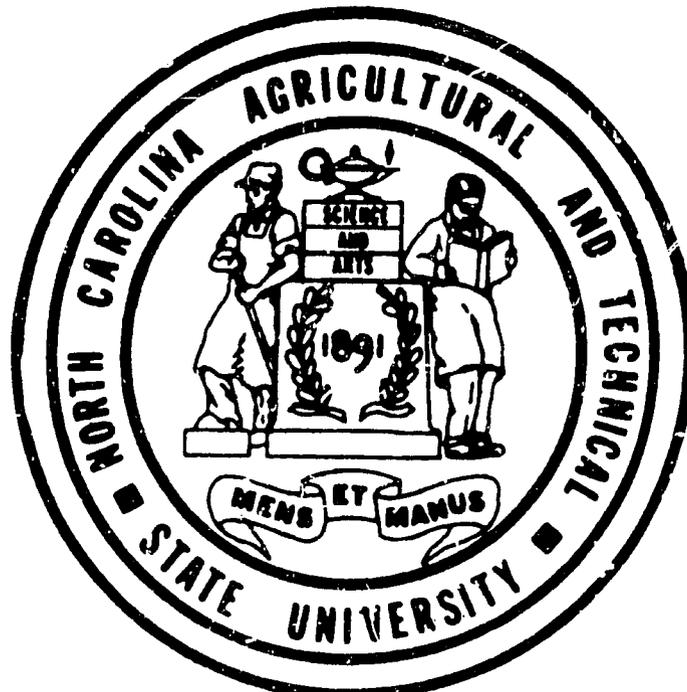


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AGRICULTURAL MARKETING SYSTEM IN ST. LUCIA

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CHAPTER I

1. Introduction

This study of agricultural marketing system of St. Lucia was undertaken by North Carolina Agricultural and Technical State University, under the 211(d) Grant from the Agency for International Development, Washington, D.C. The primary objective was to assist the St. Lucian Government in identifying the agricultural marketing system, its problems and to assist the Caribbean Development Bank (CDB) with its marketing study.

The Caribbean Development Bank has undertaken a long term marketing study of St. Lucia and is currently collecting the basic data. This study supplements that one, and will provide the bank with additional farm-to-market data and the marketing processes involved.

2. Objectives

Historically, the marketing of food crops has presented a problem to St. Lucia. About ten years ago, the Government established the St. Lucia Marketing Board (SLMB) to solve this food marketing problem. Many people felt that the SLMB would play a predominate role in marketing, and within a few years, most produce would move through the board. However, this is not the case. The SLMB handles only a small amount of total production and sales, and 2 percent annually.

The failure of the SLMB to become a major institution in food crop marketing has been due to the lack of farmer acceptance, misunderstanding of the function of SLMB, low producer prices, and a host of other marketing problems facing the St. Lucian farmer.

In an attempt to answer some of the questions raised about the marketing problem in St. Lucia, the Caribbean Development Bank (CDB) was

asked to assist in a study of food marketing. The scope of their study was at the wholesale-retail level, emphasis being placed on the Marketing Board, and the marketplace in Castries.

The purpose of this present study is to assist the government of St. Lucia through CDB to conduct a food marketing study in St. Lucia directed towards the identification of projects that will help improve the performance of the food marketing system; and also, to delineate constraints in the marketing system. Specific objectives of this study are as follows:

1. To identify the harvesting and marketing decision of St. Lucia farmers from the time of harvest to first exchange of ownership;
2. To identify the existing marketing functions and determine their effectiveness;
3. To determine marketing problems;
4. To determine the market information system used by farmers; and,
5. To outline the policy alternatives for the solution of the problem.

3. Procedures

A random sample of farmers was selected from four agricultural districts. Each of the districts were chosen based upon the crops grown and harvested during the month from June to August. These crops were representative of those being harvested throughout St. Lucia. A total of 150 farmers were selected from each district using the Agricultural Census of 1973 (Table 1-1). A systematic sample was selected for each area. The names and addresses of each farmer was recorded. Then, attempts were made to survey each of them using a questionnaire developed for use in interviewing.

The survey was conducted during a three week period during the month of July. The extension officers in each of the survey areas accompanied the interviewers. They helped to locate the farmers on each of the four samples lists. Because of their help, we were able to get more reliable

Table 1-1. Population and Sample Size by Region, St. Lucia

Area	Population	Number in Sample	Number Surveyed
Dennerly	1612	45	26
Choiseul	889	35	20
Babonneau	408	35	20
Vieux-Fort	977	35	20
Total	3886	150	86

data in a shorter time. Originally, two to three visits to each farm were suggested to gain the confidence of the farmer and to obtain better results. But, only one visit was needed, as we were able to confirm some of the data through the extension officers' personal knowledge. Thus, the researchers felt that three visits to each farm were unnecessary.

We did experience some difficulty in locating the farmers. Many of those on our list were retired, had moved away, had quit farming, or could not be located. Thus, it became necessary to replace some of the farmers in the survey to obtain the required number from each district. Replacement of farmers was time consuming, a second factor in eliminating multiple visits.

Farmers surveyed were usually very cooperative. Most of them readily answered the questions after the purpose and the objectives were explained. In some areas, the extension officers had to assist

with translating the questions. Many of the farmers felt more secure in speaking their native Patois and were reluctant to answer in English. Therefore, the extension officers assisted not only in locating the farmer, but also in translating the questions and their replies.

CHAPTER II

ST. LUCIA AND ITS ECONOMY

1. General Background

St. Lucia, the second largest Windward Island, is situated between Martinique and St. Vincent in the Eastern Caribbean Sea. The country is a part of the East Caribbean group including Grenada, the Grenadines, and St. Vincent (See Figure 2-1). It is a small island with 238 square miles of land are endowed with towering mountains, beautiful valleys, scenic areas and picturesque beaches.

The exact date of the island's discovery is still unknown but legend has it that ship-wrecked sailors landed on the island on December 13, 1502 and named it St. Lucia in honor of St. Lucy, the Virgin Martyr of Syracuse.

St. Lucia is a former colony of both Great Britain and France. Since its discovery, the island has changed hands fourteen times between English and French rulers and as a result both cultures have left their imprints. Both English and Patios, a variation of French, are spoken.

St. Lucia is a self-governing state in association with Great Britain, which has retained responsibility for external affairs, defense and monetary management.¹ The government of St. Lucia has jurisdiction over internal affairs. However, St. Lucia is currently negotiating with Great Britain for complete independence.

2. Population

St. Lucia had a total population of about 100,000 in 1970. Its people called St. Lucians, are predominantly Africans with some Europeans

¹St. Lucia received her independence from Britain in 1979.

and Indians. The population in 1974 was about 110,000² and is estimated to have increased to 114,600 in 1977, an annual rate of 1.8 percent.

More than 60 percent of the population in 1974 was living in urban areas and this has resulted in unemployment problems. Castries, the capital, and the largest urban area has 39 percent of the total population, equal to that of rural population of the island (See Table 2-1).

The density of population in 1977 for the entire island was 482 people per square mile while that of Castries was 2,900.

Reduced mortality rate due to better health programs, the declining outmigration coupled with the annual population growth rate of 1.8 percent means that the country faces a serious population problem.

3. Economic Activities and Industrial Development

The St. Lucian economy is characterized by colonial plantation economy where agriculture is the major activity and producing food crops for export predominates. The principal export crop is bananas.

The gross domestic product, commonly known as gross national product, of St. Lucia during 1971 to 1973 as estimated by the British Development Division in the Caribbean was about EC\$66.5 million, EC\$6.7 million, and EC\$66.5 million for 1971 to 1973 respectively.

St. Lucia depends largely on export crops and tourism because it does not have many of the basic natural resources for industry. Only a small proportion of people are employed either in the manufacturing or service sector.

²1970 Population from University of West Indies, 1970 Population Census of the Commonwealth Caribbean, Vol. II and V, Census Research Programme, Kingston, Jamaica, 1973. The population for 1974 from Annual Statistical Digest, St. Lucia, 1974, Table 5.

Table 2-1. Total Population and its Distribution, St. Lucia, 1974

Urban Center	Population	Percentage of Urban	Percentage of total Population
Castries	43,000	64.2	39.1
Vieux-Fort	5,600	8.4	5.1
Soufriere	3,300	4.9	3.0
Dennery	3,000	4.5	2.7
Micoud	2,800	4.2	2.5
Anse La Raye	2,100	3.1	1.9
Laborie	2,000	3.0	1.8
Choiseul	1,700	2.5	1.5
Canaries	1,300	1.9	1.2
Other	2,200	3.3	2.0
Total Urban	<u>67,000</u>	<u>100.0</u>	<u>60.8</u>
Rural Population:	<u>43,000</u>		
Total Population	110,000		
Urban	67,000	61%	
Rural	43,000	39%	

Source: The Government of St. Lucia, St. Lucia National Plan, Castries, St. Lucia, The Vice Press, 1977.

4. The St. Lucian Agricultural Sector

St. Lucia has an agricultural based economy with about 40 percent of the work force engaged in agriculture.³ However, the percentage employed in agriculture is declining; it stood at 53 percent in 1960. The vast majority of the farm operators have small holding; of St. Lucia's 10,706 farmers, almost 8,500 or 80 percent have less than five

³The Census Data of St. Lucia, "Agricultural Statistics". Castries, St. Lucia, Ministry of Agriculture and Land, 1973/74 and Annual Statistical Digest, 1975, Table 9, Castries, St. Lucia.

acres, and 4,691 farmers (44 percent) have less than one acre. Most of the farmers utilized hand labor for nearly all crop producing activities. In 1973, there were only 25 wheel and single axle tractors in the country; and a total of 367 farm vehicles including pickups, vans, jeeps, and land rovers, etc.⁴

The main fruits of St. Lucia are bananas, limes, plantains, coconuts, bread fruit, and mangoes. Root crops are an important part of the agricultural sector. Sweet potatoes, tannias, dasheen and yams make up important enterprises to the St. Lucian farmer. Recently, attempts have been made to expand vegetable production and make tomatoes, cabbage, carrots, and lettuce important cash crops. The chief livestock enterprises are cattle, sheep, goats, and pigs. A limited number of chickens is also raised.

The agricultural sector has undergone many changes during the recent past. Sugar cane and coffee, once important export crops, are now rarely grown. Bananas and coconuts have become the principal export crops, and are the major source of foreign exchange for St. Lucia. Other changes include a decline in the farm population and acreage farmed. In 1973, only 72,001 acres were under farming, a decline of 15,374 acres from 1961. The effect of these changes, especially the reduction in acres farmed, is likely to result in increased imports of food products. While estimates of productivity are not presently available, it is unlikely that large gains have been made. Less than 40 percent of the farmers apply fertilizer, and only 6 percent use irrigation. Combine these with the lack of mechanical power, gains in farm productivity are likely to be limited.

⁴Ibid.

Statistics in St. Lucia's foreign trade support the hypothesis of growing imports. In 1976, St. Lucia exported EC\$45 million and imported EC\$126 million worth of commodities. A large part of these imports were food products. The main export crops, bananas and coconuts, do not earn foreign exchange to offset the cost of imported foods. Thus, food production and marketing are serious problems faced by St. Lucia.

5. The Characteristics of Sample Farmers

The farmers in the survey were representative of all farmers in their region as well as the country as a whole. Tables 2-2 and 2-3 summarize some of the selected socio-economic characteristics of the farmers for the four regions of the country. The mean age for farmers varied little between region; most of the farmers were in the upper middle age, between 45-50. Their number of dependents varied somewhat more, ranging from 4 dependents for farmers in Babonneau to 7 in Choiseul. The years spent in farming were nearly the same; between 25 and 29. One of the more surprising items was that of sex distribution of farmers. 90 percent or more of the farmers in Choiseul and Vieux-Fort were male. In Babonneau, three-fourths were male, but in Dennery, only 58 percent were

Table 2-2. Selected Characteristics of Farmers by Region, St. Lucia
(Means)

Item	Choiseul	Vieux-Fort	Babonneau	Dennery
Age	46	50	50	46
Number of Dependents	7	5	4	6
Years Farming	26	25	29	28
Percent Male	95%	90%	75%	58%

Table 2-3. Education by Region, St. Lucia

Level	Choiseul	Vieux-Fort (No. of Farmers)	Babonneau	Dennery	All Districts
None	0	10	3	4	17
Primary	19	10	16	22	67
Secondary	1	-	1	-	2
All Farmers	20	20	20	26	86

male; which could mean that the Babonneau and Dennery districts have a relatively large number of female farmers. According to St. Lucia Government statistics for the entire country, 56 percent of farm operators are male. The survey figure for Dennery approximates the country average, but survey data for the other districts indicate percentages of male operators higher than indicated by government statistics. Since the official country data do not show regional breakdown by sex, it is impossible to tell if the survey sample was heavily weighted with males, or if this phenomena was normal for these districts.

The educational level of the farmers is low in all regions. Only 2.3 percent of the 86 farmers in our survey completed secondary school, although 80 percent of the farmers completed primary school. All the farmers in Choiseul attended school. 15 percent of the farmers in Babonneau and Dennery had not attended school. However, the Vieux-Fort area, only half of the farmers attended school (Table 2-3).

Although there appears to be little difference in age of farmers or years in farming in the different regions of St. Lucia, there appear

to be significant differences between regions for other characteristics (Tables 2-2 and 2-3).

The percentage of male operators varies from 58 to 95 across the regions: the number of dependents ranges from 4 to 7; and the number of farmers with no education ranged from none to 50 percent.

Chi square analysis was used to determine if selected characteristics and behavior of farmers varies by region: for percentage of male operators, number of dependents and education, the Chi-square was significant at the one percent level which indicates that there is a difference of farmers between regions for these characteristics.⁵

The types of crops grown in each region varied. While most of the major crops were grown in all areas, there were no peanuts or sweet potatoes grown in Babonneau and Dennery while none of the farmers in Choiseul grew tannia (Table 2-4). The most popular crops grown in all four regions were dasheen, yams and tomatoes. Dasheen and yams are major parts of the diet of most of the people so one might expect them to be principal crops. Tomatoes are very popular as a marketable crop. Of other crops, cabbage, carrots, sweet peppers and peanuts were the major vegetables grown in Choiseul; cabbage, sweet potatoes and lettuce in Vieux-Fort; cucumbers, plantains, bananas, and tannias were important crops in Dennery. The farmers in Banonneau seemed more diversified in their crops: except for dasheens, yams, bananas and coconuts, no other crops were grown by more than 25 of the farmers surveyed.

⁵ Chi square is 18.54 with 6 d.f.

Table 2-4. Crops Grown by Regions^a

Crop	Total	Choiseul	Vieux-Fort	Banonneau	Dennery
Dasheens	56	16	8	12	20
Yams	46	7	8	11	20
Tomatoes	43	14	13	8	8
Bananas	35	4	1	13	17
Cabbage	32	16	9	4	3
Cucumbers	24	2	6	3	13
Plantain	28	3	7	1	17
Carrots	22	15	5	2	0
Lettuce	21	4	8	5	4
Sweet Pepper	19	8	7	3	1
Sweet Potatoes	18	7	11	0	0
Pumpkins	15	6	5	0	4
Coconuts	11	1	1	7	2
Peanuts	11	8	3	0	0
Peas	9	4	3	1	1
Cassava	6	2	1	0	3
Tannias	31	0	6	5	20
Oranges	5	1	0	4	0
Breadfruit	4	0	0	3	1
Grapefruit	3	0	0	3	0
Other	45	9	10	15	11
Number Farms	86	20	20	20	26

^aThe numbers do not add to the number of farmers surveyed because of multiple crops grown by all farmers.

6. Harvest and Sales Decisions

Harvest decisions as well as decisions on sales of the food crops are two of the most important decisions farmers have to make. The St. Lucian farmer must decide when and how often to harvest, estimate labor needs, and determine where to sell his produce. A brief survey was made relative to some of these decisions.

The St. Lucian farmers list two major factors in determining harvest

decisions - (a) market demand, and (b) ripeness of the product. Most of the farmers surveyed felt that ripeness was the most important factor in deciding when to harvest. All 20 farmers in Babonneau and in Choiseul said ripeness was the only factor. In Vieux-Fort and Demnery, the farmers considered ripeness and market need of the product as the important factors. One might expect that an important relationship exists between market demand and harvest because of the cost of harvesting. If the farmer expects price to be low and will not cover the harvest costs, or expects the price to change either favorably or unfavorably, the amount harvested may be affected. The harvest may be moved up or deferred for a few days. Ripeness is important because the buyer will not pay premium prices if the product is not fully mature.

The harvesting of foot crops can be deferred more easily. Yams, sweet potatoes and potatoes grow underground, and many farmers can defer harvest for several weeks using the ground as a storage facility. They harvest only what they feel is marketable at a reasonable price. Nevertheless, they cannot store these crops indefinitely. During certain seasons, the tubers will begin sprouting, rendering the potato or yams undesirable for the consumer market. Furthermore, pests, bugs, and underground rodents may attack the crop. However, some short time deferrals in harvest are made when market demand is weak, in hope of improvement later.

The vast majority of the farmers tend to harvest their crops weekly. A few harvest more than twice weekly and a few harvest bi-weekly. Most farmers who harvest weekly, do it on Thursday, because they wish to retail their produce in the market at Castries (or Vieux-Fort) on Friday and Saturday mornings (Table 2-5). The farmers who sell to wholesalers or

hotels have a slightly different pattern--harvesting when their buyers want the produce.

Table 2-5. Date of Sales of Produce

When Sold	Choiseul	Vieux-Fort	Babonneau	Dennery
Weekly	3	2	7	6
Day of Harvest	1	1	1	0
Next Day After Harvest	16	8	7	15

Most of the farmers utilized hired labor to assist in harvesting of the food crops. Since most of the work on the farm is done without machinery, hired labor is needed. However because most are small farmers, their needs are limited. The number of workers used in harvesting food crops is summarized in Table 2-6. Of the 86 surveyed, only 22 did not use hired labor. Most hired less than five workers. The mean number of workers used varied somewhat, from just under 4 in Choiseul to about 2 in Vieux-Fort and Babonneau, but the difference in the number of workers

Table 2-6. Workers Used in Harvesting Food Crops by Region

Number	Choiseul	Vieux-Fort	Babonneau	Dennery	Total 4 Districts
Less than 5	13	12	12	15	52
5 - 10	2	1	1	0	7
10 or more	1	0	0	2	3
None	4	7	2	9	22
Mean	3.6	1.87	1.87	3.36	

used in harvesting food crops was not statistically significant among the

four regions, even at the 10 percent level. Similarly, there was no significant difference among the four districts in the date of sale of the produce after harvest. These results might have been expected since agriculture in all four districts does not differ much from the country averages; 80 percent of the farmers have less than 5 acres, and 44 percent hold less than one acre. The agricultural sector appears to be primarily for subsistence in all districts with the majority of the labor from that provided by the family.

7. Loss and Home Consumption

Other factors were also examined to see if there were differences by region. Table 2-7 presents the loss incurred during marketing. The losses appear to be substantial. Most farmers (68 percent) report losses exceeding 20 percent. Of that number 16 percent reported that losses exceeded 40 percent. This pattern was the same in all regions except Choiseul. In Choiseul, 50 percent reported losses in the 0-20 percent range, whereas in the other regions only 25 reported losses in the 0-20 percent range. Chi square tests indicated the differences were significant at the one percent level.⁶

Substantial losses such as those reported above mean a much lower income to the farmers. With an average loss exceeding 25 percent, farm income may be reduced by 25 percent.⁷ Such losses come from several

⁶ Chi square for date of sale of produce = 8.48, with 6 d.f.
Chi square for number of workers used in harvest = 8.15 with 6 d.f.

⁷ It is unlikely that price would decline because of the increase in amount of food crops sold since St. Lucia imports a large amount of food. In fact, society may gain if losses are reduced because less food would need to be imported which would help with balance of payments and/or free up foreign exchange for other urgent needs of the country.

sources: (1) harvesting after maturity which results in produce much more susceptible to bruising and spoilage, (2) poor handling during harvest which leads to bruises, cuts, etc., (3) improper packaging and transporting, (4) failure to properly sort and grade. It appears that a strong program to reduce post harvest losses would be very beneficial to the St. Lucian farmers as well as the consumer in all districts, although Dennery and Babonneau have greater potential for gain.

Table 2-7. Loss of Product During Marketing by Percent and Region

Percent Loss	Districts									
	Dennery		Babonneau		Vieux-Fort		Choiseul		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-20	4	17	2	17	8	42	10	50	24	32
20-40	16	67	5	42	10	53	8	40	39	52
40-60	4	17	2	17	1	5	2	10	9	12
over 60	0	0	3	25	0	0	0	0	3	4
Total	24	100	12	100	19	100	20	100	75	100

Home consumption was also analyzed by region (Table 2-8). Again, there appears to be differences among the regions. Farmers in Dennery and Babonneau reported consuming a significantly higher proportion of their products (56 percent in Dennery consumed 20-40 percent, none of the farmers in Babonneau who reported, consumed less than 20 percent). This contrasts with Vieux-Fort and Choiseul where 70 percent of the farmers consumed less than 20 percent of their products. Chi square test for the differences was significant at the one percent level.⁸

⁸ $\chi^2 = 21.84$ with 9 d.f.

Table 2-8. Home Consumption of Products by Region
(Number of Farmers - Percent Distribution)

Percent Consumed	Districts									
	Dennery		Babonneau		Vieux-Fort		Choiseul		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-20	5	28	0	0	12	70	11	69	28	48
20-40	10	55	7	88	4	24	4	25	25	42
40-60	2	11	0	0	0	0	1	6	3	5
over 60	1	6	1	12	1	6	0	0	3	5
Total	18	100	8	100	17	100	16	100	59	100

These results were surprising, especially since Castries, the largest urban center, was nearer to the Dennery and Babonneau regions. Perhaps many of the farmers have sought off-farm employment in Castries, and farm only part time for subsistence and/or supplemental income.

CHAPTER III

AGRICULTURAL MARKETING SYSTEM

1. Overview of the System

The St. Lucian economy is basically dependent on agriculture, hence, the improvement of agriculture and the efficiency of the agricultural marketing system will improve the economic well being of a large majority of people. An efficient marketing system results in a waste of valuable national resources, inequities in income distribution, and deceleration of the nation's badly needed economic growth.

The analysis of the marketing problems can best be done by visualizing marketing activities as constituting a functioning system.⁹ As a complete system, all marketing activities interact and are linked together and the end result largely depends on the efficiency of these inputs. Together with the internal factors, the functioning of marketing system is affected by external forces such as political, social, cultural and economic factors (See Figure 3-1).

The agricultural marketing system begins at the farm gate and ends when goods are delivered to the final users. The character of the agricultural marketing system depends on the volume of flow of goods coming from the agricultural sector, product characteristics, physical facilities, marketing practices, structure and other exogenous factors.

Being a developing country, St. Lucia is still characterized by a traditional agricultural system. It has the basic problem of a large

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For a very good discussion of this concept, see Kriesberg, Martin, and Howard L. Steele, "Identifying Problems of Food Marketing in Developing Countries," unpublished report prepared under an agreement between AID/TA and USDA/REDS.

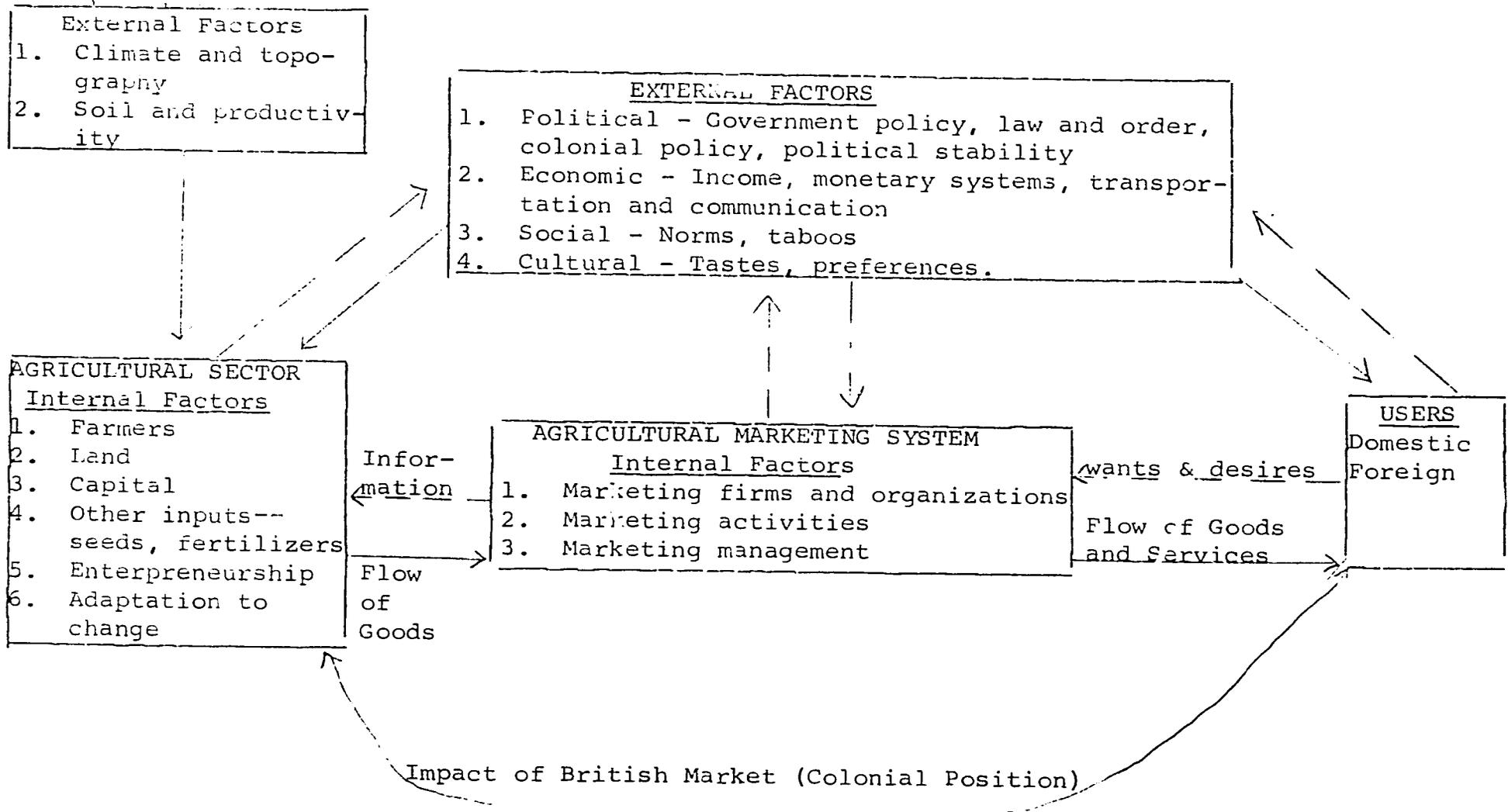


Figure 3-1. Agricultural Marketing System in St. Lucian Economy

number of subsistence farmers with small parcels of land using traditional, outdated farming practices. Further, as a former colony, the major portion of resources are devoted to producing crops for a parent country at the cost of basic crops.

Only about 39 percent live in the rural areas, but many people living and working in urban areas still farm to fully support themselves. Many of the farmers have limited education (3 years or less) and lag in adopting new technology. Use of improved seeds is very limited and fertilizer is rarely used for any crops except bananas. The lack of mechanical power in farming, the domination of agricultural sector by the British market, the open import policy, and traditional prices in the domestic market, all have contributed to an unfavorable climate for additional investment in agriculture.

St. Lucia lacks the basic infrastructure needed for an efficient and smooth operation of the marketing system. Except for the recently built East Coast highway, financed by a World Bank loan, the transportation system is inadequate. Furthermore, there is no satisfactory communication system. The agricultural marketing system for the domestic market is still primitive, poorly organized and suffers tremendously from the lack of uniformity in exchange units.

Agricultural products coming into the marketing system have basically two flows due to the influence of the British market together with all the characteristics of traditional agricultural systems. One flow is basically for export to the British market and is reasonably well organized. For example, marketing of bananas, mangoes and eggplant is well organized due largely to the effort of the Bananas Growers Association (BGA), Geest Company and few other exporters.

The Association has actively engaged in improving marketing of bananas and had done a valuable service for banana growers, by providing inputs on credit, establishing the boxing plant where farmers deliver the bananas crating, and transporting from the boxing plant to the shipping point. However, BGA has not been able to reduce the tremendous loss the members incur due to its rejection policy for poor quality produce.

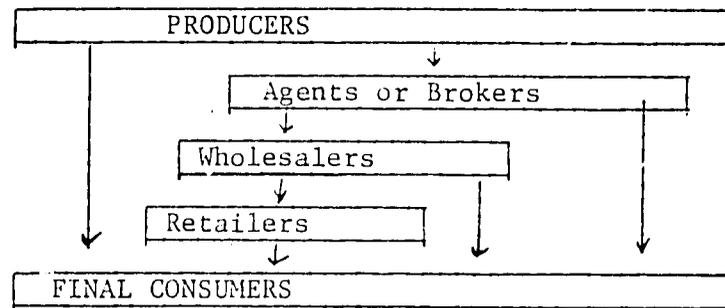
The other flow is the goods for the domestic market. Marketing of food crops in this flow is very disorganized. The system still operates on a small scale, without well defined standards, marketing practices, or facilities, e.g. no grading, sorting or weighing with scales. The marketing system is primitive and inefficient in moving goods from the production points to consumption points. Farmers and their wives still perform a significant portion of marketing functions themselves, e.g., transporting, selling, and financing, in addition to farming. Also, they take a substantial portion of risk involved in production and marketing.

2. Marketing Channel

The producer has several alternatives to reach the final consumer (See Figure 3-2). The use of a particular channel depends upon the attitude of the farmers, the development of the market organizations, the scale of productive activities, and the distance and development of the urban areas. The shortest and simplest channel of distribution is the direct scale from the producer to the final consumer. Then, "the decision to market directly to ultimate buyers involves the absorption (by producer) of all marketing related functions (contacting buyers,

storage, delivery and credit) typically performed by intermediaries."¹⁰
 On the other hand, the marketing method may involve agents wholesaler-retailers in moving produce to the final consumer. Here the producer specializes in production and intermediaries specializing in specific marketing functions can perform them more effectively and efficiently.

Figure 3-2. Marketing Channel Alternatives



Regardless of whether the route selected is short or long, "ultimately the channel system must deliver the goods and services desired by target costumers."¹¹

Given a set of traditional value systems and underdeveloped social capital, a society can expect very little participation from the business firms in the marketing system and farmers will be forced to use the direct channel by shouldering a large proportion of marketing activities.

"Marketing functions are performed through a fantastically complex network of individuals and organizations."¹² Figure 3-3 illustrates

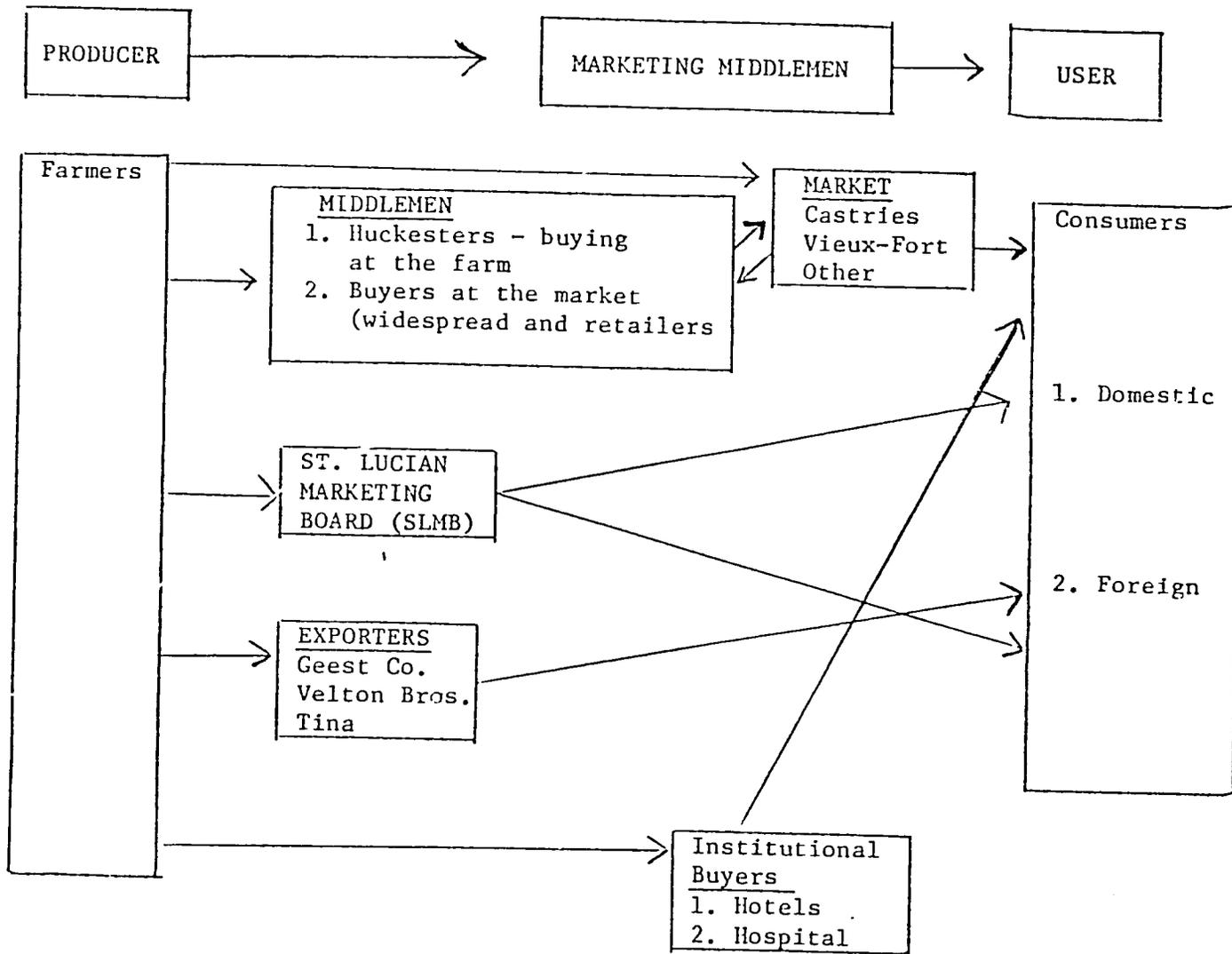
¹⁰

Kerin, Roger A. and Robert A. Peterson. Strategic Marketing Problems, Boston, MS: Allyn Bacon, Inc., 1978, p. 290. See also Stanton, William J. Fundamentals of Marketing, 5th ed., NY: McGraw-Hill Book Co., 1978, pp. 355-375.

¹¹ McCarthy, E. Jerome. Basic Marketing, 5th ed., Homewood: Ill: Richard D. Irwin, Inc, 1975, p. 306.

¹² Otherson, Schuyler F., William C. Pandher and James M. Patterson. Marketing and the Firm's Viewpoint, NY: The McMillan Co., 1964, p. 309.

Figure 3-3. The Flow of Agricultural Products, St. Lucia



agricultural marketing channel in St. Lucia. The marketing process involves the movement of goods from the farmer to the consumer directly or through the marketing middlemen. A substantial proportion of the middlemen's activities are actually performed by the farmers. Farmers deliver the goods from the farm to the main market and directly sell to the consumers or carry to the hotels and hospitals. Only a small fraction of the total supply for domestic market is handled either by the middlemen and exporters or by the St. Lucia Marketing Board.

There are basically five channels of distribution utilized by the agricultural sector.

a. Direct Sale by Farmers to the Consumers in the Market. Farmers in this instance produce goods and also participate in the marketing activities. Theoretically, this eliminates the use of marketing middlemen and reduces the cost to the final consumers. But in practice, there is little evidence of consumer savings because of very poor retail sales data. The majority of the farmers sell their produce directly to consumers in the market place (Table 3-1). Two major markets where farmers sell directly to consumers are Castries and Vieux-Fort. The bazaar style selling is done on Friday and Saturday in the Castries market and on Fridays in the Vieux-Fort market. Other smaller markets are in Soufriere, Choiseul, Dennery and Laborie. The seller purchases a "ticket" which gives him the right to sell in the market.

The use of this channel precludes farmers from specializing and thus production and marketing activities may be competing against their limited time and money. However, specialization on a limited scale is still possible because the selling of produce is done primarily by farmers' wives. Usually produce not sold to consumers will either be

disposed of to the "hawkers" and "hucksters" in the market place at a discount or be taken home and used for home consumption or feed for the livestock.

Table 3-1. Selected Buyers of Produce Grown by St. Lucian Farmers

Item	Total		Choiseul		Vieux-Fort		Babonneau		Dennery	
	No.	%	No.	%	No.	%	No.	%	No.	%
Hotel	12	13.1	2	10	7	28	2	10	1	38.5
Hospital	5	5.5	4	20	1	4	-	-	-	-
Castries Market	53	58.2	13	65	8	32	14	70	18	69.2
Supermarket	7	7.7	-	-	7	28	-	-	-	-
SL Banana GA	3	3.3	-	-	-	-	3	15	-	-
Mixed	2	2.2	-	-	-	-	1	5	1	3.8
Wholesale	8	8.8	1	5	2	8	-	-	5	19.2
Neighbor	1	1.1							1	3.8
Total	91	100.0	20	100	25	100	20	100	26	100.0

The allocation of products to the different markets varies by region. In all regions the retail market is the largest market (See Table 3-2). There was variation in the market for wholesalers and brokers. In Dennery, 23 percent of the products went to brokers while no other regions had more than 12.5 percent in this market. In Vieux-Fort and Choiseul, a much larger portion went to wholesalers. This phenomenon may be explained by the distance to the market since Castries is the major population center, with 39 percent of the total and 54 percent of urban population. Rather

Table 3-2. Allocation of Products by Marketing Agency*

Marketing Agency	Districts									
	Dennery		Babonneau		Vieux-Fort		Choiseul		4 Districts	
	No.	%	No.	%	No.	%	No.	%	No.	%
Wholesaler	2	6.7	2	12.5	6	31.6	6	26.1	16	18.2
Retailers	20	66.7	12	75.0	9	47.4	16	69.6	57	64.8
Speculators	1	3.3	-	-	2	10.5	1	4.3	4	4.5
Brokers	7	23.3	2	12.5	2	10.5	-	-	11	12.5
Total	30	100.0	16	100.0	19	100.0	23	100.0	88	100.0

*Multiple answers were permitted.

$$x^2 = 14.78 \quad x^2 = 16.919$$

$$x^2 = 14.68 \quad .05$$

$$10$$

Table 3-3. Allocation of Products to Market Areas by Region*

Market	Districts									
	Dennery		Babonneau		Vieux-Fort		Choiseul		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
SLMB	14	29.8	6	20.7	13	27.7	9	19.1	42	24.7
Neighbors	11	23.4	4	13.8	10	21.3	14	29.8	39	22.9
Castries	20	42.6	16	55.2	1	2.1	12	25.5	49	28.8
Dennery	1	2.1	-	-	-	-	-	-	1	0.6
Choiseul	-	-	-	-	-	-	1	2.1	1	0.6
Vieux-Fort	-	-	-	-	14	29.8	4	8.5	18	10.6
Saboui	-	-	-	-	1	2.1	-	-	1	0.6
Souffri	-	-	-	-	-	-	2	4.3	2	1.2
Hotels	1	2.1	3	10.3	7	14.9	3	6.4	14	8.2
St. Judiath	-	-	-	-	1	2.1	2	4.3	3	1.8
Total	47	100.0	29	100.0	47	100.0	47	100.0	170	100.0

*Multiple responses were permitted

than transport small bags of produce over a long distance (in time and/or miles) they may choose to sell directly to wholesalers. Transportation cost may be great enough to offset higher prices they could receive in the retail market. The chi square analysis was not conclusive, however; the differences were not significant at the 5 percent level, although they were significant at the 10 percent level. Thus, the probability of obtaining these results is about one in ten. There is evidence of substantial difference, even though the data obtained provided averages which were statistically significant only at higher levels of probability.

Allocation of products to market areas by region is presented in Table 3-3. Castries appears to be the favorite market area - perhaps because of the size of the city. Nearly 30 percent of the farmers in all regions market their produce in Castries. The second most popular outlet was SLMB, followed closely by sales to neighbors. In Vieux-Fort, hotel sales are fairly large (15 percent). Of course, these data reflect the number of farmers selling in each of the different markets - not the amounts sold. While neighbors may purchase from a large number of farmers, no indication was given as to what proportion of the total products were sold to neighbors.

A Chi square test of these results indicates that these differences between regions was significant at the one percent level. These results were expected, since one would assume that most farmers would sell to markets in their region. Thus, it was surprising to find that only one farmer in Dennery reported sales to the Dennery market, and only two farmers in Choiseul reported in sales in Soufriere and Laborie. Perhaps these markets were too small to take much of the products without a

depressing effect on local prices.

It is apparent that differences exist by region in regard to several characteristics and behavior of the St. Lucian farmers. These differences may call for different types of strategy in attempting to solve programs that these farmers face.

b. Direct Sales by Farmers to Institutional Buyers. This channel is utilized by only a small portion of farmers. The farmers have no written contract but only an understanding or a verbal contract with the hotel or hospital for buying the produce after harvest. Even though the prices paid by hotels are higher, limited purchases and higher quality requirement make this channel inaccessible to a large number of farmers.

c. Sale to Merchant Middlemen. Goods are sold to either wholesalers or retailers for resale to final consumers. So far as wholesale buyers are concerned, there are very few of them and their purchases are not significant. Most wholesalers buy at the farm and sometimes from the market for resale.

The retailers include either the supermarket or the regular vendors at the market. They procure goods either from the wholesaler or farmer.

Hucksters, as then are commonly known, buy directly from farmers and either sell in the main market in Castries and Vieux-Fort, or export to nearby islands such as Barbados, and St. Croix. These hucksters, depending upon the level of competition, sometimes engage in harvesting of produce. For example, farmers in Choiseul reported a keen competition among hucksters as they buy produce before harvesting and dig or harvest the products themselves.

d. Sale to Exporters. Important buyers of farm products are

the wholesalers who buy from farmers and export them to foreign markets. These buyers, such as Geeste Industries, Valton Brothers, Tina, John Baptiste, Ltd., and Banana Growers Association, seem to be very well organized and have earned tremendous confidence from the farmers. The significant reason for their confidence is due to several factors:

- (1) The prices these buyers pay are higher than other buyers; for example, Valton Brothers pays 20¢ for upgraded mangoes, 40¢ per pound for breadfruit and 20¢ per pound for plantains, while the SLMB pays only 51¢, 20¢, and 10¢, respectively, for mangoes, a pound of breadfruit and a pound of plantains. These exporters can pay higher prices and still make substantial profits because they sell only in the higher-priced export market, while SLMB also sells on the domestic markets where prices are generally lower.
- (2) Generally, many exporters buy ungraded produce from farmers, in a lot, paying the same price for all produce regardless of the quality (although they may occasionally reject when percentages of poor quality is large). The SLMB on the other hand buys on the basis of grade using what the farmers feel is an arbitrary grading system.
- (3) Although these export buyers buy a limited quantity of few crops, such as mangoes, plantains, breadfruit, and eggplants, they buy in equal proportions from all their patrons and pay the same price for all they purchase.
- (4) The produce sold to exporters is, in general, a better quality. However, these exporters grade the produce they

receive and ship only the best quality. The remaining lower quality produce is then sold to SLMB. These exporters may come to pick up at the farm or buying station, or buy at the shipping point, e.g., airport, dock or port.

e. Sale to St. Lucia Marketing Board (SLMB). The SLMB is the government sponsored agency responsible for buying produce from farmers and marketing in either the domestic or international market. One of the basic purposes of creating this institution was to assist farmers in the marketing of produce; to improve the marketing system; and to provide leadership and organized efforts to increase exports and simultaneously reduce imports.

Apparently, few of the farmers sell their produce to the SLMB. The majority of the farmers interviewed utilized the direct sale to consumers instead of St. Lucia Marketing Board for the following reasons:

- (1) Low SLMB Prices. Almost all farmers felt that the price paid by SLMB was too low and this was a major problem of the Board. Further, they felt that there is a large difference between the price at which SLMB buys from farmers and sells at the market thus depriving farmers from getting full return. Many of them prefer to sell in the market directly rather than to the Board because of better prices (depending upon the buyers). They also felt that Board does not have a cooperative style patronage refund system so farmers would share in the profits of the Board.

- (2) Arbitrary Grading System: Contrary to the buying practices of hucksters and exporters and farmers' method of selling ungraded produce in the market, the SLMB uses a grading system to decide the price. This was the major resentment factor because farmers felt that the grading system was arbitrary and varied from person to person, and varied depending on day of delivery. This system has led to large scale rejection of produce. Rather than face this unfavorable and uncertain environment, farmers prefer to sell directly in the market.
- (3) Non-Guaranteed Prices. SLMB prices were not guaranteed for farmers. Farmers decisions are based on expected price and if SLMB price is no different from that in the market, it has little use as an incentive tool. The SLMB price changes during glut and scarcity periods--high during scarcity and low during glut or major harvest period. As such, SLMB actually is not helping the farmers during major harvest period when they need the help most. Also it does not buy small quantities of produce from very small farmers. Since they are the ones who need the service most, it is not serving the needy ones.
- (4) Buying Policy. SLMB's buying policy is just the opposite of what is needed. Policy varies depending upon the supply conditions at the market--it buys less during glut and more when scarce. But this type of buying really does not provide stability to small producers during the period of excess supply. One critical example is the Ginger Fiasco. Many

of the farmers reacted adversely about SLMB and its policies due to their losses on ginger. It was learned that in 1972, the SLMB was given exclusive right to export ginger. But the Board failed to buy because of the lack of funds or other problems. Farmers suffered a substantial loss until some private buyers bought whatever they could salvage. This failure resulted in farmers losing faith in the Board and deciding to sell on their own.

- (5) Price Policy. The Board's pricing structure does not discriminate between the produce picked up at the farm gate and the ones delivered at the SLMB's sales office. The cost of transportation in many cases is very significant and if both prices are the same there is no incentive in delivering at sales office. Additionally, lack of reliable pickup service, also call farm gate service, creates uncertainty to farmers. For perishables, delays or postponement may mean a huge loss because of spoilage or missing the main market day.

In general, many small farmers expressed resentment towards SLMB. Those selling to the Board are among those who either do not have time for marketing, do not like to sell, or because the farm gate services are convenient, even if unreliable.

3. Marketing Functions

In a broad sense, the functions of marketing in today's society are:
 "...to move the desired varieties of farm and food products to consumers in the desired quantities and conditions at the lowest possible cost,...to make living for people working in it

and yield reasonable returns to the capital and management skills devoted to it...and (to find) and develop new markets either at home or abroad..."¹³

The first refers to the complex marketing process involved in moving goods from the producers to consumers, placing the product in the consumer's hands that he wants, where he wants it and in the form that he wants it. In other words, it is "...a major specialized activity performed in marketing..."¹⁴

Secondly, it refers to the efficiency and equity in marketing, i.e., marketing most function efficiently and provide reasonable returns to all participants including the farmers.

Lastly, it refers to the dynamic functions of marketing. Instead of taking for granted the existing market, the marketing system must be sensitive to changing consumer desires, and progressive enough to develop new and larger outlets.

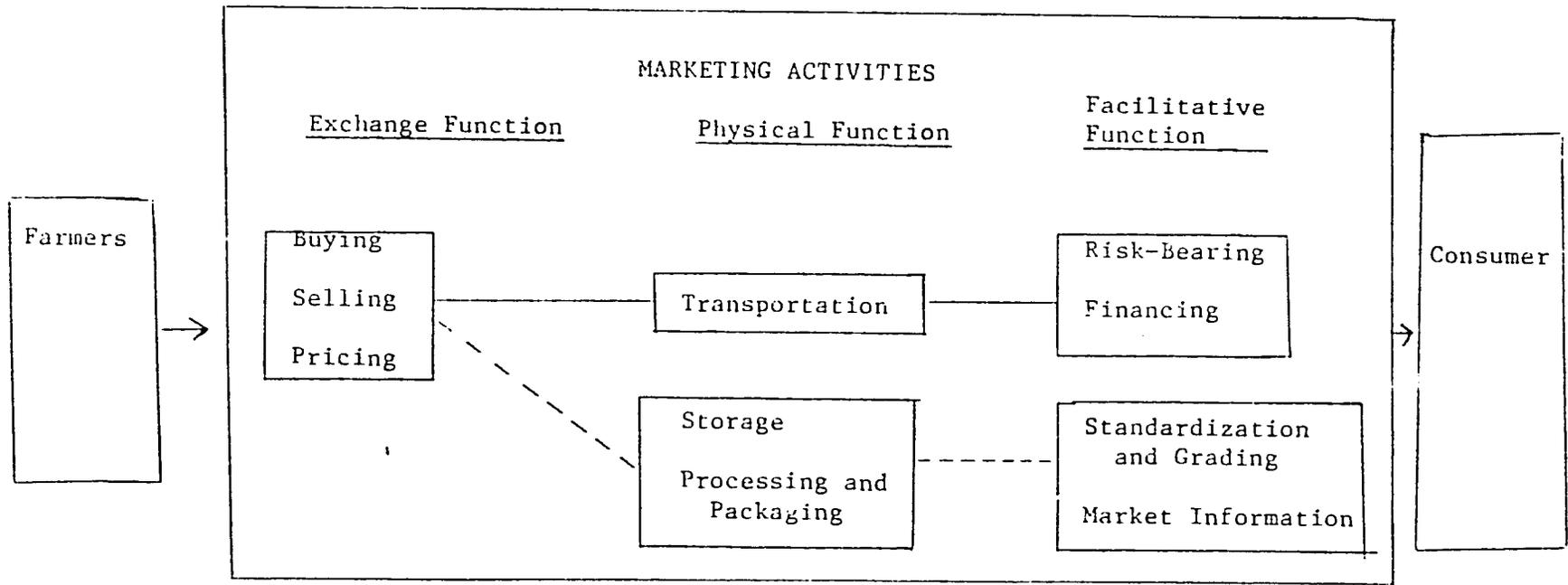
Marketing functions, therefore, include all activities involved in the flow of goods and services from the point of production until they reach the ultimate consumers.¹⁵ Figure 3-4 illustrates the functional relationships in agricultural marketing. The complex marketing process which is responsible for moving goods from the producers to the ultimate

¹³Wells, O.V., "Marketing: What Is It? Why Is It?", Marketing: The Yearbook of Agriculture, USDA, Washington, D.C.: U.S Government Printing Office, 1954.

¹⁴American Marketing Association, Marketing Definitions, Chicago, Ill: 1960, p. 16.

¹⁵Kohls, Richard and W. David Downey. Marketing of Agricultural Products, 4th ed., New York: The McMillan Co., 1972, p. 17.

Figure 3-4: Functional Relationships in Agricultural Marketing



Note: _____ Fully used
 ----- Partially or not used

consumers involves several functions and organizations. The institutional elements involved in marketing have been discussed in Section 2 and only the "what" of marketing, i.e., various activities involved in marketing goods are discussed here. Specifically, it includes the following functions:

a. Exchange Function. "The exchange functions are those activities involved in the transfer of title to goods."¹⁶ Depending upon the channel of distribution utilized and the development of the marketing system, the exchange may occur only once or several times. But no matter how many times goods are exchanged, "in the process of transferring ownership, two important functions of selling and buying can be distinguished."¹⁷

a-1. Selling Function-- "The purpose of selling is to create demand for a particular product and to find buyers to whom it can be sold at a price satisfactory to the seller."¹⁸ Therefore, in a broad sense, selling includes advertisements and other promotions to influence and expand demand, finding buyers, determination of the proper unit of sale, packaging, marketing channel decisions, price determination and actual selling.

a-2. Buying Function-- The buying function is basically concerned with locating the sources of supply, assembly of products,

¹⁶Ibid., p. 20.

¹⁷Tousley, Rayborn D., Eugene Clark and Fred E. Clark. Principles of Marketing, NY: The McMillan Co., 1962, p. 14.

¹⁸Ibid., p. 14.

determination of prices and actual buying. One of the important processes in efficient marketing system is the collection or assembly of produce from small and scattered producers for efficient utilization of transportation and handling equipment and reduction of the per unit cost of marketing. The transportation of produce by very small individual producers in the main market is not only inefficient but results in misallocation of valuable time.

Eighty-six percent of the respondents indicated that they do not carry their produce to any collection point (Table 3-4). The remaining 14 percent either take their product to banana boxing plant or deliver to middlemen, such as Valton Brothers, at their farms. So, if bananas are excluded, close to 90 percent of the farmers utilize no collection points. Five of the respondents in Vieux-Fort take their produce to Black Bay offices. Alternatively, almost everybody takes it to the market or sells to middlemen.

Table 3-4. Produce Carrying Their Produce to an Assembly Point, St. Lucia

	Total		Rabonneau		Dennery		Vieux-Fort		Choiseul	
	No.	%	No.	%	No.	%	No.	%	No.	%
Do carry	12	14	4	21	3	12	5	25	-	-
Do not carry	73	86	15	79	23	88	15	75	20	100
Grand Total	85	100	19	100	26	100	20	100	20	100

The exchange function in St. Lucian agricultural marketing system is very simple in terms of the number of times goods are bought and sold, but

actual operation is somewhat inefficient because of the lack of uniformity of pricing structure.

The use of direct marketing by farmers, as they carry their produce to Castries, Vieux-Fort, and other minor markets for direct sale to the consumers, has made the entire exchange function very simplified. However, sales to SLMB, wholesalers, hucksters and other exporters have several stages in which the exchange is involved.

The exporters or hucksters locate the sources of supply through their local contact people or regular observation before harvesting period. And some, like Valton Brothers even advertise their intention to buy in the radio.

a-3. Pricing-- In the process of change of ownership, both buyers and sellers necessarily engage in the process of determining the "reasonable" price, i.e., the price acceptable to both. Every time title changes, a price must be decided upon because "pricing is the determination of market values in terms of money."¹⁹ The functioning of the price determination process depends upon the supportive function such as market information, standardization and grading. Price determination in St. Lucia seemed to be reasonably competitive as a majority of the farmers reported that they established prices based upon "yesterdays" or "last weeks" prices depending on the activity at the market. The selling prices were adjusted based on the supply situation and the

¹⁹ Walsh, Robert M. "And What Are Its Parts," Marketing: The Yearbook of Agriculture, USDA, Washington, DC: U.S. Government Printing Office, 1954, p. 7.

number of consumers. For example, if there appear to be a lot of buyers crowding around the trucks as the produce arrived, they knew that there was likely to be a shortage. If there was no rush or crowd, they knew there was likely to be a surplus. The farmer or his wife would know that price could be adjusted accordingly. Thus, the farmer appeared to be responding to supply and demand conditions at the market on a given day. These responses are presented in Table 3-5 as supply and demand considerations.

Many of the other factors may well have been directly related to supply and demand. Judgement was listed as the second important determinant of price, i.e., each farmer decided on the price according to what he judged the market would bear. Undoubtedly, the number of buyers, quantity of good, and his best guess of quality would enter into his judgement. Bargaining was listed by a few of the sellers. Again, the supply and demand for the products would enter the decision. The amount that the buyer would be willing to pay, and the acceptance/rejection of the bid would be dependent on the available supply and the number of buyers.

Only one farmer, located in Choiseul, indicated that production records (costs) determined price. Three farmers in Babonneau reported that prices were set by wholesalers.

b. Physical Function. The function includes the activities involved in physical movement, storage, processing and packaging of the produce before it reaches to the consumers.

b-1. Transportation. In general, the transportation function is very poor and disorganized. It is not specialized and no regular service exists just for the movement of goods.

Table 3-5. The Determination of Price by St. Lucian Farmers

How Price is Determined	Total		Choiseul		Vieux-Fort		Babonneau		Dennery	
	No.	%	No.	%	No.	%	No.	%	No.	%
S&D	52	52	13	50	14	63.6	9	69.2	16	45.7
Bargaining	12	12	4	15	1	4.6	2	15.4	5	14.3
Judgement	32	32	9	35	7	31.8	2	15.4	14	40.0
Records on Production	1	1	-	-	-	-	-	-	-	-
Set by Wholesalers	3	3	-	-	-	-	-	-	-	-
Total	100	100	26	100	22	100.0	13	100.0	35	100.0

Farmers carry their produce on their head from the farm to their homes and from there they catch the transport to take the produce in the market. The vehicles are primarily for transporting people but farmers can carry their produce on top of the truck. Passenger transportation seems to be the primary use and freight transportation is secondary.

The cost of using transportation vary tremendously not only between different locality, but even between the same locality and the primary market. There are basically two rates - one for passengers and the other for freight. The former rate seems to be reasonably established

and consistent among riders. However, the freight rate is arbitrarily decided by the drivers of the vehicle. Depending upon the number of passengers (few or many), relationships with the driver (friend or other), and sex and beauty (beautiful females vs. males or average looking females), rates may be higher or lower. Section 4 of this chapter discusses more about transportation.

b-2. Storage. The equalization process of marketing aims to match demand with supply at all times at reasonable prices and to soften the severity of extreme situations of market glut and scarcity. Without storage and seasonal production pattern, there will be an abundance of a product - or a glut - during the normal harvest season, with very low prices, and a scarcity of product with high prices at other times. The storage function removes product from the market when supplies are abundant and holds them for sale during times of scarcity, thus, reducing the extremes of fluctuations of supplies and prices. The storage function thus creates time utility in marketing which softens these price fluctuations.

Except for few farmers in Choiseul who store peanuts at their farm one or two months before selling them, no storage functions are provided in St. Lucia.

Seasonality of production characterizes the agricultural marketing system of St. Lucia (See Table 3-6). Excessive supply of root crops during the harvesting period, December to March, creates a

Table 3-6. Seasonal Availability of Produce

Item	Seasonal Availability	Supply Position
Avocados	Aug/Oct	Plentiful
Bananas, Ripe	All year round	"
Bananas, Green	" " "	"
Macamboo	" " "	"
Oranges	Aug/Feb	"
Grapefruits	Oct/Feb	"
Limes	June/Nov	"
Cantaloupe	Aug/Nov	Fair
Golden Apples	Oct/Jan	Small Quantities
Guavas	Dec/March	Plentiful
Mangoes	April/Sept	"
Paw-paw	All year round	"
Passion Fruit	Sept/March	Small Quantities
Plumes	March/June	"
Sugar Apples	May/Aug	Fair
Watermelons	Aug/Nov	Plentiful
Pineapples	Dec/June	Fair
Beans, Snap or string	All year round	Erratic
Beetroots	" " "	Small Quantities
Breadnuts	Oct/Jan	Fairly Good
Cabbages	Sept/May	Erratic
Carrots	All year round	"
Christophenes	Sept/May	Fair
Cucumbers	All year round	Plentiful, April/Oct other months erratic
Eggplant or melongene	All year round	Plentiful
Lettuce	Nov/June	Erratic
Maize, Corn	Feb/March/Oct/Nov	Fair
Okras	May/Jan	Fairly Good
Parsley	All year round	Erratic
Peppers, sweet	" " "	"
Peppers, chillies	" " "	Plentiful
Potatoes, sweet	Aug/Feb	"
Plantains	All year round	"
Pumpkins	Aug/March	"
Radishes	All year round	Erratic
Spinach, Indian Kale or Chinese Cabbage	" " "	"
Marrows	All year round	"
Tannias	" " "	Plentiful
Dasheen	" " "	"
Tomatoes	March/Oct	Erratic
Turnips	All year round	"
Yam, Portuguese	Nov/April	Plentiful
Yams, Lisbon	Dec/March	"
Yams, Yellow	" " "	"
Breadfruit	June/Oct	"
Anthuriums	All year round	"
Spices (Ginger)	Feb/Aug	"

Source: Henry, Cadet W., Collection of Information (Data) for the Long Term Marketing Study, Castries, St. Lucia: The Ministry of Agriculture and Lands, 1977.

glut in the market and reduces prices often to very low levels while scarcity before planting time has driven prices up. To reduce these extremes and assure farmers a reasonable price for their production, a mechanism is needed to absorb the excess quantity during harvesting period and releasing it at a later time when supplies are scarce. To do this, farmers need appropriate facilities for storing part of the crop at harvest when prices are likely to be very low, and selling it later when prices are expected to be higher.

Table 3-7 shows that more than 9/10 of farmers sell immediately after harvest. Only some farmers in Choiseul area sell before harvesting to middlemen and some of them store only peanuts for about two months. The peanuts are stored on their own farms; there are no specialized storage facilities.

It seems many of the farmers growing the same crops year after year, and harvesting and marketing all output at the same time each year creates a glut. Perhaps one of the possibilities of eliminating or reducing this problem of glut and scarcity would be a program of education and extension; to provide information and assistance on the production of other crops, extending the production and harvest period of traditional crops, and in developing and using storage facilities.

Table 3-7. The Timing of Sale and the Use of Storage

Activity	Total		Babonneau		Dennerly		Vieux-Fort		Choiseul	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sale before harvest	1	1.0								
Sale immediately after harvest	78	91.0	20	100	25	96	20	100	13	65
Sale immediately after harvest & before harvest	3	3.4	-	-	1	4	-	-	2	10
Sale immediately after harvest and several months after harvest	4	4.6	-	-	-	-	-	-	4	20
Grand Total	86	100.0	20	100	26	100	20	100	20	100

b-3. Processing Function. Processing adds the value to goods by changing the form. Form utility is created by transforming the raw produce to semi-processed or processed products (Time utility also is often added since processed products are more storable than raw products).

The degree and extent of processing services depend upon the level of income and the preference of the consumers and, finally the availability of processing and packaging plants and equipment. The demand for processed products increases as consumers' incomes grow because many of the activities performed at home are then shifted to the processing plant.

There are no food processing plants in St. Lucia, although the government has established an experimental

processing plant to develop new processes for canning fruits grown on the island. Except for the slaughter of cattle in Castries and Vieux-Fort markets, most food products are sold in unprocessed form. Chickens are sold live and produce is sold raw immediately after the harvest. All the processed products sold in the supermarkets or elsewhere in St. Lucia are imported.

In addition, there is no home processing of the produce sold (Table 3-8). They harvest and only clean the produce before taking to the market.

Table 3-8. Processing of Agricultural Products, St. Lucia

Response	Total		Babonneau	Dennery	Vieux-Fort	Choiseul
	No.	%	No.	No.	No.	No.
Yes	-	-	-	-	-	-
No	86	100	20	26	20	20
Grand Total	86	100	20	26	20	20

c. Facilitative Functions. All other activities that assist in smooth running of the marketing activities are called facilitating functions.

Standardization. The use of uniform standards of measurement weight and standard of quality, packaging, labeling, grading and sorting - facilitates exchange as buyers and sellers can determine the prices

without engaging in inspection and checking of stage of buying and selling. Mass merchandising and efficient market depends largely on standardized products.

In St. Lucia, lack of uniformity in measurement has contributed to marketing problems. Great variation of measurements are used in selling produce such as by unit or head, heaps, bag, basket, pound and a combination thereof. Selling and buying by heaps in the market seems more prevalent than any other form while SLMB, supermarkets, exporters and hotels generally buy on the basis of total pounds.

Yam is sold by basket only while dasheens and tannias are sold by bag in wholesale trades.

Table 3-9 shows the measurement used in St. Lucian agricultural marketing system. Close to 34 percent of the respondents do not weigh any part of products they sell. While 31 percent do sell by weight, the majority of these were sold to hotels, SLMB, supermarkets, and middlemen. Out of those who sold by weight, 91 percent weighed only once while 9 percent had weighed twice. Farmers in Black Bay, Vieux-Fort, were the only group that sold by weight - and were willing to use scales if required by law.

In terms of units of sale, 27 percent of the respondents sold by pounds and only 26 percent by heap only (See Table 3-9). However, close to 64 percent of the respondents sell either by heap or combination of heap, bag, basket and pound.

Lack of uniformity in measurement not only makes buying and selling very cumbersome but also creates problems in regulating the activities of the marketing system.

Table 3-9: Measurement and Average Size of Sale in St. Lucian
Agricultural Marketing System 1979

Item	Total		Babonneau		Dennery		Vieux-Fort		Choiseul	
	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Sale by Weight</u>										
No	29	33.7	8	40.0	13	50.0	7	35.0	1	5.0
Yes & No	30	34.9	6	30.0	7	26.9	5	25.0	12	60.0
Yes	27	31.4	6	30.0	6	23.1	8	40.0	7	35.0
Total	86	100.0	20	100.0	26	100.0	20	100.0	20	100.0
<u>Frequency of Weight</u>										
Once	52	91.2	12	100.0	13	100.0	8	61.5	19	100.0
Twice	5	8.8	-	-	-	-	5	38.5	-	-
Total	57	100.0	12	100.0	13	100.0	13	100.0	19	100.0
<u>Average Size or Unit of Sale</u>										
Heap Only	22	25.9	8	42.1	8	30.8	5	25.0	1	5.0
Bag Only	1	1.2	-	-	1	3.8	-	-	-	-
Basket Only	-	-	-	-	-	-	-	-	-	-
Pound Only	23	27.1	5	26.3	4	15.4	8	40.0	6	30.0
Heap and Pound	19	22.4	5	26.3	5	19.2	4	20.0	5	25.0
Heap and Basket	1	1.2	-	-	1	3.8	-	-	-	-
Heap, Bag & Pound	6	7.1	1	5.3	-	-	-	-	5	25.0
Heap and Bag	3	3.5	-	-	1	3.8	2	10.0	-	-
Heap, Bag, basket & Pound	2	2.3	-	-	1	3.8	1	5.0	1	5.0
Bag & Basket	3	3.5	-	-	3	11.5	-	-	-	-
Bag, Basket & Pound	2	2.3	-	-	2	7.7	-	-	-	-
Bag and Pound	2	2.3	-	-	-	-	-	-	2	10.0
Total	85	100.0	19	100.0	26	100.0	20	100.0	20	100.0

So far as packaging is concerned virtually all farmers sell loose quantities or unpacked produce in the main markets. Buyers have to bring their own bags or pay 25 cents per bag. However, the SLMB, hucksters and other exporters pack their merchandise in boxes and crates before shipping to either England or to Barbados and surrounding islands.

Table 3-10 shows the extent of packaging activities provided by the farmers. About four-fifths of the farmers sell goods in unpackaged form. The remaining farmers have no packaging services or use it occasionally. However, it basically refers to bundling of carrots, bunching of celery leaves, boxing of bananas and boxing and crating of mangoes to ship to Barbados and St. Croix. Therefore, in the domestic market almost everyone sells unpackaged agricultural products.

Table 3-10. Packaging of Agricultural Products, St. Lucia

Response	Total		Babonneau		Dennery		Vieux-Fort		Choiseul	
	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	7	8.1	4	20	2	7.7	-	-	1	5
No	68	79.1	16	80	18	69.2	19	95	15	75
Yes & No (Selected Procedure)	11	12.8	-	-	6	23.1	1	5	4	20
Grand Total	86	100.0	20	100	26	100.0	20	100	20	100

In case of sorting and grading, the general tendency seems that farmers do sort the produce before selling but in a very crude fashion. The consensus of all farmers is that they use several stages sorting as:

- a. First, farmers use preliminary sorting to remove the poorest quality products from the lot to be sold. These are kept for home consumption and only the remaining better quality products are marketed.
- b. The best quality is first sold to hotels or supermarkets.
- c. The second best quality is sold in the market.
- d. Whatever is left is then sold to SLMB.

For sales in the market, the majority of farmers do no further grading or sorting after the preliminary sorting at home. The selling in the market is on the "mixed" basis instead of differentiating based on quality.

Fifty-nine percent indicated they do not grade at all while only 41 percent do sort the product (See Table 3-11). Out of these who do sort, 57 percent sort it before they take it to the market. However, this sorting actually referred to the heaping in the market instead of actual sorting by quality.

In terms of additional sorting before goods are actually marketed, less than 5 percent of the respondents thought the goods they market are further graded prior to sales. -

Financing. The financing function is the advancing of money to carry on various aspects of marketing. Many of the financial institutions provide credit to marketing firms to facilitate the shipment of goods, and to finance during the storage and processing, since anywhere that storage or delay takes place, someone must finance the holding of goods.

²⁰Kohls and Downey, op. cit., p. 27.

Table 3-11. Grading and Standardization in St. Lucia Agricultural Marketing System

Item	Total		Babonneau		Dennery		Vieux-Fort		Choiseul	
	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Sorting and Grading:</u>										
No	50	58.8	9	47.4	22	84.6	12	60	7	35
Yes	35	41.2	10	52.6	4	15.4	8	40	13	65
Before Taking to Market	20	-	-	-	-	-	-	-	-	-
After	15	-	-	-	-	-	-	-	-	-
Grand Total	85	100.0	19	100.0	26	100.0	20	100	20	100
<u>Other Marketing Before Marketing</u>										
No	81	95.3	17	89.5	26	100.0	19	95	19	95
Yes	4	4.7	2	10.5	-	-	1	5	1	5
Grand Total	85	100.0	19	100.0	26	100.0	20	100	20	100

The St. Lucian agricultural marketing system suffers from inadequate financing. Most of the banks finance only to exporters and large businesses and don't provide any agricultural credit.²¹ In fact most of the commercial banks refer the applicants to the agricultural and industrial development bank whenever the loan pertains to agriculture. These commercial banks finance only commercial loans and export trade for large exporters.

Generally, financial institutions in any developing economies play a very insignificant role when it comes to agriculture. In contrast to profitable business loans, agricultural credit is regarded as unworthy and risky. Funds are tied up for a long time, and repayment on time by subsistence farmers is risky.

Similarly, many of the farmers abhor borrowing and do not generally use credit. The traditional concept of debt as an evil still prevails among many farmers and they are reluctant to borrow for fear that they would lose their land and entire possessions in case they fail to pay back the loan on time. Also they have the burden of paying back principal and interest.

More than four-fifths of the farmers have not borrowed and indicated their strong displeasure in borrowing (See Table 3-12). Out of the 15 who have borrowed, only half of them have obtained loan from the Agricultural and Industrial Development Bank. The rest have borrowed either interest free loans from friends or high interest loans from Barclays Bank. The two types of loans from the Agricultural and Development Bank were agricultural production credit and farm improvement credit and the rates of interest were 8 percent and 12 percent, respectively. By comparison, the interest rate for other loans from Barclays

²¹Personal Interview with Mr. Baptaste, Loan Officer, Bank of Nova Scotia, Castries, St. Lucia, July 14, 1978.

Table 3-12. Financing and Conditions of Exchange in Agricultural Marketing System of St. Lucia, 1978

Item	Total		Babonneau		Dennerly		Vieux-Fort		Choiseul	
	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Borrowing:</u>										
Yes	12	14.8	3	18.8	3	11.5	4	21.1	2	10
No	<u>69</u>	<u>85.2</u>	<u>13</u>	<u>81.2</u>	<u>23</u>	<u>88.5</u>	<u>15</u>	<u>78.9</u>	<u>18</u>	<u>90</u>
Grand Total	81	100.0	16	100.0	26	100.0	19	100.0	20	100
<u>Rate of i (average):</u>										
FIC	8%		8%		8%		8%		-	
APC	12%		12%		-		-		-	
Other	18.5%						12%		25%	
<u>Condition of Exchange:</u>										
Cash Only	57	70.4	11	68.8	21	80.8	11	57.9	14	70
Credit Only	2	2.5	-	-	-	-	2	10.5	-	-
Cash & Credit	<u>22</u>	<u>27.1</u>	<u>5</u>	<u>31.2</u>	<u>5</u>	<u>19.2</u>	<u>6</u>	<u>31.6</u>	<u>6</u>	<u>30</u>
Grand Total	81	100.0	16	100.0	26	100.0	19	100.0	20	100

Bank varied between 7.5 and 25 percent.

Likewise, selling on credit is not a commonly accepted practice among farmers. Except to friends, merchants and sometimes to hotels, they do not sell on credit and every transaction is on cash basis. More than 70 percent of the farmers interviewed sell on cash only and about 27 percent use similarly cash and little bit of credit to friends, lucksters and hotel (See Table 3-12) and less than 3 percent of farmers sell on credit only, and this occurred only in Vieux-Fort.

Risk Bearing. An important function in agricultural marketing is the bearing of risk, both physical and market. The physical risks occur due to spoilage, theft, loss and damage by fire. Many of these risks can be controlled with proper managerial actions, while the market risk arising from the fluctuations of prices can neither be controlled nor forecasted. The changes in demand and supply, export and import position and several other factors could create a shortage or glut causing prices to rise or fall accordingly. The risk of a drop in the prices of commodities must be borne by someone in the marketing channel. Both physical and market risks increase with time, which means substantially increased risks when products are stored.

In St. Lucia, the risk bearing function in marketing is largely shouldered by farmers. They seem to suffer more from physical losses from wastage, spoilage, and theft, than the marketing risk since virtually all the produce is sold immediately after harvesting.

The Information System. An important concern for many of the farmers is the price of the product. Since many sell to the retail consumer directly or to hotels, and hospitals, the setting of the

retail price is extremely important. In determining how the retail price is set, information about supply and demand for food crops is crucial. Some attempts were made to determine the process of price setting and the information system in St. Lucia.

St. Lucia does not have a formal information system. Most of the information flows by word of mouth - from neighbors, relatives and friends. To the outside observer, prices appear to be set in a haphazard and a disorganized way. Only a few of the farmers surveyed reported that they obtained price information. Only two in Babonneau and three in Choiseul and none of the farmers in Dennery and Vieux-Fort obtained such information.

Despite the informal price setting technique, and the absence of a formal information system, none of the farmers reported that the absence of information was a major problem. While most of the prices were set by market conditions at the time of sale, a survey was made of existing information facilities to determine if some price information was flowing through formal channels.

St. Lucia has one television station, two radio stations, and three local newspapers operating in the country. Only a few programs relay information on farm prices in these media.

The television station in St. Lucia is more of a relay station, relaying programs taped in Britain. During the previous year, two broadcast hours per night were originated locally, all other programs were relayed. Approximately 500 to 700 T.V. sets were sold in 1975, a 10 percent increase in two years. It is estimated that 6,000 sets are on the island. The coverage is in a limited area, only 60 to 70

miles around Castries, thus reaching only about one-half the population but just a small percentage of the farmers. There were no programs geared specifically to farmers. The only program attempted was a kitchen or country garden project, aimed toward increasing farm production. This program was cancelled as it did not generate much interest, and currently there are no plans to present any similar program in the near future.

The three newspapers have an estimated weekly circulation of 7,500. Two of the papers concentrate on political news and editorials and the other is general news. No specific articles on farm marketing or prices exist in these papers. Some agricultural input, and production information is carried through advertising, and through a regular column entitled "Winban Column". Occasionally, the Banana Growers or the Coconut Growers Associations will list route changes or other such information. But there is no regular farm price features.

In addition to these three local papers, several other papers serve the needs of visitors--giving information on taxis, hotels, restaurants, shopping, etc. There is also a regional paper that serves the Caribbean. Again, no specific features on farm prices exist. Only when an article requires prices would such information be listed. Further, since the circulation is limited to small portion of the Island's population, most farmers do not have access to the little information that does exist.

There are two radio stations that originate their broadcast in St. Lucia. This media appears to be the most likely candidate for extensive farmer oriented programs. In 1975, there was an estimated 55,000 radio sets on the island, enough to average over one per

family. Both stations operate in excess of 17 hours per day.

One of the stations broadcast 17 hours of which 13 hours is in French, 4 in English, indicating that its programs are geared to the French speaking Caribbean. During the late 1978, it planned to broadcast in French, English and Spanish. None of the programming is centered on farm prices although they do have farm oriented programs; "Grow more food" (in Patois) and "Why import when we can grow." These programs are usually only a few minutes long and is designed to improve production and production practices. In addition, input suppliers are now advertising their products. Thus, very little price information flows through this station.

The other station broadcasts primarily in English with some of the programs in a Patois version. They have four scheduled farm related programs, two of which give some price information. The Bon Qualite Program, broadcast weekly, is sponsored by the St. Lucian Bananas Growers Association. Included in the 15 minute program is information on fertilizer, disease, production techniques, input prices and prices of bananas.

Another program "Shopper's Guide" is broadcast on Friday morning, for ten minutes. This program is designed for the consumer. A survey is made of supermarkets in Castries, and general information on prices, including farm food prices, is presented. Thus, farmers could benefit in setting their price based on the retail prices for similar products. However, none of the farmers or their wives reported their prices to be influenced by supermarket prices. Perhaps the effects of "Shopper's Guide", if any, is through the demand side. Consumers are aware of

competing prices, quality, freshness, etc., and accept or reject farmer's prices based on that information.

The other two programs are similar to Bon Qualite except it includes all crops. Also included is information on land preparation for cultivation. "Tips for Farmers" is presented in 15 minute segments weekly. "Agriculture Today" also includes interviews with farm leaders.

One other feature that gives some price information is an announcement by the St. Lucia Marketing Board. Each week the Board presents an announcement on the price, quantity and pick-up points for the produce that it will purchase. There is evidence that many farmers listen to this program. In some instances, farmers complained of the failure of the Board to keep its pick-up schedule, in others, the farmers complained that the announced price was too low. Thus, some price information is flowing through radio to some of the farmers.

The Ministry of Agriculture also has an information leaflet for benefit to farmers. However, as is true for the other sources of information, most of the emphasis is on production. The leaflet gives cultivation, land preparation, fertilizer, pesticide and related information. Very little emphasis is placed on price-information.

In summary, farmers in St. Lucia do not appear to be able to obtain adequate information of prices of farm products. In all of the mass media surveyed, only two programs listed price information, and that information was designed for the consumer. There were no attempts to predict prices or future production trends, nor to adequately inform farmers of present prices. The information about prices was merely incidental to other information that emphasized production. Prices

appeared to be set by supply and demand in the absence of formal information systems.

4. Transportation

As previously indicated, the transportation service for the movement of produce is very poor and disorganized except for the bananas. The following four types of services for transporting agricultural produce from the farms to the markets:

- (a) Transportation services provided by the Banana Growers Association to its members only in picking boxed bananas from the boxing plant and transporting to the shipping points.
- (b) Two trucks operated by SLMB for farm gate services. The truck from Castries services Castries, Babonneau, and Dennery and the other truck services Vieux-Fort, Choiseul, Soufriere and Laborie. Both of these trucks operated on Thursday and Friday only. These trucks were used to collect the produce to bring to SLMB outlets for sorting, packaging and crating for shipment and finally transporting to the shipping points.
- (c) Private trucks operated by middlemen such as Geest Company, John Baptiste & Co., and Valton Brothers to collect produce for export market.
- (d) The passenger transportation which is also used for carrying produce to the market. This is the most commonly used form of transportation by many farmers.

This research did not attempt specifically to compile detailed

information about the structure of the transportation system in St. Lucia. However, information obtained in conducting the survey indicated that both SLMB and Valton Brothers have two trucks each, and the BGA owns and operates several trucks all for the export market. For the domestic market, the only means available for transporting of produce is the public passenger vehicles and some privately owned vehicles. In addition to trucks, vans and old converted buses owned by private truck operators, some of the farmers owned their own transport equipments. The data in Table 3-13 indicates that of trucks owned by farmers, only 26 percent were owned by farmers with more than 25 acres, while farmers with 25 acres or less owned three-fourths of the transportation equipment. The ownership was more for social status rather than for economic reasons.

Table 3-13. Transport Equipment Owned by Farmers

Vehicle	Number of Equipment	Sized Group/Acres							
		1	5	10	25	50	100	200	500+
Trucks, Vans, Pickups									
Under 30 wt.	178	30	12	59	43	15	5	8	6
30 wt. and over	23	10	-	-	6	2	-	1	4
Jeeps and Land Rovers	80	-	-	13	34	8	5	4	16
Total: Number	281	40	12	72	83	25	10	13	26
Percent	100	14	4	26	30	9	3	5	9

Source: The Census Data of St. Lucia, "Agricultural Statistics", Castries, St. Lucia, Ministry of Agriculture and Land, 1973-74.

The structure of transportation sector indicates the existence of a large number of firms providing both passenger and freight hauling services. In 1977, there were 1727 transportation vehicles registered at the St. Lucia Police Department (See Table 3-14).

All of those are operated by individuals for their use as well as for providing services to the general public. None of those firms are large enough to control the market so the transportation sector can be characterized as being relatively competitive.

Costs of Operation. A brief analysis of the costs of operation of the transport operators was undertaken to determine the profitability. The data are very sketchy and represent only a rough estimate.

In order to purchase a truck a huge investment is required. The lending institutions generally insist on owner equity of 30 percent.

Table 3-14. Transport Equipment Registration, 1977

Number of Units	Type of Equipment	Size	Registration Fee in EC\$/yr. ^a
153	Buses	37-42 Passengers	\$190 ^b
288	Buses	12 Passengers	\$190 ^b
600	Pickups	2300# TARE Wt.	\$100-\$140 ^b
194	Vans	2300# TARE Wt.	\$110-\$140 ^b
492	Trucks	5 tons and over	\$190 ^b
1727	Total		

^aMust have a safety inspection which is free

^bMinimum of \$190 EC but charged at \$30 per ton

Source: Mr. Reeve, St. Lucia Police Department

The remaining 70 percent could be financed by the commercial banks for 30 to 36 months period with a 9 percent add-on interest, resulting in an effective annual interest rate substantially higher. For example, if a truck is valued at \$33,000, the borrower has to put \$10,000 down as equity and the remaining \$23,000 would be financed for 3 years. Then the monthly payment would be \$820 and the yearly payment would amount to \$9,840. In three years the borrower will be paying \$29,520 or a difference of \$6,520 for interest alone representing an effective annual interest rate of approximately 17 percent.

A rough estimate of minimum and maximum amount of truck operating expenses are shown in Table 3-15. These expenses vary substantially, depending upon the size of the vehicles, the distance from the market and the operation expenses and maintenance programs used. The table shows that the operating expenses are substantial, ranging from a minimum monthly expenses of EC\$683 to a maximum monthly expenses of EC\$1,552. The three major expenses are the monthly payments, fuel and labor, which constitute about three-fourths of the total.

Transportation Charges. Since there is no separate freight service just for hauling goods, the analysis of transportation charges involves the analysis of both passenger and freight shipment charges.

As previously pointed out, when the farmers haul produce on top of the bus, the amount they pay consists of (1) passenger charge, which seems to be reasonably fixed and consistent, and (a) freight charge, which is not fixed and varies considerably depending upon the bus drivers' estimates.

Table 3-16 presents the transportation charge from different points

Table 3-15. Costs of Operating Transportation Equipment

Item	Per	Minimum (EC\$)	Maximum (EC\$)
Registration Fee	Year	190	300
Insurance	Year	360	1,800
Tires	Unit	120	500
Fuel (\$2.15 to \$2.50/gal.)	Year	2,150	2,500
Labor (Asst. Driver/Loaders)	Year	2,180	2,080
Box or truck body	Unit	300	600
Monthly Payment (with 15 to 17% interest rate)	Year	2,400	9,840
Other costs, including depreciation	Year	600	1,000
Total Yearly Expenses		8,200	18,620
Monthly Operating Expenses		683	1,552

Source: Compiled from personal interviews with bank personnel, St. Lucia Police Department for registration fee, and several truck operators.

Note: Truck purchase price is estimated to be between \$8,000 and \$34,000. The mortgage repayment period varies between 30 to 36 months and the equity requirement is estimated to be 30%.

to the final destinations of either Castries or Vieux-Fort. The passenger charge varied between a low of 50¢ from Babonneau to Castries and a high of \$3.00 from Choiseul to Castries, while the freight charges varied between a low of 50¢ per bag from Bexon to Castries and a high of \$3.00 per bag from Choiseul to Castries.

Based upon the data, it is difficult to say if the transport charge is high or low and if the transport operators are making any profit. However, it appears certain the farmers are incurring substantial

expenses for transportation relative to the price they receive for their produce. Because of the low prices they are receiving for farm products, it is very difficult for transport operators to raise their rates. Given the high operating expenses (See Table 3-15), a high utilization rate of equipment needed to break even and very limited possibilities of raising transportation charge, the transport operators' earnings are at best marginal if any profit is being made.

Table 3-16. Transportation Charge, St. Lucia, 1978

From	To	Passenger Charge (EC\$)	Freight Charge (Per Bag)
Babonneau	Castries	0.50 - 1.50	1.00 - 1.25
Beson	Castries	0.75	0.50 - 1.00
Demery	Castries	1.00 - 1.75	
Vieux-Fort	Castries	2.00	
Choiseul	Castries	3.00	1.00 - 3.00
Choiseul	Vieux-Fort	1.50	
Laborie	Vieux-Fort	0.50 - 1.00	

Agricultural Prices - Farm Gate vs. Market Prices

The basic function of the price in any economic system is to guide the efficient allocation of scarce resources. If price system operates efficiently, consumers would indicate their preferences by purchasing those products whose characteristics and price suited their desires, and the producers would produce those goods in the quantities that consumers wanted. Producers in a competitive economy are forced to use the most efficient production techniques to organize the resources for producing the desired quantities of products and realize a satisfactory profit.

Price is a guide for deciding what, when, how and where to produce and sell since consumers will pay a higher price for more desired products, and producers will produce more of higher-priced products and vice versa.

Agricultural prices function in the same manner by guiding farmers in determining what to produce in the marketing system in terms of how, where, and when to sell the agricultural products. Prices are important decision variables because they "affect business decisions of producers, marketers and consumers (and) those decisions in turn affect prices."²²

The nature of farm gate prices as well as the market prices is essential in understanding the functioning of the agricultural production and marketing system because one reason a marketing system may operate very poorly could be due to poor pricing structure.

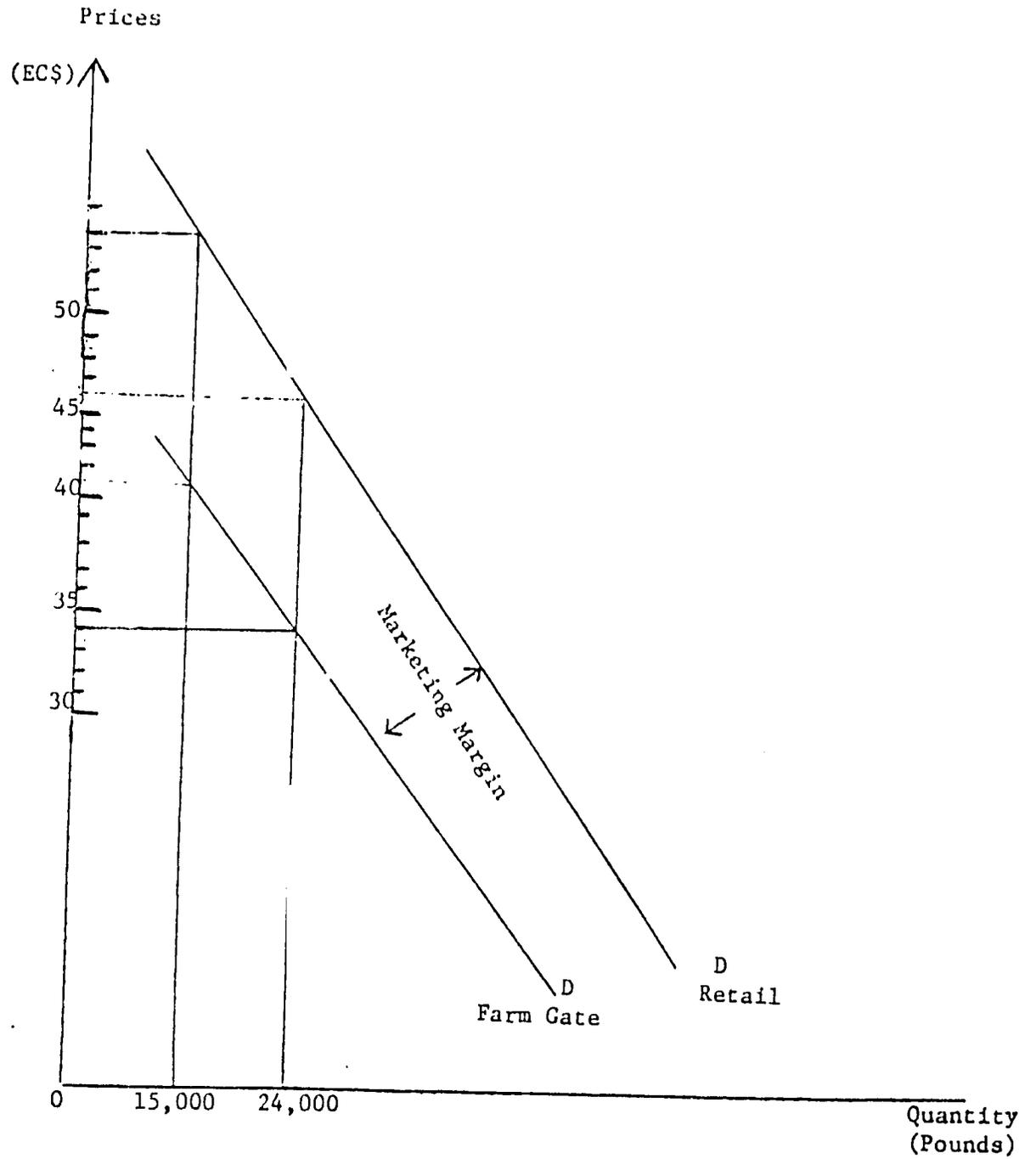
In general, the agricultural prices involve the analysis of prices at each stage of exchange beginning from the point of first sale at the farm to the final sale to consumers. This includes farm gate price, retail market price and the marketing margin.

Farm Gate Price. The first exchange generally occurs when farmers sell their produce at the farm into the marketing system and this price is call the farm gate price. In other words, farm gate price is what the farmers receive if they sell their produce right at the farm.

Farm gate price depends largely upon the retail price because the demand at the farm gate is a derived demand. The prices are determined at the retail level by consumers who satisfy their desires from the available supply of products and their available income. What the farmer

²²Hoos, Sidney S. and George L. Mehren. "Prices and Pricing in Marketing," Marketing: The Yearbook of Agriculture, USDA, Washington, DC: U.S. Government Printing Press, 1954.

Figure 3-5: Retail Price vs. Farm Gate Price



Source: Hypothetical data

receives at the farm is based on this retail price after deducting costs of the marketing system. Figure 3-5 illustrates this point. Given the consumers demand, at a price of 46¢, 24,000 pounds of tomatoes are purchased at the retail level by consumers. The middlemen will buy this quantity at the farm by paying 34¢. The difference of 12¢ is the marketing margin and covers the marketing costs. If the price rises to 54¢, consumers will purchase fewer tomatoes, only 15,000 pounds, in the market and the middlemen will buy only 15,000 pounds of tomatoes from the farmer at 41.5¢. Likewise, the decline of retail price from 54¢ to 46¢ reduces the farm gate price from 41.5¢ to 34¢. Therefore, the farm gate price of 34¢ and 41.5¢ are dependent on the market price of 46¢ and 54¢ respectively. The actual prices at the farm gate depend on actual marketing costs and market competitive situation.

Market Price. The price at which goods are bought by the final consumers, the market price or retail price, differs from farm gate prices because of the costs incurred in moving, handling, processing, storing and providing other marketing functions including a reasonable return on investment for all participants in the marketing process.

Average prices of both farm gate and market prices of selected agricultural products in St. Lucia are presented in Table 3-17. These data are the average prices in all four districts - Babonneau, Dennery, Vieux-Fort, and Choiseul and were collected during the month of July, 1978.

Because of the predominance of direct marketing, farm gate prices in most cases are the same as market price. There is in some cases a slight variation in prices depending upon the unit of sale. For example,

both prices are EC\$1.1 and \$1.5 per heap of dashæn and tannias. But, per bag farm gate price is \$35 and \$28 compared to the market price of EC\$40 and 30 per bag respectively. However, in the market, farmers and sellers generally varied prices depending upon the size, color, texture, quality and the overall appearance of the item. Despite this, the market prices among all sellers at the main markets appeared to be fairly uniform.

Perhaps an analysis of price paid by hucksters and their sales prices would have been a better information but many of the hucksters were reluctant to cooperate when approached for these information.

Some of the significant characteristics of the agricultural prices in St. Lucia are as follows:

(1) Comparison of prices becomes difficult because there is no uniformity in measurement. The prices of the commodities are as numerous as the measurement unit used by farmers and vendors. As indicated previously, prices of agricultural commodities are quoted per heap, bag, basket, unit, head and pound. Although the nominal price is unchanged, the real price is determined by the seller as the heap fluctuates depending upon his total supply and demand of consumer. Higgling and haggling is very common among buyers and sellers. Prices vary depending upon not only some rational reason such as scarcity versus glut, and a number of buyers, but also some irrational reasons such as types of buyers. Two or three tier prices have been used by farmers--one price for the local people and one for the foreigner. For example, it was observed in Castries markets that lettuce was sold at 60¢ per head to a local person but was \$1.75 to the foreigners.

(2) Farmers utilize direct marketing in most cases and this makes

the distinction between farm gate and market prices very hard. They harvest the products and carry them to Castries, Vieux-Fort and other minor markets and sell directly to customers instead of selling at the farm. The majority of these farmers do not discriminate between prices at the market or at the farm. Only a small number of them were willing to sell at a slight discount if sold at the farm. Although it is not completely clear from Table 3-13, the prices paid by hotel and supermarkets are often times higher than at the market. The market price is an average of prices at all four markets.

(3) Transportation charge is an insignificant decision variable in determining the prices at the retail and at the farm level even though farmers incur transportation costs in bringing produce from the farm to the main market. Farmers should have sold at a cheaper price at the farm compared to the market because of the saving of transportation costs. Perhaps, the reason as to why transportation costs are not significant decision variables may be because many of the farm wives combine their marketing with personal activities. They will be incurring some of the costs anyway, since they go to the market to buy essential goods or to meet and socialize with friends. Also, the St. Lucia Marketing Board pays the same price regardless of whether the produce was delivered at the farm or at its office.

Although, the few hucksters who buy produce at the farm generally obtain at lower prices; it is usually because of their strong bargaining power rather than a deduction for transportation costs.

(4) Even though final price is determined at the retail level by matching demand and supply, there was no evidence of a response of

production to market price or farm gate price.

Marketing Margin. Analysis of the marketing margin indicates the efficiency and problem of the agricultural marketing system and the nature of allocation of returns. A high marketing margin without a corresponding improvement in the marketing sector may imply exploitation of farmers and consumers, while low margin could indicate a poor marketing system because of insufficient return to the participants.

Marketing margin is the difference between the price paid by the final consumers and the farm gate price. Or

$$\text{Marketing Margin} = \text{Market Price} - \text{Farm Gate Price}$$

This marketing margin includes all the costs of marketing such as transportation, storage, processing, charge, premium for riskbearing, expenses for obtaining market information and a return on investment to all middlemen.

The comparison of market price and farm gate price of several commodities indicates that in most cases both prices are identical. Only in some cases marketing margin is existent. In Table 3-18 the marketing margin of selected agricultural products have been computed using only per pound prices ranges from high to 14.63 percent on yams to a low of 2.63 percent on cabbage. However, estimated reasonable costs of transportation and physical wastage are greater than the calculated marketing margin, implying that farmers are not realizing any reward for their marketing services.

Farmers' practices of not discriminating between purchases at the farm versus market, poor and unorganized marketing system may have accounted for the apparent low marketing margin. These factors may

Table 3-18. Marketing Margin of Selected Agricultural Products, St. Lucia, 1978

Product	Farm Gate Price	Market Price	Market Margins	M.M as a % of F.G.P.
	(Pound)	(Pound)	(Pound)	
	(EC)			
1. Yam	\$ 0.41	\$ 0.47	0.06	14.63
2. Dasheen	0.33	0.34	0.01	3.03
3. Pumpkin	0.31	0.31	-	-
4. Carrots	0.95	1.00	0.05	5.26
5. Coconuts	0.30	0.30	-	-
6. Sweet Peppers	0.81	0.81	-	-
7. Potatoes	1.80	2.00	0.20	11.11
8. Cuke	0.69	0.69	-	-
9. Cocoa	0.80	0.80	-	-
10. Orange	0.23	0.23	-	-
11. Plantains	0.40	0.40	-	-
12. Ginger	0.45	0.45	-	-
13. Cabbage	0.76	0.78	0.02	2.63
14. Breadfruit	0.40	0.40	-	-
15. Sweet Potato	0.32	0.32	-	-
16. Peanuts	2.00	2.10	0.10	5.00
17. Eggplants	0.35	0.35	-	-
18. Papaw	0.25	0.25	-	-
19. Pineapple	1.40	1.40	-	-
20. Sour Sop	0.27	0.27	-	-
21. Christsphine	0.40	0.40	-	-
22. Turnip	0.95	0.95	-	-
23. Nutmeg	0.60	0.60	-	-
24. Mace	1.00	1.00	-	-

explain why there are very few marketing middlemen and the marketing machinery is still primitive in St. Lucia.

CHAPTER IV
SUMMARY AND RECOMMENDATIONS FOR IMPROVEMENT

This chapter presents a brief summary of the findings and outlines the policy considerations to improve the food marketing system. The purpose of this paper is to contribute to improving the marketing system in order to meet current as well as future needs of the St. Lucian economic system.

Summary

The study of the agricultural marketing system was sponsored by the United States Agency for International Development in Barbados to assist the St. Lucian Government in identifying the problems and to find the solutions to improve the performance of the food marketing system.

The specific objectives were (a) to identify the harvesting and marketing decision of St. Lucian farmers; (b) to identify the existing marketing functions and determine their effectiveness; (c) to determine marketing problems; and (e) to outline the policy alternatives for the solution of the problem.

A total of 150 random sample of farmers from four agricultural districts - Babonneau, Dennery, Vieux-Fort and Choiseul - were chosen based upon the crops grown and harvested during the months from June to August. A total of 86 farmers were interviewed.

The most common crops found to be grown were dasheens, yams, tomatoes and bananas. The Banana Growers Association assists its members in collecting, packing and shipping the bananas to foreign markets. But the marketing of the remaining produce is very disorganized with

farmers selling a large part of the produce directly to the consumers at the two main markets, Castries and Vieux-Fort. Middlemen such as Geeste Company, John Baptiste and Company, Valton Brothers and some small firms buy small quantities of produce from the farmers to export to England as well as surrounding islands.

The St. Lucian Marketing Board, established in 1968 to solve food marketing problems, has failed to achieve its objective. It handles only 2 percent of the total produce because farmers are dissatisfied with its low and non-guaranteed prices, arbitrary grading standards and unreliable pick-up service.

The study found that the exchange function is very simple in terms of the number of times goods are bought and sold. The price determination by farmers generally is based upon previous day's or week's prices with adjustment for the current market situation. The transportation system is disorganized; there are no established freight rates and most vehicles are used for hauling both passengers and freight. The marketing system lacked storage, processing and packaging facilities. Also, there are no uniform standards of product quality and measurements, financing and market information is very inadequate.

To summarize, the St. Lucian agricultural system has all the characteristics of a traditional agricultural system. A substantial portion of the national resources are devoted to producing export crops at the cost of domestic needs. Farmers are generally on a subsistence level with very little money left for improving their farming. Land holding of many of the farmers are so small and fragmented; they are uneconomical and mechanization is not feasible. The land tenure system is very crude

and outdated and substantial portions of land are controlled by absentee landlords. There is very little use of modern technology because of lack of capital, low level of education and limited incentives to farmers. The marketing system is chaotic and inefficient. Many of the farmers plant the same crop year after year despite the market glut at harvest time each year.

Recommendations for Improvement

Since the economy of St. Lucia is faced with a net deficit in its balance of trade and lacks sufficient raw material resources, it has to emphasize the development of either the tourist industry or agriculture for future development. With all her natural endowments, picturesque mountains and seashores and favorable climate, tourism can be a lucrative source of foreign exchange earnings. But this directly benefits only a limited number of people and does not solve the current problem of excessive food imports. In contrast, the development of the agricultural sector would be the logical source to generate capital for economic expansion. In the final analysis, agricultural development has to be emphasized to improve the welfare of the general public and to ensure national survival during periods of crisis.

The most critical and significant problem is the lack of necessary incentives to expand production of agricultural products. The SLMB presently provides no incentives to farmers because prices are low and guaranteed, and buying policies do not ease the glut of agricultural produce at harvest periods. Farmers prefer selling at retail rather than wholesale prices because they have enough time to sell their

small quantities at higher retail prices.

In order to ensure the rapid development of agriculture and an effective marketing system, several progressive policies should be formulated and adopted immediately. We recommend the following for policy considerations:

(a) Price Policies. Public policy should aim to modify and improve the marketing system. The most important policy consideration should be to encourage the farmers to expand output by adopting a policy that assures a market and provides assurance of a reasonable price.

The prime concern at this stage should be to encourage production. After incentives to production have been implemented, then the second stage should concentrate on balancing the supply with demand.

In order to achieve the desired increased production, the government will have to provide several incentives including credit and clear title to land. There must be easy access to necessary credit to buy inputs, which are often expensive but needed to expand production. For example, costs of inputs are high for an average farmer on subsistence level when fertilizer imported from Trinidad (12-4-24 Compound) costs EC\$33 for 112 pound bag and insecticides costs EC\$34 per pound (excluding the costs of transportation). To combat these problems, the Agricultural and Industrial Bank should provide liberal financing to all farmers without red tape and at a reasonable rate of interest.

The public policy should aim to replace the present land tenure system with progressive land reform programs. A major emphasis should be placed on transfer of unused land from the absentee landlords to farmers for

productive uses, and to provide equitable sharing arrangements and incentives for farmers to use more and better inputs to expand production. Finally, it should work to eliminate uneconomically small land holdings and to facilitate mechanization. Currently, a large proportion of land is controlled by absentee landlords who are motivated only for speculative gains and care very little about agricultural development or increasing inputs. Likewise, farmers have no incentives for using better and more inputs to expand output as the sharing arrangements do not equitably compensate them as tenants. Furthermore, these tenants cannot even borrow money from AID to buy inputs because they lack a clear title. Therefore, the government must initiate a land reform program as soon as possible to eliminate absentee land holdings, to provide incentives to farmers and to consolidate the fragmented and uneconomical size of farms.

(b) Policies to Improve Facilities. Lack of storage and processing and inadequate transportation and communication facilities are critical problems facing the St. Lucian economy. Transportation and communication are the most limiting problems for farmers. Despite an improved road connecting Castries and Vieux-Fort, there are very few feeder roads linking the production and consumption areas. The communication system is totally inadequate and not many transport vehicles are available for handling the farm produce. Extensive transportation and communication networks or connecting roads, farm produce cannot be rapidly transported from production sites to main markets. Also, inefficient transportation results in greater waste and slows down the flow of goods to the market. All these increase the cost to both producers and consumers. Therefore, priorities should be given to the construction of

both main and feeder roads. An attempt should also be made to provide more reliable and regular transportation and communication networks to move goods efficiently from the farm to the assembly points, and then to the main markets.

As production expands, there will be a need for storage facilities. Since "excessive price fluctuations for food grains during the period between harvests and from one region to another may be traced to inadequate storage capacity..."²³ it is very important that steps be taken to establish storage facilities in strategic areas, some near the main markets and some near the production points which could also be used as assembly points. Further, the storage facilities must be operated to benefit all farmers and middlemen. Although sophisticated facilities with refrigeration may not be feasible in the beginning, cool, well-ventilated places may be adequate. The SLMB could undertake the responsibility of building and managing the storage facilities until private entrepreneurs could participate.

Some consideration should also be given to establishing processing facilities for many of the farm products. Most farm products are raw and ultimately need further processing. Also, as people's incomes increase, demand for more services such as processed food goes up. Many of the activities previously carried on at home would be transferred to market and this means the marketing system must be able to handle these change demands for services and for processed products.

(c) Policies to Provide and Improve Services. Increased production

²³Kriesberg and Steele. Identifying Problems of Food Marketing, p. 21.

necessitates several services to facilitate the marketing. Lack of these services creates inefficiencies and economic losses.

First, the government should immediately pass legislation to introduce mandatory uniform standards of measurement of products. This means establishing a standardized measurement system with widely known and accepted uniform measuring devices. Lack of uniformity has created confusion and inefficiency in the marketing system. It has also encouraged cheating, slowed down the buying and selling of produce and made the prospect of mass marketing almost impossible. Uniform weights, measures and containers should be established and their use made mandatory to combat these problems. In addition, product grade standards and regulations for inspection, labelling and packaging should be established.

Second, better market news and information about production, supply, demand, price and other vital information should be provided through radios, newspapers, and other media, to aid in decision making.

Third, incentives should be provided to encourage more entrepreneurs to engage in performing marketing services. The provision of intermediate credit at a reasonable rate should be considered, and cooperative societies might be set up to take care of marketing of produce as well as inputs, especially to supplement the SLMB.

(d) Policies to Improve SLMB. Since the island already has an established marketing board, we recommend that it be reorganized and its operations made effective. For this the board needs to change its image and adopt several progressive policies so that farmers feel encouraged and rewarded in dealing with it. In order to achieve those basic objectives, the board should adopt several of the following policies.

First, the board should provide leadership to farmers and assist them in marketing their produce, both domestically and internationally. Small and scattered farmers lack the resources to independently engage in regulating their outputs, finding and enlarging the market or exporting to foreign markets. The board with its resources, expertise and available alternatives is in a better position to organize the farmer's marketing efforts. Therefore, we recommend that the board adopt an open buying policy to purchase everything farmers offer for sale at the wholesale price, and, then arrange for resale at both wholesale and retail levels. Additionally, to encourage maximum production the board should buy all produce on a uniform grading basis and should guarantee farmers a minimum price for all produce. Over the years, the board should thoroughly inform and educate farmers as to the benefit of maintaining quality and should institute a reward system to those who grow better quality produce.

SLMB must formulate and adopt permanent policies with respect to quantity, price, time and manner of delivery, pick-up service and quality requirements. Most important of all is the price policy that will provide incentives for greater production by guaranteeing a minimum price. Such a price provides farmers a clear ideal of expected returns and assists them in making other basic decisions long before planting period. The price policy must also provide a premium to encourage farmers to sort and bring only the better quality produce. Marketing margins should be kept at a reasonable rate to earn farmers' trust and the board should give a bonus to farmers if there is a profit. Pick-up service should be expanded and made very reliable and the board must differentiate and pay a higher price to compensate for transportation costs for delivered produce in

contrast to produce it picks up. Changes in any of the policies should be well publicized long before the planting periods so that farmers can change their plans.

We further recommend that the SLMB be made a semi-governmental, cooperative type agency with growers owning 50% or more of the shares. The ownership and the representation by farmers would make the board more effective in earning farmers' trust and respect. Farmers, who could not afford to buy shares, should have installment payment options so they can repay from their future sales proceeds.

Second, the SLMB should take the initiative in improving the marketing system. The board should aim to have an orderly marketing system including the institution of production control to eliminate gluts.

The board should plan, coordinate and direct the activities of producers to grow necessary outputs, to match demand and supply and to reduce excess supply of some marketing machinery in order to give consumers what they want in a convenient quantity and at a convenient time and place. The board should: (a) set up an adequate collection system to transport output from farms or buying points to the main markets; (b) establish effective marketing practices among farmers and sellers; (c) recommend the standards of quality and weight and enforce the same; (d) establish transportation, communication, storage and processing facilities; (e) provide credit through Agricultural and Industrial Bank; (f) provide an insurance program; (g) provide market information to all farmers and sellers; and finally, (h) it should locate outlets near the consumers, open at convenient times and provide goods in convenient units. Changing the existing marketing system would substantially reduce the

use of the Castries and Vieux-Fort markets and the board could then operate these facilities as an outlet for its products.

Third, the board should provide strong leadership and organized effort to expand exports and simultaneously reduce imports. For this the board should determine improved methods of preservation, alternative uses of existing products and creation of new markets. St. Lucia should look at expanding trade relations with other nations to export many of the surplus agricultural produce. And the board should promote its growers' products in other countries by utilizing various promotional mediums - directly advertising in food buyers' publications of major countries, inviting agricultural officials or businessmen to St. Lucia, sending trade delegates to other countries, participating in international, regional and national food fairs or agricultural fairs, sending promotional letters directly to potential buying firms and using other sales promotions.

We recommend the board seek cooperation from other surrounding islands to adopt a regional export policy and activities.

Efforts should also be made to encourage the use of many products available in the country but hitherto unused. For example, almonds and celery hearts could be very profitable crops for export.

Finally, we recommend the board undertake research to identify the profitable cash crops, to determine alternative uses for existing products and to identify improved methods of preservation such as drying, pickling, freezing, blanching, canning and so on to find the most economical method of extending product life.

Research and Extension Policies. There has been a lack of sufficient investment in agricultural research and extension services. This resulted

in poor agricultural and marketing systems because of the lack of better adapting varieties of seeds, and plants, better methods of cultivation, efficient marketing channels, and preservation techniques and alternate use of products.

Although extension services do exist in St. Lucia they lack the necessary resources, including manpower to function properly. Presently, extension agents work hard but they must combat ingrained, inefficient ideas. Their attempts have been less than effective because farmers tend to ignore advice unless they see immediate and tangible results. They resist change and keep on doing what they have been doing for years regardless of the results. For example, many farmers have been planting yams and dasheens the same time year after year, resulting in an excess supply at harvest time. This glut has lowered their incomes, but still they continue to plant these crops in large quantities.

We recommend that the government adequately fund agricultural experiment research programs as well as extension programs. The primary purpose of agricultural experimentation will be to develop programs to find better seeds, better farming practices and improved scientific knowledge. The extension services should, then, disseminate these research findings to the farmers. One of the most important immediate extension services could be to educate farmers about improved farming methods and assist them in planting other crops teaching them to vary the planting periods to eliminate the glut of produce on the market.

To conclude, the following are the recommendations presented for consideration:

1. Adopt a price policy that first provides incentives for expansion of outputs and then matches supply with demand.
2. Provide farmers easy access to credit.
3. Initiate a land reform program that encourages productive uses, eliminates absentee landholdings, provides incentives to farmers and consolidates small holdings.
4. Provide priorities to the construction of main and feeder roads to link production and consumption centers. Plan to provide reliable transportation and communication networks to efficiently move goods.
5. Plan for establishing storage and processing facilities.
6. Pass legislation to introduce mandatory uniform standards for weights and measures and voluntary standards for product quality grades and standards.
7. Provide better market news about production, supply, demand, and price to all farmers, sellers and consumers.

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