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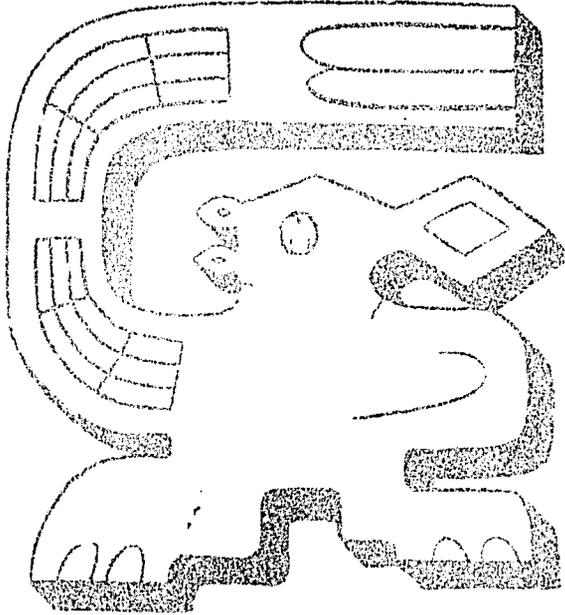
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Agrarian Structure in Seven Latin American Countries†

By SOLON L. BARRACLOUGH* and ARTHUR L. DOMIKE**

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The authors of the studies were: Arthur Domike (Argentina), one of the authors of this article, Ernest Feder with the collaboration of Michael Sund (Brazil), Eric Shearer with Oscar Delgado and Federico Herrero (Colombia), Marvin Sternberg and Juan Del Canto, Cesar Talavera and Juan Carlos Collarte (Chile), Rafael Baraona (Ecuador), Sebald Manger Cats and Eduardo Venezian (Guatemala), and Alfredo Saco with Ricardo Letts and Sergio Parra Reyes (Peru). The Director of the studies was Solon Barraclough, co-author of this article with Mr. Domike; the Coordinator was Carlos Montañez and the Executive Director of ICAD was Hugo Trivelli.

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IN LATIN AMERICA the growing manifestations of rural unrest, the unsatisfactory growth of agricultural production, the increasing importation of food-stuffs, the malnutrition of the majority of the people and the acrimonious debate on agrarian reform are proof that the agrarian question has gone beyond the realm of academic discussion.

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Even if it is unnecessary to document the existence of a serious agrarian problem, there is an urgent need to determine the problem's characteristics, to find out how it has put a brake on development and to adopt policies that might correct present-day defects in agrarian structure.

The lack of consensus concerning reasons for the agrarian problem helps explain the wide range of solutions being offered policy makers. The repertory of measures proposed includes revolutionary land-reforms, colonization of virgin lands, forced-draft industrialization, tax reform and subsidies; the means advocated for implementing these run from complete economic planning to "laissez-faire."

The controversy over possible solutions is distorted by ideological influences and the stubborn tendency to view the agrarian problem superficially as one of simply improving allocation of farm investments or of expanding educational opportunities and community development. Serious consideration of profound reforms is excluded from such analysis by the implicit assumption that the institutional structure will remain stable.

The agrarian problem must be understood as one reflecting the very structure of the society. Control over land and labor is undoubtedly a central element of the issue but in agrarian societies this control is equally evident at the political level. In Latin America the agrarian problem has become aggravated recently by rapid changes in population, technology and dominant social values and aspirations. Particularly since the Second World War the traditional rural production systems have become increasingly out of adjustment and political relationships have been threatened. As a result the techniques by which social and eco-

conomic conflicts have historically been resolved or controlled are proving increasingly ineffective.

When the Latin American agrarian problem is formulated in this broader context, the full complexity of the program alternatives can be recognized. If the kernel of the agrarian problem is a deep social-economic disequilibrium and not merely deficient resource allocation, questions such as the optimum size of a farm are clearly seen to be of incidental importance. As illustrated by the civil rights struggle in the United States, programs of social reform involving shifts in political and economic power are generated in response to a complex of pressures. Choices are possible but the institutional and political limits on policy alternatives are much narrower than perceived by outside observers.

Historically the "social equilibrium" in rural Latin America was characterized by the seigneurial system. The "patrones" (large landholders) have organized agricultural production and dominated political, economic and social institutions during most of the last four centuries. The possibility of a "campesino" changing his economic function and social position or obtaining political power has always been severely circumscribed.

Unquestionably, force has been used to maintain this social order. The numerous rural uprisings since the Spanish Conquest hardly give credence to the myth of a universally respected benevolent paternalism.¹ But an equilibrium is

¹A detailed bibliography of "campesino" revolts in Latin America since colonial times would run into scores of titles. Examples would be such works as Lewin's *Tupac Amaru, El Rebelde*; Euclides da Cunha, *Os Sertões*; Padre Caba Robalino, *Monografía General del Cantón Pillaro*, Prensa Católica, Quito, Ecuador, 1929; Germán Arciniegas, *Los Comuneros*, Zig Zag, Santiago, Chile, 1960.

no less real because it is maintained by arms. Not until the present century has the dominance of the landed class in rural Latin America been seriously threatened. Social revolutions overthrowing the traditional seigneurial system, however, have now taken place in Mexico, Bolivia and Cuba while dramatic revolutionary processes are threatening the old order throughout Latin America.

None of the countries studied—Argentina, Brazil, Colombia, Chile, Ecuador, Guatemala and Peru—have experienced irreversible changes of a “revolutionary” type in their land tenure systems. For this reason their agrarian structures as well as their reactions to agrarian problems can be considered representative of the situation which at present prevails in most of Latin America.

A. Factors Upsetting the Old Equilibrium

The developments which are putting an irresistible strain on the inherited social equilibrium are of three sorts. In their origins, these developments are essentially independent of land-holding arrangements as such. The startling rate at which the population is growing is the primary threat to the existing situation. Second, changing technology creates new possibilities for some agricultural products, makes others obsolete, affects markets, alters cost-price relationships, influences the amount and conditions of employment and makes new non-agricultural industries feasible. Finally, profound changes are taking place in the value patterns, aspirations and expectations generally held in Latin American society.

Population in Latin America is growing more rapidly than in any other part of the world and more rapidly than is

agricultural production. Every year there are about six million more Latin Americans, almost the population of a new country the size of Chile. In a modern industrialized country some population growth can be a stimulus to the economy. But the most rapid rates of population increases in Latin America are occurring in the poorest countries with the most rigid land tenure structures.

The present rate of demographic increase implies a more than doubling of the region's population within the next quarter century and the United Nations estimates that the 1965 Latin American population of 230 million may reach 700 million by the year 2,000. In the rural areas of Brazil, in the Andean countries and in Guatemala birth rates are close to the biological maximum. Although the death rates are also high—more than double those of the United States—the net increase in the population is enormous. Rapid urbanization is typical but, in spite of considerable migration to the cities, the rural population is constantly increasing almost everywhere. The number of landless peasants is growing and the rapid subdivision of agricultural units which were already too small is creating more minifundios. Consequently the clamor for land is continually growing.

As inexorable as demographic growth is the advance of technology. New techniques change farm production prospects and competitive positions: historic market situations shift almost overnight. Traditional products must compete in increasingly interrelated world markets. Village handicrafts frequently decline through failure to meet the competition of cheap imported industrial goods or often because their sources of raw material have been bought by new commercial interests for export or industrial use.

On the positive side the burst of new technology and markets also helps to create new industries where at least some of the expanding population find employment. As a direct consequence of the technological revolution the composition of agricultural production in Latin America is changing and the relative importance of agriculture in the national economies is declining.

In addition, the rate of technological change is increasing. Improved transport facilitates migration to shantytowns and slums in major urban centers—called variously “callampas,” “favelas” or “villas miserias.” In spite of the slow rate of industrial growth, urbanization grows and urban interests and values predominate more and more. In the rural areas, on the other hand, technological progress is extremely poorly distributed. The ICAD studies showed, for example, that in nine Brazilian municipalities with 26,000 farm units about 4% used fertilizers, and only 462 tractors and 3,000 carts and wagons were operating. Virtually all the farms were being worked by hand.

Some large landowners prefer to introduce machines which economize on labor rather than use intensive cultivation systems requiring more manpower. Mechanization reduces the dependence on the potentially “difficult” labor force and offers a certain prestige. The net effect is often to increase unemployment and insecurity among the campesinos. For example, on a 15,000-hectare hacienda in Ecuador, owned by Swedish interests, half of the resident population were sent away when the farm was transformed into one of the most “efficient” in the country.

Technological changes also require a redefinition of the traditional relations between the campesinos and the commercial world: a tractor driver, even

when he is a shoeless Indian, has a different social position than he had when he was driving a yoke of oxen.

Changing values concerning the traditional agrarian structure are evidenced by the growing emphasis in Latin America on economic development and social integration as primary national goals. New economic functions and city life soon force new attitudes on those who leave the countryside. The aspirations of inhabitants of even remote rural hamlets are increasingly stimulated by growing commercial and transportation contact with the outside world and by the widening diffusion of newspapers, transistors, radios and even television sets.

The traditional class structure and income distribution patterns that have brought stagnation to the economies and perennial poverty to the “campesinos” are now repudiated by all major political groups. Better living levels, education for all and the full participation of “campesinos” in national society are the avowed goals of every Latin American government and of the Alliance for Progress.²

B. The Traditional Agricultural Structure

It has long been asserted that Latin American agriculture is dominated by large “latifundia” that control most of the land while most of the farm population ekes out its living on “minifundia.”

² Changes in values and changes in social structure occur together and are mutually supporting; it is perhaps fruitless to speculate which, if either, is the primary cause of social change. The changes in Latin American society briefly mentioned here are treated much more comprehensively in the Economic Commission of Latin America's documentation for the Mar del Plata conference of 1963. See especially ECLA, *El Desarrollo Social de América Latina en la Postguerra*, E/CN.12/660, Mar del Plata, Argentina May 1963.

TABLE I—RELATIVE NUMBER AND AREA OF FARM UNITS BY SIZE GROUPS IN ICAD STUDY COUNTRIES
(Percentage of country total in each size class)

Countries	Sub-Family ^a	Family ^b	Multi-Family Medium ^c	Multi-Family Large ^d	Total
<i>Argentina</i>					
Number of farm units	43.2	48.7	7.3	0.8	100.0
Area in farms	3.4	44.7	15.0	36.9	100.0
<i>Brazil</i>					
Number of farm units	22.5	39.1	33.7	4.7	100.0
Area in farms	0.5	6.0	34.0	59.5	100.0
<i>Chile</i>					
Number of farm units	36.9	40.0	16.2	6.9	100.0
Area in farms	0.2	7.1	11.4	81.3	100.0
<i>Colombia</i>					
Number of farm units	64.0	30.2	4.5	1.3	100.0
Area in farms	4.9	22.3	23.3	49.5	100.0
<i>Ecuador</i>					
Number of farm units	89.9	8.0	1.7	0.4	100.0
Area in farms	16.6	19.0	19.3	45.1	100.0
<i>Guatemala</i>					
Number of farm units	88.4	9.5	2.0	0.1	100.0
Area in farms	14.3	13.4	31.5	40.8	100.0
<i>Peru</i>					
Number of farm units	88.0	8.5	2.4	1.1	100.0
Area in farms	7.4	4.5	5.7	82.4	100.0

^a Sub-Family: Farms large enough to provide employment for less than two people with the typical incomes, markets and levels of technology and capital now prevailing in each region.
^b Family: Farms large enough to provide employment for 2 to 3.9 people on the assumption that most of the farm work is being carried out by the members of the farm family.
^c Multi-Family Medium: Farms large enough to provide employment for 4 to 12 people.
^d Multi-Family Large: Farms large enough to provide employment for over 12 people.
Source: ICAD studies.

supplementing meager incomes with occasional off-farm employment. The data collected in the ICAD study of land tenure shows that, although this stereotype is oversimplified, it does not grossly exaggerate reality (See Table I).

Agriculture is organized in various "land tenure systems"—that is, in distinctive patterns of land tenure institutions that correspond closely with local social systems. The ICAD study sought to identify the principal systems and to determine how they influence the pace of development. Those of most importance

are: the "latifundia," including large plantations, "haciendas" and "estancias;" the "minifundia"³ both individual and in communities of small holdings; the "latifundia-minifundia" complex in which the two systems are in a sort of symbiotic relationship; small-and me-

³ As defined in the study, "minifundio" are units which are too small to provide enough employment to enable a family to obtain an income which, by prevailing local standards, is large enough to satisfy its basic needs. The concept of "sub-family scale farm," employed in the present analysis is substantially equivalent to "minifundio."

dium-scale commercial farms; and various transitional situations. Within each system one may encounter individual farms that are highly traditional and others that are relatively modern in their agricultural technology. Each of these systems present different problems for economic development. All of them, however, will undoubtedly undergo modification if agriculture is to meet the demands placed upon it for rapid economic growth.

(1) *Concentration of Land Holdings.* In two of the countries studied—Chile and Peru—more than 80% of the farm land was included in very large farm units—that is, large enough to require a permanent work force of twelve or more workers. In Peru, Ecuador and Guatemala “minifundia,” or sub-family-sized farms, constitute 85-90% of all farms and a high portion of the “minifundistas” are tenants or simply squatters. Even when their lands are not physically included within the large estates many minifundia operators depend upon them for part-time employment, markets or credit. While in Table I the “minifundia-latifundia” pattern appears somewhat less important, analysis at the regional levels reveals large zones in Argentina, Colombia and Brazil characterized by the traditional extremes—this is specially true of Brazil where “latifundia” most clearly dominate in the coastal states: In the northeastern provinces of Argentina and in the trans-Andean valleys of Colombia rigid traditional systems also prevail. Another factor influencing the data is that, except for the Colombia Census, small tenants and sharecroppers were seldom enumerated as farm operators but were counted as laborers. This partially explains the relatively fewer number of very small holdings estimated for Argentina, Brazil and Chile than for Colombia.

Moreover, a large portion—as many as half—of the family-sized units (using the ICAD classification) were found upon field-investigation really to be “minifundia” although this is obscured in the census data because of the prevalence of disguised underemployment on the smaller farms.

It is often argued that the concentration of land ownership in large-sized holdings is as prevalent in developed countries as in Latin America. This is false. An examination of United States Census data, for example, reveals that, using the ICAD criteria of farms big enough to employ permanently more than 12 laborers, only about one percent of the country's cultivated lands are in large multi-family sized holdings as contrasted with 65% in Chile or 20% in Argentina (the lowest percentage encountered in the ICAD study). The concentration of land in large farm units is, to be sure, even greater in some socialist countries (such as Russia) than in Latin America but the institutional differences are so profound that statistical comparisons of farm size between widely differing social structures are practically meaningless.

Actually the concentration of land ownership is far greater than indicated by the size of the farm units. Large landowners frequently own or control several large farms through family members or business connections. The ICAD analysis showed that on the average there were far fewer large landowners than farms enumerated in the various Latin American Censuses and that many of these large owners controlled much more land than indicated by the size of their individual farm units. In some regions the amount of land held per large owner was about twice that shown by Census data.

The middle-class group of farm own-

TABLE II—DISTRIBUTION OF FARM FAMILIES ACCORDING TO SOCIO-ECONOMIC STATUS, ICAD STUDY COUNTRIES*

	Argentina (1960)	Brazil (1950)	Chile (1950)	Colombia (1960)	Ecuador (1960)	Guatemala (1950)
Thousands of Families in Agriculture	768.6	5,104.2	344.9	1,368.8	440.0	417.4
Status of Families in Agriculture						
TOTALS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<i>Upper-total</i>						
Operators of large-sized farms	5.2%	14.6%	9.5%	5.0%	2.4%	1.6%
Operators of medium-sized farms	0.4	1.8	3.0	1.1	.3	.1
<i>Middle-total</i>						
Administrators of large and medium-sized farms	4.8	12.8	6.5	3.9	2.1	1.5
Owners of family-sized farms	33.9	17.0	19.8	24.8	9.5	10.0
Tenants with family-sized farms	1.3	2.1	2.1	1.5	...	2.2
<i>Lower-total</i>						
Sub-family-sized farm op- erators	16.4	12.0	14.8	17.9	8.0	6.6
Landless farm workers	16.2	2.9	2.9	5.4	1.5	1.2
"Communal" owners	60.9	68.4	70.7	70.2	88.1	88.4
Landless farm workers	16.6	...	1.3	...
	25.9	8.6	6.5	47.0	52.3	63.6
	35.0	59.8	47.6	23.2	34.5	24.8

* These data overestimate the numerical importance of both upper and middle classes while underestimating that of the lower groups. A considerable portion of the "medium-sized" farm-operators would never be accepted locally as upper class while half or more of the "family-sized" farm operators are in reality little differentiated socially from the operators of sub-family units with slightly less land. Data for Peru are not included as they are not strictly comparable with those of other countries.

ers is unimportant in most of these countries. All of the land worked in family-sized units in the seven countries totals less than one-quarter of the land in farms. These family units are found mostly in Argentina and Colombia. Even in these countries a large percentage of the family-scale producers are tenants rather than owners and the prevalence of underemployment on family-sized units reveals many of them really to be of sub-family or "minifundia" size. "Minifundistas" and landless farm workers consti-

tute nearly nine-tenths of the farm population in Ecuador, Guatemala and Peru and make up over two-thirds of those in agriculture in all the study countries except Argentina (See Table II).

(2) *Traditional Land Tenure Institutions.* In the absence of technological development, land is the main source of wealth in the traditional rural economy. Income from land, however, cannot be realized without labor. Rights to land have therefore been accompanied by laws and customs, which assure the landown-

ers a continuing and compliant labor supply.

These land tenure institutions are a product of the power structure. Plainly speaking, ownership or control of land is power in the sense of real or potential ability to make another person do one's will. Power over rural labor is reflected in tenure institutions which bind workers to the land while conceding them little income and few continuing rights. In the countries studied, tenure institutions vary from "peonaje" and "inquilinaje," through various forms of wage and share-hiring, to instances of "commercial" cash and share-tenancy contracts.

The most common technique used to tie the campesino to the farm is to cede him a small parcel of land for his home and garden while seeing to it that he has no alternative opportunities to obtain land or employment. The system receives characteristic names according to the traditions of each country: inquilinaje, huasipungo, yanacozgo, etc. The campesino is obliged to work for a low salary or often for nothing for a certain period of each year or to turn his production over to the owner at a low price. As is discussed below, "contracts" often contain repressive clauses.

The land concentration indexes reveal only one symptom of the problem and not the manner in which the traditional tenure structure impedes development. In order to comprehend the process it is necessary to understand the functioning of the traditional society and the forces which give the system cohesion. Sociologists and anthropologists have studied the ways in which local social systems, dominated by archaic tenure institutions, determine the opportunities, incentives and motivations of their members.⁴

The large landowners and their representatives are the richest and most influ-

ential members of their communities. The role they play is a key one in the nation as well as in the community. Their status and income are assured through traditional tenure institutions because they control most of the land. They also command the other resources necessary for efficient production such as water and credit.

Characteristically the larger farm owners have financial and commercial activities in the large cities, political responsibilities in the capital and professional or cultural interests far removed from the land. Agriculture as such is often only of secondary interest to them. Typically they maintain residence in the city or even abroad. Since they have easy access to the medical, educational and cultural facilities in modern urban centers they feel little compulsion to duplicate them in the rural communities where they hold land. Owning agricultural property not only gives status and income but it provides security against inflation and serves as a basis for obtaining cheap credit for non-agricultural pursuits. Innovations which might change present tenure relationships threaten the large landowners' traditionally privileged position.

In communities dominated by traditional "latifundia," such as may be found in the Andean highlands, in much of Brazil, and in some parts of all the study

⁴ For example, see Gilberto Freyre, *Casa Grande y Senzala* (Buenos Aires, Argentina: Emece Editores, 1943); Mario C. Vásquez, *Peonaje y Servidumbre en los Andes Peruanos* (Lima, Perú: Editorial Estudios Andinos, 1961); Orlando Fals Borda, *Peasant Society in the Colombian Andes* (Gainesville, Florida: University of Florida Press, 1955); Sol Tax, *Penny Capitalism, a Guatemalan Indian Economy* (Smithsonian Institution: United States Government Printing Office, 1953). One should not neglect the contribution of the novelists who have made some of the most penetrating analyses of Latin America's land tenure problems such as Ciro Alegría, *El Mundo es Ancho y Ajeno* (Santiago, Chile: Ercilla, 1955).

countries, practically everyone is dependent on the land-holder or "patron." Public officials including the police and army are commonly at his disposal; his influence at provincial and national political levels may make his continued good will necessary for their job security. Banks and marketing institutions operate for the large landowner's convenience as he is the only one with sufficient volume of business to support them profitably. Churches and schools must obtain the landowner's patronage if they are to prosper.

This power structure is perpetuated by systematic restriction of educational opportunities. The ICAD case studies, for example, found several large "haciendas" in Ecuador and Guatemala on which there were no elementary schools nor were there any schools nearby although legally every large property owner is required to aid in providing elementary schooling for the residents of his estate. In all of the countries studied the levels of education and literacy were much lower in rural than in urban areas. An extreme case is given by Guatemala's central provinces where only 5% of the population is literate.⁵

Tenants and workers on the large estates depend upon the "patron" for employment—there being no alternatives—and for a place to live. Wage and rental agreements can be adjusted to suit the landowner's convenience so that all productivity increases and windfall gains accrue to him. Permanent improvements such as buildings or fruit trees belong to the estate even when all the costs are borne by the tenant. On many large plantations residents are strictly forbidden to make improvements without permission for fear they would acquire vested interests in the land or take resources away from the production of the cash planta-

tion crop. Residents of the large estates can be expelled at will in traditional areas where there is neither a strong central government nor a labor union to defend them. The ICAD researchers found haciendas in certain Andean regions which required that people of the neighboring communities work without pay in order to have the right to use the paths and bridges on the property. In some cases the administration's consent is required even to receive visitors from outside or to make visits off the property. Even though it was prohibited as long ago as the 17th century, the practice of "renting out" workers still persists. And corporal punishment is still occasionally encountered on some of the most traditional plantations and "haciendas." Tenants and workers depend on the "patron" for credit, for marketing their products and even for medical aid in emergencies. Food and clothing are frequently obtained through the estate's commissary and charged against wages or crops.

With the abolition of compulsory servitude during the last century "peones" and tenants now have the right to leave but, with few alternative job opportunities and little education, this possibility often appears to be as much of a threat as an opportunity for improving their lot.

The traditional "minifundia" zones not directly dependent upon the large landholdings are characterized by tenure institutions that are scarcely more conducive to development than those found on the big estates. The "minifundia" communities are generally dependent for

⁵ The relationship of agrarian structure to education in Latin America was treated in more detail, but without the benefit of the ICAD data, in the regional UNESCO conference held in Santiago in 1961. See, Solon Barraclough, *Agrarian Structure and Education in Latin America* (New York, New York: UNESCO, ED/CEDES/30 ST EC/ACont. 10L. 30, Pau/SEC 30, 1961), mimeographed.

their contacts with the outside world upon a small group of town-dwelling politicians, landowners, merchants, secular and ecclesiastical officials. As a result these people have a great deal of power over the small-holders. They are seldom interested in jeopardizing their influence by promoting other close contacts with the outside world or by encouraging technical innovations and education that would make the small-holders more independent and mobile.

Within the "minifundia" communities themselves there is a strong resistance to change as the small-holders have learned over the years that penetration by outsiders usually results in eventual loss of land and independence. In the face of mounting population pressures and a shortage of land, social institutions have developed which restrict the possibilities of individual community members accumulating disproportionate amounts of wealth at the expense of their neighbors. While these mechanisms help to preserve the community they also make change and technological improvement more difficult. To better one's social position by becoming a more efficient farmer, for instance, is practically unheard of and migration to the towns is the principal accepted means for personal advancement. Although small-holders generally manage their parcels with skill and economic acumen, their limited opportunities and resources keep incomes low. In only a few cases, however, can technological advance overcome the desperate shortage of farm land in most "minifundia" areas.⁶

(3) *Economic Productivity.* To the extent that tenure structure impedes full, efficient use of the land, the labor force and the other resources at the command of agriculture, economic progress is stifled. As part of the ICAD analysis, in-

dicators of efficiency on farm units of different tenure types and scales were developed. These indices are limited, however, by the inadequate quantity and quality of available data so that sophisticated analytical refinement is impossible. The preferred measure of theoretical economists is the marginal productivity of the various factors of production.⁷ When resources are being used effi-

⁶The generalizations on small holdings were drawn primarily from the ICAD field studies, and especially the community studies, directed by Andrew Pearse, of Tenza and Subachoque, Colombia, Otavalo, Ecuador, and Navidad, Chile. The ICAD investigators in Guatemala visited Panajachel which had previously been studied by Sol Tax in his *Peasantry Capitalism* (*op. cit.*). Panajachel was one of the most commercially oriented small-holders' communities encountered in upland Guatemala, confirming Tax's observation that it was atypical in the region with respect to its highly intensive land use. The small-holders were found to be using imported seeds from Holland. Nonetheless, there were serious institutional obstacles to improving incomes further even in this exceptionally progressive community, the principal one being the scarcity of cultivable land available. Tax observed in his study that "the difference between Indian and Ladino is the over-ruling factor in the use of land. . ." (pp. 41). Not only did the Ladinos (mestizos) use their land differently from the Indians but, on the average, each Ladino family owned eight-and-one-half times more land than each Indian family—obviously a problem associated with land tenure institutions.

⁷The marginal productivity of the various factors of production has been estimated for the central zone of Chile by Carlos O'Brien Fonck. (See "An Estimate of Agricultural Resource Productivities by Using Aggregate Production Functions, Chile, 1954-55," Cornell University, M.S. Thesis, 1966). The results obtained tend to confirm the conclusions presented in this report. Using a Cobb-Douglas production function and data from the Agricultural Census of 1955, he arrived at the following conclusions: The marginal productivity of the land in cultivation is very high; that is, natural pastures converted into cultivated land yield a high marginal return. Measures of marginal labor productivity were generally quite low but, in areas of intensive cultivation, the marginal returns are greater and the potential response to increased labor input appears to be higher on the large than small units. The marginal productivity and returns to investments in cattle and farm building were consistently higher than costs of capital. In brief, large farms have high potential marginal returns in relation to capital, to conversion of natural pastures to cultivation, and to increases in complementary labor force. Nonetheless, they have failed to intensify their production.

ciently, marginal returns are about the same to a given factor, irrespective of the tenure system in which it is employed. For example, land of lower productive potential or poor location has less labor and capital combined with it than the better land. Consequently the marginal contribution of the better lands to the total production keeps diminishing until it is equal to that of the worst lands in use.

In theory, to compare the relative efficiency of large and small units, it would be necessary to determine the marginal productivity of all the different factors of production of both groups. The circumstances under which the large and small units are now exploited are so different and the markets so imperfect that it is doubtful that such comparisons have great validity.

Even after allowing for the measurement difficulties the general tendencies in resource use of the different tenure systems are clear. The two most important tenure groups—the minifundia and the latifundia—both appear to use resources wastefully. On smallholdings labor is wasted by overuse on small pieces of land. Lands unsuitable for agriculture—frequently on hillsides, in gullies, or in deserts—are cultivated so intensely that output per hectare is high even by the standards of modern agriculture. Yields appear even more remarkable when account is taken of the poor quality of the land, seed and other inputs. Minifundia consistently show much higher average returns per hectare than the large holdings whether comparisons are made on the basis of total farmland or area cultivated (See Table III). But the low level of technology means that average (and marginal) returns to labor are very low. Aggregate country data indicate that average production per agricultural worker

is one-fifth to one-tenth as great on small holdings as on latifundia. Finally, many soils rapidly lose fertility and are eroded. This is particularly striking on the steep hillsides of Ecuador and Colombia and in the tropical rain forests of Brazil and Guatemala.

On large estates resources are also used wastefully but in a different way. At least half of the total farmland in the countries studied is in large holdings. These incorporate a high proportion of the best soils and the land most favorably located with regard to roads, markets and water supply. The owners have ready access to credit and technical assistance. Nonetheless, only one-sixth of the lands in estates in the seven countries is or has been in cultivation; the rest are left in native vegetation. Relatively much less labor is used on most large holdings than on small farms. Even while average production per worker is sometimes quite high, production per hectare is low compared to either technical potentials or to outputs achieved on smaller units.

Measured by commercial standards the management of large landholdings is typically deficient. For example, agronomists estimate that the large-scale producers of cocoa and coffee in Brazil could double production of many existing plantations with only nominal improvements in management and investment. In Argentina new investments on large cattle estancias are not made even though returns would be increased by 25-40% because they require better management than is provided by their absentee owners. In case studies made in the coastal areas of Peru, capital-product ratios of 6.0 were estimated on large units indicating very low capital productivity. In the United States the ratio is typically about 2.5.

The economic behavior of the large

TABLE III—RELATIONSHIPS BETWEEN THE VALUE OF AGRICULTURAL PRODUCTION, AGRICULTURAL LAND, CULTIVATED LAND AND THE AGRICULTURAL WORK-FORCE BY FARM SIZE-CLASS IN SELECTED ICAD STUDY COUNTRIES^a

Country and Size Groups	Percent of Total in Each Country			Relative Value of Production as Percent of that of Sub-Family Farms		
	Agricultural Land	Agricultural Work Force	Value of Production	Per Ha. of Agricultural Land	Per Ha. of Cultivated Land	Per Agricultural Worker
ARGENTINA (1960)						
Sub-Family	3	30	12	100	100	100
Family	46	49	47	30	51	251
Multi-Family Medium	15	15	26	51	62	471
Multi-Family Large	36	6	15	12	49	622
Total	100	100	100	30	57	261
BRAZIL (1950)						
Sub-Family	0 ^c	11	3	100	100	100
Family	6	26	18	59	80	291
Multi-Family Medium	34	42	43	24	53	422
Multi-Family Large	60	21	36	11	42	688
Total	100	100	100	19	52	408
COLOMBIA (1960)						
Sub-Family	5	58	21	100	100	100
Family	25	31	45	47	90	418
Multi-Family Medium	25	7	19	19	84	753
Multi-Family Large	45	4	15	7	80	995
Total	100	100	100	23	90	281
CHILE (1955)						
Sub-Family	0 ^c	13	4	100	100	100
Family	8	28	16	14	47	165
Multi-Family Medium	13	21	23	12	39	309
Multi-Family Large	79	38	57	5	30	437
Total	100	100	100	7	35	292
ECUADOR (1954)						
Sub-Family	20	^b	26	100	100	^b
Family	19	—	33	130	179	—
Multi-Family Medium	19	—	22	87	153	—
Multi-Family Large	42	—	19	35	126	—
Total	100	—	100	77	135	—
GUATEMALA (1950)						
Sub-Family	15	68	30	100	100	100
Family	13	13	13	56	80	220
Multi-Family Medium	32	12	36	54	122	670
Multi-Family Large	40	7	21	25	83	706
Total	100	100	100	48	99	224

^a Gross value of agricultural production in all countries except Argentina where the estimates are of added value. Comparable data are not available for Peru.

^b No information available.

^c Less than one percent.

and small units is explicable in terms of factors related to the tenure structure. Those who control the land in the large and small enterprises have different motivations and their reactions in the face of changes in markets and demographic pressures are quite different. There are three important classes of units: the minifundia, the traditional haciendas and the "modern" plantations. No special attention is given here to family-sized units because of their limited importance in the countries studied.

Minifundia, whether they are in communities, in fragmented independent holdings, or in a latifundia complex, have a fixed land base and virtually no access to productive factors other than labor. The principal motivation for production is survival. At the same time these people must find room for that part of the increasing population which does not migrate. In the highlands of Guatemala, for example, where population is increasing by nearly 3 percent per year, one study shows average arable land per small farm to be 1.1 hectare most of which is on steep hillsides. This is land enough to occupy only about one fifth of the available family labor force even at the low levels of technology used. Under such circumstances labor is necessarily applied with increasing intensity to the fixed land base. In brief, the combination of rapid population growth, a rigid tenure structure, a paucity of technical aid or capital, and lack of employment alternatives explain the minifundia's high yields from land and low yields from labor. The predictable consequences are low gross labor incomes and disguised unemployment.⁸

In contrast, the production possibilities of the large-scale units are not seriously limited by lack of resources—with the exception of administrative capacity. Some

large farm enterprises are managed with a commercial orientation and modern technology and their results can be analyzed separately from those of the traditional farms. Nevertheless, in the ICAD-studied countries the traditional-oriented ones are in a large majority in number as well as in the proportion of the land resources that they control.

Traditional multi-family exploitations resemble minifundia in that their technology, capital investments and management are rudimentary so that their level of production is determined essentially by the quantity of labor they use. But the motivations of the latifundia managers are different from those of the "minifundistas." The large landowners do not need to produce in order to survive nor are they obliged to find employment on the farm for cousins, brothers and other relatives. In effect, for the hacienda-

⁸ Professor T. W. Schultz, in *Transforming Traditional Agriculture* (New Haven, Connecticut: Yale University Press, 1964), has argued that the problem of agricultural development in traditional smallholders' communities can be reduced usefully to purely economic terms without resorting to institutional or cultural explanations. Professor Schultz concludes that the principal problem in transforming traditional peasant societies is one of introducing "unconventional inputs," chiefly education. He uses Tax's data from Panajachel to support his thesis. Tax's study could be better interpreted to show that the land tenure institutions are strategic in the development of these communities. Professor Schultz also shies away from the question of why educational and similar "unconventional inputs" are so expensive and difficult to introduce into traditional agricultural societies. By ignoring the institutional problem Schultz finds it difficult to explain why the "latifundistas" have not been quicker to introduce new productive factors. He writes: "However, one would expect that farmers who operate large enterprises would actively search for new agricultural factors. There are many farms in parts of South America that certainly qualify in terms of size, but either the farmers are not very successful in the searching they do or they are inactive in this respect, judging from the obsolete traditional factors they employ. Why they have not done better on this score is a puzzle." (Schultz, *op. cit.*, pp. 169.) Within the framework of the analyses presented in the present report what puzzles Professor Schultz is explainable and is to be expected.

owner to maintain his social and economic power it is necessary that he maintain the peasants (campesinos) in a situation where they have low incomes, insecure tenancy and few alternative sources of employment. He has a constant motive to limit rather than to raise his labor requirements. The economic results of this situation are that land directly administered by the large traditional enterprises is farmed extensively. The possibilities for increasing employment and production are wasted and the excess labor supply on the neighboring minifundia is increased. It should be emphasized that this behavior is in complete agreement with the social and economic aspirations of the hacienda-owners although it does not bear out the idea generally held by economists of what is rational motivation.

The small group of large-scale estates using modern technology and management may, within the limits suggested below, contribute to the economic growth of the country. The best operated units show high productivity for both the land and labor. As producers of export crops and import substitutes they help to improve the national trade balance. As employers they provide some of the economic alternatives needed to break down traditional tenure systems. As demonstration units they may induce other estates to follow suit.

The bright possibilities of "modern" farming are seldom realized in full. For example, in order to reduce dependence on the local labor force and to limit "labor problems" many of these estates substitute capital for labor to such an extent that fewer work opportunities and lower gross wages are offered in the end than under traditional management. It is also a common practice on single-crop plantations to withdraw or withhold land suitable to cropping in response to special

market forces or merely to hold land in reserve and thereby reduce employment opportunities for the campesinos. In Guatemala the "reserves" of the banana and coffee plantations were a special target of the frustrated agrarian reform of 1952-54. Many plantation owners retain or re-invest little of their profits in the country itself. In effect, the major benefit to the nation from these "pockets of efficiency" is likely to be the direct benefits of higher wage payments and higher taxes plus a possible demonstration effect.

Even an accelerated transformation of traditional land tenure systems would not mean that all lands would suddenly be intensively exploited and that there would be larger marginal returns to labor. Production patterns would need time to be adjusted to account for comparative economic advantage and market demands. In some regions the land would continue to be used extensively but the inevitable tendency would be to use the land as well as labor better and more economically. The true production potential could be reached only after having overcome customs which have been deeply rooted for centuries.

Serious estimates should be made of the misallocation of labor that is created by existing tenure systems. Unfortunately, sufficiently detailed data were not gathered in the ICAD country studies to permit such calculations. To have an idea of the magnitudes involved the average land per worker on the family scale farms in each country may be used as an index. If this "desirable" land/labor ratio prevailed among minifundia only 700,000 of the 4.4 million workers on sub-family scale farms in six of the countries studied (excluding Peru which had insufficient data) would be required. If the family-scale land/labor ratios were applied to only half the land in large-scale exploita-

tions (on the generous assumption that half the land was of no economic potential), resources would exist for employing 25 million additional workers in the six countries. These admittedly rough guesses indicate the tremendous pressure on the land in minifundia and the ample possibilities for improvement of land and labor use on the large units.

(4) *Income Distribution and Investment.* The distorted distribution of land is a fundamental cause of the rural social stratification which in turn dates from the period of colonial conquest and slavery. In Chile, for example, the upper three percent of the agricultural population now receives 37 percent of the agricultural income while the bottom 71 percent of the farm labor force receives only one-third of the income. In one zone studied in Colombia 85 percent of the farm units received 9.3 percent of the agricultural income.

The distribution of farm income, plus the fact that a large proportion of the population vegetates at close to subsistence conditions and suffers chronic under-employment, are evidence of a rigid class structure and are the major causes of the weak internal markets which impede industrial expansion. According to the ICAD studies the modal campesino income is the equivalent of about \$300 annually except in the few regions where alternative employment exists or where the tenure structure is unusually good. Cash family incomes are much lower. In the Andean highlands, Brazil's Northeast, and in much of Guatemala cash family incomes are typically far below the equivalent of one hundred dollars annually. From half to three-quarters of the family's income goes for food leaving very little for clothing and other necessities. There is really no surplus income

with which to buy the products of infant industries whose growth depends on expanding internal markets.

It has been estimated that the income of the large landowners is great enough to permit them to make substantial investments in industry and agriculture. With respect to Chile Nicholas Kaldor affirms that, "if the ratio of consumption to gross income from property were reduced to levels found in Great Britain, 30 percent, the personal consumption expenditures of this group would fall from 21.1 to 10.3 percent of the national income. The freed resources would be more than sufficient to double investments in fixed capital and inventories. This means that, according to official estimates, net investment would increase from 2 percent to 14 percent of net national income."⁹ Marvin Sternberg sought to test this assertion for the agricultural sector on the basis of a sample of 20 large land holders in Central Chile.¹⁰ The propensity to consume of this group proved to be relatively high since on the average they spent approximately 84 percent of their disposable incomes after taxes which averaged approximately 40,000 escudos (E° 1 = \$1.00 in 1960) on consumption goods. About half of this consumption, Sternberg estimates, was sumptuary. (See Table IV)

As already noted, the ICAD Chile study shows that the largest producers receive about 37 percent of the income available from the farm sector and enjoy an average annual net family income of

⁹ "Problemas Económicos de Chile," *El Trimestre Económico*, April-June 1959, p. 196.

¹⁰ *Chilean Land Tenure and Land Reform*, Dissertation submitted in partial satisfaction of the requirements for the degree of Ph.D. (Economics), University of California at Berkeley, September 1962.

TABLE IV—INCOME AND EXPENDITURES OF 20 LARGE FARM OPERATORS OF THE CENTRAL VALLEY OF CHILE, 1960 (Escudos of 1960) ^b

	Total	Average	Percentage
A. Gross Personal Income	897,300	45,865	100.0
From Agriculture	807,400	40,370	(90.2)
From other sources ^a	89,900	4,495	(9.8)
B. Personal Taxes	46,600	2,330	5.1
C. Disposable Income (A-B)	850,700	42,535	94.9
D. Expenditures			
Consumption	712,200	35,610	83.7
Personal Investment	119,400	5,970	14.0
E. Personal Savings (C-D)	19,100	955	2.3

^a As reported by the producers themselves.

^b E₀ = 1 dollar in 1960.

Source: Marvin Sternberg, *Chilean Land Tenure and Land Reform* (Berkeley, California: University of California, Ph.D. Thesis, 1962), Table 25.

more than E° 16,000, (1960 escudos, Table V). This means that the 10,000 large landowners receive about 3.5 percent of the gross income of Chile. If these incomes had been invested over the past decade the net rate of investment in the country would have been doubled. Instead, those who receive agricultural income spend a greater part of it on consumption than do the high income receivers in developed countries. A considerable portion of these incomes are spent on foreign travel and consumption of imported articles. Investments, when they are made, are usually safe investments such as land, foreign stocks and bonds or in the construction of apartments and luxury hotels.

The conclusion seems inevitable that the seigneurial distribution of income is as antagonistic to economic development in Latin America as it has been in other regions in which large plantations and near-feudal conditions prevail.¹¹

C. Spontaneous Response and Adjustment

The existing land tenure problems would be less serious if the agrarian structure were less rigid. In spite of this rigidity it is possible to discern several currents of change. One of these is the subdivision of farm properties through sale or inheritance. A second is migration of rural families to the cities and to frontier areas. A third is in changes generated in anticipation or fear of land reform.

(1) *Subdivision by Inheritance.* "Natural" subdivision of the larger properties through sale or inheritance has been going on for centuries but the change is at a turtle's pace compared to the present-day avalanche of disequilibrating

¹¹ In an interesting attempt to apply econometric methods to historical analysis Alfred H. Conrad and John R. Meyer of Harvard University analyzed the economics of slavery in the American South. While slavery as an institution appears to have been economically profitable they concluded that slavery produced an income distribution so skewed that it was difficult to support the mass market necessary for the development of local consumer goods production. "Seigneurial consumption was not likely to be a substitute for the broad market that could have made it profitable in the South to manufacture consumer goods more sophisticated than the most elemental of subsistence wares. Also, seigneurial display that rested upon consumer debt, whether that debt was held within the South or by northerly financiers, was inconsistent with growth, as 'productive' or at least 'producers' debt would not have been. This inequality need not have restricted income growth in the presence of strong demand pressures in the world cotton markets. However, it is not simply the size but the distribution of income that is crucial for structural change, and it is in respect to the degree of inequality that slavery could have injured the South's early chances for industrialization." Alfred H. Conrad and John R. Meyer, *The Economics of Slavery, and Other Studies in Econometric History* (Chicago, Illinois: Aldine Publishing Co., 1964), pp. 228-229. The analogy with the present development problem in much of Latin America is obvious. Logically, inequality of income distribution would not necessarily deter development if a large portion of total income were invested in productive enterprises necessary for economic growth even though returns were low because of limited markets. But this is not a real possibility given seigneurial tastes and expenditure patterns. See also, Thomas Carroll, "Reflexiones sobre la Distribución del Ingreso y la Inversión Agrícola," *Temas del BID*, Agosto 1964.

TABLE V—DISTRIBUTION OF AGRICULTURAL INCOME IN CHILE, 1960

	Farm Families		Income		Average Family Income (E ^o)
	Thousands	Percentage	Millions of Escudos	Percentage	
Workers and Small Scale Owners	243.9 ^a	70.7	155.2 ^b	33.4	636
Family-Scale Producers ^c	61.1	17.7	59.0	12.7	966
Supervisory Personnel	7.3	2.1	8.6	1.8	1.178
Medium-Scale Producers	22.3	6.5	71.4	15.4	3.202
Large Scale Producers	10.3	3.0	170.8	36.7	16.582
	344.9	100.0	465.0	100.0	1.348

^a Includes families of producers with subfamily scale units and sharecroppers.

^b Includes salaries, payment in kind, social security contributions, and incomes on subfamily units from shares and from the land ceded as part payment for labor to "inquilinos."

^c Includes for the most part producers with from 5-20 ha. in irrigated zones, and greater area in the middle and extreme south. Some such units have incomes close to those of subfamily producers.

Source: Estimates based on the 3rd Agricultural Census, on the national accounts of CORFO and on the case study data in the ICAD study.

forces. According to a study of changes in size of property units in a sample district of the Argentine Pampa where there have been more "modern" influences than elsewhere on the continent it would require 130 years of continuous subdivision at present rates for the existing large scale holdings to disappear.

The ICAD analyses also demonstrated that a substantial part of the subdivision is actually occurring in family units rather than the large scale holdings. In some zones the large landholders are buying up bordering small properties.

Large units are protected by corporate status and liberal tax laws while small farmers lack other employment opportunities as well as legal advice and ready cash to prevent rapid subdivision of their units over the generations. In this fashion, the average size of the properties is falling at the same time that the relative concentration of land is increasing.

(2) *Migration.* Every year thousands of rural families flee the countryside where there are few opportunities to earn a liv-

ing. They go to the cities or to the undeveloped jungle and mountainous interiors. Of those who go to the city some find employment in industry and in commerce but the majority continue to live in poverty as urban job opportunities increase very slowly. Besides, with their slight education and lack of manual dexterity most of these migrants cannot meet the requirements of industry and modern business.

The amount of rural-urban migration increases every year but is still not sufficient to reduce the pressure on the land. In the seven ICAD study countries there were 59 million rural people in 1950 and over the subsequent decade there was a natural increase of another 19 million persons. Out of this total of 78 million people there was a net migration from rural areas of some eleven million persons, or one out of every seven. In spite of this huge movement the rural population increased by eight million some of whom left the developed farm

areas to settle in frontier regions (See Table VI).

The quantitative importance of spontaneous colonization of the frontier is difficult to estimate but it is highly significant in many regions such as western and northern Brazil, Central America and eastern Peru and Bolivia. For example, some three thousand families are estimated to be trekking annually from Brazil's Northeast to the Amazon Provinces.

A fundamental difference between this migration towards the frontier in Latin America and the settlement of American

further into the backlands. The temporary right to the use of the land in exchange for clearing it is an established custom. Many campesinos spend their whole lives clearing small areas of bush or jungle, obtaining only a passing benefit because they have no permanent rights to the land.

The families which settle in frontier forested areas—especially when this occurs without any guidance or control—face another set of problems. The clearing of forests is usually done by indiscriminate logging or by fire which destroys potentially valuable timber and soil. A major part of these soils are unsuited for continuous agricultural use. Forest covers fully half the land of Latin America and much of it is not yet commercially explored and exploited. This potential wealth will be in constant danger if this type of settlement is not brought under control and direction.

(3) *Anticipatory Adjustments.* Many new developments are taking place in response to the agrarian problem that, while not yet quantitatively important, may become so in the future. For example, in Guatemala, Colombia and Ecuador large banana producers are experimenting with the decentralization of the ownership and control of their plantations. These big exporters recognize the political dangers of large-scale producing units. They are encouraging establishment of medium-sized farms by local citizens who are under contract to sell their harvest to the company and to operate under its technical supervision in order to meet its standards for export. In return the company provides growing stock, credit, technical assistance, a guaranteed marketing quota and minimum price. In this way the political risks (and the crop failure risks) of large-scale plantation agriculture are avoided or shifted to the

TABLE VI—ESTIMATED RURAL TO URBAN MIGRATION IN THE ICAD-STUDY COUNTRIES BETWEEN 1950 AND 1960

Country	Net Rural to Urban Emigration (in thousands)	Net Rural to Urban Emigration as a Percent of 1950	
		% of Total Population	% of Rural Population
Argentina	1,466	8.6	24.9
Brazil	6,301	12.1	19.0
Chile	685	11.9	29.0
Colombia	1,345	11.9	16.6
Ecuador	390	12.2	17.0
Guatemala	75	2.7	3.6
Peru	649	8.3	13.6

frontier land in the last century is that in the United States, once the Indians had been conquered, these lands belonged to no one while in Latin America almost all land already has an owner. In many cases the lands opened for cultivation are reclaimed by their owners as soon as they begin to have a commercial value, which pushes the colonizer into a latifundia system similar to the one he had recently left behind or else obliges him to migrate

small producer while most of the economies of large-scale production are retained.

In Argentina's grain regions specialized contractors are beginning to take over many of the functions formerly performed by landlords, tenants and middlemen. "Contratistas" possessing adequate modern machinery, capital and good market connections make contracts with the large landowners to grow and market the crop for a fixed proportion of its gross value. Where they operate traditional tenant-landlord problems are disappearing but such solutions are only viable where former tenants and workers can find acceptable alternative employment.

The Catholic Church in Chile has recently sold several of its farm properties to the campesinos working them. The church helped to provide technical assistance and credit and has experimented with the cooperative management by its workers of one large property.

Several landowners have recently tried out participation schemes with varying degrees of success by giving their workers a share of the profits and a voice in management decisions. At Vicos, in northcentral Peru, a group of North-American and Peruvian social scientists have been assisting the "campesinos" (Indians) to take over a large traditional "hacienda" and to operate it under new tenure institutions.¹² The "hacienda" is now a cooperative enterprise in which the old farm layout has been largely maintained but ownership, management and income are now in the hands of the former "peones."

In the northeast of Brazil three sugar plantations, after prolonged labor trouble, were turned over to the workers for cooperative operation with the technical guidance of SUDENE (Brazil's develop-

ment agency for the northeast states). In all of the study countries a few large owners were found to be subdividing their properties in anticipation of expropriation under proposed land reforms.

Another form of response is seen in the organization of the "campesinos" into unions or associations to protect their interests. As explained below, this is very difficult to do successfully in traditional "latifundia-minifundia" areas but there are exceptions. The "ligas camponesas" in Brazil have spread rapidly although with only sporadic effectiveness in collective bargaining with the landowners. In Peru there have been several successful attempts by Indian communities to repossess grazing land taken over by large haciendas in the past although some of these invasions have been repelled by armed force. Campesino strikes against onerous tenure arrangements in La Convención valley northeast of Cuzco, Peru have resulted in government intervention to redistribute the land among the peasants.

D. Agrarian Reform Policies

The ICAD studies leave little room for doubt that existing tenure institutions are primary obstacles to economic and social development. These institutions maintain and legitimize the existing inequalities in the distribution of wealth, power and social status, which in turn impede the efficient use of disposable resources, depress the rates of investment in industry as well as agriculture and

¹² See, Mario C. Vásquez and Henry F. Dobyns, *The Transformation of Manors into Producers' Cooperatives* (Ithaca, New York: Comparative Study of Cultural Change, Department of Anthropology, Cornell University, January 1964). The same article appeared in Spanish in *Economía y Agricultura*, Vol. I, Lima, Perú, Diciembre 1963-Febrero 1964, No. 2.

prevent the achievement of minimum social and political stability.

The capacity of governments to adopt and enforce tenure reforms, given the clear case for their urgency, measures their own ability to survive. Alexander Gerschenkron's observation is steadily becoming more relevant in Latin America: "A long postponement of industrialization tends to allow social tensions to develop and acquire serious proportions. Had serfdom been abolished by Catherine the Great or at the time of the Decembrists' uprising in 1925, the peasant discontent, the driving force and earnest of success of the Russian Revolution, would never have assumed disastrous proportions, while the economic development of the country would have proceeded in a much more gradual fashion."¹³

The serious policy debates are not now between proponents of "reform" and of "no reform." Political groups in the countries studied are choosing between the "indirect" and the "direct" approaches to reform. Indirect reforms try to resolve the most obvious social conflicts without altering the present rural power structure. Such programs are similar in concept to those followed some generations ago when slavery, forced labor and primogeniture were abolished. Direct reforms achieve massive changes in the rural power structure in order to redistribute rights and redesign institutions to favor the campesinos.

In none of the seven countries studied has an irreversible direct reform of tenure structure been achieved. Variations and blends of indirect reform programs have gained some political support. These programs include colonization, labor and tenant contract regulation, land and inheritance tax reforms and industrialization. The nature and success of

such measures need to be studied carefully before considering the probable requisites of a program of direct reforms.

Colonization. Land settlement programs, particularly in unexploited jungles and disputed border regions, have been favored as an escape from the agrarian problem, particularly by the groups opposed to expropriation of privately held land but still concerned about rural discontent. Within the scope of settlement-programs must also be included assistance to spontaneous settlers and the opening of new agricultural zones through irrigation projects. These various programs have been promoted with two aims in mind: to reduce rural social tensions and to incorporate new wealth into the economies.

To judge from the experience of the study countries, such hopes are as yet unfulfilled. Attempts to colonize new areas have been slow and costly, leaving the agrarian problems unresolved. In Guatemala, for example, between 1954 and 1962 only 6000 families, many from the urban middle class, received family scale units in colonization zones. The number of families benefited was less than 7% of the demographic increase of the rural population of the country. As is noted below, it would have been necessary to benefit 240,000 families during this period in order to transform the agrarian structure in a significant way. In the other countries official colonization activities have proceeded just as slowly at rates which do not even approximate the rate of formation of rural families, much less fulfill the objective of an effective reform. (See Table VII).

¹³ "Economic Backwardness in Historical Perspective," in Bert Hoselitz (ed.) *The Progress of Underdeveloped Areas* (Chicago, Illinois: University of Chicago Press, 1962), pp. 27-28.

TABLE VII—COLONIZATION ACTIVITIES IN SELECTED ICAD STUDY COUNTRIES

Country	Period	Units Colonized	Land Area (Ha.)	Units Per Year	Area Per Year (Ha.)
Argentina ^a	1940-1956	5,731 ^b	2,195,394	337	129,141
Chile	1929-1963	4,708 ^c	1,388,024 ^d	134	39,664
Guatemala	1955-1962	5,265 ^e	95,260	619	11,207

^a Between 1961 and June 1963, 454 lots were colonized with an area of 35,281 Hectares.

^b Number of allotments.

^c Number of parcels and lots. In addition there were 1,049 very small holdings ("Micro parcelas" and "huertos").

^d Includes the "micro parcelas."

^e In addition, 4,524 "micro parcelas" with 11,660 ha., and 12,081 "comuneros" with 52,402 ha. were adjudicated.

Costs of colonization programs have to be high because land "on the agricultural frontier" can be cultivated only after costly clearing, drainage and road building. Actually there is not enough potentially good agricultural land outside the already populated areas to settle the "excess" rural population or even to take care of the present demographic increase in the rural areas. In none of the countries studied is more than a small part of the government-owned land suitable for intensive use while the rest is usable at best for forest and extensive pasture. Unless special precautions are taken land which becomes valuable after roads or improvements are made is immediately taken over by influential persons from outside the farm sector.

If the intention of colonization activities has been to improve the lot of the campesinos, the achievements to date by colonization and agricultural development agencies are at best inadequate. For example, colonization agencies in Chile and Guatemala have deliberately formed subfamily-scale units whose operators are forced to look for part-time work on the large scale units. The opposite policy of creating such large units that the latifundia system is created all over again is even more common. The agricultural im-

provement projects of Chile offer a case in point. For seven irrigation projects covering 91,200 hectares of land on which the works were completely financed by the state, 85% of the land benefited was distributed or held in units larger than 50 hectares each—that is, in multifamily units. In addition, the beneficiaries paid practically nothing; it is estimated that the government recovered no more than 3% of the real costs from the beneficiaries.

The evidence indicates that official colonization activities do not compare favorably with settlement which occurs spontaneously without governmental aid. The most notable exceptions are encountered in certain colonies of foreign immigrants such as the Japanese in Brazil. These immigrants normally arrive with some capital, their own social organization and cooperative institutions, the assistance of their own government, a strong community spirit and better education than the majority of the workers and small owners in the community. The success of these foreign colonies can, in the short run at least, help create small enclaves of modern middle class agriculture within the traditional structure.

Colonization can play an important role in the development of Latin Amer-

ican agriculture if the planning and administration of the programs is improved and if costs are reduced. It must nonetheless be remembered that colonization is not an effective instrument for modifying the traditional land tenure structure.¹⁴ Lands which have immediate agricultural potential without huge investments are, almost without exception, already in large privately-owned estates in settled areas. Colonization of such lands requires land redistribution on a large scale—that is, agrarian reform.

Tenure and Labor Contract Regulation. Two widely applied techniques for mitigating the bitter conflicts between landlords and campesinos are regulation of work and tenancy contracts, and social insurance schemes. The apparent aim of such schemes is to bring about a balance in the bargaining power between the two groups, a balance which the existing economic and social structure has not been able to generate. The popularity of such an approach is undeniable. In all the countries studied there exist laws which proscribe tenancy contract abuses and establish minimum wages and working conditions for workers. Special courts to hear cases of violations and to enforce the rules have been created. In several study countries farm workers participate in government retirement and health programs along with the urban groups.

None of these measures are new and untried. In all countries studied the laws have been in effect sufficient time so that their real impact can be ascertained. In Chile and Argentina regulations of tenancy contracts were established 40 to 45 years ago and the laws now in force were enacted in the mid-1940's. Since 1947-48 laws controlling Peru's system of "yanacónaje" as well as aspects of conventional tenancy contracts have been on the books. In Brazil, Ecuador, Colombia and Guate-

mala laws which stipulate the conditions under which farm operators are supposed to contract with farm workers and tenants have existed for a generation or more.

If these laws had been effective there would now exist greater security and higher shares of farm incomes for tenants and higher wages and improved social conditions for hired workers. As has already been indicated and described in ample detail in the various ICAD country studies the evidence demonstrates that these laws have not achieved these objectives and at times act counter to the interests of the campesinos. Large proprietors and landowners continue to be assured of the bulk of the sector's earnings. In Chile, for example, field studies showed average "inquilino" family incomes ranging from 1/80 to 1/230 of the large proprietor's income from the farm. In Argentina the wage situation improved during the late 1940's but between the mid-1950's and 1965 controlled wages of farm workers in real terms fell by 30%. Such amenities as education and health services are no more readily available to campesinos today than at the time the regulations were enacted in the 1930's and 1940's.

Although it has proved extremely difficult to determine the degree of compliance with minimum wage and tenancy-share laws a 1957 survey in Brazil showed that farm workers in seven of eight important agricultural states studied were receiving wages one-third or more below the fixed minimum wage and were being

¹⁴The declaration of Lima of the Interamerican Economic and Social Council emphasized the same point in December 1961: "Agricultural promotion and colonization cannot be substituted for agrarian reform. As is stated in the Charter of Punta del Este, the reform must be oriented toward effective structural transformation eliminating unjust systems of property and land exploitation."

overcharged for their housing (see Table VIII). Recent Chilean studies indicate a record of compliance with social laws of only 20 percent.

TABLE VIII—DIFFERENCES BETWEEN LEGAL MINIMUM WAGES AND ACTUAL WAGES OF FARM WORKERS IN EIGHT STATES, BRAZIL: 1957

State	Percentage Deviation of Actual Wages from Legal Wages		Deductions for Male Field Workers' Housing as Percent of Wages	
	Male Field Workers	Cane-cutters	Authorized by Law	Actual Deduction
Ceara	-31	-29	30	48
Paraiba	-31	-26	27	42
Pernambuco	-36	-27	27	43
Minas Gerais	-42	-41	28	51
Espirito Santo	-31	-26	31	44
Sao Paulo	-23	-18	33	37
Parana	+ 6	+ 9	24	16
Rio Grande do Sul	- 8	- 5	24	36

Minimum legal wages vary from municipio to municipio in each state. These estimates are computed on the basis of the lowest prevailing wage rate in each state. Hence the extent of wage violations are underestimated and the payments in excess of the legal rate (e.g. Parana) overestimated. Workers reported in the table (hoe workers and cane-cutters) are relatively uncommon in Rio Grande do Sul.

The effects of the laws in some cases have been negative. In Colombia, Peru and Argentina, for example, regulation of tenancy contracts is one of the major reasons why thousands of small tenants were evicted by landlords who sought to circumvent the effects of the laws. In Argentina there was a 25 percent decline in the number of tenants in the decade following enactment of tenancy regulations in 1947. In Colombia the expulsion of campesinos from the large haciendas immediately followed passage of the law giving legal rights to those who had worked more than ten years on the property. Many observers agree that this move contributed importantly to the spread of

rural violence in Colombia. In Brazil the attempts by the "ligas camponesas" and other campesino groups to force the latifundistas to respect the tenure rights of renters and other resident workers has led to serious conflicts, violence and assassinations. Unschooling campesinos have not proved to be difficult adversaries for landowners' lawyers.

Why have these measures suffered such repeated failures? What possibilities exist for putting real force into such laws? The problem, in part, lies in the lack of effective administration of existing laws. But it must be remembered that these laws are approved with the tacit agreement that they will not be vigorously enforced. In the best of cases they are meant to provide bargaining guidelines which fix acceptable limits to the aspirations of the campesinos. It is well recognized that the influence of the landlords prevents effective enforcement of the regulations since those who would suffer most are themselves frequently the politicians or government functionaries who are responsible for enforcing the law. Even when this is not the case a large and independent bureaucracy and powerful courts would be required to apply such complicated legal instruments. These requirements are beyond the technical capacity of even the richest of the countries studied. In those countries where the social and economic problems are most difficult enforcement is almost impossible.

The regulatory approach nonetheless continues to be attractive because it permits the government to give the impression they are facing agrarian issues while simultaneously avoiding direct reforms. Serious supporters of contract regulation often fail to recognize that when non-enforceable laws are passed the possibility of more effective action is weakened. On

the other hand, the patent failure of such regulations strengthens the campesinos' mistrust of existing political institutions.

The way in which the laws have occasionally been made to work is through collective bargaining, that is, through the efforts of workers' federations and small holders' cooperatives. However, in only a few cases was contract regulation accompanied by a rise in the power and influence of unions and cooperatives. Local federations and unions are able to attract public attention and even bring to court landowners who violate the regulations. It is more typical, however, that the laws are offered as a "substitute" for campesino federations and that the latter are suppressed instead of promoted by the government.

The experience in the ICAD study countries forces the conclusion that farm wage and tenancy legislation, when not vigorously supported by campesino federations and by the government, cannot improve the agrarian situation. The regulations of tenant and wage contracts, in fact, cause many landowners to withdraw lands from commercial use or to substitute machines for men so that rural work opportunities are reduced and the economic status of the campesinos is worsened.

Tax Reforms. In several of the countries studied fiscal reforms which put special emphasis on land, inheritance and income taxes were considered to be substitutes for agrarian reform. High land taxes (preferably progressive) can influence large landowners to use their properties more intensively or to sell it to those who will. Higher inheritance taxes, particularly where the "family corporation" loophole is closed, can also lead to more rapid subdivision of large estates. The benefits from such measures are expected to be higher farm output, lower

land values, more land made available for sale and more government tax revenues for development and reform programs. But it cannot be claimed that higher taxes will, as such, overcome the social tensions in rural areas.

There is ample scope for agricultural tax reform. In all of the countries studied taxation penalizes the more productive farmers while leaving those with large, idle estates virtually tax-free. The bulk of the government revenues now derived from agriculture come from taxes on sales, on imports and exports and on farm wage payments. The farmers with most production carry the burden; meanwhile the tax-take is negligible on land, capital, net incomes or inheritances. In Argentina, for example, the ICAD study indicates that only one-third of the total tax revenue collected from the agricultural sector was based upon income from land or from capital. In Peru land taxes are virtually non-existent. In other countries land taxes and income taxes are constantly evaded by large property owners.

One concrete result of attempts to improve the land tax system can be cadastral maps which include data concerning value and ownership of the lands. This information is needed as much for agrarian reform programs as for an effective tax system. At present such data is extremely fragmentary or unreliable in all the study countries with the exception of Chile and Argentina.

Some note has already been made of the slow rate of "natural subdivision" of large estates through the workings of inheritance laws. Landowning families tend to hold land in a corporate entity which is exempt from death duties and requires no more than redistribution of shares when one of the family dies. This has two negative effects. The economic pressures to subdivide large holdings is

diluted and lost, and the government's revenues from inheritance taxes is diminished.

The benefits of a good tax system can be enjoyed only if the taxes are strictly and impartially enforced. Experience in the study countries indicates that land and inheritance taxes have the same weakness as regulation of tenancy contracts and minimum wages. The more immediate interests of the bureaucrats, legislators and politicians give them no motive for adopting or enforcing really effective regulations. In Latin America the public imagination is not to be captured by tax reforms. Although agrarian reforms can have the enthusiastic support of the campesinos tax reform invariably produces intense opposition without garnering offsetting support. Politically, taxes are never popular, even among the potential beneficiaries.

Industrialization. The creation of a vigorous industrial sector is held by some to be the only realistic solution to the agrarian problems of developing countries. In the long-run, this view is certainly correct but it is also tautological. Economic development involves by definition creation of new industry, new job opportunities, greater urbanization and the other attributes of a commercial society. Through the process of development a country's social and economic structure, including its land tenure relationships, is fundamentally transformed. "Campesinos" are emancipated from their inferior position because of wider job possibilities, higher political and social status and better health and education facilities. But having a destination is not the same as knowing the road. The question remains: how is it possible to achieve industrial growth quickly while simultaneously reducing social tensions

and increasing production in the agricultural sector?

The arithmetic of development argues against the possibility of solving the agrarian problem simply by moving the rural poor into urban areas. In the study countries rural population could not be absorbed much more rapidly than at present, even if there were rapid forced-draft industrialization.¹⁵ In regions where the farm population lives under the full burden of the traditional land tenure institutions, industrialization cannot have much impact on employment opportunities for at least two generations. Celso Furtado recently estimated that the investments in Brazilian industry made between 1950 and 1960 did not change the occupational structure of the country; the number of industrial jobs increased at an annual rate of 2.8% which was below the rate of population increase and less than half the rate of increase in urban population.¹⁶ In Chile employment in industrial manufacturing increased by 21% between 1950 and 1960 but the relative importance of such employment decreased as population increased by 30% in the same period. A large portion of the farm population entering the labor market during the next few decades must continue to seek employment in farming or in related rural industries.

The speed with which new industrial jobs can be created depends not simply on the rate of industrial growth but also upon the size and nature of the existing

¹⁵ See, Gunnar Myrdal, "The United Nations, Agriculture and the World Economic Revolution," *Journal of Farm Economics*, November 1965, p. 889; particularly see his reference to the possibility of augmenting industrial employment, pp. 894-895.

¹⁶ "Political Obstacles to Economic Growth in Brazil," *International Affairs* (Chatham House, Oxford University Press), April 1965, pp. 252 ss.

industrial base. Of the countries studied, only Argentina and Chile now have sufficient industrial development so that rapid growth—say, doubling manufacturing jobs over a decade—could have an appreciable effect on rural employment alternatives.

But even where a start has been made new obstacles continue to appear in the path of industrialization. The case of Chile is illustrative: Between 1940 and 1951 Chile's farm work force grew from 58 thousand to 733 thousand workers. The total employed labor force meanwhile grew annually by some 40 thousand workers, 90% of whom were absorbed by the non-farm sectors. This apparently bright picture is nonetheless darkened by two related counter-tendencies. Disguised unemployment is increasing rapidly and new employment is occurring in the low productivity trade and service sectors, such as small retailers and domestic servants, rather than manufacturing. In the existing manufacturing plants, meanwhile, capital is being substituted for labor so that while output grows the number of jobs do not. Growth which could occur if consumer manufacturing industries expanded has been limited by lack of internal markets and low propensity to invest. These markets will not develop as long as income, both within and outside the agricultural sector, continues to be so unevenly distributed.

The Chilean experience is repeated elsewhere, and in the more agricultural countries greater difficulties are created by inequitable distribution of farm incomes. Rapid industrialization will also be limited as long as educational and health facilities for the rural people continue to be inadequate or non-existent. Such deficiencies effectively bar the rural migrant from work in modern manufac-

turing plants. In some rural areas it is possible to establish labor-intensive handicraft industries and farm product processing plants which supplement rural incomes and are a first step toward independence of the campesinos from the traditional agrarian structure.

The uncritical faith in "industrialization" is often linked to the argument that higher prices for farm products are essential in stimulating agricultural production and that they will also improve rural living levels. This argument is most clearly true with respect to agricultural exports as long as sales are not appreciably reduced by higher prices. Greater export incomes provide a developing country with additional foreign capital and may also encourage greater farm output. On the other hand, higher prices for foodstuffs for the domestic urban population are detrimental to industrialization possibilities since relatively cheap and plentiful food is one of the indispensable conditions both for rapid industrialization and social stability.

Higher farm prices, where they simply provide higher incomes for landowners, will not expand internal markets nor reduce social tensions. High prices of farm products may simply reduce the real income of both urban and rural workers. In the ICAD case studies no association was found between levels of prices paid to owners and wages paid to workers. In the case of certain subsidies, such as those given to the sugar producers in Argentina, the high prices may permit large property holders to consolidate and perpetuate the traditional tenure institutions. Although it is not arguable that adequate price levels are needed to create a dynamic commercial agriculture a system of high prices cannot cure an agrarian disequilibrium which grows out of a poorly structured agrarian system.

It would be an exaggeration to deny the importance of conventional promotional programs to overcome obstacles to rapid development when applied under the right circumstances. Well conceived programs of industrial promotion, development of rural industries and communities, price and credit and marketing assistance are all expected to play vital roles in successful reform of the agrarian structure. Nonetheless, an industrial economy cannot be casually implanted in a society whose agriculture and related institutions are unadapted and unadaptable to it. The society will reject it.

Direct Reform of Land Tenure Systems. The evidence appears clear that programs of indirect tenure reform have not succeeded either in changing the traditional agrarian structure or in mitigating the attendant social conflicts and disequilibrium. The alternatives to direct reform of tenure structure which create the economic-social environment necessary for growth are becoming less and less viable. The technical and political problems of direct reform can be immense. However, Doreen Warriner has suggested: "It would be good if the old authentic concept (of land reform) could sometimes break through, so that it would not seem so difficult as experts sometimes like to make it. Land reform in its initial and crucial stage is emphatically not a question for experts; it cannot be advised into existence, but must be based on an impetus arising within the country."¹⁷

If the reform is to be massive, rapid and effective there can be no illusions about its technical or administrative simplicity. The most critical problems which have to be resolved are: Which lands should be subject to the reform? What compensation ought to be given to the

old landowners? Who should be the direct beneficiaries of the reform with what priority? Which investments and complementary programs are essential to resolve social and production problems? What tenure systems should replace the traditional ones? What is the best manner to finance the reforms and what payments should be made by the beneficiaries? How can such a program be best administered?

None of these questions have a single answer, even within a single country. Reforms administered by an apathetic bureaucracy cannot be effective, nor can reforms done without planning or resources. It is possible to form an idea about variations in tenure problems by examining the man-land ratios for the ICAD study countries (see Table IX).

TABLE IX—DENSITY OF AGRICULTURAL POPULATION IN ICAD STUDY COUNTRIES: 1960

Country	Population per 100 Agricultural Hectares in Farms ^a	Population per 100 Cultivated Hectares in Farms
Argentina	2.1	10.4
Brazil ^b	13.6	43.3
Chile	9.7	79.4
Colombia	29.9	154.3
Ecuador	50.5	103.5
Guatemala	68.7	157.9
Peru	29.3	176.3

^a "Other uses" and "wasteland" are not included.
^b 1950.

The severity of the agrarian problem is indicated in rough terms by this measure of the relation between the persons who

¹⁷ *Land Reform and Development in the Middle East* (London: Oxford University Press, 1962), second edition, page 9.

depend upon agriculture and the agricultural resource base. However, in the planning and execution of reform projects account must also be taken of myriad other factors such as the present tenure situation, political and social history of the region, economic alternatives and experience of the campesinos, plus the soils, climate and market conditions.

Although it is always preferable to plan a reform carefully a dangerous element of instability can be introduced if there is excessive delay and discussion in getting the reform started. Large landowners will not invest their capital in their properties as long as they are unsure how much the reform will affect them. This could cause a drop in production. Unfortunately, many carefully analyzed agrarian reform projects never get to the operational stage. In this way, the problem of insecurity is added to the fact that a real reform is not achieved.

Lands Affected. A fundamental problem is that of which land is to be affected by the reform. Experience in Latin America and elsewhere shows that it is futile to expect substantial reforms simply through distribution of state-owned lands in remote areas or through the settlement of scattered properties. Any serious reform necessarily includes privately-owned lands in densely populated and highly productive agricultural areas. This implies expropriation of private lands now held in large units and possibly of some smaller properties. To minimize uncertainties and deliberate decapitalization of existing farms the size and other characteristics of properties subject to expropriation should be unambiguously clear in the law. By setting a "ceiling" or maximum size for farm properties held by individual owners the recurrence of land monopolization that

the reform is designed to correct may be prevented.

The integration of tenure reforms within a regional development program enhances the chances for success of both and helps to cut down the economic uncertainties accompanying fundamental institutional changes. It is difficult to carry out simultaneously throughout a whole country both land expropriation and the organization of new productive enterprises with supporting credit, cooperatives and other services. Although it is difficult to predict where reform would have its best chance, success is most likely where "campesino" population has little or no land and there is considerable under-used or unused good land tied up in large estates.

Regional execution of any large-scale land redistribution program has many advantages insofar as scarce technical personnel and financial resources can be used more effectively. The political nature of land reform makes it extremely unlikely that expropriations and other measures designed to alter tenure relationships can be neatly limited to well-defined regions. The usual compromise results in supporting measures concentrated in areas selected for regional development, while flagrant tenure problems are attacked wherever it is politically feasible or necessary to do so.

Number of Families to be Benefited Annually. Only by setting definite but realistic targets can governments hope to realize significant changes in agrarian structure while at the same time keeping the process controlled and orderly. A reasonable program objective over the next decade—one implicit in the Carta de Punta del Este—would be to benefit one-half of the landless laborers, operators of "minifundia" and small farmers with highly insecure tenure arrange-

ments. To attain this goal benefits would be extended annually to approximately five percent of the present "campesino" families plus those coming into existence over the decade. If this guideline is followed some 515,000 rural families should be benefited annually in the seven countries (see Table X). However, this estimate understates the size of the task if urban migration does not continue at its current high rates.

Regarding selection of beneficiaries, it would appear obvious that landless workers and small-holders should receive priority. In practice, the issue is never quite so simple. Settlement programs in the ICAD study countries have benefited retired army officers, politicians, extension agents, large-farm administrators and foremen. Such programs clearly do not cede greater control over the land to those directly working it and cannot be considered land tenure reform in the common-sense meaning of the term. There are also conflicts between temporary and permanent farm workers to be taken into account within the reform scheme. Both groups must be accommodated, but where the land is not sufficient it will often be feasible to settle those with most precarious attachment to an area in another zone so that the remaining campesinos can begin with viable-sized properties. Unless the reform is of sufficient scale to care for the transient group, the old patronal system may continue by default with the lucky recipients of parcels hiring their less fortunate neighbours.

Investment for Reform. It is essential that the distinction be maintained between investments required to initiate reforms and those which, while not absolutely necessary for a reform would nevertheless facilitate more rapid rates of agricultural development. Planning an

TABLE X—IMPLIED LAND REFORM GOALS IN ICAD STUDY COUNTRIES (Thousands of Families)

Country	Total Potential Beneficiaries	Number to be Benefited Annually		
		Five Percent of Potential Beneficiaries	Annual Agricultural Demographic Increase	Total Per Year
Argentina (1960)	467	24	8	32
Brazil (1950)	3,693	185	87	272
Chile (1955)	244	12	2	14
Colombia (1960)	961	48	14	62
Ecuador (1960)	388	19	10	29
Peru (1960)	960	48	29	77
Guatemala (1950)	369	18	11	29
TOTAL	7,082	354	161	515

Sources: Data on beneficiaries, from ICAD studies and refer to 1960. Rates of demographic increases net of migration based on UNECLA estimates: "Provisional Report" of the Conference on Education and Social Development in Latin America, Santiago, Chile: 1962 (E/CN.12/639); Argentina 1.0%; Brazil 1.3%; Chile 0.5%; Colombia 1.0%; Ecuador 2.0%; Guatemala 2.1%.

"integrated" reform development program is usually an idle exercise in countries suffering a persistent shortage of both financial and administrative capabilities. Reforms can nonetheless be accomplished rapidly and economically by giving relatively low priority to complementary services and investments and by directing the agricultural development investments to the reform areas. The crucial decisions of the Government depend upon identifying the minimal necessary costs of the reform so that the maximum number of families can be benefited.

Conventional land settlement and colonization projects in the study countries have incurred land and installation costs averaging \$17,000 per family in some Argentine projects to as low as \$3,000 per family in Guatemala and Ecuador. Even the latter investment rate per family is twenty or more times the annual income of local small farmers and agricultural

laborers who should be the beneficiaries of reform programs. No Latin American country can approach the minimum reform goals in Table X if their initial investments to establish the new units are of this order.

The two major possibilities for reducing initial settlement costs are to invest less in buildings and improvements, and to pay less for the land. It is relatively easy to reduce investments in certain types of improvements, particularly dwellings. In Puerto Rico and Mexico, for example, reform beneficiaries postponed moving into adequate homes until their increased productivity enabled them to build housing mostly with their own resources and labor, and with limited government credit and technical help. Some credit and technical assistance is indispensable in reform but elaborate "show-place" reforms boost costs and reduce the number who are benefited. After the reforms have been made projects to improve reform areas can be integrated into regional development schemes.¹⁸

Complementary Programs. The amount of investment which will be necessary for the success of the reform, and of complementary services such as credit, technical assistance and better marketing systems will depend on the experience and motivations of the campesinos, on the inherent productivity of the land distributed and on the government's resources.

Where land reform has been rapid and at times anarchic—as was the case in post-revolution Mexico and Bolivia—some lines of production temporarily decreased. Livestock numbers declined when "campesinos" sold or ate breeding stock. Sales of some industrial crops also dropped because of general economic disorganization. There is little evidence,

however, that food crop production was greatly affected in reform areas. The ICAD study of Guatemala indicates that during that country's brief experience with rapid large-scale reform there were temporary production and marketing problems for export crops but a marked increase in corn production for consumption. As already noted, the rural population consumes more food staples, eggs, meat and vegetables following a land reform, reducing commercial marketings for the cities. This happened to an important degree in Bolivia and to some extent more recently in Cuba. Reform programs that include real incentives for farmers to increase both production and marketings can be expected to avoid most of this difficulty unless the reform takes place amidst chaos and anarchy.

The adoption of flexible reform policies that can be adapted to fit a variety of initial situations is essential if production is not to suffer in at least some lines. Neither ideology nor technocracy provide adequate guides to actions that are equally good in all situations. Where reform has been flexibly administered and accompanied by at least the minimum credit required, technical help and market reorganization, marketings usually increase perceptibly after the first year or two.

It is precisely in the times and areas of reform, rather than under the traditional hacienda system, that community development programs can prove their worth. Instead of an effort to make campesinos content with their subsistence lot programs of health, education and "self

¹⁸ In Chapter 5 of *Fourth Progress Report on Agrarian Reform*, United Nations, 1966, the experience and problems related to reform financing, including compensation and repayment, are treated in detail.

help" are needed in order for the campesinos to become a part of modern society.

Compensation and Financing. The seriousness of the problem of financing reform is in large part determined by compensation given for expropriated lands. It is well to recognize that "just compensation" for expropriated land is exclusively a political, not an economic, question. In addition, a land market by which to determine land values seldom exists in traditional "latifundia" areas. When exchanges do occur, prices normally far exceed those justified by the land's productivity. The price includes the land's capitalized worth as a prestige symbol, as a hedge against inflation, as a means of gaining control of the labor force and as access to water rights, credit, markets, and various public subsidies.

If the land reform is meant to create a new distribution of power and income, large land-owners cannot be paid in cash at pre-reform prices. In any case, the compensation will be decided at the political level by resolution of the conflicting interests of property owners, mortgage holders, "campesinos," urban taxpayers and other groups.

The common solution has been to evaluate the expropriated land at something less than "market" values and to pay as much as politically feasible in long-term bonds. In Colombia, according to the agrarian legislation, the Government permits the expropriation without compensation of land that has been idle for more than ten years. The legislation in Venezuela, Colombia, Ecuador and Peru attempts to tie the form and level of compensation to land use before expropriation as well as to appraised value and productive capacity. In the reforms of Mexico and Bolivia compensation was paid in only a few isolated instances.

There are no purely technical criteria to determine the period over which compensation should be prolonged. From a fiscal viewpoint there are several ways of compensating for expropriated land without contributing to inflationary pressures or to capital flight. Chief among these are the use of non-transferable long-term bonds in combination with tax measures which assist the aim of reform. It makes little difference fiscally if property owners are compensated at relatively high levels as long as income and other taxes promptly return much of the compensation into public hands. It is true, however, that the tax systems in the study countries would have to be substantially strengthened before such a high-compensation could be made to function.

If affected large landowners are permitted to retain some land in the zones benefited by well-executed development programs, as was the case in Mexico, they may actually enjoy increases in the value of their property which offset the loss of expropriated lands. This frequently happens where reform accompanies construction of new irrigation projects or new road systems. Even when the former landowners abandon agriculture their superior education and administrative experience enable them to prosper in other lines of activity.

In any program for expropriating and redistributing rights to land the rights to irrigation water must be explicitly included. Control of water rights by the large landowners in arid areas of Peru and Chile, for example, is the chief technique they have for retaining their power and wealth. Land reform in such regions which does not reform water law leaves agrarian structure substantially unchanged.

Repayments by Beneficiaries. Campe-

sinos benefited by reforms contribute to accelerated overall development through increased output and investment on their land. Typically, more direct contributions from them are also needed for off-farm investments. To capture part of the campesinos' augmented incomes for other development purposes the government has various alternatives: direct payments from the beneficiaries, taxation, or manipulation of terms of trade so as to keep urban food prices low. The method or methods used depend upon the political, administrative and sociological conditions in each country. Because of the limitations of most administrative systems and the wide acceptance of the principle of payment for property received, a common choice in reform schemes has been direct payments.

Repayment terms ought to be fixed by the beneficiaries' productivity and incomes, not by the reform agency's continuing need for funds to extend their work. One way of restricting the scope of reforms in the ICAD study countries has been to make the responsible agency's budget depend upon repayments from beneficiaries.

Repayment periods are usually extended for 20 to 40 years with grace granted during the first few years. In Mexico and Puerto Rico no repayment at all was required for a large part of the land redistributed. From a fiscal viewpoint it may make little difference if the beneficiaries pay for the land directly through assessments or indirectly through taxes.

A closely related issue is whether the recipients should receive unrestricted titles or whether rights to sell or divide the property and control certain uses should be retained by the state. In Mexico, for example, "ejidatarios" cannot freely alienate their lands. These con-

trols restrict speculation and help prevent creation of new "latifundia" and "minifundia" situations. This problem must be settled within the possibilities of each country.

Post-Reform Tenure Systems. The kind of land tenure institutions which replace those being reformed is another source of polemic controversy. It is imperative to distinguish between long-run and short-run problems. Speculation about the best tenure structure achievable over the years is interesting but does not solve the question of what can be done immediately. There may be no important differences in social or economic performance among tenure systems in an integrated industrial economy which has ample non-farm employment opportunities. Since no one knows what Latin American society will be like in future years preferences for tenure system "ideals" are based more upon ideological and emotional grounds than upon economic ones.

Cooperative, communal and corporate farming systems have their vocal defenders in Latin America but the model tenure system that reformers most frequently advance is that of a family-sized owner-operated commercial farm. Each system has some desirable qualities but could be uniformly applied only at great prejudice to the chances for success of the reform. If "middle class" family farms are established in areas of dense agricultural population, thousands of persons will either have to be moved out or remain as laborers for those who receive land. On the other hand, if large corporate or cooperative farms are created in regions now farmed by minifundistas or tenant operators, these small farmers would be obliged to change their methods of working and living, again at high social and economic costs, as small

holders will generally oppose attempts to force them rapidly into large-scale operations.

Physical conditions, existing technology and market possibilities also delimit the practicable short-run modifications in tenure institutions. Beef cattle production, dairying, sugar cane, forest products or intensive truck crops all present different problems in the creation of new farm units. Even where subdivision of large units or consolidation of small ones is economically feasible administrative costs and difficulties of making rapid radical changes in farm layout, as opposed to changes in land ownership and tenure relationships, may make other alternatives more desirable.

A special case is the well-integrated plantation or relatively well organized commercial unit with heavy investments in facilities, such as irrigation works or processing plants, which are not easily divided. Land tenure reform might involve as a first step the administration of the whole unit as a cooperative or corporate enterprise with the participation of the reform agency. The Puerto Rican "proportional profit farms" constitute one example of a relatively successful adoption of an alternative to subdivision of large integrated units during a land reform.

There are, however, relatively few efficiently run large-scale farms in Latin America. Besides, much of the land in the large properties is actually divided into small farm units operated by sharecroppers, laborers partially paid by the right to cultivate a plot of land, and renters. In these cases subdivision among present workers and tenants presents few technical problems. If there is enough land the small plots of the present operators can be enlarged to form family-sized units. If land is scarce it may be advis-

able to continue the part of the estate formerly operated as a single enterprise intact under cooperative or some other central management while also granting permanent rights to the workers and tenants in their individual parcels. "Vicos," the Cornell University project in Peru, is one example of such a mixed solution for a heavily populated traditional hacienda.

In areas of minifundia the grouping of the holdings into family-sized farms would be costly and politically unacceptable where there is neither additional land nor alternative employment. Supervised credit, technical assistance, marketing aids, community development and the promotion of cooperatives may be more appropriate than the reshaping of property boundaries. In the long-run, the problem of too little land can only be solved by providing other job opportunities or by the incorporation of lands from nearby large estates.¹⁹

Administration of Reforms. Even when political opponents of land reform permit reform laws to be adopted it is often with the assurance that the reform will be bureaucratically snarled and never be implemented. History seems to justify their belief. Those countries with most need for massive reform are by definition short of capital, trained personnel and a tradition of successful reforms. The problem is usually presented in terms of the autonomy to be enjoyed by the reform agency and the degree of collaboration with the agencies established to serve

¹⁹ For an interesting analysis of some alternative tenure systems which can be adapted to Latin American problems, see Rainer Schickele, "Land Economics Research and the World Agricultural Development," *Land Economic Research*, J. Ackerman, M. Clawson, and M. Harris, eds. (Baltimore, Maryland: Farm Foundation-Resources for the Future Inc., The John Hopkins Press, 1962, pp. 102-110).

the traditional hacienda and "middle class" farmer. A related problem has been to instill an awareness and sympathetic appreciation of the campesinos' viewpoint in the technicians and bureaucrats of the reform agency and in assuring that they permit the campesinos to take an active part in the formulation of reform programs.

No general rules for overcoming administrative barriers to reform are possible. An initial step, however, is to recognize the unique role of the reform agency as compared to that of traditional government ministries. Not only are greater than usual flexibility and imagination needed in administering the programs, but useful analysis of the experience of successful reform administration must be available to guide administrators.

Practical difficulties of finding solutions to basic administrative problems

should not be underestimated. Flexible reform policies to meet different situations will permit the best use of resources to be made while at least maintaining present rates of farm investment and productivity. Nonetheless, if specific efforts are not exerted to give the hitherto voiceless "campesinos" participation in the reform programs, the program will flounder. There must be a continuous feedback between the field and the planning offices. It is seldom appreciated how deep are the conflicting interests among laborers, tenants and small owners during a reform process. Unless the weakest groups have representation and protection their interest may easily be ignored by the stronger, or by the bureaucrats, leaving them as badly or even worse off than previously. This has already happened in the case of some of the "reforms" initiated in the study countries.

Table IA. Population and Demographic Rates for Selected Countries and Regions of the World, 1960

Countries and regions	Total population (in thousands)	Birth rate (per mil)	Death rate (per mil)	Demographic increase a/ (per mil)
Argentina	20,666	27.0 <u>b/</u>	8.0	19
Brazil	70,967	46.0 <u>b/</u>	16.0	30
Chile	7,374	38.0 <u>b/</u>	13.0	25
Colombia	14,771	42.3 <u>c/</u>	12.9 <u>c/</u>	29 <u>c/</u>
Ecuador	4,209	47.9	19.8	28
Guatemala	3,542	48.7 <u>a/</u>	21.3 <u>e/</u>	27 <u>a/</u>
Peru	10,149	44.0 <u>b/</u>	18.0	26 <u>d/</u>
Latin America	214,000	44.0	17.0	27 <u>f/</u>
North America	200,000	24.0	9.0	18 <u>g/</u>
Africa	255,000	46.0	25.0	21
Asia	1,685,000	41.0	21.0	20
Europe	426,000	19.0	10.0	8
Oceania	16,500	25.0	8.0	25 <u>g/</u>
USSR	214,000	25.0	7.0	17
WORLD	3,010,500	36.0	18.0	18

a/ Approximated.

b/ Estimated on the basis of the rate of demographic increase and UNECLA estimate of death rates from 1955-1960.

c/ 1955-1959.

d/ Estimated on UNECLA data of the population in 1950-1960, since no census was taken in 1950.

e/ 1958.

f/ Later estimates by the Economic Commission for Latin America put the rate of increase in 1960 at more than 3.0 percent, ECLA, Distribución Geográfica de la Población de América Latina, E/CN, 12/643, 12 de febrero de 1963.

g/ This rate results from the combined effects of natural increase and migration.

Source: United Nations, Demographic Yearbook, 1962, New York, 1963 (page 134) and ICAD studies.

Table 2A. Urban and Rural Population Trends in ICAD Study Countries, 1950-1970

Country	Thousands of People			Percent	
	Urban	Rural	Total	Urban	Rural
Argentina					
1950	11,199.1	5,093.9	17,093.0	65.5	34.5
1960	15,001.9	5,664.1	20,666.0	72.6	27.4
1970	18,200.8	6,260.2	24,461.0	74.4	25.6
Brazil					
1950	10,783.0	33,161.0	51,944.0	36.2	63.8
1960	31,991.0	38,976.0	70,967.0	45.1	54.9
1970	51,000.0	44,300.0	95,300.0	53.5	46.5
Chile					
1950	3,389.7	2,364.2	5,753.9	58.9	41.1
1960	5,028.0	2,346.0	7,374.0	68.2	31.8
1970	6,925.0	2,467.0	9,392.0	73.7	26.3
Colombia ^{a/}					
1950	3,160.7	8,107.5	11,268.2	28.0	72.0
1960	5,353.0	8,961.0	14,314.0	37.4	62.6
1970	8,394.0	9,897.0	18,291.0	45.9	54.1
Ecuador					
1950	914.0	2,289.0	3,203.0	28.5	71.5
1960	1,422.0	2,787.0	4,209.0	33.8	66.2
1970	2,235.0	3,395.0	5,630.0	39.7	60.3
Guatemala					
1950	701.0	2,101.0	2,802.0	25.0	74.9
1960	963.0	2,579.0	3,542.0	27.2	72.8
1970	1,353.0	3,172.0	4,525.0	29.9	70.1
Peru					
1950	3,058.6	4,773.4	7,832.0	39.0	61.0
1960	4,607.0	5,542.0	10,149.0	45.4	54.6
1970	7,229.0	6,433.0	13,662.0	52.9	47.1

^{a/} Meta, Chocó, Comisarias o Intendencias are not included.

Table 3A. Agricultural Product as a Percent of Gross Domestic Product
In Selected Periods for ICAD Study Countries

Countries	Periods	
	1950-1952	1960-1962
Argentina	15.7	16.2
Brazil	28.3	24.9
Chile	13.7	10.9
Colombia	38.1	33.9 <u>a/</u>
Ecuador	39.7	37.0 <u>b/</u>
Guatemala	34.0 <u>c/</u>	31.1
Peru	26.9	23.2

a/ 1961-1963.

b/ 1959-1961.

c/ 1950.

Source: UNECLA, Estudio Económico de América Latina, 1963,
Vol. II, Julio 1964.

Table 4A. Annual Rates of Growth of Gross Domestic Agricultural Product, Nonagricultural Product and Total Product, in Selected Periods for ICAD Study Countries a/

Countries	1954-57	1957-60	1960-62
	(Percent)		
<u>Argentina</u>			
Agricultural product	1.2	0.4	1.6
Nonagricultural product	3.6	0.5	0.6
Total product	3.2	0.5	0.7
<u>Brazil</u>			
Agricultural product	4.8	3.5	8.4 <u>b/</u>
Nonagricultural product	5.1	7.5	7.5 <u>b/</u>
Total product	5.0	6.5	7.7 <u>b/</u>
<u>Colombia</u>			
Agricultural product	3.9	2.7	4.2 <u>b/</u>
Nonagricultural product	3.2	5.2	5.2 <u>b/</u>
Total product	3.4	4.4	4.9 <u>b/</u>
<u>Chile</u>			
Agricultural product	3.1	-2.2	-4.9
Nonagricultural product	3.5	0.0	7.7
Total product	3.5	-0.3	6.3
<u>Ecuador</u>			
Agricultural product	1.4	4.3	6.0
Nonagricultural product	4.8	5.1	3.3
Total product	3.6	4.8	4.3
<u>Guatemala</u>			
Agricultural product	3.1	5.2	1.0
Nonagricultural product	7.2	3.1	0.6
Total product	6.2	3.7	0.8
<u>Peru</u>			
Agricultural product	-1.4	7.3	8.2
Nonagricultural product	5.7	5.1	6.3
Total product	3.2	5.6	6.8

a/ Gross domestic product is defined as the commercial value of all goods and services for final consumption and investment produced by capital and labor in the country.

b/ 1960-61.

Source: Statistical Bulletin for Latin America, Vol. 1, No. 1, March 1964.

Table 5A. Land in Farms by Size and Legal Classification of Farm Operator in ICAD Study Countries

Countries and size groups	Property owners	Renters	Occupants without title	Land held in other legal forms	Total
(Thousands of hectares)					
Argentina - 1960					
Sub-family	2,749	969	331	1,862	5,911
Family	35,281	11,035	3,186	28,209	77,711
Multi-family medium	41,955	4,113	529	12,164	58,761
Multi-family large	<u>26,369</u>	<u>2,455</u>	<u>126</u>	<u>2,517</u>	<u>31,467</u>
Total	106,354 <u>a/</u>	18,572 <u>b/</u>	4,172	44,752	173,850
Brazil - 1950					
Sub-family	725	257	225	11	1,218
Family	11,532	714	1,399	212	13,857
Multi-family medium	68,373	3,062	5,242	2,250	78,927
Multi-family large	<u>121,551</u>	<u>9,289</u>	<u>3,183</u>	<u>4,186</u>	<u>138,209</u>
Total	202,181	13,322	10,049	6,659	232,211
Chile - 1955 c/					
Sub-family	64	8	2	4	78
Family	1,223	188	376	180	1,967
Multi-family medium	2,221	591	222	116	3,150
Multi-family large	<u>15,905</u>	<u>5,541</u>	<u>493</u>	<u>578</u>	<u>22,517</u>
Total	19,413	6,328	1,093	878 <u>d/</u>	27,712
Colombia - 1960 e/					
Sub-family	850	434	48	24	1,356
Family	4,571	941	497	103	6,112
Multi-family medium	4,995	499	775	99	6,368
Multi-family large	<u>10,154</u>	<u>618</u>	<u>2,431</u>	<u>333</u>	<u>13,536</u>
Total	20,570	2,492 <u>f/</u>	3,751	559	27,372
Ecuador - 1960					
Sub-family	670	54	75	199	998
Family	953	47	62	77	1,139
Multi-family medium	1,009	68	12	68	1,157
Multi-family large	<u>2,283</u>	<u>257</u>	<u>53</u>	<u>113</u>	<u>2,706</u>
Total	4,915 <u>g/</u>	426	202 <u>h/</u>	457 <u>i/</u>	6,000

Table 5A--Continued.

Countries and size groups	Property owners	Renters	Occupants without title	Land held in other legal forms	Total
(Thousands of hectares)					
Guatemala - 1950					
Sub-family	297	99	61	76	533
Family	432	24	30	15	501
Multi-family medium	1,128	22	7	11	1,168
Multi-family large	1,508	4	5	2	1,519
Total	3,365	149	103	104 ^{l/}	3,721
Peru - 1961					
Sub-family	860	140		370	1,370
Family	573	93		169	835
Multi-family medium	740	130		199	1,069
Multi-family large	10,039	1,901		3,391	15,331
Total	12,212	2,264		4,129 ^{k/}	18,605

^{a/} Includes full owners and owners with some rented land.

^{b/} Includes sharecroppers.

^{c/} Excludes medieros and inquilinos who are not classified as producers by the Census of 1955.

^{d/} Concesionarios, defined as producers that receive the land without lease or any other kind of payment.

^{e/} Including the Department of Meta.

^{f/} Including sharecroppers and colonos defined as renters who pay in services.

^{g/} Includes comuneros.

^{h/} Colonos defined as either occupants without title or workers on large units (as they are classified with land it is assumed that they are occupants).

^{i/} Includes huasipungueros, partidarios and mixed forms.

^{j/} Includes comuneros, colonos and usufructuarios.

^{k/} Includes sharecroppers, yanacanas, comuneros, and other producers.

Table 6A. Number of Farm Units by Size and Legal Classification of Farm Operator in ICAD Study Countries

Countries and size groups	Property owners	Renters	Occupants without title	Land held in other legal forms	Total
Argentina					
Sub-family	105,744	27,934	10,976	56,322	200,976
Family	131,058	44,088	4,291	47,225	226,662
Multi-family medium	24,122	4,399	529	4,827	33,877
Multi-family large	<u>3,283</u>	<u>306</u>	<u>19</u>	<u>368</u>	<u>3,976</u>
Total	264,207 <u>a/</u>	76,727 <u>b/</u>	15,815	108,742	465,491
Brazil					
Sub-family	267,685	99,560	94,094	3,789	465,128
Family	658,086	59,806	77,108	12,121	807,121
Multi-family medium	624,927	24,351	32,037	13,328	694,643
Multi-family large	<u>89,494</u>	<u>3,347</u>	<u>1,820</u>	<u>2,725</u>	<u>97,386</u>
Total	1,640,192	187,064	205,059	31,963	2,064,278
Chile <u>c/</u>					
Sub-family	45,439	5,831	1,213	3,278	55,761
Family	50,659	3,689	3,073	2,967	60,388
Multi-family medium	20,550	1,973	995	909	24,427
Multi-family large	<u>8,446</u>	<u>427</u>	<u>261</u>	<u>249</u>	<u>10,383</u>
Total	125,094	12,920	5,542	7,403 <u>d/</u>	150,959
Colombia <u>e/</u>					
Sub-family	457,048	217,754	18,683	80,009	773,494
Family	247,226	57,398	18,889	42,385	365,898
Multi-family medium	39,874	4,143	6,936	4,011	54,964
Multi-family large	<u>11,449</u>	<u>842</u>	<u>1,883</u>	<u>1,133</u>	<u>15,307</u>
Total	755,597	280,137 <u>f/</u>	46,391	127,538	1,209,663
Ecuador					
Sub-family	210,409	15,440	22,144	61,343	309,336
Family	23,033	1,142	1,556	2,011	27,742
Multi-family medium	5,065	325	64	333	5,787
Multi-family large	<u>1,171</u>	<u>131</u>	<u>19</u>	<u>48</u>	<u>1,369</u>
Total	239,678 <u>g/</u>	17,038	23,783 <u>h/</u>	63,735 <u>i/</u>	344,234

Table 6A--Continued.

Countries and size groups	Property owners	Renters	Occupants without title	Land held in other legal forms	Total
Guatemala					
Sub-family	158,858	58,120	32,733	58,362	308,073
Family	28,127	1,155	2,150	1,609	33,041
Multi-family medium	6,293	86	79	599	7,057
Multi-family large	<u>459</u>	<u>1</u>	<u>2</u>	<u>54</u>	<u>516</u>
Total	193,737	59,362	34,964	60,024 ^{j/}	348,687
Peru					
Sub-family	503,525	66,801		179,568	749,894
Family	46,595	9,754		15,542	71,891
Multi-family medium	13,308	2,670		4,576	20,554
Multi-family large	<u>6,177</u>	<u>1,230</u>		<u>2,211</u>	<u>9,618</u>
Total	569,605	80,455		201,897 ^{k/}	851,957

- ^{a/} Includes full owners and owners with some rented land.
^{b/} Includes sharecroppers.
^{c/} Excludes medieros and inquilinos who are not classified as producers by the Census.
^{d/} Concesionarios, defined as producers that receive the land without lease or any other kind of payment.
^{e/} Including the Department of Meta.
^{f/} Including sharecroppers and colonos defined as renters who pay in services.
^{g/} Includes comuneros.
^{h/} Colonos defined as either occupants without title or workers on large units (as they are classified with land it is assumed that they are occupants).
^{i/} Includes huasipungueros, partidarios and mixed forms.
^{j/} Includes comuneros, colonos and usufructuarios.
^{k/} Includes sharecroppers, yanacunas, comuneros, comunidades, and other producers.

Table 7A. Distribution of Nuclear Families In Agriculture by Socio-Economic Status of The Head of the Household

	Argentina (1960)	Brazil (1950)	Chile (1955)	Colombia (1960)	Ecuador (1960)	Guatemala (1950)
(Thousands of Families)						
Nuclear Families <u>Total</u>	<u>767.6</u>	<u>5,404.2</u>	<u>344.9</u>	<u>1,368.8</u>	<u>440.0</u>	<u>417.4</u>
A. Operators of Multi-family Large-sized Farms <u>Sub-Total</u>	<u>3.4</u>	<u>97.4</u>	<u>10.3</u>	<u>14.7</u>	<u>1.4</u>	<u>0.31</u>
1. Property Owners	2.3	45.5	8.5	11.1	1.2	0.16
2. Renters	0.7 <u>a/</u>	1.7	1.2	0.9	0.1	--
3. Occupants	-	0.9	0.2	1.7	-	--
4. Others	0.4 <u>b/</u>	49.3 <u>h/</u>	0.4 <u>j/</u>	1.0 <u>g/</u>	0.1 <u>c/</u>	0.15 <u>r/</u> ^u
B. Operators of Multi-family Medium Sized Farms <u>Sub-Total</u>	<u>37.1</u>	<u>694.6</u>	<u>22.3</u>	<u>53.6</u>	<u>9.3</u>	<u>6.3</u>
1. Property Owners	22.4	579.4	19.0	39.1	7.8	5.0
2. Renters	4.6 <u>a/</u>	22.5	1.5	4.1	0.5	0.1
3. Occupants	0.1	29.7	1.0	6.5	-	0.1
4. Others	10.0 <u>c/</u>	63.0 <u>h/</u>	0.8 <u>j/</u>	3.9 <u>g/</u>	1.0 <u>c/</u>	1.1 <u>r/</u>
C. Administrators and Supervisors of Multi-family-sized Farms <u>Sub-Total</u>	<u>10.1 t/</u>	<u>112.0 l/</u>	<u>7.3</u>	<u>20.8 t/</u>	- <u>m/</u>	<u>9.3 s/</u>

Table 7A--Continued.

	Argentina (1960)	Brazil (1950)	Chile (1955)	Colombia (1960)	Ecuador (1960)	Guatemala (1960)
(Thousands of Families)						
D. Operators of Family-sized Farms						
<u>Sub-total</u>	<u>250.0</u>	<u>807.1</u>	<u>61.1</u>	<u>319.0</u>	<u>41.7</u>	<u>32.4</u>
1. Property Owners	125.5	647.2	51.2	244.7	35.3	27.7
2. Renters	49.4 <u>a/</u>	58.8	3.4	9.5	2.2	1.1
3. Occupants	3.5	75.8	3.4	17.5	-	2.2
4. Farm Operators on fiscal lands	51.2 <u>e/</u>	-	-	-	-	-
5. Others	20.4 <u>g/</u>	25.3 <u>h/</u>	3.1 <u>j/</u>	47.3 <u>l/</u>	4.2 <u>g/</u>	1.4 <u>r/</u>
E. Operator of Sub-family and family-sized farm units communally or semi-communally owned						
<u>Sub-Total</u>	-	-	<u>57.3</u>	-	<u>5.8</u>	-
F. Operators of Sub-family sized farms						
<u>Sub-Total</u>	<u>198.7</u>	<u>465.1</u>	<u>22.5</u>	<u>643.1</u>	<u>230.2</u>	<u>265.4</u>
1. Property Owners	100.5	265.7	18.2	454.1	189.6	158.5
2. Renters	30.0 <u>a/</u>	98.8	2.3	39.9	14.2	58.0
3. Occupants	10.2	93.4	0.6	17.9	-	32.7
4. Operators on fiscal lands	25.1 <u>e/</u>	-	-	-	-	-
5. Others	32.9 <u>g/</u>	7.2 <u>h/</u>	1.4 <u>j/</u>	131.2 <u>l/</u>	26.4 <u>g/</u>	16.2

Table 7A--Continued.

	Argentina (1960)	Brazil (1950)	Chile (1955)	Colombia (1954)	Ecuador (1960)	Guatemala (1960)
(Thousands of Families)						
G. Farm Workers with unstable tenure rights and landless workers						
Sub-Total	<u>268.3</u>	<u>3,228.0</u>	<u>164.1</u>	<u>317.6</u>	<u>151.6</u>	<u>103.7</u>
1. Sharecroppers	-	800.6	26.9	141.7	13.2	-
2. Overseer and specialized farm workers	4.7 <u>d/</u>	168.8	29.4	35.8 <u>d/</u>	-	-
3. Resident farm workers <u>u/</u>	152.3	-	82.4	21.7 <u>k/</u>	19.2 <u>o/</u>	43.3 <u>p/</u>
4. Temporary farm workers	111.3	-	25.4	-	23.4 <u>p/</u>	-
5. Unclassified farm workers	-	2,258.6	-	118.4	95.8	60.4

Table 7A--Continued.

- a/ Includes sharecroppers.
- b/ Includes mixed forms, i.e., combinations of various types of tenure status, and producers on fiscal lands.
- c/ Includes mixed forms and colonos.
- d/ Includes only overseers (personal de vigilancia).
- e/ Producers on fiscal lands; tenure form is not determined.
- f/ Sharecroppers are included with renters.
- g/ Includes mixed forms.
- h/ Includes producers with administrators and mixed forms.
- i/ Includes overseers in 'minifundios'.
- j/ Producers on ceded land (cesionarios).
- k/ Renters who pay in services.
- l/ Includes unspecified forms of tenancy and unspecified forms of rent.
- m/ 1954 Agricultural Census has no information.
- n/ Includes unspecified forms of tenancy and colonos.
- o/ Huasipungueros.
- p/ Colonos.
- r/ Includes mixed forms, 'usufructuarios'.
- s/ Includes administrators and specialized farm workers.
- t/ Includes only administrators.
- u/ With or without rights to cultivate a plot of land.

Sources:

- Argentina: Consejo Federal de Inversiones, Consejo Nacional de Desarrollo, Tenencia de la Tierra, Buenos Aires, 1963.
- Brazil: Conselho Nacional de Estadística, Recenseamento Geral do Brasil-1950, Rio de Janeiro, 1956.
- Chile: Servicio Nacional de Estadística y Censos, Censo Nacional Agrícola Ganadero-1955, Santiago; ICAD estimates.
- Colombia: Censo Agropecuario de 1960, DANE, Alunos Aspectos de Crecimiento de la Población en Colombia; CEPAL (E/CN 12/618); ICAD estimates.

Table 7A--Continued.

Ecuador: Dirección General de Estadísticas y Censos, Censo Agropecuario 1956; Junta de Planificación; ICAD Study.
Guatemala: Dirección General de Estadística, Censo Agropecuario de 1950, Ciudad Guatemala. ICAD estimates.

Table 2A. Distribution of Nuclear Families in Agriculture by Socio-Economic Status of the Head of the Household

	Argentina (1960)	Brazil (1950)	Chile (1955)	Colombia (1960)	Ecuador (1960)	Guatemala (1950)
	(Percentages)					
Nuclear Families <u>Total</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
A. Operators of Multi-family Large-sized Farms <u>Sub-Total</u>	<u>0.4</u>	<u>1.8</u>	<u>3.0</u>	<u>1.1</u>	<u>0.3</u>	<u>0.1</u>
1. Property Owners	0.3	0.8	2.5	0.8	0.3	...
2. Renters	0.1 <u>a/</u>	...	0.3	0.1
3. Occupants	-	...	0.1	0.1	-	...
4. Others	... <u>b/</u>	0.9 <u>h/</u>	0.1 <u>j/</u>	0.1 <u>g/</u>	... <u>c/</u>	... <u>r/</u> ^{tl}
B. Operators of Multi-family Medium-sized Farms <u>Sub-Total</u>	<u>4.8</u>	<u>12.8</u>	<u>6.5</u>	<u>3.9</u>	<u>2.1</u>	<u>1.5</u>
1. Property Owners	2.9	10.7	5.6	2.8	1.8	1.2
2. Renters	0.6 <u>a/</u>	0.4	0.4	0.3	0.1	...
3. Occupants	...	0.5	0.3	0.5	-	...
4. Others	1.3 <u>c/</u>	1.2 <u>h/</u>	0.2 <u>j/</u>	0.3 <u>g/</u>	0.2 <u>c/</u>	0.3 <u>r/</u>
C. Administrators and Supervisors of Multi-family-sized Farms <u>Sub-Total</u>	<u>1.3</u> <u>t/</u>	<u>2.1</u> <u>i/</u>	<u>2.1</u>	<u>1.5</u> <u>t/</u>	- <u>m/</u>	<u>2.2</u> <u>s/</u>

Table 8A--Continued.

	Argentina (1960)	Brazil (1950)	Chile (1955)	Colombia (1960)	Ecuador (1960)	Guatemala (1950)
	(Percentages)					
D. Operators of Family-sized Farms						
<u>Sub-Total</u>	<u>32.6</u>	<u>14.9</u>	<u>17.7</u>	<u>23.3</u>	<u>9.5</u>	<u>7.8</u>
1. Property Owners	16.4	12.0	14.8	17.9	8.0	6.6
2. Renters	6.4 <u>a/</u>	1.1	1.0	0.7	0.5	0.3
3. Occupants	0.4	1.4	1.0	1.3	-	0.6
4. Farm Operators on Fiscal Lands	6.7 <u>e/</u>	-	-	-	-	-
5. Others	2.7 <u>g/</u>	0.4 <u>h/</u>	0.9 <u>j/</u>	3.4 <u>l/</u>	1.0 <u>g/</u>	0.3 <u>r/</u>
E. Operator of Sub-Family and Family-sized Farm Units com- munally or semi-communally owned						
<u>Sub-Total</u>	-	-	<u>16.6</u>	-	<u>1.3</u>	-
F. Operators of Sub-family sized Farms						
<u>Sub-Total</u>	<u>25.9</u>	<u>8.6</u>	<u>6.5</u>	<u>47.0</u>	<u>52.3</u>	<u>63.6</u>
1. Property Owners	13.1	5.0	5.3	33.2	43.1	38.0
2. Renters	3.9 <u>a/</u>	1.8	0.6	2.9	3.2	13.9
3. Occupants	1.3	1.7	0.2	1.3	-	7.8
4. Operators on fiscal lands	3.3 <u>e/</u>	-	-	-	-	-
5. Others	4.3 <u>g/</u>	0.1 <u>h/</u>	0.4 <u>j/</u>	9.6 <u>l/</u>	6.0 <u>g/</u>	3.9

Table 8A--Continued.

	Argentina (1960)	Brazil (1950)	Chile (1955)	Colombia (1960)	Ecuador (1960)	Guatemala (1950)
	(Percentages)					
G. Farm Workers with unstable tenure rights and landless workers						
Sub-Total	<u>35.0</u>	<u>59.8</u>	<u>47.6</u>	<u>23.2</u>	<u>34.5</u>	<u>24.8</u>
1. Sharecroppers	-	14.8	7.8	10.4	3.0	-
2. Overseer and specialized farm workers	0.6 <u>d/</u>	3.1	8.5	2.6 <u>d/</u>	-	-
3. Resident farm workers <u>u/</u>	19.9	-	23.9	1.6 <u>k/</u>	4.4 <u>c/</u>	10.3 <u>p/</u>
4. Temporary farm workers	14.5	-	7.4	-	5.3 <u>p/</u>	-
5. Unclassified farm workers	-	41.9	-	8.6	21.8	14.5

a/ through u/ correspond to those of Table 7A.
... Less than 0.05 per cent.

Sources: Same as Table 7A.

Table 9A. Active Agricultural Population by Size of Farm Groups, ICAD Study Countries, in Years as Indicated

Countries	Farm Opera- tors & their families	Administra- tors, special- ized workers & overseers	Labor Force 9/		Workers without land	Total
			Workers cultiva- ting plots of land			
			Sharecroppers	Others		
(Thousands of Persons)						
<u>Argentina - 1960</u>						
Sub-family	379.7	5.3			61.8	446.8
Family	477.4	14.0			220.6	712.0
Multi-family medium	70.9	7.3			134.8	213.0
Multi-family large	6.4	1.6			86.1	94.1
<u>Total</u>	<u>934.4</u>	<u>28.2</u>	a/	b/	<u>503.3</u>	<u>1,465.9</u>
<u>Brazil - 1950</u>						
Sub-family	1,133.2	6.5	3.4	15.1	281.0	1,439.2
Family	2,354.7	29.3	24.7	112.4	751.8	3,272.9
Multi-family medium	2,244.3	113.4	121.8	552.7	2,189.6	5,221.8
Multi-family large	289.3	134.5	74.8	340.7	1,840.1	2,679.4
<u>Total</u>	<u>6,021.5</u>	<u>283.7</u>	<u>224.7</u>	<u>1,020.9</u> c/	<u>5,062.5</u>	<u>12,613.3</u>
<u>Chile - 1955 d/</u>						
Sub-family	70.0	1.9	1.9	1.0	9.0	83.8
Family	141.5	4.8	4.5	4.3	27.9	183.0
Multi-family medium	75.5	7.1	6.0	14.0	38.9	141.5
Multi-family large	42.2	32.2	14.5	63.1	103.9	255.9
<u>Total</u>	<u>329.2</u>	<u>46.0</u>	<u>26.9</u>	<u>82.4</u> e/	<u>179.7</u>	<u>664.2</u>

Table 9A--Continued.

Countries	Farm Opera- tors & their families	Administra- tors, special- ized workers & overseers	Labor Force a/		Workers without land	Total
			Workers cultiva- ting plots of land	Others		
(Thousands of Persons)						
<u>Colombia - 1960</u>						
Sub-family	1,179.2	15.6	205.4	145.4	-	1,545.6
Family	627.6	38.1	78.8	14.6	44.4	803.5
Multi-family medium	101.9	19.8	3.7	1.6	62.1	189.1
Multi-family large	28.8	11.4	0.4	0.2	71.0	111.8
<u>Total</u>	<u>1,937.5</u>	<u>84.9</u>	<u>288.3</u>	<u>161.8</u>	<u>177.5</u>	<u>2,650.0</u>
<u>Guatemala - 1950</u>						
Sub-family	367.3	-	59.3	-	-	426.6
Family	81.1	1.2	1.5	-	-	83.8
Multi-family medium	12.6	7.8	-	-	54.1	74.5
Multi-family large	0.3	1.5	-	-	39.6	41.4
<u>Total</u>	<u>461.3</u>	<u>10.5</u>	<u>60.8</u> f/	-	<u>93.7</u>	<u>626.3</u>

Table 9A--Continued.

- a/ Included as farm operators.
- b/ In Argentina, there are no workers shown as cultivating plots of land because legally, the workers have to be paid fully in cash.
- c/ Tenants paid partly by use of land and sharecroppers.
- d/ In the Chilean Census calculations the "comuneros" are considered together with the multi-family farms.
- e/ "Inquilinos" and "Inquilinos-medieros".
- f/ Tenants paying rent in goods or services.
- g/ The data are not strictly comparable from one country to another because of differences in census definitions and tabulations.

Table 10A. Value of Agricultural Production by Size of Farm Groups in Selected ICAD Study Countries, in Years as Indicated

Country and Size Groups	Total Value a/ (Thousands)	Average Value of Production			
		Per Exploitation	Per Agricultural Ha.	Per Cultivated Ha.	Per Worker
(in national monetary units)					
Argentina - 1960 b/					
Sub-family	13,806	68.7	2,492	6,185	39.9
Family	55,233	243.7	737	3,171	77.6
Multi-family medium	31,020	915.6	1,267	3,804	145.7
Multi-family large	18,023	4,550.6	304	3,049	192.3
Total	118,152	253.8	718	3,502	80.6
Brazil - 1950 c/					
Sub-family	1,723	3,704	1,498.0	1.21	1,197
Family	11,392	14,114	880.6	1,375	3,481
Multi-family medium	26,412	38,023	361.1	920	5,058
Multi-family large	28,069	226,630	170.0	726	8,237
Total	61,596	29,839	283.8	901	4,883
Chile - 1955 d/					
Sub-family	22,500	404	334	391	268
Family	81,097	1,343	46	126	443
Multi-family medium	117,112	4,794	41	96	828
Multi-family large	299,816	28,876	41	83	1,171
Total	520,525	3,448	24	94	784

Table 10A--Continued.

Country and Size Groups	Total Value <u>a/</u> (Thousands)	Average Value of Production			
		Per Exploitation	Per Agricultural Ha.	Per Cultivated Ha.	Per Worker
(in national monetary units)					
<u>Colombia - 1960 e/</u>					
Sub-family	1,503,086	1,943	1,198	1,597	972
Family	3,268,057	8,932	565	1,461	4,067
Multi-family medium	1,384,719	25,193	227	1,347	7,323
Multi-family large	1,081,399	70,647	84	1,274	9,673
<u>Total</u>	<u>7,237,261</u>	<u>5,983</u>	<u>278</u>	<u>1,432</u>	<u>2,731</u>
<u>Ecuador - 1954 f/</u>					
Sub-family	1,678,007	5,424	1,862	2,268	--
Family	2,098,423	75,641	2,423	4,067	--
Multi-family medium	1,374,637	237,539	1,619	3,480	--
Multi-family large	1,224,928	894,761	660	2,849	--
<u>Total</u>	<u>6,375,995</u>	<u>18,522</u>	<u>1,426</u>	<u>3,064</u>	<u>--</u>
<u>Guatemala - 1950 g/</u>					
Sub-family	31,414	105	63	71	74
Family	13,694	414	35	57	163
Multi-family medium	36,924	5,232	34	87	496
Multi-family large	21,640	41,939	16	59	523
<u>Total</u>	<u>103,672</u>	<u>297</u>	<u>30</u>	<u>70</u>	<u>166</u>

Table 10A--Continued.

- a/ The figures represent the total value of agricultural production, except in Argentina where they correspond to the value added.
- b/ Argentina: Value added in pesos of 1960. Total value in millions of pesos, per exploitation and per worker in thousands of pesos. Value per agricultural and cultivated acreage (in hectares) in pesos.
- c/ Brazil: Value of agricultural production in cruzeiros of 1950. Total value in thousand millions of cruzeiros. Other values in cruzeiros.
- d/ Chile: Value of production (1955) in 1960 escudos. Total value in thousands of escudos. Other values in escudos.
- e/ Colombia: Value of production (1960) in 1960 pesos. Total value in thousands of pesos. Other values in pesos.
- f/ Ecuador: Value of production in 1954 sucres. Total values in thousands of sucres. Other values in sucres.
- g/ Guatemala: Production in nine selected items (1950), 1957 prices. Total value in thousands of quetzales. Other values in quetzales.

Table 11A. Land Use by Size Groups in ICAD Study Countries.

Countries	Cultivated land ^{a/}		Natural pastures		Forest and brush		Other uses including sterile land		Total land in farms	
	Thou. has.	%	Thou. has.	%	Thou. has.	%	Thou. has.	%	Thou. has.	%
Argentina - 1960										
Sub-family	2,232	38.0	2,748	46.8	560	9.5	333	5.7	5,873	100.0
Family	17,420	22.4	47,289	60.9	10,245	13.2	2,700	3.5	77,654	100.0
Multi-family medium	8,154	31.1	13,686	52.2	2,641	10.1	1,749	6.6	26,230	100.0
Multi-family large	5,934	9.2	45,366	70.8	8,187	12.8	4,606	7.2	64,093	100.0
Total	33,740	19.4	109,089	62.7	21,633	12.5	9,368	5.4	173,850	100.0
Brazil - 1950										
Sub-family	1,001	82.2	93	7.6	56	4.6	68	5.6	1,218	100.0
Family	8,287	59.8	2,409	17.4	2,240	16.2	921	6.6	13,857	100.0
Multi-family medium	28,705	36.4	29,929	37.9	14,504	18.4	5,790	7.3	78,928	100.0
Multi-family large	30,306	22.0	60,229	43.6	39,199	28.4	8,394	6.0	138,208	100.0
Total	68,379	29.4	92,660	40.0	55,999	24.1	15,173	6.5	232,211	100.0
Chile - 1955										
Sub-family	40	51.3	23	29.5	4	5.1	11	14.1	78	100.0
Family	306	15.6	862	43.8	594	30.2	204	10.4	1,966	100.0
Multi-family medium	535	17.0	1,432	45.5	855	27.1	328	10.4	3,150	100.0
Multi-family large	1,751	7.8	8,014	35.6	7,219	32.0	5,534	24.6	22,518	100.0
Total	2,632	9.5	10,331	37.3	8,672	31.3	6,077	21.9	27,712	100.0

Table 11A--Continued.

Countries	Cultivated lands ^{a/}		Natural pastures		Forest and brush		Other uses including sterile land		Total land in farms	
	Thou. has.	%	Thou. has.	%	Thou. has.	%	Thou. has.	%	Thou. has.	%
Colombia - 1960										
Sub-family	941	69.4	247	18.2	67	4.9	101	7.5	1,356	100.0
Family	2,237	36.6	2,279	37.3	1,265	20.7	330	5.4	6,112	100.0
Multi-family medium	1,028	16.1	3,095	48.6	1,967	30.9	278	4.4	6,368	100.0
Multi-family large	849	6.3	9,001	66.5	3,099	22.9	587	4.3	13,536	100.0
Total	5,055	18.5	14,622 ^{a/}	53.4	6,399	23.4	1,296	4.7	27,372	100.0
Ecuador - 1954										
Sub-family	740	74.1	106	10.6	55	5.5	98	9.8	999	100.0
Family	516	45.3	129	11.3	221	19.4	273	24.0	1,139	100.0
Multi-family medium	395	34.2	209	18.1	245	21.2	307	26.5	1,156	100.0
Multi-family large	430	15.9	811	30.0	615	22.7	850	31.4	2,706	100.0
Total	2,081	34.7	1,255	20.9	1,136	18.9	1,528	25.5	6,000	100.0
Guatemala - 1950										
Sub-family	444	83.3	20	3.8	37	6.9	32	6.0	533	100.0
Family	240	48.0	89	17.8	127	25.4	44	8.8	500	100.0
Multi-family medium	424	36.3	266	22.7	389	33.3	90	7.7	1,169	100.0
Multi-family large	367	24.2	208	13.7	780	51.3	164	10.8	1,519	100.0
Total	1,475	39.6	583	15.7	1,333	35.8	330	8.9	3,721	100.0
Peru - 1961										
Sub-family	935	68.2	197	14.4	195	14.2	44	3.2	1,371	100.0
Family	383	45.7	270	32.3	79	9.5	104	12.5	835	100.0
Multi-family medium	292	27.4	426	39.8	174	16.3	177	16.5	1,069	100.0
Multi-family large	937	6.1	9,595	62.6	1,837	12.0	2,961	19.3	15,330	100.0
Total	2,546	13.7	10,488	56.4	2,285	12.3	3,286	17.6	18,605	100.0

^{a/} Includes improved pastures.

Table 12A. Principal Uses of Land Not in Farms in ICAD Study Countries.

Country	Total land area	Land in farms	Land not in farms	
			Forest land ^{a/}	Wasteland, brushland and natural grass-land ^{b/}
(Thousands of hectares)				
Argentina	274,821	173,850	100,971	48,367
Brazil	846,989	232,211	614,778	505,657
Chile	73,377	27,712	45,665	11,771
Colombia	108,400	27,373	81,028	63,001
Ecuador	43,930	6,000	37,930	13,709
Guatemala	10,510	3,721	6,789	4,017
Peru	124,457	18,605	105,852	67,715
				52,604
				109,121
				33,894
				18,027
				24,221
				2,774
				38,137

a/ Figures obtained as a difference between total forest-land (FAO estimates) and brushland and forests in farms taken from the agricultural census of each country.

b/ Difference between the totals of land not covered by the census and the forest-land area.

Sources:

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