

**CORPORACION DE SERVICIOS DE SALUD Y MEDICINA AVANZADA**

**(COSSMA)**

**CHARACTERISTICS OF THE AGRICULTURAL WORKERS**

**MUNICIPALITY : HUMACAO & YABUCOA**

**APRIL, 1997**

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## PREFACE

The present research is possible by the contribution of ***Rural Community Assistance Program (RCAP)***.

It is necessary the recognition of the collaboration of Vista Volunteers from the "Corporación de Servicios de Salud y Medicina Avanzada (COSSMA)". Their assessment as interviewers was very significant to attain the objectives of the Research. The Volunteers that participate in this vital phase of the survey are the following: María Figueroa, Awilda Medina, Evelyn Ramos, Elisa Rivas, Yesenia Rodríguez, Luis Rojas, Eva Sánchez and Adelaida Serrano.

## Summary

Agriculture is an important factor that affects the economic aspects of any country. A healthy agricultural production is basic to attain a stable economic status.

Puerto Rico is a country that changed it's economical structure just in a half a century, from one essentially agrarian economy to another based on technology. Agriculture represents less than one percent of the Puerto Rican economy.

The agricultural workers of the Island were distinguish by low levels of education and income, elevated unemployment and high proportions of older people.

The present research shows the characteristics of the agricultural workers of the Humacao and Yabucoa municipalities, interviewed for this Survey "Characteristics Of Agriculture Workers".

The agricultural workers of this region are compound its majority by males, mostly married, with 44 years of median age, and educational level below ten years.

This population was affected by high unemployment levels and incomes below the mean of the Puerto Rico population: The surveyed population depends on governmental programs to satisfy their health and economic needs.

A large proportion of this group, are not owners of the housing units where they actually live. The principal obstacle to obtain a housing unit of their property was the economic factor.

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## **Introduction**

The purpose of this study is to determine the Demographic, Social and Economic characteristics of the agricultural workers at the Humacao and Yabucoa municipalities. To determine the health and housing conditions of the agricultural workers.

## **Data Source**

The population of this research were compound by agriculture workers. The members of this group were identified by the Corporation Of Health Services And Advanced Medicine (Corporación de Servicios de Salud y Medicina Avanzada-COSSMA) as residents of Humacao and Yabucoa. The major source of data will be the Agricultural Workers Characteristics Survey (Encuesta Sobre Características de los Obreros Agrícolas). This survey was develop from March 7, 1997 until March 26, 1997.

The 1990 Census of Population has been used for the description of the population of Puerto Rico and the population of agrarian workers of the Island.



## **Variables**

The present research used three variable groups: Demographics, Social and Economic. Demographic variables will be sex, age, marital status, family size, birthplace, place of residence, time living in this place, subfamilies, and migration.

Social variable type were education, health conditions, type of healthcare services, reason for selection of any healthcare service, health plans and ability to pay for healthcare services.

Economic variables type represent the employment status, occupation, incomes, income sources and house characteristics such as: housing type, number of bedrooms, number of bathrooms; access to water, electric energy, telephone and solid waste disposal services. Also the group of owners, renters and means of rent payments.

In case subjects were not owners of the housing unit, they were asked for their preference to obtain their own house. The people who answered affirmatively, were requested to answer another question regarding housing unit description such as: number of bedrooms and bathrooms, housing type, construction material. Also will investigate if the subjects have a land to build the house.

### **Limitations**

The limitations of this study are important. The major limitation of this research will be the change of residence of the subjects, death, or addresses that do not exist or empty houses.

Other factor that may limit this study is the quality of the responses. Response to this survey depends on the subjects memory and the intention to tell the truth. There are many questions that the responses may not represent the reality. Generally, the people avoid to tell the truth about their income. This action explains why the income most of the time is under estimated. The age is another variable that goes far away from the reality. Most of the times the age of the people are over estimated.

### **Methodology**

The descriptive type of analysis will be used to determine the demographic, social and economic characteristics of the agrarian workers. Also this type of analysis will be used to describe the health and housing conditions. The size of the surveyed population will be determined by using absolute numbers. The data will be shown by using Tables that present the information available in proportional terms, such as percents, and central tendency measures, mostly the Median.

The data management will be done by using a statistical computer program titled Statistical Package For Social Sciences (SPSSX).

### **Results**

The size of this population was about 350 subjects. They were mostly male (94.9 percent). That kind of sex distribution is the same case of the agriculture workers of Puerto Rico on 1990 Census. They were more males than females (93.4 versus 6.6). The population of Puerto Rico on 1990 had less males than females (48.4 versus 51.6).

The male rate is described as the number of males per 100 females. A rate of 100 males explain that male and female quantities are equal. A male rate below 100 described that male group is smaller than female group. Quantities over 100 meaning that male group is bigger than female group.

The population of Puerto Rico present a male rate of ninety four males per 100 females. This measure was 1415 for the agriculture workers of the Island, and 2054 for the surveyed population.

The observed population were compound by people in the most productive years. The median of age of this group rising to forty four years. The older people (65

years plus) represent 13 percent of the observed population.

The agrarian workers of Puerto Rico numerated in the 1990 Census have shown similar distribution of the age as the surveyed group. The older people in the agrarian workers of Puerto Rico was less than in the observed population, it sited over twelve percent. The age groups from fifteen to forty four years was greater in agrarian group for Puerto Rico than the population interviewed.

The group of ages from forty five to sixty four years was greater in the surveyed population than Puerto Rico agricultural workers. The median age of the population of agricultural workers of Puerto Rico was younger than the population of Humacao-Yabucoa area.

The median age of the population of Puerto Rico was about twenty nine years old. It can be mentioned that this group includes people under sixteen years of age. The people who responded this survey were over 15 years of age. To compare observed and Puerto Rico populations, persons aged over 15 years from residents of Puerto Rico were used to make the analysis.

The population of Puerto Rico (over 15 years) show a median age of thirty nine years. There are differences between age distribution of the population of Puerto Rico and the two groups of agricultural workers. Older people were more common in the population of Puerto Rico than the

other two groups. The people within the ages from 15 to 44 years are less common in the two groups of agrarian workers than in the Puerto Rico population.

Table 1

PERCENT DISTRIBUTION AND SUMMARY MEASURES OF THE AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES ON MARCH-1997 AND THE AGRICULTURAL WORKERS AND TOTAL OF RESIDENTS OF PUERTO RICO ON 1990 BY SOME DEMOGRAPHIC VARIABLES

Demographic Characteristics	Agriculture Workers Humacao-Yabucoa	Agriculture Workers Puerto Rico	Puerto Rico
<b>Gender</b>			
Male	94.9	93.4	48.4
Female	5.1	6.6	51.6
Total	100.0	100.0	100.0
<b>Male Rate</b>	<b>2054.3</b>	<b>1415.2</b>	<b>93.8</b>
<b>Ages</b>			
15 - 44	51.1	57.9	60.7
45 - 64	35.8	29.8	25.3
65 +	13.1	12.3	14.0
Total	100.0	100.0	100.0
<b>Median</b>	<b>43.9</b>	<b>40.0</b>	<b>39.1</b>
<b>Marital Status</b>			
Never Married	18.6	21.7	29.3
Married	54.6	56.5	49.7
Divorced	5.1	5.6	7.1
Separated	4.6	4.1	3.0
Widowed	1.4	3.1	6.4
Consensual Married	15.7	9.0	4.5
Total	100.0	100.0	100.0

The fifty five percent of the studied population were married. The unmarried persons of the group represent nineteen percent.

The distribution of the marital status of the agriculture workers of the Island have similarities with the observed in the surveyed group. The proportion of married people in the observed population were less than the Puerto Rico agrarian workers (54.5 versus 56.5). The consensual relations were less common in the agrarian workers of Puerto Rico than the surveyed population (9.0 versus 15.7). The people never married were more common from Puerto Rican agrarian workers than the observed group (21.7 versus 18.6). The marital status of widow and divorce were more common in the island agricultural workers than in the Humacao-Yabucoa workers.

The proportion of married people was smaller in the Puerto Rico residents than in the surveyed group and the agrarian workers of Puerto Rico. The never married people was more in the Puerto Rico residents than in the two groups of agricultural workers. The consensual and separated status were most common in the two groups of agricultural workers than in the residents of the Island. The widowed and divorced people were less in the two groups of workers than in the population of Puerto Rico in 1990.

The 75 percent of the families were compound by five persons or less. The majority of families have four members. The people who live alone was 7 percent. The mean of persons per house was 4.3. Less than 5 percent live with their spouse and children with another head of household, mostly their parents.

More than half of the interviewed people come from the Humacao municipality (50.3), the remaining subjects come from Yabucoa. Eighty five percent of the observed group were born in the Humacao-Yabucoa area. The remaining were born at another municipality (12.0), and outside of the Island (less than 4.0 percent). The median of years living in actual address was twenty nine years. The people that were born outside of the observed area, and now live at this area was 18 percent of the group.

The people without any schooling was two percent of the observed population. About 7 percent of the interviewed agrarian workers have university studies, while 25 percent attained a high school diploma. The median of years attending school was nine.

The Puerto Rico agrarian workers in 1990, show inferior level of education than the surveyed group. The workers from the country have more people with an educational level under seven years than the observed

population. The median of years attending school from the population of Puerto Rico was more superior than the two groups of workers.

Table 2

PERCENT DISTRIBUTION AND SUMMARY MEASURES OF THE AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES ON MARCH-1997 AND THE AGRICULTURAL WORKERS AND TOTAL OF RESIDENTS OF PUERTO RICO ON 1990 BY EDUCATIONAL LEVELS

Educational Level	Agriculture Workers	Agriculture Workers	Puerto Rico
	Humacao-Yabucoa	Puerto Rico	
No Grade	2.0	6.0	4.6
1 - 6 years	28.6	44.0	22.8
7 - 9 years	30.0	21.1	14.5
10 - 12 years	32.3	21.9	30.3
13 +	7.1	7.0	28.8
Total	100.0	100.0	100.0
Median	9.1	7.0	11.3

One third of the people surveyed did not report any disease or health condition. Muscles and bones, headache, diabetes and high pressure were the conditions that mostly affect this group. The skin, respiratory system and vascular diseases were affected less this population.



Table 3

PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES BY HEALTH DISEASE CONDITIONS: MARCH, 1997

Health Conditions	Percent
Asthma	7.9
Heart Conditions	4.2
Mental Conditions	3.3
Diabetes	9.6
Vascular Conditions	1.7
High Blood Pressure	9.2
Respiratory System Conditions	0.4
Digestive System Conditions	6.7
Hearing System Conditions	2.5
Vision System Conditions	6.7
Headaches	11.4
Muscleskeletal System Conditions	15.5
Allergies	6.3
Arthritis	5.4
Skin Conditions	1.7
Other	7.5
Total	100.0

Fourth percent of the observed group do not receive health care services. The majority (26.8) of this population receive health care services from COSSMA. The Diagnostic and Treatment Centers (CDT) bring health care services to the 25 percent of the Humacao-Yabucoa workers. The health care used less by the observed population were the public and private hospitals.

Table 4

**PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES BY SOME SOCIAL VARIABLES: MARCH, 1997**

<b>Healthcare Centers</b>	<b>Percent</b>
Private Hospital	14.9
Public Hospital	14.0
Private Offices	19.3
Diagnostic And Treatment Centers (CDT)	24.4
COSSMA	26.8
Other	0.6
Total	100.0
<b>Reason For Choosing Healthcare Centers</b>	
Easy Access	43.1
Met The Personnel	10.0
Good Services	32.2
Have Specialists Personnel	3.0
Reasonable Costs	11.4
Other	0.3
Total	100.0

The different reasons that serve as motivation to use one kind of the healthcare are easy access and the quality of service. The specialists that institution have, the price of the service, and been familiar with the personnel were weak reasons to select any of the healthcare services.

There were found different motivational reasons for choosing different healthcare types. The people that

prefer private office and hospitals have been motivated by the easy access and the quality of services.

Table 5

PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES BY SOME SOCIAL VARIABLES: MARCH, 1997

Reasons For Choosing	Private	Public	Private	CDT	COSSMA
	Hospital	Hospital	Office		
Easy Access	48.0	54.5	35.9	75.0	9.5
Met The Personnel	10.0	6.8	21.9	6.3	7.2
Good Service	30.0	6.8	31.2	6.3	72.6
Have Specialist Personnel	8.0	0.0	7.8	1.2	0.0
Reasonable Costs	4.0	31.8	1.6	11.2	10.7
Other	0.0	0.0	1.6	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

The reason for the people that receive service by the public hospital are the easy access and cost of the service. The people that use the CDT are principally motivated by easy access, at the same time that the COSSMA clients are mostly motivated by the quality of the service.

The 25 percent of agrarian workers of Humacao-Yabucoa area do not have healthcare plan. From people who were covered by some healthcare plan, the Government Healthcare Plan covered 75 percent of this population. Medicare covers 10 percent of the observed group. A small part of the agrarian workers of this area were covered by private healthcare plans.

Table 6

PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS  
FROM HUMACAO-YABUCOA MUNICIPALITIES BY  
HEALTHCARE PLAN: MARCH, 1997

Healthcare Plans	Percent
Triple S	1.9
Cruz Azul	1.1
Group Sales	0.4
MCS	1.1
Medicare	10.4
Government Healthcare Plan	77.3
Other	7.8
Total	100.0

The 83 percent of the agrarian workers of the surveyed area were unable to carry the costs of healthcare services due to the low income.

Thirty nine percent of agricultural workers at the Humacao-Yabucoa area were employed. The above information reveals that three of five members of this group had been unemployed. More than 75 percent of the employed population work in agricultural occupations. The remaining group was employed in other work, specially as manufacture industry operators and construction workers.

Three of four agrarian workers of Puerto Rico in 1990 Census of Population were employed. The population of Puerto Rico were employed at 80 percent. The unemployment

levels of the population of Puerto Rico and the agrarian workers are inferior than the unemployment level of the Humacao-Yabucoa area agrarian workers.

One third of the surveyed population receive annual income starting in two thousand five hundred dollars, but less than five thousand. The 26 percent of the observed population have income below two thousand five hundred dollars, while 5 percent earned ten thousand dollars or more. The mean income earned per year was \$4,967.65.

Table 7

**PERCENT DISTRIBUTION AND SUMMARY MEASURES OF THE AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES ON MARCH-1997 AND THE AGRICULTURAL WORKERS AND TOTAL RESIDENTS OF PUERTO RICO ON 1990 BY SOME ECONOMIC VARIABLES**

Employment Status	Agriculture Workers Humacao-Yabucoa	Agriculture Workers Puerto Rico	Puerto Rico
Employed	39.1	74.6	79.5
Unemployed	60.9	25.4	20.5
Total	100.0	100.0	100.0
<b>Income</b>			
Less Than 2,500	26.3	38.7	47.2
2,500 - 4,999	32.7	26.3	15.2
5,000 - 7,499	24.9	17.6	12.1
7,500 - 9,999	11.0	8.5	7.6
10,000 +	5.1	8.9	17.9
Total	100.0	100.0	100.0
Mean	4,967.65	4,795.37	5,642.91

On 1990 Census of Population the agrarian workers of the Island, had a yearly mean income of \$4,795.37. This

income was about \$172.00 below the mean income of the observed population. The mean income per year of the Puerto Rico residents in 1990 was \$5,642.91. The above mean income exceeds the numbers attained at the two groups of agrarian workers.

The most important income sources for the surveyed population were the agrarian work wages, Nutritional Food Program (Programa de Asistencia Nutricional-PAN), and unemployment benefits. The Federal Social Security, also, was a great important income source for the observed population.

**Table 8**

**PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES REGION BY SOURCES OF INCOME: MARCH, 1997**

<b>Income Sources</b>	<b>Percent</b>
Own Business	3.3
Not Agriculture Work	9.3
Social Security	14.7
Pensioned	0.9
Retired	0.3
Nutritional Food Program	22.8
Social Services	0.6
Unemployment Benefits	17.1
Agriculture Work	29.2
Agriculture Work In USA	0.9
Other	0.9
Total	100.0

Seventy five percent of the observed group had housing units with farm. The remaining few groups live in urban houses, apartments and public housing. The majority of the housing units were built of concrete materials.

Table 9

PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES BY SOME ECONOMIC VARIABLES: MARCH, 1997

Housing Characteristics	Percent
<b>Housing Type</b>	
Apartment	3.7
Public Housing	1.7
Urban Area	6.4
House With Farm	75.4
Other	12.8
Total	100.0
<b>Construction Material</b>	
Cement	73.4
Cement and Wood	14.9
Wood	2.0
Wood and Zinc	7.7
Other	2.0
Total	100.0

Over 75 percent of the Humacao-Yabucoa agrarian workers were using housing units of three bedrooms.

Approximately 83 percent of the interviewed people had one bathroom on their housing units.

Table 10

PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS FROM HUMACAO-YABUCCA MUNICIPALITIES BY SOME ECONOMIC VARIABLES: MARCH, 1997

Housing Characteristics	Percent
<b>Number Of Rooms</b>	
0 rooms	0.0
1 - 2 rooms	28.7
3 rooms	48.4
4 rooms	18.3
5 +	4.0
Total	100.0
Mean	2.9
<b>Number Of Bathrooms</b>	
0 bathroom	2.6
1 bathroom	82.9
2 +	14.5
Total	100.0

The 92 percent of the observed agrarian workers had access to potable water service. About 99 percent of this population had access to electric energy service. The 64 percent receive telephone service, while, 84 percent receive solid waste disposal service.



Tabla 11

PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES BY SOME ECONOMIC VARIABLES: MARCH, 1997

Housing Facilities	Percent
<b>Potable Water Service</b>	
Yes	92.0
No	8.0
Total	100.0
<b>Electric Energy Service</b>	
Yes	98.6
No	1.4
Total	100.0
<b>Telephone Service</b>	
Yes	64.0
No	36.0
Total	100.0
<b>Waste Disposal Service</b>	
Yes	84.3
No	15.7
Total	100.0

A house facilities index was created, with four variables. These variables indicates if the housing unit had the following facilities: water service, electric energy, telephone, and solid waste disposal. The index

has values from zero, to indicate the absence of all facilities, to four, that have all the facilities.

Table 12

**PERCENT DISTRIBUTION OF AGRICULTURAL WORKERS FROM HUMACAO-YABUCOA MUNICIPALITIES BY FACILITIES INDEX: MARCH, 1997**

<b>Facilities Index</b>	<b>Percent</b>
No Facilities	0.6
1 - 2	12.4
3	30.8
All	56.2
Total	100.0

The index analysis showed that 56 percent of the housing units had all the facilities. The 86 percent of the housing units, had at least, three of these services.

Approximately, 43 percent of the interviewed persons are not the owner of their housing units. The majority of the not owners were living in housing units that belongs to their parents (55.2).

Ten percent of the not owners of their housing units, were paying for rent. The monthly average of rent payment was \$188.00.

The majority of the subjects that are not owners, would like to attain one housing unit of their property. Based on the answer of major proportions, the ideal type of housing unit for the Humacao-Yabucoa agrarian workers

have been the following description: Housing unit with farm (94.1 percent), built in cement (95.6 percent), with three bedrooms (61.8 percent) and one bathroom (70.6 percent).

The 38 percent of the not owners of their housing units have land in which, they can build a house. The economic factor was the principal obstacle for obtaining a house of their property.

### **Conclusion**

The observed population was similar to the one in the 1990 Census. They are similar in the age distribution, although age was higher in the observed population.

Both groups have similarities in the marital status, educational level and incomes. They are different in the employment level, because the observed subjects had an elevated level of unemployment.

The observed population and the agrarian workers of Puerto Rico showed inferior socio-economical levels in comparison with Puerto Rico residents. The education and incomes of the Puerto Rican population was higher than the two groups of agrarian workers. The observed population and the agriculture workers of the Island were married in higher proportion than the residents of Puerto Rico. The proportion of persons involve in consensual relationships

was less common in total population of Puerto Rico than in the other two groups.

The surveyed workers, generally, belongs to a marginal group of the Puerto Rican society. It is distinguished by the elevated unemployment level, and the lower levels of education and income. The above lower socio-economical level will generate a demand for the governmental services. This population has been dependent on state services such as health services for medical indigents, unemployment benefits, Nutritional Food Programs (PAN), low costs housing units and social services.

This resource demand also includes public school and services for the older people. This population (65+ years) requires economical and health services, that makes it necessary to be considered at the time of making public policies.

A large proportion of the observed workers at Humacao-Yabucoa area are living in housing units in which they do not own. The majority of them live with their parents. This group would like to obtain a housing unit of their property. The principal obstacle to obtain a house was the low income.

After this research, the suggestion for future studies is to emphasise in the adequate of the housing units, ownership, the price and debt of it.

The study of Humacao and Yabucoa municipalities show a population with great needs such as housing, economical, educational, and healthcare. It is necessary to create programs to improve the disadvantage situation for these workers in comparison with rest of the population of Puerto Rico.

## BIBLIOGRAPHY

Morales Del Valle, Zoraida (1996). *Inmigrantes Y Vivienda: Paradigma Del Año 1990 En Puerto Rico*. Revista Del Centro De Investigaciones Demográficas, Vol. 2 No. 1, Pags. 54-73. San Juan, Puerto Rico.

Rodriguez-Morán, Juan (1996). *Características Demográficas, Sociales Y Económicas De Los Inmigrantes A Puerto Rico Para Los Períodos 1965-70, 1975-80 Y 1985-90*. Research Project Presentation To Complete The Requirements To Obtain Master Degree In Demography. San Juan, Puerto Rico.

Rodríguez-Morán, Juan (1996). *Características Sociales, Económicas Y Demográficas Del Grupo Inmigrante A Puerto Rico Para El Período : 1985-1990*. Revista Del Centro De Investigaciones Demográficas, Vol. 2 No. 1, Pags. 34-53. San Juan, Puerto Rico.

U.S. Bureau Of The Census (1990). *United States Census Of Population, Puerto Rico*.

Vázquez Calzada, José (1988). *La Población De Puerto Rico Y Su Trayectoria Histórica*. Raga Offset Printing Services. San Juan, Puerto Rico.