

June 1973

LTC No. 87

U.S. ISSN 0084-0793

THE LAND TENURE CENTER
310 King Hall
University of Wisconsin-Madison
Madison, Wisconsin 53706

A LONGITUDINAL ANALYSIS OF THREE
SMALL-FARM COMMUNITIES IN COLOMBIA:
A COMPENDIUM OF DESCRIPTIVE STATISTICS*

by

Robert L. Whittenbarger and A. Eugene Havens**

*Study supported by Ford Foundation Grant No. 69-348 to the University of Wisconsin and a Grant from U.S.A.I.D. No. cds. 2363

**Ph.D. Candidate and Associate Professor of Rural Sociology,
University of Wisconsin, Madison

All views, interpretations, recommendations, and conclusions expressed in this paper are those of the author and not necessarily those of the supporting or cooperating organizations.

A LONGITUDINAL ANALYSIS OF THREE SMALL FARM COMMUNITIES IN COLOMBIA:
A COMPENDIUM OF DESCRIPTIVE STATISTICS*

by

Robert L. Whittenbarger and A. Eugene Havens**

The present study describes changes in selected socio-economic characteristics in three areas of Colombia where one encounters small farm holdings. Each area is structurally distinct in terms of its relationship to the overall economic structure of Colombia. Nevertheless, the trends are basically similar. The small-farm sector has not received sufficient attention in Colombia to allow it to either to produce to its maximum potential or to absorb much of the labor force that it generates. Recently, both Colombian and foreign loan agencies have placed a higher priority on stimulating development of the small-farm sector. Thus, it is hoped that the data presented herein will be helpful in allocating new resources being made available to small farmers. First, data are presented on the general situation of the small-farm sector and then baseline and restudy data from the three areas studied are presented to suggest the broad outlines of the changes that have occurred in a number of basic characteristics.

I. GENERAL SETTING

The agricultural sector of the Colombian economy plays a critical role in the struggle for improvement in the quality of life for the vast

* Study supported by Ford Foundation Grant No. 69-348 to the University of Wisconsin and a Grant from U.S. Agency for International Development No. cds. 2863.

** Ph.D. Candidate and Associate Professor of Rural Sociology.

majority of the population. Agriculture contributes about 30 percent of the gross domestic product, employs about half of the working people, and, if one excludes petroleum, produces 35 percent of the value of exports. While agriculture provides half of the work force with employment, transforming industries and construction employ 15 percent of the work force but mostly in small, artisan workshops (see Table 1, Appendix). The remainder of the work force (34 percent) is employed in the services sector of the economy. Thus, both in regard to employment and contribution to the gross domestic product, the agricultural sector of the economy is a critical sector but one intimately affected by and related to the over-all social structure.

Colombia's social structure is still largely based on the large agrarian estate but with the notable difference that the ruling class is capitalistic.¹ Owners of large estates are also owners and controllers of the financial sector as well as of the production and sale of commercial crops. It is not surprising, then, for the U.S. Army Area Handbook to note that while differences in the ruling class exist, these differences "have been of degree and have never been sufficiently wide to outweigh the overriding consideration that the upper class maintain its dominant position".²

A. Land Concentration and Use

The dominant position of the ruling class is based partly on owning the bulk of the nation's productive resources. The agricultural sector

¹T. Lynn Smith, Colombia: Social Structure and the Process of Development (Gainesville: University of Florida Press, 1967), p. 374.

²Special Operations Research Office of the American University, U.S. Army Area Handbook for Colombia (Washington, D.C.: U.S. Department of the Army; U.S. Government Printing Office, 1964) p. 104.

of the economy reflects the tendency to concentrate resources. As Smith noted, "the ownership and control of the nation's agricultural and pastoral lands is highly concentrated in the hands of a few powerful families."³ In 1960, 76.5 percent of the farm units were smaller than 25 acres and represented only 9 percent of the total area; 20 percent of the farm units were from 25 to 250 acres and represented 25 percent of the total area, while 3.5 percent of the farm units were larger than 250 acres and represented 66 percent of the total area.⁴ There is little evidence to show that this land distribution pattern has changed during the last 10 years.⁵

Given this distribution of land, it is not surprising to note that the land use pattern for 1969 is as follows: commercial crops 3.3 percent; agriculture fallow 2.2 percent; natural and improved pastures 18.2 percent; cities, towns, roads, etc. 2.9 percent; rivers, forests, lakes, and swamps 4.7 percent; and the remaining 68.7 percent is not in agricultural use.⁶ Inadequate land use seems to be the general pattern but the question remains concerning land use and productivity: Who is inadequately using land? Some evidence indicates that output per unit of land is inversely related to farm size.⁷ In 1960, farms of less than 10 hectares were

³Smith, Colombia, pp. 37-38.

⁴DANE, Censo Agropecuario - 1960: Resumen (Bogotá: Imprenta Nacional, 1962).

⁵DANE, Debate Agrario Documentos (Bogotá: Departamento Nacional de Estadísticas, 1971).

⁶USAID-Colombia, Agriculture Sector Loan IV (Bogotá: U.S. Embassy, June 1971), p. 43.

⁷Peter Dorner and Herman Felstehausen, "Agrarian Reform and Employment: The Colombian Case," International Labour Review 102, no. 3 (September 1970), p. 229.

cultivated most intensively.⁸ Thus, the small-farm sector is where one encounters the most intensive land use and the majority of the economically active.⁹

B. Capital

The question of private investment in the agricultural sector of Colombia is one which is very difficult to analyze with available data. At best, we can show that the income distribution in the agricultural sector is highly concentrated (see Table 2, Appendix). Given that 5 percent of those who earn income from the agricultural sector receive about 43 percent of all earnings, it is clear that these individual profits are not all re-invested in agricultural pursuits. Nor should they be. What we don't know is where they are invested. All we can say, based on empirical evidence, is that the distribution of private income in the agricultural sector is highly concentrated if one takes equity as his standard.

Public investment in the agricultural sector is presented in Table 1. About \$400 million are invested annually in the agricultural sector. Of this \$400 million, about half is allocated to the Agricultural Credit Bank for loans to farmers. However, the bulk of these loans have traditionally gone to the medium-to-large farm units to stimulate production of export crops.¹⁰ Another fifth of these public resources is allocated by INCORA. However, the major portion of INCORA's allocations go to "engineering costs,"

⁸DANE, Debate Agrario Documentos, p. 86.

⁹Contrary to popular opinion not all large farm units in the Eastern Plains are in need of large investments to make them productive. Some are, however, and these data must be judged in the light of evidence concerning land use capabilities. These data are very sparse in Colombia. For some indication, see *ibid.* pp. 26-32.

¹⁰Ministerio de Agricultura, El Cuatrenio de la Transformación Rural 1966-1970 (Bogotá: 1970), p. 15.

i.e., land improvement and agricultural infrastructural accounts. It is not always possible to assure that these infrastructural investments will only benefit accompanying parcelization projects in the area.¹¹ Consequently, a rather small amount of these public investments trickle down to the small-farm sector.

Table 1. Public Resources Allocated to the Agricultural Sector from 1963 to 1972 (in millions of dollars)

Source	1968	1969	1970	1971	1972 (Est.)
Colombian Public Investments	310.7	410.2	369.8	362.1	372.6
U.S. Assistance	40.4	23.0	30.3	37.6	34.6
Other Foreign Financing	27.0	15.7	27.9	35.0	60.0
Total	378.1	448.9	428.0	434.7	467.2

Source: USAID-Colombia, Agriculture Sector Loan IV (Bogotá: U.S. Embassy, June 1971), p. 144.

C. Work Force

While about half of the working people of Colombia are employed in the agricultural sector, over 70 percent lived on sub-family-sized farms or were farm workers without land. While 12 percent of those whose principal occupation is in agriculture are employers, 40 percent are day laborers.¹² The current allocation of land and labor resources is illustrated in Table 2.

¹¹ IICA-CIRA, Preliminary Notes for the Analysis of the Agrarian Reform in Colombia (Bogotá: October 1970).

¹² These percentages are calculated from DANE, Resumen: Censo Nacional de Población, 1964 (Bogotá: Imprenta Nacional, 1967), P. 114.

Table 2. Distribution of Farms, Work Force, Agricultural Land, and Value of Production by Farm Size Grouping in Colombia, 1960*

Farm Size Grouping	Farms	Agricultural Work-Force	Agricultural Land	Value of Production
Sub-Family	64	58	6	21
Family	30	31	23	45
Multi-family, medium	5	7	21	19
Multi-family, large	<u>1</u>	<u>4</u>	<u>50</u>	<u>15</u>
All sizes	100	100	100	100

*Reproduced from Dorner and Felstehausen. See Reference 7.

While Table 2 represents the static picture of 1960, it is very likely that the distribution of land and labor has become even more unequal. Very few large farm units have been sub-divided while the population has increased. It is estimated that from 1970 to 1975, 853,000 additional males between the ages of 15 and 55 will be added to the work force. About half of these will originate in the agricultural sector, and, given the scarcity of employment opportunities, will likely migrate to urban areas or be unemployed or under-employed in agriculture.¹³

The large amount of available labor keeps wages at a constant level in real terms (see Table 3, Appendix). With the exception of certain months of peak labor demand for the harvest of coffee and cotton, there is always a greater supply of available labor than demand. Thus, most agricultural laborers earn a minimum subsistence wage which is almost totally spent for food, clothes, and occasionally beer and cigarettes.

¹³ USAID-Colombia, Agriculture Sector Loan IV, p. 1

Consequently, a large portion of the agricultural labor force contributes very little to internal effective demand.

What they do contribute to is an army of unemployed either seeking jobs in the already over-crowded cities where unemployment and under-employment define the economic situation for about 25 percent of the urban work force,¹⁴ or to migrant labor in agriculture. The factor mix in industry emphasizes capital rather than labor, with most capital investments going to imported technology.¹⁵ Even if Colombia is successful in encouraging industrial firms to become more labor intensive, it is not likely that they would productively employ even the natural increase of the existing urban population.

Given this general situation in Colombia, it becomes obvious that the small-farm sector is critical to any development plan. The current political control exercised by the ruling class is not likely to change in the near future, which would indicate very little redistribution of large estates. Thus, the small-farm sector is, and will continue to be an important developmental concern. The remainder of this report is devoted to an exposition of and comments on changes, over a seven-year period, in the structure of income, employment, and occupation in three small-farm communities.

¹⁴O.I.T., Hacia el Pleno Empleo (Bogotá: Imprenta Banco Popular, 1970).

¹⁵*ibid.*, pp. 185-188.

II. THREE SMALL-FARM COMMUNITIES

The three communities studied represent different structural characteristics in terms of concentration of productive resources and their ties to national or international markets. All three communities were first studied in 1963 and restudied in 1970. In 1963, a 10 percent random sample of households was selected and interviewed. In each case, an attempt was made to reinterview family heads. Not all family heads were reinterviewed. Table 7, Appendix, presents the reasons for failure to reinterview. However, 75 percent or more of family heads in the three communities were located. Thus, we can make comparisons of their previous and present situation which allow for the specification of the trends occurring in these three small-farm communities.

Basically, Cereté was a traditional latifundia community in 1963. Since the original survey, two major trends have occurred. One trend was a move toward capital-intensive agriculture on many of the large farm units. This resulted in a shift from cattle raising to rice and cotton. Since 1969, many of the large farm units have moved away from heavy investment in agriculture due to a series of crop failures in cotton, cotton varieties with poor fibers that command low prices on the international market, and a reported fear of expropriation. Extensive production of cattle, largely for export, which has been stimulated by new loans for cattle production is reappearing in the area.¹⁶ The other major trend

¹⁶ A. Eugene Havens and others, Cereté: Un Area de Latifundia (Bogotá: Facultad de Sociología, Universidad Nacional de Colombia, 1965).

has been toward reforming the large units and parcelizing the obtained land into medium-sized farms. While INCORA's action has not been totally successful, some parcelization has occurred as a result of land reclamation and land purchases.

Támesis is largely a coffee producing area of small-to-medium-sized farms. It is directly tied to the major export market of Colombia. About 80 percent of all coffee marketed in the area is sold directly from the farm to the National Federation of Coffee Growers or to middle-men and then to the Federation. The major changes during the last seven years have centered around the introduction of fertilizers and a new coffee variety which does not require shade. Consequently, a greater number of trees per hectare can be planted and each tree produces more than the traditional varieties. As a result, coffee production has increased but the small farmer has generally not shifted to the new variety because of lack of capital or credit.¹⁷

Contadero is an area of all small farms many of which cannot absorb even family labor. Land fragmentation has occurred to such an extent that the average number of plots exploited per family is three, with a total area of four hectares. Artisan production of wool garments is a very common principal occupation, given that much of the land is only suitable for grazing of sheep. A very limited number of medium-

¹⁷A. Eugene Havens, Támesis: Estructura y Cambio (Bogotá: Tercer Mundo, 1966); and A. Eugene Havens, "Modernization or Development: A Colombian Dilemma" (Bogotá: Ford Rural Modernization Project Preliminary Report No. 3, 1971).

sized farms were present in 1963 but have generally disappeared by 1970.¹⁸ For a summary description of the three communities, see Table 8, Appendix.

During the last seven years, land concentration has decreased slightly in Cereté and increased slightly in Támesis. In Cereté, the Gini coefficient for land concentration was 0.89 in 1963 and was 0.85 in 1970. In Támesis, the Gini coefficient for land concentration was 0.71 in 1963 and was 0.86 in 1970. However, in both cases these Gini coefficients indicate a high degree of concentration in both time periods. The land distribution data for Cereté and Támesis in 1963 and 1970 are presented in Tables 4 and 5, Appendix. Table 6 presents the data for Contadero and indications are that land fragmentation rather than concentration has been the general trend.

Public investment in the small-farm sector in the three areas has varied greatly. In Cereté, INCORA had settled 129 families on 518 hectares as of March 1971, largely on reclaimed swamp land. About another 800 hectares are currently being parcelled that were obtained by gifts or purchases.¹⁹ Both, INCORA and the Caja Agraria provide loans and technical assistance to the area.

In Támesis, major public investments are provided by the Federation of Coffee Growers, the Caja Agraria, the Secretary of Agriculture, and Acción Comunal.

¹⁸ L. Eduardo Montero and Dale Adams, "Algunas Consideraciones sobre Reforma Agraria en Regiones de Minifundio: Un Ejemplo Colombiano" (Bogotá: IICA-CIRA, Julio, 1965). See also Dale Adams and A. Eugene Havens, "The Use of Socio-Economic Research in Developing a Strategy of Change for Rural Communities: A Colombian Example," Economic Development and Cultural Change (January, 1966). Also as Land Tenure Center Reprint No. 17.

¹⁹ These data refer to the municipio of Cereté and not the "zona de Cereté" of INCORA. The zone includes several municipios. Data were provided by the Jefe de la Zona in March 1971.

In Contadero, about the only real source of public investment is the Caja Agraria. There are some limited investments by Acción Comunal but at extremely low levels.

Because of the nature of the variation in public investment about the only constant source in all three municipios is the Caja Agraria. Data are presented in Table 3 on the amount of loans made by the Caja in each municipio between 1963 and 1969. As can be seen from Table 3, the bulk of the loans in Cereté and Tamesis are made in the 20,000 peso or higher categories. In fact, in Cereté, 49 percent of all loans made in 1969 were for more than 50,000 pesos. Unfortunately, the data available from the Caja Agraria do not permit comparisons by size of farm. However, some evidence can be brought to bear on this issue from our survey data.

Table 4 indicates that few families in Cereté have received loans from the Caja Agraria. The loans in the small-farm sector of Cereté are all for less than 5,000 pesos. In Tamesis, more families have received credit but three-fourths of all loans were for less than 5,000 pesos. In Contadero, the Caja has given one-third of its loans to the families studied for amounts between 5,000 and 10,000 pesos. Another one-third have been loans of 10,000 to 50,000 pesos for owners of small farms. It is interesting to note that in the more commercial farming areas like Tamesis and Cereté, the size of loan to the small-farm sector tends to be less than 5,000 pesos. Thus, it seems safe to conclude that in these commercial areas, the bulk of the credit money does not find its way to the small-farm sector. On the other hand, in the subsistence portion of small-farm sector, loans in greater amounts are given to the small farm units. We now turn our

Table 3. Percent of Loans by Amount Loaned to Farmers in Three Small-Farm Communities, Colombia, 1963-1969

P E S O S	C E R E T É						
	1963 (8.84) ^b	1964 (11.01)	1965 (9.27)	1966 ^a --	1967 (10.01)	1968 (15.34)	1969 (11.89)
0 to \$1,000	4%	2%	2%	--	0%	0%	0%
1,001 to 5,000	23	16	17	--	9	7	22
5,001 to 10,000	16	12	13	--	7	8	6
10,001 to 20,000	19	21	21	--	8	8	4
20,001 to 50,000	30	34	35	--	30	21	19
50,000 plus	8	15	12	--	46	56	49
Total	100%	100%	100%	--	100%	100%	100%

P E S O S	T Á M E S I S						
	1963 (1.72) ^b	1964 (1.33)	1965 (1.08)	1966 ^a --	1967 (1.24)	1968 (2.31)	1969 (2.33)
0 to \$1,000	17%	15%	12%	--	8%	5%	4%
1,001 to 5,000	38	41	37	--	36	28	23
5,001 to 10,000	19	18	20	--	17	19	18
10,001 to 20,000	13	15	16	--	21	20	24
20,001 to 50,000	10	11	9	--	18	22	19
50,000 plus	3	0	6	--	0	6	12
Total	100%	100%	100%	100%	100%	100%	100%

Source: Archivos, Caja de Crédito Agrario, Industrial y Minero.

^a1966 loan data unavailable.

^bTotal amount of all loans in millions of pesos.

Table 3. (Cont.) Percent of Loans by Amount Loaned to Farmers in Three Small-Farm Communities, Colombia, 1963-1970

P E S O S	C O N T A D E R O						
	1963 (.92) ^b	1964 (2.94)	1965 (.75)	1966 --	1967 (4.02)	1968 (5.02)	1969 (5.42)
0 to \$1,000	36%	5%	29%	--	2%	1%	1%
1,001 to 5,000	50	54	58	--	48	35	31
5,001 to 10,000	10	24	7	--	29	34	33
10,001 to 20,000	4	14	2	--	16	18	24
20,001 to 50,000	0	3	4	--	4	8	9
50,000 plus	<u>0</u>	<u>0</u>	<u>0</u>	<u>--</u>	<u>1</u>	<u>4</u>	<u>2</u>
Total	100%	100%	100%	--	100%	100%	100%

Source: Archivos, Caja de Crédito Agrario, Industrial y Minero.

^bTotal amount of all loans in millions of pesos.

attention to the observed characteristics of these areas with regard to selected socio-economic attributes. These data are presented as a compendium so that the reader may be aware of the nature of data available at the Land Tenure Center.

The overall analytical design anticipated is to relate the general political-economic history of Colombia to the specific tendencies observed in the three small-farm communities. Specifically, part of our concern is to measure the consequence of the overall development process and the exact public input to each area on the changes in structure in the local area. In the meantime, this compendium

Table 4. Distribution of Loans by Amount and Farm Size in Three Small-Farm Communities, Colombia, 1970

Community by Loan Category	TOTAL FARM SIZE IN HECTARES									
	Less Than .5	.5 to 1	1.1 to 2	2.1 to 3	3.1 to 4	4.1 to 5	5.1 to 10	10.1 to 20	20.1 to 200	Total
<u>Cereté</u>										
101 to 500										
501 to 1,000										
1,001 to 5,000	0	1	4	2	1					8
5,001 to 10,000	0	0	0	0	0	0	0	0	1	1
Total	0	1	4	2	1	0	0	0	1	9
<u>Támesis</u>										
101 to 500	0	1	0							1
501 to 1,000	2	0	2							4
1,000 to 5,000	1	0	4	2	2	2	0	1	1	13
5,001 to 10,000	0	0	0	1	2	2	0	0	0	5
10,001 to 50,000	0	0	0	0	0	1	0	0	1	2
Total	3	1	6	3	4	5	0	1	2	25
<u>Contadero</u>										
101 to 500	0	0	1							1
501 to 1,000	0	0	0	1						1
1,001 to 5,000	0	2	6	2						10
5,001 to 10,000	0	2	2	2	3					9
10,001 to 50,000	0	1	1	2	3	1	0	1	0	9
Total	0	5	10	7	6	1	0	1	0	30

is being distributed so that a description of the changes that occurred can be presented at an earlier date.

III. SUMMARY STATISTICS

In the tables that follow, the number in parentheses immediately to the right of the number of observations is the number of observations whose value was zero. These zeros were included in the computation of the statistics. For example, in Table 1 the entry under Cereté for T_1 is 84 (0). This means that at least one person was in the economically active age range in all families, which is obviously a necessary finding. On the other hand, in Table 2, under Cereté T_1 we find the entry 84(23) which means that 23 household heads earned no income in 1963. In all tables, the trimmed mean was calculated by eliminating the single highest and lowest observation.

TABLE 1; Summary Statistics for Number of Persons Per Family in Economically Active Ages¹ in Cereté, Contadero, and Tamesis, 1963-1970

<u>CERETÉ</u>		
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	4.2	5.0
Standard Deviation	2.1	3.5
Minimum Value	1.0	1.0
Maximum Value	10.0	14.0
Trimmed Mean	4.1	4.9
Median	4.0	5.0
Confidence interval (95%) for the mean	3.7, 4.7	4.0, 6.0
<u>CONTADERO</u>		
	T ₁	T ₂
No. of Observations	69 (0)	69 (0)
No. of Missing Observations	0	0
Arithmetic Mean	3.9	4.4
Standard Deviation	1.8	1.8
Minimum Value	1.0	1.0
Maximum Value	8.0	8.0
Trimmed Mean	3.9	4.3
Median	3.0	4.0
Confidence interval (95%) for the mean	3.5, 4.3	3.9, 4.8
<u>TÁMESIS</u>		
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	4.2	4.7
Standard Deviation	2.2	2.6
Minimum Value	1.0	1.0
Maximum Value	10.0	12.0
Trimmed Mean	4.1	4.6
Median	4.0	4.0
Confidence interval (95%) for the mean	3.7, 4.7	4.1, 5.3

¹ Economic Active Age was defined as 15 to 65.

TABLE 2; Summary Statistics for Net Income Earned by Household Head in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (23)	84 (21)
No. of Missing Observations	0	0
Arithmetic Mean	1,543	2,166
Standard Deviation	1,463	3,604
Minimum Value	0	0
Maximum Value	6,600	31,200
Trimmed Mean	1,462	1,806
Median	1,560	1,846
Confidence interval (95%) for the mean	1,225; 1,360	1,384; 2,948
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (0)	69 (6)
No. of Missing Observations	0	0
Arithmetic Mean	1,741	2,314
Standard Deviation	1,683	5,236
Minimum Value	178	0
Maximum Value	9,640	40,560
Trimmed Mean	1,602	1,618
Median	1,000	780
Confidence interval (95%) for the mean	1,337; 2,146	1,057; 3,571
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	34 (3)	34 (8)
No. of Missing Observations	0	0
Arithmetic Mean	3,269	4,077
Standard Deviation	2,152	4,947
Minimum Value	0	0
Maximum Value	9,750	28,600
Trimmed Value	3,198	3,631
Median	2,631	2,871
Confidence interval (95%) for the mean	2,802; 3,737	3,003; 5,150

TABLE 3: Summary Statistics for Net Annual Income Earned by Other Family Members in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	34 (42)	84 (27)
No. of Missing Observation	0	0
Arithmetic Mean	2,192	3,011
Standard Deviation	4,588	4,183
Minimum Value	0	0
Maximum Value	36,000	20,696
Trimmed Mean	1,653	2,688
Median	1,500	1,332
Confidence interval (95%) for the mean	1,196; 3,188	2,104; 3,919
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (28)	69 (34)
No. of Missing Observations	0	0
Arithmetic Mean	1,006	1,595
Standard Deviation	1,782	2,837
Minimum Value	0	0
Maximum Value	8,640	16,222
Trimmed Mean	815	1,277
Median	144	83
Confidence interval (95%) for the mean	578; 1,435	914; 2,276
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	34 (50)	84 (33)
No. of Missing Observations	0	0
Arithmetic Mean	1,226	2,410
Standard Deviation	1,853	3,034
Minimum Value	0	0
Maximum Value	7,800	12,780
Trimmed Mean	1,104	2,235
Median	0	926
Confidence interval (95%) for the mean	823; 1,630	1,751; 3,068

TABLE 4; Summary Statistics for Income from Rent in Cereté, Contadero,
and Tamesis, 1963-1970

<u>CERETÉ</u>		
	T ₁	T ₂
No. of Observations	84 (78)	84 (80)
No. of Missing Observations	0	0
Arithmetic Mean	139	383
Standard Deviation	576	2,852
Minimum Value	0	0
Maximum Value	3,284	26,000
Trimmed Mean	68	48
Median	0	0
Confidence Interval (95%) for the mean	14; 265	000; 1,002
<u>CONTADERO</u>		
	T ₁	T ₂
No. of Observations	69 (68)	69 (64)
No. of Missing Observations	0	0
Arithmetic Mean	2	107
Standard Deviation	21	456
Minimum Value	0	0
Maximum Value	171	2,600
Trimmed Mean	0	42
Median	0	0
Confidence interval (95%) for the mean	000; 7	000; 217
<u>TÁMESIS</u>		
	T ₁	T ₂
No. of Observations	84 (82)	84 (82)
No. of Missing Observations	0	0
Arithmetic Mean	42	22
Standard Deviation	331	173
Minimum Value	0	0
Maximum Value	3,000	1,560
Trimmed Mean	0	0
Median	0	0
Confidence Interval (95%) for the mean	000; 113	000; 60

TABLE 5; Summary Statistics for Total Family Income in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (0)	84 (1)
No. of Missing Observations	0	0
Arithmetic Mean	3,817	5,504
Standard Deviation	4,640	6,989
Minimum Value	300	0
Maximum Value	36,000	53,456
Trimmed Mean	3,275	4,772
Median	2,485	3,245
Confidence interval (95%) for the mean	2,811; 4,824	3,987; 7,021
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (0)	69 (3)
No. of Missing Observations	0	0
Arithmetic Mean	2,780	3,955
Standard Deviation	2,777	6,193
Minimum Value	200	0
Maximum Value	13,280	44,517
Trimmed Mean	2,510	3,258
Median	1,912	2,080
Confidence interval (95%) for the mean	2,113; 3,477	2,467; 5,443
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	4,510	6,634
Standard Deviation	2,716	5,834
Minimum Value	936	624
Maximum Value	15,800	28,600
Trimmed Mean	4,364	6,308
Median	4,080	4,420
Confidence interval (95%) for the mean	3,921; 5,100	5,418; 7,950

TABLE 6; Summary Statistics for Number of Household Members Employed in Cerete, Contadero, and Tamesis, 1963-1970

<u>CERETÉ</u>		
	T ₁	T ₂
No. of Observations	84 (6)	84 (2)
No. of Missing Observations	0	0
Arithmetic Mean	1.7	1.8
Standard Deviation	1.3	1.0
Minimum Value	0.0	0.0
Maximum Value	6.0	5.0
Trimmed Mean	1.7	1.8
Median	1.0	2.0
Confidence interval (95%) for the mean	1.4, 2.0	1.6, 2.1
<u>CONTADERO</u>		
	T ₁	T ₂
No. of Observations	69 (0)	69 (1)
No. of Missing Observations	0	0
Arithmetic Mean	2.1	2.3
Standard Deviation	1.1	1.2
Minimum Value	1.0	0.0
Maximum Value	5.0	6.0
Trimmed Mean	2.0	2.2
Median	2.0	2.0
Confidence interval (95%) for the mean	1.8, 2.3	1.9, 2.6
<u>TÁMESIS</u>		
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	1.6	2.2
Standard Deviation	.94	1.5
Minimum Value	1.0	1.0
Maximum Value	5.0	7.0
Trimmed Mean	1.55	2.1
Median	1.0	2.0
Confidence interval (95%) for the mean	1.4, 1.8	1.9, 2.5

TABLE 7; Summary Statistics for Size of Family in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	6.7	7.1
Standard Deviation	2.9	3.2
Minimum Value	2.0	1.0
Maximum Value	19.0	18.0
Trimmed Mean	6.5	7.1
Median	6.0	7.0
Confidence interval (95%) for the mean	6.1; 7.3	6.5; 7.8
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (0)	69 (0)
No. of Missing Observations	0	0
Arithmetic Mean	5.9	6.3
Standard Deviation	2.2	2.6
Minimum Value	1.0	1.0
Maximum Value	9.0	12.0
Trimmed Mean	5.9	6.3
Median	6.0	6.0
Confidence interval (95%) for the mean	5.3; 6.4	5.7; 7.0
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	6.9	7.6
Standard Deviation	3.4	3.6
Minimum Value	2.0	1.0
Maximum Value	16.0	16.0
Trimmed Mean	6.8	7.6
Median	6.0	8.0
Confidence interval (95%) for the mean	6.2; 7.7	6.8; 8.4

TABLE 8; Summary Statistics for Total Hectares of Land Owned in Cereté,
Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (23)	84 (50)
No. of Missing Observations	0	0
Arithmetic Mean	5.65	2.76
Standard Deviation	35.40	16.51
Minimum Value	0.00	0.00
Maximum Value	318.70	148.00
Trimmed Mean	1.34	0.62
Median	0.20	0.00
Confidence interval (95%) for the mean	0.00, 13.33	0.00, 6.34
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (13)	69 (15)
No. of Missing Observations	0	0
Arithmetic Mean	3.98	1.83
Standard Deviation	5.43	2.47
Minimum Value	0.00	0.00
Maximum Value	22.00	13.00
Trimmed Mean	3.56	1.60
Median	2.48	1.00
Confidence interval (95%) for the mean	2.67, 5.28	1.24, 2.42
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (23)	84 (25)
No. of Missing Observations	0	0
Arithmetic Mean	5.01	5.80
Standard Deviation	15.00	17.21
Minimum Value	0.00	0.00
Maximum Value	128.00	128.00
Trimmed Mean	3.18	3.47
Median	1.12	1.00
Confidence interval (95%) for the mean	1.75, 8.27	2.07, 9.54

TABLE 9; Summary Statistics for Total Number of Plots Owned in Cereté,
Contadero, and Tamesis, 1963-1970

<u>CERETÉ</u>		
	T ₁	T ₂
No. of Observations	84 (23)	84 (50)
No. of Missing Observations	0	0
Arithmetic Mean	0.93	0.56
Standard Deviation	1.00	0.83
Minimum Value	0.00	0.00
Maximum Value	8.00	5.00
Trimmed Mean	0.83	0.46
Median	1.00	0.00
Confidence Interval (95%) for the mean	0.71, 1.15	0.36, 0.72
<u>CONTADERO</u>		
	T ₁	T ₂
No. of Observations	69 (13)	69 (15)
No. of Missing Observations	0	0
Arithmetic Mean	2.20	1.40
Standard Deviation	1.80	1.40
Minimum Value	0.00	0.00
Maximum Value	7.00	8.00
Trimmed Mean	2.20	1.30
Median	2.00	1.00
Confidence Interval (95%) for the mean	1.80, 2.70	1.10, 1.70
<u>TÁMESIS</u>		
	T ₁	T ₂
No. of Observations	84 (28)	84 (27)
No. of Missing Observations	0	0
Arithmetic Mean	0.77	0.94
Standard Deviation	0.68	0.83
Minimum Value	0.00	0.00
Maximum Value	4.00	3.00
Trimmed Mean	0.74	0.91
Median	1.00	1.00
Confidence Interval (95%) for the mean	0.63, 0.92	0.76, 1.11

TABLE 10; Summary Statistics for Total Hectares of Land Rented in Cereté,
Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (80)	84 (80)
No. of Missing Observations	0	0
Arithmetic Mean	0.08	0.08
Standard Deviation	0.46	0.42
Minimum Value	0.00	0.00
Maximum Value	3.00	3.00
Trimmed Mean	0.01	0.02
Median	0.00	0.00
Confidence Interval(95%) for the mean	0.00; 0.18	0.00; 0.17
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (59)	69 (56)
No. of Missing Observations	0	0
Arithmetic Mean	0.29	0.68
Standard Deviation	1.01	4.09
Minimum Value	0.00	00.0
Maximum Value	7.00	34.0
Trimmed Mean	0.16	0.16
Median	0.00	0.00
Confidence interval (95%) for the mean	0.48; 0.54	0.00; 1.66
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (77)	84 (72)
No. of Missing Observations	0	0
Arithmetic Mean	0.35	0.97
Standard Deviation	1.77	4.13
Minimum Value	0.00	0.00
Maximum Value	14.72	30.00
Trimmed Mean	0.11	0.40
Median	0.00	0.00
Confidence Interval (95%) for the mean	0.00; 0.73	0.68; 1.86

TABLE 11; Summary Statistics for Annual Food Expenditures in Cereté,
Contadero, and Tâmesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	2,915	3,126
Standard Deviation	1,676	2,019
Minimum Value	520	000
Maximum Value	13,000	13,520
Trimmed Mean	2,805	3,012
Median	2,299	2,704
Confidence interval (95%) for the mean	2,547; 3,284	2,688; 3,564
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (0)	69 (0)
No. of Missing Observations	0	0
Arithmetic Mean	3,076	2,100
Standard Deviation	2,322	1,555
Minimum Value	486	228
Maximum Value	14,320	10,816
Trimmed Mean	2,898	1,963
Median	2,651	1,622
Confidence interval (95%) for the mean	2,518; 3,634	1,726; 2,473
	<u>TÂMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	3,560	3,519
Standard Deviation	1,986	1,869
Minimum Value	520	946
Maximum Value	11,440	9,464
Trimmed Mean	3,442	3,447
Median	2,704	2,839
Confidence interval (95%) for the mean	3,129; 3991	3,113; 3,924

TABLE 12; Summary Statistics for Annual Expenditures for Clothing and Medicine
in Cereté, Contadero, and Tamesis, 1963-1970

<u>CERETÉ</u>		
	T ₁	T ₂
No. of Observations	70 (0)	84 (0)
No. of Missing Observations	14	0
Arithmetic Mean	740	571
Standard Deviation	2,121	706
Minimum Value	40	16
Maximum Value	18,000	6,240
Trimmed Mean	484	501
Median	400	468
Confidence interval (95%) for the mean	235, 1,246	417, 724
<u>CONTADERO</u>		
	T ₁	T ₂
No. of Observations	69 (0)	69 (3)
No. of Missing Observations	0	0
Arithmetic Mean	920	690
Standard Deviation	1,239	700
Minimum Value	55	0
Maximum Value	8,100	3,276
Trimmed Mean	778	641
Median	560	520
Confidence interval (95%) for the mean	623, 1,213	523, 359
<u>TAMESIS</u>		
	T ₁	T ₂
No. of Observations	84 (1)	84 (1)
No. of Missing Observations	0	0
Arithmetic Mean	474	652
Standard Deviation	378	725
Minimum Value	0	0
Maximum Value	2,200	3,552
Trimmed Mean	448	602
Median	340	398
Confidence interval (95%) for the mean	391, 556	495, 809

TABLE 13; Summary Statistics for Total Credit Obtained¹ in Cereté,
Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (84)	84 (67)
No. of Missing Observations	0	0
Arithmetic Mean	0	618
Standard Deviation	0	2,921
Minimum Value	0	0
Maximum Value	0	26,000
Trimmed Mean	0	259
Median	0	0
Confidence interval (95%) for the mean	0; 0	0; 1,252
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (20)	69 (27)
No. of Missing Observations	0	0
Arithmetic Mean	1,850	2,758
Standard Deviation	2,877	5,398
Minimum Value	0	0
Maximum Value	14,000	35,360
Trimmed Mean	1,576	2,072
Median	600	520
Confidence interval (95%) for the mean	1,159; 2,541	1,461; 4,055
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	80 (60)	84 (49)
No. of Missing Observations	4	0
Arithmetic Mean	691	1,164
Standard Deviation	2,926	3,665
Minimum Value	0	0
Maximum Value	21,500	28,600
Trimmed Mean	393	697
Median	0	0
Confidence interval (95%) for the mean	140; 1,442	369; 1,960

¹1970 Credit values in constant terms; only credit from institutionalized sources

TABLE 14; Summary Statistics for Number of Family Members Who Have Migrated
in Cereté, Contadero, and Támesis Between 1963-1970

	<u>CERETÉ</u>	<u>1963-1970</u>
No. of Observations		84 (61)
No. of Missing Observations		0
Arithmetic Mean		0.41
Standard Deviation		0.75
Minimum Value		0.00
Maximum Value		3.00
Trimmed Mean		0.35
Median		0.00
Confidence interval (95%) for the mean		0.25; 0.57
	<u>CONTADERO</u>	<u>1963-1970</u>
No. of Observations		69 (46)
No. of Missing Observations		0
Arithmetic Mean		0.38
Standard Deviation		0.79
Minimum Value		0.0
Maximum Value		4.0
Trimmed Mean		0.29
Median		0.00
Confidence interval (95%) for the mean		0.19; 0.57
	<u>TÁMESIS</u>	<u>1963-1970</u>
No. of Observations		84 (69)
No. of Missing Observations		0
Arithmetic Mean		0.29
Standard Deviation		0.69
Minimum Value		0.0
Maximum Value		3.0
Trimmed Mean		0.22
Median		0.00
Confidence interval (95%) for the mean		0.14; 0.43

TABLE 15; Summary Statistics for Number of Days of Hired Labor Per Year
in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	81 (77)	83 (70)
No. of Missing Observations	3	1
Arithmetic Mean	5.7	22.7
Standard Deviation	36.2	105.6
Minimum Value	000.0	000.0
Maximum Value	312.0	720.0
Trimmed Mean	0.9	7.4
Median	0.0	0.0
Confidence interval (95%) for the mean	0.00; 13.75	0.00; 45.74
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (22)	69 (40)
No. of Missing Observations	0	0
Arithmetic Mean	79.7	52.4
Standard Deviation	165.9	148.0
Minimum Value	000.0	000.0
Maximum Value	800.0	950.0
Trimmed Mean	61.5	31.5
Median	15.0	00.0
Confidence interval (95%) for the mean	39.8; 119.6	16.6; 83.3
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	83 (50)	80 (50)
No. of Missing Observations	1	4
Arithmetic Mean	57.6	106.6
Standard Deviation	156.3	275.8
Minimum Value	000.0	000.0
Maximum Value	900.0	1,392.0
Trimmed Mean	41.1	78.8
Median	00.0	00.0
Confidence interval (95%) for the mean	23.52; 91.76	45.26; 168.0

TABLE 16; Summary Statistics for Number of Days Family Head Worked on Own Farm in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	83 (65)	84 (62)
No. of Missing Observations	1	0
Arithmetic Mean	53.8	56.1
Standard Deviation	111.7	106.8
Minimum Value	0.0	0.0
Maximum Value	312.0	312.0
Trimmed Mean	48.7	51.1
Median	0.0	0.0
Confidence interval (95%) for the mean	29.5; 78.2	32.9; 79.3
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (10)	69 (13)
No. of Missing Observations	0	0
Arithmetic Mean	217.4	222.3
Standard Deviation	120.1	126.4
Minimum Value	0.0	0.0
Maximum Value	312.0	312.0
Trimmed Mean	221.2	226.4
Median	260.0	312.0
Confidence interval(95%) for the mean	188.6; 246.2	191.7; 252.9
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (30)	78 (31)
No. of Missing Observations	0	6
Arithmetic Mean	166.1	159.6
Standard Deviation	141.9	145.0
Minimum Value	0.0	0.0
Maximum Value	312.0	360.0
Trimmed Mean	166.6	159.1
Median	156.0	208.0
Confidence interval (95%) for the mean	135.3; 196.9	126.9; 192.3

TABLE 17; Summary Statistics for Number of Days Family Head Worked
Off - Farm in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (35)	84 (34)
No. of Missing Observations	0	0
Arithmetic Mean	143.3	131.9
Standard Deviation	136.7	134.2
Minimum Value	0.0	0.0
Maximum Value	312.0	312.0
Trimmed Mean	142.7	130.7
Median	144.0	96.0
Confidence interval (95%) for the mean	113.6; 172.9	102.8; 161.1
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (39)	69 (42)
No. of Missing Observations	0	0
Arithmetic Mean	74.3	50.6
Standard Deviation	108.4	97.4
Minimum Value	0.0	0.0
Maximum Value	312.0	312.0
Trimmed Mean	69.3	43.4
Median	00.0	00.0
Confidence interval (95%) for the mean	48.2; 100.3	26.5; 73.6
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	83 (33)	77 (29)
No. of Missing Observations	1	7
Arithmetic Mean	129.8	116.5
Standard Deviation	136.5	134.1
Minimum Value	0.0	0.0
Maximum Value	324.0	312.0
Trimmed Mean	128.2	114.4
Median	100.0	30.0
Confidence interval (95%) for the mean	99.9; 159.6	86.1; 146.9

TABLE 13; Summary Statistics for Age of Head of Family in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	78 (0)	84 (0)
No. of Missing Observations	6	0
Arithmetic Mean	49.3	54.5
Standard Deviation	13.9	13.7
Minimum Value	23.0	24.0
Maximum Value	90.0	90.0
Trimmed Mean	48.9	54.4
Median	49.0	55.0
Confidence interval (95%) for the mean	46.2; 52.4	51.5; 57.5
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (0)	69 (0)
No. of Missing Observations	0	0
Arithmetic Mean	48.7	53.9
Standard Deviation	15.7	13.8
Minimum Value	23.0	30.0
Maximum Value	85.0	95.0
Trimmed Mean	48.3	53.6
Median	49.0	55.5
Confidence interval (95%) for the mean	44.9; 52.5	50.6; 57.3
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	49.0	52.6
Standard Deviation	15.2	12.9
Minimum Value	23.0	29.0
Maximum Value	80.0	82.0
Trimmed Mean	48.9	52.4
Median	47.0	52.5
Confidence interval (95%) for the mean	45.7; 52.3	49.8; 55.4

TABLE 19; Summary Statistics for Literacy Rate of Family Head¹ in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	81 (0)	84 (0)
No. of Missing Observations	3	0
Arithmetic Mean	1.4	1.3
Standard Deviation	0.5	0.5
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.4	1.3
Median	1.0	1.0
Confidence interval (95%) for the mean	1.3; 1.5	1.2; 1.4
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (0)	69 (0)
No. of Missing Observations	0	0
Arithmetic Mean	1.9	1.8
Standard Deviation	0.3	0.4
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.9	1.8
Median	2.0	2.0
Confidence interval (95%) for the mean	1.8; 2.0	1.7; 1.9
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (0)	83 (0)
No. of Missing Observations	0	1
Arithmetic Mean	1.7	1.8
Standard Deviation	0.4	0.4
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.7	1.8
Median	2.0	2.0
Confidence interval (95%) for the mean	1.6; 1.8	1.7; 1.9

¹ Not able to read coded 1; able to read coded 2.

TABLE 20; Summary Statistics for Years of Education of Family Head in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	24 (0)	27 (0)
No. of Missing Observations	60	57
Arithmetic Mean	2.9	2.4
Standard Deviation	1.4	1.2
Minimum Value	0.0	1.0
Maximum Value	5.0	5.0
Trimmed Mean	2.9	2.4
Median	3.0	2.0
Confidence interval (95%) for the mean	2.3; 3.4	2.0; 2.9
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	62 (0)	54 (0)
No. of Missing Observations	7	15
Arithmetic Mean	4.0	3.6
Standard Deviation	1.8	1.7
Minimum Value	1.0	1.0
Maximum Value	12.0	12.0
Trimmed Mean	3.9	3.5
Median	4.0	4.0
Confidence interval (95%) for the mean	3.5; 4.4	3.1; 4.1
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	60 (0)	61 (0)
No. of Missing Observations	24	23
Arithmetic Mean	3.5	2.7
Standard Deviation	1.8	2.0
Minimum Value	1.0	1.0
Maximum Value	10.0	13.0
Trimmed Mean	3.4	2.6
Median	3.0	2.0
Confidence interval (95%) for the mean	3.0; 3.9	2.2; 3.2

TABLE 21; Summary Statistics for Radio Ownership of Families¹ in Cereté,
Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	84 (0)	84 (0)
No. of Missing Observations	0	0
Arithmetic Mean	1.20	1.80
Standard Deviation	0.37	0.43
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.1	1.8
Median	1.0	2.0
Confidence interval (95%) for the mean	1.1; 1.2	1.7; 1.9
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	68 (0)	68 (0)
No. of Missing Observations	1	1
Arithmetic Mean	1.30	1.80
Standard Deviation	0.47	0.33
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.3	1.8
Median	1.0	2.0
Confidence interval (95%) for the mean	1.2; 1.4	1.7; 1.9
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	84 (0)	83 (0)
No. of Missing Observations	0	1
Arithmetic Mean	1.40	1.80
Standard Deviation	0.49	0.39
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.4	1.8
Median	1.0	2.0
Confidence interval (95%) for the mean	1.3; 1.5	1.7; 1.9

¹Non-ownership scored 1; ownership scored 2.

TABLE 22; Summary Statistics for Number of Rooms in the Dwelling Unit
In Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	80 (0)	80 (0)
No. of Missing Observations	4	4
Arithmetic Mean	2.6	2.7
Standard Deviation	1.5	1.2
Minimum Value	0.0	1.0
Maximum Value	8.0	7.0
Trimmed Mean	2.5	2.6
Median	2.5	3.0
Confidence interval (95%) for the mean	2.2; 2.9	2.4; 2.9
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	68 (0)	64 (0)
No. of Missing Observations	1	5
Arithmetic Mean	2.3	2.7
Standard Deviation	1.3	1.4
Minimum Value	1.0	1.0
Maximum Value	6.0	6.0
Trimmed Mean	2.2	2.7
Median	2.0	2.5
Confidence interval (95%) for the mean	1.9; 2.6	2.4; 3.1
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	83 (0)	76 (0)
No. of Missing Observations	1	8
Arithmetic Mean	3.1	3.1
Standard Deviation	1.4	1.5
Minimum Value	1.0	1.0
Maximum Value	8.0	8.0
Trimmed Mean	3.1	3.0
Median	3.0	3.0
Confidence interval (95%) for the mean	2.8; 3.4	2.8; 3.4

TABLE 23; Summary Statistics for Electricity in the Housing Unit¹ in
Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	82 (0)	83 (0)
No. of Missing Observations	2	1
Arithmetic Mean	1.00	1.20
Standard Deviation	0.00	0.44
Minimum Value	1.0	1.0
Maximum Value	1.0	2.0
Trimmed Mean	1.0	1.2
Median	1.0	1.0
Confidence interval (95%) for the mean	1.0; 1.0	1.2; 1.3
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (0)	68 (0)
No. of Missing Observations	0	1
Arithmetic Mean	1.30	1.40
Standard Deviation	0.45	0.49
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.3	1.4
Median	1.0	1.0
Confidence interval (95%) for the mean	1.2; 1.4	1.3; 1.5
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	82 (0)	81 (0)
No. of Missing Observations	2	3
Arithmetic Mean	1.40	1.40
Standard Deviation	0.48	0.49
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.4	1.4
Median	1.0	1.0
Confidence interval (95%) for the mean	1.3; 1.5	1.3; 1.5

¹No electricity scored 1; electricity scored 2.

TABLE 24; Summary Statistics for Presence of Latrine¹ in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	74 (0)	84 (0)
No. of Missing Observations	10	0
Arithmetic Mean	1.10	1.30
Standard Deviation	0.25	0.46
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.0	1.3
Median	1.0	1.0
Confidence interval (95%) for the mean	1.0; 1.1	1.2; 1.4
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	69 (0)	68 (0)
No. of Missing Observations	0	1
Arithmetic Mean	1.50	1.50
Standard Deviation	0.50	0.50
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.5	1.5
Median	1.0	2.0
Confidence interval (95%) for the mean	1.3; 1.6	1.4; 1.6
	<u>TAMESIS</u>	
	T ₁	T ₂
No. of Observations	75 (0)	81 (0)
No. of Missing Observations	9	3
Arithmetic Mean	1.40	1.60
Standard Deviation	0.49	0.49
Minimum Value	1.0	1.0
Maximum Value	2.0	2.0
Trimmed Mean	1.4	1.6
Median	1.0	2.0
Confidence interval (95%) for the mean	1.3; 1.5	1.5; 1.7

¹Absence scored 1; presence scored 2.

TABLE 25; Summary Statistics for Kilos of Meat Consumed Weekly¹ in Cereté, Contadero, and Tamesis, 1963-1970

	<u>CERETÉ</u>	
	T ₁	T ₂
No. of Observations	70 (3)	75 (9)
No. of Missing Observations	14	9
Arithmetic Mean	8.1	5.4
Standard Deviation	11.2	5.4
Minimum Value	0.0	0.0
Maximum Value	70.0	28.0
Trimmed Mean	6.9	5.0
Median	4.0	4.0
Confidence interval (95%) for the mean	5.4; 10.8	4.0; 6.6
	<u>CONTADERO</u>	
	T ₁	T ₂
No. of Observations	64 (23)	67 (31)
No. of Missing Observations	5	2
Arithmetic Mean	2.1	1.6
Standard Deviation	2.5	2.1
Minimum Value	0.0	0.0
Maximum Value	13.0	10.0
Trimmed Mean	2.0	1.4
Median	1.0	1.0
Confidence interval (95%) for the mean	1.5; 2.7	1.1; 2.1
	<u>TÁMESIS</u>	
	T ₁	T ₂
No. of Observations	83 (1)	79 (1)
No. of Missing Observations	1	5
Arithmetic Mean	7.1	7.6
Standard Deviation	4.0	5.5
Minimum Value	0.0	0.0
Maximum Value	23.0	40.0
Trimmed Mean	6.8	7.2
Median	6.0	7.0
Confidence interval (95%) for the mean	6.2; 8.0	6.4; 8.9

¹Only beef and pork considered as meat.

TABLE 26; Summary Statistics for Weekly Meat Expenditures¹ in Cereté,
Contadero, and Tamesis, 1963-1970

<u>CERETÉ</u>		
	T ₁	T ₂
No. of Observations	60 (3)	78 (9)
No. of Missing Observations	24	6
Arithmetic Mean	18.57	16.69
Standard Deviation	20.53	13.63
Minimum Value	0.00	0.00
Maximum Value	98.00	50.96
Trimmed Mean	17.52	16.21
Median	13.50	13.00
Confidence interval (95%) for the mean	13.27; 23.87	13.61; 19.76
<u>CONTADERO</u>		
	T ₁	T ₂
No. of Observations	66 (23)	68 (31)
No. of Missing Observations	3	1
Arithmetic Mean	6.38	6.52
Standard Deviation	7.83	8.72
Minimum Value	0.00	0.00
Maximum Value	39.00	39.52
Trimmed Mean	5.97	5.76
Median	4.00	3.12
Confidence interval (95%) for the mean	4.45; 8.30	4.41; 8.63
<u>TÁMESIS</u>		
	T ₁	T ₂
No. of Observations	47 (1)	78 (1)
No. of Missing Observations	37	6
Arithmetic Mean	20.62	25.98
Standard Deviation	12.57	14.47
Minimum Value	0.00	0.00
Maximum Value	70.00	50.96 ²
Timmed Mean	19.93	25.96
Median	13.00	23.66
Confidence interval (95%) for the mean	16.93; 24.31	22.72; 29.24

¹T₂ costs are in constant pesos

²The higher consumer in Table 25 not included at T₂.

A P P E N D I X
SECONDARY DATA ON AGRICULTURAL SECTOR

Table 1. Occupational Structure of the Economically Active Population in Colombia In 1938, 1951, and 1964

Sector	1938 ^a		1951		1964	
	Number	Percent	Number	Percent	Number	Percent
A. Primary						
1. Agriculture	3,320,480	73.99	2,023,281	53.87	2,427,059	47.27
2. Extractive Industry	<u>75,374</u>	<u>1.68</u>	<u>61,223</u>	<u>1.63</u>	<u>81,279</u>	<u>1.58</u>
Sub-Total	3,395,854	75.67	2,084,504	55.50	2,508,338	48.85
B. Secondary						
1. Transforming Industries	440,989	9.83	460,907	12.27	655,961	12.77
2. Construction	<u>86,257</u>	<u>1.92</u>	<u>132,922</u>	<u>3.54</u>	<u>220,705</u>	<u>4.30</u>
Sub-Total	527,246	11.75	593,829	15.81	876,666	17.07
C. Tertiary						
1. Public Utilities	2,164	0.05	10,472	0.28	13,276	0.26
2. Commerce	164,563	3.67	203,774	5.43	440,520	8.58
3. Transportation	62,811	1.40	130,083	3.46	191,817	3.74
4. Services	304,826	6.79	598,093	15.93	925,946	18.04
5. Other	<u>30,121</u>	<u>0.67</u>	<u>134,854</u>	<u>3.59</u>	<u>177,562</u>	<u>3.46</u>
Sub-Total	564,485	12.58	1,077,276	28.69	1,749,121	34.08
Grand Totals	<u>4,487,585</u>	<u>100.00</u>	<u>3,755,609</u>	<u>100.00</u>	<u>5,134,125</u>	<u>100.00</u>

Source: Censo de Población, 1938, 1951, 1964

a The definition of the economically active population changed from 1938 to 1951, thus accounting for the decline in the active population. However, the concern here is with the percent employed by sector rather than number employed.

Table 2. Distribution of Personal Income in the Agricultural Sector of Colombia, 1960

Income in Thousands of Pesos	Accumulative Percent/Persons	Accumulative Percent/Income
0 - 1	8.79	1.93
1 - 1.5	41.50	12.76
1.5 - 2.0	63.86	22.78
2.0 - 3.0	75.76	30.32
3.0 - 5.0	85.89	40.57
5.0 - 10.0	94.81	56.66
10.0 - 20.0	98.61	68.48
20.0 - 100.0	99.71	84.30
100.0 - 200.0	99.93	92.90
200.0 or more	100.00	100.00

Source: Albert Berry and A. Padilla, "La Distribución de los Ingresos Provenientes de la Agricultura en Colombia, 1960". (Bogotá: Universidad Nacional; CID, Documentos de Trabajo No. 1, 1970).

Table 3. Wages to Male Agricultural Laborers Age Eighteen or Over, Colombia, 1960-1968

	<u>W A R M C L I M A T E</u>						
	<u>With Noon Meal</u>			Index of Increase 1960=100	<u>Without Noon Meal</u>		
	Price Index 1960=100	Money Terms	Real Terms		Money Terms	Real Terms	Index of Increase 1960=100
1960	100.0	3.40	3.40	100.0	5.80	5.80	100.0
1961	110.8	3.75	3.38	99.4	6.65	6.00	103.4
1962	109.2	4.40	4.03	118.5	7.40	6.78	116.9
1963	143.6	5.65	3.93	115.6	9.60	6.69	115.3
1964	189.2	6.58	3.48	102.4	11.00	5.81	100.2
1965	192.8	7.70	3.99	117.4	12.30	6.38	110.0
1966	225.6	8.45	3.75	110.2	14.25	6.32	108.9
1967	234.9	9.18	3.91	115.0	14.75	6.28	108.3
1968	257.9	9.50	3.68	108.2	15.10	5.85	100.9
	<u>C O L D C L I M A T E</u>						
1960	100.0	2.80	2.80	100.0	4.95	4.95	100.0
1961	110.8	3.00	2.71	96.8	5.70	5.14	103.8
1962	109.2	3.50	3.20	114.3	6.50	5.95	120.2
1963	143.6	4.65	3.24	115.7	7.95	5.54	111.9
1964	189.2	5.25	2.79	99.6	9.65	5.09	102.8
1965	192.8	5.80	3.01	107.7	10.85	5.63	113.7
1966	225.6	6.75	2.98	106.4	11.80	5.23	105.7
1967	234.9	7.20	3.06	109.3	13.30	5.67	114.5
1968	257.9	7.50	2.92	104.3	14.80	5.64	116.0

Source: DANE, Boletín Mensual de Estadística (Bogotá: DANE, 1970). Vols. 121, 185, and 212.

Table 4. Percent of Farm Units, Owners, and Land Area by Size Category, Cereté, Colombia, 1963 and 1970

Size Category	Farms		Owners		Land Area	
	1963 ^a (N=2,164)	1970 ^b (3,023)	1963 ^a (N=2,302)	1970*	1963 ^a (N=54,843 h)	1970*
Less than 1/2	39.0	55.0	38.1		0.2	
1/2 to 1	4.0	9.0	5.5		0.1	
1.1 to 2	9.0	9.0	8.9		0.4	
2.1 to 3	5.0	5.0	5.0		0.4	
3.1 to 4	3.0	4.0	2.9		0.3	
4.1 to 5	3.0	2.0	2.4		0.4	
5.1 to 10	7.0	4.0	6.9		1.8	
10.1 to 20	7.0	4.0	6.8		3.6	
20.1 to 30	5.0	1.0	5.0		4.7	
30.1 to 40	3.0	0.5	3.0		3.7	
40.1 to 50	2.5	1.0	2.6		4.4	
50.1 to 100	7.0	3.0	7.4		20.1	
100.1 to 200	3.2	1.4	3.0		17.4	
200.1 to 500	1.6	0.9	1.5		19.6	
500.1 to 1,000	0.6	0.2	0.7		14.9	
1,000.1 to 2,500	<u>0.1</u>	<u>0.0</u>	<u>0.3</u>		<u>8.0</u>	
Totals	100.0	100.0	100.0		100.0	

a. Source: A. Eugene Havens and others, Cereté: Un Area de Lati-fundio (Bogotá: Facultad de Sociología, Universidad Nacional, 1965), p.71.

b. Source: DANE, Censo Agropecuario, 1970-71: Informe Preliminar 2 (Bogotá: DANE, 1971).

* Data not available.

Table 5. Percent of Farm Units and Land Area by Size Category, Tamesis, Colombia, 1963 and 1970

Size Category	Farms		Land Area	
	1963 ^a (N=2,678)	1970 ^b (N=2,757)	1963 ^a (N=26,198 h)	1970*
Less than 1/2	29.2	36.3	1.2	
1/2 to 1	17.8	2.4	1.4	
1.1 to 2	15.0	22.1	2.3	
2.1 to 3	5.9	6.4	1.5	
3.1 to 4	4.8	7.3	1.7	
4.1 to 5	3.9	2.4	1.8	
5.1 to 10	9.6	9.4	6.2	
10.1 to 20	5.4	5.9	6.8	
20.1 to 30	3.0	2.2	6.3	
30.1 to 40	1.0	0.9	3.2	
40.1 to 50	0.3	0.7	0.9	
50.1 to 100	1.9	1.7	15.1	
100.1 to 200	1.3	1.1	19.3	
200.1 to 500	0.5	0.9	13.2	
500.1 to 1,000	0.3	0.2	14.2	
1,000.1 to 2,500	0.1	0.1	4.9	
Totals	100.0	100.0	100.0	

a. Source: A Eugene Havens, Tamesis: Estructura y Cambio (Bogotá: Tercer Mundo, 1966), p.59.

b. Source: DANE, Censo Agropecuario, 1970-71: Informe Preliminar 1 (Bogotá: DANE, 1971).

* Data not available.

Table 6. Percent of Farm Units, Owners, and Land Area by Size Category, Contadero, Colombia, 1960 and 1970.

Size Category	Farms		Owners		Land Area	
	1960 (N=2,190)	1970 (N=2,019)	1960 (N=2,384)	1970 (N=2,164)	1960 (N=3,006 h.)	1970 (N=3,226 h.)
Less than 1/2	11.0	28.0	11.9	27.3	1.3	4.4
1/2 to 1	24.0	24.0	23.4	24.2	10.2	10.7
1.1 to 2	43.0	23.0	42.5	23.1	34.9	20.2
2.1 to 3	11.0	11.0	11.2	10.5	17.4	15.8
3.1 to 4	6.0	5.0	5.8	5.8	12.3	11.8
4.1 to 5	2.0	3.0	2.0	3.1	5.9	8.3
5.1 to 10	2.0	5.0	2.4	4.8	10.4	19.5
10.1 to 20	0.6	0.6	0.6	0.6	5.8	4.5
20.1 to 30	0.2	0.3	0.1	0.5	0.8	3.7
30.1 to 40	0.2	0.1	0.1	0.1	1.0	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Instituto Geográfico Colombiano "Agustin Codazzi," Archivos Catastrales.

Table 7. Research Status of the 1963 Samples in 1971

Research Status	Cereté Rural		Cereté Urban		Támesis		Contadero	
	Fre- quency	Per- cent	Fre- quency	Per- cent	Fre- quency	Per- cent	Fre- quency	Per- cent
Reinterviewed	84	85	119	83	84	84	69	75
To be inter- viewed	0	0	1	1	0	0	2	2
Migrated as family	9	9	9	6	8	8	12	13
Died	2	2	5	3	3	3	6	7
Refused	0	0	1	1	0	0	1	1
Unable to locate	4	4	7	5	5	5	2	2
Institution- alized	<u>0</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total:	99	100%	144	100%	100	100%	92	100%

Table 8. Definition and Description of Three Small-Farm Communities, Colombia

Characteristic	Cereté	Támesis ^b	Contadero ^c
1. Size of Units	> 1/2 to 20	> 1/2 to 5	> 1/2 to 10
2. Major Crops	Cotton, Cattle	Coffee	Potatoes, Barley, Beans
3. Terrain	Plains	Mountainous	Mountainous
4. a. Number of Rural families	2,543	2,316	654
b. Size of Cabeceras ^d	11,849	5,247	914
5. Number in Sample	101	100	92
6. Average Temperature	30	21	7
7. Altitude Range (Meters)	0-15	900-2,500	2,000-3,005
8. Distance in hours by bus to nearest major city (100,000 plus population)	1/4 hour	3 hours	2 hours

a. Source: A. Eugene Havens and others, Cereté: Un Area de Latifundia.

b. Source: A. Eugene Havens, Támesis: Estructura y Cambio.

c. Source: Dale Adams and A. Eugene Havens, "The Area of Socio-Economic Research in Developing A Strategy of Change for Rural Communities: A Colombian Example."

d. Universe, rural families only.