THE STATUS OF EDUCATION AND AGRICULTURAL PRACTICES AMONG THE RURAL POPULATION IN SEVEN SELECTED AREAS OF HAITI

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Scope and Method of Study: The purpose of the study was to determine the status of education and agricultural practices among the rural population of Haiti. Also of paramount concern was to consider how the peasant population of Haiti may be prepared in order to effectively respond to socioeconomic development policies. A review of recent reports and journals of the Haitian Department of Agriculture, past experiences of the researcher as a Haitian field agronomist official, and responses to 59 items of an interview schedule administered to 150 Haitian peasant farmers made up data sources. The 150 respondents were selected at random from seven Agricultural Districts of Haiti.

Findings and Conclusions: A paramount and inescapable conclusion is that, hindered by all kinds of socioeconomic uncertainties of rural life and stymied by inadequate educational opportunities, the Haitian rural educational system must be judged as being relatively ineffective and inefficient. Education in agriculture receives little or no credit in Haitian primary and secondary schools. Cooperative effort and adequate working relationships among the Faculty of Agronomy and Veterinary Medicine, the Agricultural Extension services to the estimated 700,000 rural families are grossly inadequate. Respondents in some districts reported few, if any, agronomists. It was evident that agricultural development was hampered by the relatively low literacy and communication levels now existent. Important recommendations suggested were: (1) Rural schools should be provided with more qualified personnel in order to enhance rural education through an "Elementary Studies Certificate", or to three years beyond the "Primary Studies Certificate". (2) The Faculty of Agronomy, the Agricultural Extension Service, and the Agricultural Research Service should be restructured, providing effective cooperative efforts, being strongly involved in extending agricultural knowledge and enhancing production. (3) Haitian faculties should have a common campus. (4) The "Office National d'Alphabetisation et d'Action Communautaire" or "ONAAC" in cooperating with other institutions, should work with community groups to enhance local adult education programs. (5) Rural development programs and land reform policies should be of primary concern.

ADVISER'S APPROVAL _____

THE STATUS OF EDUCATION AND AGRICULTURAL

PRACTICES AMONG THE RURAL POPULATION

IN SEVEN SELECTED AREAS OF HAITI

Thesis Approved:

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Thesis Adviser

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Dean of the Graduate College

DEDICATION

This study is dedicated to my wife Immacula and our children Muriel, Wanie-Joe and Jones Wod whose love has always given me both a psychological and a moral force to move ahead.

It is also dedicated to Dad and Mom, Totor and Mantotor, as a part of what I owe them for their sacrifice for me.

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INTRODUCTION

The Republic of Haiti--Location and History

The Republic of Haiti (11,000 square miles) is the western third of the island of Haiti or Hispanola. This island is located in the West Indies or Caribbean between Cuba, Puerto Rico and Jamaica. Port-au-Prince (900,000 inhabitants), the capital city of Haiti, is at about 600 miles from Miami, Florida.

The island of Haiti was discovered by Christopher Columbus on December 5, 1492. The native population, the Tainos, called it at this time: Haiti, or Bohio, or Quisqueya. After the discovery, Columbus called it Espanola or Hispanola (little Spain).

In 1697, under the Treaty of Ryswick, Spain ceded to France the western part which they called St. Dominque. This latter became one of the richest overseas French colonies. Under the Treaty of Bale in 1974, Spain ceded the eastern part to France.

In 1801, after years of social class struggles, which were a somewhat result of the American Independence in 1776 and the French Revolution in 1789, Toussaint Louverture promulgated a constitution which proclaimed the political autonomy of all the island. Toussaint Louverture was a Negro, exslave, appointed commander-in-chief by France on all French forces in the colony. The Constitution of Toussaint

Louverture inaugurated the severance of the colony from the old world. However, the French Metropolis did not recognize the Constitution of Louverture, and the leader was finally arrested and deported to France where he died in jail in April, 1803. But the war continued in St. Dominque where allied Mulattoes and Blacks were opposed to Napoleon Bonaparte's soldiers. On January 1, 1804, after the last victory of the indigenous army upon the French army (Bataille de Vertieres, November 18, 1803), General Jean Jacques Dessalines proclaimed the independence of Haiti. Jean Jacques Dessalines, exslave, Negro, was a former lieutenant of Toussaint Louverture. January 1, 1804, the country resumed the old Indian name of "Haiti" which means "high and mountainous lands". The first black republic of the world and second independent country of the New World was born. The island remained united until 1844 when again further racial struggles divided it definitively into two republics, the Haitian Republic in the west and the Dominican Republic in the east.

Rural Population of Haiti--Origin

The Haitian rural population makes up 75 to 85 percent of the total population estimated at about 5,000,000 in 1977. The population is mostly black with a wide range of African-Caucasian blood degrees.

In fact, black slaves, coming from more than one hundred western African tribes, began to reach the country by the beginning of the sixteenth century. The native Indian population, the Tainos, estimated at about one million in 1492, was reduced to about 5,000 by the middle of the sixteenth century. Thus, the need for a new labor force led to the importation of increasing numbers of Negro slaves, primarily for

the cultivation of sugarcane. By 1520, Negro labor was used almost exclusively in Hispanola. At the end of the seventeenth century, the population of the country (then St. Dominque) included about 6,000 adult white and Mulatto males and approximately 50,000 black slaves. Although Mulattoes were, strictly speaking, the generation offspring of Negroes and Whites, the term was applied to their descendants. At the eighteenth century, "La Traite des Noirs" (The Trade of Blacks) took to St. Dominque about 20,000 black slaves per year. By 1789, the total population of St. Dominque was estimated at approximately 500,000 inhabitants. About 88 percent of that population was black with the remainder consisting of Whites and Mulattoes. As a summary, at the beginning of the nineteenth century, four groups or classes of people were living in St. Dominque.

At the top of the social scale were the affluent white minority. That class practically broke down in 1804 and the social vacuum was filled up by the Mulattoes and some exceptional Blacks.

In second place were the Mulattoes. They were mostly educated, rich, owning large estates and black slaves. However, they were devoid of civil rights which were the exclusive privilege of the Whites. Frustrated and desillusioned with their white ancestors, the Mulattoes finally united with the rebellion of the Blacks (exslaves) in the putsch which achieved Haitian Independence.

In third place, or next to the bottom of the social scale, were the black leaders, exslaves, born in the colony, earlier freed, now many occupying a place in the army under the direction of Toussaint Louverture. Among the most outstanding of them were Jean Jacques Dessalines, proclaimer of the Haitian Independence and first Emperor

of Haiti from 1804 through October 17, 1806 (when he was assassinated by his Mulatto rivals), and Henry Christophe, King of the North (1806-1820) who built the "Citadelle Laferiere", historical fortress, and one of today's most famous histroical monuments of the Caribbean. Some historians pretended that Henry Christophe was in the war of the American Independence in 1776 under the direction of General Lafayette. The third social group is called the "black bourgeoisie" by some Haitian historians. For nearly two centuries, political rivalries between Mulatto and Black bourgeoisies constantly maintained one of the most important social curbs upon the socioeconomic development process of Haiti. Even to the present time, under a more modern terminology and some socioeconomic modifications (upper class and middle class) this continues to be felt and has repercussions in the political, social and economic milieu of the country.

And at last, at the very bottom of the social scale were the black slaves, the most numerous group. Many of them were not born in the colony and were therefore designated as "Negres bossales". Negroes born in the colony were defined as "Negres Creoles". The fourth group was virtually freed in 1801 by the Constitution of Toussaint Louverture.

Individuals of that last stratum, either as landowners or under other titles such as renters or sharecroppers, have been farming the largest part of the arable--and non-arable--lands from the rule of Jean Jacques Dessalines (1804-1806) up to now. They almost exclusively constitute today's rural population of Haiti.

Statement of the Problem

Haiti is today one of the poorest countries of the western hemisphere. Its annual income per capita is $90. With an economy basically agricultural, the low gross national product or GNP largely reflects the impoverished lives of the rural population of the country.

The Haitian government, supported by international governments and institutions is making efforts to get the country developed. But the socioeconomic development process of any given country must include a consideration of all national resources and first and foremost, human resources. Consequently, rural communities which in the case of Haiti, constitute about 80 percent of the total population, must be a focal point of development planning. Developing the rural population of a country in which the economy is basically agricultural, presupposes the maintenance of a strongly functional educational system which provides both rural and urban populace with formal and informal learning opportunities, including theoretical, but stressing practical and applied education.

A problem of tremendous importance to most of the developing nations, and of particular significance for Haiti is that of planning, implementing and maintaining an educational program pertaining to agriculture and rural development. Such a program should not only be acceptable to the rural populace, but it should enhance their interest and foster a wider spread feeling of dignity and pride.

Purposes of the Study

This study was undertaken in an attempt to determine the status of education and agricultural practices among the rural population of

Haiti. The paramount purpose was to consider how that part of the population which is necessarily called to function effectively in the agricultural production process may be adequately prepared to face and carry out that assignment. Strongly undergirding analyses and assessment of such knowledge adequacy within the population chosen for this study, is a consideration of how this responsibility for increased agricultural production outputs may be presently being achieved in the worldwide socioeconomic milieu, this, in light of research findings and proven theory practices in socioeconomic development.

A projected objective, not necessarily within the confines of this study, is to enhance the understanding of Haitian people and to assist in their adoption of a somewhat new concept of the socioeconomic development process. In other words, the Haitian people as well as all other people of the world must recognize that there is no effective and viable socioeconomic change without a strong and democratic educational system to provide all the people with comprehensive and on-going, formal and informal, theoretical and practical education.

Objectives of the Study

In order to accomplish the purposes outlined, the objectives were organized as follows.

Among peasants comprising the population of seven selected areas of Haiti, to determine:

1. The status of formal education completed.
2. The status and types of informal and/or adult education experienced.

3. Present concepts of and values held concerning agricultural practices and rural development.
4. Through an analysis of findings with regard to objectives 1, 2, and 3, formulate preliminary suggested plans for more comprehensive and effective community development in education and agriculture among the rural population of Haiti.

Need for the Study

"Derriere mornes gain mornes" (Beyond mountains, other mountains) say the Haitian folks. That means you often meet again a new obstacle as soon as you overcome one. True proverb primarily in the uncertainties of the socioeconomic underdevelopment. But "Beyond mountains, other mountains" is also a right statement for Haiti as far as its topographic system is concerned. About three fourths of the geographic territories of Haiti is mountainous and a high percentage of the population, mostly illiterate or weakly educated, are living in the mountains.

Mountains in Haiti played a significant role through the War of Independence. The mountains constituted the hiding place of the fugitive Negro or of the "Negre Maron", as Haitian folks say. Under the cover of the night, the Negre Maron of St. Dominque left the mountain, got down to the plain and burnt off the prosperous plantations of the French colonists. However, as days go by, the descendants of the unknown runaway heroes have not learned to conserve the natural resources over the friendly mountains and even in some parts of the plains that his ancestors were sometimes obliged to destroy in order to gain their freedom.

The eroded mountains constitute today's Haitian nightmare. Many authors have described the situation, and some of the most remarkable are Thomas E. Weil (12, p. 14) who cried out: "In few countries of the world has the destruction of the natural woodland cover been so nearly complete", and Erik P. Eckholm (6) who, in his analysis of environmental stress and world food prospects, stated:

> Haiti, which means "Green Island" in the indigenous language, is now less than 9 percent wooded, and its mountains are completely ravaged. Long a consequence of severe poverty, soil erosion has reached the point where it is now a major cause of poverty as well. The UN Development Program has labeled rapid and increasing erosion as the country's principal problem. Wealthy farmers and North American sugar corporations own the best valley lands, crowding peasants onto slopes where cultivation is a futile, temporary proposition (p. 169).

Since the early fifties, Haiti has been helped by some foreign governments or international institutions such as the U.S. Point Four. In a recent report of the Agricultural Department of Haiti (1977), it is stated that Haiti is now attempting to implement nearly 40 socio-economic development programs, supported by foreign governments or international institutions such as USA, France, West Germany, Israel, Canada, FAO, etc. But those development projects are mostly concentrated on a part of the plains which constitute about one fourth of the country. The impact of those development projects on the needs of the poor majority is still relatively questionable. Any visitor who has the opportunity to visit the mountains of Haiti may readily comprehend for himself the true local situation. Speaking about his rural compatriots, Georges Anglade (1, p. 20) stated: "In two centuries, they have progressively elaborated an agricultural system which permits them to adapt themselves to the uncertainties of the rural life".

In August 1976 in an unpublished summary study on the island of La Gonave, Haitian rural place, the author of this study (10) concluded that behavioral scientists in almost any discipline might well find that investigation into the conditions under which those people live very interesting. They are, in many spots of La Gonave, a people existing primarily upon rudimentary fishing and farming practices and some little transactions which leave much to be desired. Thomas E. Weil (12) clearly stated:

> Little has changed in the peasants' isolated, rural existence since slave days; they remain outside the national economy and political life and are virtually untouched by modern technology or social change (p. 39).

He admitted that some rural inhabitants do become more mobile by seeking opportunities outside their ancestral villages. He further commented that although some few succeeded in shifting from their poor lower social position up to the upper middle class, they are still relatively few in number. He continued: "In spite of this signal of change, the overall social structure has not been deeply affected. At the base of the social pyramid the peasants' life is unchanged."

This present study is but merely a modest contribution to the colossal work which is to be done for the well-being of those rural people.

Definition of Terms

For better understanding of facts presented in this study, the following terms were defined:

1. Formal education: Education provided at a definite time (semesters, months, days, hours) in regular schools or colleges at primary, secondary, vocational and higher education levels. The formal education is urban and rural.
2. Informal education: is the contrary of formal education. In informal education, as a principle, all the opportunities may be used to teach the community members, regardless of age, sex and other values. As an example, for the Extension worker who is primarily involved in informal education, the classroom might be his office, a meeting room, the telephone, a home, a field, a radio or TV station, any place, anytime people can be reached effectively.
3. Theoretical education: Education provided through books or lectures. Theoretical education is rather abstract, and so, is primarily addressed to the learner through his "sight" and "hearing" senses.
4. Practical education is either the contrary or the extension (depending on how it is used by an individual) of the theoretical education. Depending on the nature of the studied matter or field, all the five senses might be stimulated or involved in the learning process. A good illustration of "practical education" versus "theoretical education" is the reproaches often addressed to the book--and lab--based educational system of some of the developing countries. Books and laboratories are often imported, thus, having little--if any--relationship with the very realities of the developing countries. As a result, the graduates often lack practical skills to cope

efficiently with their own field problems. On the other hand "practical education" as an extension of "theoretical education"[1] may be illustrated by the Agricultural Extension worker or the Home Economist who obtains that the farmer or the housewife perform actually a new method previously taught; or the teacher who repeats (with his pupils) his class lectures or lab demonstrations[2] on the very field by doing or making.

5. Comprehensive education: In Webster's New Collegiate Dictionary, "comprehensive" is defined as "covering completely and broadly". However, the French Dictionary "Larousse" defined "comprehensive" as "the faculty to readily comprehend and excuse other individuals". In this second case, comprehensive is clearly a synonym of gracious, kind or lenient. This second definition of "comprehensive" seems to be more suitable to explain the concept of "comprehensive education". A comprehensive education is then the educational methods (planning, implementation and evaluation) which consider the natural human potentiality throughout the learning process. The comprehensive education endeavors to adapt itself preferably to the normal possibilities (physic, mental, psychologic, socio-economic) of the individual rather than to pressurize the individual to become a mere robot who is then forced to adapt

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[1] Lab demonstration is on a certain extent practical education.

[2] There is no definite line of distinction drawn between formal, informal, theoretical, practical, and on-going education. All combination is possible to achieve the best efficient kind of "comprehensive education".

himself to the rigor of the learning process. Comprehensive education is, in a certain sense, "flexible education". While recognizing, for instance, the value of the memory in the learning process, comprehensive education maintains rather more emphasis on the individual's comprehension or conviction.

6. On-going education: Synonym of continuing education. It might be generally admitted that an individual must be engaged actively in continuous learning throughout this lifetime to remain a productive citizen. This statement is one of the basic principles of post-secondary, on-the-job, community and extension education programs.

7. Commune: A commune is an Haitian territorial subdivision in which the community members are democratically represented by a mayor. In 1975 {Georges Anglade (1)} the national territory of Haiti was divided into nine "Departments". Each "department" was subdivided into "Arrondissements". Each "Arrondissement" was subdivided into "Communes". And finally, each "Commune" was subdivided into "Sections Rurales". There were a total of 27 "Arrondissements", 116 "Communes" and 555 "Sections Rurales". At any level, the distribution is not equal. For example, a given Arrondissement may have two communes, while another one has four or five.

8. Agricultural District: In the frame of the activities of the Department of Agriculture, Natural Resources and Rural Development, (DARNDR), the Republic of Haiti, is divided into 14 agricultural districts. The seven agricultural districts involved in this study are currently designated as "District

Agricole de Belladere, "District Agricole des Gonaives", "District Agricole du Cap-Haitien", "District Agricole des Cayes", "District Agricole de Jeremie", "District Agricole de la Gonave" and "District Agricole de Petit Goave". An agricultural district is administered under the direction of an "Agronomist of District" appointed by the Director General of the Department of Agriculture. The Agronomist of District works in close relationship with all the services of the Department of Agriculture or DARNDR, and more particularly, with the Agricultural Extension Service. An agricultural district comprises several communes. It is to be noted that the Commune of Grands-Bois involved in this report belongs to the Agricultural District of Belladere and the Arrondissement of Mirebalais.

Scope and Limitations

The scope of the study was limited to samplings of rural peasant population in seven agricultural districts of Haiti. While a total of fourteen agricultural districts are to be found in Haiti, time and circumstances did not allow for sampling of but one-half of these. In other words, the survey was primarily designated to provide some more up-to-date data. Then, presentation and analysis of these data would corroborate, for the purpose and objectives of the study, related literature and past experiences of the author, who, as a field agronomist, worked among the Haitian countrymen from July 1971 through April 1977.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this chapter was to present for the reader an overview of material which was related to the subject of this study.

Various writers, national and international essayists, novelists and historians, professional official reporters or international experts such as agronomists, sociologists, economists, ecologists, etc., have made various studies about either the education or the agricultural practices or both of them among the rural population of Haiti. Following are some of the most notable.

Language Problems

Jacques Zephyr (13) and Hubert de Ronceray (3) raised in different senses the Creole-French bilingualism problems in the progression of the Haitian people life. The former, in a report, concluded that the Creole language is getting more and more influential among urban and rural people at the expenses of the French culture in Haiti.

While Hubert de Ronceray (3) in an experimental study on three groups each involving 50 six-year-old children, from three rural communities of Haiti, concluded that Creole should be used as a medium of instruction; French should be taught as a foreign language at the primary level.

The reader should note that French is the official language of Haiti and is exclusively used in the formal education system.

The Haitian Creole language may be defined as a mostly deformed French vocabulary in a western African style. It is estimated that about 80 percent of the 5 million people of Haiti are almost exclusively Creole speaking.

This dichotomous Creole-French system remains a serious problem in the socioeconomic development process of Haiti. It is true that Creole constitutes the primary language of the countrymen; it is the familiar language of an appreciable percentage of the middle class townspeople and a fairly large group of intellectuals of any social class; it is also the language of the Haitian artists and is being more and more supported by those adherents to the Haitian literary nationalist movement known as "Negritude".

However, relatively serious works such as national history and geography, published or unpublished official reports, institutional newspapers or journals, etc., are exclusively in French. Moreover, out of those above items, there are practically no Haitian publications in scientific and technical fields such as mathematic, physic, chemistry, statistic, agriculture, biology, architecture, mechanic, etc., for secondary level and higher education.

When will it then be possible for the Haitian people to achieve such necessary work in Creole? If an Haitian scientist or professional was to prepare a scientific or technical work, what would be the selected language (assuming that the author is free to use any desired language)?

If, as well as his non-educated folk--as it is observed by Jacques Zephyr (13)--the educated Haitian finds it enjoyable to talk in Creole with his compatriots, it is however quite different to him when he has to read or write: he is then easy but in French. In other words, many Haitian intellectuals speak Creole with their compatriots, but very few of them write and read that native language. Creole is written and read by a few Haitian intellectuals exclusively for specific purposes such as some popular novels, poems, poetries, play, popular and religious songs, religious publications (Bible, journal), adult education teaching materials, etc.

So, an important question remains still pending: How can Creole help effectively at this present moment if it is admitted that the education of the urban and rural masses constitutes the sine qua non-condition for Haiti to get itself out of isolation and underdevelopment?

An Haitian Author's Point of View

Georges Anglade (1), in a close analysis of the Haitian socioeconomic situation, stated that the activities of the socioeconomic dominating group are not directed toward development. Their profits are either used on prestigious expenditures (expensive houses, brand-new cars, etc.) or saved in foreign (American, Swiss,) banks. This is the flight of capitals. Anglade continued by adding that the peasantry, group supporting the national riches, cannot adopt new technics. This is by the fact that the peasantry is confined in the chief role of providing with surplusses a commercialization circuit which is, however, not strongly involved in solving-problem-matter of the masses. He concluded that the dominating groups' behavior is the primary curb to the achieve-

ment of the Haitian socioeconomic development. According to his analysis, the dominating groups can keep their privileges only if they are at the service of foreign powers which actually command the underdevelopment of the national economy.

Education and Agricultural Practices

Thomas E. Weil et al. (12) wrote that in the early 1970's, the rate of growth of primary schools was lower than that of the school age population, however, and the number of students in the country's one university, the University of Haiti, was lower than it had been a decade earlier. Predominantly urban secondary-school enrollment remained small, but was growing at a rapid rate. The country's literacy rate was among the lowest in Latin America. The rate of attrition at all levels of schooling was very high; most of the schools were located in the cities and towns, where only a small fraction of the population resided. He further stated that the high value that the Haitian people place on education is illustrated by the fact that Port-au-Prince students from homes lacking electricity and/or suitable studying atmosphere are frequently seen studying under street lamps and by the relatively large number who seek higher education abroad. Improvement of the educational system is, however, hindered by a variety of factors. Rural and urban schools are the responsibilities of different secretaries of state; the predominantly rural character of the population exacerbates the problem of producing an adequate number of schools; and the low level of national income severely limits the amount of money that can be devoted to the development of the program. Commenting about the Concordat of 1860 between the Haitian Government and Rome,

resulting in the assignment of additional teaching clergy, Weil (12) said that the new priests were for the most part, French, and they were motivated to further a rapprochement between Haiti and France. In this atmosphere, the clerical teachers concentrated their efforts on the developing urban elite, particularly in the excellent new secondary schools, where Haitian students were made fully aware of the greatness of France, the backwardness of their own country, and its lack of capacity for self-rule. Virtually no schools of any sort were established in the countryside. Few French priests went into the interior to teach the peasants.

During the 1920's, under the occupation by United States Marines, a considerable number of farm schools were established in which peasants could learn to read and write and could receive practical instruction in agriculture. These units were later absorbed into the regular primary system. Few textbooks are available and they are so lacking in variety that at secondary levels, rote learning is the rule. Textbooks from France are used fairly extensively. But there are few history and geography books written by and for Haitians.

The rate of attrition is severe. In 1967, almost half of the primary students were enrolled in the two kindergarten grades, 18 percent were in first grade of primary studies and approximately one percent were in the sixth and final grade. In 1963, data showed about one percent of the primary students to have been in the higher cycle.

Urban schools are modeled on the French pattern and provide the groundwork for classical studies at the secondary level. In theory, the rural system reflects the influence of the United States and endeavors to adapt schooling to the needs of rural life. In practice,

however, its curriculum is similar to that of the urban schools, except that practical courses in agriculture and home economics are included.

Enrollment is growing at a much faster rate in urban than in rural establishments. In 1967, the urban enrollment exceeded the rural by a proportion of more than three to two. In 1960, rural enrollment exceeded the rural by a proportion of more than three to two. In 1960, rural school boys outnumbered girls by more than two to one. Dropout rates, excessive throughout the system, tend to be much higher in the country than in town. In 1967 about 31 percent of the urban and 60 percent of the rural students were in kindergarten, and a little less than five percent of the urban and slightly more than one percent of the rural students were in the sixth grade. Many of the rural primary units however did not offer the full primary course. In addition, attendance is better in town than in the country. Recent data were not available in 1972, but in 1956, it was calculated that about 88 percent of the urban children enrolled regularly attended classes; in rural school, the regular attendance rate was about 76 percent. In 1960, 48.3 percent of all primary students were repeating grades, 26.2 percent were new entrants and 25.5 percent had been promoted.

The rural system is utilized because the schools are often poorly located in relation to the population to be served, a circumstance contributing to low attendance. In addition, the absence of local school districts and of parent organizations leave little opportunity for rural parents to learn that school is important. Probably, the most significant deterrent to attendance, however, is language. In the early 1970's, the rural as well as the urban classes were conducted in French, a language little understood in the countryside. The only institution

not using French as the language of instruction in 1972 was the English-speaking Union School in Port-au-Prince.

It is the stated position of Haitian educational authorities that full educational opportunities must be extended as quickly as possible to the rural population, but there is probably a conscious or unconscious reluctance on the part of many to create too great an increase in rural schooling too quickly; it could result in a corresponding increase in migration by an articulate peasantry to urban localities unable to absorb the flow. It appears to be the concensus of informed observers that the relatively slow pace of urbanization in Haiti is at least in part attributable to the low level of rural education. Moreover, so few children remain in primary school for a period long enough for them to learn and retain much of value that some educators believe that, in town as well as in the country, the limited available resources should be focused on ways to extend primary retention rates rather than on increasing enrollment.

Considering the secondary schools, Weil et al. (12) reported that in 1967 about 27,273 students were enrolled in schools of all kinds at the secondary level, an increase of about one-third over 1960. About 78 percent were in schools offering general or academic studies leading to university entrance. Over 21 percent were in vocational classes and less than one percent were in normal school (educational school). About 35 percent were girls, and 40 percent were in private schools.

Secondary schooling is almost entirely urban; in 1965 only two of 105 secondary units in Haiti were located in the countryside. Students who have completed rural primary courses and wish to matriculate at the secondary level must find lodging in urban places. The government,

however, offers a considerable number of scholarships (180 in 1961) to assist promising rural children in this respect and some vocational schools have boarding facilities. Most of the rural students who do go to cities and towns to continue their educations remain there and swell the urban population. An undated study of the backgrounds of graduates of one Port-au-Prince vocational school revealed that although these students had originally come from various parts of the country, nearly all had remained in the capital city.

As far as agricultural education in formal school is concerned, Weil et al. (12) reported that the rudiments of gardening and agriculture are taught in rural primary schools, and the Secretariat of State for Agriculture, Natural Resources and Rural Development offers some agricultural courses at the lower secondary level. These latter courses are not considered part of the regular school system, however, and enrollments in them are not included in the school enrollment statistics.

Reporting about the higher education, Weil et al. (12) found that the University of Haiti (officially, but rarely in practice, designated the State University of Haiti) was founded in 1944 by the merger of several Faculties that had functioned previously as independent entities. Its oldest component is the Faculty of Medicine and Pharmacy, founded in 1830 as the National School of Medicine. The university was originally autonomous, but in 1960 it was made the responsibility of the Secretariat of State for National Education. A baccalaureate from a secondary school is required for admission, and some of the faculties require the successful completion of entrance examinations.

University enrollments have declined in recent years, from 1,904 in 1956 to 1,227 in 1969. During the 1960's, some 10 to 15 percent of

the students were women. Dropout rates are high; of the 140 students who took graduation examinations in 1967 (120 passed), represented about 9 percent of the enrollment.

The University is made up of seven Faculties in addition to the School of Higher International Studies. In 1967 more than 36 percent of the students were engaged in the study of law and business administration, 26 percent studies medicine and pharmacy and nearly 17 percent studies education and letters. The remaining faculties had a smaller enrollment; less than three percent, for example, were engaged in the study of agronomy. There is no university graduate studies program.

About the backgrounds of Haitian urban and rural teachers, Weil et al. (12) reported that in 1967, about 70 percent of the instructional staffs in the urban primary schools were women. In rural primary schools, a little more than half of the public school teachers were men. Data were not available for rural private primary teachers. In secondary-level general classes, nearly 90 percent of the public and about 70 percent of the private school teachers were men. In the vocational system, men were slightly in the majority in both public and private sectors.

A large proportion of the teachers at both primary and secondary levels are members of Roman Catholic orders or Protestant denominations. Lay teachers, both public and private, tend to come from working class backgrounds, particularly at the primary level. Upperclass men are reluctant to accept employment in rural areas, and upper-class women seldom are employed in any gainful capacity.

Weil et al. (12) stated that in the early 1970's, the adult literacy rate (persons fifteen years or older are considered adult) was

estimated at a maximum of 20 percent and a minimum of 10 percent; it had been estimated at eight percent in 1914. But even at the highest estimation, literacy in Haiti in the 1970's was lower than in any other country of Latin America.

Considering the agriculture, Weil et al. (12) reported that the latest statistics available in 1972 indicated that of the 6.8 million acres of total land in the country, about 2.2 million acres, or 32 percent were cropland. About 1.4 million acres of the cropland were located on steep mountain slopes. Rough pastures accounted for 18 percent of the total land, or about 1.2 million acres, of which about 518,000 acres were located on the Central Plateau. Forests and wooded areas covered about 622,000 acres and the large balance of the land was idle or unproductive, mainly because of the mountainous terrain. About 300,000 acres of the idle land was believed to be potentially arable, but only if it were intensively irrigated.

The number of farms was estimated at over 560,000 in the late 1960's. Seventy percent of them were believed to be operated by their owners and their families. Others were operated by sharecroppers, renters, managers, etc. Most farms are very small. It was estimated that 90 percent of the farms are smaller than fifteen acres; eight percent are between fifteen and sixty-five acres in size; and two percent are larger than sixty-five acres.

Agricultural practices on small farms are traditional and modern methods are practiced only on some of the larger farms. Tools are basic: machette, hoe, digging stick, pruning knife, ax and serpette (a machette-like tool with a wider blade and a crescent-shaped tip). There were fewer than 100 tractors in the entire country in the early

1960's. These were, for the most part, found on the few plantations or on the government experimental farms. Although many farms have livestock, few farmers use them to pull plows. Occasionally, neighbors will purchase a plow jointly.

Most farmers cut the ground cover with a machette and burn it before planting. Some farmers stack it on hillsides to retard erosion, but burning is preferred because rats tend to nest in the piled cuttings. The soil is usually turned with a hoe. If the ground is hard or stony, machettes and serpettes are used instead of the hoe. Trees on the plot may or may not be felled. The wood is sold, made into charcoal or used for cooking fuel. Trees are felled with machettes and axes; very few saws are found in rural areas.

Because most farmers are reluctant to try new varieties, seed selection is usually poor. Only the sugarcane and rice farmers readily try new varieties. Planting more than one crop in the same field is common; usually a long-season crop is planted with a short-season crop. Given crops are planted in the same field until the yield falls drastically; then other crops are planted in their place unless the land is obviously exhausted, in which case the field is left fallow and used for pasturage for three to five years. Few farmers restore the fertility of the soil by the application of fertilizer. Because fallowing is so widely practiced as a soil conservation method, a farmer may have as little as 50 percent of his farmland under cultivation.

Coffee and sugarcane are the two important export or cash crops. Others are cotton, sisal, tobacco, cacao. Rice, corn, kidney bean, sorghum lead the way as food crops. Other important crops are vegetable,

plantains, manioc (or cassava), peas, sweet potatoes, Irish potatoes, various legumes, yam, taro, etc.

Only a few farmers derive their livelihood exclusively from livestock. There are very few ranches in the country, and stock-raising is a supplemental activity for most farmers. Farmers view their animals as a type of saving account because they are convertible into cash when funds are needed. Many tenant farmers receive young animals from their landlords to care for and share the profits when the stock is sold.

Cattle are mainly breeds derived from Spanish criollo stock of colonial times that over the years have interbred with Holsteins, Jerseys, Guernseys, Ayrshires, and Brown Swiss. Upgrading has proved difficult because most cattle are bred at random and the peasant usually sells his best animals first. No adequate animal census has been taken, but there were an estimated 800,000 head of cattle in 1971, all of which are used for beef, milk, and work. Goats, sheep, pigs, horses and other equine, donkeys, chickens, turkeys, ducks, geese, guinea hens, pigeons are also raised in a mostly traditional way by the peasants.

About 15,000 persons, largely working independently, are estimated to be engaged in fishing; annual catches of 5,000 to 7,000 tons are reported during most of the 1960's. Fishing is both ocean and freshwater, but fishing equipment as well as crop tools is still mostly rudimentary.

The forestry industry, once important, has declined because of excessive cutting of trees for both commercial use and for fuel by peasants. The stands of mahogany, once extensive, were heavily depleted, and since 1944 all exports of mahogany lumber have been prohibited. Some lignum vitae logs are exported, but most are used

domestically. Other major varieties as used are pine, oak, cedar and rosewood. The Haitian pine has a particularly high turpentine content, and a minor industry has developed around this.

Industrial establishments are mainly located in urban areas. A large proportion is concentrated in Port-au-Prince area, for as less than one percent of the rural population had access to electricity in 1972.

After considerations about the Haitian upperclass, middle stratum and urban lower class, Weil et al. (12) stated that at the bottom of the social ladder, constituting 88 percent of the population, are the peasants. Of these, only about five percent are relatively well off and merit the Creole distinction of "gros habitant" or "grand neg" (expressions for rural persons of wealth and power). The "gros habitant" subclass derives its status from its large landholdings and leadership positions within the community. On the national level, Haitian peasants are politically impotent, economically substandard, and socially ostracized; yet the other 17 percent of the Haitian population is dependent upon them. Not only is the country's economy almost entirely dependent upon the export crops that the peasants produce, but also the world's image of Haitian folk customs, religion, and language is based on the African slave heritage. On the other hand, the peasant is not dependent upon the activities of the rest of the population for his existence. He consumes little that he does not produce himself and is the most self-sufficient member of the society.

The lifestyle of the rural Haitian has remained virtually unchanged throughout the history of the republic. His technology has not evolved much beyond that of his African ancestors, and the social structure of his community is reminiscent of the slave society. Customs may vary

from region to region, but generally speaking, the peasant's portrait remains the same as his language is Creole; his religion is mostly voodoo; his marriages are mostly common law; and his value system and livelihood are based on the land.

Unlike peasants in most of Latin America, the majority of rural Haitians have owned their land since independence in the early nineteenth century. Throughout the years this pattern has remained fairly stable despite the increased pressure and excessive fragmentation accompanying population growth. Land is the most valuable rural commodity, and the peasant and his family will go to great lengths to accumulate a few more acres. His family will aid him financially and give him moral support by participating in voodoo ceremonies to gain the favor of the local gods and family spirits. The desire for property is not likely to decrease in the future as it is propagated within the family, attached to other positive values and reinforced by proverbs and songs.

Rural Development Projects and Agricultural Extension Workers

At last, one of the most recent and remarkable documents related to the rural life in Haiti is the official report of the "Department de l'Agriculture, des Ressources Naturelles et du Developpement Rural (D.A.R.N.D.R.) (2). In the official report of D.A.R.N.D.R. (2), it is mentioned that in the 1971-1972 fiscal year, a quinquenal agricultural sectorial plan (1976-1981) was elaborated. In 1977, about 40 agricultural development projects, supported by both national government and international institutions were being implemented.

Various statistics are given in this report which are of note:

Up to 1977, 769 persons received their diplomas as teachers in rural school, but it was not said how many of them were actually teaching in 1977. There are many teachers in public rural schools who do not have any official qualification with respect to the profession of teaching. But, in that case, D.A.R.N.D.R. did not give solid data in its 1977's report. Data concerning the number of youngsters attending rural schools in 1977 were not available, but in 1967, it was estimated that 98,200 children attended rural schools in Haiti.

It was equally reported that a total of 501 agronomists were working in Haiti in 1977. Two hundred sixty-eight agronomists were said to receive their diplomas between 1959 and 1977. If those 501 agronomists were evenly distributed all over the country (assuming that the population was also evenly distributed), that would have made up about one agronomist for 12,800 inhabitants and 14,000 acres. Official data about the distribution of the agronomists were not published. However, then being one of those agronomists working in la Plaine des Cayes (Southern Peninsula of Haiti) in 1972, the writer of this report can affirm there were in 1972 about 17 agronomists for only the Plaine des Cayes (Plain of Cayes) and its immediate neighborhood which make up about 200,000 acres. That would have made one agronomist for about 12,000 acres and 14,000 inhabitants. But more than half of those agronomists were either in the administration or concentrated on specific areas such as "La Beurrerie des Cayes" (commercial dairy establishment), "Projet d'elevage de l'IDAI" (commerical livestock program), etc; therefore, they were not, strictly speaking, field Agronomists".

Only two of them had official administrative link with the Extension Service of D.A.R.N.D.R.

This situation is mostly the same all over the country, so that the number of agronomists actually in direct relationship with the peasants is rather weak. Moreover, they are relatively young, with only a B.Sc. in Agronomy, unexperienced with regard to the basic principles in agricultural extension. In addition, in Haiti there is no definite link between agricultural research, instruction and extension services as those three fields are solidaristic in developed countries such as USA.

There is also in Haiti a vocational agricultural school attended by mostly young males who did not complete the high school cycle. After two years completion of that agricultural school program, the student receives an "Agricultural Technician Diploma". Graduates of this school are designated to assist the agronomists primarily involved in the extension program. But according to the report of DARNDR, there were only 258 agricultural technician graduates in 1977, and as well as the agronomists, all of them were probably neither involved in the extension program, nor evenly distributed over the country.

There are also in Haiti some so called agricultural extension agents, who do not receive actually any academic training in the agricultural field. Statistical data with regard to that last group were not given by DARNDR in its 1977's report.

At last, in October 1977, the Agricultural Extension Service of the Haitian Department of Agriculture {Service de Production et de Vulgarisation Agricoles (11)} reported that there were in Haiti 208 field agricultural extension workers supervised by six specialists in Agricultural Extension. This personnel was designated to assist an

estimated total of 700,000 peasant families. It was further indicated that most of the workers were not satisfactorily qualified as professional educators for rural areas. Moreover, on-the-job training and availability of working materials were very remarkably ineffective.

Summary and Conclusions

It may be concluded that for various reasons, officials of the government, experts of national and international institutions, national and international writers of any tendency have been analyzing the critical situation of the Haitian peasantry, either ilolated, or in its relationship with other Haitian social classes, or even some international communities. However, so far, none of those authors are prone to very strongly underline the acuteness of the necessity for Haiti to review and improve its overall educational system at any level and in any field. The education would be in that case more comprehensive with regard to all the people and primarily the poor majority of which the basic formation conditions the socioeconomic development of the nation. So far, in relatively long range development plans, the Haitian government has proclaimed either the general infrastructures or the implementation of agricultural development programs "target number one".

But what about a comprehensive and strong educational system?

How can weakly educated, and consequently relatively poor people effectively support, conserve and foster a development process for the achievement of more developmental programs?

Is there a substantial improvement in the status of education and agricultural practices among the rural population of Haiti while the

author of this report is considering the problems of that rural population? In March, 1978, Edward C. Paul (9) and many other Haitian authorities reported that efforts were being made for the improvement of the general educational system with a particular emphasis on agricultural education programs in both urban and rural places of Haiti. However, it is finally the hope of the author as a researcher that conducting this survey in selected rural areas of Haiti will provide more up-to-date edification about the actual situation of those people in question, and, consequently a larger view for more dependable solutions.

CHAPTER III

DESIGN AND METHODOLOGY

The purpose of this chapter is to present the method used and the procedure followed in conducting this study about the socioeconomic situation of rural areas of Haiti. In order to collect data which would provide information relative to the purposes and objectives of this study, the population was determined and instruments were developed for data collection. A procedure was established for data collection and methods of data analyses were selected. Information was collected.

The Population

The population of this study is constituted of 150 Haitian peasants selected at random in seven different rural places of Agricultural Districts of Haiti. Selection resulted in distribution of population into the seven different Agricultural Districts was as follows (Figure 1):

Agricultural District of Cap Haitian	20
Agricultural District of Gonaives	20
Agricultural District of Belladere (Grands Bois)	30
Agricultural District of Petit Goave	20
Agricultural District of Jeremie	20
Agricultural District of Cayes	20
Agricultural District of La Gonave	20
TOTAL	150

Those regions scattered all over the western third of the island of Haiti or Hispanola are different in climate, rainfall and topography. So, all respondents were randomly selected from different places such as

coasts, plains, valleys, hills, mountains and plateaus. The Haitian peasants are living in rural sections controlled and administered by public services located in cities or villages whose names correspond respectively to those of the selected Agricultural Districts. For example, the Agricultural District of Cap Haitien corresponds to the town of Cap-Haitien. The author of this report referred then to the town or village corresponding to the peasant's home or farm to locate him. Cities or villages often constitute also commune headquarters. (See definition of a Commune.)

Transportation means between any given place and the capital city (Port-au-Prince) is one of the most important socioeconomic characteristics and factors of Haiti. Therefore, the author judged it to be

Figure 1. Haiti: Regions Included in Study[1]

[1]Adapted from Anglade: L'Espace Haitien.

reasonable to briefly describe the nature of the transport system between the selected areas of the study and Port-au-Prince as follows:

1. Cap Haitien, Gonaives, Petit-Goave and Cayes are important regional towns of Haiti, joined to the capital city by new modern highways.
2. Jeremie is a relatively important town of the southern peninsula of Haiti. But the roads leading from Jeremie throughout the other cities of the South are rather stony, muddy in wet seasons, risky, in one word relatively impracticable. So, transportation between Jeremie and Port-au-Prince is primarily constituted of planes and motorboats.
3. Cornillon (Grands-Bois), about 30 miles as the crow flies, northeast of Port-au-Prince and on the Haitiano-Dominican border, is a small village. The place is very mountainous. Other than coffee time, a truck or a four-wheel drive jeep on the stony and cliffy road joining Cornillon to Port-au-Prince is rather a rare event. So peasants, retailers and inhabitants of the village in general often walk or ride (horses, mules, donkeys) half the road, about 30 miles or 6 hours, before they can find another village (Thomazeau or Mirebalais) where public busses driving to Port-au-Prince are available.
4. La Gonave is the island (see Map) located at the Bay of Port-au-Prince. That island has about 300 square miles and 60,000 inhabitants exclusively rural in origin. Transportation to Port-au-Prince is carried out by sailboats which sail from 10

to 48 hours to reach Port-au-Prince. The time to cross up the channel depends on the direction and impetus of the wind.

Instruments

In order to gather the information relative to the purposes and objectives of this study, a large set of questions was developed. Members of the Faculty of the Agricultural Education Department (OSU) and some classmates were instrumental in the refinements of the data collection instruments. The questions were submitted in English to the OSU individuals to be criticized and sent in French into Haiti. Finty-nine questions were developed as follows:

1. Question number 1 inquired about the date of questioning or interviewing and the location (rural section and municipality). See the procedure section.
2. Question number 2 individualized the questionnaire by inquiring about the first name, age, sex and number of children of the farmer.
3. Questions 3 through 20 dealt with the quality of formal and informal education in general; the availability of facilities (establishments, transportation) pertaining to the achievement of literacy by community members.
4. Questions 21 through 37 dealt with the availability of formal and informal agricultural education directed to the rural places through various means such as formal schools, field extension workers, radio, etc.
5. Questions 38 through 57 inquired about the agricultural resources and practices, and the personal perceptions of the

peasant with regard to his responsiveness to a possible agricultural developmental program.

6. Questions 58 and 59 inquired about the individuals responding to the questionnaire form (see the procedure section).

Procedure

A procedure to gather the information pertaining to this study was designed and implemented as descrived here.

The 59-question survey was a combination of closed questionnaires and structured interviews. By March 1978, twenty forms were mailed to a researcher's friend and colleague, Andre Victor, B.S. (Agronomy) and M.S. (Soil Science), presently coordinator of an agricultural development project in the plain of Gonaives, and also Agronomist of District for Gonaives. At the same time, thirty forms were equally mailed to Mr. Sauveur Secours, former rural teacher and former mayor in Grands Bois and presently judge at the "Tribunal de Paix" (Tribune of Peace) in the same village. Mr. Sauveur Secours is a friend and a cousin of the researcher. At last, taking advantage of the summer vacation, the researcher was in Haiti from the 18th of July through the 24th of August, 1978, and therefore, completed the rest of the survey himself in the following areas:

Agricultural District Cap-Haitian:	20 interviewees
Agricultural District Petit-Goave:	20 interviewees
Agricultural District La Gonave:	20 interviewees
Agricultural District Cayes:	20 interviewees
Agricultural District Jeremie:	20 interviewees.

As a total, 150 Haitian farmers were involved in the survey. The researcher and his friend, MM. Andre Victor and Sauveur Secours managed to get the questionnaire completed by the respondent himself if the

respondent completed at least the third grade of the Haitian secondary school (U.S. about 10th grade of the secondary level). Otherwise, the researcher, MM. Victor and Secours filled up themselves the questionnaire by interviewing the respondent. As a summary, one-third of the survey was completed by MM. Victor and Secours and the remainder by the researcher himself.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

This study was undertaken in an attempt to determine the status of education and agricultural practices among the rural population of Haiti. The paramount purpose was to consider how that part of the population which is necessarily called to function effectively in the agricultural production process may be adequately prepared to face and carry out that assignment. A projected long-term objective, recognizably not within the confines of this study, was to enhance the understanding of the Haitian and to assist in their adoption of a somewhat new concept of the socioeconomic development process.

Data collection in this study involved securing both selected background information and statements and/or opinions given by 150 peasants who were farming in seven different rural areas of agricultural districts and/or communes (territorial subdivision) of Haiti. The purpose of this chapter is to report those facts revealed from the collation and analysis of data assembled in this research effort.

Data presented in Table I list information regarding the interviews, showing agricultural districts, dates, interviews and the number of respondents involved in the study. The interviews took place during the months of April, July and August 1978. A total of 150 farmers were

TABLE I

DATE OF INTERVIEWS AND IDENTIFICATION OF INTERVIEWERS OF 150 HAITIAN FARMERS IN SEVEN AGRICULTURAL DISTRICTS

Agri. Districts	Dates	Interviewers	No. of Respondents
Grands-Bois	April, 3-10	Mr. S. Secours	30
Gonaives	April, 10-20	Mr. A. Victor	20
Cap-Haitien	July, 20-25	The researcher	20
Cayes	July, 26-31	The researcher	20
Jeremie	August, 2-6	The researcher	20
La Gonave	August, 8-12	The researcher	20
Petit Goave	August, 18-21	The researcher	20

interviewed by: (1) Mr. Sauveur Secours, former director of the rural school of the commune of Grands-Bois, former mayor of the same commune and presently judge at the tribunal (court) of the same place; (2) Mr. Andre Victor, B.S. in Agronomy, M.S. in Soil Science, presently coordinator of the Development Project of the Plain of Gonaives and Agronomist of District for Gonaives and (3) the researcher of this report who profited from the time of a summer vacation to make a trip to Haiti from the 18th of July through the 24th of August, 1978.

Method of Presentation

The findings of the study are presented in the following manner:

1) Farmer characteristics as defined by age, sex and family size.

2) Quality and level of formal and informal educational opportunities available among the respondents.
3) Identification of formal and informal agricultural education opportunities among the respondents.
4) Current basic agricultural resources and practices now used by the interviewees.
5) Personal opinions and judgments of respondents as to their desire for the assistance of professional educators in moving toward an eventual agricultural development program.

Farmer Characteristics As Defined by Age, Sex, and Family Size

Data collated and presented in Tables II and III show that about 94 percent of respondents were between 20 and 60 years old. Only one percent of them was found to be younger than 20 with five percent older than 60. Eighty-two percent of them were male. In Table IV, 58 percent of the respondents were characterized as having a family with three to six children. Thirteen percent had no child. Thirteen percent had one or two children and about 16 percent of them had more than six children.

Quality and Level of Formal and Informal Educational Opportunities Available Among the Respondents

Findings shown in Table V reveal that about 82 percent of the 150 farmers interviewed had schooling. In more detail, 41 percent of them attended urban school, 55 percent were in rural school, 10 percent attended evening school and 32 percent took private lessons.

TABLE II

AGE BY CATEGORY OF HAITIAN FARMERS INCLUDED IN THE STUDY

Agr. Districts	Distribution of Responses													
	15-19		20-29		30-39		40-49		50-59		60-over		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Grands-Bois	0	0.0	5	16.6	11	36.6	8	26.6	5	16.6	1	3.3	30	100.0
Gonaives	1	5.0	6	30.0	7	35.0	3	15.0	2	10.0	1	5.0	20	100.0
Cap-Haitien	0	0.0	3	15.0	6	30.0	7	35.0	3	15.0	1	5.0	20	100.0
Cayes	0	0.0	7	35.0	9	45.0	4	20.0	0	0.0	0	0.0	20	100.0
Jeremie	0	0.0	5	25.0	6	30.0	5	25.0	4	20.0	0	0.0	20	100.0
La Gonave	0	0.0	7	35.0	5	25.0	3	15.0	3	15.0	2	10.0	20	100.0
Petit Goave	1	5.0	7	35.0	5	25.0	2	10.0	3	15.0	2	10.0	20	100.0
All Agr. Districts	2	1.3	40	26.6	49	32.6	32	21.3	20	13.3	7	4.6	150	100.00

TABLE III

DISTRIBUTION BY SEX OF HAITIAN FARMERS INCLUDED IN THE STUDY

Agr. Districts	Distribution of Respondents					
	Males		Females		Total	
	N	%	N	%	N	%
Grands-Bois	29	96.6	1	3.3	30	100.0
Gonaives	20	100.0	0	0.0	20	100.0
Cap-Haitien	15	75.0	5	25.0	20	100.0
Cayes	13	65.0	7	35.0	20	100.0
Jeremie	16	80.0	4	20.0	20	100.0
La Gonave	15	75.0	5	25.0	20	100.0
Petit Goave	16	80.0	4	20.0	20	100.0
All Agr. Districts	124	82.6	29	19.3	150	100.0

TABLE IV

FAMILY SIZE BY CATEGORY OF HAITIAN FARMERS INCLUDED IN THE STUDY

Agr. Districts	Distribution of Respondents													
	0 child		1-2 ch.		3-4 ch.		5-6 ch.		7-8 ch.		over 9 ch.		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Grands-Bois	0	0.0	3	10.0	10	33.3	9	30.0	2	6.6	3	10.0	30	100.0
Gonaives	3	15.0	4	20.0	6	30.0	3	10.0	2	10.0	2	10.0	20	100.0
Cap-Haitien	1	5.0	2	10.0	7	35.0	7	35.0	2	10.0	1	5.0	20	100.0
Cayes	3	15.0	3	15.0	6	30.0	4	20.0	2	10.0	2	10.0	20	100.0
Jeremie	3	15.0	3	15.0	5	25.0	5	25.0	2	10.0	2	10.0	20	100.0
La Gonave	0	0.0	3	15.0	7	35.0	6	30.0	2	10.0	2	10.0	20	100.0
Petit Goave	5	25.0	2	10.0	5	25.0	7	35.0	0	0.0	1	5.0	20	100.0
All Agr. Districts	18	12.0	20	13.3	46	30.6	41	27.3	12	8.0	13	8.7	150	100.0

TABLE V

SELECTED MAJOR CHARACTERISTIC CATEGORIES OF EDUCATION EXPERIENCED BY RESPONDENTS

Agr. Districts	Distribution by Type Education											
	Totals	Urban School		Rural School		Evening School		Private Lessons		None	
	N	N	%	N	%	N	%	N	%	N	%
Grands-Bois	30	8	26.6	24	80.0	2	6.6	12	40.0	3	10.0
Gonaives	20	4	20.0	13	65.0	1	5.0	7	35.0	4	20.0
Cap-Haitien	20	11	55.0	14	70.0	4	20.0	6	30.0	0	0.0
Cayes	20	16	80.0	6	30.0	1	5.0	8	40.0	1	5.0
Jeremie	20	9	45.0	7	35.0	2	10.0	5	25.0	9	45.0
La Gonave	20	2	10.0	12	60.0	1	5.0	5	25.0	8	40.0
Petit Goave	20	12	60.0	6	30.0	4	20.0	5	25.0	2	10.0
All Agr. Districts	150	62	41.3	82	54.7	15	10.0	48	32.0	27	18.0

In Table VI, it is shown that of the 150 respondents, only 26 percent completed primary school; 18 percent attended secondary school; only 0.66 percent completed secondary school and attended college. In fact, the precentage of Haitian peasants completing secondary school, and even college, might be much higher in some places than the figures reported in this study, but they rarely went back home to practice any farming after completing school.

Data in Table VI also reveal that 13 percent of the 150 respondents declared that they attended a vocational school, but only nine percent of them had a diploma (primary school teacher, mechanic, vo-ag, cabinetmaker, taylor, dressmaker, musician, etc.). At last, through apprenticeship, 37 percent of the 150 farmers had a craft (without diploma) which permitted them to supplement their agricultural income as carpenters, dressmakers, taylors, healers, gamblers, etc.

The Haitian peasants' language is almost exclusively Creole, a sort of broken French. However, French constitutes the official language of the nation and is consequently the language of the formal educational system, either urban or rural. Therefore, an essential characteristic of Haitian people having some "school education" is the extent to which they can use--or at least understand--the French language. Table VII gives the reaction of the respondents to the question: "Do you understand French?"

Findings presented in Table VII reflect then one of the largest problems of Haiti in its process of socioeconomic development. About 11 percent of the 150 respondents could effectively use French. Creole is the Haitian's daily life language, while academic, technological and

TABLE VI

RESPONDENTS' EDUCATION AS DEFINED BY SCHOOL LEVEL ACHIEVEMENT

	Distribution of Responses														
	Total	Primary Studies Certificate		Secondary School Attendance (noncompletion)		Secondary School (completion)		University Attendance		Vocational School (attendance)		Vocational School (diploma)		Apprenticeship (no diploma)	
Agr. Districts	N	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Grands-Bois	30	4	13.3	4	13.3	0	0.0	0	0.0	4	13.3	2	6.6	6	20.0
Gonaives	20	2	10.0	2	10.0	0	0.0	0	0.0	0	0.0	1	5.0	10	50.0
Cap-Haitien	20	6	30.0	2	10.0	0	0.0	0	0.0	2	10.0	2	10.0	10	50.0
Cayes	20	9	45.0	7	35.0	1	5.0	1	5.0	6	30.0	4	20.0	7	35.0
Jeremie	20	7	35.0	5	25.0	0	0.0	0	0.0	1	5.0	1	5.0	4	20.0
La Gonave	20	3	15.0	1	5.0	0	0.0	0	0.0	2	10.0	2	10.0	6	30.0
Petit Goave	20	8	40.0	6	30.0	0	0.0	0	0.0	5	25.0	1	5.0	3	15.0
All Agr. Districts	150	39	26.0	27	18.0	1	0.7	1	0.7	20	13.3	13	8.7	56	37.3

TABLE VII

SELF ASSESSMENT OF UNDERSTANDING OF FRENCH LANUGAUGE BY FARMER RESPONDENTS

Agr. Districts	Distribution by Responses									
	Very Well		A Little		Very Little		No		Total	
	N	%	N	%	N	%	N	%	N	%
Grands-Bois	2	6.6	10	33.3	13	43.3	5	16.6	30	100.0
Gonaives	2	10.0	8	40.0	7	35.0	3	15.0	20	100.0
Cap-Haitien	2	10.0	7	35.0	9	45.0	2	10.0	20	100.0
Cayes	4	20.0	9	45.0	4	20.0	3	15.0	20	100.0
Jeremie	4	20.0	6	30.0	5	25.0	5	25.0	20	100.0
La Gonave	0	0.0	5	25.0	4	20.0	11	55.0	20	100.0
Petit-Goave	2	10.0	8	40.0	4	20.0	6	30.0	20	100.0
All Agr. Districts	16	10.6	53	35.3	46	30.6	35	23.3	150	100.0

scientific works, formal education system, official reports, political speeches, etc., are French.

One of the important obstacles to school attendance in Haiti, primarily in mountainous regions, is the localization of the school with regard to the family's house. Table VIII develops the distribution of the 150 respondents relatively to the nearest school. This distribution is expressed in the time that an adult would take to walk normally from his house to the school.

As a possible factor in educational attainment, distance from domicile to nearest school is shown in Table VIII. Only 13 percent of the 150 farmers are located at less than 15 minutes from the nearest school. More than 60 percent of families are found to walk from 30 minutes to one hour to reach the school, with 12 percent located at distances requiring somewhat more than one hour.

Responses to the schedule question as to means of transportation available to their children are collated and presented in Table IX. Data show that about 17 percent of them use cars or busses, while 28 percent ride motorcycles and bicycles. This would tend to be supportive of the assumption that some of the respondents were living in places where roads are more readily available, primarily in the plains of Gonaives, Cap-Haitien, Cayes and Petit-Goave. In fact, modern highways join those places to Port-au-Prince, the capital city. Furthermore, there are presently some rural development projects which are being implemented in those plains which include efforts to improve transportation. But in the remote mountainous zones such as Grands-Bois, a very high percentage of the children are still obliged to walk through the steep trails to attend school. Undoubtedly, the boats mentioned

TABLE VIII

PROXIMITY OF DOMICILE TO SCHOOL IN TERMS OF WALKING TIME CATEGORY AS EXPRESSED BY HAITIAN FARMERS

Agr. Districts	Distribution of Responses											
	1-14 mn.		15-29 mn.		30-44 mn.		45-59 mn.		over 1 hr.		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grands-Bois	5	16.6	4	13.3	8	26.6	9	30.0	4	13.3	30	100.0
Gonaives	3	15.0	2	10.0	7	35.0	6	30.0	2	10.0	20	100.0
Cap-Haitien	4	20.0	3	15.0	6	30.0	6	30.0	1	5.0	20	100.0
Cayes	2	10.0	4	20.0	6	30.0	6	30.0	2	10.0	20	100.0
Jeremie	3	15.0	2	10.0	5	25.0	7	35.0	3	15.0	20	100.0
La Gonave	1	5.0	1	5.0	8	40.0	6	30.0	4	20.0	20	100.0
Petit Goave	1	5.0	3	15.0	8	40.0	6	15.0	2	10.0	20	100.0
All Agr. Districts	19	12.6	19	12.6	48	32.0	46	30.6	18	12.0	150	100.0

TABLE IX

MAJOR MEANS OF TRANSPORTATION TO SCHOOL FOR CHILDREN OF HAITIAN FARMERS

	Distribution of Responses															
	Total		Private		Public Transportation		Motorcycle		Bicycle		Horse Mule Ass		Boat		None	
Agr. Districts	N		N	%	N	%	N	%	N	%	N	%	N	%	N	%
Grands-Bois	30		0	0.0	0	0.0	0	0.0	0	0.0	4	13.3	0	0.0	26	86.6
Gonaives	20		0	0.0	5	25.0	3	15.0	4	20.0	3	15.0	0	0.0	9	45.0
Cap-Haitien	20		2	10.0	6	30.0	4	20.0	5	25.0	4	20.0	0	0.0	8	40.0
Cayes	20		1	5.0	6	30.0	4	20.0	8	40.0	2	10.0	0	0.0	10	50.0
Jeremie	20		0	0.0	2	10.0	2	20.0	5	25.0	3	15.0	0	0.0	12	60.0
La Gonave	20		0	0.0	0	0.0	0	0.0	0	0.0	5	25.0	4	20.0	13	65.0
Petit Goave	20		0	0.0	4	20.0	1	5.0	6	30.0	4	20.0	2	10.0	11	55.0
All Agr. Districts	150		3	2.0	23	15.3	14	9.3	28	18.7	25	16.7	6	4.0	89	59.3

NOTE: Some respondents may have two or more means of transportation.

for La Gonave and Petit Goave were not motorboats, but rowboats and some simple sailboats.

An attempt was made in order to assess both the effectiveness and efficiency of adult education programs or evening school in the respondents' areas. Results are given in Table X. Findings shown in Table X reveal that 72 percent of the farmers recognized that there were evening schools in their respective areas. But 91 out of those 108 respondents, or 84 percent of them, reported that teachers in those schools were local leaders who did not complete the primary school. The program as taught was completely in Creole.

So, hindered by all kinds of socioeconomic uncertainties of the rural life, and sustained by inadequate educational opportunities, the Haitian educational system in the rural areas at various levels can be judged as being somewhat inefficient and ineffective. A surprising percentage of the responding peasants reported that they had been or were now involved in formal and informal types of schooling, but very few of them reported having completed the primary level, with an admittedly insignificant portion having attendance at the secondary level. Hardly any went beyond secondary school.

How could such an inefficient educational system be then expected to adequately support systems of formal and informal agricultural education or extension? This question is undoubtedly significant in that the economy continues to be recognized so essentially agricultural.

TABLE X

RECOGNITION BY FARMERS OF THE PRESENCE OF AN EVENING SCHOOL AND THE LEVEL OF TEACHER PREPARATION

Agr. Districts	Total	Presence of an Evening School		Level of Teacher Preparation					
				Primary Level		Secondary Level		Unknown Level	
	N	N	%	N	%	N	%	N	%
Grands-Bois	30	25	83.3	25	83.3	0	0.0	0	0.0
Gonaives	20	12	60.0	10	50.0	0	0.0	2	10.0
Cap-Haitien	20	15	75.0	11	55.0	2	10.0	2	10.0
Cayes	20	16	80.0	12	60.0	1	5.0	3	15.0
Jeremie	20	14	70.0	10	50.0	3	15.0	1	5.0
La Gonave	20	10	50.0	9	45.0	0	0.0	1	5.0
Petit Goave	20	16	80.0	14	70.0	1	5.0	1	5.0
All Agr. Districts	150	108	72.0	91	60.6	7	4.6	10	6.6

Identification of Formal and Informal Agricultural Education Opportunities Among the Respondents

Within the commune of Grands-Bois and on the island of La Gonave, farmer respondents did not recognize any agriculture as taught in the school. However, more than 60 percent of respondents residing in the regions of Gonaives, Cap-Haitien, Cayes, Jeremie and Petit Goave recognized agriculture as being taught in the rural schools, while one half of the farmers residing in Gonaives and one-fourth of those living in Cap-Haitien and Petit Goave recognized that instruction in agriculture was offered in the evening school.

It was difficult to assess the quality of the agricultural knowledge which is being provided to learners, both children and adults. It is quite evident to the investigator that rural teachers, although they might have some knowledge in agriculture, are not very well qualified professionally in the agricultural education field. Furthermore, agricultural education has no credit in the formal educational system of Haiti, urban and rural. In other words, agricultural education is still optional in the curriculum of the rural school in Haiti.

Corresponding in terms of organization and alleged function to the U.S. "4-H" program, is the Haitian rural youth program known as the "4-C Program". In order to asses the popularity of the "4-C Program" among the rural population of Haiti, the 150 respondents were asked: (1) whether they were aware of the existence of that program, (2) whether they had been members, and (3) whether they knew people who had been or youth who were currently "4-C" members.

TABLE XI

RECOGNITION BY FARMER RESPONDENTS OF AGRICULTURAL EDUCATION OFFERINGS IN FORMAL RURAL SCHOOLS AND IN EVENING SCHOOLS OF THEIR AREAS

	Distribution of Responses				
	Total	Rural School		Evening School	
Agri. Districts	N	N	%	N	%
Grands-Bois	30	0	0.0	0	0.0
Gonaives	20	15	75.0	10	50.0
Cap-Haitien	20	16	80.0	5	25.0
Cayes	20	13	65.0	3	15.0
Jeremie	20	12	60.0	2	10.0
La Gonave	20	0	0.0	0	0.0
Petit Goave	20	16	80.0	5	25.0
All Agr. Districts	150	72	48.0	25	16.6

Findings presented in Table XII show that only 23 percent of the respondents acknowledged awareness of the 4-C Program, while only eight percent of the total respondents had been members. It would seem further significant that only 17 percent of the interviewees knew people who had been members or were presently members. Not much additional evidence is needed to conclude that the Haitian rural youth program 4-C seems to be having a very negligible effect upon any effort to promote prestige and knowledge of agriculture among the rural population of Haiti. In places such as La Gonave, Jeremie and the mountains of Petit Goave and Grands-Bois, where truly accessibility is not easy, even an awareness of the 4-C Program seems non-existent.

Since the work of the Agricultural Extension Service constitutes one of todays' most important activities in places such as Haiti where the economy is basically agricultural, it was felt fitting that an attempt be made to determine how the respondents might view and might value the extension program. In Haiti, the Agricultural Extension Service's assistance is carried to the rural population through (1) an agronomist, (2) an agricultural technician (Vo-ag graduate) and/or (3) a local leader who often has been the recipient of some special training. Data presented in Table XIII show a picture about the type of agricultural extension workers presently assigned to the respective areas or agricultural districts. Throughout the rural areas of Haiti, some type of agricultural extension worker is provided. Findings shown in Table XIII reveal that only 12 percent of the 150 respondents reported to not have any agricultural extension worker in their areas. But, with regard to the distribution of agricultural extension personnel in other areas, this seems to vary rather greatly from one place to another. In Grands-

TABLE XII

KNOWLEDGE OF THE 4-C PROGRAM FOR YOUTH AS PRESENTLY HELD BY HAITIAN FARMERS

	Distribution of Responses							
	Total	Presently Aware		Are Past Members		Are Acquainted With Past or Present Members	
Agri. Districts	N	N	%	N	%	N	%
Grands-Bois	30	5	16.6	0	0.0	2	6.6
Gonaives	20	5	25.0	4	20.0	5	25.0
Cap-Haitian	20	7	35.0	5	25.0	7	35.0
Cayes	20	8	40.0	3	15.0	6	30.0
Jeremie	20	6	30.0	0	0.0	4	20.0
La Gonave	20	0	0.0	0	0.0	0	0.0
Petit-Goave	20	3	15.0	0	0.0	1	5.0
All Agr. Districts	150	34	22.6	12	8.0	25	16.6

TABLE XIII

THE AVAILABILITY OF THREE TYPES OF AGRICULTURAL EXTENSION WORKERS AS REPORTED BY HAITIAN FARMERS

	Distriubtion by Type of Available Workers								
	Total	Agronomist		Vo-Ag Graduate		Specialized Local Leader		None	
Agr. Districts	N	N	%	N	%	N	%	N	%
Grands-Bois	30	0	0.0	0	0.0	30	100.0	0	0.0
Gonaives	20	16	80.0	12	60.0	11	55.0	2	10.0
Cap-Haitian	20	10	50.0	14	70.0	11	55.0	1	5.0
Cayes	20	20	100.0	20	100.0	20	100.0	0	0.0
Jeremie	20	7	35.0	7	35.0	11	55.0	0	0.0
La Gonave	20	12	60.0	18	90.0	16	80.0	0	0.0
Petit Goave	20	12	60.0	9	45.0	4	20.0	6	30.0
All Agr. Districts	150	77	51.3	80	53.3	103	68.6	18	12.0

Bois for instance, 100 percent of the respondents had neither agronomist, nor Vo-Ag graduate, but were forced to rely upon only a local leader appointed by the Agricultural Department of Haiti as an "Agricultural Agent". However in Cayes, 100 percent of the respondents did not only have agronomists, but also vo-ag graduates and specialized local leaders to assist them. In order to determine more accurately about the behavior of either the agronomist, or the vo-ag graduate or the local leader, the following questions were asked: (1) Did the extension agent (Agronomist, vo-ag graduate, or specialized local leader) organize and hold some meetings with the producers of your area for the improvement of agricultural production; (2) Did the extension agent (agronomist, vo-ag graduate, or specialized local leader) use to provide the community members with useful advice about agricultural production?

Findings shown in the following tables, XIV and XV, give the respondents' reaction with regard to those above questions. Data collated and presented in Tables XIII, XIV and XV reveal that some technical assistance in agricultural production was provided in some rural places such as Gonaives, Cap-Haitien, Petit Goave and La Gonave. In fact 60 to 85 percent of the respondent residents in those rural places indicated that there was either an agronomist, a vo-ag graduate or an experienced local leader, providing them more or less frequently with useful advice about improvement in agricultural production. This advice was conveyed through more or less frequent meetings held or through other media. However, in the more remote mountainous regions such as Grands-Bois, assistance in agricultural improvement through agricultural extension work seemed to be rather non-existent. As a

TABLE XIV

FREQUENCY OF AGRICULTURAL IMPROVEMENT MEETINGS ASSOCIATED WITH THE AGRICULTURAL EXTENSION AS REPORTED BY HAITIAN FARMERS

	Distribution of Responses									
	Often		Rarely		Never		No Response		Total	
Agr. Disricts	N	%	N	%	N	%	N	%	N	%
Grands-Bois	0	0.0	0	0.0	30	100.0	0	0.0	30	100.0
Gonaives	15	75.0	3	15.0	0	0.0	2	10.0	20	100.0
Cap-Haitian	8	40.0	9	45.0	2	10.0	1	5.0	20	100.0
Cayes	9	45.0	7	35.0	3	15.0	1	5.0	20	100.0
Jeremie	2	10.0	6	30.0	6	30.0	6	30.0	20	100.0
La Gonave	16	80.0	2	10.0	0	0.0	2	10.0	20	100.0
Petit Goave	10	50.0	5	25.0	2	10.0	3	15.0	20	100.0
All Agr. Districts	60	40.0	32	21.3	43	28.6	15	10.0	150	100.0

TABLE XV

APPRAISAL OF THE USEFULNESS OF THE ADVICE AND SERVICES OF THE AGRICULTURAL EXTENSION WORKER AS REPORTED BY HAITIAN FARMERS

Agr. Districts	Distribution of Responses									
	Very Often		Sometimes		Not at all		Undecided		Total	
	N	%	N	%	N	%	N	%	N	%
Grands-Bois	0	0.0	0	0.0	30	100.0	0	0.0	30	100.0
Gonaives	17	85.0	2	10.0	1	5.0	0	0.0	20	100.0
Cap-Haitien	13	65.0	5	25.0	0	0.0	2	10.0	20	100.0
Cayes	14	70.0	3	15.0	2	10.0	1	5.0	20	100.0
Jeremie	6	30.0	7	35.0	3	15.0	3	15.0	20	100.0
La Gonave	15	75.0	3	15.0	0	0.0	2	10.0	20	100.0
Petit Goave	10	50.0	4	20.0	4	20.0	2	10.0	20	100.0
All Agr. Districts	75	50.0	24	16.0	40	26.6	10	6.7	150	100.0

matter of fact, in Grands-Bois, 100 percent of the respondents indicated that it was their observation that the local leader never organized any meeting or attempted to use other media to assist them in their agricultural labors. The question is inevitable, where is the breakdown; if he was charged with the responsibility as a government-appointed local leader, what was he doing?

Agricultural news and advice are broadcast to the Haitian people through various radio stations, from Port-au-Prince and other towns such as Cap-Haitien and Cayes, but only some of the people living in the capital city Port-au-Prince can watch TV programs. But a very large proportion of the whole nation do own a radio or wireless set of some kind. Data presented in Tables XVI and XVII give the reactions of respondents to the two following questions: (1) Did you use to listen to broadcast agricultural programs, and (2) how useful do you estimate agricultural program broadcasts?

Agricultural extension workers are very probably doing a fairly good job through radio broadcasts. Findings shown in Tables XVI and XVII reveal that only nine percent of the 150 respondents indicated that they did not listen to radio and only eight percent of them evaluated agricultural programs as not being useful. On the other hand, 62 percent of them indicated that they listened often to the radio and 73 percent of them evaluated broadcast agricultural programs as useful in the "very much" category. In Grands-Bois particularly, where possibly there were practically no effective agricultural extension workers, responses were rather significant, for only 13 percent of the Grands-Bois respondents reported no listening to the radio at all and only very few of them (six percent) found that the programs were not useful. One-

TABLE XVI

FREQUENCY OF LISTENING TO RADIO AGRICULTURAL PROGRAM BROADCASTS AS REPORTED BY HAITIAN FARMERS

Agr. Districts	Distribution of Responses							
	Often		Sometimes		None		Total	
	N	%	N	%	N	%	N	%
Grands-Bois	15	50.0	11	36.6	4	13.3	30	100.0
Gonaives	20	100.0	0	0.0	0	0.0	20	100.0
Cap-Haitien	10	50.0	8	40.0	2	10.0	20	100.0
Cayes	15	75.0	5	25.0	0	0.0	20	100.0
Jeremie	10	50.0	7	35.0	3	15.0	20	100.0
La Gonave	11	55.0	7	35.0	2	10.0	20	100.0
Petit Goave	12	60.0	6	30.0	2	10.0	20	100.0
All Agr. Districts	93	62.0	44	29.3	13	8.6	150	100.0

TABLE XVII

EVALUATION OF DEGREES OF USEFULNESS OF AGRICULTURAL PROGRAM BROADCASTS AS MADE BY HAITIAN FARMERS

Agr. Districts	Distribution of Responses									
	Very much		A little		No useful		Undecided		Total	
	N	%	N	%	N	%	N	%	N	%
Grands-Bois	25	83.3	3	10.0	2	6.6	0	0.0	30	100.0
Gonaives	19	95.0	1	5.0	0	0.0	0	0.0	20	100.0
Cap-Haitien	15	75.0	3	15.0	2	10.0	0	0.0	20	100.0
Cayes	13	65.0	5	25.0	2	10.0	0	0.0	20	100.0
Jeremie	15	75.0	2	10.0	1	5.0	2	10.0	20	100.0
La Gonave	12	60.0	5	25.0	2	10.0	1	5.0	20	100.0
Petit Goave	11	55.0	5	25.0	3	15.0	1	5.0	20	100.0
All Agr. Districts	110	73.3	24	16.0	12	8.0	4	2.6	150	100.0

half of the Grands-Bois respondents indicated listening often to the radio with 36 percent in the "sometimes" category. However, 83 percent reported that they found the programs useful as expressed in the "very much" category.

A relatively new strategy in the rural development process now being implemented in Haiti is the constitution of community groups throughout the rural areas. An attempt was made in this research effort to evaluate both the effectiveness and efficiency of these community groups as perceived by the 150 farmers interviewed. In order to determine their perceptions of community groups, respondents were asked the two following questions: (1) Is there a community group in your area? (2) Are you a member of that group? And to more specifically evaluate the efficiency of these groups, each respondent was asked to respond as to how useful he perceived the community group functioning in the local area. Responses were collated and are presented in Tables XVIII and XIX providing a look at the awareness, membership and usefulness as acknowledged by respondents.

The function of the community group organization seemed very probably to be readily acceptable among the agricultural producers of Haiti. Ninety-five percent of the respondents recognized the existence of a community group in their respective area, with more than 60 percent acknowledging membership. It would seem gratifying that among the total group of respondents, 75 percent of them responded that they recognized community groups as very useful. It is obvious, of course, that the effectiveness of community groups depends, among other things, on the effectiveness of the technical assistance provided through different institutions of national and international development efforts. But it

TABLE XVIII

AWARENESS OF AND MEMBERSHIP IN FUNCTIONING COMMUNITY GROUPS BY HAITIAN FARMERS

	Distribution of Responses				
	Total	Aware of Com. Group		Membership in a Com. group	
Agr. Districts	N	N	%	N	%
Grands-Bois	30	30	100.0	19	63.3
Gonaives	20	20	100.0	20	100.0
Cap-Haitien	20	20	100.0	12	60.0
Cayes	20	19	95.0	12	60.0
Jeremie	20	17	85.0	9	45.0
La Gonave	20	20	100.0	16	80.0
Petit Goave	20	17	85.0	9	45.0
All Agr. Districts					

TABLE XIX

PERCEPTIONS AS TO THE USEFULNESS OF COMMUNITY GROUPS
AS MADE BY HAITIAN FARMERS

	Distribution of Responses									
	Very Useful		A Little Useful		Not useful		Undecided		Total	
Agr. Districts	N	%	N	%	N	%	N	%	N	%
Grands-Bois	28	93.3	2	6.6	0	0.0	0	0.0	30	100.0
Gonaives	20	100.0	0	0.0	0	0.0	0	0.0	20	100.0
Cap-Haitien	15	75.00	5	25.0	0	0.0	0	0.0	20	100.0
Cayes	13	65.0	6	30.0	0	0.0	1	0.0	20	100.0
Jeremie	8	40.0	8	40.0	0	0.0	4	20.0	20	100.0
La Gonave	15	75.0	5	25.0	0	0.0	0	0.0	20	100.0
Petit Goave	14	70.0	3	15.0	1	0.0	2	10.0	20	100.0
All Agr. Districts	113	75.3	29	19.3	1	0.7	7	4.7	150	100.0

was previously realized that in some rural places, educational opportunities in general, and technical assistance in the field of agriculture in particular, were drastically inadequate. So, inevitably the question must be posed: In spite of the possibly goodwill and disposition of the "community group" members in particular, and probably the whole rural population in general, how were they progressing as far as the adoption of improved practices in agricultural production was concerned?

Current Basic Agricultural Resources and Practices Now Used by the Interviewees

An attempt was made to determine the extent to which farmers might be employing selected methods. Questions were asked about the nature of the kinds of power being more commonly used in soil preparation, tillage, cultivation, harvesting and other farm operations.

The mechanization of agriculture can be recognized as being in a somewhat primitive stage in Haiti. As shown in data presented in Table XX, all respondents reported that they were using manual tools such as the hoe, serpette, digging stick and machette. Only nine percent reported the use of fuel powered tractors in plowing. Fuel powered machines were evidently concentrated in the communes of Gonaives and Cayes where they were reported by about one-fourth of the farmers. The dearth of tractors in certain areas may be partly explained by considering the topography of those regions. A considerable portion of the peasant farmer population live in the mountainous areas where the steep slopes make tractor locomotion very difficult. The extreme poverty also prohibits purchase of fuel, and, as far as animal powered plows are con-

TABLE XX

KINDS OF POWER USED IN AGRICULTURAL PRODUCTION
AS REPORTED BY RESPONDENTS

	Distribution of Responses								
	Total	Man-powered		Animal Powered		Fuel Powered		Electricity Powered	
Agr. Districts	N	N	%	N	%	N	%	N	%
Grands-Bois	30	30	100.0	0	0.0	0	0.0	0	0.0
Gonaives	20	20	100.0	5	25.0	4	20.0	0	0.0
Cap-Haitien	20	20	100.0	4	20.0	2	10.0	0	0.0
Cayes	20	20	100.0	5	25.0	4	20.0	0	0.0
Jeremie	20	20	100.0	3	15.0	3	15.0	0	0.0
La Gonave	20	20	100.0	0	0.0	0	0.0	0	0.0
Petit-Goave	20	20	100.0	0	0.0	3	15.0	0	0.0
All Agr. Districts	150	150	100.0	17	11.3	16	10.6	0	0.0

NOTE: Respondents were encouraged to respond in more than one category when appropriate.

cerned, the competition between man and animals for space and food mandates the use of space or grain to the direct benefit of man rather than to keep labor animals.

On the more fertile plains, tractors are used by some institutions (DARNDR, IDAI, ODVA, etc.), commercial companies (HASCO) and a few large farmers. This is a more common practice in some of the plains close to the regional metropolis (Plaine du Cul-de-Sac, Plaine des Gonaives, Plaine de Leogane, Plaine du Nord, Vallee de l'Artibonite, Plaine de Miragoane, Plaine des Cayes, etc.). Bull-powered plows are more likely to be found in the northeastern plateau of Haiti (Plateau Central) where the researcher had the opportunity to be an undergraduate trainee in the summer of 1970. It is acknowledged that that part of the country was not included in the survey related to this present report. Data presented in Table XX show that in La Gonave and Grands-Bois, manual tools were reported as exclusively used by respondents.

Agriculture in Haiti is primarily characterized by small farms. Findings as shown in Table XXI reveal that about 75 percent of the respondents were farming less than 10 acres. In more detail, about 69 percent of the total reported farming land units of between 4 and 10 acres. Only 10 percent of the farmers were found to be farming more than 15 acres. Agricultural output depends on the size of the farm, but it also depends to a large extent on the quality of the inputs involved in the production process. Data shown in Table XXII give a picture about the distributions of the farmers with regard to the use of selected primary inputs necessary to the modern agricultural production process.

Responses obtained from Haitian farmers and presented in Table XXII show that aside from the districts of Gonaives and Cayes, the nature and

TABLE XXI

SIZE OF FARMS AS REPORTED BY FARMERS IN SELECTED AGRICULTURAL DISTRICTS

All Agr. Districts	Distribution by Size of Farm											
	1-3 acres		4-6 acres		7-10 acres		11-15 acres		over 15 acres		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grands-Bois	2	6.6	10	33.3	11	36.7	5	16.6	2	6.6	30	100.0
Gonaives	1	5.0	6	30.0	7	35.0	4	20.0	2	10.0	20	100.0
Cap-Haitian	2	10.0	8	40.0	5	25.0	3	15.0	2	10.0	20	100.0
Cayes	1	5.0	5	25.0	9	45.0	2	10.0	3	15.0	20	100.0
Jeremie	1	5.0	7	35.0	7	35.0	3	15.0	2	10.0	20	100.0
La Gonave	2	10.0	10	50.0	5	25.0	2	10.0	1	5.0	20	100.0
Petit Goave	1	5.0	7	35.0	7	35.0	2	10.0	3	15.0	20	100.0
All Agr. Districts	10	6.6	51	34.0	51	34.0	21	14.0	15	10.0	150	100.0

TABLE XXII

EXTENT OF THE USE OF SELECTED PRIMARY INPUTS BY HAITIAN FARMERS LIVING IN SELECTED AGRICULTURAL DISTRICTS

	Distribution of Respondents								
	Total	Improved Seed		Fertilizers		Pesticides		Irrigation	
Agr. Districts	N	N	%	N	%	N	%	N	%
Grands-Bois	30	8	26.6	0	0.0	3	10.0	0	0.0
Gonaives	20	8	40.0	10	50.0	12	60.0	10	50.0
Cap-Haitien	20	5	25.0	4	20.0	3	15.0	6	30.0
Cayes	20	10	50.0	7	35.0	6	30.0	9	45.0
Jeremie	20	4	20.0	3	15.0	4	20.0	7	35.0
La Gonave	20	0	0.0	0	0.0	5	25.0	0	0.0
Petit Goave	20	5	25.0	4	20.0	5	25.0	7	35.0
All Agr. Districts	150	40	26.6	28	18.6	38	25.3	39	26.0

NOTE: Respondents were encouraged to respond in more than one category when appropriate.

extent of selected primary inputs involved in agricultural production must be considered as minimal. Considering the total farmers in the study, only about one-fourth reported making efforts to adopt improved inputs. The use of improved seed is primarily to be found in corn, rice, sorghum and cotton. However, a remarkable range of agricultural species are to be found in Haiti, including legumes, vegetables, bananas, sugarcane, coffee, fruits, etc. In the Grands-Bois mountainous areas and the La Gonave arid lands, the very critical situation may largely inhibit attempts at securing and planting seeds of improved plant varieties. In fact, dealing about economical use of improved seed, fertilizers, pesticides and irrigation is to refer to a certain extent to the Green Revolution policy. This should be the right strategy to increase agricultural production outputs in a place such as Haiti where one of the alternatives seems to be the transformation of subsistence agricultural producers into farmers producing economically on small size farms for both national and international markets. The achievement of such objectives presupposes primarily the existence or establishment of specialized institutions providing financial assistance to the farmers and adequate availability of irrigation water. It is acknowledged that respondents involved in this present study were not asked questions related to availability of financial assistance among them. But many authorities, among them Lytton Duplan (5) affirmed that finanical assistance among Haitian farmers is rather relatively scant. "BCA" (Bureau de Credits Agricoles) and "IDAI" (Institut de Developpement Agricole et Industriel) constitute the two most important national institutions providing some financial assistance under a form of "supervised credits", this to only a few Haitian farmers. On the

other hand, where rainfall is not satisfactory both with regard to volume and distribution, irrigation should be one of the most important factors in a "green revolution" policy. However, selected figures concerning possible considerations about moisture for the development of a green revolution in Haiti are rather significant including the fact that 75 percent of the Republic of Haiti is mountainous, 25 percent of the whole country is arid and semi-arid with less than 48 inches of annual precipitation. Only 32 percent of the total Haitian land area is presently being cultivated with a mere three percent of the whole country or less than eight percent of the totally cultivated lands being irrigated. So, data presented in Table XXII can more easily be understood, but the question must be posed, 'How can the "green revolution" be applied to Haiti?' Data shown in Table XXIII bear out with the "pesticides" column data of Table XXII. As a summary, an average of 25 percent of the respondents reported using pesticides while almost all of them complained of many kinds of agricultural pest problems over 90 percent of them noted insects and related diseases as one of their primary concerns.

There are few professional animal breeders in Haiti. However, rare is the Haitian farmer who, out of labor animals horse, mule and ass, does not raise a few other ones such as cattle, hogs, goats and chickens. These latter often are used to constitute a cash crop kept aside for a rainy day. Data presented in Table XXIV identify the proportion of respondents raising animals, as well as those who had a veterinarian in their areas.

The raising of animals is almost universal among Haitian farmers as is also true for labor animals. However, in the plain of Cayes where

TABLE XXIII

RECOGNITION OF SERIOUS PEST PROBLEMS AS VIEWED BY HAITIAN FARMERS

	Distribution of Responses								
	Total	Insects and Diseases		Birds		Rodents		Storage Pests	
Agr. Districts	N	N	%	N	%	N	%	N	%
Grands-Bois	30	30	100.0	20	66.6	30	100.0	25	83.3
Gonaives	20	18	90.0	20	100.0	15	75.0	16	80.0
Cap-Haitien	20	17	85.0	15	75.0	16	80.0	18	90.0
Cayes	20	14	70.0	18	90.0	8	40.0	6	30.0
Jeremie	20	18	90.0	18	90.0	14	70.0	19	95.0
La Gonave	20	20	100.0	4	20.0	6	30.0	20	100.0
Petit Goave	20	20	100.0	8	40.0	19	95.0	18	90.0
All Agr. Districts	150	137	91.3	103	68.6	108	72.0	122	80.3

NOTE: Respondents were encouraged to respond in more than one category when appropriate.

TABLE XXIV

HAITIAN FARMERS RAISING ANIMALS AND THOSE HAVING A VETERINARIAN IN THEIR AREA

	Distribution of Responses						
	Total	Using Labor Animals		Raising Cattle Hogs, goats & chickens		Veterinarian in Area	
Agr. Districts	N	N	%	N	%	N	%
Grands-Bois	30	25	83.3	28	93.3	0	0.0
Gonaives	20	17	85.0	19	95.0	18	90.0
Cap-Haitien	20	19	95.0	20	100.0	15	75.0
Cayes	20	15	75.0	20	100.0	20	100.0
Jeremie	20	20	100.0	20	100.0	10	50.0
La Gonave	20	16	80.0	19	95.0	0	0.0
Petit Goave	20	18	90.0	18	90.0	12	60.0
All Agr. Districts	150	130	86.7	144	96.0	75	50.0

NOTE: Respondents were encouraged to respond in more than one category when appropriate.

the topography permits a large use of bicycles, one-fourth of the farmers did not have labor animals. Considering all districts, 96 percent of respondents reported raising animals with almost 87 percent with labor animals, while in the Plain of Cayes, all farmers reported access to a veterinarian, in the barely-accessible places such as Grands-Bois or La Gonave, animals' owners are apparently totally without the assistance of any veterinarian.

Personal Opinions and Judgments of Respondents as to Their Desire for the Assistance of Professional Educators in Moving Toward an Eventual Agricultural Development Program

At last, in an attempt to find out the respondents' feeling about farming and also their possible attitude, behavior and interest in an expanded agricultural development program, the two following questions were asked: (1) Do you enjoy farming? (2) Would you like to have more practical knowledge in modern agriculture? Tables XXV and XXVI develop the respondents' reactions.

There was no lack of goodwill. In spite of an apparent hardship bound to the uncertainties in farming in particular, and the rural life in general, a large percentage of the respondents indicated they were enjoying farming. Furthermore, they would greatly have a positive attitude towards some agricultural development programs in the rural development process.

TABLE XXV

INTERVIEWEES' RESPONSES AS TO THEIR SATISFACTION AND ENJOYMENT OF FARMING

Agr. Districts	Distribution by Degree of Satisfaction and Enjoyment									
	Very much		A Little		Not at all		Undecided		Total	
	N	%	N	%	N	%	N	%	N	%
Grands-Bois	23	76.6	3	10.0	2	6.7	2	6.7	30	100.0
Gonaives	17	85.0	2	10.0	0	0.0	1	5.0	20	100.0
Cap-Haitien	15	75.0	2	10.0	2	10.0	1	5.0	20	100.0
Cayes	16	80.0	2	10.0	1	5.0	1	5.0	20	100.0
Jeremie	16	80.0	1	5.0	3	15.0	0	0.0	20	100.0
La Gonave	8	40.0	9	45.0	2	10.0	1	5.0	20	100.0
Petit Goave	15	75.0	1	5.0	0	0.0	4	20.0	20	100.0
All Agr. Districts	94	62.7	20	13.3	11	7.3	10	6.7	150	100.0

TABLE XXVI

HAITIAN FARMERS' RESPONSES AS TO THEIR DESIRES FOR OBTAINING ADDITIONAL PRACTICAL KNOWLEDGE IN MODERN AGRICULTURE

Agr. Districts	Distribution by Desire for Additional Knowledge									
	Very Much		A Little		Not at All		Undecided		Total	
	N	%	N	%	N	%	N	%	N	%
Grands-Bois	25	83.3	3	10.0	0	0.0	2	6.7	30	100.0
Gonaives	18	90.0	1	5.0	1	5.0	0	0.0	20	100.0
Cap-Haitien	18	90.0	0	0.0	0	0.0	2	10.0	20	100.0
Cayes	19	95.0	0	0.0	0	0.0	1	5.0	20	100.0
Jeremie	18	90.0	0	0.0	0	0.0	2	10.0	20	100.0
La Gonave	15	75.0	3	15.0	0	0.0	2	10.0	20	100.0
Petit Goave	16	80.0	2	10.0	0	0.0	2	10.0	20	100.0
All Agr. Districts	129	86.0	9	6.0	1	0.7	11	7.3	150	100.0

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this chapter is to present in a concise manner the following topics: purpose of the study, specific objectives, rationale for the study, design of the study and the major findings of the research. Through a detailed analysis and consideration of these, conclusions and recommendations are presented.

Purpose of the Study

This study was undertaken in an attempt to determine the status of education and agricultural practices among the rural population of Haiti. The paramount purpose was to consider how that part of the population which is necessarily called to function effectively in the agricultural production process may be adequately prepared to face and carry out such a vital assignment.

A projected objective, not necessarily within the confines of this study is to enhance the understanding of Haitian people and to assist in their adoption of a somewhat new concept of the socioeconomic development process. In other words, the Haitian people as well as all other people of the world must recognize that there is no effective and viable socioeconomic change without a strong and democratic educa-

tional system to provide all the people with comprehensive and on-going, formal and informal, theoretical and practical education.

Objectives of the Study

In order to accomplish the purposes outlined, the following objectives were formulated to determine:

1. The status of formal education completed.
2. The status and types of informal and/or adult education experienced.
3. Present concepts of and values held concerning agricultural practices and rural development.
4. Through an analysis of findings with regard to objectives 1, 2, and 3, formulate preliminary suggested plans for more comprehensive and effective individual and community development in education and agriculture among the rural population of Haiti.

Rationale for the Study

Since the early fifties, Haiti has been helped by some foreign governments or international institutions such as the U.S. Point Four. In a recent report of the Agricultural Department of Haiti (2), it was stated that in 1977, Haiti was attempting to implement nearly 40 socio-economic development programs, supported by foreign governments or international institutions such as USA, France, West Germany, Israel, Canada, Nationalist China, FAO and others. But those development projects were mostly concentrated on a part of the plains which constitute about one-fourth of the country. The impact of those develop-

ment projects on the needs of the poor majority is still relatively questionable.

A more significant evidence about the critical situation of the Haitian peasants was found in a recent report (October, 1977) of the "Service National de Vulgarisation Agricole" (National Service of Agricultural Extension) of the Haitian Agricultural Department (11). In that report, it was clearly stated that the above mentioned Agricultural Extension Service was barely assisting the rural communities with respect to the satisfaction of their needs or necessities. That service, as then structured, hardly had efficient means to adequately support the rural communities. With a staff comprising only 208 field extension workers and 6 higher level specialists to assist 700,000 peasant families, that service was practically handicapped. Many of those extension workers were not adequately qualified to provide the peasants with effective assistance in agricultural production process. On-the-job training programs were rarely being planned and implemented. In other words, the agricultural extension worker was far short of the necessary knowledge, skills and materials which would have enabled him to fulfill satisfactorily his vital assignment. Consequently, the Agricultural Extension Service was also deemed as unable to achieve its objectives.

Is the Agricultural Extension Service of Haiti now managing to support adequately an agricultural, production process first and foremost in rural development or socioeconomic development process in general? It was very evident that there was no dynamic functional link among the Agricultural Extension Service and the "Faculte d'Agronomie et de Medecine Veterinaire (F.A.M.V.) of Haiti. Presently, the F.A.M.V.

(Faculty of Agronomy and Veterinary Medicine) constitutes the highest center providing formal agricultural education in Haiti, at both secondary and collegiate levels. Furthermore, a perfect harmonization and involvement of the Research Service of the Agricultural Department with both the Faculty of Agronomy and the Extension Service are rather relatively questionable.

How then a comprehensive cooperation can be established among those vital services, to finally constitute a strong pivot for further planning, implementation and evaluation of agricultural production and rural development or socioeconomic development programs? It was then the hope of the researcher that this modest study may carry more enlightenment for a better future for the poor majority of the country.

Design of the Study

Following a review of selected literature, a procedure was established in order to satisfy the purposes and objectives of this study. An attempt was made to include 150 Haitian peasant farmers picked randomly in each of seven selected Agricultural Districts of the Republic of Haiti.

A 59-item combined closed questionnaire and structured interview was administered to those 150 Haitian peasants. Peasants' responses to the combined closed questionnaire and structured interview were then calculated and presented in different tables for each major facet designed in an attempt to satisfy the purposes and objectives of this study.

Major Findings of the Research

In addressing the major findings of this study, the researcher made reference to five major areas included in presentation and analysis of data. They are as follows:

1. Interviewees' characteristics with respect to age, sex and family size.
2. Quality and level of formal and informal educational opportunities among respondents.
3. Identification of formal and informal agricultural education opportunities among respondents.
4. Current basic agricultural resources and practices now used by the interviewees.
5. Personal opinions and judgments of respondents as to their desire for the assistance of professional educators in moving toward an eventual agricultural development program.

Interviewees' Characteristics. Data show that 83 percent of the respondents were males; 94 percent of them were between 20 and 60 years of age; 58 percent of them had a family with three to six children; 13 percent had one or two children; 17 percent had more than six children.

Quality and Level of Formal and Informal Educational Opportunities Among Respondents. Data show that formal and informal educational opportunities were relatively available. However, the rates of achievement seemed to be rather scant. Only 18 percent of the respondents did not attend any kind of school. In more detail, it was determined that 41 percent attended formal urban schools; 55 percent attended formal

rural schools; 10 percent went to evening schools while 32 percent took private lessons. In a summary, it was reported that 82 percent of them had experienced some form of schooling. However, only 26 percent of the respondents completed primary school, that was less than the number of those who attended urban school. Furthermore, only 18 percent of them attended secondary school. We note that there is practically no rural secondary schools in Haiti. Data show that the situation presented above was not uniform throughout the country. In Cayes for instance, 80 percent of the respondents reported attendance at an urban school while 45 percent of them completed primary school and 35 percent attended secondary school. It was in the Plain of Cayes that the reseacher met the only farmer who, out of 20 interviewees, reported completion of secondary school and some college attendance. This man is a lawyer. Extreme variation between and among districts is born out by the finding that in Gonaives, only 10 percent of the interviewees had completed primary school and had some attendance at the secondary level. In general it was rather rare to find an active farmer, in a remote rural place in Haiti, who had completed secondary school. While it is true that a sizable number of Haitian peasants do complete secondary school and attend college, rarely do they go back to their native place.

Evening school attendance was weak among the respondents with only 10 percent reporting such experience. A greater number, 32 percent of the total, took private lessons. Thirteen percent of the respondents attended a vocational school and nine percent of the total had a diploma (tailor, dressmaker, agriculture technician, carpenter, etc.). However, 37 percent of the respondents indicated that they were skilled through

apprenticeship training and practiced a craft without a diploma or certificate.

Few peasants did have adequate means of transportation for their children attending school. Data show that only two percent of the respondents indicated using a private car for their children going to school, with 14 percent reporting use of public transportation, with 17 percent using bicycles, five percent using the motorcycle, while the remainder, 60 percent, walked or used an open boat (three percent) or an animal such as horse, mule or ass (15 percent). Sixty-three percent of the interviewees reported the necessity for their children to walk from 30 minutes to one hour from their house to the nearest school, while 12 percent had children walking over an hour to reach the nearest rural school.

Identification of Formal and Informal Agricultural Education Opportunities Among Respondents. There is a non-credit agricultural education program in some of the rural schools of Haiti. Except for the regions of Grands-Bois and La Gonave, more than 60 percent of the respondents recognized that some agriculture was taught in the rural school. A few of them, 50 percent in Gonaives, also indicated that evening school teachers provided some enlightenment in agriculture. Of course, the theoretical and practical value of agriculture as taught either through formal rural school or informal evening school, was rather questionable, considering that the teachers were not recognized as qualified professional in Agricultural Education. Furthermore, the evening school teacher was often a local leader with only rudiments of some primary education.

Corresponding to the American 4-H Program is a rural youth program known as "4-C Program" in Haiti. However, that program appears to be only slightly effective among the rural population of Haiti with less than one-fourth of the respondents actually reporting that they were aware of it and only eight percent acknowledging membership in it. In fact, only 17 percent acknowledged that they were acquainted with people who were members of the 4-C Program. In remote places such as Grands-Bois and La Gonave, the 4-C Porgram seemed practically unknown.

It seemed of particular importance to the researcher to at least partially identify how rural people of Haiti were assisted by the Agriculture Extension Service of the Agriculture Department of Haiti. Only 12 percent of the respondents indicated that there was no field agricultural extension agent in their area. The remainder was assisted by either an agronomist (51 percent), a vo-ag graduate (53 percent) or a local leader who often had received some special training, inadequate though this may have been.

According to an official report of the Agricultural Extension Service (11), there were in Haiti 208 field extension workers purportedly serving a total of 700,000 peasant familes. That corresponds to one agent per 3,365 families. According to the same report, those 208 field extension workers were operating under the direction of only six agronomist specialists of Agricultural Extension.

Further findings of this thesis reveal that other than Grands-Bois and Jeremie, about 70 percent of the respondents recognized that the field extension workers often provided them with useful advice through frequent meetings (50 percent) or other media. In a remote mountainous place such as Grands-Bois, there was practically no field extension

worker. Evidently, remote mountainous places such as Grands-Bois, isolated with respect to Extension Service activities, constitute the largest portion of rural Haiti. It must be recognized that the six specialists and 208 field extension workers of the Agricultural Extension Service were not evenly distributed among the 700,000 rural families.

Radio would seem to be an important mass media in carrying out informal agricultural education to the Haitian peasants, with 62 percent of the respondents asserting that they often listened to a broadcast of agricultural program, while 29 percent indicated a "sometimes" listening to programs. It would seem noteworthy that 73 percent of respondents judged the broadcasts of agricultural programs of very useful. However, agricultural programs were apparently of little value to only eight percent of the respondents who indicated they made "no difference".

A remarkable socioeconomic phenomenon in today's rural Haiti is the organization of community groups which seem rapidly spreading throughout the country. Data were not available which would verify the approximate number of existing community groups. However, the researcher stationed there as field agronomist can verify that in 1976, there were 62 of them in operation on the island of La Gonave (63,000 inhabitants). In August 1976, 13 community groups in the southern part of La Gonave totalled in the neighborhood of 440 members.

Again, with reference to this thesis study, data show that 95 percent of the respondents recognized the existence of an organized community group in their area and further that 63 percent of them were community group members. It is further praiseworthy to discover that

75 percent of them recognized that the rural community groups were very useful as compared to a mere 19 percent judging community groups as "a little useful".

Review of these data pose a question which must be asked, "With low quantity and quality of formal and informal school teachers as well as agricultural extension agents, how effective is the leadership being enhanced throughout the operation of these community groups throughout the rural areas?" Although such enhancement may be judged as somewhat minimal at present, one must recognize the potential, particularly as a solidly based community phenomenon.

Current Basic Agricultural Resources and Practices Now Reported Used by Interviewees. Agricultural practices are still primarily traditional in Haiti. It was found that 100 percent of the respondents were continuing the use of manual tools such as hoe, machette, serpette, digging stick, etc. In addition, some 11 percent of them reported using animal-powered plows while only nine percent had advanced to the use of tractor-powered plows. Certainly, it must be recognized that small sized farms are predominant, for 69 percent of the respondents were farming only four to ten acres with 14 percent reported cultivating acreages from 11 to 15 acres. Finally, a mere 10 percent of farmer operators reported size of over 15 acres.

The use of primary agricultural inputs of a more modern and progressive nature was rather scant among respondents, with 27 percent using improved seeds such as corn, rice, sorghum or cotton. Only 19 percent used fertilizers, 25 percent reported use of pesticides, while 26 percent were farming with some use of irrigation. In remote places

such as Grands-Bois and La Gonave, the use of improved seeds, fertilizers, pesticides and irrigation was practically non-existent among farmers interviewed. As is to be expected, the scant use of pesticides is significantly associated widespread pest problems. Seventy-two percent of all the respondents had rodent problems, specifically 95 percent in Petit Goave and 100 percent in Grands-Bois. Almost all of them, 91 percent, were facing insect and related disease problems, while 68 percent had bird problems. Storage facilities were most inadequate, with 81 percent reporting problems with storage of their agricultural products.

Professional animal breeders are rare in Haiti, but almost all the Haitian farmers keep a few animal species. Eighty-seven percent of the respondents used labor animal, largely the horse, mule, and ass, while 96 percent reported that they raised other agricultural animals such as cattle, hogs, goats and chickens. Significantly, only 50 percent of them recognized having a veterinarian in their area. There was no veterinarian reported in either Grands-Bois or La Gonave.

Personal Opinions and Judgments of Respondents as to their Desire for Assistance of Professional Educators in Moving Toward an Eventual Agricultural Development Program. To the question "Do you enjoy farming", 63 percent of the respondents answered "very much" and 13 percent of them responded "a little". Seven percent of them were not interested in farming with an additional seven percent undecided. Eighty-six percent of them indicated they would like "very much" to have a more practical knowledge of modern agriculture.

Conclusions

In a country with more than 700,000 rural families distributed among 107 communes, responses from a statistical sample of 150 farmers in only seven selected communes might be considered somewhat question. able. However, the socioeconomic survey was primarily designated to only corroborate and amplify, with more up-to-date facts, dependable literature and the more recent official reports and journals of the Agricultural Department of Haiti. The past experiences of the researcher, graduate of the Faculte d'Agronomie et de Medecine Veterinaire (State University of Haiti) and official of the Agricultural Department of Haiti working among the Haitian peasants from July 1971 through April 1977 was admittedly a factor in the selection of conclusions drawn. Based upon these three sources as mentioned imediately above, the researcher arrived at and posits the following conclusions.

Generally speaking, the inescapable conclusion which must confront the researcher is that hindered by all kinds of socioeconomic uncertainties of rural life and sustained by inadequate educational opportunities, the Haitian education system in the rural areas at various levels can be judged as being relatively ineffective and inefficient. A further conclusion must be that agricultural development is likewise hampered by the relatively low literacy and communication levels now existent.

Conclusions Concerning Characteristics of the Peasants

The rural population of Haiti is relatively young. Eighty-one percent of the sample involved in this study includes individuals

younger than 50 years of age. Life expectancy in Haiti is said to be less than 50, while the average family size in Haiti is estimated at about five children. Seventeen percent of the respondents involved in this study had a family of seven or more children. Relatively young people with large families reflect significantly the social characteristics of such underveloped economy. Men played a large part in farm activities, since the male is generally the head of both the family and often has major responsibilities in farm management. However, the housewife seems vital to the stability of both family and the farm economy, since she is primarily responsible for feeding the agricultural workers and accomplishing market transactions. People younger than 20 are, for a large part, wasting their time in the rural areas because of lack of educational opportunities, lands and other employment opportunities. The exit from rural uncertainties for the most concerned young persons seems to be naturally the metropolis entrance. In the metropolis, army, factories, housekeeping are sometimes opportunities for the awkward young peasant who has a good acquaintance in town. But very often, disappointment under the form of hunger and all kinds of socioeconomic prostitutions are waiting at the other end of the rural exodus process, that is often the fate of the individual seeking the metropolis entrance. Today's ghettos and business streets of Port-au-Prince are giving ample evidence of this truth.

Conclusions Concerning Educational Opportunities

Quality and amount of formal and informal educational opportunities provided to the rural areas of Haiti leave much to be desired.

About 80 percent of the whole Haitian nation continues to be rural and about 80 percent of that nation is also considered as largely illiterate. There is no rural secondary school in all of rural Haiti, and yet, few rural schools do offer a complete primary program. Dropout rates are rather excessive. The researcher had the opportunity to talk to the head of the rural school of Grands-Bois in August of 1978. Four schoolboys over fifteen years out of five received their primary studies certificate as of July 1978, while the enrollment in the lower class of that school was over 50. Achievement in evening school appears to be significantly low. A dependable alternative to the dichotomus and very important French-Creole tongue still leaves much to be desired. Distribution of rural schools with respect to the peasant habitations is but one mere curb among various others in the educational and socio-economic development process.

Colonial times' slaves, today's peasants, the "no less right" of those human beings to be happy contrasts, however, with their heavy responsibility to be both creative and productive citizens. How then can the national educational system of Haiti efficiently cooperate with other national and international institutions to meet such vital needs?

Conclusions Concerning Agricultural Education Opportunities

A non-credit Agricultural Education program was reported to be included in the curriculum of a few rural and evening schools. But if achievement in general education is excessively low in those schools, what then about agricultural education as a specific non-credit subject matter? Formal rural and evening school teachers are not recognized as

qualified professionals in Agricultural Education. There is no agricultural education program in urban schools. These latter are far and indubitably of higher quality than the rural ones. The Haitian Rural Youth 4-C Program should normally carry some agricultural knowledge and skills to the rural school pupils, but hindered by the bulk of the socioeconomic curbs, that movement evidently lacks much in popularity and must be judged as of little influence among the Haitian rural youth.

In any progressive nation, Rural Youth Programs, Home Economics, Agricultural Production, informal Agricultural Education, and even the more formal portion of Agricultural Education programs constitute the most important assignments of a cooperative and pragmatic Agricultural Extension Service. To carry out such vital tasks, the staff of the Agricultural Extension Service must necessarily cooperate with those teaching in various agricultural fields and those making research in the same fields. The Agricultural Extension Service is the vital link among agricultural producers, agribusinessmen, and professional agricultural teachers and scientists throughout the process of the agricultural economy. Viewed from such a position, the Agricultural Extension Service of Haiti must be judged as largely ineffective and inefficient in accomplishing the needed work among the agricultural educators, producers and businessmen in Haiti. Many of the agronomists, vo-ag graduates and specialized local leaders reported in this thesis study were not directly part of the Agricultural Extension Service. They were primarily operating in plains under the direction of specific national and international institutions and projects such as DRIPP (Petit Goave), ODPG (Gonaives), ODVA (Vallee de l'Artibonite), ODN (Departement du Nord), IDAI, EDAPS (Cayes), REBO (Methodist Church,

Jeremie), CWS/SCH (Church World Service and Methodist Church in the Island of La Gonave). In remote mountainous places such as Grands-Bois, Bainet, Bel-Anse, Savanette, to mention a few, it was quite easy to apprise the Agricultural Extension Service as having only very remote influence to agricultural cultivators. Lack of sufficient personnel is possibly one partial explanation in such situations, but transportation, communications and personal incentives offer present extension workers must also be recognized as falling far short of needs. It was not rare to meet some high level officials in Damien (Agricultural Department Seat) who tended to consider their extension worker subordinates as mere soldiers on the battlefield rather than community members striving to meet their own needs and realizing their own family's happiness.

Radio broadcast seemed to be the most important mass media in rural development process in Haiti. The most noticeable stations were Radio Lumiere (Baptist Church, Cayes), Radio Haiti and Radio Metropole (Commercial, Port-au-Prince), Radio Nationale (Governmental, Port-au-Prince), Radio Soleil (Catholic Church, Port-au-Prince), 4VEH (Baptist Church, Cap-Haitien), and Radio Citadelle (Commercial, Cap-Haitien).

A surprisingly large number of peasants are found to be members of organized community groups, but the question as to how those goodwill community members were being assisted in the remote mountainous places still left much to be discovered.

Conclusions Concerning Current Basic Agricultural Resources and Practices Among Haitian Farmers

Other than a part of plains surrounding the large regional metropolis (Port-au-Prince, Cap-Haitien, Gonaives, Cayes), agricultural tools were rather traditional and manual. Animal-powered plows were rare and might be impractical in many places, considering space or high amoung of feedstuff for labor animals to be productive. Competition for food among Haitian people and their agricultural animals and pets is already well established. The agrarian system of Haiti is characterized by perdominantly small size farms (3-15 acres). Few farmers used modern agricultural inputs such as improved seeds, fertilizers and pesticides. A part of the plains was irrigated and could consequently support an intensive agricultural production program. Agricultural pests such rodents, insects, birds, and mites are important curbs to agricultural production in Haiti. It was reported that in some places in Petit-Goave, rats often destroy up to 40 percent of some fields of corn. Hungry dogs sometimes also attack the fields of corn. There were few professional animal breeders found among respondents. But each peasant family owned a few animals such as the horse, mule, ass, cattle, hogs, goats, sheep or chickens, thus identifying an important population of domestic animals in Haiti. Those animals do constitute a blend of the existing species and breeds more commonly found in the Western Hemisphere. Problems relating to animal production in Haiti are but a facet of the economic uncertainties of the whole Haitian Nation.

Conclusions Concerning Personal Opinions and Judgments of Respondents as to Their Desire for the Assistance of Professional Educators in Moving toward an Eventual Agricultural Development Program

Relatively weak educational opportunities are prevalent throughout both the plains and the severely eroded mountains which have been subsequently plotted into small subsistence farms. Such is the framework in which relatively young, mostly illiterate and socioeconomically exploited Haitian farmers responded that they enjoyed farming activities, and do desire to learn more about modern agricultural practices. Thus, one concludes that they await the assistance of national and international promoters of needed aspects of socioeconomic development.

Recommendations

As a result of the conclusions drawn from the literature review, the researcher's experiences and observations as an Agronomist and as a citizen of Haiti, and a studied interpretation and analysis of data, the following recommendations are made.

I. Recommendations for Restructuring and Improving the Rural Schools.

1. Each rural school should have at least one director-administrator and a minimum of nine teachers. The time to complete the primary requirements should be five years after the kindergarten. Presently, this time is seven

years after the kindergarten. The rural school should extend its services three years beyond the "Certificat d'Etudes Primaires" or C.E.P. (Primary Studies Certificate). This extension would permit the rural student to complete grammar or elementary school. Likewise, the more advanced certificate, "Grammar Certificate" or "Elementary Certificate", ("Brevet" in Haiti), should permit every qualified pupil to continue secondary studies in an urban school or to enroll in a vocational school.

2. Haitian leaders should realize that it might be very difficult, if not impossible, to develop the Haitian Creole to the point that it would effectively satisfy the needs of Haitian communities for a medium to freely pursue and master scientific studies. Without doubt, it would seem easier to motivate the population to understand and use French and other more open languages such as English and Spanish, than to persuade a handful of Haitian intellectuals to write, or to translate, academic, scientific and technological works into Creole. Haitian leaders should admit as an axiom that "Learning is a life-long process". Any individual in good physical, psychological and moral health can learn. As a progressive nation, Haiti can hardly be expected to confine itself, albeit alledgedly for racial, national and cultural pride, in the exclusive use of the Creole tongue. As a consequence of the above considerations, it is strongly recommended that the textbooks used in rural school continue to be exclusively in French

while Creole should be a tolerated tongue of communication or explanation used among teachers and their pupils in kindergarten and the first three years of the primary level. From the fourth year of the primary school, Creole may continue to be tolerated in some pupil conversations while French should be the teacher's sole language for explanation.

3. Experts in program planning in Education and Rural Development should periodically review the curriculum of the primary level in rural school in order to perform necessary adjustments.

4. The widespread poverty, with the inevitable accompanying hunger and malnutrition, does, to a large extent, constitute a major cause of the high dropout and 'grade repeater' rates. A food program has been implemented in the rural schools, but this program does not seem to be functioning satisfactorily. Financial help to parents who are organized in community groups to further improve pupil nutrition should be considered.

5. Where reasonably traversable roads are available, school busses should be provided for the use of pupils living more than 30 minutes walking distance from their school Where the above process is not possible, financial assistance to help those pupils to spend the weekdays in the school area should be considered.

II. Recommendations for Implementing and Improving Adult Education.

Each literate citizen should be encouraged to tutor generously a minimum of two of his illiterate relatives or

friends each year. Such a process should be planned and implemented by ONAAC or "Office National d'Alphabetisation et d'Action Communautaire". ONACC is the Haitian institution designated to be responsible for promoting and supervising adult education. The tutor should receive some incentives from ONACC if learners do achieve successfully on a comprehensive test whose norms should be defined by ONAAC. ONAAC should take advantage of the growing movement of an organization of various community groups to amplify and strnegthen its educational programs. In Haiti, the concept 'alphabetisation' means 'that effort which should teach adults how to read and hopefully to write'. ONAAC should cooperate with other institutions to carry to the populace not only the simple "alphabetisation", but provide informal education even to those who can read and write.

III. Recommendations for the Implementation and Improvement of Agricultural Education in Schools.

1. The study of agriculture as a distinct subject should carry credit in both rural and urban schools and should be readily available at both primary and secondary levels.
2. Considering that at the present, only a very meager number, if any, of professional teachers of Agricultural Education can be found in all of Haiti, a board of national and international agricultural experts with some representation of educational specialists should be constituted at the Faculty of Agronomy to carry out an immediate solution.

Such a board should accept responsibility for the preparation of standardized teaching materials for different levels. These materials should be based as much as possible upon the very local situations of Haiti. Undergirded by various seminars, existing teachers in natural sciences should start teaching agriculture by using the materials prepared at the Faculty of Agronomy. The Board of Agricultural Experts should also plan and implement a comprehensive program of studies which will more adequately prepare professional teachers in Agricultural Education for both primary and secondary levels.

3. It is further strongly recommended that the "Office National d'Alphabetisation et d'Action Communautiare" or "ONAAC" should include practical agricultural education in its program.

IV. Recommendations for the Improvement of Agricultural Education at Higher Levels.

1. The 'Faculte d'Agronomie et de Medecine Veterinaire' or "F.A.M.V.' which provides Higher Agricultural Education in Haiti is a part of the 'Universite d'Etat d'Haiti' or State University of Haiti. This latter is now constituted by scattered faculties and campuses primarily located in the area of Port-au-Prince. It would seem very evident that the junction or combining of location of some of them into a common campus would save time and money while fostering larger rates of enrollment and better working relationships among both faculty members and students. In

other words, such an achievement would strengthen the Haitian university in a quantitative as well as qualitative manner. It is therefore strongly recommended that efforts be made by both national and international authorities in order to study the possibilities inherent to the achievement of such a junction.

2. Presently, the Faculty of Agronomy and Veterinary Medicine (F.A.M.V.) of the State University of Haiti is charged with the responsibility of maintaining two distinct departments at the University; namely, Agronomy and Veterinary Medicine. However, it is the present practice to issue one diploma, this known as 'Diplome d'Agronome' (Diploma of Agronomist). In order to enhance a more effective meeting of pressing social and economic needs, it is recommended that a 'Fac ulty of Agriculture' be initially established and then subdivided into these well defined departments: (a) a Department of General Agriculture, (b) a Department of Veterinary Medicine, and (c) a Department of Agricultural and Extension Education. To accomplish this it would, of course, be necessary to reorganize, refine and make relevant adjustment of the present curriculum. This should be carried out under the overall direction and supervision of the "Board" referred to in Recommendation No. III-2, above.
3. The Faculty of Agriculture, constituted according to recommendations above, should issue diplomas pursuant to the major field of study completed by the student; that is, the

issued diploma is either a diploma of 'General Agriculture', a diploma of 'Veterinary Medicine' or a diploma of 'Agricultural and Extension Education'.

4. The term B.S. or B.Sc. (Bachelor of Science) which denotes in most English speaking countries satisfactory completion of four years of college or university studies is not as precisely understood in French terminology. It is therefore recommended that attention be given by Haitian academicians and higher education administrators to standardizing interpretation of studies completed in Haiti in terms of equivalent accomplishment in an American university or in predominantly English speaking countries institutions of higher education. This is urgently needed for the sake of Haitian students who plan to further their studies abroad.
5. The "Faculty of Agriculture" recommended above should endeavor to establish and maintain a program of graduate studies at least through the level of Master of Science or its equivalent.
6. Presently students graduating from a vocational agriculture school, L'Ecole Moyenne d'Agriculture, for example, and in addition having passed successfully official examinations in Philosophy (Secondary Studies Certificate, second part) are not readily admitted to the University by the Faculty of Agronomy. They are required as all other candidates to complete successfully an entrance examination. It is strongly recommended that a graduate of the 'L'Ecole Moyenne d'Agriculture' or other vocational school

of Agriculture, having passed successfully official examinations in Philosophy, be given admission to the University by the Faculty of Agronomy (or Agriculture) without being held to the present requirement of an entrance examination.

V. Recommendation for Organization and Functioning of a "Cooperative of Agricultural Extension Services".

1. It is to be recommended that the direction and supervision of agricultural extension workers and similar professional agriculturists be recognized as a joint responsibility of, and arise out of, cooperative efforts of the Department of Agriculture, the Faculty of Agriculture and the Agricultural District. Thus, the presently "Service de Production et de Vulgarisation Agricoles" (or Service of Agricultural Production and Extension) of the Department of Agriculture of Haiti should truely be "The Cooperative of Agriculture and Extension Services" or a cooperatively based service of agriculture extended to all of the Haitian people.
2. At the level of the Haitian Department of Agriculture, the Cooperative of Agriculture Extension Services should have a close working relationship with the Research Service and other services such as the Staff of Program Planning (Unite de Programmation), Soil Conservation, Water and Forestry, Meteorology, Statistics, Husbandry, etc.
3. At the level of the Faculty of Agriculture, the Cooperative of Agriculture Extension Services should have a close

working relationship with teaching and research staffs and the prospective field agricultural workers, Home Economist workers, etc.

4. The Cooperative of Agriculture Extension Services and the Department of Agricultural and Extension Education of the Faculty of Agriculture should have a close working relationship with the Normal Rural School, or Ecole Normale Rurale, secondary institution preparing teachers for the rural school.
5. At the level of the Agricultural District, the Cooperative of Agriculture Extension Services should be represented by a staff headed by a Director of the Agricultural District. This latter should be appointed through a cooperative consultative effort by both the Director General of the Department of Agriculture and the Director General of the Faculty of Agriculture. Community members of the Agricultural District should also be represented by an Advisory Council. The primary assignment of the Advisory Council should be to help the field extension workers in the identification of problems and needs of community members so that best possible solutions may be brought about.
6. All national and international rural development projects, presently including DRIPP, ODVA, ODPG, IDAI, IHPCADE, HACHO, etc., should be coordinated on both a consultative and, in some cases, a supervisory basis with the Cooperative of Agriculture Extension Services. This, to avoid overlaps

which may be sometimes recognized as resulting in a waste of personnel and of material inputs.

7. In like manner, it is to be recommended that the very helpful services given so freely by philanthropic and religious institutions (examples being Church World Service, Methodist Church, Baptist Church, Catholic Church, etc.) in cooperating in socioeconomic development processes, should be coordinated with and undergirded by the Cooperative of Agriculture Extension Services.

8. It would appear a generally accepted viewpoint that present functioning of Haitian Rural Youth 4-C Program and the Scouts (boys and girls) of Haiti are relatively weak youth movements as compared to those in many other nations. Admittedly, the Scouts present an advantage in that their membership is both urban and rural. Therefore, is is recommended that the Cooperative of Agriculture Extension Services should endeavor to fuse or amalgamate those two youth movements in order to create one youth movement retaining both the cultural and heroic principles of the scouts and the somewhat more specific socioeconomice goals of the "4-C".

9. It is highly recommended that provisions for continuing on-the-job education and training of the field agricultural extension workers be a most leading function provided by the Cooperative of Agriculture Extension Services.

10. Radio station programming staffs, particularly those working in agriculture should be commended and urged to con-

tinue to provide effective programs. Again closer coordination with the Cooperative of Agricultural Extension Services is to be urged.

11. Introducing and implementing new strategies to constantly strengthen established rural community groups and assistance with the organization of new groups should be an important part of the continuing responsibility and function of the Cooperative of Agriculture Extension Services.

VI. Recommendations for the Adoption and Use of Agricultural Resources.

1. With due consideration for the unique environment and socioeconomic situation of rural Haiti such as small size farms, severely eroded mountains, etc., it is recommended that great care be exercised in the possible importation of appropriate technology. It is therefore recommended that the importation of large tractors be discouraged or avoided and efforts be expended to introduce small garden tractors or 'motoculteurs', perhaps first on a more limited trial basis. In order to be successful, it is most necessary that the farmer-operator posses some elementary knowledge, skills and proper tools to maintain and repair the small tractor himself. It is strongly recommended that the Cooperative of Agriculture Extension Services work to accomplish this goal. With good management, the small gas engine for power traction might be tremendously revolutionary in Haiti.

2. The importance of land reform as a measure to aid the peasant poor of Haiti cannot be overemphasized. In days gone by, there have been many approaches proposed, many without implementation, while the situation keeps worsening. The following approach is offered as a recommendation with flexibility and possible appeal to peasant farmers. A Government agency, supervised by the Department of Agriculture, should offer to buy fragmented plots less than six acres (or 2.50 ha) in size whenever a landowner desires to sell his plot. The Government agency should then retain possession until it can be resold to a farmer having a contiguous plot of at least six acres but not larger than 30 acres (or 12.50 ha). The limit of 30 acres will avoid a possible latifundium problem in the future. In order that the land does not remain unproductive during the time it belongs to the Government, the small plot would be cultivated by agricultural pupils in adjacent schools and by young farmers as a part of 'Supervised Occupational Experience Programs'. Field agricultural extension workers, rural school teachers, adult education workers, chiefs of rural police, leaders of community groups and religious authorities can be instrumental in this process. Such efforts should be of course undergirded by creating more employment opportunities in developing industries.
3. Presently functioning in the Department of Agriculture of Haiti is an important center designated to propagate and increase stocks of improved seeds which are subsequently

distributed to farmers. Of course, improved seeds mean little without other necessary items such as fertilizers, pesticides, water andprotective storage units. It is recommended that the Cooperative of Agricultural Extension Services be strengthened through moderate increases in budget and staff in order that they may be more effectively instrumental in undergirding all such efforts.

4. The current situation with regard to the use of irrigation water, particularly in the mountains, is less than satisfactory. The possibility of using sprinkler and drip irrigation systems should be considered. This recommendation should be recognized as very important since almost 75 percent of the Haitian agricultural land area is classified as mountainous.

5. In view of continuing serious losses of harvested crops because of inadequate storage facilities, it is recommended that efforts be made to establish cooperatives for crop storage through the country. On a somewhat limited basis, and in certain geographic areas such as Cayes, cooperatives have been proven successful. It is further recommended that the Cooperative of Agriculture Extension Services give this work high priority among their responsibilities and goals.

6. It is strongly recommended that the Research Divisions of both the Department of Agriculture and the Faculty of Agriculture give priority to those research projects which are directly related to agriculturel practices and produc-

tion in the mountains and to the needs of peasant farmers and their families in the pastoral setting. While the very low income population are found both in the more remote mountains and in the urban ghettos, an increase in agriculture production of nutritious food could be of great benefit, no matter where they are living.

VII. Recommendations for Further Studies

It is recommended that: (1) the recommendations made in this present study be evaluated by Haitian students in agriculture, Haitian Agronomists and other national and international professionals directly or indirectly related to the socioeconomic development of Haiti; (2) a study be implemented to identify social, economic and political factors which are discovered as possibly limiting an organization of Haitian youth seeking to establish and maintain a more cultural and practical relationship between and among urban and rural youth of Haiti.

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APPENDIX

DATA COLLECTION INSTRUMENT

Socioeconomic Survey by Joseph N. Pierre, Agronomist of the Department of Agriculture (Haiti), now studying Agricultural and Extension Education at Oklahoma State University, U.S.A.

Objective

Submission of a thesis ("The Status of Education and Agricultural Practices Among the Rural Population in Seven Selected Areas of Haiti") to the Faculty of Graduate College of the Oklahoma State University in partial fulfillment of the requirements for the Degree of Master of Science.

Dear Compatriot:

Please complete or help complete this questionnaire. This is an opportunity for you to help one of your countrymen agronomists studying abroad in his efforts to accomplish more enlightenment about our critical socioeconomic problems and possible dependable solutions. By giving some information and your judgments and opinions, you are helping our country to secure more qualified personnel for further implementation in our conjugated efforts for our national reconstruction.

1. Date: Commune:

2. Farmer's First Name: Age: Sex: M ( ) F ( )

3. Did you attend formal school? Yes ( ) No ( ) If you are now being attending a formal school, please explain _____
_____.

4. Did you attend urban school? Yes ( ) No ( )

5. Did you attend rural school? Yes ( ) No ( )

6. Did you take (or are you now being taking) private lessons? Yes ( ) No ( )

7. Do you have a Primary Studies Certificate? Yes ( ) No ( )

8. Did you attend high school? Yes ( ) No ( ) If "yes", what class did you achieve? _____

9. Have you a "Rhetoric" or "First Part Secondary Studies Certificate? Yes ( ) No ( )

10. Have you a "Philosophy" or "Second Part Secondary Studies Certificate? Yes ( ) No ( )

11. Did you attend University? Yes ( ) No ( ) If "yes", have you a university diploma? Yes ( ) No ( ); in which field _____
_____.

12. Did you attend vocational school? Yes ( ) No ( ) If you are now being attending a vocational school, please explain _____
_____.

13. Do you have a vocational school diploma or certificate? Yes ( ) No ( )

14. Is there an evening school in your area? Yes ( ) No ( )

15. Did you attend (or are you now being attending) an evening school? Yes ( ) No ( )

16. Did the evening school teacher complete primary school? Yes ( ) No ( )

17. Aside from/or in addition to agriculture, do you practice a craft without having a related diploma or certificate? Yes ( ) No ( )

18. Can you understand French? Very Well ( ) A little ( ) Very little ( ) None ( )

19. How many minutes or hours do you walk to reach the nearest school from your place? _____

20. What kind of transportation you use for your children? Private car( ) Public transportation-bus ( ) Motorcycle ( ) Bicycle ( ) Horse/mule/ass ( ) Boat ( ) None ( )

21. Is agriculture being taught in the formal rural school of your area? Yes ( ) No ( )

22. Is agriculture being taught in the evening school of you area? Yes ( ) No ( )

23. Are you aware of a program of the Department of Agriculture known as "4-C Program" and which is designated to the Haitian Rural Youth? Yes ( ) No ( )

24. Are you a past member of the "4-C Program"? Yes ( ) No ( )

25. Are you acquainted with past or present members of the "4-C Program"? Yes ( ) No ( )

26. Is there in your area a field agronomist of the Agricultural Extension Service of D.A.R.N.D.R.? Yes ( ) No ( )

27. Is there in your area a field vo-ag graduate of the Agricultural Extension Service of D.A.R.N.D.R.? Yes ( ) No ( )

28. Is there in your area any agricultural worker or "Agricultural Agent" (not having an agronomist or vo-ag diploma or certificate) appointed by the Agricultural Extension Service or other service of D.A.R.N.D.R.? Yes ( ) No ( )

29. Is there in your area any field agricultural worker (agronomist, vo-ag graduate or else) appointed by any developmental (national, international, religious) institution other than the Agricultural Extension Service of D.A.R.N.D.R.? Yes ( ) No ( )

30. If "yes", please name the Institution _____.

31. In what category would you classify the frequency of meetings held in your area by the professional agricultural worker with community members in order to increase and improve agricultural production outputs? Often ( ) Rarely ( ) Never ( )

32. How would you evaluate the amount of practical and useful advice provided by the professional agricultural worker of your area to the community members? Very much ( ) A little ( ) Nothing ( )

33. How frequent you listen to broadcast agricultural programs through radio stations? Often ( ) Sometimes ( ) Never ( )

34. How would you evaluate the usefulness of broadcast agricultural programs through radio stations? Very much ( ) A little ( ) No useful ( ) Undecided ( )

35. Is there an organized community group in your area? Yes ( ) No ( )

36. Are you a community group member? Yes ( ) No ( )

37. How would you evaluate the usefulness of a community group in your area? Very much ( ) A little ( ) No useful ( ) Undecided ( )

38. What kinds of tools you usually use for tillage? _____

39. Do you use tractor for traction of plows and other accessories? Yes ( ) No ( )

40. Do you use animals for traction of plows? Yes ( ) No ( )

41. What kinds of tools you use in other farm activities such as cultivation, harvesting? _____

42. Do you use electricity powered tools? Yes ( ) No ( )

43. What is the total size of the lands you are farming? 1-3 Acres ( ) 4-6 Acres ( ) 7-10 Acres ( ) 11-15 Acres ( ) larger than 15 Acres ( )

44. Are you the owner of all of the lands you are farming? Yes ( ) No ( )

45. Do you use improved seeds by buying them either from an agricultural developmental institution (Agricultural district, K.D.A.K., O.D.V.A., E.D.A.P.S., etc.) or a qualified store such as DARBUCO? Yes ( ) No ( )

46. What species of improved seeds you use? _____
_____

47. What species of crops you generally grow? _____
_____

48. Do you use fertilizers? Yes ( ) No ( )

49. Do you use pesticides? Yes ( ) No ( )

50. Are your lands irrigated? Totally ( ) Partially ( )

51. Check the most important of Agricultural pests you usually have to face in agriculture production: Rodents ( ) Insects and diseases ( ) Birds ( ) Storage pests ( )

52. Name the labor animals you are being using _____

_____

53. Name other agricultural animals you are being raising _____

_____

54. Do you have a veterinarian in your area? Yes ( ) No ( )

55. Do you enjoy farming? Very much ( ) A little ( ) You do not enjoy farming ( ) Undecided ( )

56. Would you like to have more practical knowledge about modern agriculture? Very much ( ) A little ( ) No ( ) Undecided ( )

57. Interviewer's observations.

58. Interviewer's name.

VITA

Joseph N. Pierre

Candidate for the Degree of

Master of Science

Thesis: THE STATUS OF EDUCATION AND AGRICULTURAL PRACTICES AMONG THE RURAL POPULATION IN SEVEN SELECTED AREAS OF HAITI

Major Field: Agricultural Education

Biographical:

Personal Data: Born in Cornillon, a village of the commune of Grands-Bois, Republic of Haiti, March 1, 1948, son of Nestor and Mrs. Pierre, nee Jeanne-Marguerite Bosquet.

Education: Primary Studies Certificate from the Annexe Lycee Alexandre Petion, Port-au-Prince, Haiti, in June, 1960; first part of the Secondary Studies Certificate (Rheto-C) from the Lycee Alexandre Petion in July, 1966; second part of the Secondary Studies Certificate (Philo-C in Lycee Alexandre Petion) in July, 1967; received the Diplome D'Agronome (B.S. in Agronomy) from the Faculte d'Agronomie et de Medecine Veterinaire, Universite d'Etat d'Haiti in October, 1971; completed requirements for the Master of Science degree in December, 1978, at Oklahoma State University.

Professional Experience: Student-trainee at the Horticulture Service of the Department of Agriculture of Haiti in the summer of 1968; Student-trainee at the Institut de Developpement Agricole et Industriel (IDAI) in Gonaives, Haiti, in the summer of 1969; Student-trainee at IDAI in Mirebalais and Hinche, Haiti, in the summer of 1970; Teacher in Natural Sciences and Chemistry at the Institut Jn. Jacques Dessalines (High School), Port-au-Prince in 1970-71; Agronomist-trainee in an Agricultural Project, Haiti-United Nations in Port-de-Paix, Haiti in the summer of 1971; Agronomist of the Agricultural Department of Haiti-FAO in Cahes, in Haiti, 1971-72; January, 1973, through August, 1976, Agronomist working with the Methodist Church of Haiti in promoting leadership among the Haitian peasants in Petit-Goave, Bainet and the Island of La Gonave,

implementing reforestration and agricultural production programs; August, 1976, through May, 1977, Agronomist of the Department of Agriculture of Haiti working in DRIPP, international developmental project Haiti-Canada in Petit Goave. The researcher's task was then to implement leadership and agricultural production programs among the agricultural producers of Haiti.

Organizations: Scout boy (Troupe Boukman) and Haitian Red Cross member in 1954-56; JEC (Jeunesse Etudiante Catholique) member in 1966-67; Member of the Olivier 79 de l'Orient de Petion-Ville since 1975.

Leadership Activity: Created on August 21, 1976, in the island of La Gonave the 4CSLG (Comite de Coordination des Conseils Communautaires du Sud de la Gonave). The 4CSLG included 12 community groups with a total of 500 Haitian farmers of the Island of La Gonave.