmen (bakers, carpenters, masons, mechanics, seamstresses, etc.). Competition from low-cost manufactured goods produced in the cities has practically eliminated local handicrafts as a source of supplementary employment.

VII. THE CONTROL AND USE OF AGRICULTURAL RESOURCES

The Land Tenure System

A wide diversity of tenure arrangements was found in the rural sample; the various types are described briefly below. Although nearly three-fourths of the sampled agricultural production units had some owner-operated land, most of these units were enmeshed in a complex tenure system with units having tenant-operated land. From the standpoint of land ownership and control, most of Fómeque's minifundia certainly are not independent units.

Owner-operators About one-fourth of the sample household heads were owner-operators. In general, this group was composed of older respondents; their average age was 56 years. Sixty percent of the owner-operated units were under three hectares in size, and the average size was four hectares. Only three owner-operators had more than 10 hectares, with the largest owner-operated unit 17.9 hectares.

Part-owners The largest tenure group was the part-owners, who comprised about one-third of the sample. Their average age was 51 years. Nearly one-half of the part-owners operated less than three hectares of land. The average size of operating unit for this group was slightly less than four hectares, and the average ratio of owner-operated to tenant-operated land was three to five. The most common form of tenancy for the part-owners was nonfamily sharecropping. Typically, these families had small land inheritances or purchases which were inadequate for providing subsistence. Hence, they entered into informal sharecropping arrangements with village landlords or other

rural landowners to produce commercial crops as well as supplementary subsistence crops.

Non-owners. Over one-fourth of the respondents owned no land at all. The average age of this group was only 43 years. Nearly two-thirds of these tenant families operated less than three hectares of land (also the average operating unit size), excluding the one administrator from the group. Both sharecropping and service tenancy are important for this group while cash renting is relatively insignificant. Sixty percent of the non-owners have more than one type of tenancy arrangement.

Landlords. About one-fifth of the rural respondents were landlords; their average age was 54 years. Only four landlords owned more than 25 hectares. The average amount owned was 12 hectares, and the majority of holdings were fragmented into several smaller parcels. Landlords owner-operated an average of four hectares. Only three did not operate any of their own land.

Nearly one-fourth of the landlords were also tenants, primarily cash renters and nonfamily sharecroppers. However, all but two of these landlord-tenants sublet all their rented parcels to other parties. Landlords gave out or sublet in tenancy an average of eight hectares. The most common forms of tenancy arrangements were non-family sharecropping and service tenancy; together these accounted for more than 90 percent of the total land given out by the rural landlords.

Table 6 summarizes the major tenure and size categories for the rural sample. In spite of cumbersome transfer procedures, land transactions are common in the community. Two-fifths of the property owners

Table 6 Distribution of the Agricultural Production Units in the Rural Sample by Major Tenure and Size Groups

Tenure Group	Size Groups (has.)					Total	
	Less than 1	1-2.9	3-9.9	10-24.9	25+	Number	Percent
Owner-Operators							
Number of units	11	20	15	3	-	49	24.1
Total area owner-operated (has.)	6.2	37.6	74.2	42.9	-	160.9	38.5
Non-Owners							
Number of units	13	23	14	3	1	54	26.6
Total area tenant-operated (has.)	5.5	41.4	72.3	53.1	39.0	211.3	48.7
Part-Owners							
Number of Units	5	24	30	3	-	62	30.5
Total area owner-operated (has.)	1.3	21.8	59.2	7.9	-	90.2	21.5
Total area tenant-operated (has.)	2.6	23.2	86.4	37.6	-	149.8	34.6
Landlords							
Number of units	1	6	16	10	5	38	18.7
Total area owner-operated (has.)	.3	5.0	57.3	64.5	40.0	167.1	40.0
Total area tenant-operated (has.)a/	-	3.2	4.4	9.9	54.8	72.3	16.7
Total area given out in tenancy (has.)	.6	6.6	40.4	74.8	183.8	306.1	100.0

Table 6 (Continued)

Tenure Group	Size Groups (has.)					Total	
	Less than 1	1-2.9	3-9.9	10-24.9	25+	Number	Percent
TOTAL							
Number of units	30	73	75	19	6	203	
Percent of total	14.7	36.0	36.9	9.4	3.0		100.0
Total area owner-operated(has.)	7.8	64.4	190.7	115.3	40.0	418.2	
Percent of Total	1.8	15.4	45.6	27.6	9.6		100.0
Total area tenant-operated (has.)	8.1	67.8	163.1	100.6	93.8	433.4	
Percent of total	1.9	15.7	37.6	23.2	21.6		100.0
Total area given out in tenancy (has.)	.6	6.6	40.4	74.8	183.7	306.1	
Percent of total	.2	2.2	13.2	24.4	60.0		100.0

a/ The tenant operated land is double counted in ten cases in which the landlords give out all their rented land in tenancy.

had acquired land within the past five years and three-fifths within the past decade. And nearly one-fourth of the property owners had sold land within the past 10 years, primarily to relatives and other small landowners in the rural areas of the municipio. About one-half of these sales were made in order to meet family needs such as medical and educational expenses, cancellation of debts, and home improvements. The remainder of the sales were made to obtain cash for land purchases near the village or in the village, for home construction in the village, or for livestock purchases.

Although there are still possibilities for peasants to acquire land in the densely-populated community, evidence suggests that these opportunities are diminishing over time. Nearly two-thirds of the sample household heads indicated that their parents owned more land than they did. For those respondents under 45 years of age, the proportion owning less land than their parents was about three-fourths; 23 owned no land. Of course this group included young families who were just getting started in agriculture and had not received as much land through inheritance as the older group. But even among those respondents 45 years and older, three-fifths owned no land at all or less land than their parents.

On the positive side, 57 respondents owned as much or more land than their parents. Most of these individuals were over 45 years of age. It is noteworthy that 24 of these household heads (42 percent) came from parents who owned no land. Eighty percent of the tenants operated land owned by non-relatives. These landlords were almost equally divided between urban (village or city) and rural residents.

Urban landlords were more common for non-owners whereas rural landlords predominated among the part-owners. In general, tenants with rural landlords received smaller amounts of land in tenancy than those having urban landlords.

The Labor System

Although labor use on minifundia was understandably difficult to quantify in a precise manner, most respondents seemed to recall reasonably well the number of days which various household members did not work because of illness and the number of days that they worked off the farm. They also knew the number of days' wages paid out for hired labor. The more difficult item to assess was the actual labor contribution of various household members to the family's agricultural operations. In general, it appeared that outside of marketing activities and daily farm and household chores, most families did little farm work on weekends and holidays except during the peak planting and harvest periods.

A practically universal division of labor existed between the sexes in the peasant families of the community. The men and older boys assume primary responsibility for crop production, including the care and operation of draft and pack animals, while the women and older girls devote most of their time to household operations and routine livestock chores. Occasionally, they assist the men in crop operations, especially in the harvesting and marketing of small fruits, vegetables, and flowers.

Using these criteria as guidelines for the interview questions, a labor residual of working days spent on the farm was calculated and converted to man-day-equivalents (MDE's). In other words, the total

number of family MDE's net of off-farm employment and illness represented a potential labor supply for a household's farming operations rather than an actual labor commitment. Because of the difficulty in measuring unemployment and underemployment on the agricultural production units, the figures tend to be biased somewhat in an upward direction.

Sample households supply most of the labor used on their operating units. The proportion declined as the size of operating unit increased. Ninety-four percent of the total labor input on operating units with less than 1 hectare was supplied by the household, compared with only 74 percent on units with 10 hectares or more.

Although three-fourths of the sample households hired some labor during 1966, most of them used it very sparingly. None of the 203 production units employed full-time laborers. Hired labor comprised a mere 6 percent of the total labor input on the operating units with less than 1 hectare, compared with 26 percent on the units with more than 10 hectares. The smallest units employed an average of 17 MDE's, compared with 158 MDE's on the 5 to 10 hectare units. Except for a few women and older men, most of the smaller operators seemed to restrict their hiring to special tasks such as the heavier tillage operations for which they lack the animals and equipment, and to the harvest of certain commercial crops such as tomatoes and peas for which delays might result in heavy losses.

Most of the larger operators supplement the family labor supply with hired labor for major operations such as planting, cultivating, and harvesting crops. If they experience problems in hiring additional

labor at the going agricultural wage rate, they tend to shift toward more extensive enterprises rather than pay higher wages. And instead of hiring and managing permanent workers, larger landowners seem to prefer a tied labor force of sharecroppers and service tenants who are not protected by minimum wage rates and other legislated benefits. Although most of the larger operating units included some intensive operations, they showed a very definite trend toward more extensive enterprises, particularly cattle.

The modal labor input for all operating units of the sample was between one and two work units(a work unit being 250 MDE's per year). Whereas all the operating units under one hectare in size had less than two work units, three-fifths of the units in the 5 to 10 hectare group used two or more work units in 1966. The proportion having two or more work units declined to two-fifths for the operating units with 10 hectares or more. Except for the smallest operating units, all size groups showed a considerable range in the number of total work units.

The Capital Structure

As with the land tenure and labor systems in minifundia agriculture, the capital structure links individual producers and other members of the community into a highly inter-dependent relationship. For families who live near the margin of subsistence, continual indebtedness to the wealthy members of a community is practically a necessary condition for survival. This is not to say, however, that peasant families do not have savings. Indeed, parsimony is practically a way of life for these families who must ration their production from one

harvest period to the next. Diseases, droughts, and other natural calamaties often exhaust any savings and force peasants to borrow funds for consumption as well as production needs.

Use of Credit

Technically speaking, the use of credit by respondents in the rural sample of Fómeque was nearly universal. Virtually all of the sample households had used informal types of credit and nearly one-half had borrowed funds from institutional sources. The most common form of borrowing was advances in kind from merchants, with 88 percent of the respondents having used this type of informal credit. Over three-fourths of the respondents had borrowed from friends and relatives, and nearly the same portion had used credit from money-lenders.

The most common source of institutional credit was the Caja Agraria, which had loaned funds to 39 percent of the respondents. While the majority of the larger landowners had received credit from this agency, it supplied funds to less than one-fifth of the respondents in the smallest owner and non-owner categories. The commercial bank had made loans to only nine percent of the respondents. These were primarily small short-term loans to medium owners for commercial activities. INCORA--the newest of the local institutional lending agencies--had extended supervised credit to a mere six percent of the respondents, mostly medium and large land-owners. Most of the funds in these package loans were for livestock acquisition and improvement.

Of those 104 respondents who had never used institutional credit, 41 felt that it was more convenient to borrow from informal sources. In 1966, 94 percent of the respondents obtained cash loans from freinds

and relatives and 91 percent received advances in produce from merchants. Most of this credit consisted of small interest-free loans for very short periods of time. Three-fourths of the respondents who obtained credit from friends and relatives had received loans totaling less than U.S. $50, and nine-tenths were under U.S. $100. Most of these loans were for household and farm supply purchases, with relatively few going for other purposes. Seven out of eight respondents who received credit from merchants had charged less than U.S. $100 worth of merchandise, mostly for household and farm supplies.

About one-half of the respondents borrowed funds from money-lenders in 1966. These loans involved somewhat larger sums of money, longer periods of time and a wider variety of uses than the other types of informal credit. The most common uses of funds received from money-lenders were farm supply and livestock purchases. Most borrowers paid the going noninstitutional interest rate of two percent per month on the unpaid balance.

Of respondents using institutional credit in 1965-66, 36 obtained credit from the Caja Agraria. While these loans varied considerably in both size and purpose, the majority totaled less than U.S. $250 and were solicited for livestock and crop production. Thirteen respondents received funds from INCORA during the 1965-66 biennium. All these loans were for more than U.S. $250, and they all gave primary emphasis to livestock production. Only eight respondents borrowed from a commercial bank during the two year period. This credit consisted primarily of small loans for livestock purchases.

Ten institutional borrowers admitted using at least a portion of

the credit received for purposes other than the intended uses specified in the loan requests. Rigid formal controls upon the use of institutional credit and wide interest rate differentials between the institutional and noninstitutional credit markets encourage misuse of funds. During the study, a number of respondents confided several cases of misappropriation of funds by loan officials as well as borrowers. A few of the rumored violations involved the reloaning of cheaper subsidized funds to third parties at the going informal interest rate of two percent per month.

At the time of the interviews, 150 respondents had a total of U.S. $36,363 in outstanding loans ranging from U.S. $2 to $2,145. The sample mean was U.S. $179, while the median was only U.S. $36. Total debts amounted to less than 10 percent of the total estimated value of family assets. Since the interviewing was conducted at the end of the agricultural year, the equity ratio was probably close to the annual maximum.

In addition to past and present experience with credit, the respondents were also asked hypothetical questions about three different types of credit needs: to meet expenses incurred by a family illness or funeral, to purchase agricultural supplies, and to buy land. Personal sources--friends and relatives--were favored for the first case. Misfortune strikes often in peasant communities, and most families are accustomed to dipping into their meager savings to provide emergency funds in addition to those which may be supplied by friends and relatives. During the unusually calamitous year of 1966, at least 17 respondents were forced to sell land, livestock, or other personal property to pay costs incurred by illness in the family--12 to pay funeral expenses or memorial masses,

5 to pay educational expenses, and 3 to pay lawsuits.

On the other hand, responses to hypothetical agricultural production credit needs indicated a tendency to seek funds from more impersonal sources. Nearly one-half of the respondents said they would solicit such funds from merchants and moneylenders; less than one-fourth mentioned friends and relatives. This choice undoubtedly reflected the common shortage of disposable funds among the peasants at the beginning of the new growing season. Nearly one-half of the respondents reported that they had no cash savings to finance the first crops of 1966, and another one-fourth had less than 500 pesos (U.S. $29.50). Most families had to sell animals or borrow money to plant their crops.

Capital Accumulation

At best, the process of capital accumulation on the minifundia may be characterized as slow and uneven. Abnormal weather, disease, and other adversities sometimes reduce output to near subsistence levels and often force peasant families to tap their savings for consumption. New technology is being used by the peasants in increasing amounts, but a large portion of the additional output which results from the use of these nontraditional factors is offset by decreases in soil productivity and increases in demographic pressure. Furthermore, exploitative land tenure and marketing systems permit dominant groups of the community and the greater society to extract large surpluses from the peasants. And peasant families, themselves, contribute to this one-way flow of resources from the countryside to the village, the cities, and even other countries by generous investment in ceremonial-religious funds and by the migration of their children ("emigrant capital").

Nevertheless, most peasants do manage to accumulate some capital, much of which represents the embodiment of their most abundant resource, labor, and the artificial appreciation of land values resulting from limited employment alternatives outside traditional agriculture.

In spite of the fact that 54 respondents (27 percent) were non-owners, landholdings still accounted for more than three-fifths of the estimated value of total capital assets possessed by the sample households. The sample mean was U.S. $1,275, versus a median of only U.S. $472. On a per hectare basis, the estimated value of land owned by the sample averaged U.S. $367 (about U.S. $149 per acre).

Next to land, the most valuable asset held by the rural sample was livestock, which represented nearly one-fifth of the estimated value of total assets. The average value of all livestock was U.S. $370 per household; the median value was U.S. $166.

In general, peasants who own no land or only small parcels of land are caught in a vicious circle of poverty. Because they possess such meager resources, they are usually forced into exploitative contractual relationships with landlords and money-lenders in order to acquire the necessary land and capital for production. And while these informal agreements may provide peasants with a sufficient amount of resources to derive a subsistence level of living for their families, they seldom permit large enough surpluses to accrue to the peasants for investment in land. And without the land, of course, incentives and opportunities for investing in other types of assets or for producing retainable economic surpluses are minimal.

Management and Technology

During recent decades, one of the most important sources of flexibility in the strained man-to-land relationships in Fómeque has been new agricultural technology. Improved genetic stock, chemical fertilizers, pesticides, and feed concentrates have created new income-earning opportunities for most of the community's rural families. At the same time, this new technology has contributed to an accelerated destruction of the community's natural environment and has made the peasants increasingly dependent upon very precarious markets. In short, the peasants appear to be caught on an accelerating technological treadmill which seems destined to dump them among the unemployed urban masses or spin them off into a deteriorating subsistence agriculture.

Because of the high degree of dependency in the land tenure, labor, and credit systems, the decision-making capacity of most peasants is substantially reduced. While most decisions concerning routine household activities and subsistence production are made by household heads, many decisions relating to the production of commercial enterprises are either made directly or else strongly influenced by outside interests. This seems to be particularly true of production decisions pertaining to the types and combination of enterprises employed and the use of certain kinds of technology. Ordinary operations such as soil preparation, planting, cultivation, and harvesting do not appear to command as much outside attention as the more specialized operations such as fertilization, spraying, and irrigation of crops and innoculation, pest control, and feeding of balanced rations to animals.

About three-fourths of the respondents had used improved agricultural

chemical practices (lime, fertilizers, pesticides), while less than one-tenth had adopted the soil conservation measures (contours, terraces) and improved animal breeds (swine, chickens). Except for feed concentrates (59 percent adoption) and improved seeds (44 percent), the other practices (animal pens, compost pit, irrigation, reforestation) all ranged in adoption from one-tenth to one-third of the respondents. Fifteen respondents had not adopted any of the improved practices, while only one individual had adopted all of them. Although a number of respondents--especially the older subsistence crop producers who no longer produced commercial crop enterprises--had abandoned certain improved practices and returned to traditional methods, no attempt was made to determine the magnitude of this discontinuance.

Of 16 improved agricultural practices asked about, respondents with 10 or more hectares in their production units had adopted an average of 10.0 improved practices, compared with an average of only 1.6 practices for respondents with less than 1 hectare in their production units. In order to ensure a minimal family subsistence, peasants with smaller units of land must commit most of their scarce resources to the production of traditional staple crops. They have very little margin for experimentation with commercial crop enterprises.

Those respondents who produced commercial crops in 1966 had adopted an average of 7.4 improved practices, compared with an average of 3.1 for subsistence crop producers. And those respondents with institutional credit experience had a mean adoption score of 7.5, versus 4.7 for informal credit users. Subsistence crop producers with no institutional credit experience had adopted an average of only 2.0 improved practices,

compared with an average of 5.1 practices for those who had used credit from institutional sources. Among the commercial crop producers, those using only noninstitutional credit had a mean adoption score of 6.5, versus 8.3 for the institutional credit borrowers.

VIII. AGRICULTURAL PRODUCTION AND INCOME

Table 7 shows the proportion of land devoted to temporal, biennial, and perennial crops (except forage) was inversely related to the size of the production unit, while the area in grassland, forests, and wasteland was directly related to size. Two-fifths of the area in the production units with less than one hectare was planted to annual crops (primarily maize and other intercultivated staple crops).

Crop Production

Maize is the most important crop in Fómeque in terms of the number of producers and the total area grown. According to Table 8 this crop was grown by 97 percent of the respondents in 1966; it accounted for nearly one-half of the total area in annual crops. With few exceptions, it was grown in combination with other staple crops such as broad beans, parsnips, potatoes, sago, squashes, and taros.

Only traditional, slow-maturing, open-pollinated varieties of maize were planted on the sample production units. Twenty respondents applied insecticides to the crop. Only five respondents applied chemical fertilizers directly to this subsistence crop. Weeds are generally allowed to grow quite rank before they are chopped out with a machete or grubbed out with a hoe. For these reasons, it is not surprising that the average maize yield was a mere 679 kilograms per hectare (about 8.6 bu/A).

Most of the maize crop was consumed by the respondents and their livestock. In 1966, only one-sixth of the total maize produced was sold

Table 7 Major Types of Land Use for the Agricultural Production Units in the Rural Sample by Size, 1966

Land Use	Size Groups (has.)				All Farms		
	Less than 1 %	1-2.9 %	3-9.9 %	10+ %	Total %	Total Area (has.)	Avg. Area (has.)
Semi-annual Cropland[a/]	16	23	19	10	13	150	.74
Annual Cropland[b/]	41	31	21	8	16	181	.89
Biennial Cropland[c/]	10	9	8	7	8	88	.43
Perennial Cropland[d/]	7	6	6	6	6	72	.35
Grassland[e/]	17	26	42	65	54	621	3.06
Forests	1	1	1	2	1	15	.07
Wasteland	f/	f/	1	1	f/	9	.04
Other	8	4	2	1	2	21	.10
TOTAL	100	100	100	100	100	1,157	5.70

a/ Includes land on which annual crops such as black-eyed peas, beets, cabbage, carrots, cucumbers, devil's cucumbers, gladiolas, green beans, lilies, onions, parsnips, peas , peppers, potatoes, shell beans, and tomatoes were grown in a single semester (growing season).

b/ Includes land on which annual crops such as broad beans, maize, sago, squashes, and taros were grown during both semesters (año grande).

c/ Includes land on which bananas, manioc, pineapple, plantains, and sugar cane were grown.

d/ Includes apples, avocados, berries, citrus, coffee, figs, guava, passion fruits, papaya, peaches, pears, sisal, sweetsops, and tree tomatoes.

e/ Includes land in soilage grass and dry season forage crops as well as pasture. Eleven production units with more than 10 hectares of forage each accounted for one-half of the total grassland in the sample.

f/ Less than 1 percent.

Table 8. Temporal Crops Grown by the Rural Sample According to Number of Producers, Area, Yield and Value of Gross Production, 1966

Temporal Crop and Semester Grown	Producers (N=203)		Area (has.) a/			Yield (kgms.)			Value of Production (U. S. $)					
	No.	%	Total	% Total Temp. Crops	Avg. per Producer	Total	Avg. per Producer	Avg. per Ha.	Home Consumption b/	Payments in Kind	Sales	Gross	Avg. per Producer	Avg. per Ha.
Staples														
Maize	198	97	154.45	47	.78	104,900 c/	530 c/	679 c/	3,014	1,938	1,007	5,959	30	38
Parsnips I	145	71	101.22	31	.70	68,000	469	672	1,618	1,794	2,605	6,017	42	59
Parsnips II	10	5	7.73	2	.77	8,300	830	1,074	228	274	278	780	78	101
Potatoes I	73	36	32.96	10	.45	46,300	634	1,405	748	1,074	1,435	3,257	45	99
Potatoes II	23	11	9.64	3	.42	9,300	404	965	115	352	364	831	36	86
Peas I	55	27	38.36	12	.70	23,700	431	618	256	783	1,249	2,288	42	60
Peas II	37	18	14.84	4	.40	10,200	276	687	99	810	965	1,874	51	126
Shell beans I	32	16	25.88	8	.31	9,100	284	352	101	266	430	797	25	31
Shell beans II	22	11	15.60	5	.71	8,000	364	513	163	484	562	1,209	55	77
Nonstaples														
Tomatoes I	43	21	17.99	5	.42	105,780	2,460	5,880	13	3,588	6,691	10,292	239	572
Tomatoes II	109	54	34.64	10	.32	165,800	1,521	4,786	58	5,885	10,747	16,690	153	482
Green beans I	17	8	12.56	4	.74	17,700	1,041	1,409	33	139	550	722	42	57
Green beans II	34	17	7.76	2	.23	14,700	432	1,894	15	432	698	1,145	34	148
Easter lilies	21	10	5.35	2	.25	10,530 d/	501 d/	1,968 d/	-	171	754	925	44	173
Peppers	14	8	4.30	1	.31	16,640	1,188	3,869	-	547	787	1,334	95	310
Gladiolas	14	7	5.65	2	.40	5,610 d/	401 d/	993 d/	-	189	1,290	1,479	106	262
Devil's cucumbers	13	6	3.00	1	.23	8,460	651	2,820	-	191	537	728	56	242

Table 8 (Continued)

Temporal Crop and Semester Grown	Producers (N=203)		Area (has.)[a]			Yield (kgms.)			Value of Production (U. S. $)					
	No.	%	Total	% Total Temp. Crops	Avg. per Producer	Total	Avg. per Producer	Avg. per Ha.	Home Consumption[b]	Payments in Kind	Sales	Gross	Avg. per Producer	Avg. per Ha.
Miscellaneous Other temporal crops[e]	201	99	195.60	59	.77	-	-	-	1,764	1,918	4,858	8,540	42	44
TOTAL	203	100	331.00	100	1.63	-	-	-	8,225	20,835	35,807	64,867	320	196

a/ Because of intercultivation and multiple cropping, much of the area is double counted.

b/ Includes consumption by the household, hired laborers, and animals

c/ Measured in dried ear form.

d/ Measured in dozens.

e/ Includes primarily common staple crops, such as broad beans, sago, squashes, and taros which most respondents intercultivate with maize. Also includes one respondent with 1.28 has. of onions with a gross value of U. S. $1,982.

at the time of harvest. Many respondents indicated that they usually have to purchase limited quantities of the commodity during the year in order to meet their needs. When asked if "they had ever considered reducing the amount of land planted to maize in order to produce more commercial crops," one-third of the respondents indicated that maize was too important a staple to diminish in area. Another one-third of the respondents replied negatively for reasons such as having too poor or inadequate land, insufficient funds or unwillingness to risk expenditures for the necessary inputs, and lack of decision-making authority.

In spite of these aversions to greater commercialization, two-thirds of the respondents did produce nonstaple crops in 1966 which required the use of improved fertility or pest control practices and went primarily for sale or payments in kind. The most important commercial crop was tomatoes which were grown by 21 percent of the respondents during the first semester (March-August) and 54 percent in the second semester (September-February). This crop accounted for 5 and 10 percent, respectively, of the total area in annual crops during the two semesters.

The real importance of tomatoes in the local economy may be appreciated by the fact that the crop represented 42 percent of the total value of all annual crop production on the sample units--substantially more than other annual crops on both a per farm and per hectare basis. Because it is a high risk crop and requires a high level of purchased physical inputs, however, a large portion of the tomatoes was produced under sharecropping arrangements. Payments in kind for tomatoes represented 35 percent of the total value of the 1966 crop and 45 percent of the total payments in kind for all annual crops.

Tomatoes are a very labor intensive crop, requiring meticulous seedbed preparation, nursery starting of the plants, and later transplantation. A small handful of complete commerical fertilizer is usually placed around each plant as it is set out.

The growing plants require continual watering, protection from insects and diseases by spraying, and staking and tying. Ideally, the tomatoes are picked just as they begin to turn pink. In this form, losses are minimized in the rugged haul by pack animals to the village marketplace. But since the market is held only twice a week except during the peak harvest season, many tomatoes are picked too ripe and are consequently damaged in transport.

Price fluctuations add to the technological problems. In 1966, tomato prices in the local marketplace ranged from five pesos per crate (less than U.S. $0.01 per pound) to 75 pesos per crate (about U.S. $0.10 per pound). Prices of perishable commodities often vary as much as 100 percent in a single day, and while local processing facilities provide an alternative use for asparagus and guavas, the only outlet for tomatoes is the sometimes glutted urban consumer market for fresh produce. Seasonal production surpluses notwithstanding, marketing margins on local tomatoes are normally high throughout the year as a result of tacit agreements among the community's major tomato middlemen. Although they lack established contacts which the major middlemen have in the urban markets, a few of the larger tomato producers have found considerable advantage in circumventing the local marketing channels.

Although other commercial crops have similar technological and institutional problems, a few have a high potential for increasing agricultural

production on the minifundia. Some already compete favorably with tomatoes, or at least provide a lucrative means of diversification on several production units.

Biennial and Perennial Crops

As Table 9 indicates, most production units have a wide assortment of biennial and perennial crops. Although these crops tend to be less productive than the commercial annual crops, they are generally produced with very few purchased inputs. And since these enterprises--especially pasture and forage crops--represent a major portion of the total area on most production units, their contribution to total agricultural output is quite significant. Except for manioc and sugar cane, however, tenants usually do not share the production from these longer term crops. Occasionally, they do receive a small portion of the crop or permission to graze an animal (a puesto) in exchange for harvesting and delivering the landlord's crops or performing other services for him. And because most families do not possess the necessary equipment to process sugar cane and sisal, these crops are nearly always harvested in partnership with individuals who own the processing facilities.

In spite of the diminishing importance of sugar cane and coffee in the local economy, these traditional enterprises still provide substantial cash earnings to Fomequeñian peasants. Most of the sugar cane is converted into molasses for which there is still a fairly strong demand among illicit distillers in Bogotá and outlying areas. A small portion of the crop is converted to fermented sugar cane juice for local consumption. Unlike the more remote areas of the country, very little of the local crop is processed into crude brown sugar (panela)which is an important staple in

Table 9. Biennial and Perennial Crops Grown by the Rural Sample According to Number of Producers, Area, Yield, and Value of Gross Production, 1966

Biennial and Perennial Crops	Producers (N=203)		Area (has.)[a/]			Yield (kgms.)			Value of Production (U. S. $)						
	No.	%	Total	% Total Perm. Crops	Avg. per Producer	Total	Avg. per Producer	Avg. per Ha.	Household & Farm Consumption	Animal Consumption	Payments in kind	Sales	Gross	Avg. per Producer	Avg. per Ha.
Bananas and Plantains	191	94	27.07	3	.14	33,865	177	1,251	798	-	293	678	1,769	9	65
Other Fruits[b/]	181	89	10.84	1	.06	51,696	287	4,769	642	-	508	1,804	2,954	16	272
Coffee	147	72	37.88	5	.26	7,250	49	191	508	-	248	2,122	2,878	20	76
Manioc	92	45	18.97	3	.21	42,400	461	2,235	869	-	447	849	2,165	24	114
Sisal	143	70	25.44	3	.18	7,750	54	305	-	-	805	879	1,685	12	66
Sugar Cane	114	56	39.96	5	.35	203[c/]	2[c/]	5[c/]	152	667	1,211	3,197	5,227	46	131
Soilage	183	90	88.63	11	.48	281[c/]	1.5[c/]	3[c/]	-	3,775	908	296	4,979	27	56
Pasture	155	76	531.94	67	3.43	2,018[c/]	13[c/]	4[c/]	-	12,805	8,797	186	21,788	141	41
Forests	58	29	14.78	2	.25	790[d/]	14[d/]	54[d/]	452	-	-	101	553	9	37
TOTAL	198	98	795.51	100	4.02	-	-		3,421	17,247	13,217	10,112	43.997	222	55

a/ Adjusted for intercultivation.

b/ Includes all other tree fruits and small fruits as well as castor beans.

c/ Given in metric tons of green forage.

d/ Number of trees.

the peasants' diet. Sugar cane is also commonly used as fodder on the smaller production units. Since very few producers use improved fertility and pest control practices for sugar cane, average yields tend to be quite low.

Coffee is a much neglected crop in Fómeque. Few producers have ever heard of the improved varieties and cultural practices now widely used in the major coffee-growing regions of the country. Since the National Federation of Coffee Growers has major responsibility for supply control as well as coffee improvement activities, it has never operated actively in such marginal coffee-producing areas as Fómeque. Most of the local coffee crop is purchased by three or four middlemen who resell the beans, either to the Federation through illicit marketing quotas, or to larger buyers outside the formal marketing channels.

Fruits also provide an important source of cash income on most of the community's minifundia. The most common are bananas and plantains, which, unlike other fruits, are an important staple in the local diet. After the bananas and plantains are harvested, the trees are commonly chopped and fed as fodder. Other important fruits included: sweetsops (56 percent), oranges (46 percent), figs (28 percent), guava (28 percent), avocados (24 percent), and passionfruits (23 percent). In addition, 23 percent of the farms produced castor beans for sale.

A permanent crop of increasing importance in the community is sisal. Although this crop requires chemical fertilizers and insecticides for optimum production, it grows reasonably well on steep, depleted soils without these improved practices. In a few areas of the country, this crop has provided the basis for successful artisan industries. In Fómeque,

however, nearly all the fiber is sold directly to a few middlemen who resell it in Bogotá.

Manioc yields very poorly on the depleted soils of Fómeque unless improved fertility practices are used. Like some of the other staple crops such as maize and plantains, local manioc production is supplemented by imports from the Llanos where the productivity of the crop tends to be much higher.

Livestock Production

The distribution of cattle on the sample production units was highly skewed. While 124 farms, or 72 percent of the production units with cattle, had only one or two head, 23 units (13 percent) had over 10 head of cattle each. The cattle on these larger farms accounted for nearly one-half of the total number. Unlike the multi-purpose bovine stock on the smaller production units, cattle on the larger units tended to be either dairy or beef animals. INCORA's emphasis on dairy herd expansion and improvement in the community facilitated a considerable increase in cattle inventories on the community's medium and large size farms during 1966.

In spite of low pork prices and local feed shortages in 1966, swine outranked cattle in net annual sales on the sample production units. Swine were fairly evenly distributed among the sample production units, with most respondents producing two to four market hogs per year. Only one-fifth of the respondents kept breeding stock; others purchased weaning pigs for fattening and sale. Swine numbers are apparently restricted on most production units by the threat of disease as well as the limited quantity of home-grown feed. In 1966, disease claimed a total of 90 swine on 20 different production units.

Three-fifths of the production units had work animals in 1966. Oxen accounted for 30 percent of the total work stock. In addition to providing the primary source of draft power in the community, oxen are also used as beasts of burden and are fattened for beef purposes.

One half of the production units had horses, mules, or burros. Most of the community's families must either keep their own pack animals or risk the availability of neighbor's animals.

Chickens are practically a universal enterprise on the agricultural production units of Fómeque. Ninety percent of the families on the rural sample had fewer than three dozen birds. Nevertheless, sales of eggs and stewing chickens from these small flocks represented a significant portion of the peasants' total cash receipts. Like swine, poultry numbers appear to be constrained by limited supplies of home-grown feed and disease threats.

Animal Products

Table 10 shows the output of livestock products for the rural sample. In terms of gross production, dairy products lead the list with a total value of U.S. $17,753, or an average of U.S. $112 for the 159 farms which produced milk in 1966. Given the limited local market for fresh milk and the difficulties involved in collecting and shipping fluid milk outside the municipio, it is not surpsrsing that over one-half of the total milk production was converted to soft cheese which may be kept for three or four days without spoilage. The whey is generally used in cooking or fed to animals, while a major portion of the cheese is sold.

To some extent, the problems associated with the marketing of dairy products may increase the local consumption of milk and its derivatives.

Table 10. Animal Products for the Rural Sample According to Number of Producers, Quantity, and Value of Annual Production, 1966

Type of Product	Producers (N=203)		Production		Value of Production (U. S. $)				
	Number	Percent	Total	Avg. per Producer	Farm and Home consumption	Payments in kind	Sales	Gross	Average per Producer
Milk	159	78	165,786 lit.	1,042 lit.	3,446	2,229	1,172	6,847	43
Whey	143	70	129,444 lit.	912 lit.	1,144	193	76	1,413	10
Cheese	143	70	43,148 kg.	302 kg.	2,713	1,399	5,381	9,493	66
Eggs	199	98	34,212 doz	172 doz.	4,525	166	11,053	15,744	79
Meat	98	48	1,869 kg.	19 kg.	756	-	885	1,641	17
Animal Services	114	56	-	-	1,446	613	3,915	5,974	52
TOTAL	199	98	-	-	14,030	4,600	22,482	41,112	207

Households with milk cows consumed 41 percent of the total value of gross dairy production. However, there was considerable variation in the consumption of dairy products. While one-fourth of the sample households consumed no milk, the quartile with the highest milk consumption used more than two liters daily per household.

Because so many dairy cows were held in partnership or owned by landlords, payments in kind for dairy products was rather high--22 percent of the total value of gross production. In the case of partnership arrangements, the milk is typically shared three days a week by the tenant and four days by the owner.

Eggs outranked dairy products as a source of cash income on the sample production units, accounting for nearly one-half of the total cash receipts derived from the sale of animal products. Only 29 percent of the total egg production was consumed. Like dairy products, egg consumption varied considerably. Home consumption of meat was limited almost exclusively to poultry and rabbits. In 1966, one-half of the households consumed no meat from the farm, and another one-fourth consumed no more than a half dozen chickens or rabbits.

Farm Income Analysis

Cash Receipts

In spite of the heavy emphasis upon intensive crop production in the community, sales of livestock and livestock products comprise the major portion of total cash farm receipts on most munifundia. (See Table 11) Nearly two-thirds of the average total cash farm income received by the rural sample in 1966 came from livestock enterprises, especially feeder stock.

The indispensable role of livestock enterprises in a peasant economy has already been discussed. Animals not only form an important component of peasant operating capital, but they serve as major short-run securities and insurance policies as well. In addition, they provide opportunities for fuller utilization of family labor supplies and of roughage and other nonmarketable farm products.

Table 11 Average Cash Farm Receipts in U.S. Dollars for the Rural Sample by Source of Income and Size of Agricultural Production Unit, 1966.

Source of Receipts	Size Groups (has.)						All Farms (N=203)	
	Less than 1 (n=30)	1-2.9 (n=73)	3-4.9 (n=37)	5-9.9 (n=38)	10-24.9 (n-20)	25+ (n=5)	Mean	Median
Annual Crop Sales	19	91	115	273	328	1,482[a/]	176	77
Biennial and Perennial Crop Sales	12	31	38	75	88	367	51	21
Animal Sales	72	160	259	244	1,001[b/]	1,222	290	126
Animal Product Sales	38	79	103	146	218	402	111	77
TOTAL	141	360	514	738	1,635	3,472	629	350

a/ Includes one respondent with U.S. $6,067 of receipts from annual crop sales. Without this individual, the cell mean is reduced to $336 and the row mean to $147.

b/ Includes one respondent who sold U.S. $9,400 of livestock. Without this individual, the cell mean is only $559 and the row mean only $245.

This does not mean that peasant families steer away from commercial crop production. To be sure, peasants rely heavily upon cash receipts from crops to finance livestock purchases. Because partnership arrangements were more common for annual crop production than for livestock

enterprises, a larger portion of total output from annual crops went for payments in kind. On the other hand, nearly all service tenancy contracts involved livestock and permanent crop production which, for the most part, went to the landlords.

Home Consumption

While most of Fómeque's peasants are able to maintain little more than a subsistence level of living, the community's minifundia are certainly not subsistence farms in the sense of being self-sufficient production units. All of the sample households produced agricultural output for sale as well as for home consumption. Of course the ratio of sales to consumption varied considerably. Households with less than one hectare in their production unit sold about three dollars worth of produce for every dollar consumed, whereas producers with 25 hectares or more sold nearly 11 dollars of produce for every dollar consumed. Naturally, a large portion of these cash receipts go for the purchase of subsistence items which are not produced on the farm.

Households with production units less than one hectare in size consumed an average of U.S. $45 of home-grown produce, versus U.S. $319 for families with production units of 25 hectares or more. The average value of home consumption for all units was U.S.$121, compared with a median of only U.S. $89. The average value of home consumption per capita for families on the largest production units was more than five times that for families on the smallest units.

The type of home-grown produce consumed also varied with farm size. While the value of home-grown annual crops declined as a percentage of total home consumption for larger producers, the value of home-grown fruits and

meat increased proportionally. The relative portion of home-grown animal products consumed did not vary greatly among size groups except for the largest producers for whom animal products represented more than three-fifths of the average value of total home consumption.

Cash Farm Expenditures

As Table 12 indicates, cash farm expenditures also were highly related to the size of production unit.

Value of Gross Farm Production

Average farm income computations are summarized by size groups in Table 13. The table demonstrates a strong direct relationship between size and each of the farm income concepts.

One of the most important concepts shown in the table is the value of gross farm production which represents the total value of agricultural goods and services produced on the farm during the year. It is represented here as the summation of total cash farm receipts, home consumption, imputed rent for the farm residence, value of services received through tenancy contracts, value of payments given out in kind, and net inventory changes. (Payments received in kind are disbursed as cash receipts, consumption, or inventory appreciation.)

The average value of gross farm production for the largest production units was 26 times greater than that for the smallest units. On a per hectare basis, however, average productivity was inversely related to size; the smallest production units had an average gross farm production of U.S. $540 per hectare, compared with an average of only U.S.$179 for the units with 10 hectares or more. If the average productivity of the land in all sample units was equivalent to that for the less than one hectare size group, gross farm production for the sample would be increased by

Table 12. Average Cash Farm Expenditures in U.S. Dollars for the Rural Sample by Type of Expenditure and Size of Agricultural Production Unit, 1966

Type of Expenditure	Size Groups (has.) Less than 1 (n=30)	1-2.9 (n=73)	3-4.9 (n=37)	5-9.9 (n=38)	10-24.9 (n=20)	25+ (n=5)	All Farms (N=203) Mean	Median
Animal Purchases	22	41	48	115	438[a]	996	116	27
Animal Costs	11	36	30	65	349[b]	176	71	1
Seeds	2	13	17	34	48	74	21	11
Fertilizers	c/	5	13	19	22	51	11	4
Pesticides	c/	4	9	14	13	25	8	2
Hired Labor	6	21	39	83	77	230	44	23
Hired Animals	c/	3	3	6	4	88[d]	5	0
Interest	1	6	3	12	44	54	11	1
Cash Rent	0	5	8	14	1	24	6	0
Taxes	c/	2	2	3	6	17	4	2
Other	2	5	7	12	46	49	11	4
TOTAL	45	140	179	377	1,048	1,784	308	134
Expenditure per Hectare	81	74	47	56	71	34	54	50

a/ One respondent purchased $3,543 of feeder stock. Without this individual, average animal purchases are $275 for this size group and $99 for all farms.

b/ One respondent had $5,071 in animal costs. Without this individual, average animal costs are $100 for this size group and $46 for all farms.

c/ Less than one dollar.

d/ One respondent had $383 in hired animal costs. Without this individual, the cell average is only $15 and the row average only $4.

Table 13. Average Farm Income Analysis in U. S. Dollars for the Rural Sample According to Size of Agricultural Production Unit, 1966

Item	Size Groups (has.) Less than 1 (n=30)	1-2.9 (n=73)	3-4.9 (n=37)	5-9.9 (n=38)	10-24.9 (n=20)	25+ (n=5)	All Farms (N=203) Mean	Median
1) Cash Farm Receipts	141	360	514	738	1,635	3,472	629	350
2) Cash Farm Expenditures	45	140	179	377	1,048	1,784	308	134
3) Net Cash Farm Income (1-2)	96	220	335	361	587	1,688	321	192
4) Consumption of Farm Products	45	85	111	176	227	319	121	89
5) Imputed Rent of Farm Residence	4	9	12	16	19	24	11	6
6) Value of Services Received in Kind[a]	6	5	3	4	6	7	5	0
7) Payments Given Out in Kind[b]	40	95	149	242	861	2,336[c]	255	86
8) Net Inventory Changes	5	14	21	27	98	131	28	13
9) Value of Gross Farm Production (1+4+5+6+7+8)	241	568	810	1,203	2,846	6,289	1,049	625
10) Depreciation of Farm Assets	10	22	29	31	79	153	32	14
11) Value of Gross Farm Expenditures (2+7+10)	95	257	357	650	1,988	4,273	595	278
12) Value of Net Farm Production (9-11)	146	311	453	553	858	2,016	454	289

a/ Includes the imputed value of services which 40 respondents received through tenancy contracts.

b/ Includes the imputed value of goods and services given out in sharecropping and service tenancy contracts.

c/ Includes one hacienda on which the landlord's share was U.S. $7,449. Without this farm, the cell mean is only $1,058 and the row mean $219.

193 percent. Or, if the average productivity for the sample area were commensurate with that for the 1-3 hectare units, gross farm production would be 67 percent more than the present figure. Even if the average productivity of the sample area were equal to that of the 3 to 10 hectare group, gross farm production would be 16 percent higher than the present level.

Productivity per hectare was also related to tenure. The average value of gross farm production per hectare was U.S.$359 for non-owners and $244 for landlords, with part-owners and owner-operators intermediate. Considering both size and tenure, however, landlords had the highest average productivity for all but the 3 to 10 hectare size group. In part, this high productivity among the rural landlords is attributable to the exploitation of peasant labor for the production of commercial agricultural enterprises. Without this cheap labor supply, they most likely would produce more extensive enterprises. Of course most of these individuals also have ready access to institutional credit to finance the purchase of improved agricultural inputs.

Cash farm receipts accounted for three-fifths of the average gross farm production for all size groups. The proportion ranged from 55 percent for the largest production units to 63 percent for the one to five hectare size groups. Not surprisingly, the relative contribution of home consumption to gross farm production was inversely related to size. Whereas 1 out of every 5 dollars of average gross farm production was consumed on the smallest units, only 1 out of 20 dollars was consumed on the largest units.

Payments in kind were an important component of average gross farm production for all size groups. Whereas about one-fifth of the average gross farm production on the units with less than 10 hectares consisted of payments in kind, the proportion increased to one-third on the units with 10 hectares or more. Two-thirds of the total payments in kind were given out to the landlords by the sharecroppers and service tenants in the sample. The remainder were given out by the 38 landlords in the sample to the peasants who worked their land. Of these disbursements to tenants, 83 percent were from the 15 landlords with 10 hectares or more of land.

Value of Net Farm Production

While gross farm production is a useful tool for measuring the productive capacity of an agricultural production unit and its contribution to the economic product of society, it does not necessarily represent the economic well-being of a family. A more precise measure of a farm's capacity to fulfill the basic needs of a family is net farm production. Except for landlords and employers who may remunerate nonfamily labor at a rate less than the value of its marginal physical product, net farm production essentially represents the economic return to a family's resources. In comparative terms, the average value of net farm production on the largest units was 14 times greater than that of the smallest units.

Because gross farm expenditures increased proportionally faster than output with increases in farm size, the ratio of average net farm production to average gross farm production was inversely related to size. The proportion decreased from 61 percent on the production units with less than 1 hectare to 32 percent on the units with 25 hectares or more. For the sample, the average value of net farm production was a little over two-fifths the average value of gross farm production.

This higher average net product per unit of gross expenditure for the smaller producers results primarily from their relatively more generous use of abundant family labor in combination with other factors of production. Hence, on a per unit of labor basis, the value of net farm production tends to be lower for the smaller producers.

Family Income Analysis

An analysis of total incomes and corresponding levels of living for the sample households shows that most of the families barely derived enough income to provide a subsistence level of living. Nutrition, medical care, education, and housing were inadequate for all but a few families who controlled relatively large amounts of resources and received a disproportional share of services. Furthermore, these privileged households were the only units on which continuous capital formation was possible under the existing structure. For families whose income provides no more than minimal subsistence needs, the savings capacity is by necessity low.

In spite of limited opportunities for nonfarm employment in the community, 83 percent of the sample households reported earnings from economic activities outside their agricultural production units in 1966. Table 14 shows the average cash nonfarm income for the rural sample according to source of income and size of production unit. Except for the largest producers, variation in average total cash nonfarm earnings among different size groups was not very great.

However, average nonfarm earnings did vary by source among size groups. Whereas income from wages and salaries tended to be inversely related to size, earnings from cash rent, interest payments, and self-

Table 14 Average Cash Nonfarm Income[a] for the Rural Sample According to Source of Income and Size of Production Unit, 1966

Source of Income	Size Groups (has.)						All Farms (N=203)	
	Less than 1 (n=30)	1-2.9 (n=73)	3-4.9 (n=37)	5-9.9 (n=38)	10-24.9 (n=20)	25+ (n=5)	Mean	Median
Wages and Salaries	73	40	50	25	4	-	39	29
Cash Rent & Interest Payments[b]	-	2	3	4	16	26	4	0
Other[c]	41	66	98	127	88	388	90	0
TOTAL	114	108	151	156	108	414	133	65

[a] Includes income from all sources other than agricultural enterprises produced on the household production unit.

[b] Only 17 respondents received income from these sources.

[c] Includes income from self-employment activities and gifts.

employment were directly related to size.

Disposable Cash Family Income

Mean disposable cash family income for the sample--the sum of net cash farm income and cash nonfarm income available for family consumption purchases as well as household and farm investments in 1966--was U.S. $454, and the median was $311. On a per capita basis, the average disposable cash family income ranged from U.S. $41 for the households with production units less than 1 hectare in size to $332 for the households with production units 25 hectares or more in size. The per capita average for the sample was U.S. $78. The proportion of disposable cash family income derived from net cash farm income ranged from an average of 46 percent for the smallest production units to 84 percent for the largest units. The

sample average was 71 percent.

Cash Family Expenditures

Table 15 itemizes average cash family expenditures by size groups. The per capita expenditure for the sample amounted to an average of U.S. $52, or $84 per adult consumer equivalent. Average cash family expenditures per individual ranged from U.S. $39 on the smallest units to $135 on the largest units. The corresponding average expenditures per adult consumer equivalent were U.S. $66 and $193, respectively.

Table 15. Average Cash Family Expenditures in U.S. Dollars for the Rural Sample by Type of Expenditure and Size of Production Unit, 1966

Type of Expenditure	Size Groups (has.)						All Farms (N=203)	
	less than 1 (n=30)	1-2.9 (n=73)	3-4.9 (n=37)	5-9.9 (n=38)	10-24.9 (n=20)	25+ (n=5)	Mean	Median
Food	114	137	165	198	208	304	161	151
Clothing	27	30	37	48	56	80	38	29
Personal Expenses	25	20	35	33	26	83	31	14
Medical Expenses	19	18	23	43	35	126	28	18
Education	4	14	20	22	34	140	20	3
Home Improvements	4	4	12	11	49	92	14	2
Household Supplies	5	7	9	11	12	15	8	6
Contributions	4	4	8	7	10	13	6	4
TOTAL	202	243	309	371	430	853	306	263

Food

Food was the principal cash family expenditure. Food purchases averaged more than one-half of total cash family expenditures for all but

the upper two size groups. Average expenditures for food were approximately equal to the average value of home consumption for larger producers, but greater than the average value of home consumption for smaller producers. The average value of total food consumption per household was only U.S. $159 for the smallest production units, compared with $623 for the largest units. On an adult consumer equivalent basis, the corresponding averages were U.S. $52 and $141, respectively.

Clothing. Clothing purchases averaged 12 percent of total cash family expenditures. Although there is a strong trend toward the purchase of low quality, ready-made cotton apparel, many rural households still make a large portion of their clothing.

Personal expenses. Personal expenses, averaging 10 percent of total cash family expenditures for the sample households, consisted primarily of travel expenses for business, recreational, and religious trips taken outside the municipio. In 1966, a round-trip bus ticket to Bogotá cost 14 pesos (U.S. $0.83), or the equivalent of a day's wage for a nonagricultural laborer. Once they arrive in the city, most Fomequeños can find food and lodging with friends and relatives. Of course this favor is usually reciprocated with farm produce or room and board, if the urban residents visit Fómeque. Because of limited incomes and strong religious indoctrination, few Fomequeñian peasants spend much money on drinking, smoking, gambling, and prostitution. Such activities are strictly controlled in the community by religious and municipal authorities. However, when church-sponsored bazaars are held--usually twice a year in the village, hamlet and each vereda--business establishments are requried to shut down while the church takes in the profits from mass consumption of food, alco-

hol, tobacco, and gambling activities.

Medical expenses. Like other types of family expenditures, medical expenses tended to be directly related to the size of production unit. Families with limited resources simply do not have funds available for their medical needs. Some medical assistance to poor families is available, but it requires the usual red tape which peasants consider to be very annoying and humiliating. Charity cases are determined by local hospital and health center authorities on the basis of information concerning the medical history and economic status of the patient and his family. But since the health centers require a 2 to 10 peso (U.S. $0.12 to $0.59) minimum consultation fee and the hospital demands a minimum payment of 40 pesos (U.S. $2.63) for entrance fee for charity cases, most peasants avoid these services except for emergencies. Many rural families still rely heavily upon household remedies as well as upon quacks and midwives. However, a large number of sample households depended upon the relatively expensive services of private physicians who extend them credit for consultation and medication.

Education. Because of the prohibitively high costs of tuition, books, supplies, uniforms, trips, room and board, and because of discriminating matriculation requirements, relatively few children from peasant families enter the village school system. Annual costs for the village primary schools are U.S. $9 to $15 per pupil, excluding room and board. For the vocational schools, the range of annual costs exclusive of room and board is approximately U.S. $27 to $44 per student. For the normal schools, the annual cost without room and board is approximately U.S. $48 to $71 per student. Rural families who do not live close to the village or own homes in the village face exorbitant room and board costs which vary between

U.S. $195 and $236 per year in the vocational and secondary schools.

Home Improvements. Five percent of average total cash family expenditures in 1966 went for home repairs and improvements. Most of the major improvements were made by a few larger producers. The majority of the rural homes were of simple construction consisting of primarily local materials such as poles, bamboo and mud. Roofing and framing materials usually constitute the major expenses. Once the basic house is completed, families tend to make gradual improvements as their economic conditions permit. Of course one of the problems with cheap construction is the need to make more frequent repairs.

Household supplies

Cash outlays for kerosene, candles, soap, kitchen utensils, bedding, and other household supplies averaged about three percent of total cash family expenditures in 1966. Most families had meager household furnishings and equipment.

Contributions

The sample household gave an average of six dollars, or about two percent of its total cash family expenditures, in direct contributions to ceremonial-religious funds in 1966. These included cash donations to special fund drives, offerings in regular masses, and contributions for "paid masses". Compared to other types of ceremonial-religious payments, however, these direct contributions were relatively small. Many payments were disguised in food expenditures (bazaars), clothing purchases (religious garb), personal expenses (ceremonial festivities and pilgrimages), educational expenses (religious literature and

special offerings), and household supplies (religious symbols). In addition, most families contributed labor or products to church-sponsored projects during the year.

Cash Family Savings

Average cash family savings is the difference between disposable cash family income and cash family expenditures. In very general terms, this figure represents the amount of liquid funds available to the families during the year for investment and replacement of capital stock. However, since a 1966 drought forced many families to reduce their livestock holdings to below normal levels, a large portion of these cash savings were needed merely to recuperate inventory losses. Whereas the 25 largest producers (12 percent) received two-fifths of the total cash family savings, only one-fifth accrued to the 103 smallest producers (51 percent). More than one-fifth of the respondents had negative cash family savings in 1966.

Value of Gross Family Subsistence

The average value of gross family subsistence for the sample households is the sum of home consumption, the imputed rent value of the farm residence, the imputed value of services received in kind, cash family expenditures, and non cash family benefits. The concept represents a crude measure of the economic well-being of the sample households. The average value of gross family subsistence was directly related to the size of production unit. The average value for households with production units of 25 hectares or more was more than four times that of the households with units less than 1 hectare. The sample mean was U.S. $454, and the median was $376.

Table 16 shows that the average value of gross family subsistence per adult consumer equivalent was related to both size and tenure.

According to an estimate made during the study, a minimum of about U.S. $57 per adult consumer equivalent was needed to eke out a mere physiological subsistence in the community.[50] Four families were substantially below this level, and 12 families were within seven percentage points of the figure. It appeared that the sample households with adequate levels of nutrition, health, education, and housing had a per adult consumer equivalent about four times that of the physiological subsistence level. Eighteen families were within 12 percentage points of U.S. $228, and eight families were considerably above this figure. Most of these households with higher levels of gross family subsistence per adult consumer equivalent were landlords and owner-operators with 10 or more hectares of land. They included most of the larger institutional borrowers in the sample. The majority had nice houses, and several owned houses in the village as well. Nearly all of these families with older children had educated or were educating them in the village school system of Fómeque or neighboring municipios.

Economic Balance.

The average economic balance for the sample households is the difference between the value of gross family production and gross family expenditures. It is the amount of net surplus or deficit accruing to the households from their total economic activities during the production year.

Table 16. Average Value of Gross Family Subsistence per Adult Consumer Equivalent by Size of Production Unit and Tenure, 1966

Size Groups (has.)	Non-owners		Part-owners		Owner Operators		Landlords		Total	
	No.	Avg. Value	No.	Avg. Value	No.	Avg. Value	No.	Avg. Value	No.	Avg. Value
Less than 1	13	87	5	78	11	92	1	81	30	87
1 to 2.9	23	102	24	101	20	112	6	170	73	110
3 to 9.9	14	124	30	128	15	140	16	184	75	142
10 and over	4	118	3	122	3	280	15	229	25	204
TOTAL	54	105	62	113	49	126	38	197	203	130

While the average economic balance for the smallest production units was nil, the five largest units had an average of U.S. $1,214. The sample mean was U.S. $141, compared with a median of only $52. Twenty-four households (12 percent) had economic deficits during 1966.

Except for a few larger landowners -- who also received relatively large amounts of institutional credit -- there was little evidence that these savings were actually being channeled into productive farm investments such as improved soil and water conservation structures, buildings, and fences. Nor did improvements in living facilities seem to absorb many of these savings. On most of the sample production units, it appeared that a large portion of any potential savings was offset by decreases in soil productivity such that higher levels of improved inputs were needed just to maintain constant yields. Rather than making investments to improve the productivity of their present land-holdings, most of the sample households with any appreciable savings tended to use them for additional land purchases. The existing social structure not only renders land a highly remunerative resource because of limited employment opportunities and possibilities for labor exploitation, but it also makes land a prerequisite for receiving many community services and participating in local government.

IX. PEASANT PARTICIPATION IN THE COMMUNITY

In addition to control of physical resources, the peasants' lot is determined by their power to shape the institutions which delimit transactions with other members of the community and the greater society. Unless the peasants participate in the formulation of working rules, there is little likelihood that they will acquire the necessary inputs and receive a sufficient portion of output to ensure respectable levels of living and full-fledged citizenship.

Religion and the Church

The most pervasive force in the lives of the Fomequeñian peasants is religion. Since the latter part of the 16th century when the Augustinian friars first began converting the souls of Fómeque, the community has been staunchly Catholic. In Fómeque the local church not only dominates the spiritual lives of the peasants, but it is profoundly involved in a wide range of economic, political, and social activities. For the peasants, participation in the activities of the Church in some form or other is inescapable.

Although many peasants were at odds with local clergy and appointed lay leaders over the tactics used to appropriate funds and distribute benefits, the rural families were unanimous in their respect for the religious dictates of the priests and the ritual requirements of the Church. While such phenomena as the number of children a woman has, the state of one's health, and the success of a crop are being manipulated to an increasing extent by scientific intervention, most Fomequeñian peasants still believe that the final outcome is largely dependent upon the will of God. From

early childhood, they are instilled with a moral awareness which permeates practically every aspect of their lives. Besides the regular services in the Church, the priests disseminate religious dogma through the various schools of the community, adult literacy classes, catechism classes, and personal visitation to homes, schools, and the hospital. For most peasants, it is a religion based upon fear and respect, with little relevance to the problems of everyday life.

Irrelevance notwithstanding, the intense reverential fear inculcated in the peasants by the clergy helps to keep the rural masses effectively subordinated to the community's powerholders. The Church not only sanctions poverty among the peasants through its dogma, but it perpetuates economic dsstitution through the ceremonial regimen. Baptisms, confirmations, marriages, and death rites are all performed by the Church for fees. And of course these payments are usually minor compared to the heavy social obligations which accrue to sponsoring families during this ritual validation. Indeed, most peasant families are forced to sell livestock or assume personal debts in order to finance these events.

CARITAS

Inadequate nutrition was responsible for many of the health problems which afflicted rural families. Since the 1950's, Fómeque has received donations of U.S. surplus food (powdered milk, wheat flour, corn meal, and vegetable oil) through the CARE program (administered locally through CARITAS, the international relief agency of the Catholic Church) for use in school lunch programs and distribution to poor families. Instead of distributing the commodities through the Church, officials of the Fómeque parish delegated this responsibility to the directorate of the Girls' Vocational School. A committee of clerical and lay leaders

was formed to determine which families were eligible to receive the food, and announcements of the program were made in Sunday masses.

All but 43 of the sample families (21 percent) knew about the program. Another 27 families (13 percent) were aware of the program, but had not solicited benefits. Of the 133 families (66 percent) who solicited benefits, 58 were denied assistance; 48 received commodities a few times; and 28 were regular recipients. All the children enrolled in the various schools of the community received some benefits from the morning and afternoon snacks prepared from the donated foodstuff.

None of the food was distributed gratuitously. Peasant families exchanged eggs for the surplus commodities or paid cash equivalent to about one-fourth the market value. School children were asked to pay 40 centavos (U.S. $0.024) per week for the snacks. According to officials, the purpose of these payments was to defray handling and transportation costs.

Educational Facilities

Few rural communities in Colombia have as many educational facilities and spend as much money on education as Fómeque. And yet, probably no aspect of the local infrastructure has evoked more concern among the peasants than the school system. Most Fomequenian peasants seem to recognize education as one of the few means by which their children can escape the perpetual poverty of minifundia agriculture. At the same time, they sense the overwhelming tendency of the present educational system to disassociate students from the problems of the rural masses. This attrition of the youth is not a major preoccupation of those rural families who manage

to get their children enrolled in educational facilities beyond the veredal school level. Of course, most peasants face insurmountable financial and structural barriers which block the entry of their children into higher levels of education.

Of the 175 sample households with sons and daughters of primary school age or older, 109 (62 percent) were unable to send their children beyond the two to four years offered in the veredal schools. Thirty-one households had sent children to both veredal and 5-year urban (village or hamlet) primary schools, while 29 families had educated at least one child exclusively in the urban primary schools. Most of these families live in veredas contiguous to the village or hamlet. Two families had sent their children to both veredal and vocational schools for their primary education, three to urban primary and vocatinnal schools, and one to urban primary and normal schools.

There were 143 sample households with sons and daughters of secondary school age and older. The children from 95 of these households (66 percent) had received no vocational or secondary education. Of the 22 families with children who received vocational schooling in the village, only two had sons and daughters who had graduated: three others had children enrolled during the 1966 school term. Of the 20 families with youth who attended the village normal schools, 9 had graduates among their children; 7 had children who attended, but did not graduate; and, 4 had children enrolled in 1966. Six other families had children of secondary school age who had attanded or were attending secondary or vocational schools outside the municipio.

Because of the lack of educational facilities and the selective

migration of educated individuals from the rural areas, participation of the adult sample population in the various schools of the community was also quite low. In 47 families (23 percent), neither the household head nor the spouse had attended school. The maximum level of participation for the household head and/or spouse was the veredal school for 137 (67 percent), urban primary school for 12 families (6 percent), and vocational school for 6 families (3 percent). Among the household heads or spouses, there were no vocational school graduates and only one normal school graduate--a school teacher whose family planned to move to the village the following year.

Agricultural Services

Although four different public agencies operated agricultural assistance program in the community, relatively few peasants had received direct benefits from these entities. Indeed, many families were not even aware of the services provided by these organizations.

Caja Agraria. Among the public agricultural services of the community, the Caja Agraria was the most widely known. Only seven respondents said they had never heard of it; nine had heard of it, but did not know what it was. Although only 80 sample households (39 percent) had received credit from the Caja, another 75 families (37 percent) had patronized the Caja's agricultural supply store and/or savings bank. Because of its diffuse clientele, the Caja had a somewhat better rating among the peasants than the other agricultural services. Twenty-two respondents (10 percent) felt that the Caja had contributed substantially to the overall development of the community. Fifty-eight interviewees (29 percent) thought that it had benefited many peasants, while 38 (19 percent) claimed that it had helped only a few. By contrast, 65 respon-

dents (32 percent) felt that it had administered primarily to the needs of the larger farmers, and five individuals said that it was a lucrative business run by the rich.

INCORA. Inasmuch as INCORA was a relatively new entity serving a fairly narrow spectrum of rural families in the community, few respondents knew much about it. Fifty-three interviewees (26 percent) claimed they had never heard of it. And 111 (55 percent) said they had heard of INCORA, but knew little about it except that it made agricultural loans. Even among the 39 respondents (19 percent)--including 13 borrowers--who had some notion of its purpose, only six individuals knew what the initials, INCORA, represented.

Besides the 13 borrowers (6 percent), 30 other sample households (15 percent) had made some contact with the agency--26 had solicited, but were refused credit, and four had made purchases from the store. Among the 150 respondents who had heard of INCORA, only 26 (17 percent felt that the program was making a positive contribution to the development of the community, while 98 (65 percent) thought that it was only benefiting the larger farmers. Twenty-six individuals had no opinion.

Departmental Nursery: Although the Department of Agriculture of Cundinamarca has operated a public nursery on the village outskirts since 1960, three-fifths of the respondents had never heard of it. Only 63 sample households (31 percent) had received seedlings from the nursery. And of these, only 29 had received plants on more than one occasion.

Corporación. Ironically, two-thirds of the respondents could not identify the famous Corporación Granja Agrícola de Fómeque. Even among those who recognized either its formal name or nickname, "la Granja", there was an overwhelming tendency to equate the entity with the Boys'

Normal School which is only one of several operations run by the Corporación. Only 61 respondents (30 percent) claimed to have had any direct contact with the Corporación. They were all shareholders in the original stock corporation. Of these individuals, only 41 said they had received direct benefits (technical advice, nursery stock, breeding services, education, scholarships, loans, income distributions, etc.) from the Corporación. Inasmuch as the Corporación has been operating since 1937, it is likely that many respondents had forgotten about some of the benefits received. Certainly, all families received some indirect benefits from improvements in community infrastructure. But the fact remains that while the community powerholders reaped major advantages from grandiose development schemes, most peasants derived only marginal benefits.

Community Cooperative

In spite of an intensive local campaign during the past several years on the purpose and merits of cooperatives, only one-third of the respondents had the slightest notion of what a cooperative was. Four-fifths of the respondents knew about the community consumer and farm supply cooperative, but only 25 families (12 percent) were members. Eighty-six families (42 percent) had made purchases in the cooperative store even though they were not members. Of these, 46 had not purchased items there within the past year.

For most respondents, the major disadvantage of the cooperative was the fact that credit purchases were not allowed. Of the 166 respondents who knew about the cooperative, 114 (56 percent) said they preferred to patronize the private stores which provided credit. (With the creation of its credit union in 1967, the community cooperative made credit pur-

chases possible, by paying an interest charge of course). Six respondents were more critical of the cooperative; they said it was "strictly a profit-making venture for the Church and the rich." On the other hand, 23 respondents said that several items were cheaper in the cooperative than in the private stores. And 13 interviewees felt that it was definitely advantageous to do their weekly shopping in the cooperative stores. Fourteen respondents saw little difference between the cooperative and private stores.

Community Development

Whereas the Corporación has made little attempt to involve peasants in the planning and construction of many of its infrastructural projects, both the Acción Comunal and Acción Catolica programs have been oriented somewhat more toward the development of self help projects in the community. Nevertheless, one-half of the respondents said they had not heard of either program. The others had heard of at least one of the programs, but only about one-half of these individuals actually knew the purpose of the organization. Only one-fifth of the sample families had actively participated in any of the community development projects.

Among the 49 respondents who had some inkling of the community development organizations, 19 felt that the programs had been beneficial while four said they had been indispensable for the progress of the community. On the other hand, 11 interviewees thought the program had failed because of a lack of cooperative spirit among the people. And two individuals attributed their failure to control and manipulation by the community power structure. Thirteen respondents were indifferent about the success of the two community development programs.

Local Government

Fomequeñian peasants do not view local government as a responsive mechanism of collective action. Rather, they see it as a group of bureaucrats who, among other things, collect and disburse local revenues for the maintenance of personnel and village services and occasionally use their "influence" to obtain outside funds for a local construction project.

Although most peasants vote, they know few elected or appointed officials of the municipal government. Among the sample households, 97 respondents (48 percent) did not know the name of a single elected or appointed official in the formal local government. Since most peasants have had direct contact with the treasurer's office to pay taxes, it is not surprising that about one-half of the respondents knew the name of the treasurer. Nearly one-third of the interviewees knew the personero (ostensibly an ombudsman) who, like the treasurer, was a permanent resident of the village and had served several terms as an appointed official. Only one individual knew the name of the mayor who, in typical fashion, was an outsider appointed by the departmental governor. And although three-fourths of the respondents had voted in the previous local election, only one-sixth could name a member of the elected 10-man Municipal Council.

In general, the peasants were more familiar with the important informal political leaders of the community than they were with formal leaders. Two-thirds of the respondents were able to name at least one other local political boss in addition to the Monseñor, whom every peasant knew of course. Except for the Moñsenor, these leaders have all held elected positions in the formal political structure. But most importantly, these men were recognized and awed by the peasants as the individuals who were most likely

to influence the major political decisions of the community. Yet, very few respondents had ever discussed a community problem with any of these individuals, or for that matter, with any of the formal political leaders.

Obviously, most peasants were obsessed with personal problems of fulfilling the basic felt needs of their families and meeting commitments to colleagues and other external parties. Individual difficulties are most often resolved among friends and relatives, and rarely are they linked to public concern. This reluctance for wider involvement is reinforced by the customary rules of behavior which foster political inertness among the peasants and relegate decision-making authority to landowners, merchants, bureaucrats, and clergy. At the same time, there appears to be a growing awareness among the peasants that they do share many problems in common. Improved means of communication and transportation have sharply intensified the peasants' exposure to new life styles and different forms of social organization. This increased contact with the outer world, in turn, has heightened the aspirations of the rural masses. And while there is little evidence that these aspirations have been translated into collective goals, there are fairly obvious signs of shared frustrations.

One indication of these frustrations may be seen in the responses to a question which asked the peasants to contrast the present conditions in their vereda with those 10 years ago. Two-thirds of the respondents clearly felt that the conditions had deteriorated during the past decade. To support their negative viewpoint, respondents mentioned decreases in soil productivity, the cost-price squeeze, dissatisfaction with services, exploitation by villagers, increases in crime, and degeneration of commun-

ity spirit. On the other hand, one-sixth of the interviewees said that conditions had definitely improved. The more optimistic opinions tended to come from the larger landowners who supported their position by noting the expansion of community services under the leadership of the Moñsenor. The other one-sixth felt that conditions had not changed substantially over the past 10 years.

X. IN CONCLUSION: WHITHER THE PEASANTS?

While modern men commit resources to increasingly lavish levels of living, masses of people around the globe live at the very margin of subsistence. While modern men survey the moon, the masses struggle desperately to acquire a piece of land on earth. And while modern men wage war over ideologies, the masses battle poverty. Such are the paradoxes of our contempory world.

The Minifundia Dilemma

This study examines peasant farms and community structure in an intermontane valley east of Bogotá, Colombia. Like peasants the world over, the rural families of Fómeque are undernourished, poorly housed, uneducated, and generally exploited. They operate small family agricultural production units which barely provide subsistence levels of living for household members. Most of the land in these units not only is steep and eroded, but also tends to be highly fragmented through inheritance patterns and informal tenancy arrangements. The rural service structure is grossly inadequate with the peasants having virtually no voice or control to effect a change. Because most peasants have limited knowledge and meager physical resources, many enter into contractual relationships with larger rural landowners, village landlords, moneylenders, storekeepers, middlemen, and professionals to acquire scarce complements for their relatively abundant labor.

Through these asymmetrical relationships, economic surpluses are slowly but steadily siphoned from the peasantry by dominant groups in the society who use these added goods and services to sustain higher than average levels of living. Similarly, religious leaders and politicians

underwrite their positions of power and wealth by capturing the peasants' loyalty and making claims against their production. In order for peasants to gain social acceptance among colleagues and provide some insurance against personal misfortune, they also enter into informal alliances with friends, neighbors, and relatives. These horizontal linkages often impose such heavy economic and social encumbrances upon families that they are forced to liquidate their savings or assume extended indebtedness.

While numerous examples of change among the rural families of Fómeque demonstrate responsiveness to new income-earning opportunities, peasant behavior is nevertheless marked by extreme caution. The peasants' task of maintaining the precarious balance between household needs and external demands against their production is greatly complicated by such uncertainties as price fluctuations, droughts, disease, accidents, and other natural calamities. Hence, peasants commit their meager savings to traditional "insurance" types of investments such as land and livestock purchases and, to the extent possible, the education of children.

Historically, Fómeque has had a number of "escape valves" which have served to equilibrate imbalances between the human and physical resources of the community. Through such means as land fragmentation, land use intensification, reduction in levels of living, high mortality rates, and migration to other parts of the country, the burgeoning peasant population has adjusted to shortages in local physical resources. However, present-day indications suggest that these traditional stabilizing forces no longer provide the same degree of flexibility and potential as they did in the past.

Declining mortality rates are increasing the absolute number of peasants on the land, and even more importantly, they are swelling the ranks of eco-

nomically-dependent persons in the community. At the same time, overall migration opportunities have been sharply reduced as accessible colonization areas become densely settled and seasonal agricultural labor requirements are supplied from growing local labor forces and increased mechanization. To be sure, rural-urban migration is continuing at unprecedented rates, especially among the 15 to 30 age group. But for the majority of rural Fomequeños, the threats of unemployment or menial employment and personal insecurity in the cities outweigh the disadvantages of a deteriorating peasant agriculture.. There continues to be a net annual increase in rural population. As a result of this demographic pressure, fragmentation in the temperate climatic zone of the community has advanced to the point where further property divisions are not possible without decreased levels of living or irreversible damage to the natural resource base.

Yield-increasing technology such as new crop varieties, chemical fertilizers, and pest controls continues to provide some slack in the delicate balance between the population and the natural resource base. And present levels of production could be increased substantially by extending the technology currently used on the better organized farms of the community to the other agricultural units. But there are serious limitations to increases in employment through more intensive land usage and technology. Without simultaneous adoption of improved soil and water conservation practices, intensive cultivation depletes the highly erodible soils at a much faster rate than does traditional cropping.

Furthermore, intensification and technification require corresponding adjustments in the supply and control of agricultural resources in the community. In Fómeque the institutional structure prevents this from hap-

pening. On the one hand, the effective demand for new inputs is dampened by traditional claims against the peasants' production, a high degree of uncertainty and risk, and restricted opportunities for acquiring new knowledge and skills. On the other hand, the development and supply of new technology and managerial skills are thwarted by a deficient and outmoded service sector which is manipulated by interlocking economic and political elites of the village and cities. Unlike the technologically progressive farmers of the community who have access to the country's major agricultural research stations, supply agencies, and financial institutions, the vast majority of peasants must rely almost entirely upon local sources of information, physical inputs, credit, and other services. As long as the peasants lack effective organization through which they can formulate collective goals and implement plans for achieving them, local leaders will not be inclined to improve agricultural and social services for the rural masses.

At the same time, there is little reason to anticipate large commitments from the national government to benefit peasants. Under the present national political system, priorities are given to projects in the urban areas and to the large commercial farm segment of the agricultural sector. And while some internal pressures as well as interpositions from abroad have resulted in a number of stop-gap measures, so far, these have failed to keep up with increments in the rural population. With certain structural reforms, however, a large portion of local resources presently used to support bureaucracies and conspicuous projects in the villages could be channeled into such investments as roads, schools, health services, market facilities, and technical information systems for which the peasants express a need.

1. Instituto Colombiano de la Reforma Agraria (INCORA), Informe de Actividades en 1966: 5 Años de Reforma Social Agraria, Serie Informes No. 8 (Bogotá: INCORA Multilith, August 1967), pp. 14, 20. The former number is inflated considerably by the inclusion of a large number of squatters (colonos) on public lands who have received nothing more than property titles from INCORA. The two numbers are not mutually exclusive since many of the former families have also received credit.

2. Enrique Peñalosa, speech to a Senate Commission, quoted in El Tiempo, April 12, 1967, p. 23.

3. Comité Interamericano de Desarrollo Agrícola (CIDA), Tenencia de la Tierra y Desarrollo Socio-Económico del sector Agrícola: Colombia (Washington: Panamerican Union, 1966), p. 135. The CIDA study was based on the 1960 agricultural census of the Departamento Administrativo Nacional de Estadística (DANE) which reported a total of 1,368,800 "nuclear agricultural families". In contrast, INCORA estimates the present number of "rural families" to be approximately two million, of which 800,000 "do not have the means for deriving subsistence needs in the countryside," as reported in an interview with Enrique Peñalosa in El Tiempo, January 2, 1967, p. 17. A "sub-family" size farm is defined in the CIDA study as one which provides employment for fewer than two adult workers under the prevailing levels of technology and services in the agricultural region. This was arbitrarily set at less than five hectares in the Andean region and less than 10 hectares in the Caribbean region.

4. In the present study, "community" is used interchangeably with municipio, the smallest formal administrative unit of government in Colombia. Fómeque, like most rural municipios in Colombia, conforms to the sociological concept of community as a basic unit of social organization and cultural transmission. See Conrad M. Arensberg, "The Community as Object and as Sample," American Anthropologist, 63 (2): 241-264, 1961, also, reprinted in C.M. Arensberg and S.T. Kimball (ed.), Culture and Community (New York: Harcourt, Brace and World, Inc., 1965), pp. 1-27.

5. Dale W. Adams, "Rural Migrants and Agricultural Development in Colombia", paper presented at the 13th Conference of the International Association of Agricultural Economists, Sydney, Australia, August, 1967.

6. Lauchlin Currie, Accelerating Development: The Necessity and the Means (New York: McGraw-Hill, 1966).

7. Dale W. Adams, "Colombia's Land Tenure System: Antecedents and Problems," Land Economics, Vol. 42, No. 1 (February 1966), pp. 43-52. Dale W. Adams and Sam Schulman, "Minifundia in Agrarian Reform: A Colombian Example", Land Economics, Vol. 43, No. 3 (August 1967), pp. 274-283; Dale W. Adams, "Resource Allocation in Traditional Agriculture: Comment", Journal of Farm Economics Vol. 49, No. 4 (November 1967), pp. 930-933.

8. James E. Grunig, "Information, Entrepreneurship, and Economic Development: a Study of the Decision Making Processes of Colombian Latifundistas," Ph.D. Thesis, Department of Agricultural Journalism, The University of Wisconsin, Madison, 1968.

9. T. Lynn Smith, "Land Tenure and Soil Erosion in Colombia," Proceedings of the Inter-American Conference on the Conservation of Renewable Natural Resources, Denver, 1948 (Washington, D.C.; Department of State, 1949), pp. 155-160: International Bank for Reconstruction and Development, The Agricultural Development of Colombia (Washington, D.C: IBRD, 1956), pp. 5, 28.

10. CIDA, op, cit., p. 185.

11. Orlando Fals Borda, La Subversión en Colombia: el Cambio Social en la Historia, Serie Monografiás Sociológicas No. 24, Universidad Nacional (Bogotá: Tercer Mundo, 1967), pp. 85-89, 131-137, 157-165.

12. CIDA, op. cit., pp. 168, 169.

13. Adams and Schulman, op. cit.; Orlando Fals Borda, Peasant Society in the Colombian Andes: A Sociological Study of Saucío (Gainesville: University of Florida Press, 1955), pp. 72-74; Facultad de Sociología, "Factores que Inciden en el Desarrollo Económico de la Hoya del Río Subachoque"(Bogotá: Universidad, Nacional, 1963), pp. 35-38.

14. CIDA, op. cit., pp. 25-27; Marco F. Reyes C., "Estudio Socioeconómico del Fenómeno de la Inmigración a Bogotá: Segunda Parte," Economía Colombiana, Vol. 22 (November 1964), pp. 21-29, Reyes' study of a representative sample of in-migrants to Bogotá shows that 62 percent of those employed listed manual occupations--sales, operatives, artisan day and wage labor, and personal and other services. Nearly 60 percent were absorbed in the service and commercial sectors, while 20 percent were employed in the industrial sector. Of the one-third who moved to Bogotá for reasons of employment, two-thirds had no definite position prior to migrating.

15. George M. Foster, Tzintzuntzan: Mexican peasants in a Changing World (Boston: Little Brown, 1967), pp. 349-352.

16. John R. Commons, Institutional Economics, Vol. II (Madison: University of Wisconsin Press, 1961), pp. 627-648.

17. John R. Commons, The Legal Foundations of Capitalism (Madison: University of Wisconsin Press, 1959), p. 6.

18. Ibid.

19. A. Eugene Havens, "The Quest for Societal Development," paper Presented at the Conference on the Sociology of Development, Iowa State University, March 11-14, 1968.

20. Raymond J. Penn, "Understanding the Pressures for Land Reform," statement presented to the Subcommittee on Inter-American Economic Relationships of the Joint Economic Committee, Congress of the United States, Washington, D.C., May 10 and 11, 1962.

21. L. Harlan Davis, "Economics of the Property Tax in Rural Colombia", Ph.D. thesis, University of Wisconsin, Madison, 1968, pp. 77-89.

22. A. Eugene Havens, Támesis: Estructura y Cambio. Estudio de Una Comunidad Antioqueña (Bogotá: Tercer Mundo and Facultad de Sociología, Universidad Nacional, 1966), pp. 157-173.

23. Matthew D. Edel, "The Colombian Community Action Program; An Economic Evaluation", Ph.D. thesis, Yale University, New Haven, 1967.

24. Fals Borda, Op. cit., (1967), p. 195.

25. Herman Felstehausen, "Economic Knowledge and Participation in Farmer Decision Making in a Developed and an Underdeveloped Country," International Journal of Agrarian Affairs, Vol. 5, No. 4, (July 1968), pp. 263-281.

26. Fals Borda, (1967), op. cit., p. 196.

27. See Everett E. Hagen, On the Theory of Social Change: How Economic Growth Begins (Homewood, Illinois: The Dorsey Press, 1962).

28. Fals Borda (1967), op. cit., pp. 31-46.

29. Zvi Griliches, "Hybrid Corn: An Exploration in the Economics of Technological Change," Econometrica, Vol. 25, No. 4 (October 1957), pp. 501-522.

30. A. Eugene Havens and Everett M. Rogers, "Adoption of Hybrid Corn: Profitability and the Interaction Effect," Rural Sociology, Vol. 26 (December 1961), pp. 409-414.

31. Theodore W. Schultz, Transforming Traditional Agriculture (New Haven: Yale University Press, 1964), pp. 145-161.

32. Ibid., pp. 146-152.

33. DANE, Mapa Estadístico de Cundinamarca (Bogotá: Imprenta Nacional, 1966). A previous estimate by DANE was 138 square miles. The total area accounted for in the cadastral list of the municipality is only 122 square miles. This discrepancy should be eliminated with the cadastral survey which is in progress.

34. Data from the experimental farm at the Boys' Normal School of the Corporación Granja Agrícola de Fómeque.

35. Hans Jenny, "Great Soil Groups in Equatorial Regions of Colombia, South America," Soil Science, 66 (1); 5-28, July 1948.

36. DANE, XIII Censo Nacional de Población, 1964 (Bogotá: Multilith Estadinal, 1965), p. 13. On the basis of the data collected and reviewed during the study, it appears that the census figure may be understated by as much as 20 percent, especially in the rural sector.

37. DANE, VI Censo General de Población, 1938, Tomo VII (Bogotá: Imprenta Nacional, 1941), p. 159; and, DANE, Censo General de Población, 1964 (unpublished data).

38. Guillermo A. Guerra E., et al., "Economic Aspects for Corn and milo in Colombia" (mimeograph) (Medellín: Facultad de Agronomía e Instituto Forestal, Universidad Nacional de Colombia, July 1966), p. 14.

39. DANE, Directorio Nacional de Explotaciones Agropecuarias (Censo Agropecuario), 1960, Vol. 1, p. 133.

40. Ibid, p. 138.

41. Ibid, p. 111.

42. Officially, a bulto weighs 125 pounds and a carga equals 250 pounds, but this varies somewhat for different types of commodities. In general terms, a bulto is considered one large sackful of produce or one-half of a carga.

43. The law attempted to provide a judicial basis to 1) clear up uncertain titles and the rights of existing land occupants, and 2) predicate land ownership on an "economic use" of the land. See Albert O. Hirschman, Journeys Toward Progress (New York: Twentieth Century Fund, 1963), pp. 95-116.

44. Most of the data presented in the following discussions were obtained from records of the Corporación, the Municipal Council, and personal interviews with numerous community leaders.

45. Most of the data about the Caja Agraria were obtained from personal interviews with the local manager, Augusto Aguilar, and ex-manager, Guillermo Arboleda.

46. Most of the data about INCORA were provided by the local project directors, Jorge Mariño and Jaime López.

47. Dale W. Adams, Antonio Giles, and Rodrigo Peña, "Supervised Credit in Colombia's Agrarian Reform: An Evaluative Study," No. 40 (Bogotá: Centro Interamericano de Reforma Agraria and

the Land Tenure Center, University of Wisconsin, January 1966), pp. 21-51. (Mimeographed).

48. INCORA, Plan de Credito Supervisado para el Municipio de Fómeque (Bogotá: INCORA, May 1964), pp. 56-58. (Mimeographed).

49. The Acción Comunal program was created on a national scale by Law 19 of 1958. Its purpose is to provide limited national assistance for organizing local self-help community development programs.

50. The estimate was based upon a minimal daily food intake consisting of (or equivalent to) 1/2 lb. parsnips, 1/2 lb. potatoes, 1/2 lb. other starchy food, 1/4 lb. maize, 1/6 lb. beans and 1 cup milk plus 90 centavos (U.S. $0.053) worth of nonfarm food staples such as rice, flour, sugar, cooking fat, chocolate, and coffee. The total value of this near starvation diet was 1.80 pesos (U.S. $0.106) per day. In addition, a minimum of 95 centavos (U.S. $0.056) per day was considered necessary for nonfood physiological needs. This means that an agricultural laborer working five days per week at the going subsistence wage rate could only provide physiological subsistence for himself and a wife. If they had a small child, he would have to work six days per week to ensure their survival.