

# Costa Rica

## AGRICULTURE SECTOR ASSESSMENT WORKING PAPERS

*ANALYSIS OF THE RURAL POOR, Samuel Daines, Consultant*

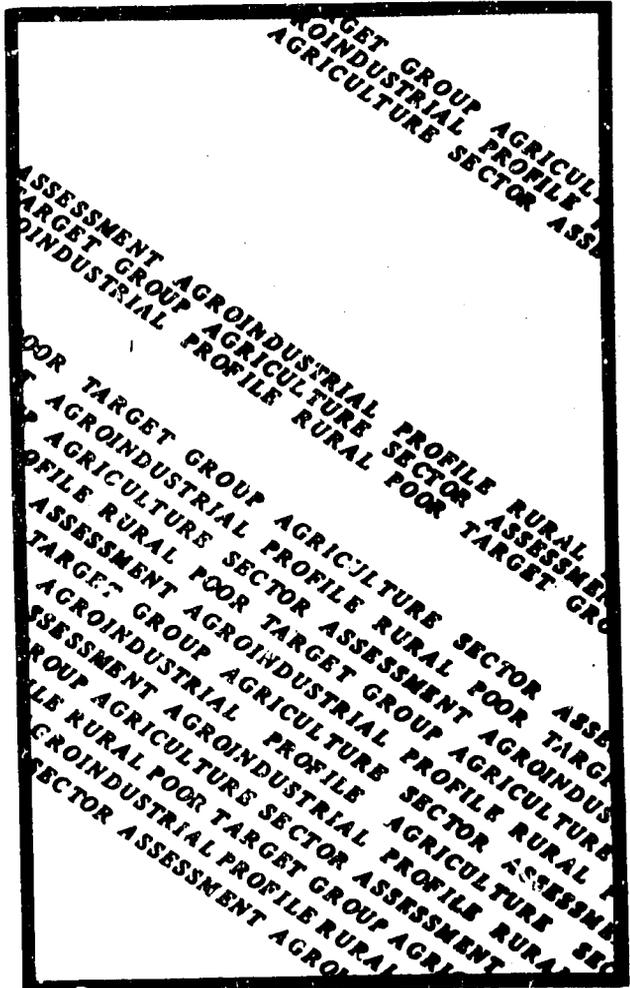
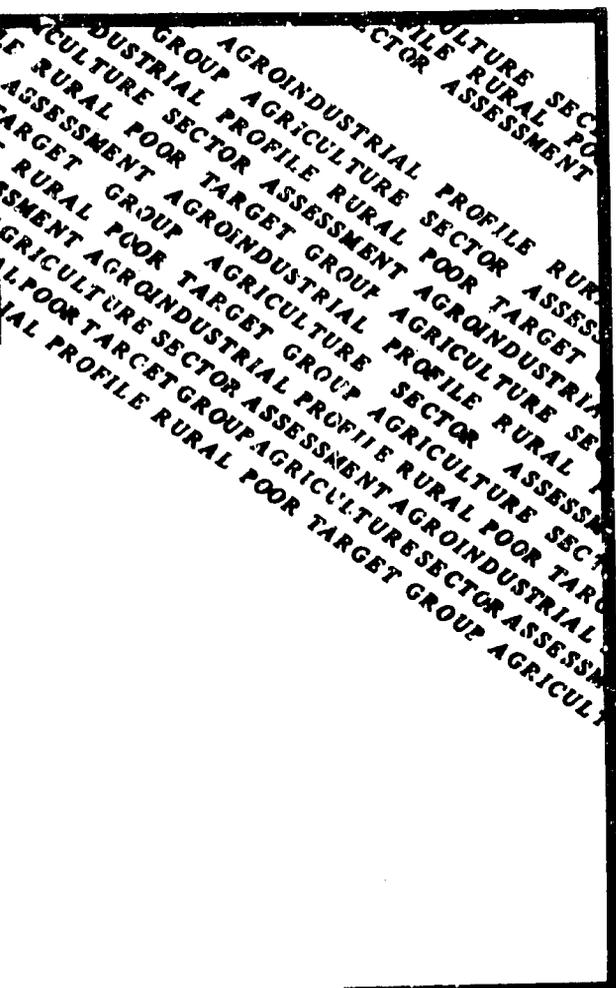
*AGROINDUSTRIAL PROFILE, Samuel Daines, Consultant*

*RURAL POOR PROFILE, Richard Kretzman, AID Costa Rica*

*REPRESENTATIVE SMALL FARM ANALYSIS, Samuel Daines, Consultant*

Prepared for the Agency for International Development Mission to Costa Rica

By Samuel R. Daines, Consultant, Washington D.C.  
December 1976





**COSTA RICA  
Agriculture Sector Assessment  
Working Papers**

**Analysis of the Rural Poor, Samuel Daines, Consultant  
Agroindustrial Profile, Samuel Daines, Consultant  
Rural Poor Profile, Richard Kreitman, AID Costa Rica  
Representative Small Farm Analysis, Samuel Daines, Consultant**

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The Agency for International Development  
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**ANALYSIS OF THE RURAL POOR**  
Samuel Daines

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Samuel Daines

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## INTRODUCTION

This collection of sector assessment working papers contain analysis and statistical profile data with reference to the rural poor in Costa Rica. These papers were written as a prelude to the elaboration of an AID sector assessment document. These papers are essentially submissions to the writers of that final paper, and while portions of these papers may find their way in adjusted form into the final paper, the intent of the papers is only to provide a statistical and analytical backdrop for the assessment.

These papers are not as broad in coverage as the final sector assessment. Sector overview, socio-cultural profile, institutional constraints, and AID strategy are all topics which are not addressed in these papers but which appear in the sector assessment.

The ideas and statistics presented here are preliminary in the sense that it is expected that added discussion, improved statistics and analysis are expected to change them. Readers with added interest in the data or analysis are referred to the AID Mission in Costa Rica where the larger census data base is housed.

Readers are reminded that these papers are an input into the AID documentation process, and do not represent or imply a position on the part of the AID Mission to Costa Rica. The responsibility for the ideas and data rests solely with the authors.

**ANALYSIS OF THE RURAL POOR**

**Prepared by  
SAMUEL R. DAINES**

**For**

**The Agency for International Development  
Mission to Costa Rica**

**December, 1976  
Washington D.C.**

## Resource Endowment and Use on Target group Farms

### a. LAND RESOURCES

#### i. Land Availability

#### TOTAL FARM SIZE : LAND DISTRIBUTION

In Costa Rica in 1973 there were 76,998 farms of which 44,728 had less than 10 Hectares of land. Of these about 60 percent, or 26,660, had percapita incomes of less than US\$150 in 1969 prices. While poor farms as a percent of all farms is lower as farm size increases, it is interesting to note that in Costa Rica, distinct from other Central American countries, never more than two thirds of any farm size are poor by the US\$150 percapita standard. Table 1 indicates that up to about 2.5 Hectares the percentage poor is about two thirds, and that after that point up to 20 Hectares it is roughly half. This implies that there are significant numbers of very small farmers who are not poor by this definition. In addition, this finding is not highly sensitive to small changes in the poverty definition. There are large numbers of very small farmers who would still be in the non poor category even if a higher poverty line were used. A 27 percent increase in the income definition reduces the non-poor group by only 17 (2)

What this implies is that for Costa Rica the rural poverty problem and the small farm problem are not the same. Farm size definitions of the target group are inadequate to capture the target group with which AID is interested.

Table 1 presents the distribution of land by farm size and income class for Costa Rica as a whole.

It is unfortunate from a land resource point of view that the largest group, almost 40 percent, of the poor farmers are on holdings of less than 1 Hectare. As we shall see in the crop mix section, there is little hope of finding crop combinations so intensive that this size of holding can ever produce incomes above the poverty line.

## ARABLE LAND IN FARMS

Table 1  
COSTA RICA 1973  
Land Distribution by Farm Size

INCOME	Number of Farms by Farm Size and Income Class					
	Landless	0/1 Ha.	1/2 Ha.	2/5 Ha.	5/10 Ha.	10/20 Ha.
Poor	2,870	9,018	4,336	6,550	3,886	4,079
NonPoor	1,320	4,275	2,498	5,551	4,364	4,607
Total	4,190	13,293	6,834	12,101	8,250	8,686
Percent of Farms Poor	68.5	67.8	63.5	53.9	47.1	47.0
Percent of All Poor Farms	9.4	29.3	14.1	21.3	12.6	13.3

SOURCE: Based on Kreicman, Rural Profiles, Table 1A

Table 2  
COSTA RICA 1973  
Arable land by Farm Size

Farm Size	Arable Land in Ha. per farm	Percent of Land Arable
2-3 Ha.	1.65 Ha.	70.1 Percent
5-10 Ha.	3.54	49.8
10-20 Ha.	5.32	38.2
20-50 Ha.	8.33	27.1

SOURCE: Daines, Representative Small Farm Analysis, Table 1

It is very difficult to estimate based on census information how much land is apt for crop production. The figures in Table 2 include all lands cultivated in the last five years, but probably excludes a large amount of land which is in uncultivated pasture but which could be used to produce crops. If it were possible to estimate the portion of these pastures which are apt for crop production it would tend to reduce further the proportion of crop production land which is held by small and poor farmers. Unfortunately, no direct measure of land quality on small farms is available.

## ii. Land Use

### Cultivation Intensity

A critical question in a country with limited land resources and heavy rural population pressure is the efficiency with which land is used. Table 3 quantifies the proportion of land dedicated to general use categories for poor and non-poor farms.

Table 3  
COSTA RICA 1973  
Land Use by General Use Category  
Percent of All Land in Each Use Category

Farm Size	Percent Cultivated Annual Crops or in Fallow	Percent in Permanent Crops	Percent Pasture
0-1 Ha.			
Poor	31.1	52.7	9.2
NonPoor	20.4	61.9	10.0
1-2 Ha.			
Poor	38.4	38.5	15.4
NonPoor	24.4	58.0	12.8
2-5 Ha.			
Poor	34.7	24.9	20.3
NonPoor	20.3	48.8	25.0
5-10 Ha.			
Poor	25.4	14.5	42.0
NonPoor	17.7	36.2	36.5
10-20 Ha.			
Poor	22.0	7.1	42.9
NonPoor	17.6	20.9	44.5

SOURCE: Kreitman, Rural Profiles, Tables 2D and 2E

Simple examination of the land use patterns in Table 3 reveals a consistent difference between the poor and NonPoor farms of all size groups. The poor farms consistently have a lower proportion of their land in permanent crops. This focuses the land use issue as much on what the cropped land is used for as on the amount of it which is cropped. Both of these factors are of apparent importance in distinguishing the poor from other farmers. Table 4 presents a comparison of the intensity of cultivation.

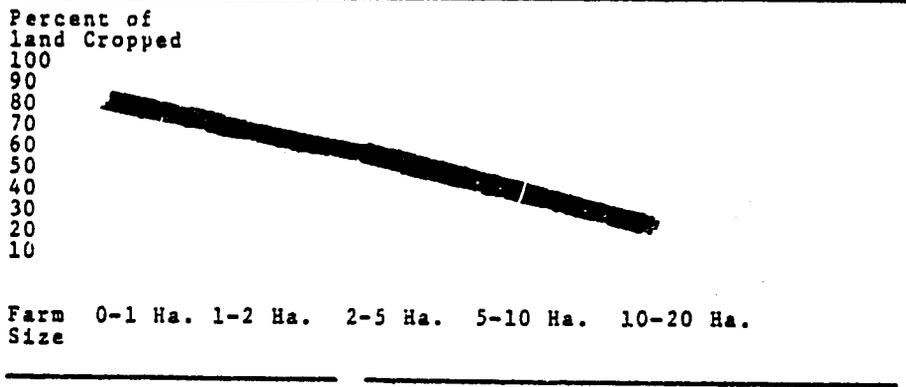
Table 4  
COSTA RICA 1973  
Cultivation Intensity for Poor and Non Poor Small Farms  
Percent of Land Cropped by Farm Size and Income Class

Farm Size	Percent of Land Cropped	
	Poor Farms	Non Poor Farms
0-1 Ha.	83.8	82.3
1-2 Ha.	76.9	83.2
2-5 Ha.	59.6	69.1
5-10 Ha.	39.9	53.9
10-20 Ha.	29.1	38.5

SOURCE: Kreitman, Rural Profiles, Tables 2D and 2E

Table 4 demonstrates two consistent trends, the first is that for both poor and non poor farms the intensity of cultivation drops dramatically as farm size increases. The larger small farms (10-20 Ha.) crop well under half as much of their land as do the smallest farms. The second conclusion is that for farms of similar size, the poor farms are consistently less intensive in their use of land than non-poor farms of similar size. The declining intensity of land use by farm size is demonstrated by Figure 1.

Figure 1  
COSTA RICA 1973  
Land Use Intensity by Farm Size and Income Class

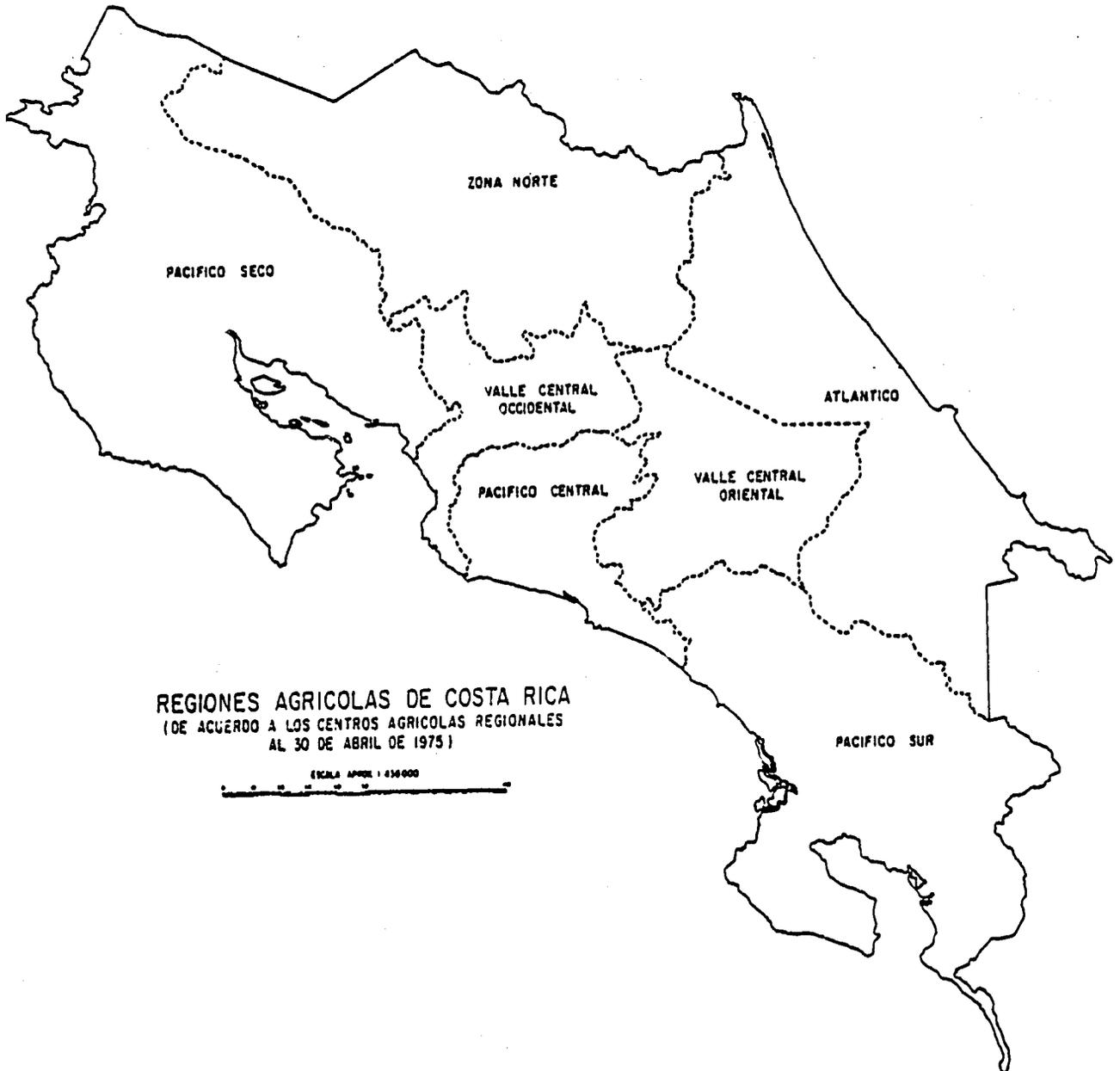


SOURCE: Table 4

It is important to note at this point that a large part of the differences in income between the poor and non-poor farms appears to be due to both intensity of cultivation and crop mix.

Cultivation intensity varies not only by income class and farm size, but also by region. Certain regions have a much higher crop intensity. Figure 2 divides the country into seven agronomically defined regions which will be used in various parts of this paper.

Figure 2  
Agronomic Regions of Costa Rica  
(Utilized in the 1973 Agricultural Census)



By selecting a few representative farm sizes Table 5 presents a comparison of the cultivation intensity of land use for these seven regions.

Table 5  
COSTA RICA 1973  
Cultivation Intensity by Farm Size and Region  
(Percent of Land in Crops or Rotation)

Region	Farm Size			
	2 to 3 Ha.	5 to 10 Ha.	10 to 20 Ha.	20 to 50 Ha.
Central Valley E.	67.8	46.7	34.7	24.5
Central Valley W.	79.9	64.3	48.4	34.5
North Zone	58.4	41.1	31.5	20.5
Dry Pacific	70.0	37.8	25.4	18.1
Cent. Pacific	75.7	51.0	39.5	30.4
Pacific South	72.5	50.4	38.3	29.8
Atlantic Zone	66.1	57.8	69.7	32.0
All Regions	70.1	49.8	38.2	27.1

SOURCE: Daines, Representative Small Farm Analysis, Table 1

The Dry Pacific zone, while consistently the lowest intensity area for the larger sizes is surprisingly intense in the smaller units under 5 Ha.. Equally surprising is the finding that larger units over 20 Ha. are uniformly un-intensive land users without large differences between regions. It appears that as farm size increases there is a consistent decline in the intensity of land use. This is an important conclusion for Costa Rica where land in the major agricultural areas is scarce, and would lend support to land redistribution, or colonization efforts whether they are encouraged by market mechanisms or by public action.

## LAND PRODUCTIVITY

While land use intensity may give a reasonably good picture of land use efficiency, it is at best a proxy for direct measures like land productivity and land profitability. Land productivity may be thought of as a societal view of land use efficiency since it attempts to estimate the value added per land unit. Land productivity might be thought of as a rough measure of the contribution of a particular land unit to national objectives like nutrition or national income. Land productivity should not be confused with measures of the private return of a hectare of the land to the farmer, estimates of private returns are treated under the heading Profitability of Land Use which follows.

Table 6 presents estimates of the productivity of land for various farm sizes and for the poor and non poor farm classes.

Table 6  
COSTA RICA 1973  
Land Productivity by Farm Size and Income Class  
Gross Value of Output per Arable Hectare in Colones/Ha.

Farm Size	Poor Farms	Non Poor Farms	All Farms
0-1 Ha.	5,483	14,641	8,428
1-2 Ha.	3,301	8,705	5,276
2-5 Ha.	2,747	6,827	4,617
5-10 Ha.	2,917	5,855	4,469
10-20 Ha.	3,017	4,997	4,067

SOURCE: Kreitman, Rural Profiles, Tables 1A, 1B, and 1C

While the productivity of land in the non-poor group drops consistently, among the poor farms it reaches a floor at about 2 Ha. and then seems to hover around that same level as farm size increases. The land productivity of the poor is lower in all groups (except the farms less than 1 Ha.) than the lowest non-poor group.

#### PROFITABILITY OF LAND USE

This concept is similar to land productivity except that the viewpoint is the farmer, and hence the measure is not the gross value of output per hectare, but rather net income or profits per hectare. In accounting terminology the income concept used here is the net returns to land, capital and family labor. Table 6 presents these profitability ratios.

Table 6  
COSTA RICA 1973  
Profitability of Land Use by Farm Size and Income Class  
(Net Income Per Arable Ha. in Colones/Ha.)

Farm Size	Poor Farms	Non Poor Farms
0-1 Ha.	3,356	8,131
1-2 Ha.	1,693	5,283
2-5 Ha.	1,234	4,238
5-10 Ha.	928	3,506
10-20 Ha.	438	2,695
Over 20 Ha.		448

SOURCE: Kreitman, Rural Profiles, Tables 1A, 1B, and 1C

The consistency with which private profitability of land use falls as farm size increases argues strongly that land is most efficiently used on smaller holdings. The fact that land on the smallest non-poor holdings is earning almost twenty times as much net income per arable hectare as it is on the farms over 20 Ha. is evident in Table 6. Poor farms, while exhibiting the same trend, begin at less than half the profitability level and drop more rapidly to the floor of about 450 Colones per Ha., which is similar to the largest non-poor farms. The non-poor farms generally have land profitabilities four times as high as comparably sized poor farms. Arable land, rather than total land, was used to compute these ratios in order to avoid underestimating the profit-

ability on larger farms simply because they may have larger amounts of low quality or unusable land. Using arable land, as measured by land recently cultivated or cropped, overestimates the true productivity of larger holdings, since they undoubtedly have a larger proportion of land which is apt for cultivation but which has not been recently used, than do smaller farms. This implies that if more accurate measures of land quality were available the effect would be to accentuate the trend seen in Table 6.

## b. LABOR RESOURCES AND EMPLOYMENT PATTERNS

### i. Labor Supply on Small Farms

Table 7 indicates the number of man days of labor available from inside the farm family per hectare of land cropped. This is intended to be an indicator of the supply of family labor, and an indicator of population pressure on the land. It is an underestimate of both labor supply and population pressure because of the existence of a large landless rural labor pool. It is difficult to include the landless population in these estimates, however, because their labor is available for work on large holdings as well as on small ones.

Table 7  
COSTA RICA 1973  
Labor Supply on Small Farms

Farm Size	Man Days of Economically Active Family Labor Available Per Cropped Hectare
0-1 Ha.	1,264
2-3 Ha.	483
3-4 Ha.	382
5-10 Ha.	245
10-20 Ha.	180
20-30 Ha.	128

SOURCES: For 0-1 Ha. farms; Academia de Centro America, Tables 3.0 and 4.0 for active workers per family, and Kreitman, Rural Poor Profiles, Table 2c for area cropped. For all other farm sizes, Daines, Representative Small Farm Analysis, Table 4

Table 7 indicates that labor supply and hence population pressure are extremely high in all of the small farm sizes. It is difficult to sense the employment implication of these numbers without establishing some magnitudes on the amount of labor demanded by various agricultural activities. If the production patterns which exist or could potentially exist, require roughly as much labor as is supplied, then one would conclude that the population pressure and labor supply are not excessive. Interpreting labor supply figures is only enlightening when presented with some rough ideas of labor demand. Table 8, which presents the labor demand of different agricultural activities in Costa Rica should be reviewed keeping in mind that small farms (up to 10 Ha.) have a labor supply of from 245 to 1,264 man days per cropped hectare. The question addressed by Table 8 is, are their feasible crop combinations which could provide reasonably full employment for small farms?

Table 8  
COSTA RICA 1973  
Labor Requirements of Agricultural Activities

Crop or Activity	Man days of Labor Required per Hectare Cultivated	Percent of Farm Family Labor Supply (ave. for farms 0-10 Ha. is 728 Man days per Ha.) Which would be absorbed if all Arable land was in this crop
<b>HIGH LABOR CROPS</b>		
Onions	331-502 Man Days	45-69 Percent
Flowers	300-500	41-69
Bananas	153-314	21-43
Tomatoes	200-232	28-32
Tobacco	150-194	21-27
Potatoes	110-206	15-28
Coffee	64-208	9-29
Beets	140-148	19-20
Carrots	120-140	17-19
Lettuce	125-	17-
<b>MEDIUM LABOR CROPS</b>		
Pineapple	85-93	12-13
Cabbage	78-82	11-
Plantain	70-79	10-11
Sugar Cane	61-81	8-11
Avocado	68-	9-
Cocoa	15-70	2-10
Oranges	66-	9-
Cassava	48-63	7-9
Dairy (intensive)	54-59	7-8
Camote	55-	8-
<b>LOW LABOR CROPS</b>		
Corn	45-50	6-7
Sorghum	40-45	5-6
Elotes	38-43	5-
Beans	25-38	3-5
Vainicas	23-30	3-4
Papaya	33-	5-
Guineo	30-	4-
Rice	8-42	1-6
Coconuts	10-14	1-2
Beef Livestock	4-8	5-1

SOURCE: Academia de Centro America pages 34-87 Cost of Production Data NOTE: The two figures given in most cases represent the range of labor intensity of different technological levels in Costa Rica.

When we compare the labor demands of crop alternatives with the labor supply of the average small farm we can see that there are no feasible crop mixes which would provide for reasonable employment levels for farm family labor. When we realize that there are severe seasonal concentrations of labor demand in these crops which are not represented here, the problem of providing reasonable employment levels for farms under 10 Ha. on their own land becomes increasingly improbable.

## ii. Employment Patterns

### ON FARM EMPLOYMENT AND UNDER EMPLOYMENT

There are a series of conceptual and data problems which make it difficult to obtain accurate employment information on small farms. It is difficult to estimate what might be considered full employment. Does eight hours a day or ten hours, or six (as is the case in much of Costa Rican agriculture) hours comprise a fully employed day? How many days a year of work comprise a fully employed year. If an average number for either hours per day or days per year is used, the statistical result will be that some farm families may be more than fully employed. The definition used in this document for full employment is 280 days of work per economically active family member per year. The number of people in the family who can work is defined by the census as those economically active, a complete description of this definition is given in the population census document. Using this definition there are an average of 1.61 economically active workers per farm family. This figure is drawn from the Academia study Table 4.0. In order to convert employment outside the farm into man days, the average off-farm wage per day is divided into the off farm salary. These averages drawn from Academia Table 24.0 are 18.023 colones per day for employment outside the farm in agricultural activities, and 18.7 colones per day for rural employment in non-agricultural activities.

The second difficulty with estimating agricultural employment is that it is highly seasonal. Since the data base which is used for this document does not contain monthly labor use information the employment rates will all be overestimates, and correspondingly, the unemployment will be less than it would be if seasonal data were used.

A third difficulty which flows from a combination of the other two, is that the data do not contain direct information on the amount of labor which is hired. It may be that even though the family labor lays idle much of the year, during the harvest of wheat, for example, they must hire additional outside labor to supplement their supply during the peak period. Hiring outside labor also may occur when family labor is not sufficient to supply even non peak labor demands, or when family labor has off farm alternatives at a higher wage than hired agricultural labor could be drawn onto the farm. In Table 9, where the agricultural employment account is presented a finding of over 100 percent employment probably means that the family is hiring outside labor to supplement its own labor supply.

For all of the reasons given above, the figures in Table 9 represent maximum family employment on the farm, in all cases the figure will be less than the one seen in Table 9.

Table 9  
COSTA RICA 1973  
On Farm Employment Rates for Farm Families  
by Farm Size and Income Class

Farm Size	Percent of Active Family Labor Utilized in Agricultural Activities on the Farm	
	Poor Farms	Non Poor Farms
0-1 Ha.	8.5 Percent	9.5 Percent
1-2 Ha.	21.0	30.1
2-5 Ha.	31.9	55.9
5-10 Ha.	42.6	87.2
10-20 Ha.	51.3	102.8
Over 20 Ha.		221.0

SOURCE: Daines computation based on Kreitman, Rural Poor Profiles, Tables 2A, 2B, and man day requirements for various crops from Table 8

Table 9 demonstrates the clear trend between farmsize and employment rates. Farms under 1 Ha. could not be expected to absorb more than 20-30 percent of available family labor even with the most intensive crops, which under the technological conditions and market distance of many small farms are economically infeasible.

The agricultural employment rates for the larger farms is indicative of a sizeable rural under-employment. The poor are characterized by substantially lower on-farm employment rates for all farm sizes.

Table 10 contains an account by major crop type of the origin of on farm labor demand.

Table 10  
COSTA RICA 1973  
On Farm Agricultural Employment by Crop Type

Farm Size and Income Class	Percent of total family active labor supply Employed by Each Crop Type					Total
	Cereals	Vegetables Potatoes Tobacco	Coffee	Other Perm. Crops	Pasture based Livestock	
0-1 Ha.						
Poor	1.1	0.8	5.6	0.9	0.07	8.5
Non poor	0.6	1.0	7.2	0.6	0.07	9.5
1-2 Ha.						
Poor	4.0	2.4	11.6	2.6	0.4	21.0
Non Poor	2.7	3.2	21.5	2.4	0.3	30.1
2-5 Ha.						
Poor	7.5	2.8	14.8	5.2	1.6	31.9
Non Poor	4.8	4.0	39.1	6.6	1.5	55.9
5-10 Ha.						
Poor	10.7	3.7	13.1	9.8	5.3	42.6
Non Poor	7.8	5.0	54.6	14.9	4.7	87.2
10-20 Ha.						
Poor	15.0	4.4	11.2	10.7	11.0	51.3
Non Poor	13.8	5.8	52.4	19.4	11.4	102.8
Over 20 Ha.						
Non Poor	34.0	3.6	41.6	48.3	93.4	221.0

SOURCE: Daines computation based on data from Kreitman, Rural Poor Profiles, Tables 2A, 2B and labor requirements figures from Academia de Centro America

From Table 10 it is obvious that the most important contributor of employment for small farms, both poor and non poor is Coffee. It is also interesting to note that the difference in the amount of coffee labor between the poor and the non poor accounts for almost all of the difference in agricultural employment. Table 11 presents this comparison.

Table 11  
COSTA RICA 1973  
Coffee Employment Differences and Total Agricultural  
Employment Differences Between Poor and Non poor Farms

Farm Size	Coffee Employment Difference Between Poor and Non Poor	Total Employment Difference Between Poor and Non Poor	Percent of Total Emp. Difference Explained by Coffee
0-1 Ha.	1.6 Percent	1.0 Percent	160 Percent
1-2 Ha.	9.9	9.1	109
2-5 Ha.	24.3	24.0	101
5-10 Ha.	41.7	44.6	94
10-20 Ha.	41.2	51.5	80

SOURCE: Daines computation based on Kreitman, Rural Poor Profiles, Tables 2A, 2B, and labor requirement estimates by Academia de Centro America

A reasonable conclusion from Table 11 is that the principal difference between the employment of poor and non poor small farmers inside their farms is attributable to the difference in the amount of coffee which they grow.

The ineffectiveness of cereals as a source of employment is demonstrated by the fact that cereals, while the largest or second largest crop in area cultivated in all small farms, provide only a small proportion of the total agricultural employment as indicated in Table 10.

#### OFF FARM EMPLOYMENT

Table 12 indicates the off farm employment patterns for poor and non poor small farm families. Because of the timing of the censuses on which the data are based, inaccuracies in off farm employment estimates are inevitable, this is because the off farm employment in the coffee harvest is not accurately selected.

Table 12  
COSTA RICA 1973  
Off Farm Employment Patterns by Farm Size

Farm Size Income Class	Percent of Total Active Family Labor Employed Outside the Farm					
	In Agriculture		Outside Agriculture		All Off-Farm Employment	
0-1 Ha.						
Poor	2.1	Percent	11.7	Percent	13.8	Percent
Non Poor	24.8		133.3		158.1	
1-2 Ha.						
Poor	1.0		5.6		6.6	
Non Poor	15.7		89.4		105.1	
2-5 Ha.						
Poor	1.0		4.4		5.4	
Non Poor	12.4		56.9		69.3	
5-10 Ha.						
Poor	0.4		3.6		4.0	
Non Poor	27.0		40.3		67.3	
10-20 Ha.						
Poor	1.0		3.2		4.2	
Non Poor	8.6		33.0		41.6	
Over 20 Ha.						
Non Poor	6.5		30.1		36.6	

SOURCE: Daines computation based on data from Kreitman, Rural Poor Profiles, Tables 1A, 1B and Academia de Centro America Table 24.0

While the agricultural employment estimates are consistently higher than true employment rates, the off farm employment figures in Table 12 are in almost all cases underestimates, due to inaccurate reflection of the coffee harvest.

The sizeable differences between the poor and the non poor point to employment in non agricultural activities as the factor of most importance. Poor farmers would appear to be poor for two principal reasons, first they cultivate less coffee than non poor farmers of similar size, and secondly, because they are unable to obtain non agricultural jobs. These two factors do not account for all of the differences in income but they do predominate.

#### SUMMARY PROFILE OF EMPLOYMENT PATTERNS OF THE TARGET GROUP

Table 13 combines the on farm and off farm employment of the poor farm families to give a summary profile.

Table 13  
COSTA RICA 1973  
Employment Summary of Rural Poor Farm Families

Farm Size (Poor Only)	Percent of Total Active Labor Employed		
	On the Farm	Off the Farm	Total Employment
0-1 Ha.	8.5 Percent	13.8 Percent	22.3 Percent
1-2 Ha.	21.0	6.6	27.6
2-5 Ha.	31.9	5.3	37.2
5-10 Ha.	42.6	4.0	46.6
10-20 Ha.	51.3	4.1	54.4

SOURCE: Tables 10 and 12

From three fourths to one half of the available economically active labor in poor farm families is without productive employment. As the farm size increases the on farm labor demand increases substantially, while the off farm employment is stable. This leads us to conclude that off farm employment is not responding in any direct way to the gravity of farm surpluses, farms with larger surplus labor (except for the very smallest 0-1 Ha. farms) do not find significantly more off farm employment.

There are three basic policy or strategy alternatives for increasing the employment of poor small farmers:

1. Increasing the labor demand of the farm itself. This may be done by increasing cultivation, shifting the mix of crops to more labor intensive ones, or by technological changes which result in more labor use (one example is that increased yields usually result in increased harvest labor, and if the increases are based on fertilizer, improved seeds, and chemicals, and not offset by labor losses in mechanization the net result will be increased employment)

2. Increasing the demand for off farm labor on larger farm units. This strategy would focus on changes similar to those noted in 1. except on larger farms.

3. Increasing the demand for off farm labor in non agricultural activities. Agroindustry may be the most promising of these non farming alternatives, but marketing, textiles manufacturing, wood and leather products also have significant potential.

The potential of increasing on farm employment for the poor small farmer is probably limited mostly to increasing the proportion of labor intensive crops which he grows. Unfortunately the poor farms are not likely to be able to increase their labor intensity in the same way that the non poor farms of comparable size have accomplished this because the added non poor labor intensity has come from coffee, and there is little potential for adding coffee. It is unlikely that significant employment increases could come from either increased cultivation or from technological change unless the increases and change were in non cereal crops. The principal potential for large on-farm employment increases is likely to be from adding labor intensive crops.

The potential of increasing small farmer employment by increasing labor demand on large farms is likewise related to the labor intensity of the crops they add. Even substantial increases in cereal production on large farms would result in relatively small increases in small farmer employment.

Non agricultural employment possibilities are discussed in the agroindustrial profile, and appear to be at least as important as the direct, on-farm employment alternatives.

### C. Capital Resources and Financial Profitability

The availability of agricultural credit in Costa Rica is probably the highest in Latin America if measured by the amount of credit per arable hectare or per agricultural worker. Table 14 presents a comparison of credit levels in various countries for years as close to 1970 as possible.

Table 14  
Agricultural Credit Availability per Arable Hectare  
and per Agricultural Worker for Selected Countries

Country	US\$ of Agricultural Credit per Worker in Agriculture	US\$ of Agricultural Credit per Arable Hectare
Costa Rica	\$488	\$167
Argentina	369	17
Chile	270	42
Mexico	230	67
Venezuela	166	86
Colombia	154	77
Brazil	112	48
Uruguay	100	9
Peru	98	61
Guatemala	61	35
Ecuador	58	19
Bolivia	3	1

SOURCES: Samuel Daines et al, Colombia Agriculture Sector Analysis Doc. 2, AID 1972 Tables 64 and 66. Based on FAO Production Yearbook 1970 and Dale Adams, Agricultural Credit Latin America, Ohio State Univ. 1969.

Unfortunately the small farmers who comprise the target group have little access to this credit. The Tri-Partite credit volume focuses on the inadequate credit base of the poor farmer. More direct information on this credit gap and its income impact should be available from a possible AID supported small farm survey during 1977.

The bankability of small farm agriculture in Costa Rica is an issue of importance to this paper. If small farm credit is to be expanded on a paying basis the activities it finances must themselves be profitable. Table 15 presents estimates of the financial profitability in banking terms of small farm operations by farm size and income class.

The concept in Table 15 is to present the net income return to the costs of production which a bank would normally finance as a part of agricultural credit. This provides an indicator of the bankability of agricultural activities on target group farms. The returns are not truly net because they do not include return to farmer owned assets and labor.

Table 15  
COSTA RICA 1973  
Estimates of Financial Profitability of Small and Poor  
Farms by Farm Size

Farm Size	Rate of Financial Return Net Agricultural Income (Sales - Costs) as a percent of costs (Poor farms only)
0-1 Ha.	141.0 Percent
1-2 Ha.	70.0
2-5 Ha.	73.5
5-10 Ha.	43.3
10-20 Ha.	17.8

SOURCE: Daines computation based on data from Kreitman, Rural Poor Profiles, Table 1a

Poor target group farmers are remarkably profitable in banking terms. This profitability drops off as farm size increases, and the rate of return on the larger poor farms (10 -20) is low enough to be questionable from a bankers point of view.

Agricultural credit if it were allocated on the basis of profitability should reach more of the poor small farmers in the target group. The average profitability (measured the same way as in Table 15) of all farms over 20 Ha. in Costa Rica is 25.5 percent. This implies that all of the small poor farms under 10 Ha. (86.7 percent of the target group farms) are significantly more profitable than the average medium or large farm in Costa Rica.

Agricultural credit is seldom rationed on the basis of profitability. Factors such as size of loan, administrative costs related to accessing a large number of small borrowers, risk involved in working with small enterprises with few assets to use as security, and many others are more important in lending decisions.

While it is difficult to make estimates of capital productivity and financial profitability based on the Academia and Kreitman studies, the figures above would lead us to conclude that the target farmers under 10 Ha. are not poor because they are inefficient in their use of capital or financial resources. It would also appear that programs directed at changing their business operation with a view to increasing its profitability are not likely to be as useful (because profitability is already very high) as are programs oriented at increasing amount of financial resource at his disposal so that he can achieve a higher total return at a perhaps lower rate of return. The capacity to expand and absorb additional financial resources is probably very small for the 0-2 Ha. farmers, but may be significant for the 2-10 Ha. group.

## Subsection 3 Income Patterns of the Rural Poor

### a. DEFINITIONS AND DIMENSIONS OF RURAL POVERTY

#### i. All Rural Poor

Defining a target group of rural poor for AID purposes is essentially an attempt to identify a sub-group of the rural population who ought to be the focus of AID programs. The target group may be defined geographically, ethnically, economically, by farm or employment type, or farm size class. Each of these methods has a two fold intent, first to find a disadvantaged group, secondly to so define the group that they are distinguishable for program purposes from the non-target population.

In Costa Rica the choice is to approach the identification of the target group using income level as the principal preliminary characteristic. An income definition of the target group unfortunately cannot serve for program purposes since it is not easy to estimate income levels as a pre-requisite to including a family in an AID program. To do so would require exhaustive survey work on each family to determine their income level before they could be included. The procedure selected for target group definition has three stages. First an income profile of the total rural population by region, farm size, crop type, disaggregated between the farming and landless populations. This step is to suggest meaningful proxies for income, that is characteristics which may be useful for program purposes. Three income proxies are explored:

1. Farm Size
2. geographic Concentrations of Poverty
3. Cropping Patterns

The farm size proxy appears to be inadequate to define target group farms for inclusion in programs for reasons already discussed. geographic concentrations of poverty at the cantonal level appear to be satisfactory for targeting program combined with the third proxy, cropping pattern. In the cropping pattern, only the amount of coffee cultivated need be known in order to distinguish a target group.

The second step involves using these characteristics to narrow the field for detailed survey work on selected sub-groups. The third step involves actual sample survey work in the selected geographic areas to establish feasible (that is adequate for program implementation) guidelines for selection of families for inclusion in AID programs. The statistical basis for the target group definition may be found in various parts of this document. the present section on income deals directly with the geographic proxy.

Table 16  
COSTA RICA 1973  
Dimensions of the Rural Poor Target Group

Income Definition in Colones Per Capita	Farm Families	Target Group Landless Families	Total Fam.	Non Poor Families	Percent Poor
Low Exc. Rate Below 1100 Col.	34,705	56,412	91,117	111,787	45%
Mid Exc. Rate Below 1400 Col.	40,686	70,570	111,256	91,648	55%
High Exc. Rate Below 1700 Col.	45,480	82,020	127,500	75,404	63%

SOURCE: Based on Kreitman, Rural Poor Profiles, Table 3a

Farm size definitions are inadequate since a large percent of the smallest farms are not poor, and a large portion of medium sized farms are. Poor and non poor farms are found in significant numbers alongside each other in all of the provinces.

Table 16 presents an outline of the dimensions of the income defined target group using three alternative income levels to divide the poor and non-poor. These definitions begin with a standard in 1969 USS of \$150 per capita. The measurements are all based on data from 1973. Three different exchange rates are used in converting the data to USS, the lowest of these, 6.7, was the rate used to tax coffee exporters in 1973, the highest one was the free market rate, and a third estimate between the two is used to give a poverty definition averaging the extremes. These three alternative definitions represent approximations of the target group size depending on which of these three rates is taken to most accurately reflect the true value of the Colon in 1973.

Alternative exchange rates move the total size of the target group from 45 percent of the rural population to 63 percent. Using the mid exchange rate definition, Table 17 explores the regional distribution of the rural poor by Province. The objective of Table 17 is to see if the poor are geographically concentrated in a way which would allow programs to centralize in certain areas

Table 17  
COSTA RICA 1973  
Geographic Distribution of the Rural Poor Target Group

Province	Poor Families Under 1400 Col. Capita)	Percent of Rural Pop. Poor	Percent of National poor in Province
San Jose	24,713	53.3 %	22.2 %
Alajuela	23,908	57.1	21.5
Cartago	12,485	57.5	11.2
Heredia	6,175	43.1	5.6
Guanacaste	21,179	64.5	19.0
Puntarenas	16,488	52.8	14.8
Limon	6,308	42.8	5.7
<b>Total</b>	<b>111,256</b>	<b>54.8%</b>	<b>100.0%</b>

SOURCE: Samuel Daines computation based on Kreitman, Rural Poor Profiles, Table 3a

Provincial differences in the percentage of the rural population in the poverty group permit a rough classification of provinces into three groups:

1. Average Poverty Provinces (those with poverty percentages close to the national average). In this group are San Jose, Alajuela, Cartago, and Puntarenas.

2. High Poverty Provinces with poverty percentages significantly above the national average. Only one province, guanacaste is in this class.

3. Low poverty provinces, with poverty percentages significantly below the national average. This includes Limon and Heredia.

Provincial level analysis of poverty incidence may miss important differences which appear at the cantonal or district level. The rural profile data base contains information at the canton and district level and will be used to examine in more detail geographic concentrations of poverty for program design purposes. Once identified, these specific areas are to be the subject of a detailed rural sample survey as mentioned earlier.

In addition to addressing the issue of the severity of poverty by province, Table 17 presents the proportion which each province comprises of the total target group. Three of the seven provinces, San Jose, Alajuela, and guanacaste, contain almost two thirds of the total rural poor.

## ii. Farm Families

There are between 35,000 and 45,000 farm families in the target group depending on the income definition used, comprising from 38 percent of the group at the lowest income definition and 36 percent at the highest.

The geographical distribution of the farm families included in the target group is illustrated in Table 18.

Table 18  
COSTA RICA 1973  
Distribution of Poor Farm Families by Province

Province	Number of Poor Farm Families Under 1100 Col Per Capita	Under 1700 Col. Per Capita	Percent of Poor Farm Families by Province (under 1100 Col.)
San Jose	8,760	11,458	25.2 %
Alajuela	7,312	9,803	21.0
Cartago	3,038	3,902	8.8
Heredia	1,164	1,564	3.4
Guanacaste	5,898	7,568	17.0
Puntarenas	6,801	8,501	19.0
Limon	1,932	2,684	5.6
<b>Total</b>	<b>34,705</b>	<b>45,480</b>	<b>100.0</b>

SOURCE: Kreitman, Rural Poor Profiles, Table 3a

Puntarenas and San Jose have a significantly larger share of the poor farmers than they do of the target group as a whole. This indicates that in these two provinces a larger proportion of the target group are farmers, and a consequently smaller relative proportion are landless laborers. This also implies that in the poverty concentration province of guanacaste, the proportion of landless poor in the target group is also high compared to other provinces.

Four of the seven provinces (San Jose, Alajuela, Puntarenas, guanacaste) comprise 82 percent of the farming target group.

Table 19 presents the distribution of rural poor by Farm size using the 1100 Colon income definition. The figures in Table 20 are for farms not families, since there are some cases of more than one family per farm the number of families in Table 21 is slightly larger.

Table 19  
COSTA RICA 1973  
Rural Target Group Farms by Farm Size

Farm Size	No. of Poor Farms (under 1100 Col.)	No. of Non Poor Farms	Percent of Farms which are poor
<b>"Landless"</b>			
Farms -	2,870	1,320	68.5
0-1 Ha.	9,018	4,275	67.6
1-2 Ha.	4,336	2,495	63.5
2-5 Ha.	6,550	5,551	54.1
5-10 Ha.	3,896	4,364	47.2
10-20 Ha.	4,079	4,607	47.0
Over 20 Ha.-	0	20,045	0.0
<b>Total</b>	<b>30,739</b>	<b>42,660</b>	<b>41.9</b>

SOURCE: Kraitman, Rural Poor Profiles, Tables 1A, 1B, and 1C

By this definition 42 percent of the farms (and 51 of the farm operating population) in Costa Rica have less than US\$150 per capita income.

While there is a decreasing trend in the percent of farms which are poor as farms increase in size, the decline is not as rapid as one might expect based on similar information from other countries, in Costa Rica there are significant numbers of non poor farms in the smallest sizes, and significant numbers of poor farms in the 10-20 Ha. size. Poverty is not simply a question of gross farm size, a farm size definition of poverty would be largely inadequate as a way of defining the target group in Costa Rica.

Farm families are shown in Table 20 with alternative definitions of poverty. This Table shows the sensitivity of the size of the target group to differing income level definitions.

Table 20  
COSTA RICA 1973  
Target Group Farm Families  
by Alternative Definitions of Poverty

Poverty Definition	No. of Families in Target Group	Population in Target Group
Less than 1100 Colones	34,705	241,875
Less than 1400 Colones	40,686	283,244
Less than 1700 Colones	45,480	315,801

SOURCE: Kraitman, Rural Poor Profiles, Table 3A

The three different definitions change the percent of the farm operating population which is poor from half (51 percent) to two thirds (67 percent).

The distribution of the farming poor may be seen in Table 21 where the population is given by income segment.

Table 21  
COSTA RICA 1973  
Income Distribution of the Farming Population

Income Strata (per capita)	Population	Percent of Population by Income Strata
Less than 100 Colones-	42,943	9 Percent
100-300 Colones	46,164	10
300-500 Colones	42,531	9
500-800 Colones	59,431	13
800-1100 Colones	50,756	11
1100-1400 Colones	41,369	9
1400-1700 Colones	32,557	7
1700-2000 Colones	26,374	6
Over 2000 Colones -	129,501	27
Total	- 471,676	100

SOURCE: Kraitman, Rural Poor Profiles, Tables 3A, and 3B

### iii. LANDLESS RURAL POOR

The number of poor farming families is less in Costa Rica than the number of rural landless poor. Table 22 presents the number of landless poor using the three alternative poverty definitions explained above.

Table 22  
COSTA RICA 1973  
Landless Rural Poor

Poverty Definition in Colones per capita	No. Poor	No. Non Poor
Less than 1100	364,837	377,160
Less than 1400	454,364	287,133
Less than 1700	522,798	219,199

SOURCE: Kraitman, Rural Poor Profiles, Table 3A

It is often suggested that the landless population is poorer than the farming population. Since the absolute size of the landless group in Costa Rica is significantly larger than the farming group, the landless group would be expected to predominate in the target group. But is a larger proportion of the landless population poor? Table 23 tests this hypothesis and finds that at the lower income definition the opposite is true, a slightly higher proportion of the farming population is classed as poor than is classed poor for the landless population. As the poverty line is moved up this changes, and the landless group show a higher incidence of poverty.

Table 23  
COSTA RICA 1973  
Comparison of the Proportion of the Landless and  
Farming Populations Classed as "Poor"

Income Definition (Per Capita)	Percent of Farming Population Classed as "Poor"	Percent of Landless Population Classed as "Poor"
Under 1100 Col.	51.3 %	49.2 %
Under 1400 Col.	60.1	61.3
Under 1700 Col.	67.0	70.5

SOURCE: Samuel Daines computation based on Kreitman, Rural Poor Profiles, Table 3A

The differences in any definition are not large, it would appear that landless and farming families are almost equally poor.

Table 24 presents the geographical distribution of the rural landless poor.

Table 24  
COSTA RICA 1973  
Distribution of the Rural Landless Poor by Province

Province	Landless Poor Families		Percent of Nat. Landless Under 1100 Col.
	Under 1100 Col.	Under 1700 Col.	
San Jose	11,431	17,046	20.3 %
Alajuela	12,476	17,336	22.1
Cartago	6,984	10,351	12.4
Heredia	3,572	5,864	6.3
Guanacaste	11,914	16,232	21.1
Puntarenas	7,022	10,337	12.5
Limon	3,013	4,854	5.3
Total	56,412	82,020	100.0

SOURCE: Kreitman, Rural Poor Profiles, Table 3A

As was mentioned above, guanacaste has a disproportionately large landless poor group, the share of poor farmers in guanacaste is only 17 percent compared with 21 percent of the national landless poor. This is a result of the large changes which have occurred in recent years in both the tenure and production patterns in this region as large numbers of earlier poor small farmers became landless poor.

One of the principal concerns of any program aimed at the rural poor must be employment of the landless families. The share of landless and farm families in the target group is indicated in Table 25.

Table 25  
COSTA RICA 1973  
Summary of Landless and Farm Populations in the Target  
Group Using Alternative Poverty Definitions

Poverty Definition in Colones per Capita	Farm Poor	Landless Poor	Total Poor
<b>POPULATION</b>			
Less than 1100	241,875	364,837	606,712
Less than 1400	283,244	454,864	738,108
Less than 1700	315,801	522,798	838,599
<b>No. FAMILIES</b>			
Less than 1100	34,705	56,412	91,117
Less than 1400	40,686	70,570	111,256
Less than 1700	45,480	82,020	127,500

SOURCE: Kreitman, Rural Poor Profiles, Table 3A

The predominance of landless poor in the income defined target group may be seen more clearly in Table 26 where the percentage shares of the target group and total rural population are presented.

Table 26  
COSTA RICA 1973  
Rural Poor Target Group  
Percentage Share of Farm and Non Farm Poor  
of the Target Group and of the Total Rural Population

Poverty Definition in Colones Per capita	Farm Poor	Non Farm Poor	Target Group	Total Rural
<b>PERCENT OF TARGET GROUP</b>				
Less than 1100	39.9 %	60.1 %	100 %	
Less than 1400	38.4	61.6	100	
Less than 1700	37.7	62.3	100	
<b>PERCENT OF TOTAL RURAL</b>				
Less than 1100	19.9	30.1	50.0	100
Less than 1400	23.3	37.5	60.8	100
Less than 1700	26.0	43.1	69.1	100

SOURCE: Samuel Daines computation based on Kreitman, Rural Poor Profiles, Table 3A

From one half to two thirds of the rural population are in the poverty target group depending on the exchange rate chosen to define poverty. The composition of the target group varies only slightly as the poverty line is moved upward, the landless proportion rises from 60 to 62 percent.

The income profile of the landless poor is given in Table 27.

Table 27  
COSTA RICA 1973  
Income Profile of the Landless Rural Population

Income Strata in Colones per capita	Population	Percent of Population
Less than 100 Colones	49,400	7 Percent
100 to 300 Colones	25,750	3
300 to 500 Colones	59,240	8
500 to 800 Colones	119,926	16
800 to 1100 Colones	110,312	15
1100 to 1400 Colones	90,827	12
1400 to 1700 Colones	67,934	9
1700 to 2000 Colones	52,640	8
Over 2000 Colones	166,559	22
Total	741,997	100

SOURCE: Kreitman, Rural Poor Profiles, Tables 3A, 3B

## b. INCOME LEVEL AND SOURCES FOR FARM FAMILIES

### i. Income Level by Farm Size

Table 28 presents the income level of poor and non poor farms by farm size. The income definition used is the lowest, 1100 Colones per capita.

Table 28  
COSTA RICA 1973  
Income Level of Farm Families by Farm Size

Farm size	No. Poor	Average Income per capita of Poor Farms	Average Income per capita of Non Poor Farms	Poor Income as a % of Non Poor
"Landless" Farms	2,870	470	3,238	14.4 %
0 to 1 Ha.	9,018	494	3,622	13.6
1 to 2 Ha.	4,336	362	3,847	14.6
2 to 3 Ha.	6,550	636	4,017	15.8
3 to 10 Ha.	3,890	643	4,634	13.9
10 to 20 Ha.	4,079	582	4,722	12.3
Over 20 Ha.	0	na	4,771	na
All Farms	30,739	562	4,449	12.6

SOURCE: Kraicman, Rural Poor Profiles, Tables 1A, and 1B

The poor farm target group appears to identify a particularly disadvantaged portion of the population. As was mentioned earlier, the disadvantaged are not restricted to very small farm sizes. The differential between the poor and non poor incomes is dramatic and does not appear to vary consistently with farm size. Farms classed poor (accounting for about 42 percent of farms, have incomes of only 12 to 15 percent of the average incomes of non-poor farms.

Table 29 presents the geographic distribution of poor farms and compares the average income per capita on poor farms by province.

Table 29  
COSTA RICA 1973  
Distribution of Poor Farms by Province

Province	No. of Poor Farms	Percent of Nat. Poor Farms	Average per capita Income	Income as a % of Nat. Ave. for Poor Farms
San Jose	8,593	28.2	558	99.3 %
Alajuela	6,767	22.2	587	104.4
Cartago	3,314	10.9	521	93.9
Heredia	1,146	3.8	426	75.8
Guanacaste	4,422	14.5	588	104.6
Puntarenas	4,026	15.2	566	100.7
Limon	1,053	5.4	na	na
Total	30,521	100.0	562	100.0

SOURCE: Kreitman, Rural Poor Profiles, Table 1A

Except for Heredia, there appears to be less than seven percent variation in the average income level of the poor farmers. Heredia appears to have significantly lower average income among poor farmers, this finding will be disaggregated to the Canton and District level to search for geographic concentrations of poverty in this province during the development of a sample frame for targeted surveys.

Table 29 addresses only the issue of the number of poor farms and their income level. To address the issue of the incidence of poverty by province Table 30 presents the percent of farms which are classed as poor, using the 1100 Colon income definition.

Table 30  
COSTA RICA 1973  
Geographic Incidence of Farm Poverty

Province	percent of Farms With Under 1100 Colones per capita	Farm Poverty Index (Province as a % of National %)
High Farm Poverty Provinces		
Cartago	51.3 %	122
San Jose	49.0	117
Average Farm Poverty Provinces		
Guanacaste	40.2	96
Alajuela	39.3	94
Limon	39.2	94
Low Farm Poverty Provinces		
Puntarenas	36.0	86
Heredia	33.2	79
Total	41.9	100

SOURCE: Samuel Daines computation based on data in Kreitman, Rural Poor Profiles, Tables 1A, and 1B

It is interesting to note that Heredia, the province with the lowest average income among poor farmers, is the province with the least incidence of poverty when measured by the percent of farms which are poor. This indicates that while the proportion of farms which are poor may be small, the severity of the poverty level of this small number is acute.

San Jose, surprisingly is classed by the standard in Table 30 as a high farm poverty incidence province. Disaggregating these province wide findings to the canton and district level should provide considerable program guidance on the location of potential geographic targets.

ii. On-Farm and Off-Farm Income Sources for Farm Families

Table 31 presents the percent share of income originating from on-farm and from off-farm sources to farm families. This table understates the off-farm income component because of the exclusion of a large part of the off-farm coffee harvest income, and an overstating of the value of on-farm family labor inputs.

Table 31  
COSTA RICA 1973  
Income Sources for Farm Families by Farm Size

Farm Size	Percent of Income from ON FARM sources (Poor Farms Only)	Percent of Income from OFF FARM sources	
		Poor Farms	Non Poor
"Landless" Farms	50.7 %	49.3 %	74.4 %
0 to 1 Ha.	62.3	37.7	74.3
1 to 2 Ha.	85.0	15.0	50.7
2 to 5 Ha.	90.0	10.0	31.1
5 to 10 Ha.	92.4	7.6	19.4
10 to 20 Ha.	93.1	6.9	15.4
All Poor Farms	81.0	19.0	26.5

SOURCE: Kreitman, Rural Poor Profiles, Table 1D

The importance of off-farm income sources decreases consistently as farm size increases. This is similar to the conclusion from the employment section in which the larger farms are able to absorb an increasing share of the available family labor. It is surprising that in no case do off-farm sources account for more income than on-farm sources.

The difference in dependance on off-farm income sources between the poor and non-poor farms is substantial. In most cases the percentage contribution of off-farm income is more than twice as high on non-poor farms as on poor farms

Table 32 presents the source of off-farm income by sector, that is divided between off-farm employment on other farms, and off-farm employment in non-agricultural activities.

Table 32  
COSTA RICA 1973  
Off Farm Income Source by Sector

Farm Size	Percent of Income From Off Farm Agriculture		Percent of Income From Off Farm Non Agriculture	
	Poor	Non Poor	Poor	Non Poor
"Landless" Farms	8.3 %	14.4 %	41.0 %	59.9 %
0 to 1 Ha.	5.4	11.3	32.2	63.0
1 to 2 Ha.	2.1	7.3	12.8	43.3
2 to 5 Ha.	1.5	5.3	8.3	25.6
5 to 10 Ha.	1.6	4.1	5.9	15.2
10 to 20 Ha.	1.5	3.1	5.4	12.3
over 20 Ha.	na	2.6	na	12.8
All Farms	3.0	4.5	15.9	21.9

SOURCE: Kraitman, Rural Poor Profiles, Tables 1A, and 1B

Based on Table 32, Table 33 summarizes the proportion of the off farm income which is non-agricultural in origin. From Table 33 we can see that while the level of off farm income varies significantly by farm size, and between the poor and non-poor, there is little difference in the proportion of off-farm income by sector. What this implies is that the non poor do not have improved incomes because they are able to depend more on non-agricultural employment.

Table 33  
COSTA RICA 1973  
Proportion of Off-Farm Income Originating in  
Non-Agricultural Employment

Farm Size	Percent of Off-Farm Income Originating in Non-Agricultural Off-Farm Employment	
	Poor Farms	Non-Poor Farms
"Landless" Farms	83.2 %	80.6 %
0 to 1 Ha.	85.6	84.3
1 to 2 Ha.	85.9	85.6
2 to 5 Ha.	84.7	92.3
5 to 10 Ha.	78.7	78.8
10 to 20 Ha.	78.3	79.9
Over 20 Ha.	na	83.1
All Farms	84.1	83.0

SOURCE: Samuel Daines computation based on data from Kraitchman Rural Poor Profiles, Tables 1A, and 1B

### Section 3. Market Orientation and Subsistence on Target group Farms

Subsistence agriculture is a term usually applied to farms outside, or principally outside, the market economy, who produce most of their own inputs and consume most of their output. Except for very limited exceptions, there appear to be no subsistence farms by this definition in Costa Rica.

Certain crops, however, are consumed by their producers in significant quantities. Corn and beans are examples of crops which in certain regions are consumed in significant quantities. It is proper therefore to speak of subsistence crops but not subsistence farms since in only rare cases do these subsistence crops make up a large share of the total value of production on small or poor farms. Since the subsistence crops are grains, and low value per hectare crops, the share of land dedicated to them will be a higher proportion than their share of value of output. The share of product value and not the share of area cultivated must be used to measure subsistence. Table 34 presents the value of product consumed as a percent of the value of product sold as an indicator of the level of subsistence for poor and non poor farms.

Table 34  
COSTA RICA 1973  
Subsistence Index  
Value of Product Consumed as a Percent of Product  
Value Sold

Farm Size	Poor Farms			Non Poor Farms
	Puriscal	Turrubares	National Average	Nat. Ave.
0 to 1 Ha.	9.6%	7.5%	4.0%	0.9%
1 to 2 Ha.	8.3	14.9	5.3	1.3
2 to 5 Ha.	8.5	8.8	6.4	1.5
5 to 10 Ha.	7.3	7.0	5.8	1.5
10 to 20 Ha.	6.2	7.4	5.6	2.1
Over 20 Ha.	na	na	na	1.3
All Farm Sizes	7.6%	7.9%	5.2%	1.3

SOURCE: Samuel Daines computation based on Kreitman, Rural Poor Profiles, Tables 1A and 1B

In addition to presenting national averages for both poor and non-poor farms, Table 34 includes two extremely poor Cantons where subsistence levels are considerably higher. Three obvious trends are evident in Table 34, first, poor farms are three to four times more subsistence oriented than non poor farms, second, that inside the poor group as poverty deepens so does the level of subsistence, third, in the non poor subsistence increases as farm size increases, and the incidence of home consumption on farms over 20 Ha. is as strong as the average.

Table 34 underestimates the level of subsistence because two important sources of home produced consumption are not captured in the basic data used for the table. The data do not include home consumption of livestock products. given the importance of livestock in the total product mix on small farms as is discussed in the production patterns section, the consumption of livestock products may be almost as important as crop consumption. The second omission is of small vegetable crops or permanent crops which are grown exclusively for home consumption and for which the volume of each item (for example one or two plantain trees) is small enough that the interviewer likely omitted it from the questionnaire. These omissions may likewise be important.

Even if we allow for a 100 underestimation, the level of subsistence on the average for poor target group farms would be about 10 on the average, and even in the poorest Canton, less than 30 .

It appears, therefore that the target group are basically market oriented in terms of the sale of their produce. Whether they are also integrated into the market for agricultural inputs is an issue addressed in the technological indicators section of this study, which indicates that while the level of input purchases is lower on poor farms, almost all of them are involved in the purchase of some inputs and in that sense are involved in the market economy.

## Subsection 9. PRODUCTION PATTERNS

The intent of this section is to provide a profile of the production patterns and technological characteristics of farms which may be included in AID program activities. The group of farms which may receive direct assistance must be broader than just the poor and very small farms since a principal program focus should be to generate employment for landless workers, and expand off farm employment opportunities for the smallest farms. Four potential program focus farm sizes have been selected as representative sizes, and the country has been divided into seven agronomically defined regions for the analysis of production and technological patterns. One extra farm size (20 to 50 Ha.) is added in the tables for comparison purposes to illustrate patterns on larger farms.

### a. CROP MIX AND LIVESTOCK PRODUCTION PATTERNS

The total value of production on small farms in Costa Rica comes from a surprisingly diverse set of agricultural activities. Though annual crops are important in terms of area cultivated they only contribute 11-13 percent of total value of production. Table 35 separates agricultural activities on small farms into three categories, annuals, permanent crops, and livestock products.

Table 35  
The Contribution of General Crop and Livestock  
Activities to Total Value of Production on Small Farms  
(Including 17 Principal Crop and Livestock Products)

Farm Size	Percent of Total Farm Value of Production*			
	Annual	Permanent	Livestock	Total
2 to 3 Ha.	13.4 %	38.0 %	48.6 %	100 %
3 to 4 Ha.	11.8	45.1	43.1	100
5 to 10 Ha.	11.3	43.3	45.4	100
10 to 20 Ha.	13.2	46.7	40.1	100
20 to 50 Ha.	11.2	36.3	52.6	100

\*Production consumed on the farm is included in total value of production. The price used to value home consumed production is the average producer price from the Academia study.

SOURCE: Daines Representative Farm Analysis Table 32

The importance of permanent crops, especially coffee, is not surprising, but the importance of animal products on even the smallest farms distinguishes Costa Rican small farmers from most other Latin American situations. The general lack of importance of basic grains and other annual crops, even when home consumption is included, emphasizes the point made elsewhere that subsistence agriculture is clearly not the rule for small Costa Rican farmers.

Regional differences in crop mix on small farms are significant. Table 36 indicates the percent of total value of production originating in annual crops, permanent crops, and livestock products.

Table 36  
Crop and Livestock Contribution to Farm Value of  
Production by Agronomic Region

Agronomic Region and Farm Size	Percent Contribution to Total Value of Farm Production			
	Annual Crops	Permanent Crops	Livestock Products	Total Value
Cent. Valley East				
2 to 3 Ha.	13 %	48 %	39 %	100 %
5 to 10 Ha.	9	50	41	100
10 to 20 Ha.	9	46	45	100
Cent. Valley West				
2 to 3 Ha.	8	53	39	100
5 to 10 Ha.	5	69	26	100
10 to 20 Ha.	3	73	24	100
North Zone				
2 to 3 Ha.	13	42	45	100
5 to 10 Ha.	13	44	43	100
10 to 20 Ha.	23	70	7	100
Dry Pacific				
2 to 3 Ha.	20	5	75	100
5 to 10 Ha.	15	7	78	100
10 to 20 Ha.	13	6	81	100
Central Pacific				
2 to 3 Ha.	10	38	52	100
5 to 10 Ha.	7	34	59	100
10 to 20 Ha.	14	40	46	100
Pacific South				
2 to 3 Ha.	21	50	29	100
5 to 10 Ha.	19	52	29	100
10 to 20 Ha.	18	47	35	100
Atlantic Zone				
2 to 3 Ha.	8	31	61	100
5 to 10 Ha.	10	47	43	100
10 to 20 Ha.	12	45	43	100

SOURCE: Daines, Representative Small Farm Analysis, Table 22

Annual crops are least important in the two central valley regions, and most important in the Pacific regions. Permanent crops are important, as would be expected, in all regions except the dry Pacific area where irrigation would be required to support them. In the dry Pacific area livestock predominates combined with annual crops. In both of the central valley regions small farms depend on annual crops to a larger extent than large farms, but there is no obvious crop mix trend according to farm size elsewhere.

## i. Annual Crops

While annual crops occupy a significant share of the land in small farms, they are relatively unimportant in value terms. Table 37 indicates the contribution of major annual crops to total farm value of production.

Table 37  
Percentage Contribution of Principal Annual Crops  
to the Total Value of Production on Small Farms

Crop	Percent of Total Value of Farm Production			
	2 to 3 Ha.	5 to 10 Ha.	10 to 20 Ha.	20 to 30 Ha.
Corn	3.8 %	2.9 %	3.3 %	3.7 %
Rice	2.0	2.2	3.2	0.5
Beans	1.7	1.4	1.9	1.8
Basic Grains	7.5	6.6	8.9	3.9
Potatoes	1.7	1.2	1.2	0.9
Cassava	1.1	1.3	1.8	0.9
Tomatoes	1.4	0.9	0.3	0.2
Tobacco	1.7	1.3	1.0	0.2
Other Annuals	5.9	4.7	4.3	2.3
All Annuals	13.4	11.3	13.2	11.2

SOURCE: Daines, Representative Small Farm Analysis, Tables 22,  
23

On a national basis corn is the most important annual crop for small farms. Tomatoes and tobacco, are surprisingly important for the smallest farms. These cropping patterns vary considerably by region. A detailed description of the cropping patterns in each regions for each farm size is given in Daines, Representative Small Farm Analysis Table 22. Potatoes are only important on small farms in the central valley East, and to a lesser degree in the North zone. In those two regions potatoes are approximately four times as important on the smallest (2-3 Ha.) farms as all basic grains together. Basic grains predominate among annual crops in the all of the Pacific zones, though to a lesser degree in the Pacific South where tobacco is almost as important on small farms as basic grains. Tomatoes are an important small farm crop in both central valley regions and yuca in the North and Atlantic zones.

It appears that annual crops, taken as a group are not very important sources of income (or consumed value) on small farms as a whole, however, they are more important on the poorer of the small farm group than for all small farms. This tendency may be seen in Table 38.

Table 38  
The Relative Importance of Annual and Cereals Crops  
in Total Value of Farm Production Between Poor and  
Non-Poor Farms

Farm Size and Income class	Percent of Land in Cereals	Percent of Land in Annual Crops	Percent Additional Annual Crops on Poor
0 to 1 Ha.			
Poor	31.5 %	37.1 %	43.8 %
Non Poor	18.2	25.8	
1 to 2 Ha.			
Poor	38.2	43.2	33.3
Non Poor	25.5	32.4	
2 to 5 Ha.			
Poor	30.7	33.1	47.8
Non Poor	18.8	22.4	
5 to 10 Ha.			
Poor	19.5	20.9	29.8
Non Poor	14.0	16.1	
10 to 20 Ha.			
Poor	13.3	13.9	0.7
Non Poor	12.7	13.8	

SOURCE: Kreitzman Table 2d, 2e

Table 38 indicates that the poorer farms in the smaller size groups depend much more on annual crops for their production than do the non-poor. In addition it indicates that basic grains predominate in the annual crop group more heavily for the poor than the non poor. This implies that non poor farms are more diversified into other annual crops like potatoes, tomatoes, tobacco which while more profitable are also higher risk crops.

In summary it appears that annual crops are much less important on small farms than livestock and permanent crops. This is true for both the poor and non poor small farms, even after adjusting the national averages for each size range by the added dependance factor on poor farms.

While it is not always safe to suggest that observed differences between poor and non poor are necessarily causative, (as opposed to symptomatic) of their poverty, the data available here would lead us to hypothesize that diversification out of basic grains, into other annuals or other agricultural activities may be a vital factor in raising target group incomes.

## ii. PERMANENT CROPS

In four out of the seven zones, permanent crops predominate in small farm production. Coffee is the most important crop, not only among the permanent crops, but is also the most important single agricultural activity on small farms. Coffee in addition is of prime importance to the landless laborers and small farmers as a source of employment.

Perhaps the most important difference between the poor and non poor small farmer is that the non poor farm has substantially more coffee. The magnitude of this difference has already been presented in the employment section of this document and will not be repeated here. This difference is, however limited to certain regions. Table 39 presents the percent share of value of production on small farms from coffee by region.

Table 39  
Coffee Value as a Percent of Total Value of Production  
for Small Farms by Region and Farm Size

Region	Farm Size			
	2 to 3 Ha.	5 to 10 Ha.	10 to 20 Ha.	20 to 50 Ha
Cent. Valley E.	42.9 %	40.8 %	38.2	31.7
Cent. Valley W.	48.4	61.8	63.7	67.2
North Zone	30.8	28.1	38.3	9.8
Dry Pacific	2.6	3.8	2.8	2.6
Cent. Pacific	35.9	30.8	36.2	32.9
Pacific South	45.2	45.0	38.6	24.9
Atlantic Zone	2.5	2.7	2.1	1.6
All Regions	29.8	30.4	31.5	24.4

SOURCE: Daines, Representative Small Farm Analysis, Table 25

Reasons aside from coffee must be the predominant explanation for differences between the poor and non poor in the dry Pacific and Atlantic zones since coffee is virtually non existent there.

In the important coffee regions, coffee accounts for approximately 90 percent of the permanent crop value on small farms, and in the other regions from 50-75 percent. In the Atlantic zone, however, coffee is only 5 percent of permanent crop value. Other important small farm permanent crops include bananas, plantains, guineo, cacao and sugar cane. Table 40 outlines the percent importance in farm production value of these other permanent crops by region for farms between 5-10 Ha. A more detailed treatment for all small farm sizes can be seen in Daines, Representative Small Farm Analysis, Table 24.

Table 40  
The Contribution of Permanent Crops (Excluding Coffee)  
to the Total Value of Farm Production on 5 to 10 Ha.  
Farms

Region	Percent of total farm value of production				
	Bananas	Plantains	Guineo	Cacao	Sugar Cane
Cent. Valley E.	1.0 %	0.3 %	0.0%	0.0%	7.7 %
Cent. Valley W.	0.0	0.1	0.0	0.0	7.0
North Zone	2.1	4.0	1.5	0.8	7.4
Dry Pacific	0.3	2.0	0.3	0.0	1.2
Cent. Pacific	0.6	0.7	0.2	0.0	1.7
Pacific South	1.6	4.1	0.2	0.2	1.0
Atlantic Zone	10.0	13.8	0.2	20.1	0.5
All Regions	2.2	3.5	0.3	3.0	3.8

SOURCE: Daines, Representative Small Farm Analysis, Table 24

Table 40 emphasizes the wide regional variation in the importance of permanent crops. Sugar cane is the widest ranging of the important non-coffee permanent crops, and provides 5–10 percent of small farm incomes in the central valley and North zones. Cacao, bananas, and plantains are vital to small farm incomes in only the Atlantic zone where they contribute 35–45 percent of the gross value of production on small farms. While guineo is of some small importance in the North zone on small farms, its insignificance as an income source is surprisix

Differences in the importance of permanent crops between the poor and non poor appear to be limited to coffee, there is little observed difference in the cultivation of other permanent crops (see Kreitman Table 2d, 2e).

### iii. Livestock Products

The importance, and in many regions predominance, of livestock products on small farms is obvious from the tables already presented. This section will explore the product composition inside livestock and indicate the regional variation in the mix of livestock products on small farms.

Livestock products may be divided into two groups, pasture based, including milk, beef, sheep etc., and non-pasture livestock including poultry (meat and eggs), pork, honey etc.. For the small farmer the distinction is important since his limited size may restrict the expansion of pasture based livestock but not the other animal activities.

The data appear to confirm the hypothesis that farm size has a direct influence on the type of livestock product grown. Table 41 presents the proportion of total livestock product value contributed by pasture based, milk and beef products.

Table 41  
The Value of Pasture Based Livestock Products as a  
Percent of Total Value of Livestock Product by  
Farm Size

Farm Size	Milk and Beef Value as a Percent of Total Value of Livestock Product
2 to 3 Ha.	35 %
3 to 4 Ha.	42
5 to 10 Ha.	50
10 to 20 Ha.	69
20 to 50 Ha.	73

SOURCE: Daines, Representative Small Farm Analysis, Table 25

The opportunity for increasing the production of pasture based livestock on small farms is probably very limited on the smallest farms except through increasing the productivity of land already in pasture. On the smallest farms, the other livestock products may have much more potential.

Table 42  
The Contribution of Pork and Poultry  
Products to Total Value of Production on Small Farms  
by Region and Farm Size

Region	Value of Production as a % of Total Farm Production Pork			Poultry (eggs and meat)		
	2/3	5/10	10/20	2/3	5/10	10/20
Valley E.	8%	6%	3%	1%	2%	1%
Valley W.	6	4	3	2%	1%	9
North Zone	15	11	13	6	4	22
Dry Pacific	47	31	27	11	7	5
C. Pacific	14	12	12	22	12	4
S. Pacific	12	10	10	9	5	4
Atlantic	38	20	16	8	6	3
All Regions	20%	20%	12%	12%	9%	8%

SOURCE: Daines, Representative Farm Analysis, Table 25

Subsistence on small farms may be as important in livestock products as in crops. The census data on which these analyses are based was unable to capture the on farm consumption of livestock products. Table 41 and the other tables in this document included consumed and sold livestock products together in the total value. Home consumption of farm produced livestock commodities is an important issue which should be addressed in a regionally targeted sample survey because of the possible positive nutritional impact on target group families. Livestock products may have a significantly lower share of cash income than of total value of farm production.

Milk and beef products appear as important small farm commodities in all regions, milk products being most important in the central valley east, and the central Pacific regions, while beef is most important in the dry Pacific, and Atlantic regions. Both milk and beef are important small farm products in the North zone. In the farm sizes from 10 to 50 Ha. beef becomes predominant over milk in all cases.

Table 43  
Milk and Beef Share of Total Value of Production  
on Small Farms by Region and Farm Size

Region	Percent of Total Value of Farm Production					
	Beef			Milk		
	2/3	5/10	10/20	2/3	5/10	10/20
Valley East	8%	9%	10%	20%	24%	30%
Valley West	2	4	6	4	4	6
North Zone	10	15	36	14	13	27
Dry Pacific	12	29	39	5	11	10
C. Pacific	7	9	15	9	13	16
S. Pacific	4	7	11	4	7	9
Atlantic	11	15	17	4	2	2
All Regions	8%	13%	19%	9%	10%	14%

SOURCE: Daines, Representative Small Farm Analysis, Table 25

## b. YIELD PATTERNS AND TECHNOLOGICAL LEVEL ON SMALL FARMS

### i. TECHNOLOGICAL INDICATORS ON SMALL FARMS

Two indicators are used to give a technological profile of small farms, mechanical intensity, and fertilizer use.

#### —MECHANICAL INTENSITY

The number of tractor or mechanized horsepower per hectare cultivated, instead of increasing on larger farms as one might expect, declines as is indicated in Table 44.

Table 44  
Mechanical Intensity of Cultivation of Small Farms  
As Indicated by the Number of Tractor Horsepower  
per Cultivated Hectare

Farm Size	Horsepower per Cultivated Ha.	Mechanical Intensity Index (National Average HP/Ha. Cultivated = 100)
2 to 3 Ha.	0.92	158
3 to 4 Ha.	0.95	162
5 to 10 Ha.	0.70	120
10 to 20 Ha.	0.61	104
20 to 50 Ha.	0.45	77

SOURCE: Daines, Representative Small Farm Analysis, Table 4

The decline in mechanical intensity does not necessarily indicate that the smaller farms utilize a larger proportion of their total power in mechanical form than do larger farms. Table 45 indicates that small farms utilize more animal and human power as well, when all power sources are added together the smaller farms appear to be more power intensive.

Table 45  
COSTA RICA 1973  
Power Source and Intensity on Small Farms by Farm  
Size

Farm Size	Draft Animals per Hectare Cultivated	Total Power Indicator (Mechanical Animal and Human)	Index of All Power (Nat. Ave. = 100)
2 to 3 Ha.	0.14	2.14	252
3 to 4 Ha.	0.14	1.82	214
5 to 10 Ha.	0.10	1.27	149
10 to 20 Ha.	0.07	1.03	122
20 to 50 Ha.	0.05	0.83	98

SOURCE: Daines, Representative Small Farm Analysis, Table 4

The smallest farms have 2.5 times as much power available per hectare cultivated as the national average. These figures overestimate the power utilized per hectare cultivated since much of the power on small farms comes from human labor, which is significantly under utilized. If however, human labor is subtracted out leaving only animal and mechanical power the small farms are still much more power intensive.

Whether the finding that smaller farms utilize more mechanical and other power per hectare cultivated is an indicator that they are at a higher technological level depends on the definition of technology. So many different meanings have been given to the word technology that it is perhaps better not to give an interpretation which depends on any one of them. All that can be said from Table 45 is that small farms use more power (animal, mechanical, and human) than do larger ones.

As with other characteristics of small farms, mechanical and power intensity vary regionally, and conclusions drawn only based on national averages poorly represent any region. Mechanical power use on small farms is virtually non-existent in the Atlantic zone, and very infrequent on small farms in the central and south pacific regions. The dry Pacific and North zones are the most mechanically intense of small farm regions, followed closely by the two central valley regions. The total power index follows a similar regional pattern indicating that by and large mechanical power does not result in a reduction in the amount of animal and human power used.

## —FERTILIZER USE ON SMALL FARMS

Small farms utilize significantly less fertilizer per cultivated hectare than the national average. It is interesting to note that this is also true of medium sized farms (from 20 to 50 Ha.), only over 50 Ha. do farms operate at fertilizer use levels above the national average.

Table 46 presents a summary of fertilizer use in major crops per hectare cultivated in those crops.

Table 46  
COSTA RICA 1973  
Fertilizer Use on Small Farms

Farm Size	Kg. of Fertilizer per Ha. Cultivated	Fertilizer Use Index (Nat. Ave. Kg/Ha. Cultivated = 100)
2 to 3 Ha.	149.9 Kg.	67
3 to 4 Ha.	160.8	72
5 to 10 Ha.	158.9	71
10 to 20 Ha.	161.6	72
20 to 50 Ha.	155.8	70

SOURCE: Daines, Representative Small Farm Analysis, Table 7

There is little observable trend among small and medium sized farms in the overall use of fertilizers. All are significantly below the national average, which is itself rather low by experiment farm standards.

Except for the dry Pacific and Atlantic regions, over half of the total fertilizer used on small farms is used in Coffee, and in the principal coffee areas the figure is over 75 . Even so, fertilizer use in coffee on small farms is significantly less than the national average. The only exception to this is in the central valley West region where small farms apply significantly more fertilizer in coffee than the national coffee average.

In the dry Pacific region two thirds of small farm fertilizer is used in rice and one third in corn. In the Pacific South region almost one third of small farm fertilizer is applied in tobacco.

Fertilizer use in basic grains on small farms varies widely by region, with some regions and farm sizes above the national average application rate but most regions below. In Bananas small farm fertilizer use is consistently less than 10 percent of the national average reflecting the strong influence of large and well organized corporate production. In tobacco small farms vary only slightly above and below the national average.

Most small farms appear to be using some fertilizer, and while the overall average is significantly under the national average, there are important regions and crops where small farms appear not to be significantly behind the larger farm size segment in fertilizer use.

## ii. YIELD PATTERNS

Yields on small farms in corn are clustered about the one metric ton per hectare figure with a gradual declining trend as farm size increases. Corn yields on small farms are slightly higher than the national average, in rice they are significantly lower and in beans slightly lower. Table 47 presents yield patterns in basic grains which in the interest of brevity average out the rather substantial regional differences. A complete region and farm size breakdown of yeild patterns for all major crops is given in the Representative Farm Analysis Tables 9 through 13. These yield patterns are not unweighted averages and may therefore reflect an innacurate view of true weighted regional and national patterns.

Table 47  
COSTA RICA 1973  
Yields in Basic Grains on Small Farms

Farm Size	Physical Yield Index (National Average Yield in Tons/Ha. = 100)		
	Corn	Beans	Rice
2 to 3 Ha.	108	102	63
3 to 4 Ha.	105	88	64
5 to 10 Ha.	80	90	76
10 to 20 Ha.	104	103	72
20 to 50 Ha.	105	75	56

SOURCE: Daines, Representative Small Farm Analysis, Table 9

Yields in tobacco on small farms are consistently above the national average reflecting the more localized and higher technological level in this crop.

Yields in potatoes, yuca, and tomatoes appear to be regionally determined, there are no farm size patterns which appear to be meaningful.

Small farm yields in coffee appear to be only slightly below the overall averages for the various regions. Banana yields are lower in comparison to national averages than any other crop.

Except for a few crops, there are essentially no yield patterns among small farms which can be identified easily. Most of the yield differences appear to be regional in nature and little related to farm size.

One important conclusion may be drawn from the yields and technological le discussions. Small farms use only 67-72 percent as much fertilizer as larger farms, yet their yields are not consistently lower. While there are many exceptions to this rule (coffee, bananas) in most crops the small farmer appear to be a more efficient user of fertilizer, or at least his yields have not suffered in any observable and systematic pattern from his lower fertilizer use.

## Subsection J. PRODUCTION CONSTRAINTS

The earlier sections attempted to define and give a simple statistical profile of the target group, the discussion now turns to searching for ways of improving their situation. The method suggested in the Latin America Regional Agriculture Assessment guidelines, to allow the problems to suggest the solutions, begins at the farm level asking the question, What factors are limiting the poor farmer from improving his income or welfare? These problems, or limiting factors are called constraints. Two general types of constraints will be examined, farm level, and non-farm factors. Subsection 1 addresses just the farm level portion of these constraints, while the other subsections address off farm constraints such as demand, prices, marketing and processing infrastructure, institutional and policy limitations.

Farm level, or production constraints will be grouped into categories roughly corresponding to the resources utilized at the farm level and the technology used to combine these resources in production.

Two methods of searching for problems and feasible solutions are utilized, the first (and preferable) method compares the production characteristics between the poor and non-poor farms, and the second examines the poor farms dire

To simplify the constraints analysis, the improvement of net income is used as the single most important objective. The target group farm may improve its income in one, or a combination of the following production system changes

1. Increase the amount of land cropped (including land cropped in pasture) by obtaining the use of added land through purchase, rental, or other tenural forms
2. Increase the amount of land cropped by increasing the porportion of land utilized (cropping heretofore unutilized land)
3. Increase income without increasing the area cropped by changing the combination of crops and livestock products from lower value per Ha. products to higher value per Ha. products.
4. Increase income without changing the area cropped or the mix of products by increasing the income yield or productivity of land used in a particular crop. The income yield per hectare may be increased by increasing the value of output more than the additional costs of the technological change, or by holding the value of output constant and reducing the cost of inputs. Changes of this type are for example utilizing more fertilizer, more pesticides, better seed, improved management or technical practices, increasing the number of animals per Ha. in pasture, etc.. Most of the changes in this category are loosely known as yield improving technological changes.

5. Increasing the price recieved per unit of product.  
This may be accomplished by either improving the quality of the product (a technological change), or in changing the marketing arrangement.

In summary a farmer may increase his income by cultivating more land, growing higher value crops, improving the income yeild per hectare, or by getting a better price for his product.

The above catalog of income improvement alternatives helps to structure the discussion of constraints which limit the achievement of improved income.

#### a. LAND CONSTRAINTS AND THE POTENTIAL OF INCREASING THE AREA CULTIVATED ON TARGET GROUP FARMS

It is unfortunate that none of the data available permits a direct measure of the quality of land in the poor and non-poor farms. It is difficult therefore, to measure land slack and to estimate the relative importance of land as a constraint on the improvement of target group income. Only one category of land in the data is clearly an indication of land slack, the ammount of land classed as fallow .

Table 48 indicates the percent of land in fallow for the target and non-poor farms by farm size.

Table 48  
COSTA RICA 1973  
Land Slack Estimates  
Percent of Land Once Cultivated, not now Utilized

Farm Size	Poor Farms	Non-Poor Farms	Difference
0 to 1 Ha.	0.0%	0.0%	0.0%
1 to 2 Ha.	0.0	0.0	0.0
2 to 5 Ha.	1.5	0.0	1.5
5 to 10 Ha.	4.4	1.6	2.8
10 to 20 Ha.	8.0	3.7	4.3
Over 20 Ha.	na	4.9	na

SOURCE: Kreitman Table 2d, 2a

Using fallow land as an indicator of land slack it would appear that there is no slack in target group farms under 2 Ha., an insignificant amount of slack, and only from 4-8 percent slack in target group farms above five Ha.. Fallow land may not be all available for cultivation, some fallow is a necessary part of the cultivation cycle. If we assume that the non-poor farm is an indication of the minimum fallow necessary to operate, then a superior land slack measure would be the excess fallow on poor farms. The net measure of land slack indicates that from 3-5 percent of land is in available fallow on target group farms over five Ha..

In many countries including Costa Rica, land slack is principally found not in fallow but in poorly utilized pasture which could be cultivated or brought into intensive improved forage and pasture crops. The proportion of pasture land may be used as a rough indicator of land slack. This measure is not reliable enough to be used with a high degree of confidence, but in the absence of direct measures of land quality is preferable to no measurement at all.

Table 49  
COSTA RICA 1973  
Possible Land Slack in Pasture and Fallow

Farm Size	Percent of Land in Pasture on Poor farms	Net Land Slack on Poor Farms in Fallow and Pasture
0 to 1 Ha.	9.2%	9.2%
1 to 2 Ha.	15.4	15.4
2 to 5 Ha.	20.3	21.8
5 to 10 Ha.	42.0	44.8
10 to 20 Ha.	42.9	47.2

SOURCE: Kreitman Table 2d, 2a

The discussion in Subsection five on commodity mix on small farms leads us to conclude that a significant part of the pasture is in relatively productive use. Some of the net land slack in Table 49 must therefore be discounted as being in current productive use.

Poor farms under five hectares cultivate from 60–84 percent of their land, farms from 5 to 10 Ha. cultivate only 40 percent and from 10 to 20 Ha. only 29 percent. Even if we discount for the probable decrease in quality as farm size increases there would appear to be considerable land slack on target group farms over five Ha.. It is probably reasonable to suggest that 20 percent of the land in 5 to 10 Ha. farms, and 30 percent in 10 to 20 Ha. target group farms is slack.

Land and land quality are highly regional phenomenon, and the conclusions drawn here vary widely from region to region, as demonstrated in Table 50.

Table 50  
COSTA RICA 1973  
Estimates of Land Constraint on Small Farms  
by Region for Farms from 10 to 20 Ha.

Region	Percent of Land by Land Use Category (10/20 ha.)			
	Fallow	Pasture	Pasture + Fallow	Uncultivated
C. Valley E.	4.2%	48.1%	52.3%	65.3%
C. Valley W.	1.8	45.7	47.5	51.6
North Zone	5.2	40.1	45.3	68.5
Dry Pacific	3.8	64.9	68.7	74.6
C. Pacific	9.0	46.3	55.3	60.5
Pacific S.	9.5	35.8	45.3	61.7
Atlantic	9.2	29.1	38.3	50.3
All Regions	6.3	44.9	51.2	61.8

SOURCE: Samuel Dains, Representative Small Farm Analysis,  
Tables 2 and 3

Many factors make this estimate difficult, for example in the Atlantic zone where colonization potential is significant and land is not a serious constraint, Table 50 indicates that a larger than average amount of the land in farms is cultivated. What may be drawn from Table 50 is that there is probably a potential increase in land under cultivation in target farms from 10 to 20 Ha. on the order of 30 to 40 .

In summary land appears to be a binding constraint on the development of the 74 percent of the target group farmers who are on farms of less than five Ha. It appears not to be a constraint on target group farms over 10 hectares, indeed a significant assistance opportunity should be to increase the amount of land under cultivation on these farms.

For the target families on farms under five hectares, the land constraint conclusion eliminates expanding cultivation as a viable income improvement strategy, leaving the following assistance alternatives for examination:

1. Focus assistance on increasing the supply of land to target group families in this class.
2. Focus on one or a combination of the other farm income increasing alternatives (higher value crop mix, improved technology etc.)
3. Focus assistance on creating off-farm employment opportunities for these small farmers.

Increasing the supply of land to the less than five Ha. group may involve land reform, but it could also be done by direct financing of land purchase or rental. The issue of land reform and an evaluation of its advisability and feasibility are beyond the scope of this paper, but increasing the supply of land to the less than 5 Ha. poor farmers is a critical need.

Alternatives for improving income through technological change will be discussed in section C. Off farm employment alternatives may be generated either on other larger farms, or in non-farm activities. generating off farm employment in non-agricultural activities is discussed in subsection 3 on marketing and processing.

The assistance opportunity of bringing unutilized land in target group farms between 5-20 Ha. is significant, and may be viewed not only as an income generating alternative for these farmers, but may generate employment alternatives for members of the smaller target farms, and for landless families.

Identifying increased cultivation in this target group segment as a potential assistance strategy leads us to a second level of farm level constraints, ie, what are the factor which impede the cultivation of this land. We might divide these into farm level resource constraints, and off-farm factors like demand, marketing infrastructure etc. The off farm factors will be discussed later, the paragraphs which follow focus only on farm level constraints.

Financial limits, available labor, and managerial capacity are perhaps the most important farm level constraints to the expansion of cultivation. There may be certain areas in Costa Rica, and certain seasons of the year when labor to operate extended cultivation may be difficult to obtain. Some have suggested that the level of social services and programs in the rural areas in Costa Rica may be such that many unemployed workers are not seriously looking for work. The data available do not directly address this issue, all that can be said is that except for periods of coffee harvest there appear to be significant labor surpluses in all rural regions. In the absence of other evidence it must be assumed that labor could be drawn to production alternatives at or near the current wage rate in sufficient quantity to not present a constraint on the expansion of cultivation in target group farms from 10 to 20 Ha. in size. Farm family labor on these farms could provide a large proportion of this added labor requirement without even requiring outside workers.

Credit and financial resources in Costa Rica are abundant, relative to other Latin American countries as was demonstrated in Table 15. The tripartite credit study indicated that small and poor farms unfortunately do not have adequate access to this credit. This issue is unclear and will need to be studied in particular areas and for the specific target group areas where assistance programs are proposed. It is possible that credit and financial constraints are principal limiting factors which prevent the cultivation of additional area.

Market, marketing, and technological factors may be more important limits on this expansion. Managerial practices in the livestock area may need to be altered in order to either make the livestock activity more intense, based on improved or cultivated pasture, or by increasing the animal land ratio on part of the pasture land to release the balance to cultivation. These are issues, beyond the scope of this overall assessment which must be addressed on an area by area basis, using sample survey data, for each geographic area selected for program assistance.

The availability of additional market demand at profitable prices and the accessibility of target farmers to adequate marketing infrastructure are probably as important limiting factors as are the farm level constraints.

In summary, it appears that three fourths of the target group farm families are constrained by available land, and that increasing cultivation is a low potential area for activity among these farms of less than five Ha. For target group farms over five Ha. increasing cultivation is a significant opportunity for assistance activity, with the potential of increasing target group incomes (assuming no change in productivity) of from 30-40 percent.

b. **CROP MIX CONSTRAINTS AND ALTERNATIVES FOR CULTIVATING MORE HIGH VALUE CROPS ON TARGET GROUP FARMS**

One alternative for increasing target group incomes is to shift the mix of crops in a higher value direction, that is substituting higher value crops for lower value ones, without increasing the total area cultivated. To explore the income potential of this approach we begin by classifying crops according to their value per hectare. One of the difficulties of making this value per hectare comparison is to avoid comparing crops at different technological levels. It is useful to separate the income increases which come from changing technological level from those which come from simply changing the proportions of products grown at constant yield levels. In order to arrive at comparisons of value per hectare between crops which are netted of technological differences, the comparisons are made in terms of a crop which most farms have at least a minimal amount of, Corn. If the corn yield is low, then the assumption is that this farmer is at a relatively low technology and hence the compared crop value relates to a lower yield as well. Table 51 contains the estimate of value per hectare for various crops as a percent of corn value per hectare on the same farms. Since many high value crops are only profitable in certain regions, whereas corn is grown in all, the comparison crop will dictate which region the figures are drawn from. The number in ( ) after the value figure indicates the region from which the estimate is taken.

Table 51  
COSTA RICA 1973  
Value of Production per Hectare Cultivated

Crop	Value of Production Per Hectare Cultivated (Corn value of Production per Ha. Cult. = 100)	
	2 to 5 Ha. Farms	5 to 10 Ha. Farms
Tobacco	3345	2896 (1)
Bananas	711	3303 (4, 5)
Tobacco	1245	1106 (6)
Potatoes	896	970 (1)
Coffee	769	844 (2)
Sugar Cane	202	754 (5)
Plantains	589	623 (6)
Yuca	367	439 (3)
Cacao	118	157 (7, 6)
Rice	159	175 (2, 1)
Beans	108	229 (2)
Corn	100	100 (all)

SOURCE: Daines, Representative Small Farm Analysis, Tables 9, 10, 11, and 12

There are a wide variety of specialty and minor crops in the high value category which are not included in the table, but which present viable small farm alternatives.

Livestock activities are difficult to classify according to their value per hectare since some of them do not even involve land (poultry and pork) and the ones that do use land do not generally use cultivated land. When livestock is based on cultivated pasture it can be a high value activity. When dairy is based on cultivated and improved pastures its value per Cultivated Ha. in Costa Rica is 669 percent of corn value on 0 to 5 Ha. farms, and 376 percent on 5 to 10 Ha. farms. (2) Beef is not as high value even when based on cultivated pasture, it is 265 of corn value on 0 to 5 Ha. farms and 155 on 5 to 10 Ha. farms.

The non-pasture based livestock products since they require no land are among the best alternatives for income generation on target group farms under 5 Ha.. These activities are already important income sources and familiar to a wide range of target group families, and therefore require little new technology. In this sense we might think of the non-pasture based animal activities (poultry, Pork, Honey, etc.) as very high on the list of high value products.

The question of the potential of the target group farms to cultivate a higher proportion of high value crops may be addressed by first comparing the proportion which high value crops already represent in the crop mix of poor and non poor small farms. Table 52 presents this comparison.

Table 52  
COSTA RICA 1973  
Comparison of the Area Cultivated in Low Value Crops  
Between Poor and Non-Poor Small Farms

Crop Type and Farm Size	Percent of Land Cultivated		Difference %	Ha.
	Poor	Non Poor		
Low Value Cereals				
0 to 1 Ha.	31.5%	18.2%	-13.3%	519 Ha
1 to 2 Ha.	38.2	25.5	-12.7	777
2 to 5 Ha.	30.7	18.8	-11.9	2,607
5 to 10 Ha.	19.5	14.0	- 5.5	1,505
10 to 20 Ha.	13.3	12.7	- 0.6	353

SOURCE: Kraitman Tables 2d, 2e

The potential cultivated land which could be shifted from low value to higher value crops is small in the farms over five hectares, if the non-poor are taken as the model. What this implies is that for the under five hectare farms there appears to be significant room for substitution of lower value crops for higher value.

Coffee is the crop which provides the high value basis for the income earned by the non-poor farms. It accounts for nearly all of the differences in income between the poor and non poor in the principal coffee regions. The answer to the income problem of the under five hectare farms seems simple enough, grow more coffee or crops like it in value per hectare. Since coffee is not really an alternative other products must be sought.

Unfortunately most of the high value crops are high risk crops. Their risk comes principally from market price fluctuations which occur most violently where the size of the market is small, as is the case of Costa Rica.

The most important constraints on shifting the crop mix are off-farm market system constraints. In the commodities where processing plants are an integral part of the marketing chain, assistance directly to processing activities is one way of reducing the off-farm constraint.

In summary it appears that some potential, large enough to be worth exploiting, exists in target group farms from 2 to 5 Ha. to substitute higher value crops for cereals. Non poor farms in similar regions on similar sized farms have been successful in doing so. Little potential for crop mix shift appears to be present in the over five Ha. target group farms. The mode of assistance and principal bottlenecks are likely to be found in marketing and processing, and not at the farm level.

c. **TECHNOLOGICAL CONSTRAINTS: ALTERNATIVES FOR INCREASING THE INCOME PRODUCTIVITY OF CULTIVATED LAND THROUGH TECHNICAL CHANGE**

On all farm sizes there is obvious potential to increase income by improving productivity through technological change. As was observed in the section on yield patterns on small farms, there are many crops in which the small farm yields are both lower than the national average, and very low by technical standards for the climate and soil conditions of Costa Rica.

Improved practices with resulting yield increases appears to be the only on-farm income alternative for the smallest farms under two hectares.

The crop mix is so diverse in Costa Rica, and the regional differences so marked that it is beyond the scope of this paper to explore the potential and describe the constraints which limit yield increasing technological change. The detailed comparison of yields by crop size and region undertaken in the Representative Small Farm Analysis (see Tables 9-13) revealed a heterogeneity of yield patterns which defied simple analysis. There were simply no obvious patterns. It is probable that careful analysis at the Cantonal or district level, disaggregating by cropping type and income class would provide a serious basis for both estimating the impact and evaluating the feasibility of yield increasing programs.

Table 53 summarizes the conclusions of the farm level constraints section for the farming segment of the target group.

Table 53  
 COSTA RICA 1973  
 Summary of Priority of Constraints and Potential  
 Areas of Opportunity for Assistance for Income  
 Improvement of Rural Poor Farm Families

Farm Size	No. of Target Families	Priority Constraints at the Farm Level	Priority Areas for Assistance
0 to 1 Ha.	9,018	Land Availability	Off Farm Employment Land Reform
1 to 2 Ha.	4,336	Land Availability	Off Farm Employment Land Reform
2 to 5 Ha.	6,550	Low value Crop Mix Low Yields	High Value Crops Tech. Change
5 to 10 Ha.	3,896	Low Utilization of of Land Low Yields	Increase Cult. Tech. Change
10 to 20 Ha.	4,079	Low Utilization of Low Yields	Increase Cult. Tech. Change

**AGROINDUSTRIAL PROFILE**  
**An Assessment of the Potential of the Agroindustrial**  
**Sector to Contribute to the Income and Employment of**  
**the Rural Poor Target Group**

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For

The Agency for International Development  
Mission to Costa Rica

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## INTRODUCTION

Agroindustry for the purposes of this profile includes the following 11 industries which process agricultural products

1. Slaughter and Meat Products
2. Milk Products
3. Fruit and Vegetable Processing
4. Fish and Seafood Products
5. Edible Oils and Vegetable Fats
6. Milling and Cereal Products
7. Bakery Products
8. Sugar Milling and Refining
9. Chocolate and Candy Products
10. Other Food Products
11. Animal Feed and Concentrates

Two important agroindustries are not included in this profile due to the unavailability of comparable data. These are the agricultural input industries (fertilizer, seeds, machinery etc.) and the Coffee hulling and milling industries.

The focus of this paper is on assessing the potential of these agroindustries for contributing to the income and employment of the rural poor target group. These industries might contribute in three principal ways to improving the rural poverty situation.

—Increasing farm income and employment by stimulating farm production through increasing the demand for farm products

—Increasing Off-Farm income and employment of the rural poor (farmers and landless families) directly as workers in agroindustrial plants

—Stimulating agricultural production by providing credit, technical assistance, and improved market accessibility to target group farmers

This paper is divided into three parts which roughly correspond to these three areas in which the agroindustrial sector may contribute to rural incomes.

## PART I: GENERATING DIRECT EMPLOYMENT AND INCOME FOR THE RURAL POOR IN AGROINDUSTRY

In order to assess the potential of the agroindustrial sector to generate employment and income for the rural poor target group through direct work in agroindustrial plants, this section outlines a set of characteristics for the eleven industries which influence their rural employment potential.

The potential impact of the agroindustrial sector on the direct employment of rural poor depends in large part on five characteristics:

1. The location of the industry. If industries are concentrated in urban areas their employment potential for the rural poor will be lessened.
2. The skill requirements of the industry. If the industry is skill intensive, requiring a high proportion of trained personnel its potential for absorbing rural farming and landless workers will be lower in comparison to industries with lower skill requirements.
3. The amount of capital required to generate employment. Since capital is scarce in Costa Rica, industries which generate large amounts of productive employment per capital unit have a more favorable rural employment potential.
4. The absolute size of the industry and the number of people it employs.
5. The expansion potential of the industry.

These five characteristics provide us with a way of making comparative judgements about the potential of alternative agroindustries for improving rural welfare in Costa Rica. These judgements will be drawn from three types of comparisons, first a comparison between the various agroindustries themselves, second a comparison between small scale and large scale agroindustries, and third a comparison between the agroindustries and other industries (textiles etc.) or direct farm production alternatives.

## A. The Absolute Size and Employment Intensity of Agroindustries in Costa Ric

### 1. INDUSTRY SIZE AND COMPOSITION

The food industries represent a declining share of Costa Rican industrial output, but are currently and will likely continue to be the predominant industry. Table 1 indicates the percent of total industrial output which is contributed by food industries.

TABLE 1  
Agroindustrial Production as a Percent of Total  
Industrial Production

	1972	1973	1974	1975
Food Industry	48.6	45.6	42.7	42.0

SOURCE: Plan Operativo de Sector Industrial para 1975, p. 34  
MEIC, San Jose, 1974

Five major agroindustries account for more than three fourths of the total agroindustrial output, these are cereals milling, oils, milk products, sugar, and meat slaughter and processing. They are almost evenly sized as is indicated in Table two.

Table 2  
Value of Production as a Percent of All Agroindustries

	Percent of Agroindustrial Output	Value of Output C000,000
Milling and Cereals Products	16	237.9
Edible Oils	15	225.2
Milk Products	15	222.0
Sugar Milling and Refining	15	219.1
Slaughter and Meat Products	15	212.0
Chocolate and Candy Products	8	120.5
Fruit and Vegetable Processing	6	85.0
Fish and Seafood Products	4	58.8
Animal Feed Products	2	28.7
Other Food Products	2	27.5
Bakery Products	2	22.3

SOURCE: Survey of Agroindustrial Establishments by MEIC 1975

It should be noted that the sample structure of the MEIC survey results in an underestimate of the importance of the bakery products sector due in large part to the predominance of small scale establishments in this sub-sector. For the purposes of this paper this limitation is not serious since small scale bakery establishments tend to locate inside urban areas near urban consumers, and are not therefore important sources of potential employment for the rural poor.

## 2. EMPLOYMENT SHARE

The size of an industry in terms of its share of output is not as good an indicator of its income potential for the poor as is the total magnitude of its employment. It is interesting to note from Table 3 that milling and cereals products, largest industry in value terms with 16 percent of agroindustrial value, accounts for only 4 percent of total agroindustrial employment.

Table 3  
Agroindustrial Employment in Costa Rica 1975

SUBSECTOR	Percent of Agroindustrial Employment	No. of People Employed
Edible Oils	21	2,011
Chocolate and Candy Products	14	1,336
Milk Products	14	1,295
Slaughter and Meat Products	13	1,186
Fruit and Vegetable Processing	10	889
Sugar Milling and Refining	9	838
Fish and Seafood Products	8	721
Milling and Cereals Products	4	408
Other Food Products	3	279
Bakery Products	3	270
Animal Feed Products	1	108

SOURCE: Survey of Agroindustrial Establishments, MEIC 1975

The fact that the most important industry in value terms is an almost insignificant employer highlights the importance of careful employment analysis of agroindustrial impacts.

### 3. EMPLOYMENT INTENSITY AND THE IMPACT OF EXPANSION

There is as much range in the employment generation potential among agroindustrial subsectors as there is between agroindustry as a whole and the rest of industry. It is not true for Costa Rica to say that agroindustry is a good employment generating alternative in general since some of its subsectors would generate little employment even if expanded significantly. For example the R. Kreitman tables based on Academia and Census data (2) indicate that there are 111,256 rural poor families (using a moderate poverty definition). This implies that there are between two and three hundred thousand rural workers. If we assume that one hundred thousand of those man years are not productively absorbed in primary agriculture it would appear that only a small fraction of that excess supply is currently employed in agroindustries, in any case less than 10 percent. A doubling of the output of the milling and cereals product industry (an additional output of C397 million) would absorb only 408 additional man years or four tenths of one percent of the excess supply. A corresponding increase in output (C397 million) in fruit and vegetable processing, or fish products, would result in adding 4,152 or 4,868 man years of employment. This means that expanding the milling and cereals product industry would have approximately one tenth as much employment impact per unit value of expanded production than other agroindustrial alternatives. These employment content indicators which show how much employment would be generated at current technology by expansions of agroindustrial subsectors are presented in Table 4.

Table 4  
The Employment Potential of Expansion in Agroindustries  
Man years of Employment Generated per Million Colones  
Value of Production

SUBSECTOR	Man years of Employment Generated per Million Col. of Output	Employment Potential as a Percent of the Largest Agroindustry (Milling-Cereals)
<b>INDUSTRIES WITH A HIGH EMPLOYMENT IMPACT IF EXPANDED</b>		
Fish and Seafood	12.3	1,194.0 Percent
Bakery Products	12.1	1,179.0
Chocolate and Candy Prod.	11.1	1,079.6
Fruit and Vegetable Proc.	10.5	1,018.5
Other Food Products	10.2	987.9
<b>INDUSTRIES WITH A MEDIUM EMPLOYMENT IMPACT IF EXPANDED</b>		
Edible Oils	8.9	869.6
Milk Products	5.8	568.0
Slaughter and Meat Products	5.6	544.8
<b>INDUSTRIES WITH A LOW EMPLOYMENT IMPACT IF EXPANDED</b>		
Sugar Milling and Refining	3.8	372.4
Animal Feed Products	3.8	366.4
Milling and Cereals Prod.	1.7	100.0

SOURCE: Samuel Daines computation based on data from a survey of agroindustrial establishments in Costa Rica by MEIC 1975

It should be remembered that these employment impact indicators refer only to the the DIRECT employment generated per unit of expansion. Employment would also be generated indirectly from both backward linkage effects (on farms) and from forward linkage effects (in marketing). These indirect effects will be discussed and estimated in Part II where the stimulation of other segments of the economy is treated.

#### 4. SCALE DIFFERENCES IN EMPLOYMENT INTENSITY

Not only does the product or subsector selected for expansion make a dramatic difference in the employment impact but also the scale of operation. Table 5 presents the employment impact of expansion by scale of operation.

Table 5  
Employment Impact of Expansion by Scale of Operation  
for Agroindustries in Costa Rica

Scale of Operation	Man Years of Employment Generated per Million Col.	Average No. Employed
Small Scale Plants	13.63	14.5
Medium Scale Plants	58.5	
Large Scale Plants	6.25	339.0*

SOURCE: Samuel Daines computation based on data from a survey of agroindustrial establishments in Costa Rica conducted by MEIC in 1975

\* This figure is the median size of large scale plants which was felt more appropriate for this table than the average which was 87.3

From Table 5 we can see the importance of capturing the employment benefit of small scale agroindustrial operations. It is interesting to note that the difference in employment payoff is only significant between the small and medium scales, there appears to be even a slight increase in employment impact between the medium and large scale plants.

The employment importance of small scale agroindustries may be illustrated by the fact that MEIC estimates that approximately 50 percent of all industrial employment occurs in small scale establishments. (see Informe Preliminar Sobre la Pequena Industria y Artesania, MEIC 1974)

## 5. SCALE DIFFERENCES BETWEEN AGROINDUSTRIES

Capturing the small scale employment benefit in expansion relates not only to scale but also to the choice of subsector to be expanded since certain subsectors lend themselves to small scale operations while others are rigidly limited by existing technology to principally large scale installations. That is to say that all of the individual agroindustries are not equally flexible to the choice of scale. This idea may be quantified by estimating the proportion of each sub-sector which is composed of by small scale operations.

Table 6  
Percent of Small Scale Plants by Agroindustry

Other Food Products	92.3 Percent
Bakery Products	72.7
Milk Products	71.4
Animal Feed Products	50.0
Fruit and Vegetable Processing	41.6
Fish and Seafood Products	40.0
Chocolata and Candy Products	37.5
Milling and Cereal Products	25.0
Sugar Milling and Refining	16.7
Slaughter and Meat Products	16.7
Edible Oils	0.0

SOURCE: Samuel Daines computation based on data from a survey of agroindustrial establishments in Costa Rica by MEIC 1975

Data is available in the Industrial Census to investigate in detail the technological differences which exist in plants of different scales in order to arrive at rational project selection criteria including scale as a choice factor. There is an observable tendency in Table 6 for those industries which have a high employment tendency to also have a higher than average small scale portion of plants. From a policy point of view this would imply that small scale choices in selected agroindustries may have significant potential for generating rural income through increasing off-farm employment.

### B. The Potential of Each Agroindustry for Expansion

Having made the comparisons of the employment potential of expansions in the various agroindustries we turn now to an examination of the potential for expansion of the individual subsectors. Our examination of expansion potential will deal with three aspects, market demand, comparative cost advantage, and capacity utilization.

## 1. CAPACITY UTILIZATION IN AGROINDUSTRIES

Expanding output where installed capacity already exists offers a particularly attractive alternative from the point of view of benefitting the rural poor since it entails no capital cost. When plant capacity is unused only variable cost inputs need be added to increase output, and since labor and primary materials are the most important variable cost items in agroindustries the added expenditure would flow almost intact to rural farmers and laborers, a major portion of whom may be rural poor. Table 7 examines the patterns of capacity utilization for each of the eleven agroindustries.

Table 7  
Installed Capacity and Capacity Utilization Rates  
for the Agroindustrial Sector of Costa Rica 1975

SUBSECTOR	Percent of Installed Capacity Utilized in 1975	Man Years of Direct Employment Added if 90 Percent of Capacity were Utilized
Fish and Seafood	49 Percent	611
Chocolate and Candy	53	923
Fruit and Vegetables	54	608
Bakery Products	55	168*
Other Food Products	55	378
Animal Feed Products	60	55
Milling Cereals Prod.	60	203
Slaughter and Meat	61	577
Edible Oils	64	807
Milk Products	72	323
Sugar Milling and Ref.	77	137
<b>Agroindustry Total</b>	<b>63</b>	<b>4,590</b>
Increased Employment as a percent of total Employment in 1975		<b>49.1 Percent Increase</b>

Since it is unlikely that agroindustries can reach 100 percent utilization of installed capacity, Table 7 presents the increased employment which would result if a 90 percent utilization rate were to be reached. It is interesting to note that the industries with lower utilization rates are also industries with high employment impact potential. The employment potential of increasing capacity utilization in agroindustries is significant, a 49 percent increase in agroindustrial employment could be achieved if the industries could operate at 90 percent capacity. This implies that a 27 percent increase in average capacity utilization in agroindustry (from 63 to 90 percent) would result in a 49 percent increase in agroindustrial employment. given the seasonality of certain agroindustrial activities the feasibility of increasing capacity utilization would need to be studied on an industry by industry basis.

it would appear that projects oriented at financing operating capital for variable cost inputs in order to more fully utilize existing capacity would be an important policy priority for generating income and employment for the rural poor.

## 2. CAPACITY UTILIZATION DIFFERENCES BY SCALE

Capacity utilization varies not only by agroindustry but also by scale of operation. Table 8 presents capacity utilization and employment increase potentials by scale.

Table 8  
Capacity Utilization and Employment Potential  
for Agroindustry in Costa Rica by Scale of Operation

SCALE	Percent of Installed Capacity Utilized in 1975	Man Years of Added Employment if 90 Percent Utilized
Small Scale (1)	46.0 Percent	7,953 (1)
Small Scale (2)	46.0	873 (2)
Medium Scale	61.3	602
Large Scale	63.5	3,102

(1) The sample by MEIC appears to have understandably undersampled small scale agroindustries. This is apparent when their sample by scale is compared with the total number of small scale establishments given in the MEIC study of small scale industry. Assumption (1) is that the capacity underutilization on the unsampled small scale industries is the same as it is on the sampled ones, but the number of establishments is expanded to the MEIC small scale industry study level. The difference between the conclusions using the two different numbers is so large that further examination of census data on this issue would be very useful. It appears that there may be enough unutilized capacity in small scale industry to almost double agroindustrial employment. This is only a possibility which must be studied further.

Regardless of which estimate is used, medium scale industry appears to have little employment potential when compared with the other two. Large scale industry appears to have a sizeable proportion of the employment potential under both assumptions, while small scale agroindustries are only a large potential contributor under the expanded assumption.

### 3. MARKET DEMAND FOR AGROINDUSTRIAL PRODUCTS

While this paper makes no pretense at having carefully studied the demand situation for agroindustrial products, some general observations will be made in order to orient the discussion of expansion potential toward market considerations. Perhaps the most important limitation on the expansion of agroindustry is market availability, this is particularly true because the products which are most attractive from an employment generation point of view are also products for which the internal market in Costa Rica, and even in the Central American Common Market is relatively thin.

#### a. Internal Demand for Agroindustrial Products

In the simplest model, the growth rate of aggregate internal demand for an agroindustrial commodity may be viewed as the product of a population growth rate, an income growth rate, and an income elasticity of demand. If we look at these three principal components of demand we will be more able to assess the possible role of internal demand as a limiting factor on agroindustrial expansion.

The income elasticity of demand tells us what the consumer would do with an added dollar of income, specifically what portion of an added dollar of income would be spent on the particular commodity we wish to analyze. Income elasticities tend to vary according to income level, hence a poor family with substantial unsatisfied food requirements or desires would spend a larger portion of an added dollar of income than would a relatively wealthier family. This tendency also explains why the overall income elasticity for food tends to be higher in underdeveloped countries than it is in the developed world. We would expect therefore that the demand for agroindustrial products would be growing at a much faster rate in Costa Rica than in the U.S. since in addition to a higher income elasticity, population is growing at nearly 3 percent per year. Aggregate internal demand for food is probably growing at about 5 percent per year in Costa Rica. While there is considerable difference between the demand situation for different food products, the simple fact that demand is not stagnant, as it has been in the U.S. for many decades, is a significant market reality. The food industry in the U.S. has experienced little expansion in many years, almost all of the changes have been internal readjustments to new and different processed forms, the total food consumed per capita in the U.S. is less today than it was before World War I. Since population growth is almost nil in the US one can understand why new food industries must effectively force others out of existence in order to enter. The growth rate in demand in Costa Rica means that the food industry can double every 15 years.

A high growth RATE of internal demand does not necessarily imply that internal demand is not a serious limitation since the rate of growth tells us nothing about the absolute magnitude. Costa Rica is a very small country, and the total size of its market is likewise small. For certain processed food products the urban markets of Costa Rica are almost non-existent. Even a very healthy annual growth rate in such a small base may imply that one added plant could supply added demand for many years to come. It should be remembered that while demand is small, the capacity of the agricultural sector to supply a particular commodity type (for example intensive fruit, vegetable and specialty crops) is not nearly so limited, imprudent expansions unguided by careful market studies may result in rapid market saturation.

Household and nutritional surveys in Costa Rica can provide the income segmented elasticities of demand needed to estimate the dimensions of increasing demand for individual agroindustrial products. Table 9 presents current (1975) agroindustrial production per capita and apparent consumption per capita for the eleven commodity groups included in this study.

Table 9  
Agroindustrial Production per capita as a Percent  
of Apparent Consumption per capita : An Indication of  
Unsatisfied Internal Demand

AGROINDUSTRY	Production as a percent of internal demand	Millions of Colones of unsatisfied internal demand
Other Food Products	62.7 Percent	10.2
Edible Oils	73.4	60.1
Animal Feed Products	89.8	2.9
Milk Products	90.7	20.6
Milling Cereals Prod.	91.6	19.9
Bakery Products	98.4	0.4

SOURCE: Samuel Daines computation based on data from a survey of agroindustrial establishments in Costa Rica by MEIC 1975

As can be seen in Table 9, six of the eleven industries have not satisfied internal demand by this measure. This measure is a minimal estimate of unsatisfied demand and represents essentially the import substitution demand. While the number of industries is large, the amount of apparent unsatisfied demand by this measure is small and occurs in industries where the employment intensity is low. Table 10 estimates the employment generation impact of expanding production in these sectors by the amount of unsatisfied demand as indicated in Table 9.

**Table 10**  
**The Employment Impact of Import Substituting in**  
**Agroindustries**

AGROINDUSTRY	Millions of colones of Potential Import Substitution	Man Years of Potential Employment
Other Food Products	10.2	105
Edible Oils	60.1	535
Animal Feed Products	2.9	11
Milk Products	20.6	119
Milling Cereals	19.9	34
<b>TOTAL</b>	<b>113.7</b>	<b>838</b>

SOURCE: Samuel Daines computation based on data from a survey of agroindustrial establishments in Costa Rica by MEIC 1975

The potential of agroindustrial expansion from import substitution is not large, only an increase of 7.8 percent of agroindustrial output could be supported by import substitution. An increase of 8.9 percent in agroindustrial employment would result from expansion to substitute for current imports.

Without better information on income elasticities and other indicators of market dimension it is difficult to estimate the slack which may exist in the internal market which could support expansion. If profitability is very high in a particular subsector, one would expect that there is slack demand which expansion could absorb and drive prices down to a lower level. In order to

properly evaluate market demand income and price elasticities of demand, along with estimates of profitability at current and alternative prices would be required. As will be seen in the profitability section, profits appear to be very high for most industries, and it is probably true therefore that substantial slack demand exists at a reasonable lower profit rate of return.

b. Central American Common Market Demand

Table 11 indicates the current orientation of each industry to the CACM market.

Table 11  
Export Orientation to the Central American Common  
Market of Costa Rican Agroindustries

AGROINDUSTRY	Millions of Colones Exported to CACM	Percent of Output Exported to CACM	Percent of all Exports Exported to CACM
Fruit and Veg.	17.6	20.6 Percent	55.2 Percent
Chocolate/Candy	12.7	10.5	37.1
Meat Products	5.9	2.7	3.9
Edible Oils	3.1	1.4	2.0
Other Food Prod.	3.0	10.9	100.0
Fish and Seafood	1.5	2.6	65.2
<b>All Agroindustries</b>	<b>44.2</b>	<b>3.0</b>	<b>11.3</b>

SOURCE: Samuel Daines computation based on data from a survey of agroindustrial establishments in Costa Rica by MEIC 1975

Only 3 percent of all agroindustrial production is exported to the Central American Common Market. It is important to note that generally those industries which are exporting to the CACM are employment intensive, whereas the import substitution potential industries were generally not. Since Costa Rican wage rates are higher than the average CACM wage rate, trade would not appear to be based on a labor cost advantage, and hence it is difficult to predict on economic efficiency grounds what the directions for trade ought to be.

Further review of available CACM commodity preference structures would need to be done before any rational estimate could be made of the export potential which exists for Costa Rican agroindustries in CACM countries.

#### c. Export Demand Outside CACM

Much of the composition and volume of trade can be explained by 'absolute and comparative advantage' between trading partners. The principal idea which unifies these two concepts is a supposition that the differences in factor endowment or abundance between trading partners is the principal explanatory cause of trade. Given the massive differences between Costa Rican wage rates and the wage rates of the U.S. and other developed countries one might expect trade flows between them to be dramatic based on comparative cost advantage, at least for those commodities where unskilled labor is an important cost item in both countries.

The dimensions of export demand for agroindustrial products is a difficult concept to estimate since it is directly related to competitive position of producers of a particular commodity in the trading partner countries. One approach to this issue is to assume that since Costa Rica (except in Coffee) is of such insignificant size in any international commodity market that whatever it exports will not affect international prices. Using this hypothesis there would be an infinite demand at the current international price for any Costa Rican agroindustrial export. This would lead us to conclude that supply problems (a quality product at a competitive price) would account for trade volumes and not the presence or absence of international demand. This approach makes sense in the case of Costa Rica, and would focus discussion on the issue of competitive cost advantage

Table 12 indicates the export orientation of agroindustries to countries outside the CACM.

Table 12  
Export Orientation of Agroindustries

AGROINDUSTRY	Millions of Colones of Exports (not CACM)	Percent of Production Exported (not CACM)	Percent of all agro-Exports (not CACM)
Sugar	149.0	68.0	43.1
Meat Products	144.8	68.0	41.8
Chocolate and Candy	21.5	9.0	6.2
Fruit and Veg. Prod.	14.3	16.8	4.1
Fish and Seafood	3.0	18.0	2.3
Milk Products	6.3	3.0	1.8
Edible Oils	1.9	1.0	0.6

SOURCE: Samuel Daines computation based on data from a survey of agroindustrial establishments in Costa Rica by MEIC 1975

### C. Capital Requirements of Expansion and Employment generation.

Having discussed the potential of each industry for expansion, we now turn to discuss the costs or resource requirements of expansion. Two resources which are required for expansion are in limited supply in Costa Rica, capital and skilled/management labor services. These resources are scarce in Costa Rica, and since there is substantial difference in the amount of capital and skilled labor required by different agroindustries, sections C and D examine which industries create more output and employment per unit of capital and skilled labor.

Capital in this section will be defined in three different but partially overlapping ways. First, capital defined as the value of durable goods used in the production process, secondly, the value of financing required to set the production process in motion, and thirdly, the value of foreign capital required. The efficiency of utilization of these types of capital will be viewed from both the point of view of the private entrepreneur (profitability) and society (capital output productivity, and employment generation).

## 1. CAPITAL REQUIREMENTS OF EMPLOYMENT GENERATION

In order to expand agroindustrial employment, and through employment the income situation of the target group, capital would be required to expand agroindustries. It is important to examine the differences which exist in the amount of capital required by the various agroindustries to create one man year of employment. Table 13 presents this calculation for ten agroindustries.

Table 13  
COSTA RICA 1975  
Capital Requirements of Employment Generation

Industry	COOO of Fixed Investment Required to Create One Man Year of Employment	Capital Requirements as % of Ave.
Bakery Products	23	37.4 %
Fish Products	31	50.4
Milk Products	35	56.8
Chocolate and Candy Prod.	40	65.0
Meat Products	41	66.6
Fruit and Veb. Prod.	55	89.4
Other Food Products	56	91.0
Oils and Oil Products	86	139.8
Sugar Milling/Refining	125	203.1
Cereals Milling and Prod.	134	217.8

SOURCE: Samuel Daines computation based on data gathered in a survey of agroindustrial establishments by MEIC 1975

As can be seen in Table 13, it would require almost six times as much capital to create one workplace in cereals milling as it would in bakery, fish, or milk products industries. What this implies is that if there is a limited amount of capital available (in AID's case a limited amount of capital assistance available) it would be possible to generate four to six times as much income and employment for target group families if that capital were invested in these industries as opposed to the ones with higher capital requirements. All of this must be subject, of course, to the identification of industries with expansion potential, as was discussed in section B.

Based on Table 13 the industries might be grouped into three groups: those with low capital requirements (Bakery, Fish, Milk, Candy, Meat and Fruit/Vegetables), Oils with a high capital requirement, and the two with a very high capital requirement, Sugar and Cereals Milling.

## 2. FINANCIAL PATTERNS AND REQUIREMENTS

The food processing industry in Costa Rica is financed principally by short term loans from the banking sector. Table 14 indicates the sources of finance for the sector in 1972-73.

Table 14  
COSTA RICA  
Financing Agroindustrial Production in 1972-73

Sources of Finance	Net Additional Financed 1972-73 (000 of Colones)	Percent of Total
Inside the Firm (Reserves, Depr. and Undistributed Profits)	9,570	11.8%
Outside the Firm	71,935	88.2%
Short Term Loans	52,368	(64.9%)
Long term Loans	2,908	(3.5%)
Stock Issues	16,159	(19.8%)

SOURCE: Analisis de la Estructura de Financiamiento al Sector Industrial, MEIC and ONUDI 1975, Table 3

Among all industries, the food processing sector in Costa Rica has the lowest rate of internal finance, the metalworking industry for example finances 80 of its requirements from internal sources. The sector's short term debt burden is also the highest of any industry. What this implies is that were the food industry to be expanded the principal requirement would be for short term finance. It would also appear that the industry could not finance much expansion from internal sources even if the market situation were to indicate expansion.

## 3. Foreign Exchange Requirements and Patterns.

The impact of the food processing sector on balance of payments is one of the most important considerations in encouraging expansion.

Costa Rican industry impacts on the foreign exchange balance in three ways

1. The industry requires foreign capital goods and hence draws on foreign exchange reserves to purchase the equipment. Though this may be done in the short run by foreign borrowing the foreign exchange drain is simply postponed to a future time period.

2. The industry may require imported inputs, or inputs which were imported at an earlier stage and then processed by domestic industry.

3. The industry may add to the foreign exchange balance by exporting its product.

4. The industry may add to the foreign exchange balance by producing products for the domestic market which substitute for imported goods.

Table 15 deals with the first of these considerations, the requirement for external capital goods, and hence for external borrowing to finance their purchase.

Table 15  
Origin of Finance for Capital Goods in Food Processing  
Sector of Costa Rica

Subsector	External Financed Capital Goods (millions of Col.)	External as a % of Total Capital
Slaughter and Meat	15.1	31%
Milk Products	0.0	0
Fruit and Veg. Proc.	9.6	20%
Fish and Sea Food	4.0	14%
Oils	170.1	98%
Cereals Milling	28.9	53%
Bakery Products	0.0	0
Sugar Milling, Refining	0.0	0
Chocolate and Candy	1.1	3%
Other Food Industry	1.7	11%
Animal Feeds	0.0	0

SOURCE: Based on a Survey of Agroindustrial Establishments by  
NEEC, 1973

It is interesting to note that the industries with the highest external finance-dependence are also industries which process products (basic grains and oils) which are not high value per hectare, and are therefore of lesser importance to target group small farmers.

One of the principal problems of industrial development in Latin America has been the foreign exchange drain caused by the high level of dependance of many industries on imported inputs. The food and agroindustries as a whole are very attractive from this perspective because they by and large process materials of national origin. Table 16 presents the import dependance of each food processing sector.

Table 16  
Import Dependence of Agroindustrias in Costa Rica

Sector	Imported Inputs as a Percent of Total Value of Production
Slaughter and Meat Products	2 %
Milk Products	0 %
Fruit and Vegetable Processing	23 %
Fish and Sea Food Products	23 %
Edible Oils	17 %
Cereals Milling	76 %
Bakery Products	1 % *
Sugar Milling and Refining	0 %
Chocolate and Candy	6 %
Other Food Products	7 %
Animal Feeds and Concentrates	73 %

SOURCE: Based on a Survey of Agroindustrial Establishments by NEIC 1975

While most agroindustries have no, or a very low imported input dependance, cereals milling and concentrates import almost all of their basic materials.

The role of agroindustry as a contributor to the foreign exchange balance through exports, or the substitution of imports has already been discussed. In exports various industries figure as important. The meat products industry exports 71 of its product, fruit and vegetables 36 , Fish 21 , Sugar 66 , and Chocolate 27

In summary, the food industry offers a significant opportunity for industrial expansion and foreign exchange contribution, if the cereals based industries are not included.

#### D. SKILL REQUIREMENTS OF EXPANSION

Not only is capital scarce in Costa Rica, but also the supply of skilled laborers and managers. Any expansion of agroindustries would have to draw on this limited pool. It is therefore important to explore the skill intensity of production in the various sub-sectors which comprise the agroindustrial sector. Table 17 presents the percent of employees by skill class.

Table 17  
Skill Intensity of Production in Agroindustries

Subsector	Percent of Employees by Class		
	Managers & Technicians	Skilled Workers	Total Skilled
Slaughter & Meat	14 %	38 %	52 %
Milk Products	21 %	7	28
Fruit & Veg. Prod.	18	8	26
Fish & Sea Food	5	1	6
Edible Oils	21	4	25
Cereals Milling	18	36	54
Bakery Products	18	56	74
Sugar Milling & Ref.	11	36	47
Chocolate & Candy	13	15	28
Other Food Prod.	21	8	29
Animal Feeds	21	2	23

SOURCE: Based on a survey of Agroindustrial establishments by MEIC 1975

Four of the eleven industries have very high skill requirements, baking, milling, meat products, and sugar. The expansion of these industries would need to be carefully studied in order to insure that there was sufficient available skilled labor and technical personnel. Even if expansion is possible, the employment impact on the target group, who are basically unskilled laborers would be significantly less if the high skill intensity industries were chosen for expansion.

PART II  
INDIRECT EMPLOYMENT IMPACT OF AGROINDUSTRIAL EXPANSION

In addition to the direct employment which agroindustries generate, there is a stream of employment impacts both backward to agriculture due to the employment created in the production of the primary material, and forward to marketing of the final product. These indirect employment streams in some cases may be more important than the direct employment itself. In order to estimate these impacts it is necessary to first define a commodity chain commencing at the farm level, and ending with the marketing of processed products in final markets.

In elaborating these chains the intent is to estimate which of the agroindustries are likely to create the most direct and indirect employment. A series of factors will be integrated into this judgement.

1. The employment intensity of the industry itself  
—its direct employment impact
2. The skill intensity of its direct employment requirements
3. The import dependance of inputs. If an industry imports a large proportion of its primary material the backward part of the employment chain is lost.
4. The employment intensity of the primary agricultural product which the industry processes

Logically this list should also include the employment intensity of the forward link to employment creation in marketing. The reason this is not included is that while marketing employment impacts are sizeable, they do not vary significantly according to the type of product marketed. That is to say, there is no reason to estimate the marketing impact since it will be very similar for all products and will not therefore assist in making inter-product comparisons.

The comparisons in Table 18 rank each subsector according to the employment impact at each stage in the commodity chain. The rankings are High, Med., Low and Very Low. Where skill requirements are high the employment impact on the target group will be correspondingly lower, likewise a high import dependence implies a lower employment impact.

The comparisons are drawn from Tables 16 and 17 for skill intensity and import dependence, from Table 4 for direct employment intensity, and from the agriculture employment section of the Analysis of the Rural Poor working paper for the farm level employment impact of each crop at the farm level.

Table 18  
COSTA RICA 1975  
Estimates of Direct and Indirect Employment Generated  
as a Result of Agroindustrial Production

Subsector	Direct Employment		Indirect Employment		Overall Impact
	Total Emp. Impact	Unskilled Employment Impact	Use of Local Inputs	On Farm Employment Impact	
Meat Prod.	Med.	Low	High	Low	Low
Milk Prod.	Med.	Med.	High	Med.	Med.
Fruit & Veg.	High	Med.	Med.	High	High
Fish	High	High	Med.	Low	Med.
Edible Oils	Med.	Med.	Med.	Low	Low
Milling	Low	Low	Low	Low	Very Low
Bakery	High	Low	Low*	Low	Low
Sugar Mill.	Low	Low	High	High	Med.
Chocolate	High	Med.	High	High	High
Other Prod.	High	Med.	High	High	High
Animal Feed	Low	Med.	Low	Low	Very Low

\* The import dependence of Bakery should actually depend on the cereals milling industry where flour products originate. Since the milling industry imports nearly all of its primary inputs, bakery activity loses its backward employment impact to Costa Rican farms.

SOURCES: Tables 16, 17, 4, and the employment section of the Analysis of the Rural Poor working paper.

Table 18 allow us to classify in a rough way the comparative employment impact of the different agroindustries in four classes as follows:

**HIGH EMPLOYMENT IMPACT SECTORS**

1. Other Food Products (Spices and other Specialty products)
2. Chocolate and Candy Products
3. Fruit and Vegetable Processing

**MEDIUM EMPLOYMENT IMPACT SECTORS**

4. Sugar Milling and Refining
5. Milk and Dairy Products
6. Slaughter and Meat Products

**LOW EMPLOYMENT IMPACT SECTORS**

7. Fish and Seafood Products
8. Bakery Products
9. Edible Oils

**VERY LOW EMPLOYMENT IMPACT SECTORS**

10. Animal Feeds and Concentrates
11. Cereals Milling

While the agroindustries rated low on employment impact do not compare favorably with the other agroindustries, their employment impacts are superior to much of the remaining manufacturing industry. Four industries which process primary materials originating in the rural sector, and which have excellent employment potential, were not analyzed here due to lack of data. These industries are textiles, leather, and wood products and coffee processing.

**PART III**  
**INSTITUTIONAL LINKAGES IN CREDIT,**  
**TECHNICAL ASSISTANCE,**  
**MARKETING AND INPUT PROVISION**

The impact of agroindustry on the welfare of the rural poor target group extends beyond direct and indirect employment generation. A variety of institutional linkages exist in the environment surrounding agroindustries which connect farmers with markets, credit, and technical assistance, and which may profoundly affect small farmer welfare.

In the Analysis of the Rural Poor working paper, the importance of high value agricultural crops for small farmers has been stressed. At the same time the point was made that except for coffee, bananas, and sugar, these crops are high risk, technologically sensitive, require relatively advanced management skills, and require high levels of inputs and credit. Much of the high risk element is caused by wide and unpredictable price fluctuations due to the small size of the domestic market. All of these elements make entry into these products extremely difficult for the small, poor target farmer.

One of the principal reasons that coffee, bananas, and sugar can be separated from this category is the fact that a rather sophisticated processing environment already exists for these products. This environment has accessed world markets and connected producers with technical and financial resources. All of these products are very labor intensive and have favorable impacts on small farmer and landless rural families.

While agroindustries have the potential for acting as monopsonist buyers in many situations, and have in some cases exploited small producers, almost as often one can find examples where the processor has played an essential role as risk taker, insulating the producer from the vagaries of international markets and providing him with a reasonably secure market and source of technical and financial assistance.

In the AID context, careful product selection and program structuring should be sufficient to assure that monopsonist behavior is minimized and that institutional, market and technical links to small farmers are magnified.

**RURAL POOR PROFILE**

**Richard Kreitman**

**USAID Costa Rica**

**December, 1976**

The Tables in this paper are based upon work done by Academia de Centro America and the University of Florida's Latin American Data Bank for USAID/Costa Rica under the first stage of the Mission's Rural Profiles Project. 1/ The project sought to bring the excellent 1973 Costa Rica Census of Population and Housing together with the equally good 1973 Costa Rica Census of Agriculture, and to make the combined data sets available as a source for policy analysis, strategy planning, program design and evaluation, and basic research into selected development problems concerning the AID target group. The first stage of the project has been devoted to a) 'marrying' the censuses (matching a farm questionnaire to the corresponding population and housing questionnaire), b) applying to the matched data set a methodology for estimating the total income of each family (farm and non-farm) in the census, and c) producing some preliminary tables based upon a disaggregation of the population into poor and non-poor categories. 2/ The tables below present summary, preliminary results

from this first stage of the project. To understand these tables properly and appreciate their strengths and limitations as a source of information about the target group, it is necessary to go into the background of the data and the methodology used to produce the tables.

### 1 The 1973 Censuses

In May, 1973, the Costa Rica Bureau of Statistics and Census (DUEC) conducted a nationwide Census of Population and Housing covering over 95% of the households in the country and, according to a U.S. Census Bureau evaluation, achieving a high degree of accuracy. A Census of Agriculture, reaching the same levels of coverage and accuracy, was taken separately during the same week of May, 1973.

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1/ This project, funded under PIO/T No. 515-122-3-50043, was contracted to the local consulting firm of Academia de Centro America, comprised of Alberto Di Mare, Eduardo Lizano, Victor H. Céspedes and Claudio Gonzáles. They in turn sub-contracted Dr. Manuel Carvajal, of the LADB located at the University of Florida, to provide the data processing services required by the project.

2/ As a definition, the AID figure of \$150 per capita per annum was used as the arbitrary line dividing 'poor' and 'non-poor'.

The Population and Housing Census collected information on the age/sex distribution of the population, education levels, migration, economic activity, occupation, wage/salaries, size and condition of housing, tenure of home, rent, type of water and sanitation services, availability of electricity, appliances, etc. The Census of Agriculture collected information on land tenure, land use, crop production, animal and animal production, use of energy and sources of power, possession and use of agricultural machinery, and the use of fertilizer and irrigation. (See facsimile Census form, ) The Agricultural Census collected no data concerning monetary values of production sold or costs of production. 1/

### Matching the Censuses

Though the censuses were taken during the same week, they were kept separate for reasons of confidentiality and programming. The first major task of the Project therefore, was to 'marry' the appropriate questionnaires from the agricultural and population censuses

and so to produce for each farm family a complete record of their census data.

The matching work was begun by the DGEC staff who had produced individual punch cards with the matching codes for each farm family questionnaire and each farm questionnaire, which were stored on computer tape. These scores of thousands of cards were used by the University of Florida's LADB to produce the matched tape used for subsequent income calculations and tabulations. The results of the matching exercise were surprisingly good; of the 76,901 individually-owned farms in the country, 73,399, or 95% were successfully matched with their respective families, leaving 4,661 farms owned by partnerships, cooperatives, corporations, or institutions which could not be matched to individual families. It should be noted that of the 3,122,456 hectares reported in the agricultural census as being in farms, 1,027,230 hectares belong to these non-individually owned farms. Fully 1/3 of the total land area in 6% of the farms.

1/ The Census results are contained in a series of volumes published by the DGEC with separate editions for the Population, Housing, and Agricultural results. The series is entitled Censos Nacionales de 1973.

# IV CENSO NACIONAL AGROPECUARIO

MAYO DE 1973

C - 2

RESIDENCIA DEL PRODUCTOR	LOCALIZACIÓN DE LA FINCA
PROVINCIA _____	PROVINCIA _____
CANTÓN _____	CANTÓN _____
DISTRITO _____	DISTRITO _____
SECTOR DE _____	SECTOR DE _____
ZONA DE _____	REGION AGROPECUARIA _____
SECTOR DE _____	SANJOSE O SAN CARLOS
VIVIENDA DE TIPO DE _____	CARRITERA O CAMINO
SANJOSE O SAN CARLOS	NOMBRE DE LA FINCA _____
AVENIDA _____ CALLES _____	
CARRITERA O CAMINO _____	

L. PRODUCTOR Y UNIDAD DE EXPLOTACION

1. Nombre del Productor o Puesto Social: \_\_\_\_\_

2. Condición Jurídica del Productor (Marque con un círculo)

3. Tiene Administrador? SI  1 NO  2

4. Nombre del Administrador: \_\_\_\_\_

5. Dirección Comercial o no Presente en la Finca: \_\_\_\_\_

6. Nombre del Informante: \_\_\_\_\_

7. ¿Cuántas personas o lotes explotados forman la finca censal? (No incluye parcelas arrendadas o cedidas a otras personas, u ocupadas por otras personas)

Número \_\_\_\_\_

LOS DATOS SOBRE EL TIPO DE ESTABLECIMIENTO ESTÁN DADOS EN:

MANZANAS  1 HECTÁREAS  2

I. REGIMEN DE TENENCIA (Tome los datos en relación al día de la explotación)	Cód. ID	Estratificación		II. USO DE LA TIERRA (Tome los datos en relación al día de la explotación)	Código	Estratificación
		Personas	Yotes			
1. Qué estratos de terreno posee propio o de no a más de 50 años? (Incluye la explotación arrendada o cedida a otras personas u ocupada por otras personas)	201			TIERRAS DE LABRANZA		
				1. Cultivos anuales e intermedios (incluye huertos comerciales y agro y cultivos de invernadero)	201	
				2. Huertos comerciales y agro y cultivos de invernadero	202	
				3. Tierras en cesación (Pastoreo)	203	
				4. Todo otro tipo de terreno de labranza	204	
				5. Cultivos permanentes	205	
2. Qué estratos de terreno tiene de otros estratos en forma de arrendamiento? (Total)	202			PASTOS		
(a) En alquiler	203			6. Pastos cultivados e mixtos para carne	206	
(b) En arrendamiento	204			7. Pastos cultivados e intermedios para carne	207	
(c) Grupos de terreno	205			8. Pastos	208	
(d) Otras formas	206					
3. Qué estratos de terreno tiene bajo otras formas de tenencia?	207			BOQUES Y MONTES		
4. Suma de Totales (1) + (2) + (3)	208			9. En explotación (Para usar mano de obra)	210	
				10. No en explotación	211	
5. Qué estratos de terreno posee y así que posee a más de 50 años de explotación en forma de arrendamiento? (Total)	209			11. Charcos y lagunas	212	
(a) Cede en arrendamiento	210			12. Todo otro tipo de terreno	214	
(b) Ocupada por propietario	211					
(c) En otras formas de tenencia	212			13. Estratos totales de fincas (suma de pres. 1 a 12) igual a pres. 8 de "REGIMEN DE TENENCIA"	215	
6. Estratos totales de la finca (4) menos (5) igual a pres. 13 de "USO DE LA TIERRA"	213					

IV. PRODUCCION AGRICOLA								
(Todos los datos expresados en toneladas a menos que se especifique en otro caso, el tonelaje, de mayo de 1972 al 30 de abril de 1973)								
A. CULTIVOS ANUALES O TRANSITORIOS								
Cultivo	Codigo	Especie Comercial	Produccion					
			Fresa		Raspberries		Consumo en la finca	
			Cantidad	Unidad de medida	Cantidad	Unidad de medida	Cantidad	Unidad de medida
Columna 1	Columna 2	Columna 3	Columna 4	Columna 5	Columna 6	Columna 7		
1. Arroz (oro, Sembrado (en granos).....	401							
2. Arroz (oro, Sembrado (en granos).....	402							
3. Maiz (oro, Sembrado (en granos).....	406							
4. Maiz (oro, Sembrado (en granos).....	408							
5. Frijoles (oro, Sembrado.....	407							
6. Frijoles (oro, Sembrado.....	408							
7. Pasa (oro, Sembrado.....	410							
8. Pasa (oro, Sembrado.....	411							
9. Yuca.....	413							
10. Algodon (en rama).....	414							
11. Yuca.....	418							
12. Camote.....	416							
13. Sorgo (oro, Sembrado (en granos).....	417							
14. Sorgo (oro, Sembrado (en granos).....	418							
15. Ajo.....	420							
16. Cebolla.....	421							
17. Elote.....	423							
18. Lenteja.....	423							
19. Remolacha.....	424							
20. Arroz.....	426							
21. Yuca.....	426							
22. Videna.....	427							
23. Zanahora.....	428							
24.....								
25.....								
26.....								
27.....								
28.....								
29.....								

B. CULTIVOS PERMANENTES								
(Todos los datos expresados en toneladas a menos que se especifique en otro caso, el tonelaje, de mayo de 1972 al 30 de abril de 1973)								
Cultivo	Codigo	Especie comercial en permanente producción			Produccion			
		En estado de producción		Material de siembra disponible	Fresa		Consumo en la finca	
		Cantidad	Unidad de medida	Cantidad	Cantidad	Unidad de medida	Cantidad	Unidad de medida
Columna 1	Columna 2	Columna 3	Columna 4	Columna 5	Columna 6	Columna 7	Columna 8	
1. Café (Toda especie excepto arabica).....	451							
2. Café robusta.....	452							
3. Café en almijar.....	453							
4. Banano (solo).....	454							
5. Café de arabica.....	456							
6. Plátano (solo).....	456							
7. Guano (solo).....	457							
8. Caca.....	458							
9. Piña.....	459							
10. Naranja.....	460							
11. Pasa.....	461							
12. Caca.....	462							
13. Agave.....	463							
14.....								
15.....								
16.....								
17.....								

**V. ANIMALES**  
 Contar solamente todos los animales grandes y chicos que ESTAN BAJO LA ADMINISTRACION DEL PRODUCTOR el día de la fecha del empadronar y que corresponden:

a) Los que están en esta finca normal y los en otras fincas censales.  
 b) Los que se encuentran o están en camino (transporte) a otras fincas, mataderos, plazas de ganado o a otra finca.

**NO SE ANOTAN** los animales de esta finca normal que se encuentran alojados en otras fincas censales o en caminos o plazas y QUE ESTAN BAJO LA ADMINISTRACION DE OTRO PRODUCTOR

**A. GANADO VACUNO**

Edad y sexo	Código	Presente		
		Corno	Lado	Disto (marcado)
<b>HEMBRAS</b>				
1. Menores de 1 año	501			
2. 1 a menos de 2 años	502			
3. 2 años y más	503			
<b>MACHOS</b>				
4. Menores de 1 año	504			
5. 1 a menos de 2 años	505			
6. 2 años y más en servicio o en camino a servicio y en camino	507			
7. Ternos reproductores de esta finca	508			
8. Bovinos	509			

**B. GANADO PORCINO**

Edad y sexo	Código	Cantidad	
		Cornos	Columna 1
1. Cerdos y cerdas menores de 6 meses	521		
2. Cerdos de 6 meses y más	522		
3. Cerdos de 6 meses a menos de 1 año:			
a) Para reproducción	523		
b) Para carne	524		
4. Cerdos de 1 año y más:			
a) Para reproducción	525		
b) Para carne	527		

**C. GANADO CABALLAR, MULAR Y ASNAL Y AVES DE CORRAL**

Edad y clase	Código	Cantidad	
		Cornos	Columna 1
1. Caballos y yeguas menores de 3 años	531		
2. Caballos y yeguas mayores de 3 años	532		
3. Mulas y asnos tanto las crías y machos	534		
<b>AVES DE CORRAL</b>			
4. Pollos y ponedras (menores de 6 meses)	535		
5. Gallinas (de 6 meses y más)	536		
6. Gallinas (de 6 meses y más)	537		
7. Patos, caracaras, pavos (tanto las crías y machos)	538		
8. Chachinos (Pavas) (tanto las crías y machos)	539		

**D. COLMENAS Y PRODUCTOS DE ORIGEN ANIMAL**

Producto	Código	Cantidad	
		Cornos	Columna 1
1. Número de colmenas (total) el día de la fecha	541		
2. Cantidad de miel producida el último año agrario	542		
3. Litros de leche producida la semana anterior	543		
4. Litros de manteca producidos la semana anterior	544		
5. Cantidad de leche producida ayer	545		
6. Muestras recogidas ayer	546		

**VI. USO DE ENERGIA ELECTRICA Y FUERZA MOTRIZ**  
 (Los datos referidos se refieren al año agrario pasado, o sea, del 1.º de mayo de 1972 al 30 de abril de 1973.)

1. ¿Usó energía eléctrica en las labores de la finca? Códigos  601  0  1  2  3

2. ¿Qué clase de fuerza motriz usó para realizar las labores agrícolas de la finca (marcar con 'X' sólo un círculo)?

Código  602

a) Muecas .....  1 X  
 b) Animal .....  2 X  
 c) Animal y muecas .....  3 X  
 d) Humano solamente .....  4 X

**VI. PROPIEDAD Y USO DE LA MAQUINARIA AGRICOLA**  
 Los datos referidos se refieren al día de la fecha del empadronar y los de uso al año agrario pasado o sea, del 1.º de mayo de 1972 al 30 de abril de 1973.

Clase	Código	Propiedad del productor el día de la fecha (marcar)	Usos en la Finca durante el año agrario pasado		
			Más de 10 días	Más de 5 días	Poco o nada
1. Tractor (motorizado)	701		<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>
2. Arados de tiro animal	702		<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>
3. Arados de 7' ancho	703		<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>
4. Rastras	704		<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>
5. Sembradoras	705		<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>
6. Cosechadoras	706		<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>
7. Alisadoras	707		<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>
8. Esparcidoras	708		<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> X <input type="checkbox"/> <input type="checkbox"/>

**VII. RIEGO Y ABONO**  
 (Los datos referidos se refieren al año agrario pasado, o sea, del 1.º de mayo de 1972 al 30 de abril de 1973.)

Cultivo	Código	Superficie regada	Anexo Químico		
			Superficie abonada	Cantidad de abono	Unidad de medida
1. Café	801				
2. Café de sombra	802				
3. Banano	803				
4. Plátano	804				
5. Arroz 1.º Sembrado	805				
6. Arroz 2.º Sembrado	806				
7. Maíz 1.º Sembrado	807				
8. Maíz 2.º Sembrado	808				
9. Papa 1.º Sembrado	811				
10. Papa 2.º Sembrado	812				
11. Yuca	814				
12. Tomate	815				
13. Cebolla	816				
14. Lúpulo	817				
15. Remolacha	818				
16. Zanahoria	819				

**OBSERVACIONES:**

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\_\_\_\_\_

(Si falta espacio utilice el reverso de la Finc)

### Income Determination

Once the censuses were matched the next step was to calculate family income from the census information and divide by the number of family members to arrive at a per capita income figures for the population.

The Family Unit was defined according to the census definition as all the persons living together in one household, as a family, and eating at the same table. This excluded domesticing servants, guards, etc. and their families.

To arrive at the necessary Per Capita Annual Income estimate, Total Net Income of each family was calculated by pooling the income of that family from all sources and dividing by the number of people (all ages) in the family unit. This family Per Capita Net Income figure was the basis on which a family and its members were subsequently placed in an income class.

The components of Total Net Family Income were defined as:

- a) Salaries and wages of all family members.
- b) An Imputed Rental income for self-owned housing, and
- c) Net income from agricultural production (for farm families only).

Individually they are:

- a) Salaries and Wages

The wages or salaries of all family members reported in the census were pooled in the family income account. The families of those individuals reported as being employed at a stated occupation but without reporting a wage or salary (because of self-employment or other reasons) were awarded the average wage or salary of a person of their sex, urban/rural location and occupational category as calculated from the census.

On-farm wages for farm families were calculated as the number of days, that a family could work on its own farm, multiplied by a standardized regional rates. The number of adult males in the family (15-64 years old) was multiplied by 280 to give an estimate of potential family working days in the year, and this estimate of potential on-farm labor was compared with estimated farm labor requirements. If family labor

availability was greater than farm labor requirements, the family was awarded income equal to the total labor requirements (no hired labor). If farm requirements were greater, total family potential was imputed.

b) Housing Income

Families who owned their own homes were given an imputed net income from housing calculated as 15% of the average rental value of a home in similar conditions (census definitions were poor, regular, good) located in the same cantón.

c) Net Income from Farm Production

This was by far the most complex and difficult part of the study. As can be seen from the facsimile census questionnaire reproduced below no economic (prices, costs, labor inputs) information was asked of the respondents. To estimate income from agricultural operations and thus complete the farm family income calculations, the economic data had to be found outside the census.

Toward this end, Academia de Centro America was asked to search out and review all available agricultural price and costs-of-production data relevant to the census year, and use it to develop a methodology to estimate net farm income from the census data. The income estimation procedure they developed differs with each crop and livestock activity. For each product a farm-gate price was estimated using price and transportation cost information. For major crops and livestock products, price was determined for each cantón, with all farms in the same cantón assumed to receive the same price. (For a limited number of products, the cantonal prices were differentiated for different scales of operation) The estimate price was applied to the quantity of production reported as not being consumed on the farm to arrive at an estimate of gross sales income from that product.

Production costs for major activities were estimated by several geographic zones and at least two levels of technology. The technology level assigned to a given farm and crop was based upon the yield, use of technology, and use of machinery, as reported. For example, in the case of coffee, costs were determined according to five geographical zones, five scale strata in each zone, and two levels of technology for each strata. A given coffee operation's income was therefore calculated from one fifty separate sets of cost parameters, based upon region, size of operation, and reported use of technology. In corn production four technologies were defined. In beef, four zones and and three technologies.

The contractor was requested to, as far as possible, separately estimate these cost of production parameters. Each technology, zone, and input called for an individual decision. Though each such decision would contain an error factor, it may be assumed that as a group these errors are unbiased and normally distributed. Therefore, it was hoped that the bias of the general estimation procedure would fall around zero.

Of course, such a procedure of applying general parameters chosen a posteriori to specific cases is fraught with potential for error. Without such a procedure, it would have been impossible to produce an income distribution of the rural population. Though the possible error in income estimation for a single farm is very large, we are confident that the results as a whole reflect the situation of the target group with sufficient accuracy to permit analysis and program conclusions; <sup>1/</sup> and this possibility of error diminishes considerably as we move from the farm family categories to the non-farm rural and urban families. In these categories, family income estimates come from reported wages and salaries in over 75% of the cases. The remaining 25% did not report a wage figure, but based upon their sex, location, and occupation, they were assigned an estimated income. (See above p. This procedure held little chance for serious estimation bias, and as such the income estimated for the Rural non-farm poor and urban poor are probably the most accurate in the study.

The Tables: Description

Tables 1, 2, and 3 correspond roughly to Tables 21, 17 and 3 respectively of 'Algunas Condiciones'. <sup>2/</sup>

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<sup>1/</sup> A sensitivity analysis in the preliminary computer tabulations indicated that the results are not highly sensitive to errors in price estimation. A 5% increase in the assumed farm gate price for corn, beans, vegetables, coffee, and sugar cane resulted in a diminution of the number of poor farm families by 0.7%, 0.6%, 0.6%, 1.1% and 0.7% respectively. At a 5% price increase therefore, the elasticity of the number of poor families to assumed farm gate prices for the above products varies between .12 and .22.

<sup>2/</sup> The preliminary tables and methodology were presented in an unpublished document entitled Algunas Condiciones de Vida de la Población Rural de Costa Rica, by Di Mare, Lizano, Céspedes, and González, of Academia de Centro America.

The major differences are in format, definition of poor/non-poor, and in the elimination of some programming 'Bugs' found in the preliminary runs.

Table 1

Table 1 presents Farm Family Income, broken down by components, farm sizes, and poor/non-poor/all-farm categories. Tables 1A, 1B, and 1C present the average family figures for poor farms, non-poor farms, and all farms respectively.

The definition of poor-non-poor was a per capita net income poverty threshold of 1,400 colones. This arbitrary figure was based upon AID's poverty definition of less than US\$150 per capita per year in 1969 prices. Due to difficulties of estimation with larger size farms, and AID programming requirements concerning the size of operations appropriate to our congressional mandate, all farms over 20 hectares were arbitrarily placed in the non-poor category regardless of their estimated Net Per Capita Income.

The footnotes and labels to Table 1 are self-explanatory, but the reader should be cautioned about two possible errors which the tables contain. The first is that LINE (20), Per Capita Net Income, is not LINE (16) divided by LINE (19), as would be imagined. Rather, LINE (20) is the average of the family per capita income. It is an average of the averages, unweighted by the different family sizes.

The second error is that On Farm Wage Income, LINE (3) (See p. above), is counted as income but not charged against Gross Farm Sales LINE (8) as a cost of production. Therefore it is counted as income twice, resulting in an overestimation of family income and underestimation in the size of the target group. This error is probably not as serious as may at first be imagined, for it in part compensates for an error of omission which was very difficult to deal with. This error was the omission of coffee harvest income from the income estimations. The coffee harvest, held mainly in November, December, and January, is a major source of income for the target groups, both rural and urban, farm and non-farm. While families turn out and earn money needed to pay off debts, purchase household durables and clothing, and buy Christmas gifts. In the census year 1972-1973, an estimated 140,000,000 colones were paid to coffee pickers. Some of this income is captured in the tables for the small farm families in that they are attributed as earning the coffee harvest income on their own farms. But a good deal of this income undoubtedly went uncounted. In addition, the majority

of small farmers work seasonally off their own farms in agricultural work, such as the sugar harvest, pasture weeding, fence building, etc. Little or none of this off-farm income is captured by the census unless it occurred during the week preceding the week the census was held (the official 'employment week', and the first week in May is a week of little off-farm activity.

The net result is that the error of double-counting On Farm Wage Income is in part compensated by the census omission of certain important off-farm income sources. In terms of numbers, the on-farm wage bill in Table 1A totals approximately C\$39,000,000, which also equals the quantity of over-estimated wages. For Table 1B, the total is approximately C\$62,000,000, or approximately C\$100,000,000 over all farms in the Profiles. The reader may decide which would be the more acceptable estimation procedure, i.e. to subtract the wages from net family income or leave them in. The percentage figures for Line (3) in Tables 1D, 1E, 1F, give a precise measure of the relative size of income overestimation over the different farm sizes. Based upon experience with the preliminary tables and the current tabulations we would estimate that the number of farms calculated as being poor would rise to about 35,000 from the current 50,739 were the tables re-estimated with On-Farm Wages subtracted from Gross Farm Sales.

#### Table 2 - Land Use Patterns

Table 2 follow the same category format as Table 1, and permits comparisons of land use patterns with incomes and income sources. The only notable error in this Table is that Lines (11), (12), (13) and (14) do not add up to Line (10) as promised in the footnote, as there is a missing miscellaneous category which would make up the difference.

#### Table 3 - Income Classes

Table 3A presents the number of families and people falling in each income class by urban/rural location and farm/non-farm categories. According to the different exchange rate assumptions described in the table footnotes the population is divided into poor/non-poor groups in the lower section of the table.

Table 3B contains the same information as Table 3A but in percentages of total population. This Table contains an error in that the farm family population of Guanacaste province was included a second time under the non-farm rural families, resulting in an over-count of some 75,000 people for the population of that province and the country as a whole.

An apparent discrepancy which should be noted is that under the 'moderate' definition of poverty 40,686 farm families are counted as poor. Since this is the definition of poverty used to elaborate Tables 1 and 2, the reader may wonder why the discrepancy between the 30,739 poor farms in Table 1A and the 40,686 poor farms in Table 3A. The reason is that those farms over twenty hectares which had per capita incomes under 1,400 colones were excluded from Table 1A (See footnote A in Tables 1A and 1B) but included in the proper income class in Table 3A.

### Analysis of Results

A caveat concerning these tables must be stated from the first; they provide no justification for drawing conclusions of cause and effect in the etiology of rural poverty in Costa Rica. Rather, they provide a means for describing certain characteristics of the target group, 'e., a typology of rural poverty. Notwithstanding the possibility (and actuality) of error in the Profiles, the following conclusions can be drawn with a certain level of confidence.

#### A. Size and Location of the Target Group

Looking at the Table A below, which contains the 'Moderate Definition' row's of Table 3A with some percentage added, we can see that approximately on-half the national population falls into the target group according to AID's poverty definition and the mixed exchange rate of 7.7 colones to the dollar.

The Non-Farm Rural Poor are the largest poverty group in the country, comprising 23.3% of the national population, 37.5% of the rural population, 47.0% of all the poor and 61.6% of the rural poor. In contrast, Poor Farm Families comprise only 14.5% of national population, 23.3% of the rural population, 29.3% of all poor and 38.4% of the rural poor.

No corrective re-tabulation of the Profiles or playing with the figures in these tables will substantially alter these proportions. This includes a) re-estimation of On-Farm Wages, b) eliminating the 10,000 farm families having more than 20 hectares who were calculated as poor in Table 3, c) changing the exchange rate definition, d) subtracting the double-counted Guanacaste farm families, etc.

#### B. Land Use Patterns.

Comparing Tables 2A and 2B one can see significant differences in land use patterns between the poor and non-poor farms in several of the size categories. For example, in poor farms of 1 to 1.9 hectares, 38.5% of the land is in permanent crops; for non-poor farms of the same size the percentage is 58%. In the next size category the figures are 24.9% and 48.8%. Similarly in the smallest size classes the poor farms have higher

TABLE A

	Urban Zones	Rural Zones Farm	Non-Farm	Totals
<u>POOR</u> ( 1400)				
People	229.271	283.244	454.864	967.379
% of poor	(23.7)	(29.3)	(47.0)	(100.0)
% of Nat'/Pop	(11.7)	(14.5)	(23.3)	(49.5)
<u>NON POOR</u>				
People	512.786	188.432	287.133	988.351
% of Non-poor	(51.9)	(19.1)	(29.0)	100.1)
% of Nat'/Pop	(26.2)	(9.6)	(14.7)	(50.5)

TABLE B  
 OFF-FARM INCOME AS A % OF TOTAL  
 FAMILY INCOME

	FARM SIZES							
	Landless	1	1-1.9	2-4.9	5-9.9	10-19.9	20	All Size
<u>POOR FARMS</u>								
Off-Farm	.493	.377	.150	.099	.076	.059	.000	.190
Ag. Sector	.083	.054	.021	.015	.016	.015	.000	.030
Other	.410	.322	.128	.083	.059	.054	.000	.159
<u>NON POOR FARMS</u>								
Off-Farm	.744	.743	.507	.310	.194	.154	.154	.265
Ag. Sector	.144	.113	.073	.053	.041	.031	.026	.045
Other	.599	.630	.433	.256	.152	.123	.128	.219
<u>ALL FARMS</u>								
Off-Farm	.670	.646	.411	.263	.174	.140	.154	.256
Ag. Sector	.125	.097	.057	.045	.037	.028	.025	.043
Other	.544	.548	.352	.218	.137	.112	.128	.212

### C. Income Sources.

One of the major questions raised by Mission personnel at the start of this project concerned the quantity of off-farm income earned by small farmers and the relation of off-farm income to total Family income. Table B, taken from table 1D, 1E, and 1F, gives a good picture of this situation. For the first farm size categories the differences between poor and non-poor farms are highly significant. For all farms over sizes, off-farm income is over 25% of the total. For all farms of 5 hectares and under, it accounts for approximately 45% of the total family income, while for all farms under 10 hectares the figure is approximately 38%.

These results, and the others noted above, indicate a multitude of areas for further study and analysis. Each of these tables, and the Province and Cantón-level tables, raise more questions than they provide answers to. One such area is the adoption of new technology. Farmers can easily be divided by technology level on specific crops and the characteristics of adopters and non-adopters compared. Similarly, many of these results indicate a need to test hypotheses concerning the geographical location of the target groups and their economic characteristics. As an example, if off-farm income is such an important factor in family income determination, how is the area distribution of farm poverty related to the area distribution of employment opportunities? Specific program-oriented hypotheses can be tested by modifying the parameters applied to the data in the income computations. How many families would have benefited by how much from a 25% increase in corn prices, or corn yields, or the rural wage rate?

TABLE 1A: POOR FARMS(A)

FARM FAMILY INCOME  
(FARM AVERAGES)

## COSTA RICA

FARM SIZE CATEGORY	'LANDLESS' FARMS (D)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.(C)	ALL FARM SIZES
(1) NUMBER OF FARMS	2,259	3,988	4,311	6,501	3,641	4,021	0	30,521
(2) WAGE INCOME	1,886.1	1,593.4	1,605.9	2,026.7	2,504.4	2,056.6	0.0	2,008.3
(3) ON-FARM	311.3	441.9	1,060.6	1,581.6	2,125.5	2,615.6	0.0	1,250.6
(4) OFF-FARM	1,574.7	1,151.5	545.3	445.0	374.8	334.9	0.0	749.7
(5) AG. SECTOR	266.7	166.5	80.5	72.0	85.5	74.3	0.0	121.3
(6) OTHER SECTORS	1,307.9	985.0	464.7	372.9	289.3	260.6	0.0	628.4
(7) FARM PRODUCTION INCOME	1,038.3	1,164.4	1,622.1	1,952.7	1,894.5	1,215.4	0.0	1,483.7
(8) GROSS FARM SALES	3,067.9	1,987.9	3,941.7	4,613.9	6,297.5	6,047.1	0.0	4,265.0
(9) PRODUCTION COSTS	2,029.6	823.5	2,319.6	2,661.1	4,403.0	6,831.7	0.0	2,781.2
(10) HIRED LABOR	65.5	62.3	155.0	349.5	571.0	1,216.4	0.0	332.0
(11) MATERIALS	1,959.4	722.8	1,974.5	2,124.3	3,357.4	5,061.9	0.0	2,217.2
(12) TRANSPORTATION	0.5	38.2	190.0	287.2	474.5	853.3	0.0	231.9
(13) OTHER INCOME	274.6	305.4	435.1	528.7	606.7	716.2	0.0	460.4
(14) AUTOCONSUMPTION	0.5	79.7	207.3	297.4	356.3	454.3	0.0	222.8
(15) HOUSING	266.1	225.6	227.8	231.2	240.4	261.8	0.0	237.6
(16) TOTAL NET FAMILY INCOME	3,199.0	3,063.3	3,663.2	4,508.1	5,005.7	4,882.1	0.0	3,952.5
(17) NON-CASH INCOME	585.9	747.3	1,495.7	2,110.4	2,736.3	3,331.8	0.0	1,719.0
(18) CASH INCOME	2,613.0	2,316.0	2,167.4	2,397.7	2,269.3	1,550.3	0.0	2,233.5
(19) AVERAGE FAMILY SIZE	6.8	6.3	6.5	7.0	7.3	7.3	0.0	6.8
(20) PER CAPITA NET INCOME	470.4	474.7	561.8	636.1	643.3	581.8	0.0	562.2
(21) NET INCOME PER ARABLE HECTARE	0.0	3,361.6	1,699.6	1,234.2	914.0	436.9	0.0	1,665.5
(22) VALUE PRODUCT PER ARABLE HECTARE	0.0	5,488.6	3,315.4	2,752.2	2,913.8	3,035.9	0.0	3,437.5

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES IN WHICH TOTAL NET PER CAPITA INCOME (LINE 20) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO THE AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES. ALL VALUES IN 1973 COLONES.

(B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDETERMINATE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, POULTRY, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.

(C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.

(D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:

(2) WAGE INCOME = (3) + (4)

(3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).

(4) OFF-FARM INCOME = (5) + (6).

(7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)

(9) PRODUCTION COSTS = (10) + (11) + (12).

(13) OTHER INCOME = (14) + (15).

(15) HOUSING = 15% OF IMPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.

(16) TOTAL NET FAMILY INCOME = (2) + (7) + (13), OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.

(17) NON-CASH INCOME = (3) + (14) + (16).

(18) CASH INCOME = (4) + (7).

(21) NET INCOME PER ARABLE HECTARE = (7) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

(22) VALUE PRODUCT PER ARABLE HECTARE = (8) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE 1A: POOR FARMS(A)

FARM FAMILY INCOME  
(FARM AVERAGES)

PROVINCIA: SAN JOSE

INCOME SOURCES (D)	FARM SIZE CATEGORY	'LANDLESS' FARMS (H)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS. (C)	ALL FARM SIZES
(1) NUMBER OF FARMS		406	2,598	1,398	2,112	1,168	911	0	8,593
(2) WAGE INCOME		1,932.3	1,679.5	1,741.2	2,212.9	2,866.5	3,414.1	0.0	2,177.8
(3) ON-FARM		401.4	460.2	1,189.1	1,860.4	2,599.7	3,111.1	0.0	1,492.0
(4) OFF-FARM		1,530.8	1,219.3	552.0	352.4	266.8	302.9	0.0	685.8
(5) AG. SECTOR		356.6	185.7	87.3	64.3	77.7	103.4	0.0	15.5
(6) OTHER SECTORS		1,174.2	1,033.5	464.6	288.0	189.0	199.5	0.0	570.3
(7) FARM PRODUCTION INCOME		765.4	949.8	1,488.0	1,916.3	1,746.0	971.1	0.0	1,376.9
(8) GROSS FARM SALES		2,206.2	1,786.1	3,444.7	4,945.4	7,502.8	9,784.3	0.0	4,477.3
(9) PRODUCTION COSTS		1,440.8	836.2	1,956.7	3,029.1	5,754.8	8,813.2	0.0	3,100.3
(10) HIRED LABOR		26.9	59.9	157.2	282.5	710.4	1,422.3	0.0	361.7
(11) MATERIALS		1,413.5	695.6	1,336.9	2,038.4	3,803.2	5,905.3	0.0	2,138.6
(12) TRANSPORTATION		6.3	80.7	462.5	708.1	1,241.2	1,485.4	0.0	595.9
(13) OTHER INCOME		191.7	251.6	363.8	463.6	563.0	631.5	0.0	401.7
(14) AUTOCONSUMPTION		13.5	77.1	206.1	310.2	414.6	483.1	0.0	241.3
(15) HOUSING		178.2	174.5	157.7	153.3	148.4	148.3	0.0	160.4
(16) TOTAL NET FAMILY INCOME		2,889.4	2,881.0	3,593.1	4,592.9	5,177.6	5,016.7	0.0	3,956.6
(17) NON-CASH INCOME		592.1	711.8	1,553.0	2,324.1	3,162.8	3,742.6	0.0	1,893.8
(18) CASH INCOME		2,296.2	2,169.1	2,040.1	2,268.7	2,014.8	1,274.1	0.0	2,062.7
(19) AVERAGE FAMILY SIZE		6.5	6.0	6.3	7.0	7.5	7.6	0.0	6.7
(20) PER CAPITA NET INCOME		434.4	481.2	576.4	646.6	616.0	527.9	0.0	558.6
(21) NET INCOME PER ARABLE HECTARE		0.0	2,929.8	1,365.5	1,157.9	774.8	289.5	0.0	1,528.5
(22) VALUE PRODUCT PER ARABLE HECTARE		0.0	5,177.8	3,374.2	2,894.5	3,166.0	3,572.3	0.0	3,634.9

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES IN WHICH TOTAL NET PER CAPITA INCOME (LINE 20) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO THE AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES. ALL VALUES IN 1973 COLONES.

(B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDETERMINATE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, POULTRY, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.

(C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.

(D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:

(2) WAGE INCOME = (3) + (4)

(3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).

(4) OFF-FARM INCOME = (5) + (6)

(7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)

(9) PRODUCTION COSTS = (10) + (11) + (12).

(13) OTHER INCOME = (14) + (15).

(15) HOUSING = 15% OF IMPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.

(16) TOTAL NET FAMILY INCOME = (2) + (7) + (13), OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.

(17) NON-CASH INCOME = (3) + (14) + (15).

(18) CASH INCOME = (4) + (7).

(21) NET INCOME PER ARABLE HECTARE = (7) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

(22) VALUE PRODUCT PER ARABLE HECTARE = (8) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE 1A: POOR FARMS(A)

FARM FAMILY INCOME  
(FARM AVERAGES)

PROVINCIA: ALAJUELA

***** INCOME COLONES(D)	FARM SIZE CATEGORY *****	'LANDLESS' FARMS(B)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.(C)	ALL FARM SIZES
(1) NUMBER OF FARMS		527	2,754	1,036	1,234	640	576	0	6,767
(2) AVERAGE INCOME		1,695.9	1,548.6	1,657.7	2,042.7	2,299.1	2,479.8	0.0	1,817.1
(3) ON-FARM		257.9	424.4	1,056.5	1,601.2	1,980.5	2,261.4	0.0	1,026.3
(4) OFF-FARM		1,437.9	1,124.2	601.2	441.5	318.5	218.4	0.0	790.7
(5) AG. SECTOR		139.0	191.5	58.3	56.3	66.9	3.7	0.0	114.6
(6) OTHER SECTORS		1,298.9	932.6	542.8	385.1	251.6	214.6	0.0	676.1
(7) FARM PRODUCTION INCOME		836.0	1,300.7	2,366.1	2,870.0	2,691.6	2,114.7	0.0	1,914.6
(8) GROSS FARM SALES		5,257.5	1,948.5	3,688.0	4,926.1	5,970.4	6,820.3	0.0	3,858.1
(9) PRODUCTION COSTS		5,021.4	647.8	1,321.8	2,056.0	3,278.0	4,715.5	0.0	1,943.4
(10) HIRED LABOR		151.4	60.3	155.6	300.5	608.9	1,138.5	0.0	269.5
(11) MATERIALS		4,070.0	547.3	1,043.8	1,578.5	2,504.3	3,494.5	0.0	1,583.9
(12) TRANSPORTATION		0.0	40.1	122.3	176.9	165.5	82.3	0.0	89.9
(13) OTHER INCOME		198.1	273.7	359.5	424.4	519.8	585.2	0.0	358.0
(14) AUTOCONSUMPTION		1.5	72.0	166.5	224.7	327.8	395.1	0.0	160.5
(15) HOUSING		193.6	201.7	192.9	199.6	192.6	190.1	0.0	197.4
(16) TOTAL NET FAMILY INCOME		2,727.2	3,123.1	4,383.5	5,337.1	5,510.6	5,179.8	0.0	4,089.8
(17) NON-CASH INCOME		453.1	698.1	1,416.1	2,025.6	2,500.4	2,946.6	0.0	1,384.3
(18) CASH INCOME		2,274.0	2,424.9	2,967.4	3,311.5	3,010.2	2,333.2	0.0	2,705.4
(19) AVERAGE FAMILY SIZE		6.6	6.3	6.8	7.1	7.4	7.5	0.0	6.8
(20) PER CAPITA NET INCOME		396.3	504.8	645.1	712.8	697.9	653.4	0.0	586.7
(21) NET INCOME PER ARABLE HECTARE		0.0	3,676.7	2,232.0	1,726.6	1,335.2	870.6	0.0	2,353.3
(22) VALUE PRODUCT PER ARABLE HECTARE		0.0	5,365.6	3,478.7	2,977.1	2,995.2	3,077.4	0.0	3,804.4

FOOTNOTES:

- (A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES IN WHICH TOTAL NET PER CAPITA INCOME(LINE 20) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO THE AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES. ALL VALUES IN 1973 COLONES.
- (B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDEFINITE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, POULTRY, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.
- (C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.
- (D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:  
 (2) WAGE INCOME = (3) + (-)  
 (3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).  
 (4) OFF-FARM INCOME = (5) + (6).  
 (7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)  
 (9) PRODUCTION COSTS = (10) + (11) + (12).  
 (13) OTHER INCOME = (14) + (15).  
 (15) HOUSING = 5% OF IMPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.  
 (16) TOTAL NET FAMILY INCOME = (2) + (7) + (13), OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.  
 (17) NON-CASH INCOME = (3) + (14) + (15).  
 (18) CASH INCOME = (4) + (7).  
 (21) NET INCOME PER ARABLE HECTARE = (7) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.  
 (22) VALUE PRODUCT PER ARABLE HECTARE = (8) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE 1A: POOR FARMS(A)

FARM FAMILY INCOME  
(FARM AVERAGES)

PROVINCIA: CARTAGO

***** INCOME SOURCES (D)	FARM SIZE CATEGORY	'LANDLESS' FARMS(B)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.7 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.(C)	ALL FARM SIZES
(1) NUMBER OF FARMS		503	1,344	489	583	250	145	0	3,314
(2) WAGE INCOME		2,494.7	1,636.7	1,734.5	2,383.1	2,921.3	3,269.2	0.0	2,109.9
(3) ON-FARM		326.0	477.2	1,218.2	1,612.5	2,125.6	2,624.6	0.0	981.6
(4) OFF-FARM		2,368.7	1,159.4	516.2	770.5	775.6	644.6	0.0	1,128.2
(5) AG. SECTOR		349.9	176.7	92.7	166.0	217.9	259.1	0.0	195.4
(6) OTHER SECTORS		2,018.8	982.6	423.5	604.5	557.6	385.4	0.0	932.7
(7) FARM PRODUCTION INCOME		884.5	1,063.6	2,224.6	2,353.2	2,312.5	850.7	0.0	1,519.5
(8) GROSS FARM SALES		2,096.5	1,799.6	3,787.3	4,837.1	6,565.2	9,313.7	0.0	3,362.1
(9) PRODUCTION COSTS		1,212.0	736.0	1,562.6	2,483.9	4,272.6	8,463.0	0.0	1,842.6
(10) HIRED LABOR		27.7	46.0	110.8	276.9	472.2	1,752.8	0.0	200.6
(11) MATERIALS		1,184.2	688.0	1,446.4	2,191.0	3,784.5	6,685.0	0.0	1,635.6
(12) TRANSPORTATION		0.0	1.9	5.3	13.9	15.9	25.1	0.0	6.3
(13) OTHER INCOME		227.7	248.7	290.2	314.8	374.4	422.3	0.0	280.3
(14) AUTOCONSUMPTION		1.6	31.8	71.6	96.9	157.4	209.6	0.0	61.8
(15) HOUSING		226.1	216.9	218.6	217.9	216.9	212.7	0.0	218.5
(16) TOTAL NET FAMILY INCOME		3,807.1	2,949.1	4,249.4	5,051.2	5,588.2	4,542.4	0.0	3,909.8
(17) NON-CASH INCOME		553.7	726.0	1,508.4	1,927.4	2,500.0	3,047.0	0.0	1,262.0
(18) CASH INCOME		3,253.3	2,223.0	2,740.9	3,123.8	3,088.1	1,495.3	0.0	2,647.7
(19) AVERAGE FAMILY SIZE		7.4	6.9	6.9	7.7	7.9	7.1	0.0	7.2
(20) PER CAPITA NET INCOME		493.8	429.2	618.4	620.8	658.1	489.8	0.0	520.5
(21) NET INCOME PER ARABLE HECTARE		0.0	3,390.3	2,203.4	1,515.9	1,264.8	592.0	0.0	2,088.0
(22) VALUE PRODUCT PER ARABLE HECTARE		0.0	5,711.1	3,857.0	3,192.2	3,403.7	3,935.2	0.0	3,875.8

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES IN WHICH TOTAL NET PER CAPITA INCOME (LINE 20) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO THE AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES. ALL VALUES IN 1973 COLONES.

(B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDETERMINATE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, Poultry, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.

(C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.

(D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:

(2) WAGE INCOME = (3) + (4)

(3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).

(4) OFF-FARM INCOME = (5) + (6)

(7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)

(9) PRODUCTION COSTS = (10) + (11) + (12)

(13) OTHER INCOME = (14) + (15)

(15) HOUSING = 1% OF INPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.

(16) TOTAL NET FAMILY INCOME = (2) + (7) + (13). OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.

(17) NON-CASH INCOME = (3) + (14) + (15)

(18) CASH INCOME = (4) + (7)

(21) NET INCOME PER ARABLE HECTARE = (7) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

(22) VALUE PRODUCT PER ARABLE HECTARE = (8) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE 1A: POOR FARMS(A)

FARM FAMILY INCOME  
(FARM AVERAGES)

PROVINCIA: MERCEDES

FARM SIZE CATEGORY SOURCE(S) (D)	'LANDLESS' FARMS (D)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.(C)	ALL FARM SIZES
(1) NUMBER OF FARMS	109	706	131	90	48	62	0	1,146
(2) WAGE INCOME	2,446.0	2,052.9	1,967.7	2,499.2	1,944.9	3,290.0	0.0	2,177.9
(3) ON-FARM	234.0	406.0	1,224.9	1,606.4	1,551.6	2,110.7	0.0	746.3
(4) OFF-FARM	1,912.0	1,646.7	742.8	892.7	393.2	1,179.2	0.0	1,431.6
(5) AG. SECTOR	53.6	156.5	199.2	0.0	115.8	124.2	0.0	135.8
(6) OTHER SECTORS	1,858.4	1,490.1	543.5	892.7	277.7	1,055.0	0.0	1,295.7
(7) FARM PRODUCTION INCOME	1,743.4	1,462.0	-3,342.7	-4,439.8	1,779.0	1,134.7	0.0	471.6
(8) GROSS FARM SALES	2,951.1	2,054.9	19,982.3	7,646.1	4,637.9	6,263.4	0.0	4,964.4
(9) PRODUCTION COSTS	1,207.7	592.8	23,325.0	12,086.0	2,858.8	5,128.6	0.0	4,492.7
(10) HIRED LABOR	64.5	103.8	888.3	653.6	451.3	1,222.4	0.0	308.0
(11) MATERIALS	1,142.4	487.0	22,422.3	11,420.5	2,394.1	3,873.7	0.0	4,178.6
(12) TRANSPORTATION	0.7	1.8	14.2	11.7	13.4	32.4	0.0	6.1
(13) OTHER INCOME	260.1	253.9	270.3	363.6	340.0	614.6	0.0	283.4
(14) AUTOCONSUMPTION	6.1	27.8	58.8	91.5	120.9	376.8	0.0	57.1
(15) HOUSING	253.9	226.0	211.5	212.0	219.0	237.8	0.0	226.3
(16) TOTAL NET FAMILY INCOME	4,449.6	3,768.8	-1,104.6	-1,637.0	4,064.0	5,039.4	0.0	2,933.0
(17) NON-CASH INCOME	794.1	660.0	1,495.2	1,910.0	1,891.6	2,727.3	0.0	1,029.7
(18) CASH INCOME	3,655.4	3,108.8	-2,599.9	-3,547.0	2,172.3	2,312.0	0.0	1,903.3
(19) AVERAGE FAMILY SIZE	6.2	6.3	6.9	7.0	6.7	7.9	0.0	6.7
(20) PER CAPITA NET INCOME	538.7	596.7	-367.5	-93.3	608.5	670.6	0.0	425.9
(21) NET INCOME PER ARABLE HECTARE	0.0	5,175.3	3,011.2	1,264.2	771.4	365.8	0.0	3,683.9
(22) VALUE PRODUCT PER ARABLE HECTARE	0.0	7,176.9	4,654.1	2,065.0	1,677.9	1,368.2	0.0	5,259.9

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES IN WHICH TOTAL NET PER CAPITA INCOME (LINE 20) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO THE AID POVERTY DEFINITION C. 150 PER CAPITA PER YEAR IN 1969 PRICES, ALL VALUES IN 1973 COLONES.

(B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDETERMINATE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, POULTRY, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.

(C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.

(D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:

(2) WAGE INCOME = (3) + (4)

(3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).

(4) OFF-FARM INCOME = (5) + (6).

(7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)

(9) PRODUCTION COSTS = (10) + (11) + (12).

(13) OTHER INCOME = (14) + (15).

(15) HOUSING = 15% OF IMPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.

(16) TOTAL NET FAMILY INCOME = (2) + (7) + (13), OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.

(17) NON-CASH INCOME = (3) + (14) + (15).

(18) CASH INCOME = (4) + (7).

(21) NET INCOME PER ARABLE HECTARE = (17) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

(22) VALUE PRODUCT PER ARABLE HECTARE = (8) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE 1A: POOR FARMS(A)

FARM FAMILY INCOME  
(FARM AVERAGES)

PROVINCIA: GUANACASTE

FARM SIZE CATEGORY	'LANDLESS' FARMS(B)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.(C)	ALL FARM SIZES
FARM SIZE CATEGORY	'LANDLESS' FARMS(B)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.(C)	ALL FARM SIZES
(1) NUMBER OF FARMS	659	784	596	1,051	626	706	0	4,422
(2) WAGE INCOME	1,656.9	1,240.8	1,302.5	1,952.3	2,463.7	3,152.8	0.0	1,969.4
(3) ON-FARM	294.6	485.7	953.3	1,490.6	2,098.2	2,805.7	0.0	1,357.8
(4) OFF-FARM	1,362.3	755.1	429.2	461.6	365.4	347.0	0.0	611.6
(5) AG. SECTOR	302.9	101.0	60.7	80.3	82.0	100.1	0.0	117.9
(6) OTHER SECTORS	1,059.3	654.0	368.5	381.3	283.4	246.8	0.0	493.6
(7) FARM PRODUCTION INCOME	1,265.9	1,349.8	1,568.6	1,772.4	1,867.4	1,105.9	0.0	1,501.5
(8) GROSS FARM SALES	2,791.8	2,887.3	3,695.5	4,811.8	6,831.6	9,237.4	0.0	5,011.6
(9) PRODUCTION COSTS	1,525.9	1,537.5	2,126.9	3,039.6	4,964.2	8,131.5	0.0	3,510.1
(10) HIRED LABOR	93.3	76.3	119.1	185.5	444.2	1,418.6	0.0	377.0
(11) MATERIALS	1,431.3	1,446.6	1,964.0	2,776.7	4,418.3	6,591.4	0.0	3,072.3
(12) TRANSPORTATION	1.2	14.4	43.7	77.3	101.5	121.4	0.0	60.7
(13) OTHER INCOME	333.0	509.9	738.6	811.8	802.9	849.7	0.0	681.4
(14) AUTOCONSUMPTION	18.6	204.6	437.8	537.9	540.1	604.4	0.0	398.9
(15) HOUSING	314.4	305.2	297.8	273.8	262.7	245.2	0.0	282.5
(16) TOTAL NET FAMILY INCOME	3,258.9	3,100.6	3,686.8	4,536.3	5,133.0	5,108.5	0.0	4,152.4
(17) NON-CASH INCOME	627.7	995.6	1,688.9	2,302.5	2,901.1	3,655.5	0.0	2,039.3
(18) CASH INCOME	2,628.2	2,104.9	1,997.8	2,233.8	2,232.9	1,452.9	0.0	2,113.1
(19) AVERAGE FAMILY SIZE	6.6	6.4	6.8	7.2	7.4	7.8	0.0	7.0
(20) PER CAPITA NET INCOME	503.6	517.5	564.4	638.1	673.6	611.5	0.0	587.5
(21) NET INCOME PER ARABLE HECTARE	0.0	3,320.4	1,356.9	1,082.3	1,007.6	422.6	0.0	1,238.9
(22) VALUE PRODUCT PER ARABLE HECTARE	0.0	6,894.5	3,134.8	2,912.9	3,496.9	4,333.6	0.0	3,524.1

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES IN WHICH TOTAL NET PER CAPITA INCOME (LINE 20) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO THE AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES. ALL VALUES IN 1973 COLONES.

(B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDETERMINATE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, POULTRY, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.

(C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.

(D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:

(2) WAGE INCOME = (3) + (4)

(3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).

(4) OFF-FARM INCOME = (5) + (6).

(7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)

(9) PRODUCTION COSTS = (10) + (11) + (12).

(13) OTHER INCOME = (14) + (15).

(15) HOUSING = 15% OF IMPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.

(16) TOTAL NET FAMILY INCOME = (2) + (7) + (13), OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.

(17) NON-CASH INCOME = (3) + (14) + (15).

(18) CASH INCOME = (4) + (7).

(21) NET INCOME PER ARABLE HECTARE = (7) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

(22) VALUE PRODUCT PER ARABLE HECTARE = (8) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE 1A: FOUR FARMS(A)

FARM FAMILY INCOME  
(FARM AVERAGES)

PROVINCIA: PUNTARENAS

***** INCOME SOURCES (D) *****	***** FARM SIZE (CATEGORY) *****							
	'LANDLESS' FARMS (B)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS. (C)	ALL FARM SIZES
(1) NUMBER OF FARMS	586	697	805	1,021	695	1,122	0	4,626
(2) WAGE INCOME	1,485.5	1,270.3	1,157.5	1,657.4	2,419.6	2,715.7	0.0	1,493.9
(3) ON-FARM	271.3	386.1	786.4	1,311.0	2,047.4	2,465.6	0.0	1,372.4
(4) OFF-FARM	1,214.2	890.2	371.0	346.4	372.1	250.0	0.0	521.4
(5) AG. SECTOR	242.6	177.5	86.1	77.8	65.5	48.0	0.0	105.5
(6) OTHER SECTORS	971.6	712.7	284.9	268.5	306.5	202.0	0.0	415.8
(7) FARM PRODUCTION INCOME	1,168.2	1,161.0	1,378.7	1,662.8	1,466.9	903.4	0.0	1,267.0
(8) GROSS FARM SALES	2,476.4	2,269.7	2,684.9	3,620.8	5,382.4	7,015.0	0.0	4,258.0
(9) PRODUCTION COSTS	308.1	1,108.6	1,306.2	2,018.0	3,913.5	6,111.5	0.0	2,991.3
(10) HIRED LABOR	36.4	56.9	68.5	178.6	399.1	790.1	0.0	302.8
(11) MATERIALS	1,271.0	1,041.4	1,210.6	1,670.3	3,250.0	4,684.8	0.0	2,476.8
(12) TRANSPORTATION	0.6	10.2	27.0	57.0	224.2	636.6	0.0	211.2
(13) OTHER INCOME	381.1	549.4	634.1	689.8	775.4	856.4	0.0	677.3
(14) AUTOCONSUMPTION	6.1	128.8	237.5	326.9	408.6	489.4	0.0	298.4
(15) HOUSING	375.0	420.5	396.6	362.8	370.7	366.9	0.0	378.9
(16) TOTAL NET FAMILY INCOME	3,035.0	2,980.8	3,170.4	3,950.0	4,667.9	4,475.6	0.0	3,830.3
(17) NON-CASH INCOME	652.5	929.5	1,420.6	2,000.8	2,826.8	3,322.0	0.0	2,049.8
(18) CASH INCOME	2,382.5	2,051.2	1,749.7	1,949.2	1,841.0	1,153.5	0.0	1,788.5
(19) AVERAGE FAMILY SIZE	6.4	6.2	6.0	6.7	7.1	7.0	0.0	6.7
(20) PFR CAPITA NET INCOME	492.6	506.6	544.8	597.4	639.6	574.6	0.0	565.5
(21) NET INCOME PER ARABLE HECTARE	0.0	2,196.2	1,358.5	941.7	682.8	349.8	0.0	874.1
(22) VALUE PRODUCT PER ARABLE HECTARE	0.0	3,918.9	2,679.4	2,282.5	2,671.3	2,283.2	0.0	2,341.8

FOOTNOTES:

(A) A FOUR FARM IS A FARM OF LESS THAN 20 HECTARES IN WHICH TOTAL NET PER CAPITA INCOME (LINE 20) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO THE AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES. ALL VALUES IN 1973 COLONES.

(B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDETERMINATE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, POULTRY, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.

(C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.

(D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:

(2) WAGE INCOME = (3) + (4)

(3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).

(4) OFF-FARM INCOME = (5) + (6).

(7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)

(9) PRODUCTION COSTS = (10) + (11) + (12).

(13) OTHER INCOME = (14) + (15).

(15) HOUSING = 15% OF IMPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.

(16) TOTAL NET FAMILY INCOME = (2) + (7) + (13), OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.

(17) NON-CASH INCOME = (3) + (14) + (15).

(18) CASH INCOME = (4) + (7).

(21) NET INCOME PER ARABLE HECTARE = (7) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

(22) VALUE PRODUCT PER ARABLE HECTARE = (8) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE 1H: NON-POOR FARMERS

FARM FAMILY INCOME  
(FARM AVERAGES)

## COSTA RICA

FARM SIZE CATEGORY	LANDLESS FARMS (B)	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS. (C)	ALL FARM SIZES
(1) NUMBER OF FARMS	1,311	4,207	2,480	5,514	4,111	4,500	19,063	42,284
(2) WAGE INCOME	13,177.2	13,971.2	10,465.9	8,640.1	8,240.1	8,218.4	8,449.0	9,238.2
(3) ON-FARM	655.5	701.2	1,626.3	2,730.3	3,897.1	4,695.8	6,382.5	3,971.7
(4) OFF-FARM	12,521.7	13,269.9	8,839.5	5,809.8	4,351.0	3,519.7	3,066.5	5,266.5
(5) AG. SECTOR	2,442.5	2,019.3	1,278.3	1,003.4	931.4	708.2	527.2	904.1
(6) OTHER SECTORS	10,079.2	11,250.6	7,561.1	4,806.3	3,419.5	2,811.5	2,539.3	4,362.3
(7) FARM PRODUCTION INCOME	3,273.5	3,544.4	6,482.8	9,698.6	13,504.5	13,653.1	10,349.6	9,805.3
(8) GROSS FARM SALES	7,419.4	6,820.9	11,031.3	14,667.0	21,523.8	22,790.9	50,580.9	31,885.3
(9) PRODUCTION COSTS	4,145.9	3,276.4	4,548.4	4,968.4	8,019.3	9,137.7	40,231.2	22,080.0
(10) HIRED LABOR	128.5	118.8	197.6	407.5	1,092.2	1,790.0	13,044.1	6,515.0
(11) MATERIALS	4,016.3	3,142.3	4,253.3	4,408.2	6,581.6	7,020.0	26,530.6	15,168.8
(12) TRANSPORTATION	1.0	15.3	97.4	152.6	245.4	327.6	657.0	396.0
(13) OTHER INCOME	302.8	312.0	379.9	446.7	539.7	721.2	880.2	667.3
(14) AUTOCONSUMPTION	8.9	61.2	147.9	212.3	312.5	474.2	642.6	427.4
(15) HOUSING	293.9	250.8	231.9	234.4	227.1	247.0	237.5	239.8
(16) TOTAL NET FAMILY INCOME	16,753.6	17,827.8	17,328.7	18,685.6	22,292.4	22,590.0	19,678.9	19,718.8
(17) NON-CASH INCOME	958.1	1,013.3	2,006.2	3,177.1	4,436.8	5,417.1	6,262.7	4,639.0
(18) CASH INCOME	15,795.2	16,814.4	15,322.4	15,508.4	17,855.5	17,172.9	13,416.2	15,079.8
(19) AVERAGE FAMILY SIZE	5.8	5.4	5.0	5.3	5.7	5.8	6.7	6.1
(20) PER CAPITA NET INCOME	3,265.5	3,613.2	3,827.9	4,091.1	4,620.9	4,707.7	4,749.5	4,430.8
(21) NET INCOME PER ARABLE HECTARE	0.0	8,135.1	5,278.6	4,254.1	3,531.2	2,719.6	448.6	2,547.8
(22) VALUE PRODUCT PER ARABLE HECTARE	0.0	14,646.4	8,694.3	6,853.5	5,890.6	5,048.2	5,949.4	6,819.2

## FOOTNOTES:

- (A) A NON-POOR FARM IS OVER 20 HECTARES AND/OR A FARM IN WHICH TOTAL NET PER CAPITA INCOME (LINE 20) IS MORE THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO THE AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES. ALL VALUES IN 1973 COLONES.
- (B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDETERMINATE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, POULTRY, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.
- (C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.
- (D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:
- (2) WAGE INCOME = (3) + (4).
- (3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).
- (4) OFF-FARM INCOME = (5) + (6).
- (7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)
- (9) PRODUCTION COSTS = (10) + (11) + (12).
- (13) OTHER INCOME = (14) + (15).
- (15) HOUSING = 15% OF IMPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.
- (16) TOTAL NET FAMILY INCOME = (2) + (7) + (13), OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.
- (17) NON-CASH INCOME = (3) + (14) + (15).
- (18) CASH INCOME = (4) + (7).
- (21) NET INCOME PER ARABLE HECTARE = (7)/TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.
- (22) VALUE PRODUCT PER ARABLE HECTARE = (8)/TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE IC: ALL FARMS(A)

FARM FAMILY INCOME  
(FARM AVERAGES)

## COSTA RICA

INCOME SOURCES (D)	FARM SIZE CATEGORY		1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.(C)	ALL FARM SIZES
	'LANDLESS' FARMS (B)	LESS THAN 1 HECTARE						
(1) NUMBER OF FARMS	4,170	13,255	6,791	12,015	8,152	6,529	19,863	72,775
(2) WAGE INCOME	5,435.9	5,578.0	4,841.4	5,015.9	5,541.8	5,733.3	8,449.0	6,206.1
(3) ON-FARM	419.5	525.4	1,267.2	2,108.8	3,064.3	3,715.1	5,382.5	2,833.8
(4) OFF-FARM	5,016.3	5,052.6	3,574.2	2,907.0	2,477.5	2,018.2	3,066.5	3,372.2
(5) AG. SECTOR	950.7	762.9	518.0	499.4	532.8	409.3	527.2	575.8
(6) OTHER SECTORS	4,065.5	4,289.6	3,056.2	2,407.5	1,944.6	1,608.8	2,539.3	2,796.4
(7) FARM PRODUCTION INCOME	1,741.0	1,930.6	3,397.2	5,507.5	8,034.2	7,759.3	10,349.6	6,315.3
(8) GROSS FARM SALES	4,436.0	3,543.7	6,530.7	9,227.5	14,349.6	15,840.0	50,580.9	20,301.7
(9) PRODUCTION COSTS	2,694.9	1,613.1	3,133.5	3,720.0	6,315.4	8,050.6	40,231.2	13,976.3
(10) HIRED LABOR	88.1	80.5	170.6	322.0	846.6	1,519.6	13,044.1	3,921.9
(11) MATERIALS	2,606.1	1,501.7	2,806.7	3,172.4	5,115.3	6,096.9	26,530.0	9,737.1
(12) TRANSPORTATION	0.6	30.8	156.2	225.5	353.3	434.0	657.0	327.2
(13) OTHER INCOME	283.5	307.5	415.0	491.1	571.3	718.8	880.2	588.5
(14) AUTOCONSUMPTION	8.6	73.7	185.6	258.4	337.9	464.8	642.6	341.6
(15) HOUSING	274.8	233.7	229.3	232.7	233.3	254.0	237.5	238.8
(16) TOTAL NET FAMILY INCOME	7,460.4	7,816.2	8,653.6	11,014.5	14,147.3	14,241.6	19,678.9	13,182.0
(17) NON-CASH INCOME	703.0	832.9	1,682.2	2,599.9	3,635.6	4,434.0	2,262.7	3,414.4
(18) CASH INCOME	6,757.4	6,983.2	6,971.4	8,414.6	10,511.7	9,807.6	13,416.2	9,687.5
(19) AVERAGE FAMILY SIZE	6.5	6.0	6.0	6.2	6.4	6.5	6.7	6.4
(20) PER CAPITA NET INCOME	1,346.0	1,498.6	1,754.5	2,221.7	2,746.8	2,762.6	4,749.5	2,008.4
(21) NET INCOME PER ARABLE HECTARE	0.0	4,898.3	3,006.6	2,620.1	2,298.0	1,643.4	448.6	2,177.7
(22) VALUE PRODUCT PER ARABLE HECTARE	0.0	8,436.6	5,279.7	4,634.4	4,488.0	4,093.2	5,949.4	5,408.9

## FOOTNOTES:

- (B) 'LANDLESS' FARMS ARE A RESIDUAL CENSUS CATEGORY FOR FARMS OF INDETERMINATE TENANCY AND/OR AGRICULTURAL ENTERPRISES SUCH AS PIG, POULTRY, AND DAIRY PRODUCERS WHO HAVE NO AGRICULTURAL LAND IN PRODUCTION.
- (C) FARMS OVER 20 HECTARES ARE DEFINED AS 'NON-POOR' REGARDLESS OF COMPUTED PER CAPITA INCOMES.
- (D) THE METHODOLOGIES EMPLOYED FOR CALCULATING THE BUDGET ITEMS ARE AS FOLLOWS:
- (2) WAGE INCOME = (3) + (4)
- (3) ON-FARM LABOR INCOME = TOTAL FARM LABOR REQUIREMENTS (IN COLONES) MINUS HIRED LABOR COSTS (ITEM 10).
- (4) OFF-FARM INCOME = (5) + (6).
- (7) FARM PRODUCTION INCOME = (8) - (9). (RETURNS TO LAND AND CAPITAL)
- (9) PRODUCTION COSTS = (10) + (11) + (12).
- (13) OTHER INCOME = (14) + (15).
- (15) HOUSING = 15% OF IMPUTED RENTAL VALUE OF A SIMILAR HOME IN THAT CANTON.
- (16) TOTAL NET FAMILY INCOME = (2) + (7) + (13), OR ALTERNATIVELY, (17) + (18). NET RETURNS TO LAND, LABOR, AND CAPITAL.
- (17) NON-CASH INCOME = (3) + (14) + (15).
- (18) CASH INCOME = (4) + (7).
- (21) NET INCOME PER ARABLE HECTARE = (7) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.
- (22) VALUE PRODUCT PER ARABLE HECTARE = (8) / TOTAL ARABLE HECTARES AS REPORTED IN THE AG CENSUS.

TABLE 2A: POOR FARMS(A)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(B)

## COSTA RICA

LAND USE CATEGORY(C)	FARM SIZE CATEGORY	'LANDLESS' FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS		2,870	9,019	4,336	6,550	3,886	4,079	0	30,739
(2) TOTAL AREA		0.0	3,906.5	5,844.6	20,530.3	27,371.9	58,860.4	0.0	116,513.9
(3) CULTIVATED CROP LAND		0.0	1,218.5	2,247.0	7,131.1	6,969.6	12,989.9	0.0	30,555.3
(4) ANNUAL CROPS		88.4	1,450.0	2,525.0	6,811.3	5,738.4	8,234.3	0.0	24,648.1
(5) CEREALS		88.4	1,213.2	2,234.3	6,308.8	5,359.4	7,456.8	0.0	23,072.7
(6) VEGETABLES		1.5	87.5	87.1	97.9	36.3	24.4	0.0	315.1
(7) TUBERS		0.4	81.3	102.3	170.2	135.5	137.2	0.0	627.3
(8) TOBACCO		0.0	47.8	121.1	234.2	216.0	213.7	0.0	832.9
(9) LAND IN FALLOW		-88.9	-231.4	-278.0	319.8	1,231.2	4,755.5	0.0	5,708.1
(10) LAND IN PERMANENT CROPS		0.0	2,061.8	2,250.7	5,115.0	3,990.6	4,184.4	0.0	17,632.8
(11) COFFEE		0.0	1,525.1	1,511.5	2,311.6	1,550.1	1,375.9	0.0	8,984.4
(12) COCOA AND COCONUT		0.0	12.0	64.3	479.6	829.7	949.6	0.0	2,335.4
(13) SUGAR CANE		0.0	165.2	245.6	583.9	434.4	408.1	0.0	1,827.5
(14) FRUIT TREES		0.0	73.5	99.6	289.0	292.2	505.6	0.0	1,255.2
(15) PASTURES		0.0	359.8	904.7	6,021.3	11,511.2	25,268.9	0.0	44,066.1
(16) FOREST		0.0	29.3	61.6	415.7	1,352.6	6,979.1	0.0	8,837.5
(17) OTHER		0.0	237.9	380.4	1,843.0	3,847.7	9,437.9	0.0	15,447.0

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES.

(B) IN HECTARES  
(C) DEFINITIONS OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (3) + (9) + (10) + (15) + (16) + (17).

(3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY.

(9) LAND IN FALLOW, WHEN NEGATIVE INDICATES MULTIPLE CROPPING.

(10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).

(17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDBREAKS, CORRALS, ETC.

TABLE 2A: POOR FARMS(A)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(B)

PROVINCIA: SAN JOSE

LAND USE CATEGORY(C)	FARM SIZE CATEGORY	'LANDLESS' FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS		406	2,598	1,398	2,112	1,168	911	0	8,593
(2) TOTAL AREA		0.0	1,149.8	1,918.1	6,716.4	8,332.3	12,804.6	0.0	30,941.4
(3) CULTIVATED CROP LAND		0.0	337.8	682.1	2,147.6	2,131.3	2,715.1	0.0	6,334.2
(4) ANNUAL CROPS		15.1	443.2	846.4	2,370.5	1,922.5	1,948.0	0.0	7,616.0
(5) CEREALS		14.0	390.1	730.5	2,120.5	1,775.2	1,770.1	0.0	6,813.5
(6) VEGETABLES		0.0	15.0	7.6	8.5	4.4	4.9	0.0	40.6
(7) TUBERS		0.3	7.2	7.0	25.2	21.6	11.8	0.0	73.2
(8) TOBACCO		0.0	15.7	101.1	207.1	191.2	151.2	0.0	691.5
(9) LAND IN FALLOW		-15.1	-105.3	-164.2	-202.8	136.7	767.1	0.0	416.2
(10) LAND IN PERMANENT CROPS		0.0	673.6	860.4	1,964.5	1,304.0	1,182.4	0.0	5,989.2
(11) COFFEE		0.0	577.0	697.7	1,559.6	935.7	789.6	0.0	4,559.9
(12) COCOA AND COCONUT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(13) SUGAR CANE		0.0	24.7	67.9	178.4	162.6	179.3	0.0	613.1
(14) FRUIT TREES		0.0	11.2	17.7	48.4	47.0	45.3	0.0	169.9
(15) PASTURES		0.0	95.5	247.0	1,902.6	3,531.1	6,166.2	0.0	11,942.5
(16) FOREST		0.0	5.5	16.7	129.8	326.3	871.9	0.0	1,352.6
(17) OTHER		0.0	57.1	111.6	547.8	1,037.3	1,868.7	0.0	3,622.7

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES.

(B) IN HECTARES

(C) DEFINITIONS OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (3) + (10) + (15) + (16) + (17).

(3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY

(9) LAND IN FALLOW, WHEN NEGATIVE INDICATES MULTIPLE CROPPING.

(10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).

(17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDBREAKS, CORRALS, ETC.

TABLE 2A: POOR FARMS(A)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(B)

PROVINCE: ALAJUJLA

***** LAND USE CATEGORY (C)	***** FARM SIZE CATEGORY *****	'LANDLESS' FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS		527	2,754	1,036	1,214	640	576	0	6,767
(2) TOTAL AREA		0.0	1,179.6	1,404.6	3,859.9	4,555.9	8,104.0	0.0	19,104.1
(3) CULTIVATED CROP LAND		0.0	281.1	405.9	825.1	788.3	1,240.3	0.0	3,565.9
(4) ANNUAL CROPS		1.3	346.2	436.1	795.9	653.3	744.7	0.0	2,997.4
(5) CEREALS		1.3	274.4	349.3	660.2	466.3	716.0	0.0	2,567.8
(6) VEGETABLES		0.0	29.4	29.2	92.9	20.7	8.9	0.0	136.2
(7) TUBERS		0.0	39.3	37.5	55.5	55.8	37.9	0.0	217.2
(8) TOBACCO		0.0	17.0	29.0	27.0	10.4	1.3	0.0	74.0
(9) LAND IN FALLOW		-1.3	-65.0	-30.2	29.3	134.9	495.9	0.0	563.4
(10) LAND IN PERMANENT CROPS		0.0	734.4	691.7	1,325.1	765.6	716.3	0.0	4,235.3
(11) COFFEE		0.0	515.5	433.5	682.7	298.2	203.8	0.0	2,134.0
(12) COCOA AND COCONUT		0.0	0.8	0.3	47.6	68.9	135.0	0.0	252.8
(13) SUGAR CANE		0.0	102.8	119.9	276.5	129.6	86.9	0.0	715.8
(14) FRUIT TREES		0.0	18.4	26.5	71.8	67.9	109.9	0.0	294.8
(15) PASTURES		0.0	111.2	233.5	1,327.5	2,054.8	3,282.4	0.0	7,009.7
(16) FOREST		0.0	7.5	12.0	82.2	301.2	1,291.1	0.0	1,694.3
(17) OTHER		0.0	45.1	61.3	299.8	645.7	1,551.8	0.0	2,603.8

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO AID POVERTY DEFINITION OF \$15 PER CAPITA PER YEAR IN 1969 PRICES.

(B) IN HECTARES

(C) DEFINITIONS OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (1) + (10) + (15) + (16) + (17).

(3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY.

(9) LAND IN FALLOW, WHEN NEGATIVE INDICATES MULTIPLE CROPPING.

(10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).

(17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDBREAKS, CORRALS, ETC.

TABLE 2A: POOR FARMS(A)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(B)

PROVINCE: CARTAGO

FARM SIZE CATEGORY (C)	'LANDLESS' FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS	503	1,344	489	593	250	145	0	3,314
(2) TOTAL AREA	0.0	533.9	665.2	1,028.9	1,793.0	1,998.6	0.0	6,819.6
(3) CULTIVATED CROP LAND	0.0	164.3	162.9	345.7	205.0	253.3	0.0	1,131.5
(4) ANNUAL CROPS	2.5	137.1	125.9	186.3	101.3	97.6	0.0	650.1
(5) CEREALS	2.4	68.1	66.6	114.7	80.3	92.1	0.0	414.4
(6) VEGETABLES	0.0	38.2	18.3	24.6	3.3	1.2	0.0	85.3
(7) TUBERS	0.1	30.6	41.0	46.8	16.6	14.4	0.0	149.7
(8) TOBACCO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(9) LAND IN FALLOW	-2.5	27.2	36.9	159.4	104.7	155.5	0.0	481.4
(10) LAND IN PERMANENT CROPS	0.0	297.0	324.6	619.6	361.0	277.2	0.0	1,879.6
(11) COFFEE	0.0	211.9	226.9	361.1	141.6	122.4	0.0	1,064.3
(12) COCOA AND COCONUT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(13) SUGAR CANE	0.0	30.7	46.8	95.5	90.6	59.1	0.0	322.9
(14) FRUIT TREES	0.0	11.1	6.0	25.7	16.9	17.5	0.0	71.3
(15) PASTURES	0.0	45.9	117.8	589.3	855.6	987.5	0.0	2,596.3
(16) FOREST	0.0	6.1	7.3	64.8	128.6	201.2	0.0	408.2
(17) OTHER	0.0	20.4	52.4	209.3	242.6	279.1	0.0	804.0

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES.

(B) IN HECTARES

(C) DEFINITIONS OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (3) + (9) + (15) + (16) + (17).

(3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY

(9) LAND IN FALLOW, WHEN NEGATIVE INDICATES MULTIPLE CROPPING.

(10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).

(17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDBREAKS, CORRALS, ETC.

TABLE 2A: POOR FARMS(14)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(14)

PROVINCIA: MERIDA

LAND USE CATEGORY(C)	FARM SIZE CATEGORY	LANDLESS FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS		110	706	131	90	48	62	0	1,146
(2) TOTAL AREA		0.0	258.6	172.2	259.8	332.4	891.5	0.0	1,914.7
(3) CULTIVATED CROP LAND		0.0	34.9	21.4	42.7	35.3	110.5	0.0	245.1
(4) ANNUAL CROPS		3.4	25.1	21.4	29.5	18.9	30.7	0.0	159.4
(4) CEREALS		1.9	14.8	11.4	21.0	12.9	47.0	0.0	110.0
(4) VEGETABLES		1.5	7.1	8.1	4.1	1.0	0.7	0.0	22.7
(4) TUBERS		0.0	3.2	1.8	3.6	4.0	12.9	0.0	26.5
(4) TOBACCO		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(9) LAND IN FALLOW		-3.4	9.7	0.0	13.1	16.4	49.7	0.0	85.7
(10) LAND IN PERMANENT CROPS		0.0	197.9	100.3	104.5	79.2	100.3	0.0	542.4
(11) COFFEE		0.0	187.7	88.2	86.7	25.4	18.1	0.0	406.5
(12) COCOA AND COCONUT		0.0	0.0	0.0	0.0	0.0	8.8	0.0	8.8
(13) SUGAR CANE		0.0	3.7	4.7	5.1	0.7	3.8	0.0	18.2
(14) FRUIT TREES		0.0	0.5	1.3	3.2	6.2	38.6	0.0	59.0
(15) PASTURES		0.0	23.0	41.5	92.3	181.0	334.5	0.0	673.3
(16) FOREST		0.0	0.3	1.3	11.6	41.0	229.0	0.0	283.5
(17) OTHER		0.0	2.3	7.4	8.4	34.8	116.9	0.0	179.1

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS LESS THAN 1400 COLONES PER FAMILY MEMBER. EQUIVALENT TO AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1989 PRICES.

(B) IN HECTARES OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (3) + (9) + (15) + (16) + (17).  
 (3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY.  
 (9) LAND IN FALLOW, WHEN NEGATIVE INDICATES MULTIPLE CRIMPING.  
 (10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).  
 (17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDBREAKS, CORRIALS, ETC.

TABLE 2A: FOUR FARMS(A)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(B)

PROVINCIA: GUANACASTE

LAND USE CATEGORY(C)	FARM SIZE CATEGORY	LANDLESS FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS		659	784	596	1,051	626	766	0	4,422
(2) TOTAL AREA		0.0	384.3	806.6	3,307.4	4,451.2	10,157.0	0.0	19,106.7
(3) CULTIVATED CROP LAND		0.0	253.7	585.2	1,911.6	1,514.1	2,258.2	0.0	6,523.1
(4) ANNUAL CROPS		46.2	127.1	666.9	1,465.8	1,362.5	1,875.9	0.0	6,143.8
(5) CEREALS		46.2	127.1	658.6	1,452.9	1,356.8	1,869.9	0.0	6,108.2
(6) VEGETABLES		0.0	1.3	1.5	3.9	3.6	0.4	0.0	10.9
(7) TIMBERS		0.0	2.5	6.6	8.9	2.0	5.4	0.0	25.6
(8) TOBACCO		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(9) LAND IN FALLOW		-46.2	-73.6	-81.5	45.8	151.6	382.2	0.0	378.3
(10) LAND IN PERMANENT CROPS		0.0	32.8	34.7	104.4	104.0	175.8	0.0	451.9
(11) COFFEE		0.0	7.0	13.3	57.2	43.3	94.0	0.0	215.0
(12) COCOA AND COCONUT		0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.7
(13) SUGAR CANE		0.0	1.3	1.0	10.1	22.3	20.3	0.0	61.1
(14) FRUIT TREES		0.0	3.0	7.5	15.8	21.9	27.9	0.0	76.4
(15) PASTURES		0.0	30.3	108.3	1,033.7	2,309.5	6,381.1	0.0	9,863.0
(16) FOREST		0.0	4.9	7.8	13.6	68.3	319.0	0.0	413.9
(17) OTHER		0.0	62.4	70.2	243.9	456.1	1,022.8	0.0	1,854.6

## FOOTNOTES:

(A) A FOUR FARM IS A FARM OF LESS THAN 20 HECTARES ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES.

(B) IN HECTARES

(C) DEFINITIONS OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (3) + (10) + (15) + (16) + (17).

(3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY.

(9) LAND IN FALLOW, WHEN NEGATIVE INDICATES MULTIPLE CROPPING.

(10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).

(17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDSHEDS, CORRALS, ETC.

TABLE 2A: POOR FARMS(A)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(B)

PROVINCIA: PUNTAPINAS

LAND USE CATEGORY(C)	FARM SIZE CATEGORY	LANDLESS FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS		586	697	205	1,021	695	1,122	0	4,626
(2) TOTAL AREA		0.0	318.3	662.3	3,190.8	4,813.8	16,395.8	0.0	25,381.2
(3) CULTIVATED CROP LAND		0.0	139.8	345.3	1,569.7	1,751.1	4,732.2	0.0	8,529.4
(4) ANNUAL CROPS		16.5	161.2	401.6	1,415.4	1,384.0	2,792.2	0.0	6,171.1
(5) CEREALS		16.5	155.7	394.8	1,400.1	1,357.4	2,720.1	0.0	6,044.9
(6) VEGETABLES		0.0	0.7	2.1	3.5	2.4	4.3	0.0	13.3
(7) TUBERS		0.0	4.6	4.6	11.7	9.7	16.6	0.0	47.4
(8) TORACCO		0.0	0.0	0.0	0.0	14.3	51.0	0.0	65.4
(9) LAND IN FALLOW		-16.5	-39.3	-56.3	154.2	367.1	1,939.9	0.0	2,358.2
(10) LAND IN PERMANENT CROPS		0.0	99.1	138.5	370.4	336.4	509.3	0.0	1,454.3
(11) COFFEE		0.0	23.8	46.9	142.1	112.7	121.7	0.0	447.4
(12) COCOA AND COCONUT		0.0	1.7	4.3	0.6	8.3	12.0	0.0	27.4
(13) SUGAR CANE		0.0	1.1	4.4	11.8	14.2	21.0	0.0	51.9
(14) FRUIT TREES		0.0	25.1	29.4	79.2	73.1	135.8	0.0	342.8
(15) PASTURES		0.0	38.2	98.9	740.0	1,735.1	5,611.8	0.0	8,223.5
(16) FOREST		0.0	2.7	14.2	80.6	313.4	2,515.0	0.0	2,926.1
(17) OTHER		0.0	47.3	65.2	425.9	677.0	3,628.1	0.0	4,243.7

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS LESS THAN 1400 COLONES PER FAMILY MEMBER, EQUIVALENT TO AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES.

(B) IN HECTARES

(C) DEFINITIONS OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (3) + (9) + (15) + (16) + (17).

(3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY.

(9) LAND IN FALLOW. WHEN NEGATIVE INDICATES MULTIPLE CROPPING.

(10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).

(17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDBREAKS, CORRALS, ETC.

TABLE 2A: POOR FARMS(A)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(B)

PROVINCIA: LINEN

FARM SIZE CATEGORY (C)	LANDLESS FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS	00	135	161	459	459	557	0	1,871
(2) TOTAL AREA	0.0	61.5	215.4	1,366.8	3,093.1	6,508.6	0.0	13,245.6
(3) CULTIVATED CROP LAND	0.0	15.4	43.7	268.3	544.2	1,659.9	0.0	2,531.8
(4) ANNUAL CROPS	3.5	9.5	26.5	147.7	226.6	695.1	0.0	1,109.0
(5) CEREALS	3.5	6.2	22.0	129.3	201.2	653.2	0.0	1,016.5
(6) VEGETABLES	0.0	0.5	0.0	0.2	0.7	3.7	0.0	5.2
(7) TUBERS	0.0	2.6	3.6	18.1	24.6	38.0	0.0	67.2
(8) TOBACCO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(9) LAND IN FALLOW	-3.5	5.9	17.2	120.6	317.5	964.8	0.0	1,422.7
(10) LAND IN PERMANENT CROPS	0.0	26.7	100.2	622.3	1,079.5	1,220.0	0.0	3,049.8
(11) COFFEE	0.0	1.8	4.7	21.7	22.9	25.8	0.0	77.1
(12) COCOA AND COCONUT	0.0	9.2	59.6	431.2	751.6	793.5	0.0	2,045.5
(13) SUGAR CANE	0.0	0.7	0.6	7.1	14.1	23.4	0.0	46.0
(14) FRUIT TREES	0.0	3.9	10.9	44.4	64.9	125.3	0.0	249.7
(15) PASTURES	0.0	15.3	57.4	335.7	842.9	2,506.0	0.0	3,757.5
(16) FOREST	0.0	0.9	1.9	32.7	171.4	1,551.5	0.0	1,758.6
(17) OTHER	0.0	2.9	11.9	107.6	454.9	1,570.2	0.0	2,147.8

## FOOTNOTES:

(A) A POOR FARM IS A FARM OF LESS THAN 20 HECTARES ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS LESS THAN 1400 COLONS PER FAMILY MEMBER, EQUIVALENT TO AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES.

(B) IN HECTARES

(C) DEFINITIONS OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (3) + (9) + (15) + (16) + (17).

(3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY.

(9) LAND IN FALLOW, WHEN NEGATIVE INDICATES MULTIPLE CROPPING.

(10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).

(17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDBREAKS, CANALS, ETC.

TABLE 20: NON-PCOR FARMS(A)

LAND USE BY FARM SIZE  
TOTALS PER SIZE CATEGORY(B)

## COSTA RICA

FARM SIZE CATEGORY (C)	LANDLESS FARMS	LESS THAN 1 HECTARE	1 TO 1.9 HECTARES	2 TO 4.9 HECTARES	5 TO 9.9 HECTARES	10 TO 19.9 HECTARES	MORE THAN 20 HAS.	ALL FARM SIZES
(1) NUMBER OF FARMS	1,320	4,275	2,498	5,551	4,364	4,607	20,045	42,660
(2) TOTAL AREA	0.0	1,768.0	3,448.5	18,167.7	31,357.0	66,604.0	2,013,018.9	2,134,364.4
(3) CULTIVATED CROP LAND	0.0	360.9	843.3	3,695.6	5,558.6	11,726.6	189,402.2	211,587.4
(4) ANNUAL CROPS	47.5	456.7	1,119.1	4,073.2	5,049.9	9,250.3	89,836.2	109,832.3
(5) CEREALS	47.5	323.3	880.4	3,424.5	4,416.5	8,484.5	87,757.1	105,324.2
(6) VEGETABLES	0.0	91.3	128.1	301.2	250.2	174.8	464.3	1,414.2
(7) TUBERS	0.0	31.0	77.7	261.8	323.2	523.9	1,352.8	2,572.7
(8) TONACCO	0.0	6.9	31.6	83.5	69.8	67.0	261.9	621.0
(9) LAND IN FALLOW	-47.5	-95.7	-274.7	-377.6	508.7	2,476.2	99,565.9	101,755.1
(10) LAND IN PERMANENT CROPS	0.0	1,095.8	2,000.2	8,878.8	11,391.5	13,923.8	87,456.6	124,737.1
(11) COFFEE	3.5	929.1	1,612.0	6,532.0	7,183.4	7,254.9	25,074.6	48,589.9
(12) COCOA AND COCONUT	0.0	2.1	25.1	331.2	929.2	2,122.9	11,310.0	14,720.8
(13) SUGAR CANE	0.0	48.6	162.2	1,048.1	1,688.7	2,023.4	17,469.2	22,440.4
(14) FRUIT TREES	3.8	35.8	77.9	378.6	718.0	1,239.2	21,209.4	23,682.8
(15) PASTURES	0.0	178.1	442.5	4,546.4	11,466.6	29,702.7	1,055,381.1	1,101,717.4
(16) FOREST	0.0	14.2	21.5	174.6	753.2	4,177.7	463,410.4	468,551.9
(17) OTHER	0.0	118.7	140.8	870.1	2,196.9	7,073.0	217,546.2	227,946.0

## FOOTNOTES:

(A) A NON-PCOR FARM IS OVER 20 HECTARES AND/OR A FARM ON WHICH TOTAL ANNUAL PER CAPITA INCOME (SEE TABLE 1A) IS MORE THAN 1400 COLONES PER FAMILY MEMBER. EQUIVALENT TO AID POVERTY DEFINITION OF \$150 PER CAPITA PER YEAR IN 1969 PRICES.

(B) IN HECTARES

(C) DEFINITIONS OF LAND-USE CATEGORIES ARE:

(2) TOTAL AREA = (3) + (10) + (15) + (16) + (17).

(3) CULTIVATED CROP LAND = (4) + (9). PERMANENT CROPS ARE NOT INCLUDED IN THIS CATEGORY.

(9) LAND IN FALLOW, WHEN NEGATIVE INDICATES MULTIPLE CROPPING.

(10) LAND IN PERMANENT CROPS = (11) + (12) + (13) + (14).

(17) OTHER LAND USES INCLUDE BUILDINGS, ROADS, WINDBREAKS, CORRALS, ETC.

TABLE 3A

POPULATION BY INCOME CLASS  
(TOTALS)

## COSTA RICA

INCOME CLASSES (C)	URBAN ZONES (A)		RURAL ZONES				TOTALS	
	FAMILIES	PEOPLE	FARM FAMILIES (B)		NON-FARM FAMILIES		FAMILIES	PEOPLE
			FAMILIES	PEOPLE	FAMILIES	PEOPLE		
LESS THAN 100 COLONES	7,664	33,217	6,807	42,943	10,595	49,409	25,066	125,569
100 TO 300 COLONES	4,000	20,292	6,559	46,164	5,340	25,750	16,998	92,116
300 TO 500 COLONES	3,729	17,938	6,033	42,531	7,641	59,240	17,403	119,709
500 TO 800 COLONES	6,532	41,583	8,233	59,481	16,243	119,926	31,008	220,990
800 TO 1100 COLONES	8,122	56,314	7,073	50,756	16,593	110,512	31,788	217,582
1100 TO 1400 COLONES	9,021	60,017	5,981	41,369	14,158	90,027	29,160	191,413
1400 TO 1700 COLONES	9,141	58,495	4,794	32,557	11,450	67,934	25,385	158,986
1700 TO 2000 COLONES	8,358	51,155	4,045	26,374	9,741	52,640	22,144	130,169
MORE THAN 2000 COLONES	83,099	403,136	23,874	129,501	37,744	166,559	144,717	699,196
TOTALS	140,765	742,057	73,399	471,676	129,505	741,997	343,669	1,955,730
POOR/NON-POOR TOTALS (D)								
CONSERVATIVE DEFINITION (D)								
POOR (<1100 COLONES)	31,146	169,254	34,705	241,875	56,412	364,637	122,263	775,966
NON-POOR	109,619	572,803	38,694	229,801	73,093	377,160	221,406	1,179,764
MODERATE DEFINITION (F)								
POOR (<1400 COLONES)	40,167	229,271	40,686	283,244	70,570	454,664	151,423	967,379
NON-POOR	100,598	512,786	32,713	186,432	58,935	287,133	192,246	988,351
LIBERAL DEFINITION (G)								
POOR (<1700 COLONES)	49,308	287,766	45,480	315,801	82,020	522,798	176,808	1,126,365
NON-POOR	91,457	454,291	27,919	155,875	47,485	219,199	166,861	829,365

## FOOTNOTES:

(A) BASED UPON THE 1973 COSTA RICA CENSUS DEFINITION: THE SAN JOSE METROPOLITAN AREA AND ALL CANTONAL CAPITALS.

(B) ALL FARM FAMILIES, INCLUDING THOSE WITH URBAN RESIDENCES, ARE INCLUDED IN THIS CATEGORY.

(C) IN 1973 COLONES.

(D) THE FOLLOWING THREE DEFINITIONS OF POVERTY ARE BASED UPON THE AID POVERTY DEFINITION OF LESS THAN \$150 PER CAPITA PER YEAR IN 1969 PRICES. DIFFERENCES ARE DUE TO THE MULTIPLE EXCHANGE RATES WHICH WERE IN EFFECT IN 1973. PRICES ARE DEFLATED USING THE CENTRAL BANK'S COST-OF-LIVING INDEX FOR THE URBAN WORKING CLASS.

(E) CONSERVATIVE DEFINITION BASED UPON AN EXCHANGE RATE OF 6.7 COLONES TO THE DOLLAR. THIS RATE WAS EMPLOYED AS AN INDIRECT TAX ON COFFEE EXPORTERS.

(F) MODERATE DEFINITION BASED UPON MIXED RATE OF 7.7 COLONES TO THE DOLLAR.

(G) LIBERAL DEFINITION BASED UPON FREE MARKET RATE OF 8.6 COLONES TO THE DOLLAR.

TABLE 3A

POPULATION BY INCOME CLASS  
(TOTALS)

PROVINCIA: SAN JOSE

INCOME CLASSES(C)	URBAN ZONES(A)		RURAL ZONES				TOTALS	
			FARM FAMILIES(B)		NON-FARM FAMILIES			
	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE
LESS THAN 100 COLONES	3,687	14,492	1,614	9,864	2,455	10,825	7,756	35,181
100 TO 300 COLONES	2,146	8,688	1,611	11,282	1,242	5,954	4,999	25,724
300 TO 500 COLONES	1,640	7,634	1,537	10,775	1,481	11,084	4,658	29,693
500 TO 800 COLONES	3,241	18,719	2,181	15,713	3,852	22,019	8,474	56,451
800 TO 1100 COLONES	3,938	26,108	1,817	12,950	3,201	21,507	8,956	60,647
1100 TO 1400 COLONES	4,585	30,088	1,508	10,328	3,014	19,065	9,107	59,481
1400 TO 1700 COLONES	4,784	31,374	1,190	7,926	2,601	15,895	8,695	58,195
1700 TO 2000 COLONES	4,820	28,300	1,023	6,588	2,259	12,450	7,902	47,338
MORE THAN 2000 COLONES	51,995	255,341	5,075	27,738	9,425	44,076	66,495	327,155
TOTALS	80,756	420,826	17,556	113,164	28,730	162,875	127,042	696,865
<b>POOR/NON-POOR TOTALS(D)</b>								
<b>CONSERVATIVE DEFINITION(D)</b>								
POOR (<1100 COLONES)	14,652	75,723	8,760	60,584	11,431	71,389	34,843	207,696
NON-POOR	66,104	345,103	8,796	52,580	17,299	91,486	92,199	489,169
<b>MODERATE DEFINITION(F)</b>								
POOR (<1400 COLONES)	19,237	105,811	10,268	70,912	14,445	90,454	43,950	267,177
NON-POOR	61,519	315,315	7,288	42,252	14,285	72,421	63,092	429,688
<b>LIBERAL DEFINITION(G)</b>								
POOR (<1700 COLONES)	24,141	137,105	11,458	78,838	17,046	106,349	52,645	322,372
NON-POOR	56,615	283,641	6,098	34,326	11,684	56,526	74,397	374,493

FOOTNOTES:

- A) BASED UPON THE 1973 COSTA RICA CENSUS DEFINITION; THE SAN JOSE METROPOLITAN AREA AND ALL CANTONAL CAPITALS.
- B) ALL FARM FAMILIES, INCLUDING THOSE WITH URBAN RESIDENCES, ARE INCLUDED IN THIS CATEGORY.
- C) IN 1973 COLONES.
- D) THE FOLLOWING THREE DEFINITIONS OF POVERTY ARE BASED UPON THE AID POVERTY DEFINITION OF LESS THAN \$150 PER CAPITA PER YEAR IN 1969 PRICES. DIFFERENCES ARE DUE TO THE MULTIPLE EXCHANGE RATES WHICH WERE IN EFFECT IN 1973. PRICES ARE DEFLATED USING THE CENTRAL BANK'S COST-OF-LIVING INDEX FOR THE URBAN WORKING CLASS.
- (F) CONSERVATIVE DEFINITION BASED UPON AN EXCHANGE RATE OF 6.7 COLONES TO THE DOLLAR. THIS RATE WAS EMPLOYED AS AN INDIRECT TAX ON COFFEE EXPORTERS.
- (F) MODERATE DEFINITION BASED UPON MIXED RATE OF 7.7 COLONES TO THE DOLLAR.
- (G) LIBERAL DEFINITION BASED UPON FREE MARKET RATE OF 8.6 COLONES TO THE DOLLAR

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POPULATION BY INCOME CLASS  
(TOTALS)

PROVINCIA: ALAJUJLA

INCOME CLASSES(C)	URBAN ZONES(A)		RURAL ZONES				TOTALS	
			FARM FAMILIES(B)		NON-FARM FAMILIES			
	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE
LESS THAN 100 COLONES	1,047	5,047	1,179	7,475	2,423	11,638	4,449	24,160
100 TO 300 COLONES	855	3,220	1,638	11,238	1,103	4,884	3,596	19,342
300 TO 500 COLONES	588	2,657	1,320	8,959	1,800	13,772	3,675	25,388
500 TO 800 COLONES	827	5,282	1,678	12,103	3,617	26,398	6,122	43,783
800 TO 1100 COLONES	969	6,949	1,497	10,957	3,533	22,781	5,999	40,687
1100 TO 1400 COLONES	1,115	7,258	1,366	9,680	2,740	16,993	5,235	33,931
1400 TO 1700 COLONES	982	6,122	1,111	7,753	2,120	11,673	4,213	25,748
1700 TO 2000 COLONES	928	5,531	904	6,209	1,805	9,311	3,637	21,051
MORE THAN 2000 COLONES	7,428	35,300	6,518	37,185	5,454	23,474	19,397	95,959
TOTALS	14,706	77,366	17,222	111,563	24,595	141,120	56,523	330,049
POOR/NON-POOR TOTALS(D)								
CONSERVATIVE DEFINITION(E)								
POOR (<1100 COLONES)	4,253	23,155	7,312	50,736	12,476	79,469	24,041	153,360
NON-POOR	10,453	54,211	9,910	60,827	12,119	61,651	32,482	176,689
MODERATE DEFINITION(F)								
POOR (<1400 COLONES)	5,368	30,413	8,692	60,416	15,216	96,462	29,276	167,291
NON-POOR	9,338	46,953	8,530	51,147	9,379	44,658	27,247	142,758
LIBERAL DEFINITION(G)								
POOR (<1700 COLONES)	6,350	36,635	9,803	68,169	17,336	108,335	33,489	213,039
NON-POOR	8,356	40,631	7,419	43,394	7,259	32,785	23,034	117,010

## FOOTNOTES:

(A) BASED UPON THE 1973 COSTA RICA CENSUS DEFINITION; THE SAN JOSE METROPOLITAN AREA AND ALL CANTONAL CAPITALS.

(B) ALL FARM FAMILIES, INCLUDING THOSE WITH URBAN RESIDENCES, ARE INCLUDED IN THIS CATEGORY.

(C) IN 1973 COLONES.

(D) THE FOLLOWING THREE DEFINITIONS OF POVERTY ARE BASED UPON THE AID POVERTY DEFINITION OF LESS THAN \$150 PER CAPITA PER YEAR IN 1949 PRICES. DIFFERENCES ARE DUE TO THE MULTIPLE EXCHANGE RATES WHICH WERE IN EFFECT IN 1973. PRICES ARE DEFLATED USING THE CENTRAL BANK'S COST-OF-LIVING INDEX FOR THE URBAN WORKING CLASS.

(E) CONSERVATIVE DEFINITION BASED UPON AN EXCHANGE RATE OF 6.7 COLONES TO THE DOLLAR. THIS RATE WAS EMPLOYED AS AN INDIRECT TAX ON COFFEE EXPORTERS.

(F) MODERATE DEFINITION BASED UPON MIXED RATE OF 7.7 COLONES TO THE DOLLAR.

(G) LIBERAL DEFINITION BASED UPON FREE MARKET RATE OF 8.6 COLONES TO THE DOLLAR.

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POPULATION BY INCOME CLASS  
(TOTALS)

PROVINCIA: CARTAGO

INCOME CLASSES(C)	URBAN ZONES(A)		RURAL ZONES				TOTALS	
			FARM FAMILIES(B)		NON-FARM FAMILIES			
	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE
LESS THAN 100 COLONES	645	3,294	546	4,127	1,006	5,130	2,247	12,551
100 TO 300 COLONES	511	1,899	729	3,306	475	2,041	1,713	9,246
300 TO 500 COLONES	416	2,028	542	3,814	841	7,592	1,799	13,434
500 TO 800 COLONES	719	5,374	643	4,876	2,372	17,722	3,734	27,972
800 TO 1100 COLONES	1,002	7,365	520	3,972	2,290	15,738	3,620	27,975
1100 TO 1400 COLONES	1,940	7,108	474	3,456	1,989	12,716	3,503	23,280
1400 TO 1700 COLONES	953	6,204	390	2,696	1,378	8,156	2,721	17,056
1700 TO 2000 COLONES	858	5,339	324	2,173	1,244	6,660	2,426	14,172
MORE THAN 2000 COLONES	6,334	31,614	2,231	12,711	3,640	16,812	12,208	61,137
TOTALS	12,478	70,225	6,457	43,131	15,235	92,567	34,170	205,923
POOR/NON-POOR TOTALS(D)								
CONSERVATIVE DEFINITION(E)								
POOR (<1100 COLONES)	3,293	19,960	3,038	22,095	6,984	48,223	13,315	90,278
NON-POOR	9,185	50,265	3,419	21,036	8,251	44,344	20,855	115,645
MODERATE DEFINITION(F)								
POOR (<1400 COLONES)	4,333	27,068	3,512	25,551	8,973	60,939	16,818	113,558
NON-POOR	8,145	43,157	2,945	17,580	6,262	31,628	17,352	92,366
LIBERAL DEFINITION(G)								
POOR (<1700 COLONES)	5,286	33,272	3,902	28,247	10,351	69,095	19,539	130,614
NON-POOR	7,192	36,953	2,555	14,864	4,884	23,472	14,631	75,309

## FOOTNOTES:

(A) BASED UPON THE 1973 COSTA RICA CENSUS DEFINITION; THE SAN JOSE METROPOLITAN AREA AND ALL CANTONAL CAPITALS.

(B) ALL FARM FAMILIES, INCLUDING THOSE WITH URBAN RESIDENCES, ARE INCLUDED IN THIS CATEGORY.

(C) IN 1973 COLONES.

(D) THE FOLLOWING THREE DEFINITIONS OF POVERTY ARE BASED UPON THE AID POVERTY DEFINITION OF LESS THAN \$1.0 PER CAPITA PER YEAR IN 1969 PRICES. DIFFERENCES ARE DUE TO THE MULTIPLE EXCHANGE RATES WHICH WERE IN EFFECT IN 1973. PRICES ARE DEFLATED USING THE CENTRAL BANK'S COST-OF-LIVING INDEX FOR THE URBAN WORKING CLASS.

(E) CONSERVATIVE DEFINITION BASED UPON AN EXCHANGE RATE OF 6.7 COLONES TO THE DOLLAR. THIS RATE WAS EMPLOYED AS AN INDIRECT TAX ON COFFEE EXPORTERS.

(F) MODERATE DEFINITION BASED UPON MIXED RATE OF 7.7 COLONES TO THE DOLLAR.

(G) LIBERAL DEFINITION BASED UPON FREE MARKET RATE OF 8.0 COLONES TO THE DOLLAR

POPULATION BY INCOME CLASS  
(TOTALS)

PROVINCIA: HEREDIA

INCOME CLASSES(C)	URBAN ZONES(A)		RURAL ZONES				TOTALS	
			FARM FAMILIES(B)		NON-FARM FAMILIES			
	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE
LESS THAN 100 COLONES	329	1,547	188	1,106	695	3,062	1,212	5,795
100 TO 300 COLONES	362	1,337	228	1,580	266	1,171	856	4,088
300 TO 500 COLONES	255	1,143	219	1,475	419	3,298	893	5,916
500 TO 800 COLONES	366	2,559	270	1,840	980	7,559	1,616	11,958
800 TO 1100 COLONES	539	3,719	259	1,749	1,212	8,713	2,010	14,201
1100 TO 1400 COLONES	580	3,987	288	1,520	1,231	8,406	2,019	13,913
1400 TO 1700 COLONES	590	3,965	192	1,398	1,061	6,853	1,843	12,216
1700 TO 2000 COLONES	568	3,628	187	1,277	954	5,603	1,709	10,508
MORE THAN 2000 COLONES	5,266	26,999	1,701	9,735	4,050	20,824	11,017	56,758
TOTALS	8,855	48,904	3,452	21,760	10,868	64,689	23,178	135,353
FOOR/NON-POOR TOTALS(D)								
CONSERVATIVE DEFINITION(D)								
POOR (<1100 COLONES)	1,851	10,325	1,164	7,830	5,572	23,803	6,587	41,958
NON-POOR	7,004	38,579	2,288	13,930	7,296	40,886	16,588	93,395
MODERATE DEFINITION(F)								
POOR (<1400 COLONES)	2,431	14,312	1,372	9,350	4,803	32,209	8,606	55,871
NON-POOR	6,424	34,592	2,080	12,410	6,065	32,480	14,869	79,482
LIBERAL DEFINITION(G)								
POOR (<1700 COLONES)	3,021	18,277	1,564	10,749	5,864	39,062	10,449	68,887
NON-POOR	5,834	30,627	1,888	11,012	5,084	25,627	12,726	67,266

FOOTNOTES:

(A) BASED UPON THE 1973 COSTA RICA CENSUS DEFINITION; THE SAN JOSE METROPOLITAN AREA AND ALL CANTONAL CAPITALS.

(B) ALL FARM FAMILIES, INCLUDING THOSE WITH URBAN RESIDENCES, ARE INCLUDED IN THIS CATEGORY.

(C) IN 1973 COLONES.

(D) THE FOLLOWING THREE DEFINITIONS OF POVERTY ARE BASED UPON THE AID POVERTY DEFINITION OF LESS THAN \$150 PER CAPITA PER YEAR IN 1969 PRICES. DIFFERENCES ARE DUE TO THE MULTIPLE EXCHANGE RATES WHICH WERE IN EFFECT IN 1973. PRICES ARE DEFLATED USING THE CENTRAL BANK'S COST-OF-LIVING INDEX FOR THE URBAN WORKING CLASS.

(E) CONSERVATIVE DEFINITION BASED UPON AN EXCHANGE RATE OF 6.7 COLONES TO THE DOLLAR. THIS RATE WAS EMPLOYED AS AN INDIRECT TAX ON COFFEE EXPORTERS.

(F) MODERATE DEFINITION BASED UPON MIXED RATE OF 7.7 COLONES TO THE DOLLAR.

(G) LIBERAL DEFINITION BASED UPON FREE MARKET RATE OF 8.6 COLONES TO THE DOLLAR.

TABLE 3A

POPULATION BY INCOME CLASS  
(TOTALS)

PROVINCIA: GUANACASTE

INCOME CLASS (C)	URBAN ZONES (A)		RURAL ZONES				TOTALS	
			FARM FAMILIES (B)		NON-FARM FAMILIES			
	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE	FAMILIES	PEOPLE
LESS THAN 100 COLONES	501	3,123	1,393	9,091	2,656	10,219	4,056	22,433
100 TO 300 COLONES	502	2,216	972	7,236	1,263	7,587	2,737	17,039
300 TO 500 COLONES	356	2,222	1,016	7,624	1,961	14,749	3,333	24,595
500 TO 800 COLONES	584	4,154	1,393	10,409	3,458	26,463	6,435	41,026
800 TO 1100 COLONES	626	4,642	1,124	8,261	1,176	21,409	4,926	34,312
1100 TO 1400 COLONES	576	4,063	950	6,712	2,417	15,983	3,943	26,788
1400 TO 1700 COLONES	557	3,724	720	4,944	1,901	11,487	3,178	20,155
1700 TO 2000 COLONES	375	2,654	597	3,835	1,413	7,647	2,385	13,936
MORE THAN 2000 COLONES	3,230	16,382	2,829	18,537	4,182	20,469	10,251	52,088
TOTALS	7,407	42,680	11,004	73,649	10,013	62,367	40,238	252,342

## POOR/NON-POOR TOTALS (D)

## CONSERVATIVE DEFINITION (D)

POOR (<1100 COLONES)	2,669	16,157	5,898	42,621	11,914	80,427	20,481	139,405
NON-POOR	4,738	26,323	5,106	31,028	9,913	55,686	19,757	112,937

## MODERATE DEFINITION (F)

POOR (<1400 COLONES)	3,245	20,420	6,848	49,333	14,331	96,410	24,424	166,163
NON-POOR	4,162	22,260	4,156	24,316	7,496	39,603	15,814	86,179

## LIBERAL DEFINITION (G)

POOR (<1700 COLONES)	3,802	24,144	7,568	54,277	16,232	107,897	27,602	186,318
NON-POOR	3,605	18,536	3,436	19,372	5,595	28,116	12,636	66,024

## FOOTNOTES:

(A) BASED UPON THE 1973 COSTA RICA CENSUS DEFINITION; THE SAN JOSE METROPOLITAN AREA AND ALL CANTONAL CAPITALS.

(B) ALL FARM FAMILIES, INCLUDING THOSE WITH URBAN RESIDENCES, ARE INCLUDED IN THIS CATEGORY.

(C) IN 1973 COLONES.

(D) THE FOLLOWING THREE DEFINITIONS OF POVERTY ARE BASED UPON THE AID POVERTY DEFINITION OF LESS THAN \$150 PER CAPITA PER YEAR IN 1969 PRICES. DIFFERENCES ARE DUE TO THE MULTIPLE EXCHANGE RATES WHICH WERE IN EFFECT IN 1973. PRICES ARE DEFLATED USING THE CENTRAL BANK'S COST-OF-LIVING INDEX FOR THE URBAN WORKING CLASS.

(E) CONSERVATIVE DEFINITION BASED UPON AN EXCHANGE RATE OF 6.7 COLONES TO THE DOLLAR. THIS RATE WAS EMPLOYED AS AN INDIRECT TAX ON COFFEE EXPORTERS.

(F) MODERATE DEFINITION BASED UPON MIXED RATE OF 7.7 COLONES TO THE DOLLAR.

(G) LIBERAL DEFINITION BASED UPON FREE MARKET RATE OF 8.6 COLONES TO THE DOLLAR.

TABLE 3A

POPULATION BY INCOME CLASS  
(TOTALS)

PROVINCIA: PUNTARENAS

INCOME CLASSES(C)	URBAN ZONES(A)		RURAL ZONES				TOTALS	
	FAMILIES	PEOPLE	FARM FAMILIES(B)		NON-FARM FAMILIES		FAMILIES	PEOPLE
			FAMILIES	PEOPLE	FAMILIES	PEOPLE		
LESS THAN 100 COLONES	678	2,961	1,438	9,175	1,205	8,594	3,321	17,730
100 TO 300 COLONES	440	1,644	1,071	7,453	719	3,287	2,230	12,424
300 TO 500 COLONES	268	1,252	1,099	7,025	904	6,910	2,268	16,087
500 TO 800 COLONES	446	3,042	1,605	11,423	1,985	14,017	4,036	28,482
800 TO 1100 COLONES	592	4,168	1,388	9,660	2,209	13,710	4,189	27,558
1100 TO 1400 COLONES	656	4,274	1,038	6,951	1,627	11,193	3,521	22,418
1400 TO 1700 COLONES	615	3,667	862	5,746	1,488	8,357	2,945	17,770
1700 TO 2000 COLONES	563	3,241	705	4,444	1,342	6,943	2,610	14,628
MORE THAN 2000 COLONES	4,609	19,490	3,659	18,600	6,684	24,582	14,952	62,642
TOTALS	8,864	43,739	12,865	81,437	18,363	94,563	40,092	219,739
POOR/NON-POOR TOTALS(D)								
CONSERVATIVE DEFINITION(D)								
POOR (<1100 COLONES)	2,421	13,067	6,601	45,696	7,022	43,518	16,044	102,281
NON-POOR	6,443	30,672	6,264	35,741	11,341	51,045	24,048	117,458
MODERATE DEFINITION(F)								
POOR (<1400 COLONES)	3,077	17,341	7,639	52,647	8,849	54,711	19,565	124,699
NON-POOR	5,787	26,398	8,226	28,790	9,514	39,852	20,527	95,040
LIBERAL DEFINITION(G)								
POOR (<1700 COLONES)	3,692	21,008	8,501	58,393	10,337	63,068	22,530	142,469
NON-POOR	5,172	22,731	4,364	23,044	8,026	31,495	17,562	77,270

## FOOTNOTES:

(A) BASED UPON THE 1973 COSTA RICA CENSUS DEFINITION; THE SAN JOSE METROPOLITAN AREA AND ALL CANTONAL CAPITALS.

(B) ALL FARM FAMILIES, INCLUDING THOSE WITH URBAN RESIDENCES, ARE INCLUDED IN THIS CATEGORY.

(C) IN 1973 COLONES.

(D) THE FOLLOWING THREE DEFINITIONS OF POVERTY ARE BASED UPON THE AID POVERTY DEFINITION OF LESS THAN \$150 PER CAPITA PER YEAR IN 1969 PRICES. DIFFERENCES ARE DUE TO THE MULTIPLE EXCHANGE RATES WHICH WERE IN EFFECT IN 1973. PRICES ARE DEFLATED USING THE CENTRAL BANK'S COST-OF-LIVING INDEX FOR THE URBAN WORKING CLASS.

(E) CONSERVATIVE DEFINITION BASED UPON AN EXCHANGE RATE OF 6.7 COLONES TO THE DOLLAR. THIS RATE WAS EMPLOYED AS AN INDIRECT TAX ON COFFEE EXPORTERS.

(F) MODERATE DEFINITION BASED UPON MIXED RATE OF 7.7 COLONES TO THE DOLLAR.

(G) LIBERAL DEFINITION BASED UPON FREE MARKET RATE OF 8.6 COLONES TO THE DOLLAR

TABLE 3A

POPULATION BY INCOME CLASS  
(TOTALS)

PROVINCIA: LIMON

INCOME CLASSES (C)	URBAN ZONES (A)		RURAL ZONES				TOTALS	
	FAMILIES	PEOPLE	FARM FAMILIES (B)		NON-FARM FAMILIES		FAMILIES	PEOPLE
			FAMILIES	PEOPLE	FAMILIES	PEOPLE		
LESS THAN 100 COLONES	677	2,753	399	2,021	765	2,965	1,831	7,719
100 TO 300 COLONES	283	1,198	310	2,029	272	826	865	4,063
300 TO 500 COLONES	242	1,502	300	1,959	235	1,825	777	4,796
500 TO 800 COLONES	349	2,453	463	3,117	779	6,748	1,591	11,318
800 TO 1100 COLONES	456	3,261	460	3,187	972	6,654	1,888	13,182
1100 TO 1400 COLONES	469	3,239	423	2,722	940	5,671	1,832	11,632
1400 TO 1700 COLONES	540	3,439	329	2,094	981	5,313	1,778	10,846
1700 TO 2000 COLONES	446	2,662	385	1,848	724	4,926	1,475	3,536
MORE THAN 2000 COLONES	4,237	18,310	1,854	7,995	4,309	17,152	10,400	43,467
TOTALS	7,699	38,317	4,843	26,972	9,887	60,170	22,429	115,459
POOR/NON-POOR TOTALS (D)								
CONSERVATIVE DEFINITION (E)								
POOR (<1100 COLONES)	2,007	10,667	1,932	12,313	3,013	18,008	6,952	49,988
NON-POOR	5,692	27,650	2,911	14,659	6,874	32,162	15,477	74,471
MODERATE DEFINITION (F)								
POOR (<1400 COLONES)	2,476	13,906	2,355	15,035	3,953	23,679	8,784	52,626
NON-POOR	5,223	24,411	2,488	11,937	5,934	26,491	13,645	62,839
LIBERAL DEFINITION (G)								
POOR (<1700 COLONES)	3,014	17,345	2,684	17,129	4,654	28,992	10,554	63,466
NON-POOR	4,683	20,972	2,159	9,843	6,833	21,178	11,875	51,993

FOOTNOTES:

(A) BASED UPON THE 1973 COSTA RICA CENSUS DEFINITION; THE SAN JOSE METROPOLITAN AREA AND ALL CANTONAL CAPITALS.

(B) ALL FARM FAMILIES, INCLUDING THOSE WITH URBAN RESIDENCES, ARE INCLUDED IN THIS CATEGORY.

(C) IN 1973 COLONES.

(D) THE FOLLOWING THREE DEFINITIONS OF POVERTY ARE BASED UPON THE AID POVERTY DEFINITION OF LESS THAN \$150 PER CAPITA PER YEAR IN 1969 PRICES. DIFFERENCES ARE DUE TO THE MULTIPLE EXCHANGE RATES WHICH WERE IN EFFECT IN 1973. PRICES ARE DEFLATED USING THE CENTRAL BANK'S COST-OF-LIVING INDEX FOR THE URBAN WORKING CLASS.

(E) CONSERVATIVE DEFINITION BASED UPON AN EXCHANGE RATE OF 6.7 COLONES TO THE DOLLAR. THIS RATE WAS EMPLOYED AS AN INDIRECT TAX ON COFFEE EXPORTERS.

(F) MODERATE DEFINITION BASED UPON MIXED RATE OF 7.7 COLONES TO THE DOLLAR.

(G) LIBERAL DEFINITION BASED UPON FREE MARKET RATE OF 8.6 COLONES TO THE DOLLAR.

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**COSTA RICA  
REPRESENTATIVE SMALL FARM ANALYSIS**

**EXAMINATION OF SELECTED CHARACTERISTICS FOR REPRESENTATIVE  
SMALL FARMS FROM SEVEN AGRICULTURALLY  
DEFINED REGIONS**

**By Samuel R. Daines, Consultant - AID**

**November 22, 1976**

This part of the small farm profile analysis is aimed at providing a detailed statistical view of the principal economic and agronomic characteristics of small farms in Costa Rica. This information will be selectively used in the writing of the small farmer profile section of the Costa Rica Agriculture Sector Assessment.

The characteristics selected for inclusion can be seen by reviewing the list of tables, or in more detail by examining the tables themselves.

The data was drawn from the Costa Rica Agricultural Census for 1973. All small farms in the selected size range were included in the computation which means that the reliability of the data do not depend on sample issues, the numbers represent a computation based on the complete universe (at least as complete as the census) for each farm type. The number of farms included in the computations is indicated in the first column of each table.

In many cases product values and production coefficients for livestock inventory patterns were drawn from the AID financed study, by Academia de Centro America, 'ALGUNAS CONDICIONES DE VIDA DE LA POBLACION RURAL DE COSTA RICA', San Jose, 1976.

Five farm sizes were chosen as representative of the small farm population which AID was both interested in and hoped to be able to access with their possible loan activity. These farm sizes are:

2	-	3	Has.
3	-	4	Has.
5	-	10	Has.
10	-	20	Has.
20	-	50	Has.

The 20-50 Has. group was included not because it was a target group focus but to provide a comparison of the characteristics of the smaller farm units with a larger group.

The regions were agronomically defined in the Census itself, a map of which is reproduced,



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TABLE 1  
Land Use and Cultivation Patterns  
Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	% of Land in					Average Area in				
		Annual Crops	Permanent Crops and Gardens	Cultivated Pasture	Land which has been recently cultivated but is now utilized (fallow)	Land which is Arable	Annual Crops per Farm	Permanent Crops and Gardens per Farm	Cultivated Pasture	Cultivated Land not in use this Year	Average Land in Groups or Rotation
		%	%	%	%	%	Ha.	Ha.	Ha.	Ha.	Ha.
<b>Farms 2-3 Has.</b>											
Cent. Valley E.	1,249	13.17	48.13	2.17	4.38	67.85	0.31	1.16	0.05	0.13	1.65
Cent. Valley W.	1,593	10.45	55.82	1.37	5.79	79.39	0.25	1.38	0.03	0.05	1.82
North Zone	1,029	13.49	31.46	1.27	4.78	58.43	0.37	0.88	0.04	0.09	1.43
Dry Pacific	1,079	23.67	1.63	0.75	4.90	69.96	1.25	0.18	0.01	0.11	1.67
Central Pacific	985	22.40	41.02	0.65	4.77	75.70	0.70	0.93	0.01	0.11	1.67
Pacific South	59	32.40	34.23	1.02	4.83	72.50	0.74	0.73	0.03	0.11	1.67
Atlantic Zone	312	16.24	44.37	1.45	4.04	66.11	0.35	0.96	0.03	0.08	1.44
<b>Ave. 2-3 Has.</b>	<b>6,434</b>	<b>25.38</b>	<b>39.24</b>	<b>1.29</b>	<b>4.14</b>	<b>70.06</b>	<b>0.60</b>	<b>0.92</b>	<b>0.03</b>	<b>0.09</b>	<b>1.85</b>
<b>Farms 3-4 Has.</b>											
Cent. Valley E.	497	10.38	42.79	2.22	4.78	60.20	0.36	1.48	0.07	0.15	2.08
Cent. Valley W.	778	10.00	61.99	0.40	1.74	74.14	0.34	1.14	0.01	0.06	2.55
North Zone	230	15.39	29.51	1.84	4.66	61.80	0.43	1.02	0.06	0.16	1.79
Dry Pacific	435	41.28	6.40	1.50	4.86	45.89	-1.41	0.21	0.05	0.23	1.91
Central Pacific	516	32.89	3.16	0.95	7.08	27.38	8.07	1.26	0.03	0.21	9.61
Pacific South	273	10.47	53.85	0.86	6.35	65.92	0.91	1.06	0.03	0.21	2.23
Atlantic Zone	273	10.47	53.85	0.86	5.10	70.69	0.33	1.67	0.02	0.15	2.19
<b>Ave. 3-4 Has.</b>	<b>3,328</b>	<b>49.71</b>	<b>37.46</b>	<b>1.25</b>	<b>5.23</b>	<b>93.66</b>	<b>1.71</b>	<b>1.26</b>	<b>0.04</b>	<b>0.17</b>	<b>3.20</b>
<b>Farms 5-10 Has.</b>											
Cent. Valley E.	1,295	8.05	31.67	2.88	4.10	46.72	0.57	2.27	0.20	0.29	2.35
Cent. Valley W.	1,245	6.53	53.01	1.73	2.75	64.03	0.44	3.78	0.12	0.19	4.92
North Zone	1,859	12.03	21.51	2.29	5.24	41.08	0.87	1.37	0.16	0.38	3.00
Dry Pacific	1,463	14.93	4.53	3.13	3.18	37.77	1.79	0.32	0.22	0.72	3.72
Central Pacific	1,205	18.69	24.19	1.75	6.32	50.97	1.34	1.73	0.12	0.45	3.65
Pacific South	1,701	20.69	20.77	1.17	6.32	50.43	1.45	1.46	0.08	0.54	3.55
Atlantic Zone	953	9.52	39.24	1.27	7.71	57.75	0.65	2.67	0.08	0.52	3.94
<b>Ave. 5-10 Has.</b>	<b>9,095</b>	<b>14.35</b>	<b>27.85</b>	<b>2.03</b>	<b>5.58</b>	<b>49.82</b>	<b>1.02</b>	<b>1.97</b>	<b>0.14</b>	<b>0.39</b>	<b>3.54</b>
<b>Farms 10-20 Has.</b>											
Cent. Valley E.	884	5.79	22.14	2.18	4.60	34.73	0.81	3.10	0.30	0.64	4.86
Cent. Valley W.	1,015	3.79	40.70	1.70	2.19	48.39	0.52	5.68	0.23	0.10	6.75
North Zone	1,043	10.06	12.72	2.20	6.54	31.54	1.41	1.79	0.31	0.92	2.44
Dry Pacific	1,735	15.59	2.39	2.33	4.56	25.39	2.20	0.41	0.33	2.64	4.59
Central Pacific	1,059	13.93	13.48	2.54	9.58	39.54	1.96	1.90	0.35	1.35	2.25
Pacific South	2,039	14.55	12.11	1.41	10.26	38.34	2.04	1.70	0.19	1.44	5.38
Atlantic Zone	980	9.40	28.78	1.20	13.26	49.65	1.25	3.83	0.16	1.36	6.61
<b>Ave. 10-20 Has.</b>	<b>8,777</b>	<b>10.44</b>	<b>18.98</b>	<b>1.94</b>	<b>6.86</b>	<b>38.23</b>	<b>1.46</b>	<b>2.63</b>	<b>0.27</b>	<b>0.95</b>	<b>5.32</b>
<b>Farms 20-50 Has.</b>											
Cent. Valley E.	868	4.01	13.52	2.35	4.60	24.59	1.24	4.17	0.72	1.47	7.54
Cent. Valley W.	313	6.77	26.78	3.06	2.43	34.45	0.67	8.40	0.96	0.76	10.32
North Zone	2,003	9.39	5.44	2.31	5.74	20.49	2.19	1.75	0.74	1.20	6.52
Dry Pacific	2,547	11.04	1.71	2.65	4.67	13.13	2.31	0.54	0.25	1.50	5.51
Central Pacific	1,228	10.16	5.71	3.21	9.02	10.38	1.96	2.91	0.01	2.83	7.55
Pacific South	3,523	7.73	12.89	1.81	12.56	3.77	1.47	2.95	1.01	3.86	9.16
Atlantic Zone	1,423	7.73	12.89	1.81	9.56	33.01	2.12	3.54	0.50	2.63	8.21
<b>Ave. 20-50 Has.</b>	<b>12,436</b>	<b>7.28</b>	<b>10.45</b>	<b>2.39</b>	<b>6.97</b>	<b>27.11</b>	<b>2.25</b>	<b>3.20</b>	<b>0.74</b>	<b>2.13</b>	<b>8.33</b>

Source: Based on Samuel R. Daines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 2  
Percentage of Land in Farm by Use Category

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	% of Land in Annual Crops	% of Land in Commercial or Home Gardens	% of Land in Fallow	% of Land Percently Cultivated for sale (generally mixed (including fallow))	% of Land in Permanent Crops	% of Land in Natural Pasture (excluding improved or cultivated pastures)	% of Land in Meadows or Forests	% of Land in Use for current production (excluding fallow, etc.)	% of Land in Use for other purposes (excluding fallow, etc.)
<b>Farms 2-3 Has.</b>										
Cent. Valley E.	1,034	13.17	2.41	4.01	0.36	45.71	21.80	0.93	88.73	
Cent. Valley W.	1,235	10.45	1.23	1.72	0.56	64.58	14.81	0.11	91.24	
North Zone	1,129	19.49	1.93	2.96	0.79	31.47	26.08	0.20	82.24	
Dry Pacific	1,070	26.67	0.39	3.73	1.17	6.73	15.48	0.11	83.11	
Central Pacific	1,074	26.24	0.53	4.29	0.51	40.48	15.78	0.11	80.50	
Pacific South	995	37.40	0.39	4.01	0.92	33.83	14.52	0.24	86.66	
Atlantic Zone	312	18.24	0.38	3.67	0.36	43.99	25.29	0.11	90.11	
<b>Ave. 2-3 Has.</b>	<b>6,454</b>	<b>25.38</b>	<b>1.17</b>	<b>3.48</b>	<b>0.65</b>	<b>38.11</b>	<b>18.97</b>	<b>0.21</b>	<b>87.55</b>	
<b>Farms 3-4 Has.</b>										
Cent. Valley E.	497	10.38	2.28	4.38	0.40	40.51	29.56	0.87	87.44	
Cent. Valley W.	772	15.00	0.80	1.28	0.46	61.18	18.84	0.15	92.14	
North Zone	230	15.39	0.72	4.17	0.48	28.78	29.66	0.47	79.49	
Dry Pacific	335	41.28	0.56	4.72	2.18	5.63	23.31	0.01	77.35	
Central Pacific	516	22.99	0.33	6.70	0.38	36.01	20.05	0.13	296.41	
Pacific South	599	27.07	0.45	7.12	1.22	31.07	17.99	0.72	83.11	
Atlantic Zone	273	10.87	0.68	3.73	1.06	53.17	17.80	0.23	87.92	
<b>Ave. 3-4 Has.</b>	<b>3,328</b>	<b>49.71</b>	<b>0.83</b>	<b>4.30</b>	<b>0.93</b>	<b>36.62</b>	<b>22.32</b>	<b>0.39</b>	<b>116.12</b>	
<b>Farms 5-10 Has.</b>										
Cent. Valley E.	1,295	8.05	0.81	3.60	0.50	30.86	35.89	1.62	91.73	
Cent. Valley W.	1,413	6.83	0.57	2.26	0.48	47.44	24.71	0.25	87.73	
North Zone	859	12.03	0.71	4.07	1.17	20.79	28.42	1.95	89.77	
Dry Pacific	1,463	24.93	0.35	4.22	0.95	4.16	33.63	0.43	68.71	
Central Pacific	1,209	18.69	0.38	3.81	0.51	23.81	27.38	0.52	77.13	
Pacific South	1,701	20.89	0.32	6.84	0.92	20.45	24.80	1.83	75.49	
Atlantic Zone	953	9.52	0.19	6.88	0.83	37.04	24.43	1.23	82.15	
<b>5-10 Has.</b>	<b>9,095</b>	<b>14.35</b>	<b>0.48</b>	<b>4.81</b>	<b>0.77</b>	<b>27.36</b>	<b>28.47</b>	<b>1.12</b>	<b>77.33</b>	
<b>Farms 10-20 Has.</b>										
Cent. Valley E.	884	5.79	0.53	4.20	0.40	21.61	42.10	2.56	77.21	
Cent. Valley W.	1,035	3.79	0.35	1.83	0.35	40.34	37.73	0.75	81.43	
North Zone	1,745	10.06	0.07	5.23	1.31	12.64	25.25	2.71	57.33	
Dry Pacific	1,735	15.59	0.18	3.80	0.75	2.71	38.44	0.71	62.33	
Central Pacific	1,039	13.93	0.21	9.01	0.57	13.27	27.91	1.02	66.11	
Pacific South	2,039	14.55	0.21	7.47	0.78	11.89	24.99	3.02	64.97	
Atlantic Zone	963	9.40	0.40	9.18	1.07	28.38	24.02	2.14	74.62	
<b>10-20 Has.</b>	<b>8,777</b>	<b>10.44</b>	<b>0.25</b>	<b>6.10</b>	<b>0.75</b>	<b>18.69</b>	<b>30.92</b>	<b>1.86</b>	<b>69.07</b>	
<b>Farms 20-50 Has.</b>										
Cent. Valley E.	868	4.01	0.26	4.13	0.46	12.25	41.38	5.17	68.73	
Cent. Valley W.	913	2.15	0.12	2.20	0.23	26.26	35.70	1.16	68.24	
North Zone	2,929	6.77	0.11	4.96	0.39	5.32	20.73	4.11	43.24	
Dry Pacific	2,827	3.09	0.21	3.98	0.29	1.47	40.70	1.49	57.23	
Central Pacific	1,248	11.04	0.28	8.45	0.56	7.01	25.94	2.11	55.23	
Pacific South	3,229	10.16	0.24	11.84	0.72	5.47	20.50	5.01	53.23	
Atlantic Zone	1,223	7.73	0.22	8.98	0.58	12.67	25.49	3.95	59.49	
<b>20-50 Has.</b>	<b>12,431</b>	<b>7.28</b>	<b>0.18</b>	<b>6.36</b>	<b>0.60</b>	<b>10.26</b>	<b>30.06</b>	<b>3.27</b>	<b>58.23</b>	

Source: Based on Samuel R. Daines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 3  
Land Use in Livestock Activities  
Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	% of Farm Area in Pasture	% of Pasture which is Fertilized	% of Pasture Irrigated	Intensity of Annual Carrying Load Pasture per Animal	Area in Improved Pasture/farm	Area per Farm in Unimproved Pasture	Area in Improved Pasture/Animal	Area in Unimproved Pasture/Animal	% of Improved Pasture Fertilized	% of Improved Pasture Irrigated
<b>Farms 2-3 Has.</b>											
Cent. Valley E.	1,044	24.78	4.97	0.01	0.29	0.07	0.52	7.22	0.25	41.42	9.23
Cent. Valley W.	1,590	17.42	2.30	0.00	0.38	0.06	0.35	6.30	0.30	15.36	4.49
North Zone	1,409	33.77	3.15	0.01	0.41	0.18	0.64	16.87	0.33	13.56	5.82
Dry Pacific	1,020	22.47	0.43	0.00	0.23	0.19	0.34	17.14	0.11	1.22	3.30
Central Pacific	1,079	19.08	0.52	0.00	0.10	0.07	0.38	7.93	0.22	3.07	3.31
Pacific South	995	18.60	0.00	0.00	0.16	0.07	0.31	2.31	0.23	0.00	0.00
Atlantic Zone	312	27.29	0.00	0.00	0.18	0.04	0.55	4.15	0.33	0.00	0.00
<b>Ave. 2-3 Has.</b>	<b>6,454</b>	<b>23.34</b>	<b>1.62</b>	<b>0.00</b>	<b>0.36</b>	<b>0.10</b>	<b>0.44</b>	<b>10.45</b>	<b>0.29</b>	<b>10.69</b>	<b>3.22</b>
<b>Farms 3-4 Has.</b>											
Cent. Valley E.	497	31.81	5.27	0.02	0.37	0.11	0.99	11.24	0.33	51.69	22.89
Cent. Valley W.	778	22.41	1.54	0.01	0.46	0.12	0.45	12.36	0.39	9.66	9.45
North Zone	230	41.71	2.09	0.01	0.47	0.42	1.03	42.04	0.33	7.23	4.24
Dry Pacific	435	37.84	0.42	0.00	0.31	0.49	0.40	27.88	0.19	1.10	0.00
Central Pacific	516	24.66	1.51	0.00	0.48	0.19	0.69	19.95	0.37	2.12	0.36
Pacific South	399	22.69	0.00	0.00	0.38	0.19	0.60	12.84	0.46	3.00	3.16
Atlantic Zone	273	19.08	0.00	0.00	0.43	0.03	0.55	3.35	0.45	0.00	0.00
<b>Ave. 3-4 Has.</b>	<b>3,328</b>	<b>28.60</b>	<b>1.54</b>	<b>0.00</b>	<b>0.44</b>	<b>0.21</b>	<b>0.76</b>	<b>21.63</b>	<b>0.35</b>	<b>11.11</b>	<b>5.74</b>
<b>Farms 5-10 Has.</b>											
Cent. Valley E.	1,295	41.46	5.45	0.00	0.54	0.39	2.57	39.96	0.47	42.16	3.55
Cent. Valley W.	1,615	32.55	2.43	0.01	0.60	0.56	1.75	36.06	0.45	11.00	5.04
North Zone	859	41.70	3.31	0.01	0.58	0.96	2.07	96.99	0.40	10.41	3.92
Dry Pacific	1,463	55.06	0.78	0.00	0.45	1.54	2.42	154.53	0.27	2.01	0.40
Central Pacific	1,209	39.58	0.33	0.00	0.64	0.87	1.96	87.60	0.44	1.03	0.19
Pacific South	1,701	32.58	0.26	0.00	0.78	0.59	1.74	55.44	0.39	1.11	1.41
Atlantic Zone	953	27.16	0.45	0.00	0.57	0.18	1.66	78.58	0.51	4.51	5.92
<b>5-10 Has.</b>	<b>9,095</b>	<b>38.60</b>	<b>1.92</b>	<b>0.00</b>	<b>0.60</b>	<b>0.72</b>	<b>2.03</b>	<b>72.74</b>	<b>0.45</b>	<b>10.33</b>	<b>2.92</b>
<b>Farms 10-20 Has.</b>											
Cent. Valley E.	884	48.11	5.54	0.01	0.73	0.84	5.89	84.27	0.64	44.37	9.53
Cent. Valley W.	1,035	45.74	3.78	0.00	0.73	1.67	4.70	167.76	0.54	10.61	2.31
North Zone	1,045	49.12	2.01	0.02	0.70	2.09	3.56	209.72	0.44	5.42	6.88
Dry Pacific	1,735	64.92	0.54	0.00	0.60	3.75	5.44	375.00	0.35	1.33	0.40
Central Pacific	1,059	52.27	0.20	0.00	0.84	2.59	3.94	259.29	0.50	0.50	7.30
Pacific South	2,039	32.79	0.21	0.00	0.94	1.51	3.50	151.54	0.65	0.71	0.44
Atlantic Zone	980	08	0.68	0.01	0.66	0.67	3.20	67.38	0.54	3.93	6.05
<b>10-20 Has.</b>	<b>9,095</b>	<b>38.60</b>	<b>1.92</b>	<b>0.00</b>	<b>0.60</b>	<b>0.72</b>	<b>2.03</b>	<b>72.74</b>	<b>0.45</b>	<b>10.33</b>	<b>2.92</b>
<b>Farms 20-50 Has.</b>											
Cent. Valley E.	860	49.80	9.33	0.01	0.74	2.60	12.77	260.03	0.62	55.20	11.05
Cent. Valley W.	913	57.76	4.44	0.01	0.85	6.92	11.19	639.25	0.53	11.53	2.75
North Zone	2,000	39.86	1.73	0.02	0.79	6.17	6.49	617.71	0.41	3.61	4.21
Dry Pacific	2,547	58.44	0.46	0.00	0.73	8.99	13.05	929.87	0.44	1.15	0.45
Central Pacific	1,248	50.91	7.65	0.00	0.97	7.85	8.16	785.00	0.49	15.61	0.54
Pacific South	2,227	32.35	0.17	0.00	1.06	3.65	6.31	369.04	0.68	0.47	0.48
Atlantic Zone	1,223	33.62	0.00	0.00	0.73	2.23	7.01	223.68	0.55	0.03	2.58
<b>20-50 Has.</b>	<b>12,436</b>	<b>47.54</b>	<b>3.40</b>	<b>0.00</b>	<b>0.84</b>	<b>5.47</b>	<b>9.31</b>	<b>547.65</b>	<b>0.53</b>	<b>12.53</b>	<b>3.08</b>

Source: Based on Samuel R. Gaines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 4  
Technological Level: Power Source and Mechanical Intensity

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included		Tractor Horsepower per Ha. Cultivated		Mechanical Intensity of Cultivation		Tractor Horsepower per Ha. Cultivated as a % of not Average Mechanical Intensity Index		Tractor Horsepower per Ha. in Farm		Mechanical Intensity of Cultivation		Tractor Horsepower per Ha. in Farm as a % of National Average		Animal Power Intensity of Cultivation - Animals/No. Cultivated		Labor Supply Intensity Man-days Availability per No. Cultivated		Total Power (mechanical, animal, and human) Index per No. Cultivated		Total Power Index per Ha. in Farm		Total Power Index per Ha. in Farm as a % of National Average		Total Power Index per No. Cultivated as a % of National Average							
	HP/No.	%	HP/No.	%	HP/No.	%	HP/No.	%	No./Ha.	Days/No.	Index	Index	%	%	No./Ha.	Days/No.	Index	Index	%	%												
<b>Farms 2-3 Has.</b>																																
Cent. Valley E.	1,043	1.00	171.46	0.84	787.18	0.11	483.14	2.11	1.33	1,106.87	247.44																					
Cent. Valley W.	409	1.13	231.72	1.17	1,103.53	0.03	378.07	1.77	1.37	1,106.87	201.54																					
North Zone	1,023	1.13	231.72	1.17	1,103.53	0.03	378.07	1.77	1.37	1,106.87	201.54																					
Dry Pacific	1,023	2.29	383.47	0.18	1,103.53	0.03	378.07	2.41	1.37	1,106.87	201.54																					
Central Pacific	1,023	0.43	131.71	0.21	1,103.53	0.03	378.07	2.41	1.37	1,106.87	201.54																					
Pacific South	1,023	0.30	43.33	0.02	1,103.53	0.03	378.07	2.41	1.37	1,106.87	201.54																					
Atlantic Zone	1,023	0.30	0.00	0.00	1,103.53	0.03	378.07	2.41	1.37	1,106.87	201.54																					
<b>Ave. 2-3 Has.</b>	<b>6,484</b>	<b>0.92</b>	<b>157.80</b>	<b>0.61</b>	<b>736.96</b>	<b>0.14</b>	<b>482.88</b>	<b>2.14</b>	<b>1.40</b>	<b>1,157.25</b>	<b>251.70</b>																					
<b>Farms 3-4 Has.</b>																																
Cent. Valley E.	497	0.78	128.13	0.41	300.47	0.11	327.68	1.74	0.98	799.09	204.49																					
Cent. Valley W.	778	1.50	433.15	1.08	1,322.08	0.31	297.17	1.41	1.49	848.54	186.30																					
North Zone	415	2.20	187.83	0.37	1,322.08	0.13	434.66	2.46	1.49	848.54	186.30																					
Dry Pacific	415	0.84	187.83	0.37	1,322.08	0.13	434.66	2.46	1.49	848.54	186.30																					
Central Pacific	415	0.08	61.42	0.03	1,322.08	0.13	434.66	2.46	1.49	848.54	186.30																					
Pacific South	498	0.39	61.42	0.03	1,322.08	0.13	434.66	2.46	1.49	848.54	186.30																					
Atlantic Zone	273	0.30	0.00	0.00	1,322.08	0.13	434.66	2.46	1.49	848.54	186.30																					
<b>Ave. 3-4 Has.</b>	<b>3,328</b>	<b>0.95</b>	<b>161.54</b>	<b>0.52</b>	<b>625.77</b>	<b>0.14</b>	<b>381.54</b>	<b>1.82</b>	<b>1.03</b>	<b>887.53</b>	<b>213.87</b>																					
<b>Farms 5-10 Has.</b>																																
Cent. Valley E.	1,298	0.77	131.73	0.33	395.70	0.07	143.41	1.20	0.51	425.98	141.82																					
Cent. Valley W.	1,418	1.31	227.18	0.81	891.17	0.03	170.07	0.94	0.57	478.64	110.81																					
North Zone	1,859	1.15	195.76	0.41	284.27	0.03	219.37	0.94	0.57	478.64	110.81																					
Dry Pacific	1,463	1.29	220.58	0.42	326.70	0.18	219.37	0.94	0.57	478.64	110.81																					
Central Pacific	1,463	0.18	27.35	0.07	326.70	0.09	219.37	0.94	0.57	478.64	110.81																					
Pacific South	1,463	0.18	27.35	0.07	326.70	0.09	219.37	0.94	0.57	478.64	110.81																					
Atlantic Zone	951	0.03	0.00	0.00	326.70	0.13	219.37	0.94	0.57	478.64	110.81																					
<b>Ave. 5-10 Has.</b>	<b>9,095</b>	<b>0.70</b>	<b>120.19</b>	<b>0.30</b>	<b>369.43</b>	<b>0.10</b>	<b>244.67</b>	<b>1.27</b>	<b>0.53</b>	<b>448.82</b>	<b>149.29</b>																					
<b>Farms 10-20 Has.</b>																																
Cent. Valley E.	884	0.48	118.91	0.20	246.07	0.04	176.54	0.93	0.28	231.48	109.08																					
Cent. Valley W.	1,335	0.98	147.93	0.53	464.36	0.03	195.47	0.74	0.34	288.73	86.73																					
North Zone	1,044	0.92	127.93	0.43	476.03	0.06	211.36	0.74	0.30	250.20	142.73																					
Dry Pacific	1,735	1.10	188.04	0.43	276.03	0.19	232.47	0.74	0.36	297.53	202.71																					
Central Pacific	1,044	0.22	38.72	0.08	42.70	0.19	176.00	0.93	0.27	229.58	108.74																					
Pacific South	2,039	0.15	26.38	0.04	52.21	0.07	176.00	0.93	0.27	229.58	108.74																					
Atlantic Zone	980	0.01	3.17	0.00	6.80	0.05	181.84	0.93	0.24	222.19	112.23																					
<b>Ave. 10-20 Has.</b>	<b>8,777</b>	<b>0.61</b>	<b>103.84</b>	<b>0.18</b>	<b>226.48</b>	<b>0.07</b>	<b>180.37</b>	<b>1.03</b>	<b>0.30</b>	<b>251.46</b>	<b>121.51</b>																					
<b>Farms 20-50 Has.</b>																																
Cent. Valley E.	882	0.79	134.58	0.15	188.75	0.03	121.20	0.74	0.16	125.76	89.67																					
Cent. Valley W.	913	0.98	164.57	0.21	371.34	0.03	74.14	0.49	0.14	152.23	67.48																					
North Zone	2,008	0.43	68.41	0.08	70.05	0.04	168.79	0.99	0.14	152.23	67.48																					
Dry Pacific	1,857	0.17	97.85	0.07	32.45	0.07	172.58	1.32	0.17	147.86	116.07																					
Central Pacific	1,228	0.11	19.06	0.03	84.44	0.03	110.95	0.69	0.14	123.00	41.53																					
Pacific South	1,228	0.11	19.06	0.03	84.44	0.03	110.95	0.69	0.14	123.00	41.53																					
Atlantic Zone	1,223	0.06	10.79	0.01	17.17	0.06	120.56	0.71	0.13	111.55	91.96																					
<b>Ave. 20-50 Has.</b>	<b>12,436</b>	<b>0.45</b>	<b>76.81</b>	<b>0.09</b>	<b>114.18</b>	<b>0.05</b>	<b>128.34</b>	<b>0.83</b>	<b>0.15</b>	<b>110.31</b>	<b>88.11</b>																					

Source: Based on Samuel R. Deines' compilation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 5  
Technological Level - Fertilizer Use in Coffee, Sugar Cane, Tobacco, Banana

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Fertilizer Use in Banana in Kg./Ha.		Fertilizer Use in Banana as a % of National Average		Fertilizer Use in Tobacco in Kg./Ha.		Fertilizer Use in Tobacco as a % of National Average		Fertilizer Use in Coffee in Kg./Ha.		Fertilizer Use in Coffee as a % of National Average		Fertilizer Use in Sugar Cane in Kg./Ha.		Fertilizer Use in Sugar Cane as a % of National Average		Composite Number of Fertilizers per Ha. in Banana, Tobacco, Coffee and Sugar Cane	
		Kg./Ha.	%	Kg./Ha.	%	Kg./Ha.	%	Kg./Ha.	%	Kg./Ha.	%	Kg./Ha.	%	Kg./Ha.	%	Kg./Ha.	%	Kg./Ha.	%
<b>Farms 2-3 Hec.</b>																			
Cent. Valley E.	1,249	19.16	1.99	0.00	0.00	341.83	76.45	138.88	40.90	226.38	326.38	120.90	326.38	120.90	326.38	120.90	326.38	120.90	326.38
Cent. Valley W.	1,490	19.16	1.99	753.61	97.00	443.97	99.24	278.92	120.90	278.92	326.38	120.90	326.38	120.90	326.38	120.90	326.38	120.90	326.38
North Zone	1,490	19.16	1.99	0.00	0.00	168.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dry Pacific	1,490	19.16	1.99	0.00	0.00	248.31	57.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central Pacific	1,490	19.16	1.99	0.00	0.00	157.11	30.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pacific South	312	4.44	0.44	1,003.34	130.46	78.74	17.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ave. 2-3 Hec.	6,454	8.30	0.82	251.02	32.63	207.79	46.47	67.25	24.65	184.41									
<b>Farms 3-4 Hec.</b>																			
Cent. Valley E.	497	3.80	0.37	0.00	0.00	359.32	80.36	150.59	53.20	315.14									
Cent. Valley W.	778	3.80	0.00	995.64	129.43	49.73	11.12	231.07	34.70	332.49									
North Zone	230	0.00	0.00	0.00	0.00	204.70	45.74	111.11	26.73	183.02									
Dry Pacific	435	0.00	0.00	0.00	0.00	0.00	0.00	143.75	52.89	37.45									
Central Pacific	318	0.00	0.00	0.00	0.00	319.30	71.41	12.28	3.89	291.43									
Pacific South	399	0.00	0.00	801.48	104.21	152.85	34.19	0.00	0.00	171.45									
Atlantic Zone	273	3.07	0.30	0.00	0.00	0.00	0.00	0.00	0.00	1.61									
Ave. 3-4 Hec.	3,328	0.98	0.09	256.74	33.37	155.14	34.69	92.68	33.97	147.95									
<b>Farms 5-10 Hec.</b>																			
Cent. Valley E.	1,295	65.14	6.44	0.00	0.00	170.48	82.86	181.18	70.08	379.44									
Cent. Valley W.	1,812	24.21	2.39	740.84	94.28	374.56	119.56	305.76	112.08	229.63									
North Zone	853	0.00	0.00	0.00	0.00	203.26	45.46	95.93	35.02	33.33									
Dry Pacific	1,483	0.00	0.00	0.00	0.00	9.41	2.10	18.51	6.78	11.45									
Central Pacific	1,209	0.00	0.00	0.00	0.00	339.18	75.86	10.82	3.89	291.43									
Pacific South	1,701	0.00	0.00	897.97	116.62	140.26	31.36	0.00	0.00	168.50									
Atlantic Zone	953	12.81	1.26	0.00	0.00	0.00	0.00	20.97	7.68	10.03									
Ave. 5-10 Hec.	9,095	14.59	1.44	233.95	30.41	228.16	51.03	91.80	33.65	305.99									
<b>Farms 10-20 Hec.</b>																			
Cent. Valley E.	884	4.66	0.46	0.00	0.00	415.85	93.01	139.08	50.98	343.76									
Cent. Valley W.	1,235	101.09	10.00	733.44	97.95	583.17	130.88	252.57	107.28	313.52									
North Zone	1,235	2.85	0.28	0.00	0.00	208.77	46.89	184.84	57.84	185.99									
Dry Pacific	1,235	0.00	0.00	0.00	0.00	6.42	1.43	59.32	21.74	21.82									
Central Pacific	1,235	8.04	0.79	0.00	0.00	395.06	88.36	11.85	4.34	329.20									
Pacific South	2,319	3.64	0.36	880.70	114.49	178.33	39.88	11.39	4.17	186.96									
Atlantic Zone	980	5.61	0.55	0.00	0.00	0.00	0.00	0.00	0.00	3.63									
Ave. 10-20 Hec.	8,777	17.98	1.78	233.45	30.34	255.66	57.18	94.11	34.49	223.56									
<b>Farms 20-50 Hec.</b>																			
Cent. Valley E.	868	11.46	1.13	0.00	0.00	497.67	111.31	200.39	73.45	414.23									
Cent. Valley W.	913	79.31	7.85	694.42	90.27	622.58	139.25	311.67	114.25	542.64									
North Zone	2,008	0.00	0.00	0.00	0.00	252.07	56.37	87.23	30.13	110.53									
Dry Pacific	2,947	0.00	0.00	0.00	0.00	13.62	3.49	101.54	37.29	41.74									
Central Pacific	1,248	0.00	0.00	0.00	0.00	437.92	97.94	17.32	6.35	372.62									
Pacific South	3,429	32.85	3.25	982.25	127.26	184.16	41.19	6.25	2.29	148.93									
Atlantic Zone	1,223	2.10	0.20	0.00	0.00	24.17	5.40	0.00	0.00	6.93									
Ave. 20-50 Hec.	12,436	17.96	1.77	239.60	31.14	290.60	64.99	102.80	37.68	234.63									

Source: Based on Samuel R. Calmes' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 6  
Technological Level-Fertilizer Use in Rice, Corn, Potatoes and Tomatoes

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Fertilizer Use in Rice in Kg./Ha.		Fertilizer Use in Corn in Kg./Ha.		Fertilizer Use in Potatoes in Kg./Ha.		Fertilizer Use in Tomatoes in Kg./Ha.		Composite Index of Fertilizer Use per Ha. in Rice, Corn, Potatoes and Tomatoes
		Kg./Ha.	% of National Average	Kg./Ha.	% of National Average	Kg./Ha.	% of National Average	Kg./Ha.	% of National Average	
<b>Farms 2-4 Has.</b>										
Cent. Valley E.	1,349	0.00	0.00	78.74	225.62	1,224.95	102.46	793.44	81.14	590.08
Cent. Valley W.	1,590	88.46	645.70	146.86	420.31	192.22	102.46	1,688.33	172.74	321.51
North Zone	1,433	0.00	0.00	48.13	137.91	337.19	71.33	0.00	3.08	242.11
Dry Pacific	1,020	77.01	562.13	25.43	72.89	20.90	1.60	454.02	46.43	19.73
Central Pacific	1,379	23.16	242.11	67.75	194.12	0.00	0.00	132.00	13.49	56.51
Pacific South	393	1.05	7.69	16.76	48.04	0.00	0.00	125.48	12.63	11.75
Atlantic Zone	312	0.00	0.00	7.35	21.07	0.00	0.00	0.00	0.00	6.37
Ave. 2-4 Has.	6,454	28.52	208.23	55.86	160.07	355.32	27.27	456.26	46.66	180.29
<b>Farms 3-4 Has.</b>										
Cent. Valley E.	497	0.00	0.00	86.74	248.56	1,191.70	91.46	1,107.75	113.29	520.29
Cent. Valley W.	773	150.00	1,095.65	135.03	386.92	0.00	0.00	1,332.41	136.26	224.52
North Zone	230	0.00	0.00	84.92	245.31	1,040.20	79.63	70.76	7.22	302.43
Dry Pacific	435	75.06	547.93	77.99	217.91	0.00	0.00	131.82	13.44	49.69
Central Pacific	516	61.68	450.26	91.37	204.50	0.00	0.00	671.60	68.48	154.33
Pacific South	499	10.74	78.44	18.20	52.15	0.00	0.00	0.00	0.00	15.43
Atlantic Zone	273	0.00	0.00	2.12	6.10	0.00	0.00	0.00	0.00	1.76
Ave. 3-4 Has.	3,328	42.51	310.32	60.80	174.21	318.84	24.47	473.42	48.41	169.64
<b>Farms 5-10 Has.</b>										
Cent. Valley E.	1,295	38.93	262.31	93.38	267.58	1,359.26	104.32	500.78	51.21	530.97
Cent. Valley W.	1,815	173.90	1,269.36	13.42	38.45	51.11	3.92	1,110.57	113.57	27.87
North Zone	859	0.88	6.87	24.53	74.09	1,121.88	86.10	178.06	18.21	123.63
Dry Pacific	1,463	89.94	729.31	33.19	93.93	3.80	0.29	309.45	31.84	66.49
Central Pacific	1,259	71.88	523.23	19.97	217.10	0.00	0.00	362.25	37.04	75.92
Pacific South	1,751	12.51	91.32	20.08	57.84	88.72	4.50	43.82	4.41	17.79
Atlantic Zone	953	0.00	0.00	10.11	28.99	0.00	0.00	164.28	16.80	8.97
Ave. 5-10 Has.	9,095	56.37	411.53	38.95	111.63	370.68	28.45	381.21	38.98	121.66
<b>Farms 10-20 Has.</b>										
Cent. Valley E.	884	0.00	0.00	88.90	254.74	1,609.50	123.53	451.06	46.13	660.23
Cent. Valley W.	1,035	163.16	1,190.96	111.10	318.36	102.98	7.90	1,081.07	109.48	181.04
North Zone	1,045	1.26	9.24	1.81	5.21	1,406.15	107.92	0.00	0.00	43.59
Dry Pacific	1,735	106.57	778.06	24.53	70.30	0.00	0.00	129.60	13.25	65.37
Central Pacific	1,059	77.90	568.66	67.71	194.03	0.00	0.00	390.26	39.91	73.30
Pacific South	2,033	9.99	72.92	11.67	33.44	0.00	0.00	255.55	26.13	11.16
Atlantic Zone	940	0.02	0.17	5.43	15.58	0.00	0.00	0.00	0.00	4.62
Ave. 10-20 Has.	8,777	51.27	374.29	44.45	127.38	445.52	34.19	325.36	33.27	148.47
<b>Farms 20-50 Has.</b>										
Cent. Valley E.	868	3.57	26.09	169.94	486.93	1,333.72	102.38	1,570.19	160.58	661.37
Cent. Valley W.	913	92.00	671.53	103.00	295.15	387.87	25.14	1,011.17	103.41	146.88
North Zone	2,008	0.54	4.00	10.89	31.19	79.71	59.76	0.00	0.00	12.48
Dry Pacific	2,757	101.76	742.80	25.52	73.12	79.31	6.06	182.64	18.67	62.56
Central Pacific	1,248	94.38	684.95	45.68	130.89	0.00	0.00	60.52	6.12	75.66
Pacific South	3,229	21.73	158.62	6.27	17.95	40.00	1.07	82.56	8.44	13.07
Atlantic Zone	1,223	0.00	0.06	3.53	10.12	0.00	0.00	1,007.61	103.04	3.88
Ave. 20-50 Has.	12,436	44.85	327.44	52.12	149.34	365.63	28.06	559.24	57.19	139.56

Source: Based on Samuel L. Delmas' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 7  
Fertilizer Use Index - Major Crops Only

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	% Used in							Kg of Fertilizer Utilized per Ha. Cultivated	Kg of Fertilizer Utilized in Major Crops per Ha. Cultivated as % of National Average
		Rice	Corn	Potatoes	Banana	Tabacco	Coffee	Sugar Cane		
<b>Farms 2-3 Has.</b>										
Cent. Valley E.	1,049	0.00	2.34	25.23	0.10	0.00	67.73	4.58	283.32	122.19
Cent. Valley W.	1,433	0.21	2.45	0.05	0.00	2.30	43.55	9.38	321.36	162.15
North Zone	439	0.00	6.06	45.09	0.13	0.00	44.39	1.72	121.81	81.00
Dry Pacific	1,020	66.45	30.18	0.03	0.00	0.00	0.32	0.38	147.36	64.01
Central Pacific	1,079	2.17	11.63	0.00	0.00	0.00	89.49	0.00	33.33	41.81
Pacific South	995	0.16	5.12	0.00	0.00	32.71	81.99	0.00	4.00	1.79
Atlantic Zone	312	0.00	35.38	0.00	0.00	0.00	59.17	0.00		
Ave. 2-3 Has.	6,454	9.85	13.51	10.06	0.81	5.00	58.09	2.65	149.99	67.19
<b>Farms 3-4 Has.</b>										
Cent. Valley E.	497	0.00	3.03	23.65	0.01	0.00	66.98	6.31	293.92	131.67
Cent. Valley W.	775	0.18	3.67	0.00	0.00	2.91	84.21	9.00	394.61	176.77
North Zone	230	0.00	6.58	41.17	0.30	0.00	39.78	12.44	133.30	99.71
Dry Pacific	415	57.88	34.18	0.00	0.00	0.00	0.00	7.92	135.68	19.96
Central Pacific	516	2.44	9.66	0.00	0.00	0.00	87.34	0.32	185.88	81.45
Pacific South	599	1.82	5.21	0.00	0.00	18.39	72.36	0.00	82.38	38.24
Atlantic Zone	273	0.00	60.00	0.00	40.00	0.00	0.00	0.00	0.41	0.18
Ave. 3-4 Has.	3,328	8.90	17.47	9.26	5.71	3.04	60.44	5.14	160.79	72.03
<b>Farms 5-10 Has.</b>										
Cent. Valley E.	1,295	0.01	2.84	22.28	0.25	0.00	63.11	11.48	297.09	133.09
Cent. Valley W.	1,813	0.37	2.16	0.00	0.00	1.07	84.12	12.74	425.55	190.63
North Zone	859	0.06	4.04	30.46	0.00	0.00	51.30	14.11	88.37	39.59
Dry Pacific	1,483	72.60	25.07	0.00	0.00	0.00	0.00	0.98	43.53	19.50
Central Pacific	1,209	3.28	9.73	0.00	0.00	0.00	84.59	0.41	173.83	77.87
Pacific South	1,701	2.02	6.67	0.06	0.00	28.23	64.99	0.00	81.80	36.84
Atlantic Zone	953	0.00	62.58	0.00	27.89	0.00	0.00	9.52	2.07	0.93
Ave. 5-10 Has.	9,095	11.47	16.16	7.94	4.02	3.90	49.92	6.96	158.89	71.18
<b>Farms 10-20 Has.</b>										
Cent. Valley E.	884	0.00	2.42	27.31	0.02	0.00	63.80	6.43	339.17	151.94
Cent. Valley W.	1,035	0.15	1.35	0.02	0.03	0.43	84.19	13.70	449.62	201.41
North Zone	1,045	0.23	0.49	19.49	0.12	0.00	54.24	25.42	58.56	26.23
Dry Pacific	1,735	77.32	18.05	0.00	0.00	-0.00	0.00	3.70	42.42	19.00
Central Pacific	1,059	8.96	8.41	0.00	0.03	0.00	87.32	0.46	165.47	74.12
Pacific South	2,039	2.11	4.03	0.00	0.00	0.00	72.35	0.54	74.54	33.39
Atlantic Zone	980	0.05	74.19	0.00	25.74	0.00	0.00	0.00	1.18	0.52
Ave. 10-20 Has.	8,777	12.70	15.56	6.69	3.71	2.98	51.14	7.18	161.56	72.37
<b>Farms 20-50 Has.</b>										
Cent. Valley E.	868	0.00	4.41	26.26	0.08	0.00	62.44	6.78	386.10	172.26
Cent. Valley W.	913	0.18	0.92	0.05	0.02	0.17	85.02	13.60	451.02	202.04
North Zone	2,008	0.36	6.97	9.03	0.00	0.00	60.52	23.63	25.61	11.57
Dry Pacific	1,937	71.65	18.18	0.15	0.00	0.00	2.45	7.52	155.29	15.77
Central Pacific	1,248	18.19	5.49	0.00	0.00	0.00	74.25	0.45	148.41	66.40
Pacific South	3,229	11.07	4.11	0.00	0.00	0.00	74.60	0.49	42.47	17.03
Atlantic Zone	1,223	0.02	68.74	0.00	2.56	7.32	24.77	0.00	1.60	0.71
Ave. 20-50 Has.	12,436	14.50	15.55	5.07	1.30	1.07	55.06	7.42	155.78	69.70

Source: Based on Samuel A. Delmas' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE B  
Technological Level: Irrigation in Major Crops

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Irrigation in Major Crops						
		% Land Irrigated in Rice	% Land Irrigated in Potatoes	% Land Irrigated in Beans	% Land Irrigated in Tobacco	% Land Irrigated in Coffee	% Land Irrigated in Sugar Cane	% Land Irrigated in Pasture
<b>Farms 2-3 Has.</b>								
Cent. Valley E.	1,049	0.00	15.80	0.60	0.00	66.83	9.37	6.31
Cent. Valley W.	1,590	0.00	1.32	0.00	0.34	77.24	18.67	7.54
North Zone	1,403	4.77	24.91	0.00	0.30	44.36	7.15	12.55
Dry Pacific	1,020	96.95	0.00	0.00	0.00	1.25	0.00	0.50
Central Pacific	1,029	17.36	0.00	0.00	0.00	77.66	0.81	3.50
Pacific South	993	5.38	0.00	0.00	52.47	40.35	0.00	0.30
Atlantic Zone	312	0.00	0.00	10.52	0.00	36.84	0.00	0.00
<b>Ave. 2-3 Has.</b>	<b>6,454</b>	<b>17.61</b>	<b>5.96</b>	<b>1.58</b>	<b>7.54</b>	<b>49.22</b>	<b>5.21</b>	<b>3.30</b>
<b>Farms 3-4 Has.</b>								
Cent. Valley E.	497	0.00	0.60	0.00	0.00	96.80	0.71	2.02
Cent. Valley W.	778	0.00	0.00	0.00	0.89	79.37	13.08	5.80
North Zone	230	0.00	51.63	0.00	0.00	5.73	0.00	34.42
Dry Pacific	435	96.51	0.00	0.00	0.00	0.00	0.00	0.00
Central Pacific	516	12.26	0.00	0.79	0.00	82.01	0.79	0.79
Pacific South	999	13.91	0.00	0.00	12.32	62.67	0.00	10.56
Atlantic Zone	271	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Ave. 3-4 Has.</b>	<b>3,328</b>	<b>17.19</b>	<b>7.46</b>	<b>0.11</b>	<b>1.88</b>	<b>46.64</b>	<b>2.08</b>	<b>7.65</b>
<b>Farms 5-10 Has.</b>								
Cent. Valley E.	1,295	0.00	10.41	1.30	0.00	69.77	12.85	5.35
Cent. Valley W.	1,615	1.31	0.00	0.00	0.01	73.64	17.60	7.06
North Zone	1,859	1.33	23.30	0.00	0.00	44.89	0.00	29.35
Dry Pacific	1,463	90.86	0.00	0.00	0.00	1.98	0.00	6.44
Central Pacific	1,709	40.06	0.00	0.00	0.00	58.48	0.26	0.80
Pacific South	1,701	8.23	0.00	0.00	44.05	39.29	0.00	7.82
Atlantic Zone	953	0.00	0.00	25.90	0.00	14.50	0.00	54.40
<b>Ave. 5-10 Has.</b>	<b>9,085</b>	<b>20.31</b>	<b>4.81</b>	<b>3.88</b>	<b>6.29</b>	<b>43.22</b>	<b>4.39</b>	<b>15.89</b>
<b>Farms 10-20 Has.</b>								
Cent. Valley E.	884	0.00	11.14	0.00	0.00	57.30	6.64	24.56
Cent. Valley W.	1,035	1.46	0.00	0.00	0.27	70.64	21.88	5.49
North Zone	1,045	0.22	5.83	0.00	0.00	16.29	4.30	40.30
Dry Pacific	1,735	74.20	0.00	0.00	0.50	1.75	4.25	12.83
Central Pacific	1,059	62.45	0.00	0.16	0.00	35.00	0.16	1.97
Pacific South	2,039	16.95	0.00	0.92	31.86	43.38	0.00	6.40
Atlantic Zone	980	0.00	0.00	0.00	0.00	0.72	0.00	96.85
<b>Ave. 10-20 Has.</b>	<b>8,777</b>	<b>22.37</b>	<b>2.42</b>	<b>0.15</b>	<b>4.59</b>	<b>35.01</b>	<b>5.62</b>	<b>29.20</b>
<b>Farms 20-50 Has.</b>								
Cent. Valley E.	868	0.00	10.70	0.81	0.00	49.67	2.21	36.43
Cent. Valley W.	313	0.11	0.00	0.00	0.00	64.53	23.47	11.80
North Zone	2,008	0.65	1.77	0.00	0.00	9.42	2.25	85.12
Dry Pacific	2,947	71.49	0.06	0.30	0.00	0.00	0.44	27.36
Central Pacific	1,248	73.56	0.00	0.00	0.00	24.77	1.02	0.41
Pacific South	3,229	41.04	0.00	7.83	6.30	32.19	1.15	11.27
Atlantic Zone	1,223	0.00	0.00	2.39	0.00	11.61	0.00	84.79
<b>Ave. 20-50 Has.</b>	<b>12,436</b>	<b>26.69</b>	<b>2.02</b>	<b>1.57</b>	<b>0.90</b>	<b>27.46</b>	<b>4.39</b>	<b>36.64</b>

Source: Based on Samuel A. Daines' computation from basic data contained in the Costa Rica, 1973 Agricultural Cens

TABLE 9  
 Field and Production Patterns in Basic Grains  
 Costa Rica Small Farm Profile  
 Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Rice Yields as % of National Average Yield		Rice Value per Ha. as % of Corn Value/No.		Corn Yields in Metric Tons/No.		% of Basic Grain Value which is Exceeded by Corn Value		Bean Yields as % of National Average Yield		Bean Value per Ha. as % of Corn Value/No.		Value of Production of Each Grain
		Mt./Ha.	%	Mt./Ha.	%	Mt./Ha.	%	Mt./Ha.	%	Mt./Ha.	%	Mt./Ha.	%	
<b>Farms 2-3 Has.</b>														
Cent. Valley E.	1,044	1.20	62.29	103.39	1.22	120.86	71.61	0.41	100.47	81.77	27.94			
Cent. Valley W.	1,559	0.91	50.27	159.29	1.08	108.10	56.76	0.48	119.18	105.54	34.74			
North Zone	1,020	0.90	52.71	125.39	0.99	98.16	44.70	0.50	123.18	88.03	28.91			
Dry Pacific	1,320	0.90	58.22	124.70	0.99	98.16	44.70	0.41	100.78	97.41	31.33			
Central Pacific	1,020	0.90	58.22	124.70	0.99	98.16	44.70	0.41	100.78	97.41	31.33			
Pacific South	1,020	0.90	58.22	124.70	0.99	98.16	44.70	0.41	100.78	97.41	31.33			
Atlantic Zone	312	0.84	40.27	81.31	0.88	97.35	86.50	0.32	78.02	78.84	2.60			
<b>Ave. 2-3 Has.</b>	<b>6,454</b>	<b>0.99</b>	<b>62.65</b>	<b>116.25</b>	<b>1.09</b>	<b>108.34</b>	<b>58.02</b>	<b>0.42</b>	<b>102.06</b>	<b>93.09</b>				
<b>Farms 3-4 Has.</b>														
Cent. Valley E.	477	0.93	58.99	103.42	1.14	112.95	72.60	0.44	108.70	94.67	24.94			
Cent. Valley W.	778	1.57	98.36	173.67	1.14	113.28	62.11	0.48	118.48	102.68	32.99			
North Zone	230	0.79	49.76	99.58	1.00	98.93	47.32	0.46	112.79	112.15	26.37			
Dry Pacific	435	1.21	76.28	168.36	1.02	101.18	39.39	0.50	121.79	116.40	26.42			
Central Pacific	435	1.21	76.28	168.36	1.02	101.18	39.39	0.50	121.79	116.40	26.42			
Pacific South	399	0.99	63.23	115.25	0.93	92.40	37.26	0.38	88.12	93.82	19.15			
Atlantic Zone	273	0.68	41.64	70.14	1.01	109.08	47.93	0.41	99.96	90.14	26.69			
<b>Ave. 3-4 Has.</b>	<b>3,328</b>	<b>1.01</b>	<b>63.74</b>	<b>120.85</b>	<b>1.06</b>	<b>105.38</b>	<b>57.74</b>	<b>0.36</b>	<b>87.47</b>	<b>83.17</b>				
<b>Farms 5-10 Has.</b>														
Cent. Valley E.	1,295	1.66	98.33	175.35	1.12	111.02	73.23	0.43	105.00	93.03	24.47			
Cent. Valley W.	1,816	1.41	78.21	152.04	0.11	11.30	74.24	0.10	26.34	229.12	3.10			
North Zone	859	0.99	62.46	122.23	1.02	101.18	39.39	0.50	121.79	116.40	26.42			
Dry Pacific	1,463	0.89	56.01	120.62	0.93	92.40	37.26	0.38	88.12	93.82	19.15			
Central Pacific	1,239	0.78	49.76	99.58	0.73	72.10	33.06	0.37	90.21	379.45	26.62			
Pacific South	1,201	0.99	63.23	115.25	1.09	109.08	47.93	0.41	99.96	90.14	26.69			
Atlantic Zone	953	0.80	50.50	92.09	1.09	108.98	84.13	0.40	86.75	87.65	1.32			
<b>Ave. 5-10 Has.</b>	<b>9,095</b>	<b>1.19</b>	<b>75.51</b>	<b>447.13</b>	<b>0.80</b>	<b>79.57</b>	<b>52.55</b>	<b>0.37</b>	<b>89.74</b>	<b>155.94</b>				
<b>Farms 10-20 Has.</b>														
Cent. Valley E.	884	1.27	80.33	138.43	1.16	114.90	75.73	0.42	102.14	87.44	21.40			
Cent. Valley W.	1,335	1.23	77.89	140.52	1.11	109.89	45.37	0.48	117.77	105.42	31.63			
North Zone	1,045	0.88	56.05	108.63	1.05	104.07	41.21	0.44	108.01	102.59	28.39			
Dry Pacific	1,715	1.26	74.50	125.45	0.86	85.96	35.49	0.38	92.14	105.44	22.27			
Central Pacific	1,715	1.26	74.50	125.45	1.03	102.79	27.61	0.37	90.21	66.20	16.37			
Pacific South	1,335	0.37	61.48	121.63	1.01	100.08	42.04	0.41	100.78	99.04	26.66			
Atlantic Zone	980	0.94	59.20	106.28	1.11	110.28	82.18	0.44	107.71	96.08	2.35			
<b>Ave. 10-20 Has.</b>	<b>8,777</b>	<b>1.14</b>	<b>71.89</b>	<b>136.85</b>	<b>1.05</b>	<b>104.00</b>	<b>51.24</b>	<b>0.42</b>	<b>102.76</b>	<b>97.49</b>				
<b>Farms 20-50 Has.</b>														
Cent. Valley E.	868	0.49	30.97	54.60	1.13	112.33	74.21	0.41	99.23	86.90	22.23			
Cent. Valley W.	913	1.18	73.54	154.80	0.95	94.07	48.11	0.49	118.72	124.15	35.17			
North Zone	2,008	0.00	0.03	0.08	0.96	95.31	42.39	0.52	125.89	127.94	31.56			
Dry Pacific	2,347	0.86	54.22	124.63	0.87	89.24	37.95	0.35	84.81	76.74	24.68			
Central Pacific	1,258	1.01	114.53	247.53	0.82	81.81	37.95	0.37	70.83	76.68	19.34			
Pacific South	1,258	1.01	114.53	247.53	0.93	92.64	36.13	0.42	102.51	104.73	23.97			
Atlantic Zone	1,223	0.78	49.24	92.33	1.06	104.90	86.50	0.31	75.62	70.54	2.16			
<b>Ave. 20-50 Has.</b>	<b>12,436</b>	<b>0.88</b>	<b>55.86</b>	<b>117.25</b>	<b>0.97</b>	<b>96.73</b>	<b>49.33</b>	<b>0.41</b>	<b>99.49</b>	<b>101.97</b>				

Source: Based on Samuel R. Salinas' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 10  
Yield and Production Patterns in Coffee, Sugar Cane and Cacao  
Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Coffee Yields in Metric Tons/Ha.		Coffee Yields as % of National Average Yield		Coffee Value per Ha. as % of Corn Value/Ha.		Cacao Yields in Kg/Ha.		Cacao Yields as % of National Average Yield		Cacao Value per Ha. as % of Corn Value/Ha.		Sugar Cane Yields in Metric Tons/Ha.		Sugar Cane Yields as % of National Average Yield		Sugar Cane Value per Ha. as % of Corn Value/Ha.		Value of Production in Coffee, Sugar Cane and Cacao
		Mt./Ha.	%	%	%	Kg./Ha.	%	%	%	Mt./Ha.	%	%	%	%	%	%	%	%	%	
<b>Farms 2-3 Has.</b>																				
Cent. Valley E.	1,049	3.29	74.46	489.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.74	68.59	240.74	371.72				
Cent. Valley W.	1,350	2.62	78.14	765.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.29	91.98	170.54	1,146.19				
North Zone	409	2.45	192.08	452.71	286.11	128.03	103.57	33.22	38.41	272.49	65.27	19.37	24.35	93.81	241.23	19.37				
Dry Pacific	1,020	1.36	42.03	319.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.35	48.51	202.10	282.26				
Central Pacific	1,079	2.35	53.39	411.15	95.33	42.89	48.37	24.35	24.35	241.23	19.37	19.37	24.35	48.51	202.10	282.26				
Pacific South	375	1.55	79.56	643.37	180.46	71.83	82.52	12.19	12.19	74.10	28.72	28.72	22.29	57.14	87.14	17.37				
Atlantic Zone	312	2.12	48.02	391.63	231.67	103.70	118.46	12.91	12.91	22.29	57.14	57.14	22.29	57.14	87.14	17.37				
Ave. 2-3 Has.	6,454	3.01	68.19	500.51	110.58	49.50	50.12	31.54	31.54	206.92	206.92	206.92	31.54	54.44	206.92	206.92				
<b>Farms 3-4 Has.</b>																				
Cent. Valley E.	497	3.81	96.27	605.20	0.00	0.00	0.00	48.62	83.91	315.16	255.63									
Cent. Valley W.	778	0.45	10.27	72.00	0.00	0.00	0.00	50.13	86.32	124.00	748.99									
North Zone	435	4.09	92.49	742.13	174.58	78.19	87.89	51.79	89.39	383.29	60.77									
Dry Pacific	415	2.40	32.37	472.38	0.00	0.00	0.00	34.65	58.80	277.76	13.44									
Central Pacific	516	3.74	84.24	675.80	0.00	0.00	0.00	27.79	47.97	196.52	177.78									
Pacific South	399	1.72	28.70	668.15	189.41	84.78	94.28	38.88	67.11	284.61	218.99									
Atlantic Zone	273	1.25	84.33	191.31	228.75	102.40	96.86	12.50	21.57	77.84	26.68									
Ave. 3-4 Has.	3,328	2.64	59.71	461.15	84.69	37.91	39.85	37.76	65.18	265.60	265.60									
<b>Farms 5-10 Has.</b>																				
Cent. Valley E.	1,295	3.91	88.44	632.38	92.00	41.18	41.24	61.43	88.76	339.15	1,089.61									
Cent. Valley W.	1,613	4.97	112.39	7,889.74	0.00	0.00	0.00	42.79	93.70	314.84	3,605.63									
North Zone	859	4.15	93.95	737.10	208.04	92.23	101.36	45.75	73.70	331.03	308.60									
Dry Pacific	1,463	1.70	38.60	331.68	11.50	6.19	39.94	68.95	116.53	36.45										
Central Pacific	1,309	2.78	62.49	2,121.12	0.00	0.00	0.00	24.07	41.55	753.63	582.31									
Pacific South	1,901	1.86	87.30	635.31	344.36	154.24	157.23	26.76	46.18	179.61	880.29									
Atlantic Zone	953	1.87	42.35	309.66	200.73	89.85	92.02	22.08	38.11	146.90	136.05									
Ave. 5-10 Has.	9,095	3.32	75.08	1,808.07	122.12	54.66	56.86	37.76	65.17	797.67	797.67									
<b>Farms 10-20 Has.</b>																				
Cent. Valley E.	884	3.79	85.73	592.31	0.00	0.00	0.00	45.33	78.24	288.84	967.85									
Cent. Valley W.	1,035	2.22	112.98	852.27	0.00	0.00	0.00	58.14	100.15	387.36	2,966.02									
North Zone	1,045	4.25	90.98	892.65	265.79	119.02	127.17	46.62	80.46	327.97	361.70									
Dry Pacific	1,735	1.51	34.25	316.50	0.00	0.00	0.00	37.89	59.45	288.64	75.58									
Central Pacific	1,059	3.24	73.33	566.34	240.91	107.86	116.69	37.57	47.02	194.24	610.53									
Pacific South	2,039	3.79	85.80	660.57	321.30	143.03	159.81	10.24	52.19	221.22	1,111.06									
Atlantic Zone	980	1.50	33.97	244.55	202.50	30.64	91.40	15.80	27.26	104.89	191.56									
Ave. 10-20 Has.	8,777	3.30	74.57	563.71	147.23	65.90	70.72	36.75	63.44	239.02	239.02									
<b>Farms 20-50 Has.</b>																				
Cent. Valley E.	868	4.73	106.84	755.78	306.66	137.27	135.89	53.46	92.26	348.43	1,576.13									
Cent. Valley W.	913	5.51	124.68	1,052.16	0.00	0.00	0.00	52.55	92.43	416.82	4,022.91									
North Zone	2,008	4.41	99.85	829.98	249.17	111.54	130.13	50.13	86.52	385.10	523.63									
Dry Pacific	1,747	1.59	35.91	370.86	0.00	0.00	0.00	43.22	74.60	366.99	195.49									
Central Pacific	1,248	3.33	86.71	751.38	83.63	37.43	45.44	27.41	47.11	219.10	989.43									
Pacific South	3,229	3.67	87.57	750.28	282.29	124.36	151.65	10.35	52.39	239.25	1,400.79									
Atlantic Zone	1,223	1.79	40.59	307.18	230.31	103.36	109.57	15.47	26.71	108.03	246.01									
Ave. 20-50 Has.	12,436	3.68	63.16	622.51	164.66	73.71	81.81	39.09	67.46	297.76	297.76									

Source: Based on Samuel R. Daines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 11  
Yield and Production Patterns in Tobacco, Plantain and Banana

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Banana Yield in Qq/Ha.	Banana Yield as % of National Average	Banana Value per Ha. as % of Corn Value/ Ha.	Plantain Yield in Qq/Ha.	Plantain Yield as % of National Average	Plantain Value per Ha. as % of Corn Value/ Ha.	Tobacco Yield in Kg./Ha.	Tobacco Yield as % of National Average	Tobacco Value per Ha. as % of Corn Value/ Ha.	Value of Production in Tobacco, Plantain, and Banana, cent
<b>Farms 1-5 HAs.</b>											
Cent. Valley E.	1,029	113.70	36.31	477.14	78.70	61.10	254.22	1.10	0.23	0.00	22.9
Cent. Valley W.	1,029	75.96	23.74	435.11	48.47	37.95	181.22	0.21	0.05	0.00	0.00
North Zone	1,029	137.81	42.53	240.01	161.63	89.77	328.79	0.20	0.05	0.00	1.00
dry Pacific	1,029	38.35	11.78	194.15	118.33	91.88	443.79	0.20	0.05	0.00	0.00
Central Pacific	1,029	108.72	33.26	428.00	124.30	91.88	443.79	0.20	0.05	0.00	0.00
Pacific South	1,029	121.66	36.72	433.98	103.50	80.05	443.79	0.20	0.05	0.00	0.00
Atlantic Zone	1,029	121.66	36.72	433.98	103.50	80.05	443.79	0.20	0.05	0.00	0.00
<b>Ave. 2-3 HAs.</b>	<b>6,454</b>	<b>94.24</b>	<b>28.43</b>	<b>450.81</b>	<b>110.39</b>	<b>88.71</b>	<b>409.72</b>	<b>341.39</b>	<b>32.02</b>	<b>318.41</b>	
<b>Farms 3-4 HAs.</b>											
Cent. Valley E.	497	124.20	37.58	557.72	97.43	75.64	337.59	1.00	0.20	0.00	6.10
Cent. Valley W.	778	46.22	13.94	208.94	39.98	43.89	187.71	0.21	0.05	0.00	14.10
North Zone	230	171.42	51.73	321.57	172.24	107.10	450.76	0.23	0.05	0.00	1.00
dry Pacific	230	137.42	41.53	240.01	161.63	89.77	328.79	0.20	0.05	0.00	0.00
Central Pacific	230	137.42	41.53	240.01	161.63	89.77	328.79	0.20	0.05	0.00	0.00
Pacific South	230	137.42	41.53	240.01	161.63	89.77	328.79	0.20	0.05	0.00	0.00
Atlantic Zone	230	137.42	41.53	240.01	161.63	89.77	328.79	0.20	0.05	0.00	0.00
<b>Ave. 3-4 HAs.</b>	<b>3,328</b>	<b>145.88</b>	<b>44.02</b>	<b>717.63</b>	<b>93.34</b>	<b>72.47</b>	<b>346.59</b>	<b>308.74</b>	<b>28.68</b>	<b>270.56</b>	
<b>Farms 5-10 HAs.</b>											
Cent. Valley E.	1,295	142.85	43.10	652.56	117.21	91.00	413.17	1.00	0.20	0.00	26.10
Cent. Valley W.	1,815	113.31	34.19	5,061.92	74.40	57.78	2,574.64	1.06	0.24	0.00	31.10
North Zone	859	104.34	31.68	523.01	70.98	55.11	274.55	0.20	0.05	0.00	0.00
dry Pacific	1,463	98.72	29.79	541.31	231.98	182.09	392.71	0.20	0.05	0.00	0.00
Central Pacific	1,209	132.12	40.26	531.18	175.84	132.92	392.71	0.20	0.05	0.00	0.00
Pacific South	1,701	114.36	34.51	531.18	175.84	132.92	392.71	0.20	0.05	0.00	0.00
Atlantic Zone	953	119.80	36.15	559.61	125.32	97.48	432.38	0.20	0.05	0.00	0.00
<b>Ave. 5-10 HAs.</b>	<b>9,035</b>	<b>120.81</b>	<b>36.45</b>	<b>1,589.13</b>	<b>142.23</b>	<b>110.42</b>	<b>1,242.78</b>	<b>337.79</b>	<b>31.68</b>	<b>1,443.85</b>	
<b>Farms 10-20 HAs.</b>											
Cent. Valley E.	884	199.33	60.15	873.87	227.18	176.38	773.75	0.00	0.00	0.00	47.10
Cent. Valley W.	1,335	132.62	40.02	612.07	51.25	33.79	182.52	1.23	0.37	0.00	16.10
North Zone	1,335	58.53	17.56	421.82	61.23	47.54	236.46	0.20	0.05	0.00	87.10
dry Pacific	1,735	118.09	35.62	698.60	128.66	99.91	525.44	0.23	0.05	0.00	45.10
Central Pacific	1,079	152.12	45.90	755.63	102.99	77.89	391.78	0.20	0.05	0.00	0.00
Pacific South	2,039	102.45	30.91	517.19	163.33	127.95	641.75	1.29	0.31	0.00	29.10
Atlantic Zone	980	143.86	43.41	661.82	110.75	85.99	393.02	0.20	0.05	0.00	22.10
<b>Ave. 10-20 HAs.</b>	<b>8,777</b>	<b>133.56</b>	<b>40.30</b>	<b>648.80</b>	<b>120.85</b>	<b>91.82</b>	<b>456.29</b>	<b>361.34</b>	<b>33.89</b>	<b>324.81</b>	
<b>Farms 20-50 HAs.</b>											
Cent. Valley E.	888	92.36	27.87	417.04	119.16	92.51	415.15	1.06	0.27	0.00	51.70
Cent. Valley W.	313	171.19	51.71	921.95	69.17	41.71	247.54	0.20	0.05	0.00	19.10
North Zone	1,029	171.19	51.71	921.95	69.17	41.71	247.54	0.20	0.05	0.00	24.10
dry Pacific	1,029	156.34	47.32	875.36	175.47	134.25	796.39	0.23	0.05	0.00	41.10
Central Pacific	1,029	161.44	48.87	1,007.77	258.17	141.62	447.32	0.23	0.05	0.00	41.10
Pacific South	1,029	160.24	48.53	875.36	175.47	134.25	796.39	0.23	0.05	0.00	41.10
Atlantic Zone	1,029	150.66	45.46	726.44	139.13	100.02	519.07	0.20	0.05	0.00	24.10
<b>Ave. 20-50 HAs.</b>	<b>12,436</b>	<b>141.08</b>	<b>42.61</b>	<b>755.67</b>	<b>139.35</b>	<b>103.22</b>	<b>573.31</b>	<b>272.55</b>	<b>34.94</b>	<b>375.31</b>	

Source: Based on Samuel P. Deines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 12  
Yield and Production Patterns in Potatoes, Yucca and Tomatoes

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Potatoes Yield in Metric Tons/Ha.		Potatoes Yield as a % of National Average Yield		Potatoes Value Per Ha. as a % of Corn Value/Ha.		Yucca Yield in Metric Tons/Ha.		Yucca Yield as a % of National Average Yield		Yucca Value per Ha. as a % of Corn Value/Ha.		Tomato Yield in Metric Tons/Ha.		Tomatoes Yield as a % of National Average		Tomato Value per Ha. as a % of Corn Value/Ha.		Value of Production in Potatoes, Yucca and Tomatoes c 000	
		Ha.	%	%	%	Ha.	%	%	Ha.	%	%	Ha.	%	%	%	%	%	%			
		Mt./Ha.	%	%	%	Mt./Ha.	%	%	Mt./Ha.	%	%	Mt./Ha.	%	%	Mt./Ha.	%	%	%	%		
<b>Farms 2-3 Has.</b>																					
Cent. Valley E.	1,049	11.44	109.64	896.71	5.36	80.68	271.04	9.70	77.40	1,759.25										92.05	
Cent. Valley W.	1,000	11.75	21.55	202.37	5.50	202.37	318.87	16.06	128.17	3,343.87										92.39	
North Zone	1,000	0.00	48.90	343.10	9.28	343.10	1,222.70	0.00	0.00	0.00										17.73	
Dry Pacific	1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										6.44	
Central Pacific	1,000	0.00	17.26	172.49	4.61	172.49	201.24	0.42	53.85	1,222.62										6.25	
Pacific South	995	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										6.25	
Atlantic Zone	312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										6.05	
Ave. 2-3 Has.	6,454	3.15	28.17	271.24	5.08	76.40	282.39	5.48	43.79	1,125.19										6.40	
<b>Farms 3-4 Has.</b>																					
Cent. Valley E.	497	11.38	108.68	851.11	0.41	6.26	22.52	13.19	105.24	2,569.45										56.36	
Cent. Valley W.	729	2.50	11.41	99.58	4.19	63.06	226.00	13.17	105.12	2,548.11										52.72	
North Zone	230	3.65	30.22	301.98	11.13	167.51	627.43	2.97	23.71	658.42										12.72	
Dry Pacific	435	0.00	0.00	0.00	2.85	42.98	190.97	0.55	4.45	134.02										0.73	
Central Pacific	516	0.00	0.00	0.00	3.15	77.48	303.70	10.71	85.44	2,266.39										6.16	
Pacific South	599	0.00	0.00	0.00	3.05	48.99	186.67	0.00	0.00	0.00										1.01	
Atlantic Zone	273	0.00	0.00	0.00	3.28	79.23	273.61	0.00	0.00	0.00										1.91	
Ave. 3-4 Has.	3,328	2.45	21.47	193.24	4.58	68.92	270.13	5.80	46.28	1,166.80										6.40	
<b>Farms 5-10 Has.</b>																					
Cent. Valley E.	1,295	11.28	108.92	869.76	5.00	75.18	274.93	14.67	117.04	2,895.83										175.45	
Cent. Valley W.	1,615	2.22	10.77	943.14	10.00	150.37	5,198.91	16.08	128.29	3,548.11										133.56	
North Zone	859	5.81	33.53	323.99	7.27	109.41	399.00	5.78	43.80	1,583.23										69.39	
Dry Pacific	1,463	2.50	17.25	148.25	4.81	69.40	304.93	6.59	52.44	1,583.23										6.66	
Central Pacific	1,209	7.20	57.83	2,444.22	4.44	66.83	1,160.09	7.04	56.24	6,603.77										11.97	
Pacific South	1,201	0.52	4.12	37.50	3.62	54.31	202.87	7.19	57.11	1,438.18										8.88	
Atlantic Zone	953	0.00	0.00	0.00	6.69	100.74	376.67	2.26	18.08	457.57										24.27	
Ave. 5-10 Has.	9,095	4.19	35.58	723.54	5.95	89.49	1,165.27	8.47	67.60	6,473.48										6.40	
<b>Farms 10-20 Has.</b>																					
Cent. Valley E.	884	11.13	107.54	825.12	6.05	91.01	321.58	5.93	47.34	1,131.87										157.04	
Cent. Valley W.	1,335	11.35	97.01	875.59	7.88	115.49	426.67	10.96	87.48	2,186.73										56.89	
North Zone	1,035	6.03	58.77	335.27	5.97	88.89	350.66	0.00	0.00	0.00										61.49	
Dry Pacific	1,735	2.50	10.21	111.42	4.30	49.70	221.72	6.71	21.85	691.85										7.54	
Central Pacific	1,059	10.00	45.65	439.02	4.72	71.12	251.31	1.29	58.20	1,355.38										6.73	
Pacific South	2,039	5.71	24.25	239.54	3.62	54.44	272.65	1.45	11.59	317.76										8.50	
Atlantic Zone	980	0.00	0.00	0.00	6.69	100.69	370.60	0.00	0.00	0.00										61.34	
Ave. 10-20 Has.	6,777	6.63	48.77	447.56	5.43	81.76	315.15	4.05	32.32	840.51										6.40	
<b>Farms 20-50 Has.</b>																					
Cent. Valley E.	868	10.55	102.20	899.34	2.80	42.21	152.55	6.81	54.40	1,330.51										277.18	
Cent. Valley W.	913	4.68	39.86	418.37	7.19	108.22	467.05	14.26	113.84	3,324.47										52.89	
North Zone	2,508	4.23	40.19	416.81	9.07	136.48	581.37	0.71	5.67	163.46										83.10	
Dry Pacific	1,947	4.23	36.79	421.77	9.26	79.11	372.45	4.96	39.59	1,261.07										12.43	
Central Pacific	1,248	0.00	0.00	0.00	4.19	63.03	279.37	0.96	7.86	229.64										3.24	
Pacific South	3,229	1.35	10.54	112.48	38.83	583.95	2,558.54	3.86	30.86	914.99										20.59	
Atlantic Zone	1,223	0.00	0.00	0.00	5.98	69.94	348.11	5.81	46.41	1,215.38										52.33	
Ave. 20-50 Has.	12,436	3.58	32.80	324.19	10.47	157.56	679.92	5.34	42.63	1,205.67										6.40	

Source: Based on Samuel R. Daines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 13  
Livestock Yields and Production Patterns in Beef and Milk  
Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Beef Yield: Production Value of Beef per Ha. of Pasture		Beef Yield as % of National Average		Value of Beef Production per Ha. as % of Corn Value/Ha.		Milk Yield - Value of Milk per Ha. of Pasture in MILK		Milk Yield as % of National Average Yield		Value of Milk Production per Ha. as % of Corn Value per Ha.		Total Value of Milk	Total Value of Meat	Total Value of Milk and Meat Production	Milk Value as % of Total Milk and Meat
		c/Ha.	%	%	c/Ha.	%	%	c 0000	c 0000	c 0000	%						
<b>farms 2-3 Hec.</b>																	
Cent. Valley E.	1,047	1,482.54	454.43	191.99	5,425.09	315.26	728.55	162.13	61.37	223.50	72.54						
Cent. Valley W.	1,050	824.31	255.60	128.30	3,505.38	252.51	649.77	78.76	52.01	130.78	60.22						
North Zone	1,023	824.31	255.11	91.50	3,344.82	221.19	448.85	31.99	23.14	55.14	22.33						
North Pacific	1,020	1,214.35	372.22	131.27	6,339.51	336.13	1,036.38	26.09	48.42	91.51	22.50						
Central Pacific	1,029	983.78	301.55	151.31	5,310.57	297.64	616.37	63.67	45.86	109.13	35.27						
Pacific South	995	562.98	172.56	90.49	3,019.91	169.20	485.20	22.84	22.08	44.71	20.53						
Atlantic Zone	312	743.75	227.97	119.53	4,303.53	241.19	692.60	5.08	13.81	18.89	26.31						
<b>Ave. 2-3 Hec.</b>	<b>6,454</b>	<b>954.24</b>	<b>292.49</b>	<b>138.53</b>	<b>4,799.93</b>	<b>269.02</b>	<b>705.75</b>										
<b>farms 3-4 Hec.</b>																	
Cent. Valley E.	497	1,203.45	368.88	166.77	4,377.19	245.32	606.63	110.76	41.46	152.23	72.76						
Cent. Valley W.	778	854.00	200.77	90.50	3,501.66	196.35	483.88	41.35	30.52	77.88	33.02						
North Zone	230	774.66	225.19	116.23	3,344.73	193.17	545.36	29.86	19.93	49.80	59.96						
North Pacific	435	908.73	278.54	153.73	5,231.92	293.23	896.68	6.56	51.10	67.66	11.38						
Central Pacific	516	653.69	200.37	98.20	3,540.06	198.40	535.13	41.51	26.99	68.51	60.59						
Pacific South	399	507.40	151.37	71.71	3,111.15	171.67	441.21	14.71	11.13	14.24	11.11						
Atlantic Zone	273	655.54	200.94	87.28	3,793.16	212.59	505.09	0.65	10.60	11.26	5.82						
<b>Ave. 3-4 Hec.</b>	<b>3,328</b>	<b>759.78</b>	<b>232.39</b>	<b>113.53</b>	<b>3,814.87</b>	<b>213.81</b>	<b>573.29</b>										
<b>farms 5-10 Hec.</b>																	
Cent. Valley E.	1,289	819.15	251.09	115.48	2,983.06	167.23	420.76	525.12	198.80	723.92	72.53						
Cent. Valley W.	1,613	508.07	155.71	75.32	2,719.34	152.41	376.41	169.07	176.57	345.59	48.00						
North Zone	859	341.41	165.25	83.78	2,783.48	156.00	420.62	106.82	125.91	231.74	43.62						
North Pacific	1,563	625.49	192.85	106.62	3,964.46	231.32	577.55	11.44	129.81	491.33	26.75						
Central Pacific	1,409	466.11	139.02	37.76	2,525.29	131.52	1,620.31	220.71	149.94	379.65	59.14						
Pacific South	1,701	372.34	114.33	53.42	2,280.77	116.62	289.28	136.33	142.98	72.54	49.11						
Atlantic Zone	953	495.31	151.32	71.39	2,854.80	160.00	411.55	11.65	27.17	96.83	11.78						
<b>Ave. 5-10 Hec.</b>	<b>9,095</b>	<b>545.99</b>	<b>167.35</b>	<b>115.18</b>	<b>2,790.26</b>	<b>156.38</b>	<b>605.02</b>										
<b>farms 10-20 Hec.</b>																	
Cent. Valley E.	884	655.90	201.05	89.34	2,219.92	124.36	302.29	671.00	228.47	899.47	74.49						
Cent. Valley W.	1,035	421.34	129.30	60.08	2,921.00	124.48	316.36	221.47	253.71	479.18	47.05						
North Zone	1,045	447.86	137.28	67.35	2,328.22	130.48	350.18	178.54	174.81	416.42	42.87						
North Pacific	1,725	472.05	144.69	85.95	2,700.68	151.36	497.78	184.26	174.65	928.94	19.83						
Central Pacific	1,059	347.21	106.61	52.96	1,948.15	109.18	296.68	254.84	233.08	487.91	54.23						
Pacific South	2,039	309.78	94.95	42.44	1,737.96	97.40	271.84	240.40	107.68	348.08	43.64						
Atlantic Zone	959	432.49	132.57	61.38	2,482.94	139.16	352.43	22.64	163.61	185.86	12.19						
<b>Ave. 10-20 Hec.</b>	<b>8,777</b>	<b>441.11</b>	<b>135.21</b>	<b>66.50</b>	<b>2,233.98</b>	<b>125.20</b>	<b>340.22</b>										
<b>Farms 20-50 Hec.</b>																	
Cent. Valley E.	868	821.58	251.83	114.48	2,191.88	122.84	305.45	1,308.05	505.60	2,313.66	78.14						
Cent. Valley W.	913	379.27	115.02	62.44	1,912.49	107.18	318.25	446.20	546.81	1,013.02	46.02						
North Zone	2,329	387.05	118.64	63.56	2,074.02	116.24	340.63	451.76	926.30	1,378.07	32.78						
North Pacific	2,947	323.50	117.55	69.60	2,194.00	122.96	398.24	578.31	2,452.88	3,029.20	19.02						
Central Pacific	1,748	299.96	91.94	51.25	1,603.96	94.38	287.75	322.36	361.50	973.86	40.25						
Pacific South	1,223	267.02	81.84	45.10	1,513.91	54.85	255.75	484.40	841.70	1,308.10	35.55						
Atlantic Zone	1,223	390.57	119.72	58.24	2,247.59	125.97	335.20	55.46	439.64	495.10	11.23						
<b>Ave. 20-50 Hec.</b>	<b>12,436</b>	<b>417.85</b>	<b>128.08</b>	<b>66.38</b>	<b>1,973.28</b>	<b>110.63</b>	<b>320.18</b>										

Source: Based on Samuel R. Delmes' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 14  
Livestock Production Patterns in Pork and Poultry  
Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Beef Animals		Milk Animals		Value of Pork Production per Farm		Pork Animals		Value of Egg Production per Farm		Number of Fowl Per Farm	Value of Poultry Meat Production Per Farm		Total Value of Pork Production	Total Value of Poultry (Meat and Egg) Production
		No.	per farm	No.	c	No.	c	No.	c	c 0000	c 0000					
<b>Farms 1-2 Has.</b>																
Cent. Valley E.	1,029	1.32	0.94	593.18	0.89	210.88	11.4	49.25	62.22	27.28						
Cent. Valley W.	1,029	1.03	0.30	803.19	1.20	3,061.38	165.32	715.29	127.10	600.58						
North Zone	1,029	1.64	0.44	2,474.34	1.42	426.90	15.5	66.33	34.10	14.54						
Dry Pacific	1,029	1.49	0.35	2,474.34	1.32	426.90	14.7	66.33	25.13	10.64						
Central Pacific	1,029	1.36	0.35	879.22	1.31	431.91	11.4	47.21	28.41	11.33						
Pacific South	1,029	0.72	0.13	794.24	1.08	434.67	11.4	47.21	101.34	72.36						
Atlantic Zone	1,029	1.56	0.09	1,512.44	2.27	274.00	13.3	57.46	47.20							
Ave. 2-3 Has.	6,454	1.41	0.35	1,117.32	1.68	821.91	45.06	194.24								
<b>Farms 3-4 Has.</b>																
Cent. Valley E.	497	1.84	1.25	1,150.35	1.73	215.90	11.70	50.43	57.17	13.23						
Cent. Valley W.	778	1.52	0.32	1,079.23	1.62	532.01	28.83	124.28	63.96	51.08						
North Zone	230	2.42	0.79	2,974.07	1.46	313.69	17.10	73.73	22.40	8.93						
Dry Pacific	1,029	1.72	0.09	2,445.24	1.67	420.14	23.25	102.72	108.38	23.63						
Central Pacific	1,029	1.72	0.49	891.33	1.34	672.74	16.46	157.15	46.00	42.89						
Pacific South	1,029	1.28	0.18	1,111.33	1.47	601.33	15.79	41.24	44.89	7.89						
Atlantic Zone	273	1.36	0.01	1,015.46	1.52	228.40	12.27	52.88	27.72							
Ave. 3-4 Has.	3,328	2.04	0.46	1,228.44	1.86	429.63	25.78	100.36								
<b>Farms 5-10 Has.</b>																
Cent. Valley E.	1,295	3.40	2.47	984.10	1.48	272.58	14.77	63.67	127.44	43.54						
Cent. Valley W.	1,615	1.54	0.63	1,084.74	1.83	3,061.75	165.94	715.29	175.10	600.58						
North Zone	859	4.59	0.75	1,105.16	1.66	320.56	18.47	79.22	94.93	36.12						
Dry Pacific	1,463	4.53	0.54	2,589.22	1.89	478.36	25.92	111.74	378.00	86.33						
Central Pacific	1,209	4.12	1.11	2,230.84	2.35	2,118.90	136.52	580.62	209.70	375.67						
Pacific South	1,701	2.82	0.48	1,070.08	1.80	436.21	23.64	131.90	182.02	91.53						
Atlantic Zone	983	3.21	0.07	1,198.45	1.80	293.99	16.20	69.64	114.21	35.15						
Ave. 5-10 Has.	9,095	4.33	0.86	1,466.02	2.20	1,058.24	57.35	247.20								
<b>Farms 10-20 Has.</b>																
Cent. Valley E.	884	5.32	4.62	858.07	1.29	269.77	14.62	63.02	75.85	29.41						
Cent. Valley W.	1,335	7.86	1.32	1,119.56	1.68	2,832.58	153.55	661.70	115.87	361.65						
North Zone	1,345	7.21	1.04	2,395.76	2.09	384.74	19.74	85.21	145.85	47.02						
Dry Pacific	1,335	14.94	0.64	2,971.26	4.31	481.24	25.05	108.16	515.61	99.10						
Central Pacific	1,359	7.51	1.44	1,707.25	2.56	424.03	23.09	99.52	185.49	45.65						
Pacific South	2,039	5.15	0.71	1,396.76	2.10	461.02	24.98	107.69	284.80	113.98						
Atlantic Zone	980	5.81	0.14	1,502.50	2.26	611.73	33.15	142.30	147.25	73.95						
Ave. 10-20 Has.	8,777	7.69	1.42	1,564.40	2.35	775.56	42.03	181.17								
<b>Farms 20-50 Has.</b>																
Cent. Valley E.	868	9.47	12.69	1,804.99	2.26	247.96	13.44	57.92	130.63	26.55						
Cent. Valley W.	913	18.60	3.11	2,234.54	1.85	415.64	22.52	97.07	112.75	46.81						
North Zone	2,086	15.06	1.37	2,218.86	3.33	359.03	19.45	83.87	447.54	88.93						
Dry Pacific	2,947	29.01	1.19	2,452.35	5.19	493.29	26.77	115.23	1,017.40	179.33						
Central Pacific	1,448	15.93	1.81	2,194.69	3.30	340.09	29.27	126.16	275.59	83.14						
Pacific South	1,429	8.03	0.89	2,120.52	1.49	504.45	27.14	117.24	746.29	200.84						
Atlantic Zone	1,223	12.60	0.27	2,267.93	3.64	471.35	25.54	110.11	279.81	71.11						
Ave. 20-50 Has.	12,436	15.67	3.96	2,173.47	3.26	433.11	23.47	101.17								

Source: Based on Samuel R. Daines' computation from basic data contained in the Costa Rica 1973 Agr. Census.

TABLE 15  
Crop Mix - Major Crops

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	% of Cultivated Area in Cereals (Rice, Corn, Beans)		% of Cultivated Area in Tubers (Potatoes and Yuccas)		% of Cultivated Area in Coffee		% of Cultivated Area in Sugar Cane		% of Cultivated Area in Rice		% of Cultivated Area in Corn		% of Cultivated Area in Beans		% of Cultivated Area in Potatoes		% of Cultivated Area in Yucca		% of Cultivated Area in Cereals Tubers, Coffee and Sugar Cane	
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
<b>Farms 2-3 Hec.</b>																					
Cent. Valley E.	1,049	12.83	5.49	58.26	9.38	0.06	8.45	4.01	5.30	0.19	81.66										
Cent. Valley W.	1,590	18.78	5.87	58.14	13.37	0.07	8.38	4.01	5.11	0.18	81.27										
North Zone	409	18.78	5.87	58.14	13.37	0.07	8.38	4.01	5.11	0.18	81.27										
Dry Pacific	1,020	29.32	0.90	42.93	0.88	32.63	44.06	21.32	0.39	0.27	103.65										
Central Pacific	1,079	98.81	0.27	49.58	4.29	3.67	18.50	14.50	0.39	0.14	103.38										
Pacific South	995	48.77	0.27	42.20	17.16	14.19	19.53	16.18	0.00	0.99	119.37										
Atlantic Zone	312	22.94	3.55	3.00	0.56	2.95	19.25	0.73	0.00	3.55	30.07										
Ave. 2-3 Hec.	6,454	41.24	2.97	36.57	7.89	9.59	21.60	10.04	1.59	1.37	88.69										
<b>Farms 3-4 Hec.</b>																					
Cent. Valley E.	497	14.33	5.87	54.79	12.31	0.33	10.47	3.22	5.72	0.14	87.32										
Cent. Valley W.	778	16.78	0.14	687.93	15.31	0.88	10.47	4.11	0.03	0.10	700.24										
North Zone	230	21.16	9.86	29.90	14.96	0.48	10.34	4.11	5.01	0.25	71.36										
Dry Pacific	435	97.27	0.84	45.59	2.37	7.70	44.86	24.90	0.01	0.62	103.39										
Central Pacific	518	47.32	0.27	41.37	1.19	7.22	24.67	16.03	0.02	0.21	103.35										
Pacific South	499	58.61	0.41	41.63	1.71	14.50	24.44	16.66	0.00	0.61	95.57										
Atlantic Zone	273	14.58	1.49	4.31	0.57	2.44	11.65	0.48	0.00	1.49	20.96										
Ave. 3-4 Hec.	3,328	38.24	2.69	42.43	7.43	8.31	19.57	10.35	1.54	1.15	169.81										
<b>Farms 5-10 Hec.</b>																					
Cent. Valley E.	1,295	12.47	4.95	50.61	17.83	0.16	9.08	3.25	4.84	0.10	85.88										
Cent. Valley W.	1,813	71.66	0.26	66.97	17.04	0.92	68.77	3.76	0.01	0.26	157.74										
North Zone	856	10.68	0.41	22.30	13.05	9.00	13.47	18.20	2.35	4.05	74.45										
Dry Pacific	1,463	83.13	0.22	6.17	2.31	31.62	32.90	18.59	0.03	0.19	91.85										
Central Pacific	1,409	30.29	0.40	43.35	6.81	12.74	29.76	15.28	0.10	0.29	100.86										
Pacific South	1,701	57.19	0.43	37.91	2.93	13.22	29.17	16.79	0.07	0.26	98.87										
Atlantic Zone	953	15.48	2.77	2.26	0.94	2.41	12.84	0.23	0.00	2.77	21.46										
Ave. 5-10 Hec.	9,095	46.10	2.55	32.79	8.70	10.01	26.64	9.44	1.06	1.49	90.16										
<b>Farms 10-20 Hec.</b>																					
Cent. Valley E.	884	12.47	6.00	52.03	15.69	0.25	9.23	2.98	5.73	0.27	86.21										
Cent. Valley W.	1,315	9.43	0.36	64.69	21.05	0.70	15.48	3.26	0.08	0.27	95.55										
North Zone	1,715	36.58	6.57	15.21	10.30	10.65	15.51	10.51	0.78	5.88	69.07										
Dry Pacific	1,715	48.95	0.22	6.58	2.65	10.76	31.20	78.97	0.01	0.21	85.31										
Central Pacific	1,059	33.62	0.15	34.39	6.49	19.03	20.35	14.02	0.01	0.14	94.67										
Pacific South	2,039	57.97	0.71	30.41	3.56	15.75	23.73	16.48	0.00	0.70	92.66										
Atlantic Zone	940	19.43	3.05	2.20	0.68	2.85	16.10	0.47	0.00	3.05	25.38										
Ave. 10-20 Hec.	8,777	38.68	2.45	29.29	8.63	11.45	17.69	9.53	0.94	1.50	79.06										
<b>Farms 20-50 Hec.</b>																					
Cent. Valley E.	868	14.17	7.67	48.44	13.06	0.72	10.02	3.42	7.58	0.08	83.35										
Cent. Valley W.	913	7.32	0.31	61.59	17.69	0.90	14.03	2.37	0.06	0.24	88.92										
North Zone	2,098	46.76	2.39	6.16	7.19	14.09	16.42	13.46	0.28	2.26	62.67										
Dry Pacific	1,947	69.05	0.39	8.53	2.41	24.77	25.08	19.17	0.06	0.21	77.49										
Central Pacific	1,748	59.05	0.19	25.70	3.86	28.61	17.85	12.55	0.00	0.18	88.79										
Pacific South	3,223	63.76	0.00	17.16	3.38	21.64	27.89	16.22	0.02	0.06	86.40										
Atlantic Zone	1,223	36.69	2.85	1.64	0.69	4.39	31.17	1.10	0.00	2.85	41.89										
Ave. 20-50 Hec.	12,436	42.68	1.99	23.74	7.21	13.99	18.92	9.76	1.14	0.84	75.64										

Source: Based on Samuel R. Deines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 16  
Crop Mix - Major Crops

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	% of Cultivated Area in									
		Tomatoes	Tomatoes	Bananas	Plantains	Beans	Tabacco	Cacao	Major Specialty Crops	Area in First 3 Crops	Area in Second 4 Crops
<b>Farms 2-3 Has.</b>											
Cent. Valley E.	1,049	22.34	22.34	24.48	4.79	2.24	0.00	0.00	76.22	69.18	7.04
Cent. Valley W.	1,593	4.60	4.60	0.23	0.59	0.28	0.00	0.00	16.70	9.49	5.20
North Zone	1,409	0.00	0.00	0.20	1.41	1.74	0.00	0.00	3.26	0.30	1.06
Dry Pacific	1,229	0.48	0.48	0.40	1.63	1.71	0.00	0.00	2.07	0.24	0.74
Central Pacific	1,095	0.21	0.21	0.41	0.86	1.23	0.00	0.12	1.45	1.84	2.74
Pacific South	312	0.00	0.00	1.32	3.86	1.15	4.28	0.30	11.45	1.84	6.58
Atlantic Zone	312	0.00	0.00	9.35	22.40	1.10	0.00	93.07	126.53	9.95	116.58
Ave. 2-3 Has.	6,454	3.95	3.95	5.38	5.07	1.37	1.14	13.41	34.29	13.28	21.01
<b>Farms 3-4 Has.</b>											
Cent. Valley E.	497	30.34	30.34	41.72	18.86	8.27	0.00	0.00	129.65	102.41	27.24
Cent. Valley W.	778	1.62	1.62	0.35	0.77	1.05	0.00	0.00	14.17	7.59	4.57
North Zone	230	0.00	0.00	0.16	0.47	0.61	0.00	0.00	2.23	0.18	2.04
Dry Pacific	433	0.07	0.07	0.11	0.87	1.56	0.00	0.73	1.70	0.28	3.03
Central Pacific	516	1.29	1.29	0.55	3.36	1.59	0.00	0.00	3.30	3.13	4.56
Pacific South	399	0.00	0.00	3.22	20.82	1.57	5.67	0.00	31.80	28.69	28.69
Atlantic Zone	273	0.00	0.00	16.25	16.35	1.73	0.00	171.63	206.97	16.25	189.72
Ave. 3-4 Has.	3,328	5.04	5.04	8.91	8.94	2.26	1.48	24.71	56.42	19.01	37.40
<b>Farms 5-10 Has.</b>											
Cent. Valley E.	1,295	1.82	1.82	4.35	1.81	0.60	0.00	0.04	10.47	8.00	2.46
Cent. Valley W.	1,859	7.56	7.56	0.78	1.62	1.49	0.00	0.00	24.89	15.31	6.98
North Zone	859	0.01	0.01	0.40	1.45	0.79	0.00	0.76	3.45	0.43	3.01
Dry Pacific	1,463	0.12	0.12	0.31	1.17	1.57	0.00	0.08	3.40	0.51	2.84
Central Pacific	1,209	0.28	0.28	0.84	0.90	1.20	0.00	0.03	3.54	1.40	2.14
Pacific South	1,701	0.07	0.07	2.66	6.37	1.29	3.99	0.83	14.88	2.80	12.08
Atlantic Zone	953	0.04	0.04	15.15	26.54	1.67	0.00	188.77	231.93	15.24	216.69
Ave. 5-10 Has.	9,055	1.41	1.41	3.50	5.59	1.23	1.40	27.22	41.79	6.33	35.46
<b>Farms 10-20 Has.</b>											
Cent. Valley E.	884	11.92	11.92	75.89	20.12	1.41	0.00	0.89	122.17	99.74	22.43
Cent. Valley W.	1,035	2.47	2.47	0.76	1.25	1.01	1.37	0.00	9.41	5.70	3.70
North Zone	1,045	0.00	0.00	0.63	2.53	0.91	0.00	1.28	5.72	0.63	5.09
Dry Pacific	1,735	0.07	0.07	0.25	1.26	1.84	0.00	0.08	3.51	0.40	3.10
Central Pacific	1,059	0.12	0.12	1.31	1.71	1.35	0.00	0.05	4.69	1.97	3.72
Pacific South	2,039	0.01	0.01	1.95	4.75	1.18	1.54	0.91	10.76	1.56	8.79
Atlantic Zone	580	0.00	0.00	22.54	28.73	2.16	0.00	213.90	267.45	22.54	244.90
Ave. 10-20 Has.	8,777	2.08	2.08	14.76	8.64	1.41	0.47	31.06	60.53	18.54	41.59
<b>Farms 20-50 Has.</b>											
Cent. Valley E.	868	3.13	3.13	34.66	2.35	2.13	0.00	0.82	46.24	40.92	6.31
Cent. Valley W.	913	1.05	1.05	0.72	0.37	1.68	0.46	0.00	5.35	2.83	2.52
North Zone	2,008	0.00	0.00	2.02	1.28	1.13	0.00	0.00	7.74	2.06	1.70
Dry Pacific	2,247	0.03	0.03	0.24	0.88	1.20	0.00	0.29	3.29	0.32	2.97
Central Pacific	1,248	0.07	0.07	1.35	0.35	1.21	0.00	0.00	1.91	2.11	1.59
Pacific South	3,229	0.00	0.00	1.68	2.16	1.09	0.15	0.45	6.29	1.69	1.86
Atlantic Zone	1,223	0.02	0.02	7.35	6.31	1.43	0.00	53.15	78.90	8.00	70.90
Ave. 20-50 Has.	12,436	0.61	0.61	7.04	1.97	1.41	0.08	9.67	21.43	8.27	13.15

Source: Based on Samuel R. Daines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 17  
Crop Mix by Value - Major Crops Cereals and Annual Crops

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Crop Value (c 0000)								
		Rice	Corn	Beans	Potatoes	Wax	Tomatoes	Tobacco	Basic Grains	Others and Oilseeds and Tobacco
		€ 0000	€ 0000	€ 000	€ 0000	€ 0000	€ 0000	€ 0000	€ 0000	€ 0000
<b>Farms 2-3 Has.</b>										
Cent. Valley E.	1,039	3.37	10.55	4.10	60.99	0.85	31.10	0.00	14.73	
Cent. Valley W.	1,590	2.75	19.02	11.20	0.81	7.29	91.73	35.33	33.51	92.00
North Zone	1,409	2.54	7.33	1.34	0.74	0.00	0.00	0.00	1.00	94.39
Dry Pacific	1,023	37.33	44.24	19.15	0.00	0.38	0.00	0.00	13.48	1.00
Central Pacific	1,273	18.06	30.29	17.32	0.10	0.46	3.10	0.00	25.75	2.00
Pacific South	393	18.42	27.30	16.56	0.00	2.02	0.00	59.36	60.34	2.00
Atlantic Zone	312	0.63	5.35	0.15	0.00	4.40	0.00	0.00	5.84	4.40
Ave. 2-3 Has.	6,454									
<b>Farms 3-4 Has.</b>										
Cent. Valley E.	497	0.23	7.07	2.43	38.22	0.03	18.09	0.00	9.74	56.32
Cent. Valley W.	270	1.19	15.16	8.05	0.12	0.50	32.09	23.23	25.41	32.72
North Zone	230	1.32	2.44	1.36	3.79	2.38	0.34	0.00	5.18	12.72
Dry Pacific	438	19.42	18.14	9.42	0.00	0.84	0.10	0.00	47.99	0.73
Central Pacific	516	5.97	17.69	9.88	0.00	0.62	7.49	0.00	33.94	8.16
Pacific South	598	13.29	18.89	12.61	0.00	1.01	0.00	26.05	44.80	1.01
Atlantic Zone	273	0.71	4.86	0.00	0.00	1.91	0.00	0.00	5.58	1.91
Ave. 3-4 Has.	3,328									
<b>Farms 5-10 Has.</b>										
Cent. Valley E.	1,295	0.79	25.46	8.51	132.74	1.01	41.69	0.00	34.77	175.32
Cent. Valley W.	1,815	7.40	35.13	4.40	0.12	7.37	128.07	46.09	44.95	13.00
North Zone	859	19.99	19.59	14.13	18.25	38.96	2.32	0.00	49.72	8.00
Dry Pacific	1,483	77.05	66.30	35.41	0.18	1.40	5.08	0.00	179.27	6.66
Central Pacific	1,299	70.04	12.89	31.59	1.89	2.18	7.29	0.00	116.33	11.97
Pacific South	1,201	51.26	96.88	53.96	0.11	2.45	3.23	155.71	202.10	8.99
Atlantic Zone	953	5.01	29.00	0.45	0.00	23.82	0.24	0.00	34.47	24.27
Ave. 5-10 Has.	9,095									
<b>Farms 10-20 Has.</b>										
Cent. Valley E.	884	0.95	25.28	7.14	145.79	2.69	8.55	0.00	31.37	156.90
Cent. Valley W.	1,035	1.21	22.25	16.11	4.10	5.91	46.71	20.28	46.45	36.22
North Zone	1,045	22.33	37.95	26.23	10.72	50.77	0.00	0.00	22.61	61.42
Dry Pacific	1,735	108.57	87.72	56.23	0.12	1.52	1.29	0.00	252.53	2.54
Central Pacific	1,027	122.56	60.48	35.87	0.49	1.16	3.53	0.00	230.31	2.71
Pacific South	2,039	92.46	132.27	83.30	0.21	0.19	3.36	178.75	314.64	8.80
Atlantic Zone	980	10.78	58.39	1.67	0.00	41.34	0.00	0.00	71.05	41.34
Ave. 10-20 Has.	5,777									
<b>Farms 20-50 Has.</b>										
Cent. Valley E.	868	1.51	38.36	11.40	261.75	0.62	14.77	0.00	51.27	276.93
Cent. Valley W.	913	7.72	22.24	16.75	1.93	6.70	42.35	10.16	40.23	52.23
North Zone	5,008	0.07	94.16	100.32	7.10	75.85	0.10	0.00	194.56	81.70
Dry Pacific	2,347	18.51	175.75	129.96	2.02	3.88	4.72	0.00	522.23	12.61
Central Pacific	1,248	47.61	85.57	55.54	0.00	2.13	0.51	0.00	454.79	3.24
Pacific South	3,029	20.54	282.56	170.20	0.30	18.17	0.51	81.21	752.02	20.59
Atlantic Zone	1,223	20.69	157.93	3.25	3.00	50.62	1.71	0.00	182.58	52.33
Ave. 20-50 Has.	12,436									

Source: Based on Samuel R. Daines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 10  
Crop Mix by Value  
Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Banana Value	Plantain	'Guineo'	Coffee	Cacao	Sugar Cane	Banana as % of Coffee	Cacao as % of Coffee	Sugar Cane as % of Coffee
		c 0000	c 0000	c 0000	c 0000	c 0000	c 0000	%	%	%
<b>Farms 1-2 Hqs.</b>										
Cent. Valley E.	1,224	3.84	0.82	0.09	343.88	0.00	28.16	2.57	0.00	8.19
Cent. Valley W.	1,224	0.43	0.58	0.05	1,324.98	0.00	18.35	0.24	0.00	19.29
North Zone	1,224	1.47	8.75	1.08	71.37	3.81	13.58	2.07	0.14	18.24
Dry Pacific	1,224	0.45	0.32	1.17	13.74	0.00	2.13	1.84	0.00	15.21
Central Pacific	1,224	0.40	1.14	1.14	244.78	0.00	10.46	0.24	0.00	4.22
Pacific South	1,224	0.16	12.01	1.06	261.88	0.21	3.94	1.97	0.08	1.50
Atlantic Zone	1,224	0.16	12.01	0.20	3.59	14.33	0.14	263.86	463.49	4.88
Ave. 1-2 Hqs.	8,454							41.23	66.39	8.81
<b>Farms 3-4 Hqs.</b>										
Cent. Valley E.	497	4.86	1.36	0.02	298.89	0.00	26.74	2.12	0.00	11.88
Cent. Valley W.	778	0.23	0.36	0.03	678.55	0.00	70.34	0.03	0.00	10.38
North Zone	320	0.18	0.25	0.02	41.42	0.31	13.63	9.15	0.00	28.78
Dry Pacific	418	0.25	0.20	0.10	170.46	0.00	9.11	0.24	0.00	21.00
Central Pacific	299	0.25	4.28	0.30	218.02	0.20	3.78	3.10	0.00	1.98
Pacific South	299	0.16	20.18	0.40	218.02	0.20	3.78	3.10	0.00	1.98
Atlantic Zone	773	13.04	8.20	0.18	3.44	23.04	0.18	378.37	664.32	5.42
Ave. 3-4 Hqs.	3,328							56.51	95.89	12.04
<b>Farms 5-10 Hqs.</b>										
Cent. Valley E.	1,295	21.24	5.59	1.05	899.82	0.04	170.04	2.36	0.00	18.90
Cent. Valley W.	1,615	4.39	2.19	0.72	2,499.60	0.00	308.03	0.07	0.00	11.35
North Zone	258	17.81	27.86	13.13	239.08	8.67	62.84	7.45	2.08	28.28
Dry Pacific	1,482	3.55	22.48	1.57	41.50	0.01	14.85	8.53	0.03	38.71
Central Pacific	1,209	10.26	11.46	4.49	332.88	3.00	29.78	1.94	0.00	3.48
Pacific South	1,201	16.37	79.46	0.97	15.80	11.57	18.78	1.49	0.00	2.18
Atlantic Zone	853	87.14	79.95	0.97	15.80	11.57	3.17	361.43	740.33	20.05
Ave. 5-10 Hqs.	9,095							58.04	106.24	17.15
<b>Farms 10-20 Hqs.</b>										
Cent. Valley E.	884	38.23	9.91	0.07	843.73	0.00	124.11	4.53	0.00	14.71
Cent. Valley W.	1,325	3.51	2.03	1.19	2,583.78	0.00	387.22	0.12	0.00	12.79
North Zone	1,245	27.33	68.83	15.28	283.44	20.47	89.77	10.48	0.00	32.07
Dry Pacific	1,235	4.97	20.88	8.13	54.07	0.00	71.50	9.19	0.00	39.79
Central Pacific	1,229	14.29	9.84	2.18	573.25	0.16	37.11	2.45	0.02	6.47
Pacific South	1,229	46.04	138.48	1.11	1,063.80	6.72	40.32	4.32	0.63	6.40
Atlantic Zone	380	129.90	98.35	.23	19.58	170.39	2.58	663.14	869.79	13.20
Ave. 10-20 Hqs.	8,777							99.18	125.48	17.82
<b>Farms 20-50 Hqs.</b>										
Cent. Valley E.	868	48.03	3.24	0.46	1,401.41	0.46	174.25	3.42	0.03	12.43
Cent. Valley W.	913	8.05	8.29	2.01	3,870.72	0.53	492.19	0.22	0.00	12.86
North Zone	2,308	182.74	60.04	27.80	292.70	71.99	158.23	62.43	24.63	54.25
Dry Pacific	1,247	16.84	19.32	1.52	128.30	0.00	67.18	13.26	0.20	52.35
Central Pacific	1,248	40.47	19.32	3.51	947.86	0.00	41.51	4.27	0.00	6.31
Pacific South	1,229	295.53	359.04	33.75	1,104.60	13.77	82.36	22.85	1.05	4.11
Atlantic Zone	1,223	181.34	102.64	4.67	25.54	216.69	3.77	709.86	848.21	14.79
Ave. 20-50 Hqs.	12,436							116.58	124.84	22.45

Source: Based on Samuel R. Daines' compilation from basic data contained in the Costa Rica 1973 Agricultural Census.

TABLE 39  
Summary of Livestock Production Patterns

Costa Rica Small Farm Profile  
Analysis of the Average Small Farm for Each Region and Farm Size

Farm Size and Region	Number of Farms Included	Value of Meat Production per Farm	Value of Milk Production per Farm	Value of Pork Production per Farm	Value of Poultry Production per Farm (eggs and meat)	Value of all Livestock per Farm	Meat Value as a % of all Live-stock	Milk Value as a % of all Live-stock	Pork Value as a % of all Live-stock	Poultry Value as a % of all Live-stock	Land Based Live-stock (cows, substituting Beef and Milk as % of Total Livestock)
		c 00	c 00	c 00	c 00	c 00	%	%	%	%	%
<b>Farms 2-3 Has.</b>											
Cent. Valley E.	1,043	5.85	15.45	5.33	2.60	29.83	19.60	51.79	19.87	10.88	71.40
Cent. Valley W.	1,550	4.27	4.94	8.33	37.77	54.36	24.05	9.16	14.58	82.11	15.22
North Zone	400	6.65	7.82	5.33	3.55	25.37	22.29	30.83	32.88	20.87	53.17
Dry Pacific	1,077	6.61	2.58	24.74	5.51	39.22	14.35	6.32	61.37	28.05	27.47
Central Pacific	1,379	4.23	5.79	8.79	13.96	32.89	28.74	6.32	28.74	37.34	30.40
Pacific South	392	2.21	2.27	2.27	3.38	17.09	14.96	13.93	42.33	34.40	28.28
Atlantic Zone	1,728	4.42	1.53	15.12	3.03	24.22	18.27	6.31	62.46	33.37	25.00
Ave. 2-3 Has.	6,454	4.58	5.79	11.17	10.25	31.81	18.48	19.47	37.46	42.52	34.96
<b>Farms 3-4 Has.</b>											
Cent. Valley E.	497	8.34	22.28	11.80	2.46	44.79	18.62	49.75	25.67	7.99	68.37
Cent. Valley W.	778	8.89	5.31	19.79	2.88	27.76	19.42	19.42	28.43	29.60	36.37
North Zone	230	8.66	12.88	7.74	3.89	35.28	24.56	36.78	27.40	15.24	81.36
Dry Pacific	435	11.74	1.80	24.45	8.42	43.13	27.23	3.49	26.68	29.05	10.73
Central Pacific	516	5.23	8.04	8.91	8.25	30.49	17.19	26.38	29.23	38.46	43.94
Pacific South	399	3.75	2.71	11.12	7.49	25.04	24.93	10.38	44.49	53.61	29.76
Atlantic Zone	273	3.88	0.24	10.15	2.79	17.07	22.75	1.40	59.47	40.36	24.16
Ave. 3-4 Has.	3,328	6.61	7.58	12.38	6.30	31.88	20.34	21.15	40.36	32.04	41.50
<b>Farms 5-10 Has.</b>											
Cent. Valley E.	1,295	15.35	40.84	9.84	3.36	69.10	22.21	59.87	14.24	5.67	80.89
Cent. Valley W.	1,813	10.93	10.46	10.54	37.75	70.01	15.61	14.94	15.48	63.83	30.56
North Zone	859	14.89	12.43	11.05	4.20	42.39	34.61	29.36	26.09	13.43	63.97
Dry Pacific	1,463	24.89	8.98	25.89	5.90	65.37	37.82	13.72	38.60	14.94	51.36
Central Pacific	1,239	12.40	18.25	22.70	31.07	84.03	14.94	21.72	26.94	50.33	36.88
Pacific South	1,231	8.28	7.99	10.70	3.38	32.38	25.59	24.71	13.08	24.33	50.30
Atlantic Zone	953	9.14	1.22	11.98	3.60	26.04	35.12	4.69	46.01	26.23	39.81
Ave. 5-10 Has.	9,095	13.62	14.27	14.66	13.05	55.61	26.50	23.98	28.72	28.47	50.48
<b>Farms 10-20 Has.</b>											
Cent. Valley E.	884	25.84	75.90	8.58	3.32	113.65	22.74	66.75	7.54	3.16	89.57
Cent. Valley W.	1,235	24.51	21.78	11.19	34.94	92.43	24.51	23.56	12.11	42.01	30.08
North Zone	1,045	22.76	17.08	12.95	2.49	58.30	19.04	29.30	23.93	10.14	68.34
Dry Pacific	1,735	22.31	10.82	29.71	5.71	68.97	42.22	17.93	33.40	9.64	60.17
Central Pacific	1,079	22.00	24.06	17.04	3.25	68.39	32.17	32.18	24.94	10.23	67.36
Pacific South	4,359	14.08	11.79	13.96	3.88	46.53	32.42	25.33	30.01	17.66	57.76
Atlantic Zone	980	11.43	2.31	15.02	7.54	41.51	40.06	5.56	36.19	28.48	45.63
Ave. 10-20 Has.	8,777	24.25	23.36	15.64	9.56	72.83	34.45	28.24	24.02	17.45	62.69
<b>Farms 20-50 Has.</b>											
Cent. Valley E.	868	58.24	208.30	15.04	3.05	284.65	20.46	73.17	5.28	1.13	93.43
Cent. Valley W.	913	59.89	51.06	12.34	2.12	128.43	46.43	19.75	8.61	4.41	86.39
North Zone	2,008	46.13	22.49	22.18	4.42	95.24	48.43	23.62	23.29	5.08	72.05
Dry Pacific	2,347	63.23	19.55	34.52	6.62	143.39	58.04	13.43	24.07	5.58	71.64
Central Pacific	1,248	46.59	31.43	21.94	8.66	106.64	43.69	29.58	20.57	7.46	71.17
Pacific South	1,229	26.06	14.34	22.29	6.22	62.87	37.30	20.58	33.20	13.33	57.84
Atlantic Zone	1,223	35.94	4.53	22.87	5.81	69.17	51.96	6.55	33.02	12.55	58.52
Ave. 20-50 Has.	12,436	50.87	50.25	21.73	5.34	126.20	43.79	29.54	21.30	7.28	73.33

Source: Based on Samuel R. Daines' computation from basic data contained in the Costa Rica 1973 Agricultural Census.

Table 22  
Costa Rica  
Representative Small Farm Analysis

Value of Crop Production as a Percent of All Farm Value of Production

			Rice Value of Production as a Percent of Total	Corn Value of Production as a Percent of Total	Bean Value of Production as a Percent of Total	Potato Value of Production as a Percent of Total	Basic Grains Value of Production as a Percent of Total	All Annuals Value of Production as a Percent of Total	Permanent Crops Value of Production as a Percent of Total	Livestock Value of Production as a Percent of Total
			%	%	%	%	%	%	%	%
Region 1	Size 1		0.00	1.31	0.51	7.49	1.83	13.31	47.61	39.06
Region 2	Size 1		0.12	0.87	0.53	0.02	1.54	7.43	52.94	39.60
Region 3	Size 1		1.09	3.18	1.44	4.20	5.73	13.38	41.81	44.79
Region 4	Size 1		6.35	8.33	3.56	0.00	18.86	20.07	35.35	74.36
Region 5	Size 1		2.62	4.42	2.32	0.04	9.58	10.17	38.14	51.68
Region 6	Size 1		2.14	4.71	2.35	0.00	10.42	20.98	49.63	29.37
Region 7	Size 1		0.33	4.08	0.12	0.00	4.71	8.28	30.66	61.05
Farmsize 1 Total			2.02	3.84	1.63	1.68	7.52	13.38	38.02	48.59
Region 1	Size 2		0.04	1.28	0.44	6.94	1.76	12.00	47.56	40.43
Region 2	Size 2		0.11	1.43	0.77	0.01	2.33	7.70	71.39	20.40
Region 3	Size 2		0.78	1.43	0.79	2.21	3.02	10.43	62.14	47.39
Region 4	Size 2		7.71	7.60	3.74	0.00	19.05	19.34	6.13	74.51
Region 5	Size 2		1.36	4.82	2.58	0.00	8.77	10.90	47.94	41.13
Region 6	Size 2		2.83	4.05	2.70	0.00	9.61	14.98	52.82	32.18
Region 7	Size 2		0.69	4.75	0.00	0.00	3.45	7.32	47.07	45.39
Farmsize 2 Total			1.96	3.60	1.57	1.30	7.14	11.81	45.08	43.09
Region 1	Size 3		0.03	1.15	0.36	6.02	1.57	9.53	49.82	40.63
Region 2	Size 3		0.16	0.80	0.10	0.00	1.07	3.18	68.92	25.88
Region 3	Size 3		1.47	2.30	1.65	2.14	3.83	12.83	43.86	43.30
Region 4	Size 3		6.26	5.42	2.87	0.01	14.56	15.11	7.15	77.73
Region 5	Size 3		4.04	0.74	1.94	0.10	6.73	7.42	35.88	58.69
Region 6	Size 3		2.98	5.07	2.82	0.00	10.58	19.21	51.95	28.83
Region 7	Size 3		0.88	1.99	0.07	0.00	5.93	10.11	47.17	42.71
Farmsize 3 Total			2.27	2.92	1.40	1.18	6.61	11.34	43.23	45.39
Region 1	Size 4		0.04	1.14	0.32	6.59	1.50	8.60	45.92	45.46
Region 2	Size 4		0.11	0.63	0.39	0.10	1.14	3.04	73.34	23.60
Region 3	Size 4		4.23	3.70	3.94	1.61	13.91	23.14	69.78	7.06
Region 4	Size 4		3.89	4.60	2.95	0.00	13.24	13.43	5.39	80.97
Region 5	Size 4		7.73	3.81	2.26	0.03	13.81	14.17	40.14	45.68
Region 6	Size 4		3.57	4.80	3.04	0.00	11.42	18.23	47.30	34.45
Region 7	Size 4		1.18	6.20	0.17	0.00	7.54	11.93	44.83	43.22
Farmsize 4 Total			3.22	3.84	1.87	1.19	8.94	13.22	46.70	40.06
Region 1	Size 5		0.03	0.66	0.25	5.91	1.15	7.41	36.77	55.81
Region 2	Size 5		0.14	0.41	0.30	0.03	0.86	2.05	73.88	22.05
Region 3	Size 5		0.00	3.13	3.36	0.23	6.51	9.30	26.60	64.08
Region 4	Size 5		0.32	3.50	2.59	0.04	10.41	10.66	5.06	84.27
Region 5	Size 5		1.65	3.04	2.06	0.00	17.18	17.29	36.49	46.21
Region 6	Size 5		0.39	3.40	3.42	0.00	14.95	16.90	39.94	43.14
Region 7	Size 5		1.28	9.77	0.24	0.00	11.30	14.53	33.09	52.36
Farmsize 5 Total			0.54	3.73	1.75	0.89	6.91	11.16	36.26	52.56

Source: Samuel R. Daines computations based on data contained in the Costa Rica Agriculture Census, 1973.

Table 23  
Costa Rica  
Representative Small Farm Analysis

Value of Crop Production as a Percent of all Farm Value of Production			Potato Value of Production as a Percent of Total	Yuca Value of Production as a Percent of Total	Tomato Value of Production as a Percent of Total	Tobacco Value of Production as a Percent of Total	Tubers Tomato and Tobacco Value of Production as a Percent of Total
			%	%	%	%	%
Region 1	Size 1	1	7.49	0.10	3.88	0.00	11.48
Region 2	Size 1	1	0.02	0.05	4.19	1.61	5.90
Region 3	Size 1	1	4.20	3.44	0.00	0.00	7.64
Region 4	Size 1	1	0.00	0.10	1.10	0.00	1.20
Region 5	Size 1	1	0.04	0.06	0.48	0.00	0.59
Region 6	Size 1	1	0.00	0.34	0.01	10.19	10.56
Region 7	Size 1	1	0.00	3.55	0.00	0.00	3.55
Farmsize 1 Total			1.68	1.09	1.38	1.68	5.85
Region 1	Size 2	2	6.94	0.00	3.28	0.00	10.22
Region 2	Size 2	2	0.01	0.04	3.07	2.22	5.36
Region 3	Size 2	2	2.21	4.89	0.31	0.00	7.42
Region 4	Size 2	2	0.00	0.24	0.03	0.00	0.28
Region 5	Size 2	2	0.00	0.17	1.95	0.00	2.13
Region 6	Size 2	2	0.00	0.21	0.00	5.15	5.37
Region 7	Size 2	2	0.00	1.86	0.00	0.00	1.86
Farmsize 2 Total			1.30	1.06	1.23	1.05	4.66
Region 1	Size 3	3	6.02	0.04	1.89	0.00	7.95
Region 2	Size 3	3	0.00	0.16	2.88	1.05	4.11
Region 3	Size 3	3	2.14	4.57	0.27	0.00	6.99
Region 4	Size 3	3	0.01	0.11	0.41	0.00	0.54
Region 5	Size 3	3	0.10	0.12	0.45	0.00	0.69
Region 6	Size 3	3	0.00	0.29	0.16	8.15	8.62
Region 7	Size 3	3	0.00	4.09	0.07	0.00	4.17
Farmsize 3 Total			1.18	1.34	0.88	1.31	4.72
Region 1	Size 4	4	6.39	0.12	0.36	0.00	7.09
Region 2	Size 4	4	0.10	0.14	1.15	0.50	1.90
Region 3	Size 4	4	1.61	7.62	0.00	0.00	9.23
Region 4	Size 4	4	0.00	0.07	0.09	0.00	0.18
Region 5	Size 4	4	0.03	0.08	0.24	0.00	0.36
Region 6	Size 4	4	0.00	0.29	0.01	6.49	6.81
Region 7	Size 4	4	0.00	4.39	0.00	0.00	4.39
Farmsize 4 Total			1.19	1.82	0.27	0.99	4.28
Region 1	Size 5	5	5.91	0.01	0.33	0.00	6.25
Region 2	Size 5	5	0.03	0.12	0.33	0.19	1.18
Region 3	Size 5	5	0.23	2.54	0.00	0.00	2.78
Region 4	Size 5	5	0.04	0.11	0.09	0.00	0.25
Region 5	Size 5	5	0.00	0.09	0.01	0.00	0.11
Region 6	Size 5	5	0.00	0.34	0.04	1.35	1.94
Region 7	Size 5	5	0.00	3.13	0.10	0.00	3.23
Farmsize 5 Total			0.89	0.91	0.20	0.24	2.25

Source: Samuel R. Daines computations based on data contained in the Costa Rica Agriculture Census, 1973.

Table 24  
Costa Rica  
Representative Small Farm Analysis

Value of Crop Production as a Percent of all Farm Value of Production

			Banana Value of Production as a Percent of Total	Plantain Value of Production as a Percent of Total	Guineo Value of Production as a Percent of Total	Cacao Value of Production as a Percent of Total	Sugar Cane Value of Production as a Percent of Value	All Permanent Crops (including coffee) Value of Production as a Percent of Total
			%	%	%	%	%	%
Region 1	Size	1	1.10	0.11	0.01	0.00	3.51	47.61
Region 2	Size	1	0.03	0.02	0.03	0.00	4.46	52.94
Region 3	Size	1	0.63	3.51	0.85	0.34	5.66	41.81
Region 4	Size	1	0.45	1.64	0.25	0.00	0.39	5.35
Region 5	Size	1	0.08	0.42	0.16	0.01	1.31	38.14
Region 6	Size	1	0.89	2.61	0.18	0.03	0.68	49.63
Region 7	Size	1	6.59	9.70	0.16	11.57	0.11	30.66
Farmsize 1 Total			1.39	2.58	0.23	1.71	2.33	38.02
Region 1	Size	2	0.88	0.24	0.00	0.00	4.85	47.56
Region 2	Size	2	0.02	0.04	0.04	0.00	6.74	71.89
Region 3	Size	2	2.44	2.44	1.76	0.76	7.96	42.14
Region 4	Size	2	0.09	0.48	0.21	0.00	0.92	6.13
Region 5	Size	2	0.24	1.11	0.07	0.00	1.91	47.94
Region 6	Size	2	1.43	4.32	0.08	0.04	0.80	52.82
Region 7	Size	2	12.75	8.02	0.17	22.34	0.17	47.07
Farmsize 2 Total			2.55	2.36	0.33	3.33	3.33	45.08
Region 1	Size	3	0.96	0.25	0.04	0.00	7.72	49.82
Region 2	Size	3	0.04	0.05	0.01	0.00	7.00	68.92
Region 3	Size	3	2.09	3.98	1.54	0.78	7.37	43.86
Region 4	Size	3	0.28	1.98	0.29	0.00	1.20	7.15
Region 5	Size	3	0.59	0.65	0.14	0.00	1.71	33.88
Region 6	Size	3	1.56	4.12	0.15	0.15	0.98	51.95
Region 7	Size	3	9.63	13.75	0.16	20.14	0.54	47.17
Farmsize 3 Total			2.19	3.54	0.33	3.01	3.79	43.25
Region 1	Size	4	1.72	0.40	0.00	0.00	5.61	45.92
Region 2	Size	4	0.09	0.05	0.02	0.00	9.42	73.54
Region 3	Size	4	4.07	9.09	2.29	3.07	12.43	69.78
Region 4	Size	4	0.26	1.09	0.26	0.00	1.12	5.59
Region 5	Size	4	0.88	0.60	0.13	0.01	2.34	40.14
Region 6	Size	4	1.67	5.02	0.25	0.24	1.47	47.30
Region 7	Size	4	13.79	10.44	0.13	18.10	0.27	44.83
Farmsize 4 Total			3.21	3.81	0.44	3.06	4.67	46.70
Region 1	Size	5	1.08	0.07	0.01	0.01	3.93	36.77
Region 2	Size	5	0.15	0.02	0.03	0.00	8.50	75.88
Region 3	Size	5	6.12	2.01	0.92	2.41	5.32	26.60
Region 4	Size	5	0.33	0.32	0.30	0.00	1.33	5.06
Region 5	Size	5	1.40	0.60	0.12	0.00	1.44	36.49
Region 6	Size	5	5.65	6.86	0.84	0.26	1.57	39.94
Region 7	Size	5	11.22	6.35	0.28	13.41	0.23	33.09
Farmsize 5 Total			3.71	2.35	0.33	2.30	3.19	36.26

Source: Samuel P. Daines computations based on data contained in the Costa Rica Agriculture Census, 1973.

Table 25  
Costa Rica  
Representative Small Farm Analysis

Value of Crop Production as a Percent of all Farm Value of Production

			Coffee Value of Production as a Percent of All Farm Value	Coffee as a Percent of Permanent Crops	Milk Value of Production as a Percent of All Farm Value	Beef Value of Production as a Percent of All Farm Value	Milk and Beef Value of Production as a Percent of All Farm Value	Pork Value of Production as a Percent of All Farm Value	Poultry Value of Production as a Percent of All Farm Value	Milk and Meat as a Percent of Livestock
			%	%	%	%	%	%	%	%
Region 1	Size 1		42.87	90.03	20.23	7.65	27.89	7.76	3.40	71.40
Region 2	Size 1		48.37	91.37	3.63	2.39	6.02	5.88	27.68	15.22
Region 3	Size 1		30.80	73.66	13.80	9.98	23.79	14.71	6.27	53.12
Region 4	Size 1		2.56	47.82	4.86	12.19	17.05	47.03	10.47	22.67
Region 5	Size 1		35.93	94.20	9.27	6.64	15.92	13.82	21.93	30.60
Region 6	Size 1		45.22	91.11	3.90	3.80	7.71	12.44	9.21	26.27
Region 7	Size 1		2.49	8.14	4.10	11.15	15.26	38.13	7.64	25.00
Farmsize 1 Total			29.75	70.90	8.54	7.69	16.23	19.97	12.37	34.95
Region 1	Size 2		41.57	87.40	20.11	7.53	27.64	10.38	2.40	68.37
Region 2	Size 2		65.03	90.46	3.96	3.49	7.46	8.04	4.89	36.57
Region 3	Size 2		26.75	63.48	17.43	11.63	29.07	13.08	3.22	61.34
Region 4	Size 2		4.41	71.90	2.60	20.29	22.89	42.23	9.37	30.72
Region 5	Size 2		44.58	92.99	10.85	7.03	17.91	12.03	11.19	43.53
Region 6	Size 2		46.12	87.31	3.48	4.80	8.28	14.30	9.58	25.76
Region 7	Size 2		3.36	7.15	0.63	10.37	11.00	27.12	7.45	24.14
Farmsize 2 Total			33.12	71.53	8.44	9.31	17.75	18.17	7.16	41.49
Region 1	Size 3		40.84	81.96	23.84	9.02	32.86	5.78	1.97	80.89
Region 2	Size 3		61.80	89.66	3.86	4.04	7.91	4.00	13.96	30.56
Region 3	Size 3		28.07	64.00	12.54	14.78	27.32	11.14	4.24	63.10
Region 4	Size 3		3.37	47.22	10.68	29.24	39.93	30.78	7.01	51.36
Region 5	Size 3		30.76	90.80	12.74	8.66	21.41	12.11	21.70	36.47
Region 6	Size 3		44.96	86.54	7.12	7.38	14.50	9.53	4.79	50.30
Region 7	Size 3		2.71	5.76	2.00	15.00	17.00	19.65	6.04	39.81
Farmsize 3 Total			30.36	66.56	10.40	12.59	22.99	13.28	8.53	50.36
Region 1	Size 4		38.17	83.11	30.36	10.33	40.69	3.43	1.33	89.52
Region 2	Size 4		63.74	86.90	5.56	6.25	11.82	2.85	8.92	50.08
Region 3	Size 4		38.82	55.82	26.81	35.72	62.54	12.79	21.90	85.58
Region 4	Size 4		2.83	50.73	9.66	39.06	48.72	27.04	3.19	60.17
Region 5	Size 4		36.15	90.06	16.07	14.69	30.77	11.39	3.51	67.36
Region 6	Size 4		38.63	81.66	8.72	11.17	19.90	10.34	4.21	57.76
Region 7	Size 4		2.08	4.63	2.40	17.31	19.72	15.64	7.63	45.62
Farmsize 4 Total			31.49	64.67	14.23	19.22	33.45	11.93	7.56	
Region 1	Size 5		31.65	86.08	40.84	11.42	52.26	2.95	0.59	91.63
Region 2	Size 5		67.16	88.50	8.76	10.28	19.05	2.12	0.88	86.39
Region 3	Size 5		9.80	36.86	15.13	31.03	46.17	14.96	2.97	72.05
Region 4	Size 5		2.55	50.48	11.49	48.91	60.40	20.28	3.57	71.68
Region 5	Size 5		32.91	90.19	13.62	20.19	33.81	9.51	2.88	73.17
Region 6	Size 5		24.94	82.44	8.86	16.09	24.97	14.32	3.84	57.88
Region 7	Size 5		1.58	4.77	3.43	27.21	30.64	17.31	4.40	58.52
Farmsize 5 Total			24.37	59.90	14.59	23.59	38.19	11.64	2.73	73.33

Source: Samuel R. Daines computations based on data contained in the Costa Rica Agriculture Census, 1973.