

Health and Socio-Economic Studies in Puerto Rico

V. SECOND SURVEY OF THE LAFAYETTE AREA* †

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† This is the fifth of a series of articles dealing with the health, social and economic conditions prevailing in the rural areas of Puerto Rico. Those already published deal with conditions in the sugar cane,¹ tobacco, coffee and fruit regions,² physical measurements of agricultural workers,³ and physical impairments of adult life among agricultural workers.⁴

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INTRODUCTION

IN 1936 the Puerto Rico Reconstruction Administration inaugurated its sugar rehabilitation program with the purchase of Central Lafayette, an absentee-owned sugar cane plantation and mill situated on the south eastern coast of Puerto Rico.

For the operation of the Central, the P.R.R.A. sponsored the organization of one industrial and twelve land cooperatives. Each of the land cooperatives occupies an area of less than 500 acres, pursuant to the provisions of the Joint Resolution approved by the U. S. Congress on May 1, 1900, which limits the possession of land by corporations to a maximum of 500 acres.

The land is cultivated by the members of the cooperatives who employ hired labor when necessary. The members of the cooperatives, however, receive wages as ordinary workers; their share in the profits of the cooperatives, if any, is accumulated as a reserve fund to be distributed eventually in proportion to the time worked by each one of them. Thus, the workers are, and for many years will be, only nominal owners of the land. To be a member of a land cooperative the applicant must be a subsistence homesteader within the P.R.R.A. resettlement program. The industrial cooperative, which operates the mill, is composed of the land cooperatives, their members, and of independent *colonos*, farmers, who grind their sugar in the mill at Lafayette. Membership in the industrial cooperative, however, is not compulsory for the independent *colonos*. The purchase of the Central was an experimental step toward retrieval of land from the large landholders for its distribution either directly or through cooperatives to trained agricultural workers.

In order to ascertain the health and socio-economic conditions of the people living within the limits of the Central, a survey of the area was carried out by the Health Division of the P.R.R.A. in 1936.¹ The aim was to use the findings of the survey as a possible index of conditions in the rural areas in which the main source of income is the sugar cane industry, and to obtain data which might serve as a basis for comparison with future surveys.

OBJECTIVES OF PRESENT SURVEY

The present survey was undertaken with the purpose of ascertaining the conditions prevailing in the surveyed area after nearly four years of operation of the Central as a government-sponsored cooperative enterprise, to compare such conditions with those exist-

ing in 1936, and to record the new activities or changes which may have taken place since the previous survey.

It should be made clear that it is not intended here to analyze, judge or evaluate the business organization of the Central as such, but merely to present the existing conditions in so far as they may affect, in one way or the other, the living standards of the people who live within the limits of the Central.

PROCEDURE

The information for this study was gathered by a number of enumerators who canvassed every house in the surveyed area and worked under the supervision of a trained social worker. The same investigation sheet of the 1936 survey was used to collect the information. Since three medical dispensaries and a modern hospital have been functioning in the surveyed area during the last two or three years, no sanitary inspectors or nurses were employed, because it was assumed that most of the information regarding the health conditions of the population could be obtained from the records of the dispensaries and hospital.

Two supplementary sheets were prepared to collect the data dealing with the illnesses of the population and with the dispensary and hospital services offered to the families. The enumerators asked the families whether members had been sick during the last twelve months and if they had received any service from the dispensaries or from any hospital. The information received was then checked in the records of the respective dispensary or hospital.

Other information used in this report was obtained from the records of the *Asociación Azucarera Cooperativa Lafayette*, (which is the official name of the mill cooperative), the Community Centers Section, the Rural Sanitation and Health Section and the Central Office of the P.R.R.A. and through questionnaires, letters and personal interviews with officials and employees of the P.R.R.A. and the *Asociación Azucarera Cooperativa Lafayette*, including the medical director and the social worker of Lafayette's hospital.

HEALTH CONDITIONS

CHANGES IN POPULATION. The first change of importance brought out by the present investigation is a considerable increase in the number of families living in the surveyed area, which is the same as that covered by the 1936 survey. A total of 860 families with 4,400

members was then investigated, whereas in the present survey 1,101 families with 5,911 members have been canvassed. Thus the relative increase in the number of families is 28.0% and 34.3% in the number of members. This increase in population and the limitations in production imposed by the Federal regulations under the sugar production program have exercised a very definite and harmful influence on the general living conditions existing in Lafayette Central today.

The increase has been particularly significant in the *colonias* located in Arroyo (61.8% in the number of families and 70.9% in the number of members) and Patillas (56.0% in the number of families and 66.7% in the number of members). In the *colonias* located in the municipality of Maunabo (Bordelaise and Garonne), there has been a decrease of 19.4% in the number of families and of 17.1% in the number of members in families. The average number of persons per family is 5.4; in 1936 it was 5.1. The increase in the average size of the families was observed in all *colonias*, except in colonia Garonne in which there is a slight decrease (from 5.0 to 4.9) and in colonia Lafayette (6.4 to 6.2) which is mostly populated by employees' families. (Table 1.)

TABLE 1
Number of Families and Members in Families, by Colonias, 1940 and 1936,
and Per Cent of Change

Municipality and Colonia	Number of families			Members in families		
	1940	1936	% of change	1940	1936	% of change
ALL COLONIAS	1,101	860	28.0	5,911	4,400	34.3
ARROYO	437	270	61.8	2,384	1,395	70.9
Lafayette	65	69	-5.8	406	440	-7.7
Palmas Cuatro Calles	287	108	165.7	1,512	502	201.2
Enriqueta-Concordia	85	93	-8.6	466	453	2.9
PATILLAS	390	250	56.0	2,062	1,237	66.7
Felicita	215	86	150.0	1,218	461	164.2
Catalina	17	55	-69.1	84	269	-68.8
Providencia	158	109	45.0	760	507	49.9
MAUNABO	274	340	-19.4	1,465	1,768	-17.1
Bordelaise	139	183	-24.0	806	988	-18.4
Garonne	135	157	-14.0	659	780	-15.5

From the records of the previous survey¹ it was possible for us to determine the families living in Lafayette in 1936, the new families formed in the interval between the two surveys among the former

residents, and the families that came into the area after the first survey was carried out.

Of the total number of families (1,101) 524 or 47.6% are old families that in 1936 were residing in the surveyed area, most of them (74%) in the same colonia where they were investigated in 1940; 577 or 52.4% of the total are new families that arrived in the surveyed area after the Lafayette Central and certain sugar lands were acquired by the Lafayette Cooperatives and, therefore, were not included in the 1936 survey. Most of the latter (84.2%) are from the same municipality in which the colonia where they reside is located; 91 families (15.8%) are new families coming from municipalities other than Arroyo, Maunabo and Patillas. In the colonias located in the municipality of Arroyo, the percentages of old and new families are 46.0 and 54.0 respectively; in those located in Patillas 39.2 and 60.8 respectively, and in Maunabo, where no increase of population was registered, more than three fifths (62.0%) of the families are old residents of the area and nearly two fifths (38.0) are new families. The 524 old families investigated in 1940 represent 60.9% of the families investigated in 1936 (860).

The highest proportions of new families coming into the surveyed area are registered in colonias Palmas Cuatro Calles of Arroyo (59.6%), and Catalina (52.9%) and Felicita (70.7%) of Patillas; the highest proportion of new families coming from other municipalities outside of Arroyo, Patillas and Maunabo is shown by colonias Lafayette (53.8%), Enriqueta-Concordia (33.3%) and Palmas Cuatro Calles (17.0%). Therefore, the highest number of new families is established in the colonias located in the municipality of Arroyo, close to the Lafayette mill.

It is to be understood that the Central is not organized in colonias as in 1936; the present organization is based on the land cooperatives and in several land areas still controlled by the P.R.R.A. for pasture and for experimental purposes. Besides, there are about 1,000 *cuerdas** of land which have been allotted for farmsteads and central service farms. For the comparisons given above, therefore, we have allocated, as far as possible, the various cooperatives and settlements within the boundaries of the old colonias in the respective municipalities. In fact, most of the cooperatives were organized in the places where the colonias existed and bear the same name of the colonias.

* A *cuerda* is 0.974 of an acre.

As in the previous survey, the site of the sugar mill and the territory surrounding it, where most of the employees live, has been considered as a separate unit for the purpose of this investigation.

AGE DISTRIBUTION. Comparing the age distribution of the population in 1940 and 1936, it is noticed that the 1940 population is somewhat younger: the percentages of people under 10 years of age both in the white and in the colored race are higher than in 1936; from 10 to 24 years there are relatively less persons in 1940 than in 1936, but in the age group 25-34 years there are about 3% more persons in 1940 than in 1936. The other differences are not very significant. (See Table 2.)

TABLE 2
Percentage Distribution of the Population in the Survey Area, by Age and Color, 1940 and 1936.

Age	Total		White		Colored	
	1940	1936	1940	1936	1940	1936
ALL AGES	100.0	100.0	100.0	100.0	100.0	100.0
Under 1 year	4.1	3.9	4.2	3.8	4.0	3.9
1-4 years	13.7	12.8	12.6	11.6	14.6	13.8
5-9 "	15.0	13.7	14.0	13.2	15.9	14.1
10-14 "	11.2	12.9	11.0	12.3	11.4	13.3
15-24 "	20.8	22.6	21.0	22.5	20.6	22.7
25-34 "	13.7	10.9	14.4	11.8	13.1	10.2
35-44 "	10.4	10.9	10.8	11.3	10.1	10.7
45-54 "	6.4	7.0	6.6	7.5	6.3	6.5
55-64 "	2.5	3.5	3.1	3.9	2.1	3.1
65 years and over	2.2	1.8	2.4	2.0	1.9	1.7

COLOR AND SEX. As was the case in 1936, there is a higher proportion (54.3%) of colored people in the total population surveyed. However, the percentage of white persons has increased in 1940 (45.7 as against 43.8 in 1936) which probably is due to the fact that there was a higher proportion of white persons in the newly arrived families.

There are more males than females both among the white and among the colored people in 1940 as in 1936, and the proportion of the sexes happens to be exactly the same (51.1% males and 48.9% females) in both years.

LENGTH OF RESIDENCE. Information was obtained from every family as to the length of residence in the house and in the commu-

nity. By "community" was understood the municipality in which the family resided. Taking into account that a large number of families had come to the surveyed area during the last two or three years, the length of residence in both house and community was tabulated for single years up to four, and then in one group from five years up. Considering the total number of families, 56.0% of them had resided for one year or under in the houses where investigated; 16.4% said that they had resided in the house for two years; 3.8% for three years and 17.4% had been residing in the same house for five years or over. This shows the great shift in house occupancy that has taken place during the last three years, since more than three fourths (76.0%) of the families had been residing in the house where they were investigated for only three years or less. As to the resettlers' families,* nearly four fifths of them (79.4%) had been residing in the house for only one year or less; 17.3% for two years; and less than 1% for three years. We find more or less the same situation in the case of the *batey* laborers' families, of whom nearly two thirds (64.9%) had resided in the same house for one year or under, about one fourth (24%) for two years, and 9.3% for three years. This is in agreement with the construction program for resettlers' and *batey* laborers' houses which was started in 1937 and continued during 1938 and 1939.

Contrariwise, in the squatters' houses, which are the old type houses, about one half of the families (45.3%) had resided in the same house for five years or over at the time of the investigation. However, the percentage of families living in the same house for one year or under (24.5%) is too high and indicates that a large number of vacant houses of the old type have been occupied by new families during the years 1938 and 1939.

As to the length of residence in the community, the information gathered shows that the vast majority of the families have been formed, or at least have resided in the place for a large number of years. More than seven tenths of them (71%) have been residing in the community for a period of five years or over whereas the percentage of families who reported a length of residence in the community of four years or less is 26.1. More than three fifths (62.5%) of the resettlers' families have been living in the community for five years or over, 24.6% for one year or less, and 7.6 for two years. Four

* For the definition of resettlers, *batey* (pronounced bah-tay') laborers, squatters and employees, see pages 574-576.

fifths (79.1%) of the *batey* laborers' families have lived in the community for five years or more, 9.3% for one year or less, and 4.4% for two years. Among the squatters' families we find also that nearly four fifths (79.8%) had resided in the community for five years or over, 8.0% for one year or under, and 3.0% for two years. (See Table 3.)

TABLE 3
Length of Residence of Families, by Economic Classification—Per Cent

Place of Residence By Economic Classification	Length of Residence						
	Total	1 year or under	2 years	3 years	4 years	5 years & over	Not specified
TOTAL FAMILIES							
In House	100.0	56.0	16.4	3.6	3.2	17.4	3.3
In Community	100.0	15.4	5.5	2.6	2.6	71.2	2.7
RESETTLERS							
In House	100.0	79.4	17.3	0.6	—	—	2.7
In Community	100.0	24.6	7.6	0.2	1.9	62.5	3.2
LABORERS							
In House	100.0	64.9	24.0	9.3	0.9	—	0.9
In Community	100.0	9.3	4.4	3.1	1.8	79.1	2.2
SQUATTERS							
In House	100.0	24.5	11.0	6.1	7.6	45.3	5.5
In Community	100.0	8.0	3.0	3.0	3.4	79.8	2.8
EMPLOYEES							
In House	100.0	18.9	12.2	16.2	10.8	36.5	5.4
In Community	100.0	6.7	5.4	14.9	6.7	64.9	1.4

FORMER RESIDENCE OF FAMILIES. The figures above seem to indicate that the majority of the newly arrived families have been of the resettlers' class, and to clarify the point we analyzed the former residence of the families as appearing in the investigation sheets. We find that 347 of the families were from Arroyo, 392 from Patillas, 259 from Maunabo and 91 from other places (30 from Guayama, 12 from Yabucoa, 7 from Salinas and 42 from all other places). Therefore, 998 families or 90.6% of those who stated their former residence are from one or another of the three municipalities in which Lafayette is situated, and only 8.3% are from other places, mostly from neighboring towns.

In the resettlers' families only twelve are from outside of the municipalities in which Lafayette is located.

THE HOUSES. The improvement in the housing facilities in the surveyed area has been very significant since 1936. All the *bohios*,

which made up nearly 10% of the total number of houses in the surveyed area in 1936, have disappeared, as well as most of the small and flimsy wooden houses. These have been replaced with nearly 500 hurricane-proof concrete houses for resettlers and 225 wooden houses for the batey laborers.

The houses for the resettlers are built within small plots of land of a little more than an acre which are cultivated by the resettlers as subsistence farms. For both house and land they pay a low monthly rent according to a lease contract, whereby it is provided that if the resettler pays such rent for a number of years (\$2.00 per month during the first year and \$3.06 per month during the successive years for a period of 25 years) he acquires the property of the house and farm.

Therefore, there are at present four types of houses in the survey area:

1. The houses for the resettlers which consist of a living and dining room both in one compartment of 9'½" x 18'7"; two bedrooms of 9'3½" x 9'6½" each, and a kitchen of 5'7" x 5'2". The interior partitions are constructed of wood and the floor consists of a course of tamped earth and another course of pressed stone 6" thick with a top finish of ¾" cement mortar. The floor is made ratproof by means of outside concrete walls which penetrate the ground at a depth not less than 2'. The roof consists of an inclined continuous reinforced concrete slab 4" thick. The roof and walls of the kitchen are constructed of corrugated galvanized iron and the floor of cement in the same way as that of the main house. The latrine is of the pit type and is made mosquito and flyproof. The average cost is \$828.53 per house.

2. Laborers' houses with no land, but built in lots large enough to permit the dweller to raise a few vegetables, flowers, etc. These are frame houses roofed with galvanized iron and are constructed in groups forming small villages, commonly called bateyes. They have the same accommodation as the resettlers' houses: a living and dining room, two bedrooms, a kitchen and a sanitary latrine. The average cost per house is \$583.60.

3. What we conventionally call squatters' houses, because most of them are old houses belonging to the families who live in them. Since the house construction program is still in progress, these houses will eventually disappear from the area.

4. The employees' houses, some belonging to the cooperatives and some to the P.R.R.A., which are ceded free of charge to the employees.

Size of Houses. While in 1936 nearly three fifths of the houses (58.6%) had from 100 to 299 square feet of floor area, in 1940 more than two thirds (66.8%) of the houses are of 400-599 square feet of

floor area. All the houses for resettlers and laborers have 400 square feet of floor area. The houses of less than 400 square feet of floor area have dropped to only 27.3% of the total and this proportion is being reduced every day by the construction of houses of a larger size. (See Table 4.)

TABLE 4
Size of Houses

Size of Houses	Per Cent of Houses				
	Total	Resettlers	Laborers	Squatters	Employees
TOTAL	100.0	43.1	20.4	29.7	6.7
Under 200 sq. ft.	14.9	—	—	47.4	12.2
200-399 sq. ft.	12.4	—	—	37.6	18.9
400-599 sq. ft.	66.8	100.0	100.0	8.9	9.5
600-799 sq. ft.	1.8	—	—	2.4	16.2
800 sq. ft. and over	3.3	—	—	2.4	37.8
Not specified	0.7	—	—	1.2	5.4

Rooms per Dwelling. The situation with respect to the number of rooms per dwelling and the number of occupants per room in the employees' and squatters' houses has not varied greatly because practically all of the families investigated in these classes live in the same houses which they occupied in 1936. Nevertheless, even among them, conditions may have improved to some extent since all of the straw and *yaguas* huts, as well as many of the smallest houses, have disappeared from the area. We must consider therefore only the resettlers' and laborers' houses which each consist of two sleeping rooms, one large living and dining room and a kitchen. In the 475 resettlers' families there are 2,793 members and in the 225 laborers' families there are 1,127 members. Therefore, the average number of occupants per room including living room and sleeping rooms for these 700 families is 1.9 for the total, 2.0 for the resettlers' families and 1.7 for the laborers' families. The average number of occupants per sleeping room is 2.8 for the total, 2.9 for the resettlers' families and 2.5 for the laborers' families.

Although 1.9 persons per room and 2.8 persons per sleeping room still indicates a large degree of overcrowding, the situation has improved since 1936, when the average number of occupants per sleeping room was 3.5, and 64.6% of the families lived in houses with only one room with an average of 4.6 persons per sleeping room. Also, since most of the country people use the living room as a dormi-

tory, and considering, moreover, that the rooms in the new houses are of a larger size, the degree of overcrowding is lower in 1940. (See Table 5.)

TABLE 5

Number of Occupants per Room Among Resettlers' and Laborers' Families

Economic Classification	Number of Families	Number of Rooms			Total No. of Members in Families	Average Number of Occupants per Room	
		Total	Living	Sleeping		Total	Sleeping
TOTAL	700	2,100	700	1,400	3,920	1.9	2.8
Resettlers	475	1,425	475	950	2,793	2.0	2.9
Laborers	225	675	225	450	1,127	1.7	2.5

Furniture. In many of the houses investigated considerable improvement has been observed in the amount, kind and quality of the furniture and home accessories, as well as in the decoration, neatness and general appearance of resettlers' and laborers' homes. The home demonstration work of the Community Centers and the Agricultural Extension Service has undoubtedly contributed to this end. In some of the houses, pictures, curtains, flowerpots, ornamental plants and other decorations may be seen, in pleasant contrast with the utter neglect of houses in the past. However, much is yet to be done along these lines, since even among the resettlers' and laborers' houses many still have an unpleasant appearance and are poorly kept.

On the average, the families in the surveyed area have 9.7 pieces of furniture. The resettlers' families, however, are below the average with only 6.7 pieces per family; in the employees' families, the average number of pieces per family is 20.8. In some of the workers' houses, refrigerators, radio sets, sewing machines and other modern furniture and conveniences were observed.

WATER SUPPLY. In some of the new houses a water tank has been constructed to obtain rain water for house consumption; for most of them, water has been provided by means of small water supply systems or pipe lines constructed by the P.R.R.A. The water, however, is not piped to the houses; public fountains have been installed near the houses from which the families obtain their provision of water. Up to 1939 the P.R.R.A. has spent \$96,258.75 in these water supply systems. Nearly three fifths (56.4%) of all the families are provided with water from these aqueducts, and 10% with rain water, mostly from the water tanks. Therefore, two thirds of the

families (66.6%) have a good or acceptable water supply in comparison with 41.1% in 1936.

Over one fourth of the families (26.4%) still consumes surface water from wells, brooks and rivers, while in 1936 about one half of the families obtained their water supply from these sources. Seventy-seven families or 7% of the total state that they use water from the irrigation canals. This is in part due to the fact that during the dry season, which sometimes lasts for months, there is no water in the aqueducts. In some places the reason is that the irrigation canals are near the houses and no other water supply has been provided. (See Table 6.)

TABLE 6

Source of Water Supply, by Economic Classification of Families

Source	Total Number of Families (Per Cent)	Per Cent of Families			
		Resettlers	Laborers	Squatters	Employees
TOTAL	100.0	43.1	20.4	29.7	6.7
Aqueduct	56.4	64.0	45.8	48.9	73.0
Well, brook, river	26.4	28.8	16.9	33.3	9.5
Rain	10.2	.6	27.1	11.0	16.2
Irrigation water	7.0	6.5	10.2	6.7	1.3

DISPOSAL OF HUMAN EXCRETA. All the houses for resettlers and laborers have been provided with sanitary privies of the pit type, constructed outside of the houses and mosquito and flyproof.

As may be observed from Table 7, the improvement in this respect has been outstanding: in 1936, 43.1% of the families did not have any sanitary convenience whatsoever in their houses; this proportion has been reduced in 1940 to 10.4%. Only 114, or 34.9% of the squatters' houses have no latrines. Thus, the proportion of families having latrines in their houses is 83.7% and 5.1% have water-closet installations.

TABLE 7

Disposal of Human Excreta

Disposal of Human Excreta	Total	Per Cent of Families			
		Resettlers	Laborers	Squatters	Employees
TOTAL	100.0	43.1	20.4	29.7	6.7
None	10.4	—	—	34.9	1.4
Water-closet	5.1	—	.5	4.9	52.7
Latrine	83.7	100.0	99.5	59.0	40.5
Not specified	0.7	—	—	1.2	5.4

NUTRITION. The families were asked what food they ordinarily consumed in the three daily meals and the answers were carefully recorded and then tabulated, grouping all those that consumed the same kind of food in each meal.

Although in some cases the dietary of the families may have improved, the data obtained in the present survey show that the situation in this respect is probably worse than in 1936. Taking the three most usual combinations of food for the three daily meals we may summarize the findings to compare them with those obtained in 1936 as follows:

FOOD COMBINATIONS	PER CENT OF FAMILIES	
	1940	1936
<i>Breakfast</i>		
1. Black coffee, etc.	40.4	38.0
2. Coffee with milk, etc.	51.0	49.9
3. Coffee with milk, bread and butter, etc.	8.5	12.0
<i>Lunch</i>		
1. Vegetables and codfish	19.6	36.0
2. Vegetables, codfish, rice-beans, etc.	73.8	52.2
3. Rice-beans, meat, fish, etc.	6.6	11.8
<i>Dinner</i>		
1. Rice and beans	75.7	75.7
2. Vegetables, codfish, rice-beans	7.6	3.9
3. Rice—beans, meat, etc.	16.6	20.3

From the data above it is observed that the percentages for combination 3 in each meal, in which the more varied diets are included, are consistently lower in 1940 and that in the diets most commonly taken (combinations 1 and 2) which are the cheaper and more unbalanced diets, the percentages are generally lower in 1936. The percentage for the combination "rice and beans" for dinner is the same (75.7) in both years. Although these families consume about 90% of the products raised on the farm, part of which consists of fresh vegetables, eggs, etc., the consumption of cereals, meat, fish, and other essential foods is extremely low.

Consumption of Milk. More than two thirds (69.5%) of the families in the surveyed area consume milk as compared with about 60% in the 1936 survey. The average consumption of milk per family is 2.0 pints while in 1936 it was 2.3 pints. Therefore, the per capita daily consumption of milk, (0.36 pints) is slightly below that recorded in 1936 (0.40 pints). The highest average consumption is found among the families who have their own cows, with 3.8 pints per family per day.*

* Average daily consumption of milk for all families is 1.8 pints per family and 0.25 pints per capita. The daily per capita consumption among resettlers consuming is 0.20 pts., and 0.19 pts., all families considered. Among the bated laborers the per capita consumption is 0.22 and 0.22 pts., respectively; among the squatters, 0.26 and .25, and among the employees, 0.74 and 0.72.

A point of interest is that 149 families or 13.5% of the total state that they consume canned milk, while in 1936 only seven families or less than 1% of the total number of families consumed canned milk. (See Table 8.)

TABLE 8
Daily Consumption of Milk, by Economic Classification of Families

Kind of Milk	Total No. of Families	Total Milk Consumed (Pints)	Average Daily Consumption per Family (Pints)				
			Total	Resettlers	Laborers	Squatters	Employees
TOTAL	765	1,497.5	2.0	1.2	1.1	1.2	4.4
COW'S MILK	508	1,193.5	2.3	2.0	1.6	2.1	5.2
Own	102	386.5	3.8	2.8	2.2	4.0	6.8
Dealer	406	807.0	2.0	1.7	1.5	1.7	4.4
GOAT'S MILK	108	155.5	1.4	1.4	1.4	1.5	1.5
CANNED MILK	149	148.5	1.0	0.9	1.0	1.2	0.9

Among the resettlers' families, 29.3% do not consume milk; 23.1% among the laborers' families; 41.0% among the squatters' families and only 4.1% among the employees' families.

HEALTH AND MEDICAL CARE. For the last two or three years three rural medical dispensaries have been functioning in the surveyed area under the Rural Sanitation and Health Section during 1939 and under the Medical Section and Health Division of the P.R.R.A. during the previous years. One of the dispensaries is established in colonia Palmas Cuatro Calles of Arroyo, another at colonia Felicita in Patillas and the third in colonia Bordelaise of Maunabo. Judging from the data available and also from the reaction of the people living in the surveyed area, the services rendered to the community by these health centers have been of paramount importance. Most of the families living within the area, and some in the neighborhood have availed themselves of the facilities offered by the dispensaries. More than four fifths (84%) of the families investigated reported that they had received medical attention at the P.R.R.A. dispensaries or the Lafayette Hospital, whereas only 16.0% reported that they had been attended by the respective municipal doctor (13.4%) or public health unit (2.5%).

The municipalities of Arroyo, Patillas and Maunabo are located within the zone of the highest morbidity from malaria in Puerto Rico and the dispensaries have an enormous task in the prevention and treatment of this and other diseases which are prevalent.

The three dispensaries are in charge of one physician who, in addition, attends two other dispensaries, one at barrio Guardarraya of Patillas and another at barrio Palo Seco of Maunabo. Although the last two attend some cases from Lafayette, they are not properly within the area. There are a graduate nurse and a clerk in each dispensary. The nurse distributes her time according to a scheduled program of work whereby fourteen of the forty weekly hours are devoted to home visits and demonstrations, eight hours to the clinics, eleven hours to dressings, taking of samples, vaccinations, injections, etc., and seven hours to the keeping of records and general office work. The physician, and the nurse, devote part of their time to health education work by means of public lectures and health talks to the patients attending the clinics and while visiting the homes.

The physician works forty hours per week, of which he devotes one day, or eight working hours, to each dispensary. The time devoted by the physician to each dispensary is manifestly inadequate, but consideration should be given to the fact that the work of the dispensaries, as they are now organized, is mainly of a preventive and educational character. Therefore, they offer medical care only in connection with the work entrusted to them, and because there is a pressing need for such service which should be provided for, in part at least, by the Insular Government and by the respective municipal governments. The therapeutic work, particularly in Arroyo and Patillas, is largely carried out by the Lafayette Hospital, but even so, the need of a coordinated medical service which would include the health education, the preventive and the therapeutic phases of the work, is apparent. However, the improvement made along these lines is outstanding.

Besides the work carried out in the dispensaries, there are two sanitary inspectors in the surveyed area who are in charge of strictly preventive work, including sanitary inspections, mosquito control, house-to-house treatments against malaria and intestinal parasites, and general immunization work, with stress upon smallpox and typhoid fever prevention.

During the year 1939 these inspectors worked in the colonias situated in Arroyo and Patillas and carried out the following work: 1,834 typhoid fever inoculations and 739 smallpox vaccinations; 310 persons were treated against malaria, 452 treatments were given, and to 830 persons who were treated for intestinal parasites, 1,501 treatments were administered. They sent 547 blood samples and 1,208 samples of feces to the laboratory, made 1,924 hemoglobin

readings and gave iron sulphate treatments to 345 persons. In the health education campaign they delivered 659 talks on health and sanitation, which 2,511 persons attended.

The number of clinics held during the year in the three dispensaries was 143 to which 1,047 new patients were admitted. The majority of these patients were admitted to the general clinic in which general, parasitic and communicable diseases, notably malaria cases, were seen. The special clinics have a relatively low number of patients with the exception of the pediatric clinics, in which children up to six years are attended, and the clinic for gynecologic and obstetric cases. The miscellaneous cases attended numbered 3,517 and the compensation cases, 190. Miscellaneous cases are those which receive some attention in the dispensary but are not admitted to the clinic. The compensation cases are industrial accident cases which are attended pursuant to arrangements with the U. S. Employees' Compensation Commission through the Finance Division of the P.R.R.A. The total number of cases attended during the year in the three dispensaries is therefore 4,987.

The physician made 145 home visits to the patients and the visits to the homes by the nurses numbered 4,516. The number of persons treated for malaria was 2,216, to which 4,483 treatments were given, and the number of persons treated for intestinal parasites was 158, to which 253 treatments were given. Forty persons were treated for syphilis and the number of luetic treatments numbered 153.

The Lafayette Hospital. As an example of the social functions which many believe the sugar industry should provide for the benefit of its working population, a modern hospital was constructed by the P.R.R.A. at a cost of \$55,550.86. The equipment, valued at about \$35,000.00, was paid for by the mill cooperative which operates the hospital.

The hospital was planned and constructed having the following needs in mind:⁵ (a) an emergency service for the care of industrial accident cases; (b) an out-patient department for ambulatory cases; (c) facilities for obstetrical cases including pre-natal clinics and (d) general medical and surgical wards for men, women and children.

The building, of modern style, is so arranged that its bed capacity can be increased without disturbing the administrative and service departments. On the first floor, the administrative, diagnostic, dietary and out-patient departments are established. The latter is provided with a separate entrance leading to the information and

registry clerk; a clinical laboratory and pharmacy operate in conjunction with the out-patient department. An elevator connects this section with the second floor for service, patients, and stretcher cases. The examining room, emergency treatment room, necropsy room and x-ray diagnostic unit are also on the main floor. A supply receiving room and general storage are adjacent to the dining room, kitchen, and office of the dietitian and housekeeper. The laundry is installed in the northwest corner with the power plant as a separate unit directly outside. The second floor consists of two adult wards for men and women; a smaller room for private patients; a children's ward opening to a solarium; a preparation and labor room close to the delivery room with a crèche for four bassinets, an infants' bath and a milk laboratory; and an air-conditioned operating suite consisting of four rooms.

The hospital has a capacity of thirty-two beds, twenty-six of which are for the members of the cooperatives, the employees and the workers and their immediate families and six are for pay-patients.

The hospital was opened on April 1st, 1939, and during the nine months ending December 31, 217 clinics were held of which 186 were general clinics and 31 prenatal clinics. The number of new and old patients seen in these clinics was 5,879, and 359 patients were hospitalized. The average number of days in hospital was 13.8 for non paying patients and 12.0 for the pay-patients. (See Table 9.)

TABLE 9
Work Done at the Lafayette Hospital During Nine Months
*(April 1st to Dec. 31, 1939)**

<i>Kind of Work</i>	<i>Total</i>	<i>General Clinics</i>	<i>Prenatal Clinics</i>
Number of clinics held	217	186	31
New patients admitted	2,996	2,894	102
Old patients seen	2,883	2,779	104
Total patients interviewed by the Social Worker and examined by physician	5,879	5,673	206
Patients hospitalized	359	—	—
Total day-patients in hospital	4,968	—	—
Average number of days in hospital	13.8	—	—
Pay-patients hospitalized	16	—	—
Total day-patients in hospital	192	—	—
Average number of days in hospital	12.0	—	—

* The first patient was hospitalized on March 29, 1939; the general clinics began on April 3rd, 1939 and the prenatal clinics on May 6, 1939.

Services rendered by the hospital during the nine months referred to above may be summarized thus: 3,324 laboratory, 370 radiographic and 3 fluoroscopic examinations were made. The resident physician made 472 visits to the homes of the patients; 16,120 prescriptions were dispensed in the pharmacy and 84 antitetanic and 1,126 antiluetic treatments were given. In the emergency room, 224 minor operations were performed, 3,062 dressings were made and 1,313 injections were administered.

General Morbidity. The field workers asked the families if there had been persons ill among them during the twelve months previous to the date of investigation, and a morbidity sheet was filled out for each person reported ill. In this form, information was obtained of 1,265 cases of disease, which represent a rate of 214.0 per 1000 population investigated. The male rate is 202.1 and the female rate 226.5 per 1000 population. Among the white population the rate was 206.6 and among the colored 220.2 per 1000 population. The rate among children under one year of age was 111.6 per 1000 for the total; 106.2 for the white and 116.3 for the colored people. The illness rate in the 45 years of age and over group is 248.8 per 1000 population for the total, 233.1 for the white and 264.4 for the colored.

The total illness rate of 214.0 per 1000 is lower than that recorded by us in the tobacco, coffee and fruits regions² and much lower than that recorded by Mountin, Pennell and Flook⁶ for the population of Puerto Rico at large. There are some facts which should be borne in mind in interpreting the data given in the present study: first, only one illness was counted to each person, that is, if the person had been sick two or more times during the year, he was counted only once; second, the information on illnesses was obtained directly from the family and the data was then checked in the records of the dispensary or hospital in which the informant had been attended. In some cases, no record was found of such illness either in the dispensary or in the Lafayette Hospital, and no record whatsoever was found of the cases who informed us that they had been treated, hospitalized or attended in the municipal hospital or by the municipal doctor; third, there is the possibility that many persons suffering from malaria did feel sufficiently well to work and to carry out an ordinary life, and were not considered by their families or by themselves as sick persons. An indication of this is the high number of persons treated against malaria by the rural medical dispensaries established in the surveyed area and in the Lafayette Hospital. Notwithstanding this, the improvement in the medical services and the increase in the medical facilities offered to the families have been

Morbidity from Malaria and Intestinal Parasites. In connection with this investigation a large number of blood samples for malaria and of feces for intestinal parasites were collected in the colonias of Arroyo and Patillas. In the case of malaria, laboratory results are not a good index to determine the prevalence of the disease when the population has been extensively cinchonized, since the plasmodium is not found in the blood of persons who have been treated with quinine. However, it is worthwhile to note that in the colonias situated in the municipality of Arroyo where important malaria control work of a permanent character has been carried out, the percentages of positive cases are very low, (3.6% in Lafayette, 7.2% in Palmas Cuatro Calles, and 3.5% in Enriqueta-Concordia) as compared with the percentages recorded in Patillas, where no permanent control work has been done. (See Table 12.)

TABLE 12

Laboratory Samples of Blood for Malaria Examined from Lafayette Area February-March, 1939

Colonia	Samples Examined			
	Total	Negative	Positive	Per Cent Positive
TOTAL	1,826	1,617	209	11.4
ARROYO	885	834	51	5.8
Central Lafayette	219	211	8	3.6
Palmas 4 Calles	524	486	38	7.2
Enriqueta-Concordia	142	137	5	3.5
PATILLAS	941	783	158	16.8
Felcita	750	628	122	16.3
Providencia	191	155	36	18.8

With respect to the parasitic cases the percentage positive of any parasite is 34.5 as compared with 79.3 in 1936. There were 237 cases positive for uncinaria alone, or 13.1% of the total; 306 cases or 16.9% were positive for other parasites, and in 81 cases or 4.5% there was a mixed infestation. Therefore, the parasitic index, as shown by these results, has been reduced in about 57.0%. The method followed in the treatment of these cases is that those found positive are given two antihelminthic treatments with a week's interval between treatments, and then re-examined; to those still positive, two more treatments are administered. It is evident that the intensive treatment to which the population has been subjected coupled with the con-

TABLE 13
Laboratory Samples of Excreta Examined from Lafayette Area February-March, 1939

Colonia	Samples Examined						
	Total	Negative	Positive any parasite	Per Cent positive	Per Cent positive uncinaria	Per Cent positive other parasites	Per Cent positive mixed infestation
TOTAL	1,807	1,183	624	34.5	13.1	16.9	4.5
ARROYO	955	682	273	28.6	5.2	20.6	2.7
Central Lafayette	205	142	63	30.7	1.5	27.8	1.5
Palmas Cuatro Calles	565	423	142	25.1	6.6	16.6	1.9
Enriqueta-Concordia	185	117	68	36.8	5.4	24.9	6.5
PATILLAS	852	501	351	41.2	21.9	12.8	6.5
Felcita	726	449	277	38.2	19.6	12.1	6.5
Providencia	126	52	74	58.7	35.7	16.7	6.3

struction of sanitary privies in the majority of the houses are responsible for this drop in the parasitic index. The percentages of positive cases are much lower in Arroyo than in Patillas and it is gratifying to note that the percentage of cases positive for uncinaria alone is only 13.1 which in Arroyo has been reduced to merely 5.2%. In 1936, 46.3% of the cases were positive for uncinaria, and 38.4% had a mixed infestation. More than three-fifths (61.9%) of the white persons and more than one-half (51.1%) of the colored persons informed us that they wore shoes regularly, which compares with 61.7% and 51.5% white and colored persons, respectively, wearing shoes in 1936, so it is evident that the lowered rate of infestation is not due to more general wearing of shoes. (See Table 13.)

Malaria Control. The outstanding health problem in Lafayette, now as in 1936, is the malaria problem. Most of the cases attended in the dispensaries and the majority of the cases taken care of in the Lafayette Hospital are malaria cases. When the Health Division of the P.R.R.A. was organized in 1936 plans were formulated in cooperation with the Engineering Division for a program of malaria control in the surveyed area, including subsoil drainage, refilling of certain zones, the use of larvicides when drainage or refilling was not possible, and the removal of houses from malarial to healthful places. This program of work, although in a somewhat modified form, has been carried out in part since 1936. During the years 1938 and 1939 some drainage work was done in Maunabo and the drainage of Río Niguas in Arroyo was completed. In the same year subsoil drainage was done in cooperatives No. 2, 3, and 4 (Cuatro Calles, Enriqueta and Concordia) and in the place known as "El Poyal" where \$143,506.08 have been spent in filling and drainage. Also in the Guamani River, in the vicinity of Arroyo and Guayama, and in certain other areas near by the irrigation service offices, in which \$60,136.91 have been spent. In all, \$241,152.80 have been spent in engineering work for permanent malaria control during 1938 and 1939.

In spite of all these expenditures, the malaria problem has not been yet solved in the Lafayette area and although the incidence of the disease has been reduced, great efforts will be needed to bring it down to low and tolerable levels.

Disabled Persons. During the present survey 52 disabled persons were found in the families investigated. These persons were classified thus:

Deaf and dumb	10
Insane or feeble minded	14
Crippled	14
Blind	14

HUMAN FERTILITY. On examining the age composition of the population, we observed the high number of children in the total population of the area, which is suggestive of a high fertility among women of marriageable age. Since it is not possible to calculate birth and death rates for such a limited area as Lafayette because the figures are not kept separately in the Vital Statistics Registers, we have computed the ratio of children to women to measure the effective fertility of women in the surveyed area and to compare the fertility ratio thus obtained with those registered in other agricultural regions and in Puerto Rico at large.

Ratio of Children to Women. The number of children under five years of age per 1000 women of marriageable age (15-44 years) is 814 for the whole population in area, 730 for the white population and 892 for the colored population. The ratio for the tobacco region² is 929, for the coffee region, 891, and for the fruit and nut region, 967. For Puerto Rico at large the ratio of children under five years to women 15-44 years is 616; for the urban zone, 423, and 737 for the rural zone. The ratio of children to women in the United States in 1930 was 391. (See Table 14.) As may be observed, the ratio of children to women in the Lafayette area, a typical sugar cane section, is comparable to that registered in the coffee region of Puerto Rico.

TABLE 14

Ratio of Children under 5 Years of Age per 1000 Women 15-44 Years, in Survey Area; Tobacco, Coffee and Fruits Regions (P.R.); Puerto Rico; and United States

<i>Country or Region</i>	<i>Ratio of children under 5 years per 1000 women 15-44 years</i>
SURVEY AREA (1940)	814
White	730
Colored	892
TOBACCO, COFFEE AND FRUITS REGIONS (P.R. 1937)	918
Tobacco	929
Coffee	891
Fruits and nuts	967
PUERTO RICO (1935)	616
Urban	423
Rural	737
UNITED STATES (1930)	391

MORTALITY. We obtained from the Vital Statistics Register of the Department of Health of Puerto Rico the necessary information as to the deaths registered from certain barrios of the municipalities of Arroyo, Patillas, and Maunabo during the calendar years 1936 through 1939. The barrios referred to are those in which there are properties of Central Lafayette, namely, Palmas, Pitahaya, Ancones and Cuatro Calles of Arroyo; Pollos, Apeadero, Cacao Bajo, Cacao Alto, Bajos and Guardarraya of Patillas; and Palo Seco, Emajagua, Calzada, Talante and Quebrada Arenas of Maunabo. Barrio Cuatro Calles of Arroyo is an urban barrio, but many persons who live there work in the Central.

From the data obtained we computed general death rates and malaria mortality rates based on the population estimated according to the Censuses of 1930 and 1935, since the figures for the 1940 Census are not available at the time of writing. The rates are not representative for the Lafayette area proper, because, (1) they include parts of the barrios (in some cases the major part) outside of the survey area, and (2) the population on which they are based does not include the people newly arrived to the area, which as we have seen amounted to 34.3% from 1936 to 1939. We present them, however, to show that even so, the mortality has not increased and in many cases has actually decreased during the period in question. The rates for the survey area proper must be considerably lower.

General Mortality. The average general death rate per 1000 population for the three municipalities as a whole during the four years from 1936 to 1939 is 20.8; for the barrios in which there are lands belonging to Lafayette the death rate is 18.4, and 22.9 for the rest of the three municipalities.

In Arroyo, the death rate for the municipality is 21.3 per 1000 population, 12.8 for the barrios and 27.2 for the rest of the municipality. In Patillas, however, the rate for the barrios specified (24.3 per 1000) is higher than for the rest of the municipality (20.8). The rate for the municipality as a whole is 22.5. It seems, therefore, that the mortality situation is very serious in the rural sections of this municipality. In the municipality of Maunabo the average death rate for the municipality as a whole during the four years in question is 19.6 per 1000 population, 17.0 for the barrios specified and 21.1 for the rest of the municipality. (See Table 15.)

TABLE 15
Death Rates from All Causes in the Municipalities of Arroyo, Patillas and Maunabo, and in the Barrios in which There Are Central Lafayette Properties, 1936-1939

Area	Average death rate per 1000 population 1936-1939	Death Rates per 1000 Population			
		1939	1938	1937	1936
THE THREE MUNICIPALITIES	20.8	19.2	19.9	23.2	20.1
All Barrios	18.4	18.6	15.6	20.9	18.7
Rest of the Municipalities	22.9	19.8	23.6	25.1	21.1
ARROYO ¹	21.3	21.3	21.6	22.4	19.9
Lafayette Barrios ²	12.8	13.6	9.3	15.0	12.8
Rest of the Municipality	27.2	26.3	30.1	27.5	23.2
PATILLAS ¹	22.5	18.0	23.6	25.7	20.1
Lafayette Barrios ³	24.3	22.9	24.8	27.2	22.4
Rest of the Municipality	20.8	17.2	22.3	24.4	18.8
MAUNABO ¹	19.6	17.6	14.1	21.2	21.3
Lafayette Barrios ⁴	17.0	17.9	11.4	19.1	19.4
Rest of the Municipality	21.1	17.3	18.0	23.8	24.4

¹ The whole municipality.

² Palma, Pitahaya, Ancones, Cuatro Calles.

³ Pollos, Apeadero, Cacao Bajo, Cacao Alto, Bajos, Guardarraya.

⁴ Palo Seco, Emajagua, Calzada, Talante, Quebrada Arenas.

Mortality from Malaria. The average death rate per 100,000 population from malaria in the municipalities of Arroyo, Patillas and Maunabo is 392.1 for the four years from 1936 to 1939; for all the barrios in which there are properties belonging to Central Lafayette the rate is 323.2 and 442.4 for the rest of the three municipalities. In Arroyo the rate for the municipality as a whole is 481.4, for the barrios 254.4, and 551.2 for the rest of the municipality. Contrariwise, in the municipality of Patillas the rate for the six rural barrios in which there are properties belonging to Central Lafayette is higher (588.3 per 100,000 population) than in the rest of the municipality (430.0). The rate for the municipality as a whole is 516.6 per 100,000 population. Thus, the increased death rate in the six specified barrios of this municipality is mostly due to a very high mortality from malaria. In the municipality of Maunabo the rates in general are considerably lower: 143.6 for the whole municipality, 139.7 for the five barrios in which there are Central Lafayette properties and 145.7 for the rest of the municipality. (See Table 16.)

TABLE 16

Death Rates from Malaria in the Municipalities of Arroyo, Patillas and Maunabo, and in the Barrios in Which There Are Central Lafayette Properties, 1936-1939

Area	Average Death Rate Per 100,000 Population 1936-1939	Death Rates per 100,000 Population			
		1939	1938	1937	1936
THE THREE MUNICIPALITIES					
All Barrios	392.1	361.2	387.3	501.1	290.5
Rest of the Municipalities	323.2	350.1	282.2	399.6	351.9
ARROYO ¹	442.4	369.5	475.0	584.9	321.6
Lafayette Barrios ²	481.4	494.9	535.1	524.5	371.2
Rest of the Municipality	254.4	234.4	214.4	315.0	246.5
PATILLAS ¹	551.2	671.1	758.1	668.7	426.4
Lafayette Barrios ³	516.6	473.0	486.9	705.6	402.0
Rest of the Municipality	588.3	685.1	521.7	717.6	393.2
MAUNABO ¹	430.0	337.0	456.4	686.0	333.9
Lafayette Barrios ⁴	143.6	98.0	127.4	195.2	140.8
Rest of the Municipality	139.7	126.7	115.1	176.5	135.4
	145.7	46.1	141.9	218.5	149.7

¹ The whole municipality.

² Palmas, Pitahaya, Ancones, Cuatro Calles.

³ Pollos, Apeadero, Cacao Alto, Cacao Bajo, Bajos, Guardarraya.

⁴ Palo Seco, Emajagua, Calzada, Talante, Quebrada Arenas.

SOCIAL CONDITIONS

ECONOMIC CLASSIFICATION. In dealing with the housing problem, we established a classification of the families in four groups: (1) resettlers, (2) laborers, (3) squatters, and (4) employees. Moreover, to describe conditions among them we have referred sometimes in the present analysis to these groups of families as different classes within the community. In fact, the method of selection and the privileges and opportunities afforded to the resettlers are of such character that we need to differentiate them from the laborers and squatters.

A brief description of the above mentioned groups of families and of the methods employed for their selection follows:

1. *Resettlers.* As the term indicates, this group of families consists of those to which hurricane-proof houses with small farms have been leased or sold.

The procedure for the selection of the families is more or less thus: (1) the application blanks are given to those interested; (2) the applicants are then investigated by the social worker of the respective community centers. The investigation includes size of family, age and sex composition, social problems, criminal record, number of dependents, economic condition, work record, etc. (3) When the social investigation is completed the family is examined by the physician in charge of the rural medical dispensaries. The medical investigation includes a brief medical history and a complete

physical examination (including the supplementary laboratory examinations) of every member of the applicant's household; (4) the committee consults with the plantation foremen (*mayordomos*) with respect to every application; (5) the committee then makes the final selection and the available farmsteads are distributed by drawings among the candidates thus selected.

Although all the applicants and their families had to go through the social and medical investigations only a fraction of the families examined was finally selected. From 108 families investigated in Patillas and 101 in Arroyo, taken at random, only 30 in Patillas and 40 in Arroyo or 27.8% and 39.6% respectively, were found as resettlers at the time of the investigation.

There are about 500 resettlers in Lafayette. The present survey includes only 475 because some of the houses were vacant at the time of the investigation and also because a few of the families were evicted just before or while the investigation was taking place, and either no information was gathered from them, or the information gathered was too incomplete to permit its inclusion in this report.

The 475 resettlers' families have 2,793 members or an average of 5.9 members per family. These are the largest families in the three groups of workers (not including the employees' group), which suggests that the number of persons in each family was taken into account in selecting those who would bring to the plantation a desirable number of working people. In the long run this idea proved to be wrong, since one of the major problems of the area is the unemployment brought about by the restriction in sugar production and the excessive number of employable people. Certainly, the problem of unemployment exists all over the Island, but it is evident that in the surveyed area it was aggravated by the immigration of such a large number of families, many of which were large-sized families.

Although this group of families has certain privileges besides having better houses and pieces of land, such as preference in the medical and hospital services, and 230 who became members of the land cooperatives were entitled to preference in employment during the whole year, they do not seem to be better off, but rather in a worse condition than the other workers' families. Two factors seem to be responsible, in part at least, for this situation: the large size of the family and the rent they have to pay. From the information gathered by the social workers among the resettlers, the most frequent reasons for complaint are: lack of work and the payment of a rent. The rent is low indeed and it, moreover, might be considered as an investment, but it nonetheless represents a substantial part of the workers' income which on the average is very low to permit such disbursement.

2. *Laborers.* The batey of each land cooperative is the place where the sugar-cane loading and weighing machinery and supplies, warehouses and other equipment are located and where, for the convenience of operations, dwellings have been built for the occupancy of laborers employed at the

batey. The batey of the mill cooperative consists of some 60 acres of land where the mill itself is located together with all its accessories and necessary equipment and where numerous houses have been built for the occupancy of laborers employed at the mill, the railroad, the butyl alcohol plant and in other activities of the Asociación Azucarera Cooperativa Lafayette. The batey laborers are selected directly by the management of the Cooperatives. The P.R.R.A. rents the frame houses for these laborers to the mill and land cooperatives at a nominal price and the cooperatives in turn give them free of charge to selected workers. In some cases, however, when the worker is covered by the Fair Labor Standards Act and obtains a high wage he has to pay a rent. The proportion of skilled workers in this group of families is larger than in any other group. About 30.0% of the gainfully employed workers among the batey workers are skilled. This fact should be borne in mind at all times in the interpretation of the data given in this report since the skilled workers not only are paid a relatively higher salary but, what is more important, have a longer working period during the year.

The 225 families investigated in this group have 1,127 members or 5.0 members per family. Generally speaking these families appear to be in a more satisfactory condition than the rest of the workers' families in the surveyed area.

3. *Squatters*.* The term squatter is broadly used here to include all those families in the surveyed area that are not included in the P.R.R.A. resettlement program. That is, they are not employees, resettlers, or batey laborers. These workers, however, work in the Central more or less under the same conditions as the resettlers and laborers.

There is great variation in the social and economic condition of these families from the extremely poor and needy to those who have small stores, shops, or other business activity that affords them a relatively acceptable standard of living.

The 327 squatters' families have 1,542 members in them or an average of 4.7 members per family. As a group, these are the smallest families in the surveyed area.

4. *Employees*. Finally we have the group of the employees' families in which there are included all those heads of families who have more or less important administrative responsibility, or are clerical employees. In this group are included also a few families of government employees (two policemen and two road keepers) who live within the surveyed area.

The number of members in these 74 families is 449 or an average of 6.1 members per family.

* In fact these are old *agregados* of the former owners of the Central who for some reason or another did not qualify as resettlers or batey laborers. The name "squatter" does not really apply to them and it is used in this report because so they were known in the place and so they were called in the reports of the P.R.R.A.

TYPES OF FAMILIES. As is usual, the families were classified in three groups: (1) normal families, consisting of husband and wife with or without children, or with or without other persons; (2) broken families consisting of either husband or wife with children or with other persons; and (3) the one-person families.

Of the 1,101 families investigated, 954 or 86.6% were normal families; 131 or 11.9% were broken families and 16 persons were living alone, representing 1.5% of the total number of families investigated. Among the normal families there were 501, or 52.5% of the total in the group, that were civilly or religiously married and 453 or 47.5% that were consensually married. In the 1936 survey 78.6% of the total number of families were normal families, 17.2% were broken families and 4.2% were one-person families. Therefore, the percentage of normal families is considerably higher in the present survey.

AGE COMPOSITION OF FAMILIES. To find out the number of persons who because of their age are ordinarily considered as normally dependent (under 16 years of age and 65 years of age and over), a table was worked out to show the age composition of the families. Of the total number of families, 862 or 78.3% have persons under 16 years of age living with them; 39 families or 3.5% have persons 65 years of age and over, and 73 families or 6.6% have normally dependent persons of both ages. Hence, the number of families without normally dependent persons is 127 or 11.5%. (Table 17.)

In the 1936 survey 74.0% of the families had one or more dependents under 16 years of age but none of the ages 65 years and over; 2.8% of the families had one or two dependents 65 years of age and over but none of the ages under 16 years; 5.6% had two or more dependents of both ages and 17.6% had no dependent persons whatsoever in them. It is observed therefore, that the proportional number of normal dependents has increased, which is due to the migration into the surveyed area of a large number of families with many young members in them as it was observed when the analysis of the age composition of the population was made. (Table 2.)

The relative number of families with normally dependent persons is highest among the resettlers, 93.7%; among the batey laborers, squatters, and employees the percentage of families with normally dependent persons is 85.8, 83.2 and 86.5 respectively.

MARITAL STATUS. All computations have been based on the population 15 years of age and over. The legal marriageable age in Puerto Rico is 18 years with parental consent but many of the consensual

TABLE 17
Families with Dependent Persons, by Economic Classification

Economic Classification	Total number of families		Under 16 years		65 years of age and over		Both ages		No dependents	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
	ALL FAMILIES	1,101	100.0	862	78.3	39	3.5	73	6.6	127
Resettlers	475	100.0	409	86.1	5	1.1	31	6.5	30	6.3
Laborers	225	100.0	173	76.9	6	2.7	14	6.2	32	14.2
Squatters	327	100.0	222	67.9	28	8.6	22	6.7	55	16.8
Employees	74	100.0	58	78.4	—	—	6	8.1	10	13.5

marriages take place at earlier ages. There are 3,309 persons of marriageable age in the surveyed area as against 2,494 in 1936. The proportion of married persons in both years is 61.3% and 57.2% respectively. In 1940, 56.4% of the persons married are civilly or religiously married and 43.6% are consensually married. The corresponding figures for 1936 are 53.6% and 46.4% respectively. More than three tenths (30.4%) of the people of marriageable age are single, 6.2% are widowed or divorced and 2.1% are concubines—married persons who are living with other than his legal wife or her legal husband, as the case may be. In the 1936 survey, 33.0% of the persons of marriageable age were single, 7.1% were widowed or divorced and 2.6% concubines. The civil and religious marriages increased from 53.6% to 56.4% during the period from 1936 to 1940, and the consensual marriages dropped from 46.4% to 43.6% during the same period of time. (See Table 18.)

TABLE 18
Marital Condition of the Population 15 Years of Age and Over in the Survey Area, 1940 and 1936

Civil Status	Survey Area, 1940		Survey Area, 1936	
	Population 15 yrs. of age & over	Per Cent	Population 15 yrs. of age & over	Per Cent
TOTAL	3,309	100.0	2,494	100.0
SINGLE	1,006	30.4	824	33.0
MARRIED	2,029	61.3	1,428	57.2
Civil or Church	1,144	56.4	765	53.6
Consensual	885	43.6	663	46.4
WIDOWED OR DIVORCED	204	6.2	178	7.1
CONCUBINES	70	2.1	64	2.6

The marital status of the heads of families was computed by color and by economic classification of the families. The proportion of married heads of families among the resettlers is 95.2%, of which 60.0% are civilly or religiously married and 40.0% consensually married; among the laborers there are 87.1% married, of which 47.4% are civilly or religiously married and 52.6% consensually married; among the squatters 80.4% are married, of which 49.4% are civilly or religiously married and 50.6% consensually married; and among the employees, 91.9% are married of which 83.8% are civilly or religiously married and 16.2% consensually married.

The consensual marriages are consistently higher among the colored people in all groups of families. It is noticed, however, that the percentage of colored heads of families who are consensually married among the resettlers group is the lowest of all. The proportion of widowed or divorced heads of families is likewise the lowest among the resettlers' heads of families: 4.2% as against 11.1% among the laborers, 16.8% among the squatters and 8.1% among the employees.

The percentage age distribution of the population of marriageable age is given in Table 19. The consensual marriages have been included in the group of married persons which are thus classified in three sub-groups: civil, religious, and consensual marriages. According to this classification, 61.3% of the persons of marriageable age were married, of whom 21.9% were civilly married, 34.5% were religiously married and 43.6% were consensually married. The proportion of the consensual marriages was highest in the age groups 15-19 years (59.0) and 20-24 years (52.4%); in the following age groups the proportion of consensual marriages is more or less constant—about 40%. There has been no improvement in this respect since 1936 when 60.0% of the consensual marriages were in the age group 15-19 years and 52.4% (exactly the same figure of 1940) in the age group 20-24 years. In the 25-29 years age group, however, the percentage of consensual marriages in 1936 was 52.1 as against 44.7 in 1940.

The civil marriages are less numerous in all age groups above 25 years; in the age groups 15-19 and 20-24 years, religious marriages are the least numerous of all. Most of the 70 persons reported as concubines (2.1% of all persons of marriageable age) are found in ages 25 to 29 years (3.6%) and 30 to 34 years (4.7%).

TABLE 19
Percentage of the Age Distribution and Marital Condition of the Population
15 Years of Age and Over

Age	Total	Single	Married				Concubines	Widowed or Divorced
			Total	Civil	Church	Consensual		
ALL AGES	100.0	30.4	61.3	21.9	34.5	43.6	2.1	6.2
15-19 years	19.3	87.0	12.2	26.9	14.1	59.0	.8	—
20-24 "	17.8	48.0	48.6	25.2	52.4	2.9	.5	
25-29 "	14.1	18.6	76.5	26.0	29.3	44.7	3.6	1.3
30-34 "	10.3	10.5	83.7	18.5	39.0	42.5	4.7	1.2
35-44 "	18.6	4.2	90.1	20.4	39.9	39.7	1.8	3.9
45 years & over	19.8	2.7	71.1	19.7	40.1	40.1	.6	25.5

In Table 20 the married population has been classified by age, sex and color, and by form of marriage. Almost half of the total married population (49.6%) is white; 50.4% is colored. In the religious marriages, 59.0% of the persons married are white and 41.0% are colored; in the civil marriages 51.8% of the persons married are white and 48.2% colored. In the consensual marriages, however, the proportion is reversed: 41.0% of the persons married are white and 59.0% are colored. From the total number of persons married in 1936, 45.7% were white and 54.3% were colored; in the religious marriages the proportion of white and colored persons was 59.3% and 40.7% respectively; in those civilly married the proportion was 44.0% white and 56.0% colored, and in the consensual marriages, 37.8% white and 62.2% colored.

TABLE 20
Married Population Classified by Age, Sex, and Color, and by
Form of Marriage

Color and Sex	Total		Civilly Married		Church Married		Consensually Married	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
TOTAL	2,029	100.0	444	100.0	700	100.0	885	100.0
WHITE	1,006	49.6	230	51.8	413	59.0	363	41.0
Male	513	51.0	122	53.0	210	50.8	181	49.9
Female	493	49.0	108	47.0	203	49.2	182	50.1
COLORED	1,023	50.4	214	48.2	287	41.0	522	59.0
Male	494	48.3	104	48.6	142	49.5	248	47.5
Female	529	51.7	110	51.4	145	50.5	274	52.5

The marital status of the population 15 years of age and over in the survey area, in the municipalities of Arroyo, Patillas and Maunabo and in Puerto Rico is presented in Table 21. As it may be observed, the proportion of single people in the survey area (30.4%) is much lower than in the three municipalities (37.6%) and Puerto Rico as a whole (38.3%). This is due to the fact that the proportion of natural unions or consensual marriages is considerably higher in the survey area (45.7%) than in the three municipalities (37.2%) and Puerto Rico at large (26.1%). The percentage of civil or religious marriages in the surveyed area (56.4) is considerably below that of the three municipalities (62.8) and Puerto Rico (73.9).

TABLE 21

Marital Condition of the Population 15 Years of Age and Over in the Survey Area, in Arroyo, Patillas and Maunabo, and in Puerto Rico

Civil Status	Survey Area		Arroyo, Patillas and Maunabo (1935)		Puerto Rico (1935)	
	Population 15 yrs. of age & over	Per Cent	Population 15 yrs. of age & over	Per Cent	Population 15 yrs. of age & over	Per Cent
TOTAL	3,309	100.0	20,556	100.0	1,013,163	100.0
SINGLE	1,006	30.4	7,726	37.6	388,235	38.3
MARRIED	2,099	63.4	11,207	54.5	534,674	52.8
Civil or Church	1,144	54.5	7,040	62.8	395,229	73.9
Consensual	955*	45.5	4,167	37.2	139,445	26.1
WIDOWED OR DIVORCED	204	6.2	1,623	7.9	90,254	8.9

* This number includes 70 persons reported as concubines.

EDUCATION. There are 3,971 persons of school age (10 years of age and over) in the surveyed area, of which 2,716 or 68.4% had been in school one or more years and 1,255 or 31.8% had never been in school. In 1936, 63.1% of the school age population had been and 36.9% had never been in school. Therefore, the percentage of persons who had never been in school has been reduced by 5.3% since 1936.

In Table 22 the schooling of persons 10 years of age and over by age and color is presented in percentage form. The percentage of persons in each grade is given separately from the first to the fourth grades and then all those persons who have completed any or the four grades have been grouped. Nearly two fifths (39.2%) of the school population had completed from one to four grades; one fourth (25.3%) had completed from five to eight grades and about 4.0% had completed nine or more grades. In the 10-14 years of age group, 63.2% of the population had completed from one to four grades; from 15 years of age up the percentage of the population having completed from one to four grades fluctuates around 40.0 to descend to 26.7 in the age group 40-44 years, and to 11.4 in the age group 45 years and over. In 1936, 57.2% of the population 10-14 years of age had completed one to four grades of school but the percentage of individuals with the same grade of instruction (1-4 grades) was generally higher in the age groups from 15 years up. Thus, the improvement in education has been registered mainly in the age group 10-14 years.

TABLE 22

Percentage Distribution of the Schooling of Persons 10 Years of Age and Over, by Age

Last Grade Completed in Schools	Total	Age in Years							
		10-14	15-19	20-24	25-29	30-34	35-39	40-44	45 years and over
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	31.6	7.7	10.3	15.8	23.7	30.6	41.6	57.3	81.2
1	2.6	6.0	2.7	0.8	1.3	2.3	4.5	2.3	0.9
2	7.6	17.1	5.6	7.6	4.9	8.7	7.4	6.1	1.8
3	14.6	20.8	14.9	18.5	18.4	16.0	12.2	8.8	4.6
4	14.4	19.3	18.2	18.2	14.3	15.7	13.9	9.5	4.1
1-4	39.2	63.2	41.4	45.1	38.9	42.7	38.0	26.7	11.4
5-7	18.7	25.8	24.7	21.7	22.2	18.1	15.0	11.1	5.6
8	6.6	2.4	16.0	11.9	8.5	3.8	2.0	3.0	1.1
9-12	3.0	0.8	7.0	4.8	4.5	2.9	1.4	0.4	0.5
Over 12	0.9	—	0.6	0.7	2.1	1.7	2.0	1.5	0.2

A comparison of the schooling of the population of school age in 1940 and 1936 is offered in Table 23. The individuals who had completed any school grade were classified according to their age in two main groups: (1) those who had completed from one to four grades; and (2) those who had completed five or more grades. From this table it is observed that, in general, the proportion of persons who have completed any grade in school is lower in 1940 in all age groups below 25 years and higher in all age groups above 25 years. The differences are more significant in the individuals who have completed five or more grades. In the age group 10-14 years, for example, only 16.6% of the total number of persons with any grade of instruction had completed five or more grades in 1940 while the corresponding figure for 1936 is 21.9%. Contrariwise, in the age group 25-29 years, 15.1% of the total had completed five or more grades in 1940 while in 1936 only 9.8% had completed a similar grade of instruction.

Schooling of Heads of Families. An analysis was made of the schooling of the heads of families, by age and color, and by economic classification of the family. The highest percentage of illiterates is found among the resettlers: 49.9 as compared with 48.4 among the laborers, 48.6 among the squatters and 14.9 among the employees. More than one eighth (13.3%) of the illiterate white resettlers are in the age group 15-24 years, while among the colored resettlers the percentage of illiteracy in ages 15-24 years is only 7.1. More than half (52.5%) of the illiterate white resettlers are from 35 to 44 years and 73.8% are 45 years old or over. The corresponding figures among

TABLE 23
 Schooling of Persons 10 Years of Age and Over, by Age, 1940 and 1936

Age Groups	All Grades						1-4 Grades						5th Grade and Over					
	1940		1936		1940		1936		1940		1936		1940		1936			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent		
TOTAL	2,716	100.0	1,932	100.0	1,557	100.0	1,184	100.0	1,159	100.0	748	100.0						
10-14 years	611	22.5	488	25.2	419	26.9	324	27.4	192	16.6	164	21.9						
15-19 "	573	21.1	429	22.2	264	17.0	223	18.8	309	26.7	206	27.5						
20-24 "	496	18.3	391	20.2	266	17.1	244	20.6	230	19.8	147	19.7						
25-29 "	357	13.1	195	10.1	182	11.7	122	10.3	175	15.1	73	9.8						
30-34 "	238	8.8	127	6.6	147	9.4	78	6.6	91	7.8	49	6.6						
35-44 "	318	11.7	208	10.8	204	13.1	136	11.5	114	9.8	72	9.6						
45 yrs. and over	123	4.5	94	4.9	75	4.8	57	4.8	48	4.1	37	4.9						

the colored illiterate resettlers are 53.1% and 88.4%. Among the white batey laborers there are no illiterates in ages 15-24; among the colored the percentage of illiterates in ages 15-24 years is 14.3. A very high proportion (82.1% among the whites and 80.0% among the colored) of illiterates is found in ages 45 years and over in this group of families.

The percentages of heads of families having completed from 1 to 4, 5 to 8, or 9 or more grades are 36.1, 17.4 and 0.4 respectively among the resettlers; 22.4, 27.0 and 5.9 respectively among the laborers; 33.1, 21.2 and 3.3 respectively among the squatters and 20.7, 36.2 and 31.0 respectively among the employees. The resettlers, therefore, have the lowest grade of instruction among all heads of families; in general, they are above the other groups in the first four grades of elementary school, but much below in the more advanced grades.

SOCIAL PROBLEMS. Of the social problems found in the surveyed area the most important by reason of the number of persons affected, are those of illiteracy and illegitimacy. These problems need time and persistent efforts to be solved or ameliorated and it is, therefore, gratifying to note that some improvement has been registered in them since 1936.

Illiteracy. By "illiterates" are meant, of course, those persons who do not know how to read or write. In the present investigation a few persons were found who informed us that they know how to read and write without ever having been in school, but their number is so small that the proportion of illiterates is practically the same as that of persons who had never been in school, namely 31.6%.

The problem of illiteracy particularly affects the older people who did not have the educational opportunities of the last decades. In the group of ages 10-14 years only 7.7% of the population investigated is illiterate; the percentage then ascends steadily with age to 93.8 in ages 65 years and over. Among the white people the percentage of illiteracy at ages 10-14 is 5.7, which ascends to 92.4 in the upper age limit; among the colored people the percentages of illiteracy are higher in all ages: in the age group 10-14, 9.3 of the population is illiterate and the percentage rises to 96.4 in ages 65 years and over. As to the total number of persons 29.7% among the whites and 33.3% among the colored are illiterates.

A study was made of the problem of illiteracy in persons 10 years of age and over, by color and by economic classification of the families. Corroborating our findings when the schooling of the heads of

families was analyzed, it is observed that the resettlers' families have the highest (46.4 for the total, 45.2 for the whites and 47.3 for the colored) percentage of illiteracy among all groups of families. That is, not only a large proportion of the heads of families among the resettlers are illiterates but in the families as a whole the percentage of illiteracy is very high. Among the batey laborers the percentage of illiteracy is considerably lower; 21.6 for the total, 15.7 for the whites and 26.3 for the colored; among the squatters 30.0% of the total were illiterates, 36.6% of the whites and 24.8% of the colored; and among the employees the percentage of illiteracy is merely 2.0 for the total, 2.5 for the whites and 1.6 for the colored. (See Table 24.)

TABLE 24

Illiterate Persons 10 Years of Age and Over, by Color and by Economic Classification of Families

Family Group	Total		White		Colored	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
TOTAL	1,255	100.0	555	100.0	700	100.0
Resettlers	582	46.4	251	45.2	331	47.3
Laborers	271	21.6	87	15.7	184	26.3
Squatters	377	30.0	203	36.6	174	24.8
Employees	25	2.0	14	2.5	11	1.6

Illegitimacy. In the analysis of the social condition of the population, only persons under 15 years of age are considered. The population 15 years of age and over was already classified as single, married, widowed or divorced when the analysis of the marital condition of the population was made. There are 2,602 persons of ages under 15 years among the population investigated, of which 1,499 or 57.6% are legitimate, and 1,103 or 42.4% are illegitimate. The legitimate persons have been classified as legalized and not legalized indicating by legalized those whose birth out of wedlock has been registered by the father or by both parents in the Vital Statistics Registers. These legalized children have been considered by some as socially legitimate.

The percentage of illegitimacy is highest in the age group under one year (55.0), descending to 45.7 in age 1-4 years, to 41.5 in age 5-9 years, and to 34.9 in the group of age 10-14 years. In the 1936 survey the percentage of illegitimacy was somewhat higher (43.5) for the total; 58.2 among children under one year of age; 52.2 in

ages 1-4, 38.8 in ages 5-9; and 35.3 in the age group 10-14 years. (See Table 25.)

TABLE 25

Social Condition of Persons Under 15 Years of Age, Classified as Legalized and not Legalized, by Age Groups—Per Cent

Age	Total	Legitimate	Illegitimate		
			Total	Legalized	Not legalized
ALL AGES	100.0	57.6	42.4	59.1	40.9
Under 1 year	9.3	45.0	55.0	63.2	36.8
1-4 years	31.1	54.3	45.7	60.8	39.2
5-9 "	34.2	58.5	41.5	59.1	40.9
10-14 "	25.4	65.1	34.9	54.1	45.9

The social condition of the population under 15 years was analyzed also by color and by economic classification of the families. We find here that the percentage of illegitimacy is lower among the resettlers' families (39.6 for the total, 34.7 among the white and 42.8 among the colored) than in the other groups of families, except the employees' families in which the percentage of illegitimacy is 16.6 for the total, 9.2 among the white and 35.3 among the colored families.

OTHER SOCIAL PROBLEMS. Other social problems of certain importance found in the surveyed area are those of marital separation, alcoholism, and desertion. However, a considerable decrease in the frequency of these problems has been registered since 1936. In that year, 188 families or 20.9% of the total number of families investigated were affected by social problems other than illiteracy and illegitimacy. In the present survey, 143 families or 12.9% of the total number of families investigated have problems of this kind. In 79 families existed the problem of marital separation; in 37 the problem of alcoholism; and in 20 families the wife had been deserted by the husband or the husband by the wife. By information which the social workers have been able to gather, and from their personal experience through their daily contact with the people in the area surveyed, the impression is gained that, in general, there is a more sound and wholesome social life among the families, and that many of the habits and customs which are considered unsocial are being slowly but firmly corrected.

THE COMMUNITY CENTERS. By the end of 1937, the Social Service Section organized three community centers at colonias Palmas

Cuatro Calles, Arroyo; Felicita, Patillas; and Bordelaise, Maunabo. In the course of 1938, three smaller units were organized at the bateyes of Concordia, Arroyo; Providencia, Patillas; and Columbia, Maunabo. The direction of the three community centers was in charge of three social workers, assisted each by a clerk visitor and an athletic instructor. A clerk visitor was in charge of each one of the units at the bateyes.

The physical plant of the community centers consists of an assembly hall with a stage, a room for kindergarten, a room for industrial arts and handicraft work, and a general office room. At the bateyes, the social service activities were carried out in one of the houses built for laborers, with the exception of that of Providencia, Patillas, where a small building was provided. The community centers are surrounded with playgrounds which permit the neighbors to indulge in all sorts of sports and outdoor activities.

The centers are open to the public from 8:00 A.M. until 9:30 P.M. every day in the week, including holidays. Each center has its regular program designed to meet the needs of the different groups of the community. It includes social case work and social group work activities carried out to help individuals and families unable to conduct their lives normally without assistance, to adjust themselves to the new program, and to provide group experiences essential to individual happiness and to the general welfare of the community life.

Social case work has been, primarily, in the hands of the social workers in charge of the community centers. The rôle of the social workers in this aspect of the program has been to investigate and study the conditions of individuals and families affected by personal, environmental or social problems, and to help those involved to overcome their difficulties by making use of the facilities of the community.

The number of interviews held at the community centers during the fiscal year 1939-40, amounted to 4,026 with the resettlers, laborers and squatters, and 2,227 with collaterals. The number of visits made to the former was 2,574 and 1,149 to collaterals. Through these interviews and home visits, the social workers tried to orient the individuals concerned as to the best ways of solving their problems of income, health, work, education, recreation, housing, and family and community relations. The services rendered to the individuals presenting problems such as those stated above, are as follows: 307 cases of resettlers and laborers, and 42 squatters were referred to the medical dispensaries with the corresponding inter-

pretation of the findings in each individual case. Two hundred and seventy-four resettlers and laborers and 46 squatters were referred to doctors of the neighboring municipalities or to district hospitals. Sixty-two cases of resettlers and laborers and seven of squatters were referred to relief agencies for either work relief or direct relief. With the assistance of the social workers, one hundred and sixty-nine cases of resettlers and laborers and 30 of squatters received specialists' services. Other miscellaneous services were given in the amount of 1,242 to resettlers and laborers and 452 to squatters.

The figures above do not include the work of the medical social worker of the Lafayette Hospital, who is appointed by the Community Centers Section. The cases sent from the medical dispensaries to the Lafayette Hospital were referred by the social workers of the community centers through the Hospital's social worker.

The chief contribution of the social worker to the work carried out at Lafayette Hospital, measured in terms of frequency of performance, was the securing of information to facilitate an adequate understanding of the general health problems of the patients; the interpretation of the patients' health problems to themselves, their families and those community agencies interested in them; and the mobilizing of resources to give economic assistance when necessary for the full use of the medical resources in the district or outside.

As far as social group work is concerned, the job of the community centers was to determine and provide those group experiences which assure as many fundamental values—fair play, sportsmanship, good companionship, etc.—as possible, and to fit the group activities to individual needs. Widespread unemployment in this area forced on many unwillingly idle persons full days of leisure. The routine of everyday labor in the cane fields, on the other hand, made it advisable for the employed to counteract the effects of the daily routine with leisure-time activities affording variety, freedom, and creative outlets, which are so important to individual growth and happiness. Group work programs adaptable to community needs and interests were prepared for each one of the community centers. The group activities engaged in were those undertaken by groups regularly scheduled, and special events or casual activities. Among the regularly scheduled groups with definite enrolment, the community centers organized clubs, classes, athletic teams and special interest groups. Other group activities without definite enrolment were also carried out such as open-house activities, special activities and athletic activities.

A club may be briefly defined as a group of persons bound together by personal or social ties, in which the membership is determined by the group itself. During the fiscal year 1939-40, 11 clubs were organized at the community centers and bateyes of the district. Among these there were boys' clubs, young women's clubs, mothers' clubs, societies for mutual aid, athletic associations, associations of resettlers, etc. These clubs held a total of 167 sessions during 373 hours. The enrolment to each ranged from 9 to 58 and the aggregate attendance was 1,616 men and 1,554 women.

A class consists of a group of persons who meet together on a regular schedule for the acquisition of specific knowledge, the exercise of individual skills, or the participation in a specific educational activity. The control of such a group is vested in a teacher. Nineteen classes were organized in the community centers and bateyes of the district during 1939-40. The number of sessions held amounted to 1,243 to which 2,435 hours were devoted. The enrolment of each class ranged from 6 to 87 with an aggregate attendance of 2,432 men and 9,234 women. These classes were, primarily, on handicrafts and needlecrafts, kindergartens, and adult education in such subjects as reading and writing, shorthand and typing, and English language.

The clerk visitor was in charge of the handicraft and needlecraft classes, and the social workers conducted the kindergartens. The clerk visitors in the bateyes were in charge of all the work, necessarily more limited in scope at the smaller units. The social workers in charge of the kindergartens attended to three institutes on kindergarten, held at the University of Puerto Rico under the direction of its kindergarten teacher. The clerk visitors in charge of handicraft and needlecraft work participated in six training institutes, conducted under the direction of the Supervisor of Industrial Work of the Community Centers Section. The clerk visitors in charge of the bateyes attended to both the institutes on kindergartens and industrial crafts.

The total number of special interest groups was 15. These groups held 173 sessions during 384 hours. The enrolment ranged from 6 to 32 persons per group and the aggregate attendance was 1,245 men and 296 women. In this category are included all such groups as choruses, glee clubs, social clubs, typical orchestras, dramatic groups and quiet games clubs.

Open house activities were held at the various community centers during 199 hours. The participants amounted to 1,322 men and 605 women with a total of 5,985 spectators. Besides being used by or-

ganized groups, the community centers were also used continually by individuals assembled together by the desire of hearing the radio, reading magazines, newspapers and books, playing quiet games, or simply relaxing and talking with others. These activities occupied 8,522 hours and in them 3,209 individuals participated, besides those belonging to organized groups. Two thousand seven hundred and five hours were dedicated to athletic activities; male participants amounted to 8,300 and female participants to 2,097. The total number of spectators in these activities was 18,780. Other special or irregular activities occupied 243 hours during this period. The number of participants was 1,954 men and 666 women. The number of spectators was 5,162.

In addition to these activities, the Social Service personnel made 124 investigations of applicants for farmsteads and prepared 18 reports on resettlers eligible to property rights in the area.

The social service program tries to facilitate direct an individual participation in, as well as to satisfy, as far as possible, the needs of individuals for companionship, varied interests and personal expression, and it undoubtedly has been productive along these lines. How profound a change has been achieved cannot be estimated, although undoubtedly it has been significant.

ECONOMIC CONDITIONS

Heretofore we have examined in some detail the general health and social conditions existing in the survey area and have tried to describe in a general way the development of this social experiment during the years in which it has been in operation in so far as the workers and their families are concerned. We shall now turn to the economic aspects, starting with a general description of the business organization.

The purchase of Central Lafayette and neighboring sugar lands was financed by the P.R.R.A. in order to attack the problems of low wages and low colono compensations, absentee ownership, and land concentration.

The mill property was sold to the newly organized mill cooperative while part of the land was sold to the land cooperatives, the P.R.R.A. taking a 27-year mortgage on the fixed assets, present and future, of the cooperatives, at 3% interest per annum. The first payment is due in 1940. The Administration is further secured by the fact that all activities of the cooperatives must be approved by

the P.R.R.A. and by the pledge of the cooperatives' capital stock.

The purchase of equipment by the land cooperatives was made possible by a 15-year loan from the P.R.R.A. at 3% per annum, secured by a chattel mortgage and the capital stock of the cooperatives. Another \$550,000 loan for 25 years at 3% per annum, secured by fixed assets, was instrumental in the acquisition by the mill cooperative of a butyl alcohol plant.

The P.R.R.A. also grants short-term production credits to the cooperatives and to the colonos from a special fund, operates a central service farm, maintains free medical dispensaries, and provides social work service through the community centers.

Principal debts outstanding in favor of the P.R.R.A. as of June 30, 1939, are as follows:

MILL COOPERATIVE	LAND COOPERATIVES
\$1,536,851.70 (27 years, 3%, first lien on fixed assets)	\$2,255,299.59 (27 years, 3% lien on fixed assets)
550,000.00 (25 years, 3% lien on fixed assets for the construction of a butyl-alcohol plant)	239,349.90 (15 years, 3% lien on farm equipment, for the purchase of the same)
270,000.00 (agricultural loan, due 1940, crop and inventory lien and sundry debts)	150,000.00 (agricultural loan, due 1940, 3% crop and inventory lien)
Total—\$2,356,851.70	Total—\$2,644,649.49

Of the 18,000 cuerdas of land owned or leased by *Sucrs. C. J. Fantauzzi*, the P.R.R.A. has segregated, as we have seen, 5,500 cuerdas for the land cooperatives and for subsistence farms. About one half of the 8,000 cuerdas leased by the Fantauzzi interests were later sub-leased by the P.R.R.A. to approximately 100 independent farmers, most of whom have become members of the mill cooperative. The other 4,000 cuerdas are devoted to pasture.

The mill cooperative owns total assets of about \$3,000,000.00, of which about \$1,400,000.00 are fixed assets. It may issue 6% cumulative non-voting preferred stock to the public, although no preferred stock has been issued to date. Members are required to purchase one share of non-transferable common stock of \$5.00 par value, with the right of one vote. All of the common stock issued has been paid.

Eligible to membership are the land cooperatives and independent colonos, as well as workers in the land cooperatives. Of the latter there are none now. Total membership is about 360. The admission

of a member is subject to the directors' approval and any member may be expelled by the Board of Directors if he is deemed unfit for membership, has violated any provision of the articles of incorporation or of the by-laws, or has failed to fulfill any obligations he may owe to the Association.

In the mill cooperative there is a Board of Directors of 11 members, 9 elected by the members of the cooperative and two appointed as "Public Directors" by the Administrator of the P.R.R.A. One of these Public Directors is chosen to represent labor from among five candidates selected by the vote of the employees of the mill cooperative and the employees of its members. The by-laws also provide for the appointment of an Executive Committee of at least three directors, with powers granted by the Board and responsible to it.

The mill cooperative acquires its cane principally from the agricultural cooperatives and from colonos. A small proportion of the cane is purchased from the P.R.R.A., which still owns some cane lands. The sources of the cane ground by the mill during the last three years are given in Table 26.

TABLE 26
Sources of Cane Ground by the Mill Cooperative: 1936-1939

Source	1936-37		1937-38		1938-39	
	Value	Per Cent	Value	Per Cent	Value	Per Cent
TOTAL	\$1,317,932	100.0	\$1,196,006	100.0	\$960,711	100.0
P.R.R.A.	665,453	51.0	360,026	30.0	67,103	7.0
Land Cooperatives	391,099	29.0	542,824	45.0	428,725	45.0
Colonos	261,380	20.0	293,156	25.0	464,883	48.0

The colonos may be members of the mill cooperative, if they so desire. The difference between member and non-member colonos is that members, as distinguished from non-members, are entitled to a portion of the profits that may be distributed by the Board of Directors, to a proportionate participation in the assets of the mill cooperative, and to participation in the affairs of the cooperative. Both are paid for their cane according to the provisions of the In-sular Law No. 112 (1937), as amended, which regulates compensation to colonos for cane delivered by them for grinding. Non-member colonos number about 70 out of a total of about 400.

Under charter provisions the following reserves must be created

to exemption from property taxes, both the mill and the land co-operatives have paid such taxes since they began operations.

ECONOMIC CONDITIONS OF FAMILIES. In the foregoing discussion, an idea has been given of the business organization of the Central. We shall examine now the economic conditions of the individuals and families living in the surveyed area.

Gainful Workers. There are 2,209 gainful workers in the 1,101 families investigated. Gainful workers are those engaged in gainful occupations, including persons usually working but temporarily unemployed at the time of the survey. Women doing house work are not included. Of the 2,209 gainful workers, 1,266 or 57.3% are workers on wages, 57 or 2.6% are salaried employees and 886 or 40.1% are unemployed persons.

Of the 1,323 gainfully occupied workers, 1,278 or 96.6% are male and 45 or 3.4% are female. The percentage of gainfully employed people fluctuates from 38 to 53% in the age groups from 20 years up. In the age group 15-19 years only 17.7% of the population in that group is employed, which is due to the fact that in Puerto Rico the legal working age is 16 years. In total, only 40.0% of the population 15 years of age and over is employed. (See Table 27.)

TABLE 27

Gainfully Occupied Workers 15 Years of Age and Over, by Age, and Percentage of Gainfully Occupied Workers, by Age and Sex

Age	Total population 15 years of age and over	Gainfully Occupied Workers 15 Years of Age and Over			
		Number	Per Cent	Per Cent of male workers	Per Cent of female workers
TOTAL	3,309	1,323	40.0	96.6	3.4
15-19 years	639	113	17.7	84.1	15.9
20-24 "	589	223	37.9	97.8	2.2
25-29 "	468	204	43.6	98.0	2.0
30-34 "	343	158	46.1	98.1	1.9
35-39 "	353	188	53.2	99.5	0.5
40-44 "	262	137	52.3	95.6	4.4
45 years and over	655	300	45.8	97.3	2.7

Gainfully Occupied Workers. The percentages of gainfully employed people with respect to the total population and to the population 15 years of age and over in the survey area in 1940 and 1936, and in Puerto Rico, according to the 1935 Census, are given in the Table 28. There has been a reduction of nearly 8.0% in the employment rate (percentage of people gainfully employed) in 1940 (40.0%)

as compared with 1936 (47.8%). In Puerto Rico as a whole the percentage of people 15 years of age and over in the total population is 58.8, and the percentage of gainfully employed persons 50.9. Therefore, the employment rate in the surveyed area in 1940 is nearly 11.0% lower than in Puerto Rico in 1935.

TABLE 28

Gainfully Occupied Persons 15 Years and Over in the Survey Area, 1940 and 1936, and in Puerto Rico, 1935

Area	Population			Gainfully Occupied Persons 15 Years and Over		
	Total	15 years & over	% of population 15 years & over	Number	% of total population	% of population 15 years & over
Survey Area (1940)	5,911	3,309	56.0	1,323	22.4	40.0
Survey Area (1936)	4,400	2,494	56.7	1,192	27.1	47.8
Puerto Rico (1935)	1,723,534	1,013,163	58.8	516,118	29.9	50.9

Occupations and Wage Rates. The total number of wage earners is 1,266, of which 949 or 75.0% are unskilled laborers and 317 or 25.0% are skilled or semi-skilled laborers. Of the unemployed persons, 859 or 98.8% are unskilled laborers, and 10, or 1.2% are skilled laborers. Therefore, there are 1,808 unskilled and 327 skilled laborers in the surveyed area. The proportion of skilled and unskilled workers in 1936 was 20.0% and 80.0% respectively.

There has been an increase of 27.2% in the total number of workers employed in 1940 (1,266) as compared with 1936 (995). The increase in the skilled workers is 59.3% and 19.2% in the unskilled. It should be explained, however, that although the major part of the skilled laborers work for the cooperatives, there are a few of them working in the different projects of the P.R.R.A.

Nearly four fifths (79.3%) of the workers earn a daily wage of \$1.00 to \$1.49; only 4.2% earn less than \$1.00 and about 16.0% earn a daily wage rate of \$1.50 and over. Most of the unskilled laborers (879 or 92.6%) earn wage rates from \$1.00 to \$1.49. Among the skilled laborers nearly two fifths (39.7%) earn a daily wage rate of \$1.00 to \$1.49 and more than half (53.9%) earn wages of \$1.50 and over.

Comparing the rates in 1940 with those of 1936 a substantial increase in the daily wage rates is observed. In 1936 11.4% of the workers earned wages under \$0.75 per day, 56.1% earned wages from 75 to 99 cents and the remainder 32.4% earned wages of \$1.00 or

more. The mean daily wage rate, all workers comprised, was 96.4 cents and the modal, 85 cents in 1936. In 1940 the mean wage rate is \$1.19 and the modal wage rate \$1.00 per day, the total number of workers considered. The mean wage rate for resettlers, laborers and squatters is \$1.11, \$1.22 and \$1.29 respectively.

The cooperatives pay the wage rates specified in the Collective Agreement between the Sugar Producers Association and the laborers organized under the *Federación Libre de los Trabajadores de Puerto Rico*, affiliated with the American Federation of Labor. According to this agreement the daily wage rates in cultivation and harvesting range from \$1.00 to \$1.45 in 1939. Workers in factory, railroads, etc. earn wages ranging from \$1.05 to \$3.15 per day.

Time Worked during the Year. Sugar production in Puerto Rico is limited in accordance with the Federal agricultural adjustment program. Under the quota system, the Secretary of Agriculture of the United States fixes the amount of sugar that each Central in Puerto Rico can produce every year. In the fiscal year 1937-1938 central Lafayette ground 268,592 tons of cane, and in 1938-1939, only 223,478 tons, a reduction of 45,114 tons or 16.8%. Consequently, the *zafra*, or harvesting period, was very short in 1939.

This shrinkage in production coupled with the increase in the number of families and hence of employable persons, brought about, not only a great deal of unemployment, but also of underemployment. (See Table 29.)

TABLE 29

Cumulative Percentage Distribution of Time Worked During the Year by Skilled and Unskilled Workers, 1940 and 1936

Time Worked	Skilled				Unskilled			
	1940		1936		1940		1936	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
TOTAL	317	100.0	199	100.0	941	100.0	796	100.0
Under 8 weeks	2	0.6	1	0.5	22	2.3	—	—
8-12 weeks	5	1.6	2	1.0	55	5.8	6	0.8
13-16 "	40	12.6	6	3.0	188	20.0	22	2.8
17-20 "	59	18.6	11	5.5	277	29.4	36	4.5
21-25 "	75	23.7	24	12.5	399	42.4	75	9.4
26-30 "	133	42.0	33	17.0	603	64.1	159	19.9
31-34 "	176	55.5	54	27.1	699	74.3	366	45.9
35-38 "	179	56.5	97	48.7	717	76.2	622	78.1
39-43 "	201	63.4	108	54.2	789	83.8	689	86.5
44-47 "	206	65.0	113	56.7	806	85.7	715	89.8
48-51 "	211	66.6	116	58.2	815	86.6	719	90.3
52	317	100.0	199	100.0	941	100.0	796	100.0

One-fourth (23.7%) of the skilled laborers worked for a period of 25 weeks or less in 1940 while in 1936 only one-eighth (12.5%) worked for the same period of time; more than one-half (55.5%) of the workers worked 34 weeks or less in 1940, whereas in 1936 only 27.1%, or half that number, worked during an identical period. One-third (33.4%) of the workers were employed during the 52 weeks of the year in 1940, while in 1936, 41.8% of the workers had work during the whole year.

Among the unskilled workers, 42.4% worked for periods of 25 weeks or less in 1940, while in 1936 only 9.4% worked for the same period of time; nearly three-fourths (74.3%) worked 34 weeks or less in 1940 and only 45.9% in 1936. On the other hand, relatively more workers were employed during the whole year in 1940 (13.4%) than in 1936 (9.7%) which might be attributed to the fact that a small number of individuals had work during the dull season of the year in other projects of the P.R.R.A. within the survey area.

Summarizing, approximately three-eighths (37.8%) of the workers, skilled and unskilled, had work during 25 weeks or less in 1940 while in 1936 only 9.9% worked for the same period; more than two-thirds (69.6%) worked 34 weeks or less in 1940, and only 42.1% in 1936. The workers who had work during the 52 weeks of the year amounted to 18.4% and 16.3% in 1940 and 1936, respectively.

According to information, the resettlers had preference for work during the whole year. The analysis of the information obtained in the survey indicates that there is no such preference: on the whole, the resettlers seem to have more or less the same opportunities for work as the other workers. For instance, the relative number of skilled and unskilled workers having work for 39 weeks or more (9 months to one year) was 43.0% and 20.5%, respectively, among the resettlers, 42.8% and 31.3% among the laborers, 36.3% and 23.9% among the squatters, and 63.3% and 40.0% among the employees. However, the analysis of the time worked during the year was made for the 475 resettlers as a group. Since only 230 of them were members of the land cooperatives and were therefore entitled to preference in employment, it is possible that if a separate analysis had been made for them in this respect, a higher rate of employment would have been obtained.

In interpreting the question of preference in employment for all resettlers the following factors must be considered: (1) Limitations because of specialization of laborers for different types of work. (2) The *mayordomos* claim that many of the resettlers are not as

good workers as other laborers because of psychological reactions due to the change in their status from common laborers to co-owners of the land cooperatives. (3) The pressure exerted by the increase of employable workers who were not resettlers, and outnumbered them.

Annual Earnings from Wages. Table 30 shows the weekly and annual earnings from wages of unskilled laborers. The average annual earnings from wages, based on the time worked during the year, is \$116.59 per worker as against \$119.34 in 1936. The 399 workers who had work during 25 weeks or less had annual earnings from wages ranging from \$8.42 to \$71.98; those working 26 weeks or more had earnings ranging from \$110.22 to \$263.92. The 126 workers (representing 13.4% of all workers in this group) who had work during the 52 weeks of the year had average annual earnings from wages of \$263.92 per worker.

The workers are distributed rather evenly according to the weekly earnings, that is, there is not a large group of workers having work during a large part of the year and another large group working during a short period of time. This probably reflects the tendency to provide work for the highest possible number of workers during some part of the year.

The percentage of workers earning under \$2.00 per week is 16.0, those earning from \$2.00 to \$2.99 represent 15.4% of the total and the highest number of workers (245 or 26.0%) is found among those earning from \$3.00 to \$3.99 per week. The group earning from \$4.00 to \$4.99 per week follows with 186 workers, or 19.8% and the smaller number of workers (102 or 10.8% of the total) is found among those earning from \$5.00 to \$5.99. One hundred and twelve workers (representing 11.9% of the total) earned \$6.00 or more per week. In 1936 one-third of the unskilled workers earned from \$2.00 to \$2.99 per week, another third from \$3.00 to \$3.99, and 11.1% earned less than \$2.00. Only 33 or 4.1% of the total number of unskilled workers had earnings of \$6.00 or more per week.

The average annual earnings per worker for the 317 skilled workers (Table 31) is \$307.21 as against \$349.52 for the same class of workers in 1936. The 75 workers (23.7%) who had work for 25 weeks or less, had annual earnings ranging from \$4.19 to \$171.70 and those working 26 weeks or more had earnings ranging from \$188.58 to \$541.10. The 106 (33.4%) workers who had work during the whole year had annual earnings of \$521.52. In 1936, 41.7% of the skilled workers had work during the whole year with earnings of

TABLE 30
Time Worked During Year by Unskilled Laborers; Weekly and Annual Earnings from Wages and Annual Earnings per Worker

Time worked during year	Workers Gainfully Occupied		Weekly Earnings (In Dollars)								Annual Earnings	Annual Earnings per Worker
	No.	%	Total	Under \$2.00	\$2.00 to \$2.99	\$3.00 to \$3.99	\$4.00 to \$4.99	\$5.00 to \$5.99	\$6.00 and over			
	TOTAL PER CENT*	949	100.0	3,479.47	151	145	245	186	102	112	\$109,710.86	\$116.59
Under 8 weeks	22	2.3	41.12	17	—	2	1	—	2	185.37	8.42	
8-12 weeks	33	3.5	63.96	24	2	3	1	2	1	616.96	18.70	
13-16 "	133	14.1	306.02	78	20	15	9	5	6	4,229.77	31.80	
17-20 "	89	9.5	235.43	15	50	12	7	4	1	4,334.30	48.70	
21-25 "	122	13.0	398.84	3	37	62	12	3	5	8,781.32	71.98	
26-30 "	204	21.7	825.78	4	15	88	52	24	21	22,484.27	110.22	
31-34 "	96	10.2	422.26	1	5	19	42	21	8	14,124.42	147.13	
35-38 "	18	1.9	80.67	—	1	2	12	2	1	2,907.10	161.50	
39-43 "	72	7.6	319.12	2	6	12	23	16	13	12,982.58	180.31	
44-47 "	17	1.8	72.83	1	1	7	1	2	5	3,540.19	208.25	
48-51 "	9	1.0	38.84	1	—	2	—	—	4	2,270.66	252.29	
52	126	13.4	644.37	5	8	21	26	21	45	33,253.92	263.92	

* The percentages are based on the 941 workers who specified the time worked during the year.

TABLE 31
Time Worked During Year by Skilled Workers; Weekly and Annual Earnings from Wages and Annual Earnings per Worker

Time Worked During Year	Workers Gainfully Occupied		Weekly Earnings (In Dollars)							Annual Earnings	Annual Earnings Per Worker	
	No.	%	Total	Under \$2.00	\$2.00 to \$2.99	\$3.00 to \$3.99	\$4.00 to \$4.99	\$5.00 to \$5.99	\$6.00 and over			
				9 2.8	15 4.7	30 9.5	39 12.3	51 9.8	193 60.9	\$97,386.63	\$307.21	
TOTAL PER CENT	317		2,544.31									
Under 8 weeks	2	0.6	1.62								8.38	4.19
8-12 weeks	3	1.0	3.77								30.16	10.05
13-16 "	35	11.0	222.96		9		3	1			3,133.88	89.54
17-20 "	19	6.0	154.96	1	1	3	1	2			2,602.54	136.98
21-25 "	16	5.1	127.24		1	1	3	2			2,747.26	171.70
26-30 "	58	18.3	395.93		1	12	7	6			10,937.49	188.58
31-34 "	43	13.6	300.71	1	1		10	6			9,952.24	231.45
35-38 "	3	0.9	12.34								736.59	245.53
39-43 "	22	6.9	162.66					5			6,593.47	299.70
44-47 "	5	1.6	56.76					1			2,657.40	531.48
48-51 "	5	1.6	54.75								2,705.50	541.10
52	106	33.4	1,050.61	2	2	5	10	8			55,281.72	521.52

\$612.87 per worker and those working for 25 weeks or less, who represented only 12.5% of the total, had weekly earnings ranging from \$5.00 to \$82.78. It appears therefore, that proportionally more skilled workers were employed during the whole year in 1936, and that those so employed had, on the average, larger annual earnings from wages.

Three-fifths (60.9%) of the skilled workers had earnings of \$6.00 or more per week, 70 workers or 22.1% had earnings from \$4.00 to \$5.99 and 54 workers or 17.0% had weekly earnings under \$4.00. The distribution of the skilled workers in 1936 according to their weekly earnings was thus: 48.2% had weekly earnings of \$6.00 or more, 26.2% had earnings from \$4.00 to \$5.99 and 25.6% had earnings below \$4.00 per week.

In order to have an idea of the value of the farm products, information was obtained as to the weekly and annual income of resettlers from farm products either sold or consumed. Most of the products of the farms are consumed by the family, the proportion being 10.0% sold and 90.0% consumed. Of the 475 resettlers only 369 reported income from farm products; the other 106 or 22.3% had no income from this source during the year. This was explained by the fact that many of the resettlers had been on the farm for a very short period of time and, therefore, the crops planted had not yielded product. The resettlers established in colonia Bordelaise of Maunabo did not have products from their farms because these were being improved according to a plan formulated by the Soil Conservation Section of the Rural Rehabilitation Division.

It was observed that 10.0% of the families obtained an average annual income of only \$5.54, and that 2.7% of the resettlers had incomes of \$142.36 per farm. The average income from this source for the 369 resettlers reporting income from products sold or consumed is \$35.42.

Weekly Income of Families. The distribution of the total weekly income by economic classification of the families is offered in Table 32. The average weekly income for the total number of families is \$7.47. If the employees' families are excluded, the average weekly income for the wage earner families is \$5.91 as compared with \$6.13 in 1936. Therefore, in spite of the increase in the daily wages and the income from products raised on the farms there has been a small reduction in the weekly income. This is attributable to the decrease in the period of time worked during the year.

TABLE 32
Distribution of Total Weekly Income of Families, by Economic Classification of Families

Rate of Income	Number of Families	Total Weekly Income	Total Income Per Family	Wages	Products Sold	Products Consumed	Other Earnings
TOTAL	1,101	\$8,227.16	\$ 7.47	\$6,972.59	\$65.01	\$278.21	\$911.35
Per Cent of Total Wkly. Income		100.00		84.7	0.8	3.4	11.1
RESETTLERS	475	2,705.20	5.70	2,289.46	27.27	223.32	165.15
Under \$3.00	41	97.12	2.37	80.05	1.25	11.55	4.27
\$3.00-\$5.99	263	1,190.79	4.53	1,029.88	11.48	101.59	47.84
\$6.00-\$9.99	140	1,031.48	7.37	844.13	9.46	87.52	90.37
\$10.00 and over	31	385.81	12.44	335.40	5.08	22.66	22.67
LABORERS	225	1,500.87	6.67	1,314.11	3.10	11.18	172.48
Under \$3.00	20	37.53	1.88	35.74	—	.73	1.06
\$3.00-\$5.99	85	359.91	4.23	338.88	.05	3.08	17.90
\$6.00-\$9.99	84	623.14	7.42	530.15	1.05	6.62	85.32
\$10.00 and over	36	480.29	13.34	409.34	2.00	.75	68.20
SQUATTERS	327*	1,867.76	5.73	1,341.38	33.14	39.26	453.98
Under \$3.00	81	150.10	1.85	100.77	1.34	6.76	41.23
\$3.00-\$5.99	136	556.76	4.09	392.57	13.80	15.94	134.45
\$6.00-\$9.99	59	418.17	7.09	297.15	8.00	14.35	98.67
\$10.00 and over	50	742.73	14.85	550.89	10.00	2.21	179.63
EMPLOYEES	74	2,153.33	29.10	2,027.64	1.50	4.45	119.74
Under \$3.00	1	2.92	2.92	2.92	—	—	—
\$3.00-\$5.99	3	14.03	4.68	9.98	—	—	4.05
\$6.00-\$9.99	9	66.95	7.44	66.52	—	.15	.28
\$10.00 and over	61	2,069.43	33.92	1,948.22	1.50	4.30	115.41

* One family had no income

Among all the families, the resettlers had the smallest weekly income (\$5.70) followed, in ascending order, by the squatters (\$5.73), the laborers (\$6.67) and the employees (\$29.10). The earnings from wages constitute the major part (84.7%) of the total weekly income; the products sold amount to less than 1.0% and the products consumed to 3.4%. All other earnings amount to 11.1% of the weekly income. Among the resettlers' families, however, the products sold (1.0%) or consumed (8.3%) amount to 9.3% of the weekly income. The squatters group had the smallest relative income from wages (71.8%) and the highest from "other earnings" because in this group are some families who derive their main income from the operation of small shops or other minor business undertakings, and not from wages.

It is to be observed, furthermore, that the highest number of families earn from \$3.00 to \$5.99 per week, followed by those earning \$6.00 to \$9.99 per week. The percentages of those falling within these two groups of income are 55.4 and 29.5 for the resettlers, 37.8 and 37.3 for the laborers and 41.7 and 18.1 for the squatters.

Annual Income of Families. Although the annual income was computed for all the families investigated, only the 1,027 wage earner families (resettlers, laborers and squatters) have been included in Table 33, since the inclusion of the income of the employees' families would give a misleading idea of the actual income of the wage-earners' families. The annual income per family, all the wage-earners' families considered, is \$220.19. The resettlers' families have the lowest annual income with \$203.33, followed by the squatters' families with \$218.08; the laborers' families have an annual income of \$258.82. To compute the annual income, the total amount of wages earned by the householders and by other members of the household, the value of products sold or consumed and all other earnings were considered. The wages of the householders amounted to 69.8% of the total income and those earned by other members of the household to 4.2%, or an income of 74.0% from wages. The income from products sold or consumed amounted to 7.8% and the remainder 18.2% is from all other sources.

The per capita income, all families considered, is \$41.38; for the resettlers' families \$34.58; for the squatters' families \$46.16 and for the laborers' families \$51.67. Therefore, the per capita income per day is 11 cents for all families, 9½ cents for the resettlers' families, 14 cents for the laborers and about 13 cents for the squatters' families.

TABLE 33
Weekly and Annual Income per Family and Annual Income per Capita of Wage-Earners' Families

Economic Classification	Number of Families	Members in Families	Annual Income (In Dollars)						Annual Income	
			Total	Wages		Products sold or consumed	Other earnings	Per family	Per capita	
				Householder	Other members					
TOTAL PER CENT	1,027*	5,462*	225,911.44 100.0	157,816.94 69.8	9,392.74 4.2	17,538.04 7.8	41,163.72 18.2	\$220.19	\$41.38	
Resettlers	475	2,793	96,581.56	70,785.26	4,179.82	13,030.68	8,587.80	203.33	34.58	
Laborers	225	1,127	58,235.43	45,337.78	3,186.13	742.56	8,968.96	258.82	51.67	
Squatters	327*	1,542*	71,094.45	41,695.90	2,026.79	3,764.80	23,606.96	218.08	46.16	

* One family having two members had no income.

For the interpretation of the income data it should be considered that a large proportion of the batey laborers are skilled workers who have steady employment at higher wage rates and that among the squatters there are many individuals whose source of income is the operation of small businesses. On the other hand, most of the resettlers are common laborers at a lower rate of pay, whose employment is not steady, especially in the case of those who were not members of the land cooperatives.

In 1936 the average annual income per wage-earner family was \$254.63 or \$34.44 more than in 1940 and the per capita income \$48.59 or \$7.21 more than in 1940. The average income per person per day for the wage-earners' families in 1936 was about 13 cents.

The annual income of the 74 employees' families is \$1,430.32 and the per capita income \$235.73.

Distribution of Income. The weekly expenditures of the families have been computed for what could be considered as a typical week, since the families were asked to report the expenditures which they incurred ordinarily, and not during the week of the investigation.

The average weekly expenditures for the total number of families is \$7.22; for the resettlers' families, \$6.06; for the batey laborers \$6.47; for the squatters \$5.65 and for the employees \$23.94. (Table 34.) For the wage-earners' families it is \$6.02. Whereas the laborers' families have a surplus of 3.0% per week, the squatters' families a surplus of 1.1% and the employees' families a surplus of 17.7%, the resettlers' families have a deficiency of 6.4% per week between income and expenditures.

Three-fifths (60.4%) of the expenditures are spent in food, all families included. Among the various groups of families the proportion of the weekly expenditures spent in food is 63.2% for the resettlers, 66.6% for the laborers, 63.7% for the squatters and 47.5% for the employees. The payment of rent amounts to 10% of the expenditures for the resettlers, 1.2% for the laborers, 2.2% for the squatters and 1.3% for the employees. The resettlers' families are below all the other families in the amount spent for clothes, for recreation and transportation, with 7.9% and 2.9%, while the laborers spend 8.1% and 3.3%, the squatters 8.5% and 3.6% and the employees 10.3% and 6.9% for clothes and for recreation and transportation respectively.

The average weekly expenditures per wage-earner family (excluding employees) in 1936 was \$6.50 and the average weekly income, \$6.13. There was an average deficiency of 3% between income and

TABLE 34
Weekly Income and Expenditures, and Itemized Distribution of Expenditures, by Economic Classification of Families

Income and Expenditures	Total*		Resettlers		Laborers		Squatters		Employees	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
	TOTAL WEEKLY INCOME	\$8,227.16	100.0	\$2,705.20	32.9	\$1,506.87	18.2	\$1,867.76	22.7	\$2,153.33
TOTAL WEEKLY EXPENDITURES	7,953.57	100.0	2,878.70	36.2	1,455.16	18.3	1,847.84	23.2	1,771.87	22.3
AVERAGE PER FAMILY	7.22		6.06		6.47		5.65		23.94	
SURPLUS AND % OF INCOME	273.59	3.3	-173.50†	-6.4	45.71	3.0	19.92	1.1	381.46	17.7
Food	4,806.80	60.4	1,820.59	63.2	968.84	66.6	1,176.57	63.7	840.80	47.5
Rent	369.68	4.6	289.08	10.0	17.63	1.2	40.59	2.2	22.38	1.3
Clothes	685.45	8.7	227.01	7.9	118.55	8.1	156.85	8.5	183.04	10.3
Health	273.00	3.4	62.52	2.2	33.06	2.3	71.56	3.9	105.86	6.0
Recreation and transportation	321.72	4.0	82.79	2.9	48.60	3.3	67.44	3.6	122.89	6.9
Others	1,496.92	18.8	396.71	13.8	268.48	18.5	334.83	18.1	496.90	28.0

* Based on total number of families surveyed (1,101).

† A minus sign denotes a deficiency.

expenditures. The proportion of the expenditures spent in food was 65.7%, in clothes 12.2%, in health 5.8%, in transportation and recreation 8.9% and 7.5% for all other purposes.

Property Owned by Families. There were 955 families, or 86.7% of the total, owning property of some kind, regardless of furniture and other home accessories. The average value of property per family is \$100.50, all families considered; for the resettlers' families the average value of property is \$45.34, for the laborers \$33.75, for the squatters \$87.88 and for the employees \$805.76.

The value of crops amounts to 54.6% and the value of animals to 33.1% of the total value of property owned by the resettlers. In the squatters' families nearly three-fifths (56.9%) of the total value of property owned by them is represented by the value of the houses they possess. All of the resettlers, except one, own property.

It is interesting to note that there are a few resettlers and laborers who are owners of land and/or houses. The land, of course, is outside of the surveyed area; some of the houses are within the survey area and some are outside. Fourteen resettlers and eight laborers had houses and no land; five resettlers and five laborers had land but no houses, and five resettlers and one laborer had both houses and land. The size of these farms ranged from 1/2 to 6 cuerdas; the value of the houses from \$10.00 to \$700.00.

The average value of animals per family is \$18.66, all families comprised, \$15.07 for the resettlers' families, \$13.39 for the laborers, \$15.78 for the squatters and \$76.16 for the employees.

The average value of property per family was \$142.54 in 1936, for all families investigated, \$85.59 for the wage-earners' families and \$508.93 for all other families.

Accumulated Debts of Families. The majority of the families investigated (1,001 or 90.9%) had accumulated debts amounting to \$54,219.00 or an average of \$54.16 per family. The average amount of debt for the resettlers is \$43.51, for the batey laborers \$53.14, for the squatters \$46.19 and for the employees \$183.91.

Nearly one-half (47.9%) of the total amount of debts was incurred for food, all families comprised; for the resettlers the percentage of debts incurred for food was 56.9, for the laborers 47.2, for the squatters 61.9 and for the employees 14.0. About one-tenth (9.5%) of the total amount of debts of resettlers is on account of rentals in arrears. (Table 35.)

One-fourth (25.0%) of the debts was incurred for the purchase of furniture. This item is relatively high for both resettlers (24.2%) and

batey laborers (38.7%) and is due to the fact that many of the workers purchased new furniture to equip the newly constructed houses in which they were going to live.

TABLE 35

Accumulated Debts of Wage-Earners' Families, by Purpose of Debt, by Economic Classification of Families

Purpose of Debt	Total	Economic Classification			
		Resettlers	Laborers	Squatters	Employees
TOTAL	\$54,219	\$20,320	\$10,575	\$12,841	\$10,483
TOTAL FAMILIES IN DEBT	1,001	467	199	278	57
AV. DEBT PER FAMILY	54.16	43.51	53.14	46.19	183.91
			<i>Per Cent</i>		
TOTAL	100.0	37.5	19.5	23.7	19.3
Food	47.9	56.9	47.2	61.9	14.0
Rent	3.5	9.5			
Clothes	5.5	4.5	7.4	6.4	4.3
Health	6.6	0.5	1.4	2.9	28.1
Furniture	25.0	24.2	38.7	17.0	22.3
Loans	5.7	1.4	2.6	5.9	17.1
Others	5.8	2.9	2.7	5.8	14.2

SUMMARY

The present study comprises the second survey of the Lafayette area and aims to throw light on the living conditions prevailing there after nearly four years of operation of the Central as a government-sponsored cooperative enterprise.

The first important fact brought out by the survey is a significant increase in the number of families (from 860 to 1,101 or 28.0%) and hence of the population (from 4,400 to 5,911 or 34.3%). A comparison of the population enumerated in both surveys shows that the 1940 population is somewhat younger, although in the most physically productive ages (25 to 34 years) there are more persons in 1940 than in 1936. There is a higher proportion (54.3%) of colored people and the proportion of the sexes is 51.1% males and 48.9% females. Only 91 families or 8.3% of the total were from outside of the municipalities of Arroyo, Patillas and Maunabo in which Lafayette is situated.

The improvement in the housing situation is noteworthy. All the bohios which made up nearly 10% of the total number of houses in 1936 have disappeared. About 500 hurricane-proof concrete houses and 225 wooden houses have been constructed. The average number of occupants per room is 1.9 and the average number of occupants

per sleeping room, 2.8. In 1936 the average number of occupants per sleeping room was 3.5 and 64.8% of the families lived in houses with only one room, with an average of 4.6 persons per room.

In some of the houses tanks for rain water have been constructed, and in most of them water has been provided by means of water supply systems. The water is not piped to the houses; public fountains have been installed nearby. One-third (33.4%) of the families obtain their water supply from wells, brooks and rivers (26.4%) or from the irrigation canals (7.0%).

All the newly constructed houses are provided with pit sanitary latrines thus reducing the percentage of houses without sanitary conveniences from 43.1 in 1936 to 10.4 in 1940.

The dietary of the families has not improved and the situation in this respect is rather worse than in 1936. The percentage of families taking the most varied and balanced diets has decreased while the percentage of those taking only tubers and codfish, and rice and beans has increased. More than two-thirds (69.5%) of the families consume milk as compared with 60.0% in 1936 but the per capita consumption per day has dropped from 0.40 to 0.36 pints.

Considerable improvement has been experienced in the general health conditions of the population. The morbidity from malaria, the greatest scourge in the area, has been reduced, and the general mortality has been lowered. Three rural medical dispensaries have been functioning for the last two or three years and a modern hospital for 32 beds was opened in April, 1939. The general morbidity rate registered (214 per 1000 population) is considered very low since the surveyed area lies within the territory registering the highest morbidity in Puerto Rico. Nearly a fourth of a million dollars has been spent in permanent malaria control work, mainly in the vicinity of the mill and in the colonias situated in Arroyo.

The workers (heads of families) were divided in four main groups; (1) resettlers, or those to whom hurricane-proof houses and a piece of land were sold or leased and from whom members of the cooperatives were selected; (2) laborers, or batey dwellers, for whom wooden houses with no land are provided at the bateyes of the Cooperatives, but who are not eligible for membership in the cooperatives. About one third of these are minor field employees or skilled factory workers. (3) Squatters, or all those who were not employees, batey laborers, or resettlers; and (4) employees, or those having a more or less important administrative responsibility or who were technical or clerical employees.

In general, the resettlers who, one would suppose, are the backbone of the organization, are socially and economically in a more precarious situation than the rest of the workers.

More than one-eighth (13.4%) of the total number of families were broken families in which either the husband or the wife was missing, (11.9%) or one-person families (1.5%). Nine hundred and seventy-four families (88.5%) had normally dependent persons (under 16 and 65 years of age and over) among them; the proportion of normally dependent persons among the resettlers was 93.7%.

More than three-fifths (61.3%) of the population of marriageable age (15 years or more) was married, as compared with 57.2% in 1936. Of the persons married, 56.4% were civilly or religiously married and 43.3% consensually married. In 1936 the proportion was 53.6% and 46.4% respectively.

The percentage of illiteracy among the population of school age (10 years and over) was 31.6, as compared with 36.9 in 1936. The improvement in education was registered mainly in the age group 10-14 years. The resettlers' families, and also the resettlers as heads of families showed the highest percentage of illiteracy: 46.4 and 46.1 respectively. The percentage of heads of families having completed five or more grades in school was 17.8 among the resettlers, 32.9 among the batey laborers and 24.5 among the squatters.

A very high proportion of illegitimate persons, 42.4% of the population under 15 years of age, was found in the present survey. In 1936 a still higher percentage (43.5) was recorded. The proportion of illegitimate persons among the resettlers (39.6%) was the lowest among all the wage-earners (excluding employees' families).

To become a member of the land cooperatives the applicant must be a resettler within the P.R.R.A. resettlement program. There are 230 resettlers, among those investigated, who are members of the cooperatives. More than half of the resettlers are not members. The membership of the mill cooperative consists of the land cooperatives and their members, and of independent colonos.

There were 2,209 gainful workers among the 1,101 families investigated, of which 1,323 or 60.0% were employed and 40.0% unemployed. One thousand two hundred and sixty-six of the employed persons were workers on wages and 57 or 2.8%, salaried employees. Of the gainfully employed persons 1,278 or 96.6% were male and 45 or 3.4%, female. Although there has been an increase of 27.2% in the total number of workers employed (59.3% skilled and 19.2% unskilled) the percentage of persons gainfully employed has dropped

from 47.8 in 1936 to 40.0 in 1940. Three-fourths of the workers employed are unskilled and one-fourth skilled or semiskilled.

Nearly four-fifths (79.3%) of the workers earned a daily wage rate of \$1.00 to \$1.49; 16.0%, \$1.50 or more, and only 4.2%, less than \$1.00. Comparing the wage rates paid in 1940 with those of 1936, a substantial increase was observed. In 1936 11.4% of the workers earned daily wages under \$0.75; 56.1%, from 75 to 99 cents; and 32.4%, \$1.00 or more. The mean wage rate in 1940 was \$1.19 and the modal rate, \$1.00.

The reduction in sugar cane production imposed by the Federal agricultural adjustment program coupled with the increase in the number of families, and hence of employable persons, caused a great deal of unemployment and under-employment. Nearly two-thirds (64.8%) of the workers were employed from 35 to 52 weeks in 1936 while in 1940, 62.8% of the workers were employed from 13 to 34 weeks.

The average annual earnings from wages for unskilled workers was \$116.59 per worker as against \$119.34 in 1936. Only 126 or 13.4% of the unskilled workers were employed during the 52 weeks of the year and had earnings of \$263.92 per worker. The skilled workers had average annual earnings of \$307.92 per worker, as compared with \$349.52 in 1936. One-third (33.4%) of the skilled workers had work during the whole year with earnings of \$521.52 per worker; in 1936 the percentage was 41.7 with earnings of \$612.87 per worker.

The family weekly income from all sources for all wage-earners' families (excluding employees) was \$5.91 as compared with a weekly income of \$6.13 per family in 1936. The majority of the families earned weekly incomes of \$3.00 to \$5.99, followed by those earning from \$6.00 to \$9.99. Among all the families, the resettlers had the lowest weekly income (\$5.70). Earnings from wages constituted 84.7% of the total weekly income, all families considered.

The annual income per family for the wage-earners' families was \$220.19. The resettlers' families had the lowest annual income: \$203.33 per family. The annual income included the total amount of wages earned by the householders and by other members of the household, the value of products sold or consumed, and all other reported earnings whatever their source. The daily per capita income was 11 cents, all families considered, 9½ cents for the resettlers, 14 cents for the batey laborers, and about 13 cents for the squatters. The average annual income of the 74 employees' families was \$1,430.32.

The average weekly expenditures of the wage earners' families was \$6.02 and \$6.50 in 1936. Whereas the batey laborers' families had a surplus between income and expenditures of 3.0% per week and the squatters' families, a surplus of 1.1%, the resettlers' families had a deficiency of 6.4%. Three-fifths (60.4%) of the expenditures were spent in food (63.2% the resettlers; 66.6%, the laborers; 63.7%, the squatters; and 47.5% the employees). The payment of rent amounted to 10% of the expenditures for the resettlers, 1.2% for the laborers, 2.2% for the squatters and 1.3% for the employees. The resettlers' families were below all the other families in the amount of money spent in clothes, and in transportation and recreation.

Most of the families (86.7%) had property of some kind, regardless of furniture and home accessories. The average value of property per family was \$100.50 (\$45.34 the resettlers, \$33.75 the laborers, \$87.88 the squatters, and \$805.76 the employees). The average value of property per family in 1936 was \$142.54 for all families and \$85.59 for the wage-earners' families. The majority of the families (90.9%) had accumulated debts averaging \$54.16 per family (\$43.51 the resettlers, \$53.14 the batey laborers, \$46.19 the squatters, and \$183.91 the employees). Nearly one-half (47.9%) of the debts were incurred for food. About one-tenth (9.5%) of the amount of the resettlers' debts are on account of rentals in arrears. One-fourth of the debts were incurred for the purchase of furniture.

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