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CARIBBEAN TOURISM RESEARCH & DEVELOPMENT CENTRE

A STUDY OF

LINKAGES BETWEEN

TOURISM & LOCAL AGRICULTURE

IN

GRENADA
ST. VINCENT
ST. LUCIA
THE BAHAMAS

FINANCED BY

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AND

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MANAGEMENT CONSULTING AND TRAINING

1984-03-29

Mr. Luther Miller,
Caribbean Tourism Research & Development Centre,
Mer Vue,
Hastings,
CH. CH.

Dear Mr. Miller,

We are happy to submit the final report of the study on Tourism Agriculture Linkages in Grenada, St. Vincent & the Grenadines, St. Lucia and the Commonwealth of the Bahamas with which we have been involved during 1983 under technical assistance from the United States Agency for International Development and the Caribbean Development Bank.

This project identification assignment posed a specific challenge in that, although the identification of agricultural projects has been thoroughly researched in the past, the identification of projects on the interface between tourism and agriculture have not been comprehensively considered.

This report attempts to redress this situation by proposing model identification projects arising from experience in the Eastern Caribbean and in the Bahamas.

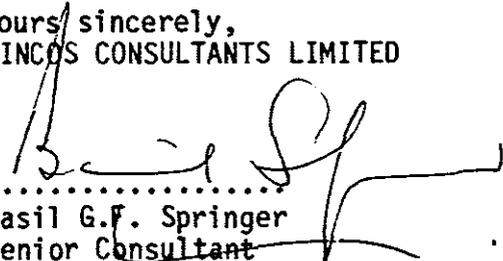
Over the last 5 years, we have collaborated with consultants from the Rural Development and Agriculture Consulting arm of Deloitte Haskins and Sells Associates in over 25 multi-disciplinary projects within the agricultural sector. DH+SA personnel also contributed to this study as part of the SYSTEMS project team.

We trust that the circulation of this document within the tourism sector of your member states will sufficiently stimulate the much needed tourism agriculture linkages which will ultimately contribute to the development of both the tourism and agricultural sectors within the Caribbean.

The steps beyond this project identification phase are many and varied and we stand ready to follow on from the initiative of this study should the response to these proposals find favour in the appropriate economic sectors.

With best wishes,

Yours sincerely,
SINCOS CONSULTANTS LIMITED


.....
Basil G.F. Springer
Senior Consultant

BGFS:mmm

TOURISM AGRICULTURE LINKAGES IN GRENADA, ST.VINCENT AND THE
GRENADINES, ST.LUCIA AND THE COMMONWEALTH OF THE BAHAMAS

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E. EXECUTIVE SUMMARY

E.1 The Model

Linkages between tourism and agriculture, like all socio-economic matters, depend for their long term success on the effective functioning of many components of a complex system. It is against this basic understanding that this study of tourism/agriculture linkages in Grenada, St. Lucia, and St. Vincent and the Grenadines was conducted.

Our formulation of the system within which tourism/agriculture linkages take place, identified ten basic system components. These are:

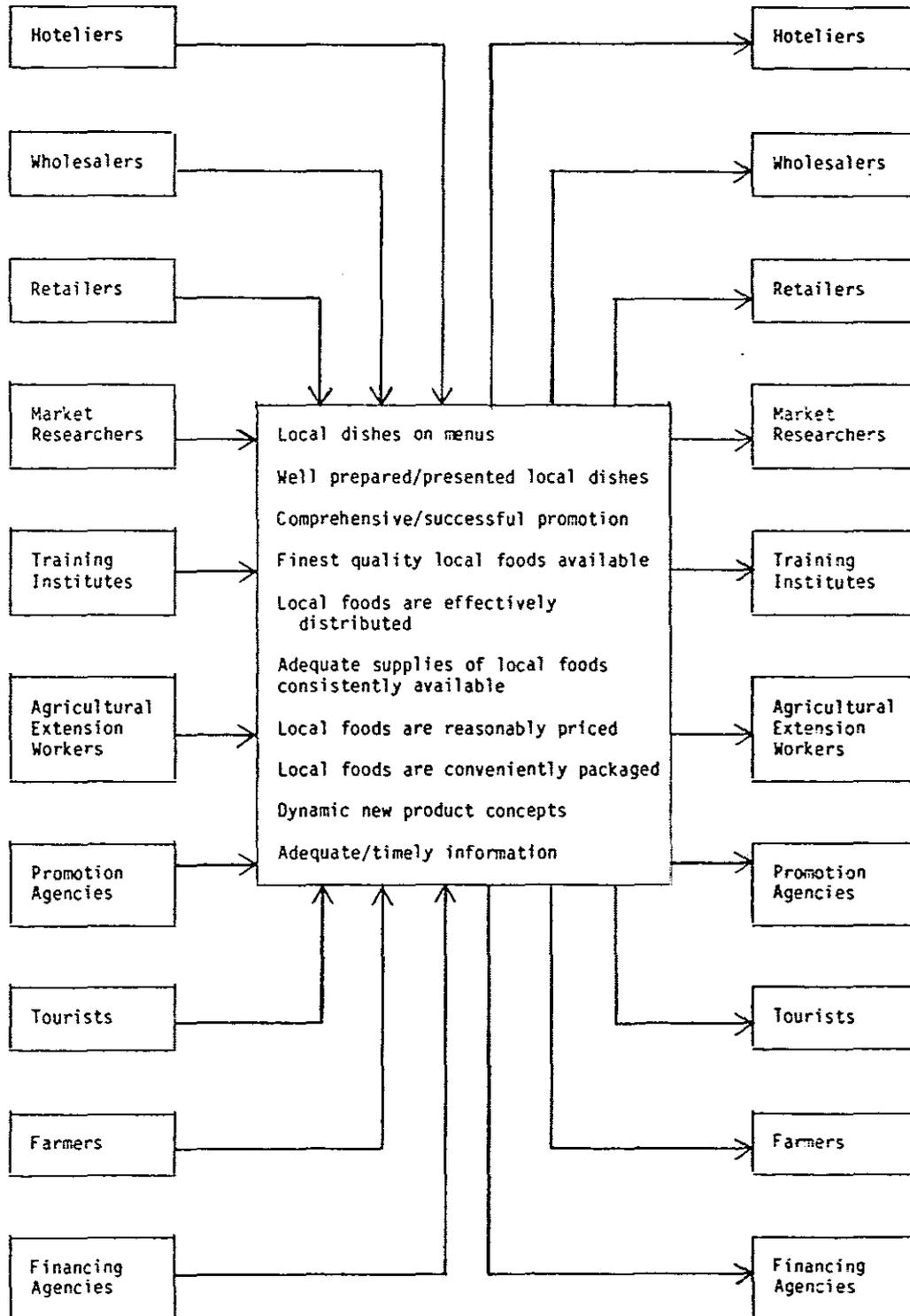
- hotels and restaurants (including their staff)
- wholesalers
- retailers
- market researchers
- promotion agents
- training institutes
- financiers
- agricultural extension officers
- farmers
- tourists

Each of these components provides flows of information and/or produce and/or financial resources into the overall system. Such inputs are often shared by many of the components which transform these inputs into products and achievements which they then supply to other components or external systems. The diagram below illustrates the interconnected or "pooling" nature of this system for creating and sustaining tourism/agriculture linkages.

Because of the pooling nature of the system, shortcomings in one component tend to reduce the successful operation of other components, to the extent of causing failure in some of these other modules. For example, a poorly functioning market research component which does not provide adequate information on product characteristics required by tourist consumers, or on volumes and seasonality of demand, will cause farmers, wholesalers, retailers, extension workers, hoteliers, and tourists to be frustrated in their attempts to create a tourism/agriculture linkage.

Figure E.1

Entity contributes to SYSTEM contributes to Entity



INTERDEPENDENT NATURE OF TOURISM-AGRICULTURE LINKAGES

Each disturbance eventually ends up with a failure of the hotel-tourist link or the retailer-tourist link. But, since these two links are those which provide the points of increased tourist consumption of local foods, then the objectives of the programme are frustrated by any ineffectiveness in the operation of these two links.

The entire system must work well in all its subsectors if the final objectives of increased tourist consumption are to be achieved.

E.2 The Current Situation

E.2.1 Qualitative Assessment

In Grenada, St.Lucia, St.Vincent and the Grenadines, and the Commonwealth of the Bahamas, agricultural development is constrained because of three fundamental factors:

- prices for local fresh produce are frequently high, both in absolute terms and relative to processed alternatives;
- the quality of local fresh produce is, often, both low and variable, and does not fit the demand requirements of a sophisticated tourist outlet; and
- supply availability is inconsistent which, again, does not fit the requirements of a buyer who has to know food requirements each week in advance.

In the Windward Islands, these three fundamental factors reflect the interaction of many sub-factors that combine to constrain agricultural development:

- the domestic market for local produce in each of the territories is relatively small, and the tourist segment is only a small component of this small market total. Very likely, demand is relatively constant, but supply can vary sharply, reflecting yield and acreage variations; as a result, prices for fresh produce can fluctuate sharply, both between and within seasons. Local hotels and restaurants set meal prices in advance of actual sales, and require advance knowledge of input prices - local produce prices are an unknown factor, whereas imported food product prices are more predictable;

- in the past, both buyers and sellers of produce have reneged on verbal contracts made to supply/produce food items. For example, if prices rise unexpectedly, farmers are tempted to market produce for the highest price attainable, irrespective of previous commitments made, and food buyers have done likewise when unforeseen gluts have depressed local prices. As a result, there is an atmosphere of mistrust which pervades relationships between buyers and sellers of fresh produce which serves to confound long-term market development;
- the market infrastructure and level of post-harvest skills within the Windward Islands is, frequently, inadequate to deliver high quality items from point of production to point of consumption. For example, farmers may harvest produce incorrectly, leave it in the sun too long after harvest, pack the produce incorrectly in unsuitable packaging material, further damage the produce in transporting it to market point. Or even pre-harvest, the farmer may have planted the wrong variety to meet market requirements, had insufficient funds to purchase the necessary inputs to maintain product quality, and received inadequate extension advice as to how to maintain pre-harvest product quality.

These problems which can be identified throughout the production and marketing system for fresh produce in the Windward Islands, cannot be removed at a stroke. Individual problems may be only minor and seemingly surmountable, but the inter-dependent nature of the production and marketing system and the propensity for results of individual problems to be additive, must be taken into account when addressing the triad of fundamental agricultural development problems - price, quality and supply availability.

Within the Windward Islands, the tourist sectors have insufficient demand for fresh produce to stimulate the development of agriculture of its own tourist-driven accord. Yet, the tourist sector can play a vitally important part - along with other segments of the local market, plus the export sector focussed at intra- and extra-regional markets - in the development of the local agricultural sector if the integrated nature of the food production and marketing system is acknowledged and if development programmes are directed at the system as a whole and not at individual and unconnected points in the system.

E.2.2 Survey Results

Surveys were conducted to estimate the likely extent of food consumption in the tourist sector. The surveys also identified the basic foods consumed and the source of such foods, as a preliminary step to identifying the prospects for increased linkage between tourism and agriculture. Further, supply problems limiting the extent of linkage were researched during the surveys. The results of these surveys were later used to assist in project identification.

Key results of these surveys include:

- Total tourist sector food consumption for all islands equalled an estimated EC\$23.3 million or 7.15 million lbs. of produce.
- By comparison, tourist sector fruit and vegetable consumption alone in Barbados equalled 9.4 million lbs. in 1981.
- Total imported tourist sector food consumption equalled EC\$12.5 million (53.6% of expenditures) or 2.9 million lbs. (40.6% of weight).
- Total tourist sector beverage consumption equalled an estimated EC\$4 million of which EC\$2.5 million (62.5% by value) was imported.
- St.Lucia accounted for 70% of the group's expenditures on food, and 61% of expenditures on beverages. Its share of imported foods was, however, even higher at 75%, while beverages were lower at only 51% of imports.
- Grenada, with 18% of all tourist food expenditures and St.Vincent with 12%, were of considerably less importance. Of the two, however, Grenada is a far larger importer, accounting for 25% of all imports to St.Vincent's 10%.
- The degree of dependence upon imports is linked to the relative importance of out-of-region visitors. In St.Lucia, 77% of hotel meal costs are attributable to this category of visitor. Figures for Grenada and St.Vincent are 61% and 57% respectively. The differences were even larger for restaurant meals.

- Dependence upon imports does not appear to be linked to seasonality which is strong in all cases. Both St.Lucia and St.Vincent served approximately 2.5 meals/day in the high season for every meal/day in the low season. For Grenada, the figure is approximately 2 per day.
- Meat and seafoods together account for at least 50% of expenditures in all cases (with seafood generally 2/3 of meat costs).
- But at least 70% of all meats (by value) are imported - particularly steak, processed meats and (except Grenada) chicken - while for seafood, only St.Lucia achieved 17% imported (by value). Grenada (3%) and St.Vincent (10%) were much lower. Shrimp is the only major imported seafood expenditure.
- Dairy goods (except in some cases, eggs) are entirely imported, and account for between 8% (Grenada) and 20% (St.Lucia) of all expenditures.
- Fruits and vegetables account for between 20% and 25% of all food expenditures, and are primarily local. Canned juice is a major import by value however.
- Oils and fats are significant imported items.
- St. Lucia possesses a much more developed wholesaling sector than the other two islands, largely as a result of the size of the market.
- Despite the above, greater dissatisfaction exists with regard to supply and quality in St.Lucia than for the other islands.
- Almost all hotels and restaurants attempt to impart a Caribbean flavour to at least some of the dishes presented. Availability of foods was also a major deciding factor in planning menus.

A previous study had already been undertaken for the CTRDC concerning linkages in the Commonwealth of the Bahamas. This study, therefore, was restricted to a qualitative update of the situation. Interviews with

key industry and government personnel in the Bahamas, elicited the following:

- The Ministry of Agriculture sees only a very limited role for local agricultural production.
- Little need is felt by the government for changing present strategies with regard to agricultural production.
- Should the above attitudes change, a restructuring of the marketing system would be of prime importance.
- Future development should rely on specific target crops rather than an overall expansion of agriculture.
- Increased cooperation of different components of agriculture-tourist linkage is needed (i.e., growers, traders, hotel and restaurant buyers, government officials).
- Awareness of 'local' restaurants (those serving a higher proportion of domestic production) is poor among tourists and needs to be increased.

Qualitative factors were also evaluated in the Windward Islands. Most of the supply problems which the second parts of the surveys identified are symptomatic of poorly-functioning or even missing modules in the tourism/agriculture linkage system.

Firstly, many fruits are out of season during the peak months of tourist traffic to the islands. It appears that the greater the size of the tourist sector, the less the countries are able to meet the tourist demand for food. Farmers, it seems, need to get help from financiers and extension agriculturalists to extend the season for many of these fruits.

Secondly, the complaints about poor quality and poor reliability of supply are very likely related to the absence of a well functioning wholesale section supplying local produce to the visitor trade. The absence of wholesaling units is, however, not the only reason for the poor supply of meat; other parts of the system are clearly not functioning adequately. For example, the agricultural extension

component probably needs to pay more attention to livestock husbandry. The training component needs to place more emphasis on curing meats and on cutting meats. The wholesale component needs to use trained butchers and to provide the appropriate cuts of meat for the trade.

Part of the problem of unreliable meat supply, as indeed the supply of all produce, may be the poor state of market information. Reliable, regular, and timely information on produce requirements - quantity, quality, unit sizes, and timing - in the tourist sector does not exist. Thus planning for production becomes a much harder task and the ensuing situation is one of irregular supply.

While menus are planned to make use of available local produce and to offer some local dishes, one does not get the feeling that a great deal of effort is made to promote local cuisine or to improve that cuisine, as offered to the tourist trade. Certainly no particular glamour or professionalism surrounds the local cuisine to attract tourists to such foods.

No one knows how well tourists would like local cuisine when served such food on other than the rare occasions. With this lack of information, it is no wonder then, that hoteliers and restaurateurs generally react fairly cautiously to supplying local dishes to the tourist trade.

E.3 Projects

E.3.1 Format

The study goes on to consider projects which can increase and strengthen the linkages between tourism and agriculture.

Twenty three projects were identified and capsule project descriptions have been provided. These capsule descriptions include for each project:

- products
- markets
- material requirements
- skill requirements
- equipment needs
- potential implementing agencies
- rough cost estimates

- likely financing services
- qualitative macroeconomic benefits
- benefits which would strengthen the system for tourism/agriculture linkages

E.3.2 Benefits

Significant benefits, both direct and indirect, will be reaped from these projects. These benefits are macroeconomic benefits as well as system benefits in that they provide a strengthening for the tourism/agriculture linkage model to function better in the future. The system benefits therefore provide the suitable setting from which economic benefits may be less arduously achieved.

E.3.3 Direct Benefits

Four basic direct economic benefits and ten "system" benefits have been identified from these projects. These are:

Direct Economic Benefits

Foreign exchange savings/earnings
 Use of currently wasted produce
 Use of currently idle land
 Increased employment, income

System Benefits

Local dishes on menus
 Well prepared/presented local dishes
 Comprehensive/successful promotion of local foods
 Finest quality local foods
 Effective distribution of local foods
 Consistent/adequate supplies of local foods
 Reasonably priced local foods
 Convenient packaging of local foods
 Dynamic new products
 Adequate/timely information

The ways in which each project contributes to these benefits are summarized in Tables E.1 and E.2 below. The presence of an 'X' in a benefit column and a project row indicates that the project contributes to that benefit.

Table E.1
Summary of Macroeconomic Benefits

Projects	Foreign exchange earnings	Foreign exchange savings	Use of waste resources	Increased incomes	Increased employment
1 Local food and beverage promotion programmes	X	X	X	X	X
2 Tourism food and beverage research & development unit		X	X	X	X
3 Developing local cuisine		X			
4 Slaughtering/processing facilities		X		X	X
5 Training of butchers		X		X	X
6 Improving wholesaling facilities	X	X	X	X	X
7 Distribution of partially prepared local foods		X	X	X	X
8 Extraction of fruit essences/purees		X	X		
9 Production of snack foods		X	X	X	X
10 Production of exotic juices/drinks		X	X	X	X
11 Production of jams/jellies/ preserved fruit		X	X	X	X
12 Production of exotic fruit liqueurs	X	X	X	X	X
13 Production of fruit based candies		X		X	X
14 Production of honey	X	X	X	X	X
15 Production of local hot beverage mixes		X	X	X	X
16 Production of processed meats/fish		X	X	X	X
17 Expansion of fruit orchards		X	X	X	X
18 Expansion of shrimp production	X	X		X	X
19 Expansion of meat/milk production		X	X	X	X

Table E.1 (continued)

Summary of Macroeconomic Benefits

Macroeconomic Benefits Projects	Foreign exchange earnings	Foreign exchange savings	Use of waste resources	Increased incomes	Increased employment
20 Provision of production coordinating services			X	X	X
21 Artificial insemination unit for cattle				X	X
22 Herd registration				X	X
23 Institutional development	X	X	X	X	X

Table E.2

Summary of System Benefits

System Benefits	Local dishes on menu	Well prepared/presented local dishes	Comprehensive/successful promotion of local foods	Finest quality local foods	Effective distribution of local foods	Consistent/adequate supplies of local foods	Reasonably priced local foods	Convenience packaging of local foods	Dynamic new products	Adequate/timely information
Projects										
1 Local food and beverage promotion programmes	X	X	X		X			X	X	
2 Tourism food and beverage research & development unit			X		X	X		X	X	X
3 Developing local cuisine	X	X	X						X	
4 Slaughtering/processing facilities				X	X	X		X		
5 Training of butchers				X	X			X		
6 Improving wholesaling facilities			X	X	X	X	X	X		X
7 Distribution of partially prepared local foods				X	X	X	X	X		X
8 Extraction of fruit essences/purees				X					X	
9 Production of snack foods		X	X	X				X	X	
10 Production of exotic juices/drinks				X	X	X		X	X	
11 Production of jams/jellies/ preserved fruit		X		X	X	X		X	X	
12 Production of exotic fruit liqueurs			X	X				X	X	
13 Production of fruit based candies			X	X				X	X	

Table E.2 (continued)

Summary of System Benefits

System Benefits	Local dishes on menu	Well prepared/presented local dishes	Comprehensive/successful promotion of local foods	Finest quality local foods	Effective distribution of local foods	Consistent/adequate supplies of local foods	Reasonably priced local foods	Convenience packaging of local foods	Dynamic new products	Adequate/timely information
Projects										
14 Production of honey				X		X			X	
15 Production of local hot beverage mixes				X		X		X	X	
16 Production of processed meats/fish		X	X	X	X	X		X	X	
17 Expansion of fruit orchards				X		X	X			
18 Expansion of shrimp production				X		X	X			
19 Expansion of meat/milk production				X		X	X			
20 Provision of production coordinating services				X		X	X			X
21 Artificial insemination unit for cattle				X		X	X			
22 Herd registration				X		X	X			
23 Institutional development	X	X	X	X	X	X	X	X	X	X

E.3.4 Indirect Benefits

Indirect benefits would be reaped from the projects which have been identified. In particular, the expansion of dairy and beef herds with appropriate extension of adequate abattoir facilities will provide a great deal of raw material to be used in other projects. Such projects would make use of hides and skins, offal, cream and curd to provide non edible, animal feed, and edible products respectively.

Similar indirect benefit would be obtained from bee-keeping for honey. The beeswax produced could be used in the batik industries developing in all the territories, or exported.

E.3.5 Project Priorities

Criteria

The projects identified and profiled may be implemented with significantly differing degrees of difficulty. In respect of each project, the The difficulty stems from the:

- size
- complexity
- financial needs
- requirement for key support services
- degree to which feasibility analyses and operational plans may exist

Additionally, the right conditions must exist if some of the larger and riskier projects are to succeed. Many of the smaller projects are designed to create just such conditions. Advantageously, these projects can generally succeed even in the current state and size of the tourism and agricultural sectors of the economies of the territories being considered. Very often, these smaller and earlier projects will use the existing agricultural production now going to waste. By so doing, these projects will generate the confidence in, and enthusiasm for effecting the linkages between tourism and agriculture.

These considerations condition the level of priority placed on the various projects which have been profiled.

E.3.6 Rankings

Three broad implementation levels have been identified. They are:

- Implementation Level A - for projects which could be implemented within 1-1/2 to 2-1/2 years from now.
- Implementation Level B - those projects which could be implemented within 2-1/2 to 4 years from the present.
- Implementation Level C - those projects which could be implemented within 4-5 years from now.

These projects, by priority rating are:

Table E.3
Project Implementation Rankings

<u>Priority</u>	<u>Project</u>
A1	Production of processed meats and fish.
A2	Establishment of a local food and beverage promotion programme.
A3	Establishment of a tourism food and beverage research and development unit.
A4	Developing local cuisine.
A5	Slaughtering and processing facilities.
A6	Training of butchers.
A7	Improvement of local wholesaling facilities for local produce.
A8	Distribution of partially prepared local foods.
A9	Production of "exotic" and other fruit juices and drinks.
A10	Production of snack foods from local produce.
A11	Artificial insemination unit for cattle.
A12	Expansion of shrimp production.
A13	Extraction of essence concentrates.
B1	Provision of production coordinating series.
B2	Production of jams/jellies and processed fruits.
B3	Herd registration.
B4	Institutional strengthening/building.
B5	Production of honey.
B6	Expansion of meat and milk production.
B7	Expansion of fruit orchards.
C1	Production of exotic fruit liqueurs.
C2	Production of fruit-based candies.
C3	Production of local hot beverage mixes.

Some of the projects in the different priority groupings may really be seen as phases of one large project. Examples of these are:

- I. Slaughtering and processing facilities
 - Training of butchers
 - Production of processed meats
 - Herd Registration
 - Artificial insemination unit for cattle
 - Expansion of meat and milk production

- II. Production of "exotic" and other fruit juices and drinks
 - Production of jams/jellies, processed fruits
 - Expansion of orchards
 - Extraction of essence
 - Concentrates, purees
 - Production of fruit liquors
 - Production of fruit candies

The project priorities, of course, reflect only the consultants' views of:

1. the ease of implementing various projects;
2. the need for quick results in the marketing of local foods in order to provide stimulus for increased local production;
3. the relative weakness of the different parts of the model postulated earlier.

Even now, however, priorities of the final decision makers on the order in which projects should be implemented, may diverge from those of the consultant team. By the time the projects come to be implemented, priorities of the various decision makers may not themselves be convergent. Because of the likely differences in project implementation rankings then, an institutional mechanism must be recommended to bring order to the process of project implementation.

E.3.7 Institutional Mechanism

The Ministers of Tourism who are the governors of the CTRDC should appoint from among CTRDC staff and officials of the various ministries of tourism, a small advisory team called the Tourism-Agriculture Linkage Priorities Advisory Sub-committee, to present proposals to a Tourism-Agriculture Linkage Priorities Committee, consisting of (a subsection of) Ministers of Tourism. This Ministerial Committee would then make the final decision on the order of implementation of projects to which the governments and their agencies would give support.

E.4 Conclusion

We must not however believe that implementing these projects will in itself cause such great linkages to develop or that the national economies will be suddenly and heavily impacted.

We must however start to provide more impetus to the process of linkage between tourism and agriculture. Once the process starts and is kept going for a while, it will build enough momentum to sustain itself and to bring about even more linkages. The projects identified here, although they span over 7 years, are only those required to enable this system of tourism/agriculture linkages to gain "critical mass".

TOURISM/AGRICULTURE LINKAGES IN GRENADA, ST.VINCENT AND THE
GRENADINES, ST. LUCIA AND THE COMMONWEALTH OF BAHAMAS

1.0 INTRODUCTION

The last decade has seen considerable growth, throughout the Caribbean, in the importance of the tourist industry to the economies of countries in the region. It is often claimed, however, that much of the foreign exchange earned through the tourist sector is immediately lost to purchases of imported goods or amortisation on tourist plant investment. This leakage of earnings has attracted particular attention with respect to food and beverage consumption in the tourist sector, for in this area at least, the possibility exists for the replacement of a portion of the imported goods with domestic produce. Such a consideration is of particular importance, given the still preponderantly agricultural economies of many of the Caribbean islands.

As a result of these considerations, the Caribbean Tourism Research and Development Centre initiated, in 1981, a series of studies to determine the nature of existing and potential future linkages between agriculture and tourism in a range of member countries. Assistance in this effort was provided by UNDP/WTO, USAID, OAS and CDB. This study, encompassing Grenada, St. Vincent and the Grenadines, St. Lucia, and the Commonwealth of the Bahamas, is one contribution to this ongoing programme.

1.1 Objective of Project

The objective of this report is to identify projects to benefit the Bahamas and the three southern Windward Islands contributing through the goal of creating intra-sectoral and inter-sectoral linkages between the tourism and agricultural sectors. Sub-objectives of the project are:

- (i) quantifying volume of demand for agri-products and the proportion of such products imported into the area by the tourism industry;
- (ii) identifying specific business opportunities for agricultural products that could be domestically or regionally supplied to the industry;
- (iii) quantifying leakages as a result of high imports or other factors related to the industry; and

- (iv) estimating possible macroeconomic benefits of improved linkage opportunities.

1.2 Terms of reference

The Terms of Reference of the project are outlined below:

- o Identify and assemble existing reports, studies and other data pertaining to food demand, especially tourist industry demand which are available in the target countries, the CDB or the CTRC library and are relevant to accomplishing this project's objectives.
- o Conduct surveys of a representative sample of hotels and restaurants in the Bahamas and the Southern Windward Islands, to identify specific patterns of food demand, including kinds of commodities, sources, seasonal variations and quality specifications.
- o Perform analysis of relevant data to determine the volume and value of food demanded by the tourist industry, disaggregated by major commodities and sources of supply.
- o Conduct interviews with key farmers, commodity traders and Government officials to determine likely national or regional supply sources for selected commodities demanded in significant quantities by tourist industry.
- o Identify and describe specific opportunities for food commodities which could be supplied in increased quantities from national or, where possible, regional sources.
- o Identify and describe specific opportunities for food processing and/or agri-business services that would significantly promote greater utilization of local food commodities by the tourist industry.

Project Description

The Caribbean Tourism Research and Development Centre (CTRDC) initiated a 'Tourism Linkages Project' in 1981, with the view to seeking ways of strengthening the linkages between tourism and the agricultural sector in the Caribbean. An initial study was undertaken in the Commonwealth of

the Bahamas, which focussed upon, inter alia, the characteristics of the market demand for food, the structure of the agricultural and food marketing sub-sectors, and the purchasing patterns of hotels.

Recommendations were developed for further specific project activities pertaining to tourist-agricultural sectoral linkage strengthening.

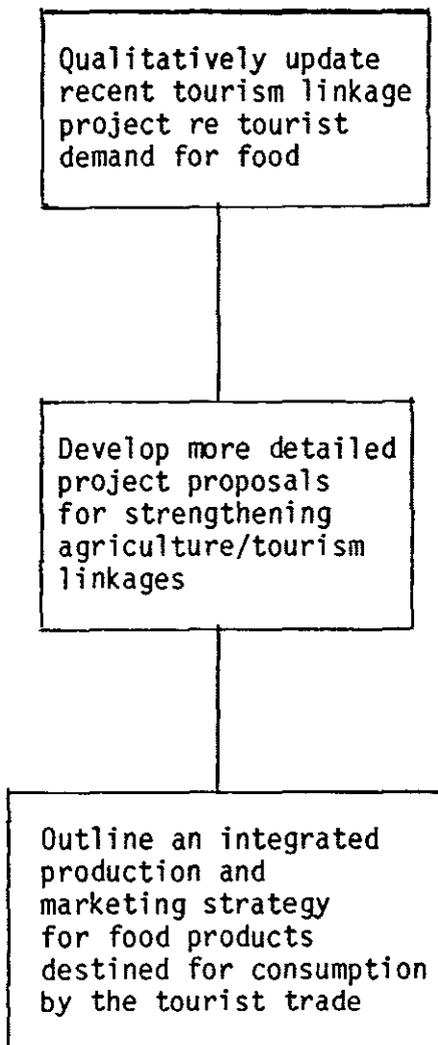
As part of this project, the consultants were requested to:

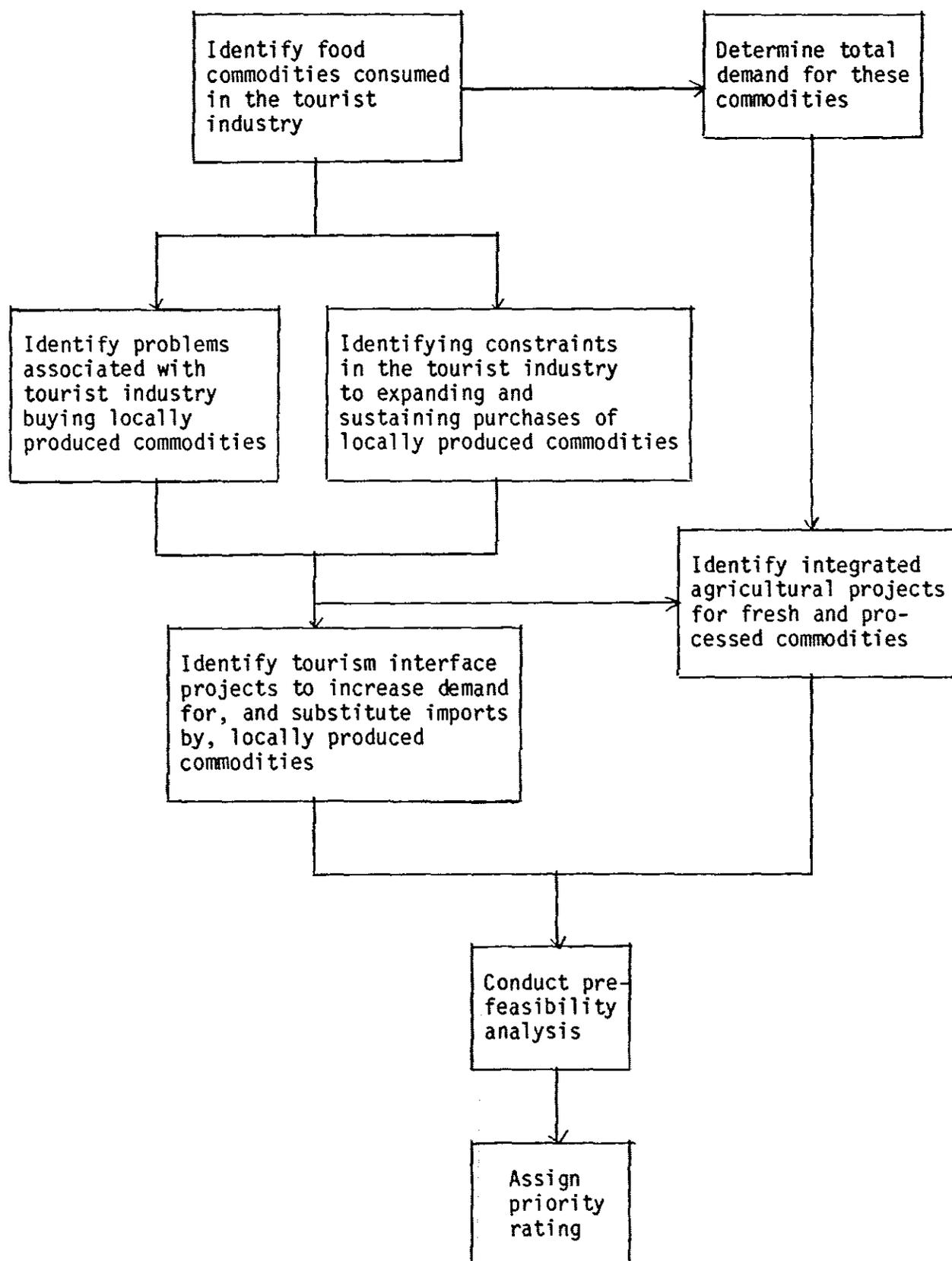
- provide a qualitative update of the Commonwealth of the Bahamas 'Tourism Linkages Project' report and then select specific recommended areas for further development;

- initiate qualitative and quantitative research in the Windward Islands and Barbados to identify supply and marketing opportunities for local and/or regional farm and processed agricultural products. The latter research component comprises five basic steps - desk research, qualitative design, field surveys, data analysis, synthesis of results and development of recommendations for project action.

TOURISM/AGRICULTURE LINKAGE STUDY

Approach to the Study - Commonwealth of the BAHAMAS



Approach to the Study - Windward Islands and Barbados

1.3 Introduction to Country Studies

As part of the overall study, and to provide a basis from which recommendations for increased linkages between tourism and agriculture could be made, the consultants undertook individual country studies of the four islands. An earlier study of supply and demand within the tourist sector of the Commonwealth of the Bahamas rendered a full survey in that island unnecessary. However, a two week visit was made to update and extend the information already available. During this visit, meetings were held with relevant government officials, buyers from the tourist sector and major importers, wholesalers and retailers supplying hotels and restaurants.

In the remaining countries (Grenada, St. Vincent and St. Lucia), a more intensive examination was conducted, including a detailed survey of food and beverage purchases of hotels, restaurants and marinas and discussions with suppliers (both those involved in production and those from the importing and wholesaling sectors). Survey results were analysed in detail and the results are presented for each country in the following sections (see below). In addition, available data pertaining to the tourist sector within each island was collected and attached to these sections, together with an overview of the agricultural supply situation for each island.

Taken together, therefore, these country studies provide a comprehensive picture of the current position of both the tourist and agricultural sectors in each island and the extent to which linkages exist between the two sectors. It should be noted, however, that although the survey results represent current conditions within each country, the contemporaneity of data relating to the tourist and agricultural sectors is dependent largely upon the speed of publication or analysis of data in each island. Although efforts have been made to update information through personal contact with the appropriate government departments, it is the case, particularly in agriculture, that a substantial time-lag nevertheless exists.

1.4 The Surveys

Over the period May 11 to June 30, 1983 a questionnaire was prepared, tested and administered to institutional users of foodstuffs and drinks in the tourist sector for the countries of Grenada, St. Vincent (including the Grenadines) and St. Lucia. Respondents were divided into three main categories; hotels providing meals ('full-service' hotels), restaurants and marinas (with provisioning facilities).

The questionnaire attempted to provide data for this study in two key areas relating to existing and potential linkages between the tourist industry and agriculture. Firstly, the survey sought data concerning the volume, value, seasonality and origin (local or imported) of foods and drinks used by the tourist sector. A range of categories of foods were identified including meats, sea food, dairy products, staples, vegetables and fruits. For each category, the most important individual products were specified. Similarly, the chief types of beverages were also specified. Sample results were aggregated and, through the use of available statistics on total rooms (hotels) or servings (restaurants and marinas) provided on each island, an estimate obtained of total food and drink consumption by the tourist sector.

Secondly, data was sought with regard to the factors influencing the institutions in their choice of supplies. Topics covered included supply problems, type of customers, storage facilities and the nature of marketing channels used. As linkage between the tourist and agricultural sectors is concerned largely with the prevention of excessive 'leakage' to imported goods, an understanding of the problems and constraints faced by institutional buyers in utilising local foodstuffs and drinks will aid in the design of more effective linkages in the future.

The methodology for undertaking the survey was the same in all cases. In the course of discussions with officials in the tourism sector, a complete listing of all hotels, restaurants and marinas servicing the tourist trade was obtained. Those restaurants dealing almost exclusively with local trade were rejected but all other establishments were contacted. Appointments were made to administer the questionnaire to all receptive establishments.

Response rates varied from island to island but in general, despite the length of the questions (approximately 1 hour) few refusals were received. (Response was, however, poor in Grenada - see Section 5.3.1). The questionnaires were always administered directly by an interviewer. The most commonly stated reason for refusal to participate was that no records were kept of purchases, and that, as a result, the manager or buyer was not in a position to supply accurate responses. It was the experience of the interviewers, however, that even where no records were available (a fairly frequent occurrence), most managers or buyers were well aware of the amount of food and beverage consumed. For some sections (e.g. beverage consumption) interviewers were referred to the particular person in charge (e.g. the barman).

The proportion of coverage obtained for each island is discussed within the country reports in Chapters 3 - 5.

Analysis of the survey results focussed not only on the products consumed in the tourist sector but also addressed the wider institutional framework within which linkages between tourism and agriculture occur. These linkages depend for their success on many activities and institutions outside of tourism and agriculture. Distribution activities, agro-industrial production, promotional efforts, training exercises and financial resources, all have a part in forging effective linkages between tourism and agriculture.

A model of the system for linkages is therefore presented very early in the report, in Chapter 2, to guide the interpretation of the entire report.

2.0 A MODEL FOR INTEGRATING
TOURISM AND AGRICULTURE

2.0 MODEL FOR INTEGRATING TOURISM AND AGRICULTURE

2.1 Introduction

The programme to increase the amount of local foods and beverages by tourists must be seen as a set of interrelationships between a wide span of institutions and practices. This chapter describes the various institutions with their characteristics, and examines the necessary relationships between the institutions if a programme to expand tourist use of local foods and beverages is to succeed.

Firstly, the various sets of people with roles to perform are identified. Then, the roles of these people are listed, along with the attributes which these people must possess if they are to meet their role demands. Many of these attributes are required, however, only when the different people have to interact with each other.

The third focus of this chapter, therefore, is to identify the various demands of each set of people on all the other groups (e.g., hoteliers' demands of wholesalers) and to define the outputs which each set of people must provide.

The final result is a model of the subsector which deals with tourist consumption of locally produced food and beverages. This model can then be used to evaluate the existing situation and the production sector's capacity to meet the food needs of tourists. The structuring of projects to match the model, in effect, becomes an objective which the project identification exercise seeks to achieve.

2.2. The System

2.2.1 The Components

A large number of groups are involved in the system to provide locally produced goods and services for tourist consumption. These groups include the following:

1. Hotel and restaurant personnel:
 - managers,
 - chefs,
 - purchasers,
 - waiters/waitresses.
2. Wholesalers.
3. Retailers.

4. Market researchers.
5. Training institutes.
6. Agricultural extension workers.
7. Promotion agencies.
8. Tourists.
9. Farmers.
10. Financial institutions.

2.2.2 Characteristics of System Components

2.2.2.1 Hotel Personnel

Hotel and restaurant personnel play a critical role in ensuring that tourists have the opportunity and the inclination to consume local foods and beverages.

Firstly, hotel personnel must:

- (i) provide local dishes on menus,
- (ii) educate tourists about the local dishes,
- (iii) advertise local food to tourists,
- (iv) ensure that high quality local foods are served to the tourists.

At the same time, however, the hotel personnel are concerned that:

- quality of local produce must be consistently high;
- supplies of local produce are consistently and adequately forthcoming;

- prices of local foods are not significantly above those of imported substitutes and are reasonably predictable;
- units of local foods are available in the controlled portion sizes which hotels prefer and which save labour costs in preparation;
- sources and seasonalities of various local foods are known to the purchasers so that the purchasing function can be adequately performed;
- chefs are able to prepare and present local foods appetizingly so that restaurant sales will not suffer from introduction of more local foods.

2.2.2.2 Wholesalers

Wholesalers have a pivotal role to play in this system. As usual, the wholesaler provides the link between the supplier and the purchaser of the goods. In this system, the wholesaler however has to do somewhat more than provide a distribution point. To date, this role has been performed only in a very weak fashion.

To a large extent, the wholesaler will have to:

- ensure the quality of produce reaching the purchasers;
- move fresh produce quickly before it spoils;
- promote the local produce to potential purchasers;
- package the produce into the portion-controlled and other sizes which purchasers want to buy;
- convey information about market needs and supply conditions to farmers and purchasers respectively;
- provide technology for efficient storage of large volumes of different types of fresh produce;
- (arrange to) process the fresh produce to the degree required by the purchasers.

2.2.2.3 Retailers

Retailers will find their role in the effort to increase tourist consumption of local foods by supplying produce to those tourists who stay in self-contained apartments with kitchenettes, or in houses where tourists provide their own meals.

In this role, these retailers:

- provide convenient distribution outlets close to where tourists stay;
- carry single-person controlled portions of produce;
- carry partially-prepared produce for ease of use of tourists;
- present attractive shelf displays of local produce;
- provide assistance and literature on how to cook various local foods;
- must be well trained to provide helpful service to customers.

Big wholesalers may well also have retail sections to cater to specific areas which are too small for a wholesale selling effort.

Through providing these services to tourists, retailers will also be in a position to provide the same services for local residents. As the local residents also increase their consumption of locally grown foods, then the market expands for these products and financial feasibility becomes more of a reality for projects geared to meet this demand. Particularly in the line of processing and packaging, expansion of the tourist market into the local residential market would provide a financial filip.

So far, this retail function for local produce has not been particularly well performed.

2.2.2.4 Market Researchers

The role of the market researchers is to produce useful market information in a timely and professional manner. However, the market

researchers will not be the only people to disseminate the information on markets to the other groups involved in the system. Promotion agencies, government extension officers and wholesalers will be the three major agencies engaged in this latter function, utilising results derived from the findings of the market researchers.

Market research will contribute to informed purchasing and planting decisions. Along these lines, market researchers will collect and analyse data on:

- areas planted in each crop,
- expected yield and time of reaping of each crop,
- varieties planted,
- number of tourists expected,
- expected length of stay,
- expected volume and timing of tourist demand for various crops.

Additionally, the market research role includes, in this instance, a market development function. This will include:

- surveying tourist reactions to local foods and its presentation,
- testing new local products,
- monitoring food trends in tourists' countries of origin,
- evaluating the mix of outlets used for distributing local foods.

Very little activity in any of these market research areas has been observed in any of the islands covered by this study.

2.2.2.5 Training Institutes

Tourists, and indeed residents, expect a certain standard of food preparation and presentation when they eat in restaurants, especially the higher class ones such as those usually found in or around larger hotels.

The chefs in these restaurants and hotels must therefore be able to meet high preparation and presentation requirements if the tourists are to try and repeat dishes prepared from local foods.

Continual training must therefore be undertaken to:

- upgrade the skills of existing chefs in preparing and presenting local foods;
- train new chefs in the same areas;
- provide refresher training for those chefs requiring it.

In addition, the training institutes must also play a role in educating waiters, waitresses, bartenders and chefs, and indeed, all people who prepare food, in the nutritional value of local foods.

More specifically, however, the training institutes must teach waiters, waitresses and bartenders how to effectively sell local foods and beverages to visitors in the restaurants and bars. This training will be achieved through:

- acquainting serving staff with the method of preparation used in local dishes;
- preparing and passing on to serving staff, particular selling phrases designed to capture the diner's or drinker's imagination, and lead him on to purchase the local product;
- developing a greater self-perception among serving staff, when they deal with tourists and other restaurant/bar patrons.

2.2.2.6 Agricultural Extension Services

Specific varieties and breeds of plants and animals respectively are required for meeting the quality requirements of the high-value tourist market for food. Additionally, proper agricultural management of these varieties and breeds must be the norm if the volumes and consistency of quality and quantity are to be forthcoming.

Supplying the correct varieties and breeds, and guiding the farm management methods of growers is a role for the agricultural extension services.

The agricultural extension personnel also function as disseminators of information. These personnel interpret the market demand data, issued by

the market researchers for the benefit and guidance of farmers, so that farmers plant the right amounts of the right crops at the right time, to earn a good price and maintain continuity of supply.

On the other side of the coin, the extension personnel will have ready access to information on plantings, expected yields, expected harvest date, expected quality and sources of produce. All this information will be needed by the market researchers, by wholesalers and retailers, and by hoteliers and restaurateurs.

2.2.2.7 Promotion Agencies

Particularly in the early stages of any programme to increase tourist (and even residents') consumption of local foods, a great deal of promotion must be done. The promotion will take many forms to include:

- attracting the diner to choosing a local product;
- disseminating information on how to prepare excellent dishes from local produce;
- developing an aura of professionalism and high culture around local cooking;
- providing information on where, when and what to buy at various times of the year.

Various functions requiring professional artistic skills have to be performed if the above objectives are to be effectively achieved. These will include:

- menu preparation and presentation,
- recipe preparations and presentations,
- exhibitions of local produce,
- culinary shows using local foods,
- radio, and especially television, newspapers, magazine and billboard advertising.

Once again, the functions required for this role have only been performed in a very weak manner, if at all.

2.2.2.8 Farmers

The farmers' role is to ensure that there are adequate quantities of an acceptable quality of the demanded commodities on the market at prices which prospective purchasers will pay.

In filling these roles, the farmer may nevertheless have to wait on the demand creating efforts of the promotional agencies to succeed. Yet the acceptable supply of produce must be forthcoming soon enough after demand has been stimulated so that the demand can be converted into actual purchases. Timely market research information, effective dissemination of that information and very good production planning and agricultural extension are required to ensure satisfactorily quick response to demand increases.

The farmer must:

- understand how market research information may be gainfully used;
- know and be able to apply the best technological knowledge and practice to meet a particular market;
- be prepared to operate the farm as an all-year business in order to keep supply forthcoming;
- be able to do some warehousing of crops in satisfactory conditions;
- be able to share part of the risk of the programme of growing to meet a market, for which the demand forecast is only tentatively (at least initially).

General observation indicates that a great deal more effort is still needed in this area.

2.2.2.9 Tourists

The tourist market for local foods is not a homogeneous one; neither is it static. In actuality, the tourist market for local foods will exhibit many of the characteristics of the tourists' own food consumption behaviour at home.

Although the majority of the tourists to the area still come from North America, increasing numbers had recently, (before the last recession) been arriving from Europe, South America and especially the Caribbean.

Tourists seem to be getting younger, on average, and appear more concerned with experiencing the culture of the host country at reasonable prices than was the case previously.

Average income and vacation expenditure per tourist seem also to be declining, and this development has meant a relative shift of tourists from full-service hotels to self-contained apartments with kitchenettes, and to eating in less expensive restaurants catering largely to residents. The range of distribution outlets to cater to the entire tourist market has correspondingly changed and expanded.

Despite the downward pressure on highly priced foods which these tourist market developments will generate, the tourists still expect to get high quality produce for the prices they pay, wherever they buy the produce. They are, after all, for the most part accustomed to obtaining good quality at reasonable prices in their countries of origin.

Visitors to a country will often not know how to prepare the various local dishes, or even be able to identify them. The visitors will need assistance in buying local produce, either as a meal, or in a raw or semi-processed form. Tourists, therefore, depend on all people with whom they come into contact during the food buying process, to give them assistance.

For those tourists who choose to prepare their own meals, convenience packages of semi-prepared produce will have to be available. Tourists generally do not wish to spend a great deal of their time preparing a meal when they are on vacation. Package sizes, preparation and cooking instructions, ease of use, information on contents, etc. must all be present if the tourist is to be encouraged to purchase the local food.

Nor will tourists wish to spend a great deal of time searching for local produce. The produce must be prominently displayed to bring it to the tourists' attention and introduce the idea of experimentation with what will frequently be unfamiliar products.

Finally, as food preferences and methods of preparation change in the tourists' countries of origin, the tourists' demand for local foods will change in like manner. The mix of various foods offered to tourists should therefore change as food preferences change; so too, the degree and type of processing applied to the various local foods should also change.

Tourists in effect set the parameters within which the entire system will operate, since the tourists themselves will provide the impetus for growth in the interface between agriculture and tourism/hospitality.

2.2.2.10 Financial Institutions

Two sorts of financial institutions are important in the programme to raise tourist consumption of local foods. Firstly, the financial institutions have to provide the credit to farmers and wholesalers, especially on terms which recognise the developmental nature of the programme.

Secondly, flexibility in repayment schedules and in extensions of credit may be an important feature of financing the programme. Poor weather conditions, poor forecasting of demand, or pests, could all leave farmers and wholesalers in financial difficulty, particularly if these people borrowed to finance their ventures. A credit insurance and guarantee scheme may, therefore, have to be devised and established to assist in reducing insolvency risks of farmers and wholesalers.

Far greater willingness by locally resident financial institutions to perform the role required of them in this system is still not yet forthcoming.

2.2.3 Summary of System Characteristics

The characteristics of the various system components may be summarized into ten basic system needs. These basic system needs are that -

1. Local dishes are available on menus in tourist establishments.
2. Local dishes are excellently prepared and presented.
3. Local foods are comprehensively and successfully promoted.
4. Local foods are available in finest quality.
5. Local foods are effectively distributed.
6. Adequate supplies of local foods are constantly available.

7. Local foods are reasonably priced as compared with imported foods.
8. Local foods are conveniently packaged.
9. Dynamic new product concepts for local foods must be continuously forthcoming.
10. Information on markets, supplies and technologies for local foods must be regular, comprehensive, timely and adequately used.

2.3 Interdependence of the System Components

2.3.1 General Linkage

No one component of the system monopolizes any system characteristic. In fact, the opposite is true. More than one system component is generally required to contribute to successful achievement of a single characteristic, and in turn, each system characteristic benefits a plurality of system components. It is as if each system entity contributes to and draws from a common pool.

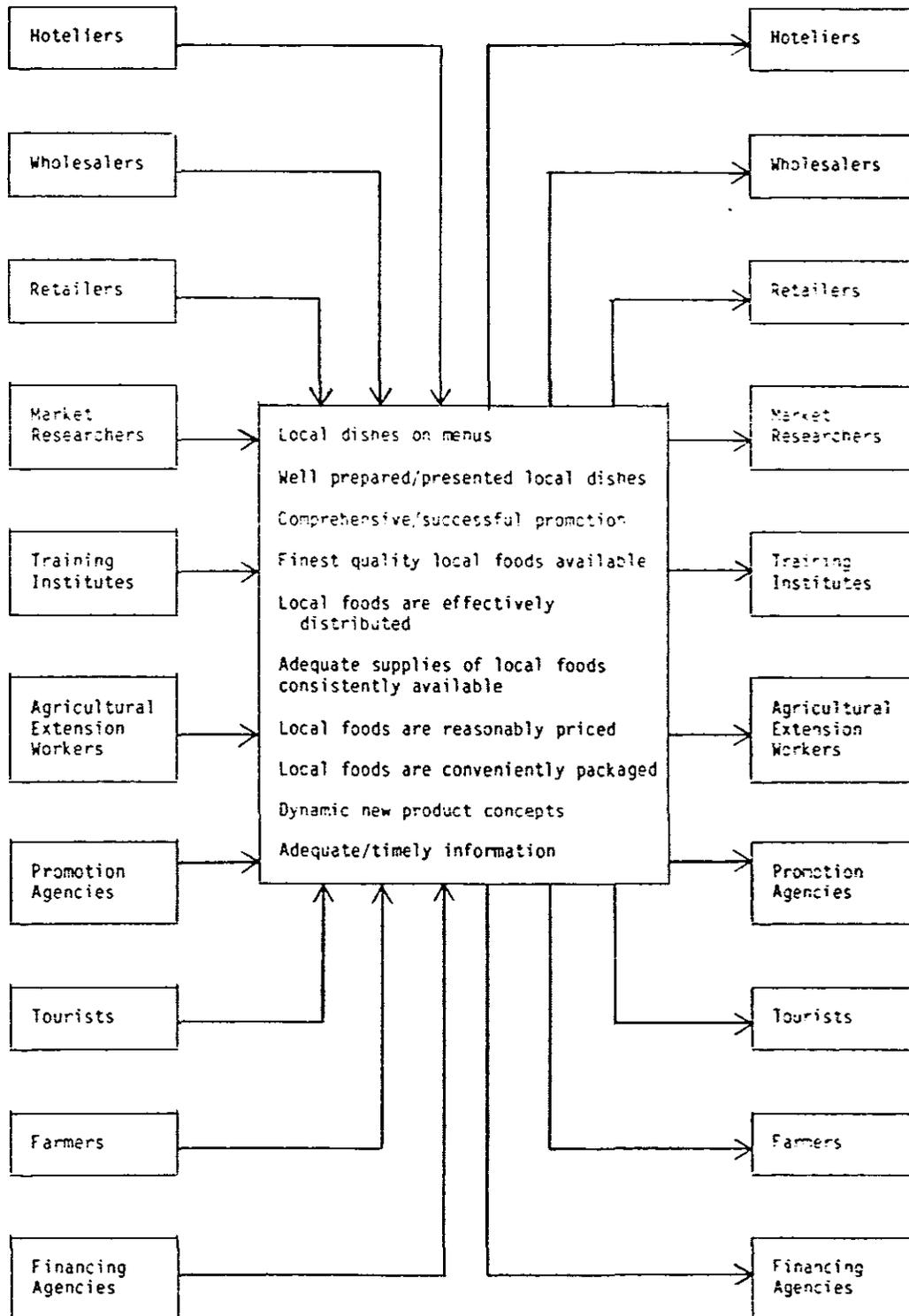
The diagrams below illustrate this interdependence of system components and characteristics. Firstly an overall system model is shown in Diagram 2.1 and later Diagrams 2.2 - 2.7 show the linkages between any one component and all the other components within the system.

Although there are ten separate system entities, only six (6) diagrams are required to show all the interactions between individual system components and all the other system components. This clearly illustrates the non-independence of the various system components in the achievement of tourism/agriculture linkages and also hints at the difficulty of successfully establishing such linkages.

Diagram 2.1

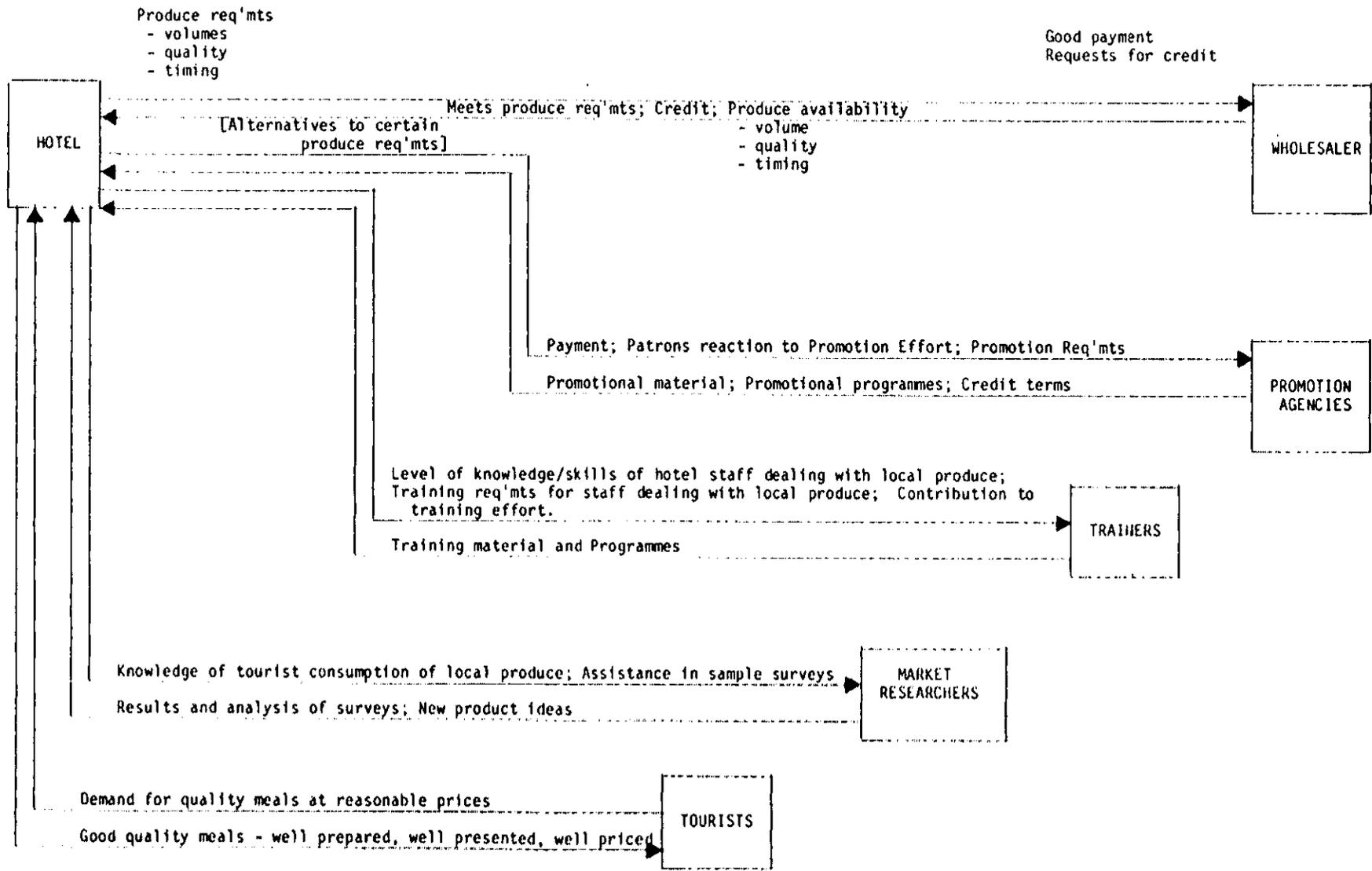
INTERDEPENDENT NATURE OF TOURISM/AGRICULTURE LINKAGES

Entity contributes to SYSTEM contributes to Entity



2.3.2 Hotel Linkages
 Hotel personnel need to interact regularly with at least five other system components - wholesalers, promotion agencies, trainers, market researchers, tourists.

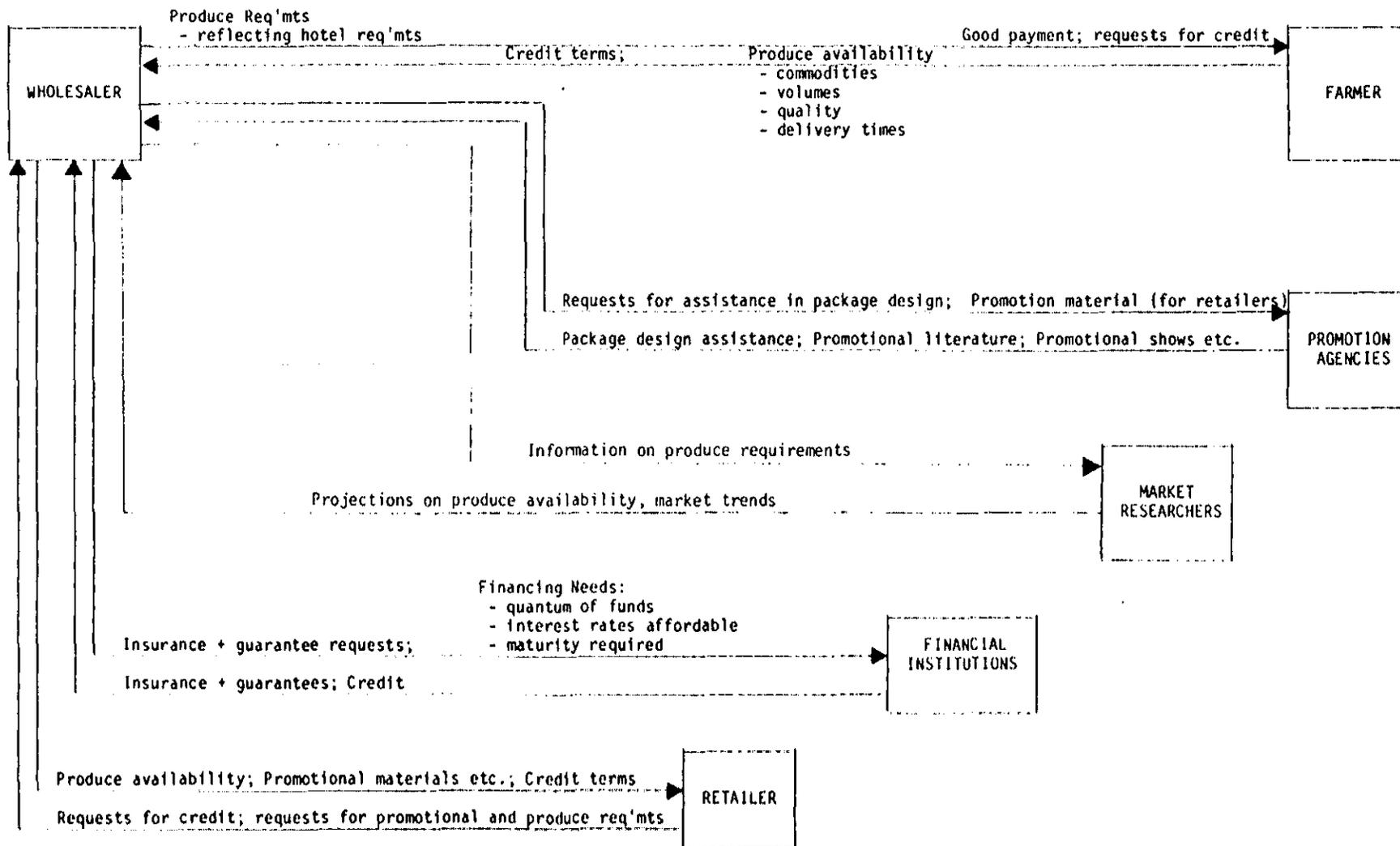
Diagram 2.2 Diagrammatic Representation of the System
 Linkages involving HOTELS



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Diagram 2.3 Diagrammatic Representation of the System

Linkages involving WHOLESALERS



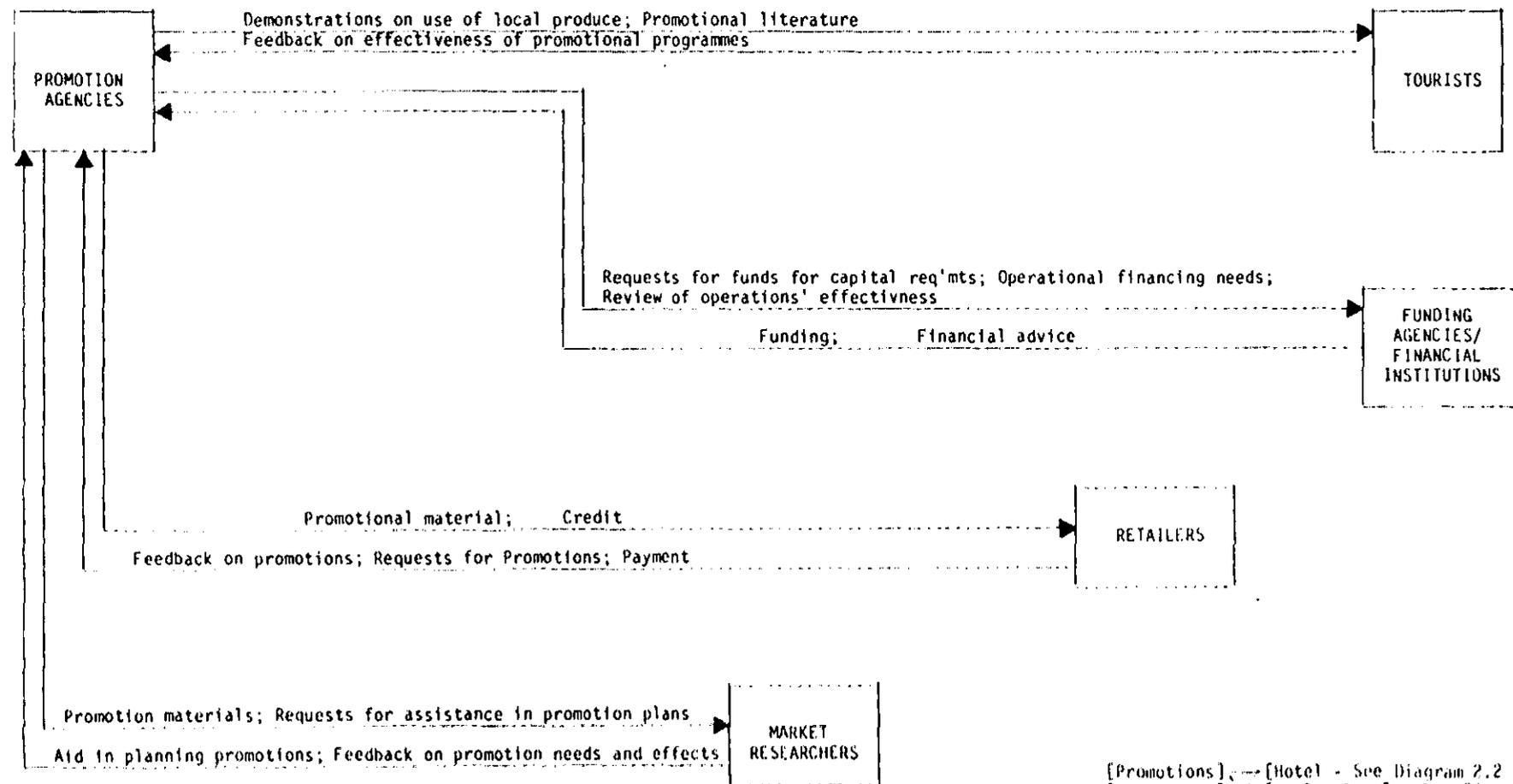
2.3.3 Wholesaler Links
 Wholesalers must maintain good links with hotels and at least five other system entities - farmers, promotion agencies, market researchers, financial institutions, and retailers.

[Wholesaler] ↔ [Hotel] - see Diagram 2.3

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Diagram 2.4 Diagrammatic Representation of the System

Linkages involving PROMOTION AGENCIES



[Promotions] ↔ [Hotel - See Diagram 2.2]
 [Promotions] ↔ [Wholesalers] - See Diagram 2.3

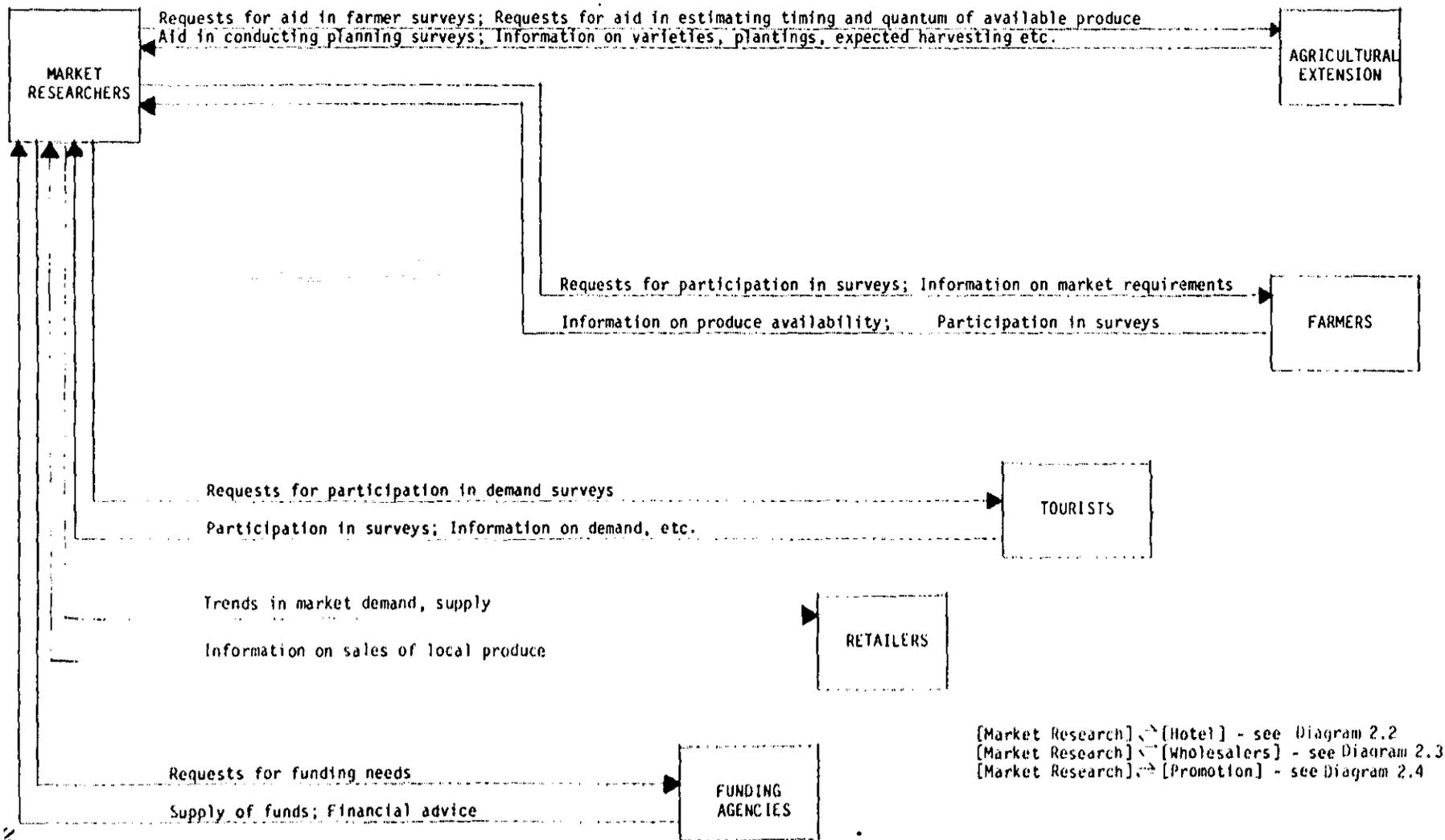
2.3.4 Promotion Agency Links
 Promotion Agencies assist wholesalers and hotels in addition to interacting with four other system actors - tourists, financial institutions or funding agencies, retailers and market researchers.

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2.3.5 Market Research Links
 Market Researchers collect and disseminate information from and to hotels, wholesalers, promotion agencies and five other system entities. These are agricultural extension workers, farmers, tourists, retailers and funding agencies. Flows to funding agencies (financial institutions contain requests for funding).

Diagram 2.5 Diagrammatic Representation of the System

Linkages involving MARKET RESEARCHERS

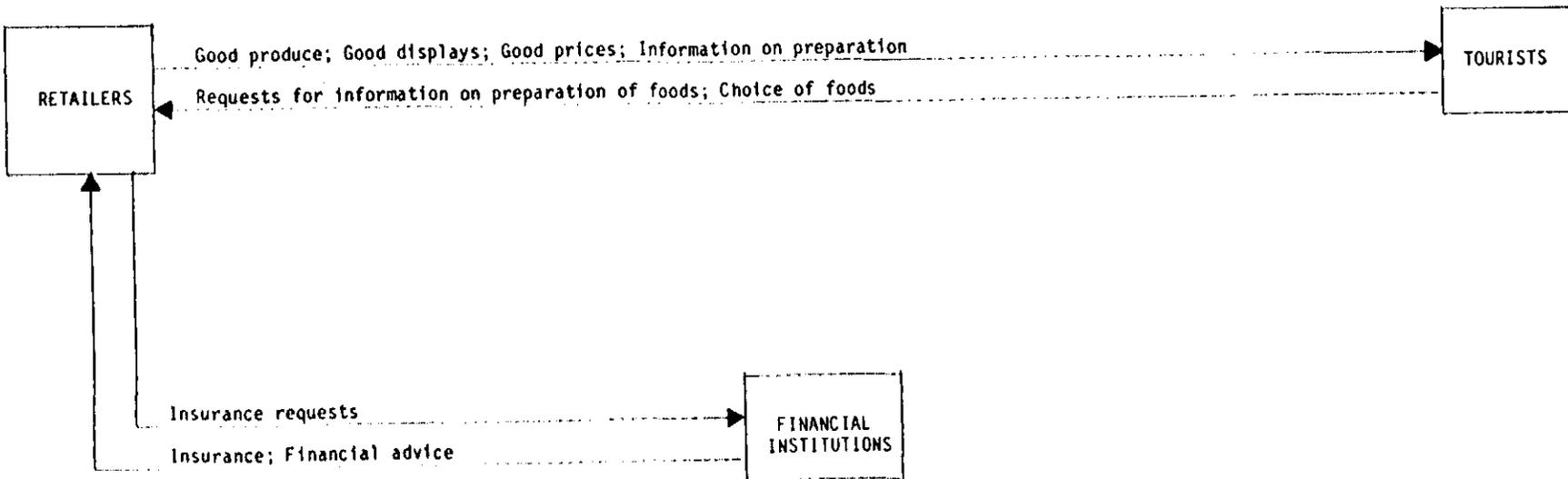


2.3.7 Retailer Links

Retailers make regular contact with five other components of the system. These are tourists, financial institutions, wholesalers, promotion agencies and market researchers.

Diagram 2.7 Diagrammatic Representation of the System

Linkages involving RETAILERS



[Retailers] ↔ [Wholesalers] - see Diagram 2.3
 [Retailers] ↔ [Promotion Agencies] - see Diagram 2.4
 [Retailers] ↔ [Market Researchers] - see Diagram 2.5

2.3.8 Problems Arising from Breakdowns in System Components

It is difficult to achieve adequate performance in the programme to increase tourist consumption of local food because of the high degree of interrelationships in the model. No interrelationship identified is superfluous, even though that relationship may exist between more than one group of actors in the model. Such duplication of relationships recognises that the transference of information is more often than not incomplete when the dissemination comes from only one source. Replicating the relationships therefore ensures comprehensiveness of the information received, highlights inconsistencies in information, thus indicating areas for correction, and ensures that information is actually disseminated.

2.4. Problems Arising from Component Failure

2.4.1 Reverberation through entire System

It is also increasingly difficult for the system to work effectively as more and more of the relationships are destroyed or not implemented. Rather, as any one relationship goes into abeyance, the effectiveness of a particular subset of entities is reduced and this leads to additional pressures on other entity subsets. These other entity subsets either have to work harder to achieve their same effectiveness or their effectiveness is reduced because the abeyance experienced in one relationship causes an abeyance in another.

Because the model is dynamic, problems in relationships quickly have an adverse impact on the ability of the system to survive. The results of a malfunction in any of the roles of one linkage in the system creates adverse effects throughout the system.

Failure in the hotel-wholesaler link, for example, leads to failure in the links between:

- wholesaler-farmer
- wholesaler-retailer
- wholesaler-financial institution.

Failure in the wholesaler-farmer link leads to failure in the links between:

- farmer-financial institution
- farmer-agricultural extension
- wholesaler-hotel
- hotel-tourist.

Failure in wholesaler-retailer link leads to failure in the links between:

- retailer-tourist
- retailer-financing institution.

Failure in wholesaler-financial institution link leads to failure in the links between:

- wholesaler-hotel
- wholesaler-retailer
- wholesaler-farmer
- hotel-tourist
- retailer-tourist
- farmer-financial institution.

Each disturbance eventually ends up with a failure of the hotel-tourist link or the retailer-tourist link. But, since these two links are those which provide the points of increased tourist consumption of local foods, then the objectives of the programme are frustrated by any ineffectiveness in the operation of these two links.

The entire system must work well in all its subsectors if the final objectives of increased tourist consumption are to be achieved.

2.5 The Current Situation

In Grenada, St. Lucia, St. Vincent and the Grenadines, and the Commonwealth of the Bahamas, agricultural development is constrained because of three fundamental factors:

- prices for local fresh produce are frequently high, both in absolute terms and relative to processed alternatives;

- the quality of local fresh produce is, often, both low and variable, and does not fit the demand requirements of a sophisticated tourist outlet; and
- supply availability is inconsistent which, again, does not fit the requirements of a buyer who has to know food requirements each week in advance.

In the Windward Islands, these three fundamental factors reflect the interaction of many sub-factors that combine to constrain agricultural development:

- the domestic market for local produce in each of the territories is relatively small, and the tourist segment is only a small component of this small market total. Very likely, demand is relatively constant, but supply can vary sharply, reflecting yield and acreage variations; as a result, prices for fresh produce can fluctuate sharply, both between and within seasons. Local hotels and restaurants set meal prices in advance of actual sales, and require advance knowledge of input prices - local produce prices are an unknown factor, whereas imported food product prices are more predictable;
- in the past, both buyers and sellers of produce have reneged on verbal contracts made to supply/produce food items. For example, if prices rise unexpectedly, farmers are tempted to market produce for the highest price attainable, irrespective of previous commitments made, and food buyers have done likewise when unforeseen gluts have depressed local prices. As a result, there is an atmosphere of mistrust which pervades relationships between buyers and sellers of fresh produce which serves to confound long-term market development;
- the market infrastructure and level of post-harvest skills within the Windward Islands is, frequently, inadequate to deliver high quality items from point of production to point of consumption. For example, farmers may harvest produce incorrectly, leave it in the sun too long after harvest, pack the produce incorrectly in unsuitable packaging material, further damage the produce in transporting it to market point. Or even pre-harvest, the farmer

may have planted the wrong variety to meet market requirements, had insufficient funds to purchase the necessary inputs to maintain product quality, and received inadequate extension advice as to how to maintain pre-harvest product quality.

These problems which can be identified throughout the production and marketing system for fresh produce in the Windward Islands, cannot be removed at a stroke. Individual problems may be only minor and seemingly surmountable, but the inter-dependent nature of the production and marketing system and the propensity for results of individual problems to be additive, must be taken into account when addressing the triad of fundamental agricultural development problems - price, quality and supply availability.

Within the Windward Islands, the tourist sectors have insufficient demand for fresh produce to stimulate the development of agriculture of its own tourist-driven accord. Yet, the tourist sector can play a vitally important part - along with other segments of the local market, plus the export sector focussed at intra- and extra-regional markets - in the development of the local agricultural sector if the integrated nature of the food production and marketing system is acknowledged and if development programmes are directed at the system as a whole and not at individual and unconnected points in the system.

3.0 ST.VINCENT AND THE GRENADINES

3.1 The Tourist Sector

3.1.1 Physical Facilities

St. Vincent and the Grenadines' tourism plant consists mainly of small owner-managed hotels and guest houses, spread over the mainland and a number of tiny islands, and one marina. Average size of the plant is 14 rooms, and the largest facility has only 30 rooms. Room capacity has remained fairly constant, varying between 518 in 1977 to 529 in 1983. The number of rooms in operation during a given year also varies according to the seasonality pattern for the country. CTRC's recent accommodation survey accounted for 529 rooms at 37 establishments in 1983, distributed as follows:

349 rooms at 21 hotels;
 91 rooms at 8 guest houses; and a further
 89 rooms at 9 apartments and villas.

Data from the survey also revealed that 76% of the properties accounting for 69% of rooms were either owned and/or managed by nationals. There are about six restaurants, outside of the hotels and guest houses which serve the tourist population.

The island, like some of its other neighbours, depends almost exclusively on LIAT for its air transportation requirements. Air Martinique, Aero Services, Tropic Air and Mustique Airways operate small services between St. Lucia, Grenada and to a lesser extent, Barbados. Barbados however, remains the major gateway through which tourists to St. Vincent and the Grenadines must fly. At present transportation arrangements between the two islands are far from satisfactory and numerous complaints have been made by passengers. The Government owns a small aircraft (Trilander) which has been leased out to LIAT. Presently, (December 1983), with the exception of charters, St. Vincent is serviced by 64 scheduled flights per week, in the summer and 72 in the winter. These flights account for 2 414 and 2 399 passenger seats in the summer and winter respectively. The possibilities of establishing gateways through Mustique and St. Lucia are being investigated. The introduction of a new service (Winlink) out of St. Lucia should provide additional seating capacity and St. Vincent and the Grenadines should become more accessible to international tourists.

The St. Vincent and the Grenadines Department of Tourism is the body responsible for the organization of the islands' tourism programmes. It falls under the auspices of the Ministry of Foreign Affairs and Tourism. Its resources are slender, US\$114 000 in 1980 and US\$145 000 in 1981 and its activities somewhat restricted. Most of the promotional thrusts are beamed at the US and Canadian markets. In 1981/82, US\$22 700 was allocated for the USA, US\$19 700 for Canada, US\$12 700 for Europe, and US\$13 000 for the Caribbean. There are 17 persons employed by the Department including staff for the Beaches Commission. The St. Vincent and the Grenadines Hotel Association is active in promoting the country overseas.

Incentive legislation for tourism is restricted mainly to tax holidays and duty concessions with respect to construction materials and equipment. There is no incentive for food and beverage purchases.

3.1.2 Tourist Arrivals

Tourist arrivals to the country approximately doubled between 1970 and 1982. Average annual growth between 1970 and 1982 was 7.1%, between 1970 and 1976 - 1.5%, and between 1976 and 1982 - 14.8%. Cruise traffic nearly doubled as well, but recorded negative growth over the period 1970-1976. The market share of tourists with the OECS grouping stood at 12% and 0.4% within the Caribbean region.

The country's major market remains the 'rest of the Caribbean' which accounted for just under 50% of arrivals in 1982. Next was the US market 22.6% in 1981 with Europe accounting for 17.3%, over 50% of which were from the U.K. No recent visitor expenditure surveys have been conducted and visitor statistics by intended length of stay are not compiled at present. Length of stay figures are therefore not readily available. This however, is estimated to be in the region of 8 nights.

Like most other Caribbean destinations, the majority of arrivals to the country are clustered into the 5 month period, December to April. Peak months are typically December, February and August; there is also strong demand in July, while the months with lowest demand are September and May. These figures are shown in Table 3.1. The increase in arrivals in July and August stem mainly from Carnival traffic - mainly Caribbean visitors - in July and medical students in August, while winter traffic accounts for the December and February peaks.

TABLE 3.1

Tourist Arrival Data: St. VINCENT & THE GRENADINES

3.1a Tourist Arrivals by Country of Origin

Country of Origin (1)	1977	1978 (2)	1979 (2)	1980 (2)	% of 1980 Total	% Change 80/79
U.S.A.	5,253	6,657	8,867	10,957	28.5	+23.6
Canada	1,606	2,914	3,515	4,230	11.0	+12.3
United Kingdom	-	2,578	3,398	3,761	9.8	+10.7
Other Europe	1,053 ³	2,125	3,502	3,689	9.6	+5.3
Americas	2,586	3,832	693	1,289	3.4	+86.0
Caribbean	8,030	10,452	12,691	14,296	37.2	+12.6
Rest of World	838	140	135	208	0.5	+54.1
TOTAL	19,366	28,698	32,801	38,430	100.0	+17.2

- (1) By country of residence
(2) Arrivals by air (excluding excursionists)
(3) Includes U.K.
(4) No comparable data available for 1981

3.1b Monthly Tourist Arrivals (1)

Months	1974	1976	1977	1978	1979	1980	1981	% of 1981 Total	% Change 81/80
January	1,371	1,106	1,738	2,736	4,094	4,722	5,540	12.4	+17.3
February	1,739	1,554	1,900	3,388	4,280	5,179	4,415	9.9	-14.7
March	1,861	1,833	1,776	3,726	4,187	4,921	3,891	8.7	-21.0
April	1,204	1,536	1,698	2,919	3,595	3,848	4,016	9.0	+4.4
May	1,144	1,202	1,256	1,858	2,088	3,096	2,493	5.5	-19.5
June	884	1,183	1,392	2,813	2,427	3,647	3,154	7.0	-13.6
July	1,309	1,719	2,107	3,224	3,630	5,745	4,167	9.3	-27.5
August	1,541	2,115	2,077	3,820	4,121	4,636	4,554	10.2	-1.8
September	1,096	908	833	1,914	2,380	2,370	1,993	4.4	-16.0
October	1,080	1,120	1,029	2,208	3,140	3,004	2,397	5.4	-20.3
November	1,083	1,225	1,009	2,854	3,568	3,742	3,001	6.7	-19.9
December	876	1,603	1,385	3,789	5,204	5,441	5,111	11.4	-6.1
TOTAL	15,188	17,105	18,200	34,249	42,714	50,351	44,732	100.0	-11.2

Source: St. Vincent and the Grenadines Tourist Board.

- (1) All arrivals by air, including excursionists.

3.1c Sea Arrivals (includes cruise and yachts)

Months	1975	1976	1977	1978	1979	1980	1981	% of 1981 Total
January	4,087	2,662	3,914	4,628	4,608	5,500	8,702	26.0
February	5,041	2,199	5,083	2,957	3,058	5,188	7,688	23.0
March	4,637	1,853	4,716	2,438	2,754	4,327	4,981	14.9
April	2,496	3,087	2,694	2,071	1,341	4,454	4,542	13.6
May	208	102	774	1,194	1,410	2,243	1,018	3.0
June	207	115	139	379	1,391	1,757	120	0.3
July	262	107	168	320	1,492	1,359	185	0.5
August	300	112	1,995	552	1,719	1,829	136	0.4
September	188	711	160	288	664	1,459	72	0.2
October	163	132	730	116	223	1,224	175	0.5
November	219	227	880	2,088	462	1,197	1,781	5.3
December	2,868	4,285	1,386	3,857	1,604	1,942	4,049	12.1
TOTAL	20,676	15,592	22,639	20,888	20,726	32,479	33,449	100.0

3.1.3 Economic Aspects

Despite the small size of the tourism plant, the hotel and restaurant sector still accounted for 2.1% of the GDP in 1981, as reported in IBRD Report No. 3817-CRG. Under the CTRC assumption that this sector represents roughly half of the tourist sector, tourism therefore contributed US\$1.8m or 4.2% of GDP. Employment in the sector was estimated at 1 167 in 1981 with 499 accounted for by the accommodation sector.

In terms of foreign exchange generated, visitor spending accounted for the equivalent of US\$13.8m in 1981 as estimated by CTRC. Of this figure of US\$13.8m, the majority (US\$13m) was generated by airborne tourists with US\$0.8m attributed to cruise traffic. IBRD Report No.4370 -CRG gives a higher estimate of US\$25.2m. In comparison, merchandise exports in 1980 realised US\$23.3m.

3.1.4 Future Development Plans

There are no immediate plans to increase the number of accommodation units in the country. Instead, the policy appears to be one of increasing occupancy levels in the existing plant. This policy does not seem consistent, however, with a cut in the overall tourism budget by some US\$30 000. In terms of markets, no budget has been allocated for Canada for 1983, perhaps as a result of the sluggishness and uncertainty being experienced in that market. However, marketing and promotional funds have been increased for the US market (55%) for the same year, a consequence of the recovery apparent in that market since the slump of 1981-1982. Efforts are being made to use St. Lucia as a gateway, and 'cash in' on the increased number of flights to that island which Pan American airlines have introduced from the end of October, 1983. The budgets for Europe and the Caribbean have also been slashed for 1983.

3.2 The Agricultural Sector

Agriculture forms the basis of the economy of St. Vincent and the Grenadines, contributing 15% of GDP in 1979 (second only to government service) and 87% of domestic exports (defined as food, beverages and tobacco) in the same year. It is estimated that two-thirds of the population are employed in the agricultural sector.

According to the 1972 agricultural census, 28 500 acres of the island's total of 85 000 acres is suitable for agricultural production. It is probable, however, that small plantings of tree crops on steep slopes extend this figure to more than 30 000 acres. Peasant farming is widespread, particularly on the Leeward side of the island and less than 25% of all farmland is contained within estates. Although statistical data for St. Vincent is generally poor, estimates place the number of farmers at approximately 12 000. These farmers are served by the Department of Agriculture with about 35 extension staff.

Bananas are by far the most important crop produced in St. Vincent with exports of between 25 and 30 thousand tons per annum, outside of hurricane years (see Table 3.2). These alone account for between 40-60% of total domestic exports. Probably second in importance are mangoes, although being largely of the ungrafted type, exports are not major. Production of these stands at approximately 6 000 tonnes per annum. Plantain and the traditional West Indian 'provisions' of Eddoes/Dasheen and Tannias are also major crops. Of key importance economically are coconut (primarily exported as copra or oil), limes and arrowroot, although the latter is facing a declining market. Sweet potato is also a major crop for both export and home consumption. With the exception of those crops grown primarily for export, figures given in Table 3.2 should be treated as rough estimates only; there is no systematic monitoring of crop production in St. Vincent.

Plantains, bananas, sweet potatoes, carrots, cucumbers, pumpkins, sweet peppers, and peanuts can be grown and harvested year-round in St. Vincent under rain-fed conditions. With irrigation, the harvest period can be extended throughout the year for cabbage, string beans, and tomatoes. Grapefruit and oranges can be harvested from late August through to February, and limes from June until January (Table 3.3). Eddoes, dasheen and tannias have a six-month harvest season from November to April.

Table 3.2

Agricultural Production of Selected Commodities in St. Vincent
1976, 1977, 1978, 1980
 ('000 Kg.)

Crop	1976	1977	1978	1979
Arrowroot	746	678	834	710
Aubergines	20	220	20	
Avocadoes	101	120	110	
Bananas (Exports only)	31 486	26 965	30 721	22 377
Beans	17	19	23	
Cabbage	100	136	150	
Carrots	1 05	500	533	425
Coconut (Copra & Fresh)	3 095	3 014	3 930	2 596
Cucumber	150	165	182	
Eddoes/Tannias/Dasheen	3 723	4 430	6 201	3 267*
Ginger	797	680	870	544
Grapefruit	488	515	492	
Limes	3 160	3 592	3 525	
Mangoes	5 170	5 744	5 987	
Nutmeg (incl. Mace)	200	143	119	214
Okra	45	63	68	
Onions	-	5	10	
Oranges	868	860	860	
Peanuts	68	25	73	45
Pigeon Peas	380	402	409	
Pineapple	-	-	5	
Plantain	1 505	2 422	4 297	4 100
Pumpkins	88	120	163	
Sweet Pepper	40	50	55	
Sweet Potato	3 500	1 675	2 455	2 110
Tomatoes	30	100	136	
Yams	742	890	684	

* includes yams

Source: Ministry of Agriculture, Kingstown, St. Vincent.

Table 3.3

Seasonality of Horticultural Produce

Commodity	J	F	M	A	M	J	J	A	S	O	N	D
Avocadoes												
Grapefruits												
Limes												
Mangoes												
Oranges												
Pineapples												
Plantains												
Eddoes												
Tannias												
Dasheen												
Sweet Potatoes												
Yams												
Aubergines												
Cabbages												
Carrots												
Cucumbers												
Okras												
Onions												
Pumpkins												
String beans												
Sweet peppers												
Tomatoes												
Peanuts												
Pigeon Peas												
Cinnamon												

1. A small second crop of mangoes at the end of the year.

- Key:
1. Solid lines: harvest period for rainfed produce.
 2. Broken lines: extension of harvest period likely attainable with irrigation.
 3. Double lines: periods of highest production when gluts are possible.

No recent estimates for livestock populations exist but slaughter figures from the Kingstown abattoir reveal 191 375 lbs of dressed carcasses of beef were produced in 1980 and 112 285 lbs of dressed pork. A significant number of sheep were also slaughtered.

Significant potential exists for expanding the production of crops for the tourist sector - especially out of the major crop growing seasons. Amongst possible candidates for participation in tailored supply to hotels and restaurants are:

- Organisation for Rural Development (ORD).
Presently members are growing over 100 acres but have no post-harvest facilities.
- West Indian Tobacco Company (WITCO).
Witco has 13 farmers growing tobacco on 130 acres. This land is largely unused between May and September. Some crops cannot follow tobacco however.
- Union Estate.
Approximately 70 acres of land are available for small-scale vegetable and fruit production.
- Orange Hill Estates.
Would be prepared to consider production on contract.
- Georgetown Farmers Cooperative.
Sixty to seventy active members farming 160 acres.
- ADC, Ministry of Agriculture.
Irrigation facilities could be used to grow out of season crops.

Total food imports in 1979 (the last year available) amounted to EC\$40.4 million. Some of the major import items are given in Table 3.4. The poor quality of Vincentian trade data renders this list far from complete, however.

As is the case in the other islands, the wholesaling/distributive functions are largely occupied by importers - either in their own right

Table 3.4

Imports of Selected Fresh and Processed Produce Items
into St. Vincent, 1979 and first 9 months 1980

	Volume (Tonnes)	Value \$'000	First 9 months 1980	
			Volume (Tonnes)	Value \$'000
English Potatoes	384	330	315	324
Onions	221	226	113	140
Garlic	13	55	10	40
Pigeon Peas	118	230	61	125
Fruit Juice ('000 gals.)	12	161	19	192
Rice	1 380	1 523	1 411*	1 758*
Sugar	3 487	2 600	-	-
Butter	126	652	-	-
Milk	1 051	3 107	-	-

*for full year

No import figures are available for meat or meat products.

Source: Statistical Unit, Ministry of Finance & Economic Planning,
St. Vincent.

or in the form of supermarkets which wholesale as a sideline. Among these are:

P.H. Veira Co. Ltd.
Universal Sales Corporation
Low Budget Supermarkets
Eastern Caribbean Traders

Eastern Caribbean Traders also handles significant quantities of local produce both for domestic and export sales. Additionally, the St. Vincent Marketing Corporation, besides retaining a monopoly on imported goods, such as sugar and rice, operates its own wholesaling and retailing functions within St. Vincent, and possesses limited cold storage facilities. The Corporation handles significant quantities of such commodities as carrot, pumpkin, ginger and sweet potato.

Several fruit and vegetable processors are in operation in St. Vincent:

Orange Hill Estates - manufactures and sells under its own label, such products as lime juice, passion fruit juice, as well as some jams and jellies.

Agro-Lab - a Government owned operation operates on a very limited scale producing juices (sorrel, soursop, mango, guava) and a small range of jams. The facilities are basically research oriented rather than commercial, and considerable upgrading would be necessary to expand production significantly.

Unique Foods - a commercial operation, processes hot pepper sauce and similar items.

In addition, the following processors are active in other areas:

Diamond Dairies - limited fresh milk output, but primarily reconstituting liquid milk from powder. Ice cream production and a modern facility for producing tetra-pak containers for juices.

Russell's Ice Cream - also producing ice cream and related products.

Arnos Vale Oil Industries - processes copra for oil and other products.

Tempo Ltd. - processes domestically grown peanuts.

Vibert Bailey - processes plantain chips for local sale.

No commercial scale meat processing industry exists in St. Vincent at the present time. St. Vincent Packers Ltd., established in 1974 to process ham, bacon and related items, ceased operations some years ago. Maple Leaf Mills, the Canadian company, operates a large flour and animal feed mill in St. Vincent, which supplies much of the Windward Islands with these products.

3.3 Tourist Sector Consumption - Survey Results

3.3.1 Scope of Survey

The tourist sector in St. Vincent is heavily dominated by full-service hotels. Few independent restaurants catering to tourists exist (although there are numerous small local eating establishments which fall outside the scope of this study) and only a single marina with full provisioning facilities.

Of the 26 full-service hotels and guest houses providing meals in operation in St. Vincent and the Grenadines, with a total of 416 rooms, the sample contained 12 hotels, primarily the larger ones, with 266 rooms. This approximates to 60% of tourist accommodation available in the country. In addition the single marina has been included within the hotel group as it was considered too isolated for independent categorisation and had more features in common with the hotel rather than the restaurant categories (e.g. provision of all meals including breakfasts).

Only two restaurants are included within the sample but it is estimated that they form approximately one third (33%) of the independent restaurant sector in St. Vincent and the Grenadines, with a high season/low season trade of 60 and 45 meals per day respectively, out of an estimated total of 180-200 and 150 for the sector. Several of the restaurants listed in the tourist material are, in fact, part of a larger hotel complex and thus appear within the hotel section.

The results of the survey of food consumption are summarised in Appendices 3.1 to 3.7. Sample results have been extrapolated upwards, either by estimating from number of rooms (hotels) or by number of meals served (restaurants) to provide a measure of total tourist sector consumption. It should be noted, however, that much of the consumption, especially in the low season, may be the result of local custom. See Appendix 3.9 later in the study, for a discussion of this factor.

3.3.2 Meat and Sea-Food

Appendix 3.1 contains estimates for total tourist sector meat consumption in the country. Chicken and steak are the two dominant meat items of meat consumption, each accounting for nearly 50 000 lbs per annum (or approximately 25% of total meat consumption each). Due to the much higher value for steak, however, it contributes nearly 43% by value compared with chicken's 15%. Both items are almost entirely imported (96% for chicken, 91% for steak). If steak is added to 'other beef' to obtain total beef consumption, beef becomes far more important than chicken, both in quantity (46% of all meat) and value (62% of all meat). Other beef is far more likely to be local, however. Pork, lamb and goat are relatively minor items by comparison although predominantly of local origin. Processed meats (including ham, sausage and bacon) account for 17% of all meats by volume and 16% by value and are exclusively imported. The total meat sector amounts to slightly less than 200 000 lbs per annum for a value of just over EC\$1 million. The hotel sector accounts for nearly 90% of this business (both by volume and value).

Turning to seasonality, it is apparent that the independent restaurant sector in St. Vincent and the Grenadines is far less dependent upon seasonal trade than is the case for the hotels. On average, the hotel sector conducts more than half of its business in the 17 week high season (56%) compared with only slightly over 1/3 (37%) for the restaurants. This latter figure implies an almost constant level of trade in meat throughout the year for the restaurants. Looking at individual items, there appears to be little difference in the demand patterns throughout the year. Within the hotels, consumption of steak and bacon are most seasonal (as might be expected) but only marginally. Demand for ham in restaurants appears seasonal while steak remains constant. No explanation is available for this pattern.

As might be expected, given their only very slight seasonal bias, the restaurants account for a much higher proportion of local produce than do the hotels (as a percentage of total consumption - 45% as against 22%). In the restaurants sampled, this results almost entirely from the exclusive use of local 'other beef' (the hotels by contrast use local and imported 'other beef' almost equally). The only meat item used by the hotels which is heavily local in origin is lamb and goat (86% local) but it accounts for only 5% of total meat usage and hence is of only minor importance.

In Appendix 3.2, estimates for sea-food consumption are presented. In terms of quantity, fresh fish is the dominant item within the sea-food sector with nearly 50% by weight of the total. They are of relatively low value, however, and account for only 25% of expenditure. Second in quantity (at 32%) but by far the most important in value (46%) is lobster. Canned fish, shrimp and 'other seafood' are all of minor importance by volume although, due to its extremely high price, shrimp accounts for nearly 20% of value in the sea-food sector. Total sea-food consumption, at approximately 130 000 lbs and EC\$760 000 is less than for the meat sector, but is still of major importance. Once again the hotels are the major consumers, with 93% of volume and 95% of the value for sea-food.

Turning to seasonality, a similar pattern can be identified for the hotels as in the meat sector. An average of 55% of all consumption occurs in the 17 week high season with shrimp, lobster and 'other seafood' showing the strongest high season bias. Consumption of fresh and canned fish varies less. Seafood consumption by restaurants appears to be more seasonal than was the case for meat (51% in the high season as against 37% for meat), largely due to the use of lobster exclusive during the high season. Fresh fish consumption varied relatively little throughout the year. The restaurants in the sample used no canned fish at all.

For both the hotels and restaurants, usage of local produce is much higher for sea-food than meat (91% local). Only shrimp and canned fish are imported but both are relatively insignificant against the other items in terms of weight. As mentioned before, however, the high price of shrimp renders it a major import in terms of value.

3.3.3 Dairy Items and Staples

Appendices 3.3 and 3.4 present estimates for tourist sector consumption of dairy items and staples respectively. No total volume figures are possible for dairy items as eggs are not calculated by weight. Eggs are, however, the most important dairy goods in terms of value (EC\$125 000), accounting for more than half of all dairy expenditures. Butter and cheese account for approximately equal proportions of the remainder. Figures for ice-cream were not collected by the survey team and attempts to estimate milk consumption were stymied by the mixture of powdered and liquid milk. All dairy items in St. Vincent are ultimately imported although Diamond Dairies produces milk from imported powder.

The independent restaurants accounted for a much higher percentage of surveyed dairy goods consumption than was the case for meat or fish (23%). This was particularly evident for cheese, where extrapolated consumption by restaurants accounted for 47% by value of the total. Butter was also high, with approximately 1/3 of the total value. No explanation is readily apparent for this large usage of dairy items.

Seasonality of usage follows the same pattern already observed. In the hotels, high season consumption averages 55% of total usage while in the restaurants, little seasonal effect is seen, except in the case of butter. This latter item is predominantly used in the high season by restaurants. Eggs are the most seasonal of the hotel dairy items (65% in high season) and may reflect the larger proportion of overnight guests (and hence breakfasts) during this period.

Turning to staples in Appendix 3.4, it can be seen that irish potatoes are the most popular staple by volume and by value (approximately 50% of all staples for both categories) although no data on bread or plantain consumption was collected by the survey team. Ground provisions (including sweet potato, yam, dasheen etc.) were next in popularity (at about 30% by volume and value) followed by rice. Only the ground provisions are local in origin. Surprisingly, results based upon the sample of independent restaurants show them to be only minor users of ground provisions (only 2%) but major users (32%) of irish potatoes.

Total staple consumption by the tourist sector equalled approximately 95 000 lbs in weight for a value of nearly EC\$87 000. The restaurants accounted for nearly 20% of staple usage.

Seasonality, once again, fits the patterns established earlier with hotels consuming approximately 55% of staples during the high season and restaurants about 37%. Very little variation in individual items is noticeable.

3.3.4 Vegetables

Appendix 3.5 presents estimates of fresh vegetable consumption by the tourist sector for St. Vincent and the Grenadines. The single largest item in terms of volume is tomatoes (19%) although no single vegetable has an overwhelming share. Other vegetables with a greater than 10% share include cabbage, carrots, cucumbers and onions. In terms of value, tomatoes are equal to cabbage, with a 25% share of expenditure each. Total consumption of all vegetables is in the region of 170 000 lbs per annum, for a total value of approximately EC\$325 000. The hotels account for 93% of these totals.

Seasonality again follows the previous pattern with an average of 54% of hotel consumption occurring during the high season. Within the hotel sector only frozen and canned vegetables show a relatively greater usage than average during the high season with 63% of all consumption in this category falling within the 17 week peak period - presumably acting as a useful emergency source of vegetables for unexpected demand. Relatively more cabbage is used by the restaurants during the high season (41%) but the difference is slight.

Only onions and canned and frozen vegetables are imported within the vegetable sector, and they account for only 11% of total expenditure.

3.3.5 Fruit

Estimates of national tourist sector fruit consumption are given in Appendix 3.6. In terms of weight of fruit, oranges are by far the most important, accounting for approximately 26% of all consumption. Second in importance are bananas, with slightly under 18% of the total. Bananas are entirely, and oranges primarily, local in origin. Combining all citrus (grapefruit, oranges and limes) includes nearly half (49%) of all fruits used by the tourist sector by weight. In terms of value,

however, imported canned juice (primarily citrus and pineapple) is the chief item with a 38% share of all expenditures. This is nearly equalled (37%) by the value of all citrus fruits combined. Mangoes (11% by weight, 7% by value) and pawpaw (6% by weight, 3% by value), both entirely local, are also significant items.

The total fruit sector amounts to nearly 400 000 lbs per annum with a value of just over EC\$250 000. Hotels account for 92% by value of this market. Independent restaurants in the sample were users of only two fruit items - limes and canned juices - both primarily for drinks.

Seasonality, although existing, was less strong for fruits than for other commodities. On average, only 51% of consumption occurred in the high season within the hotels. Canned juice, canned fruit and pineapples appear less seasonal than the other items, all having less than half their sales during the high season. The two items used by the restaurants show no seasonality at all, which fits the patterns observed earlier.

Apart from the canned fruits and juices, only minor quantities of oranges and pineapples are imported. All other fruit is 100% local.

3.3.6 Miscellaneous Items

Total food consumption by the St. Vincent and the Grenadines tourist sector is summarised in Appendix 3.7. It will be noted that one additional category - miscellaneous - has been added. This consists of two commodities - flour, and jams and jellies. Flour is 100% local although milled from imported wheat. Jams and jellies are approximately half local and half imported. In terms of weight, flour accounts for nearly 90% of the two commodities' total; in terms of value, approximately 2/3. Data on oils and fats, sauces and cereals, also included in this category in the other islands, were not collected in St. Vincent.

3.3.7 Total Food Consumption

Turning to the entire tourist sector totals (see Appendix 3.7), it can be seen that while fruit accounts for the largest food category by weight (37%) their low value results in only a 9% share of all food expenditures. Meats and sea-foods are the dominant categories by value, accounting for 38% and 27% of expenditures respectively. Staples at 12%

and dairy products at 8% by value are also significant. Overall, total tourist sector food consumption amounts to just over 1 million lbs per annum (476 long tons) for a value of EC\$2.811 million. Of this total, hotels account for 91% by weight and 90% by value.

Seasonality follows the pattern established within individual categories with hotels using approximately 53% of their commodities during the 17 week high season, while restaurants, depending relatively little upon the tourist sector, use only 38% - little more than average. Only for sea-food and, to a lesser extent, dairy products, does seasonality become an important element for restaurants.

While imported food accounts for only 30% by weight of all hotel consumption, much of the local produce is of a relatively low value. Examination of imports by value reveal that 45% of hotel expenditures are directed towards immediately imported food. Equivalent figures for the restaurants are 45% by weight and 54% by value. This difference between the hotels and restaurants is largely attributable to the lack of fruit and ground provisions usage by the restaurants - both heavily local items. It should be borne in mind, however, that imports here exclude those products imported and then processed on the island, for example, flour.

A true estimate of import expenditure would be considerably higher.

3.3.8 Beverages

Appendix 3.8 presents a similar summary for beverages used by the tourist sector. Bar mixes are consumed in the greatest quantity (46% by volume) but, owing to their relatively low cost, comprise only 20% of the value in the beverage sector. Only slightly less in volume (39%) and most important in value (33%) is beer, which is totally imported. Wine (21% by value) is also a significant item. Total beverage consumption equals nearly 85 000 litres (18 557 gallons) with a total value (at cost) of nearly EC\$556 000. Of this, the hotels account for only 46% by volume, although 60% by value. This contrasts sharply with the food sector where the hotels held a 90% share, indicating that the restaurants receive considerable non-dining custom.

Turning to seasonality, the same patterns observed for foods is repeated with beverages; the hotels consuming more than 1/2 of all beverages (56%) during the high season, while the restaurants use only slightly over 1/3 (35%). As a 33% share for the high season would indicate no

additional business at all at peak times, it is likely that the restaurants receive little seasonal trade with the possible exception of wine (42% in the high season).

Only bar mixes and rum are available locally, although in both cases, a good proportion is also imported (37% and 39% respectively). This results in an extremely high 78% of all beverage costs passing to imported items and represents a significant leakage from the St. Vincent economy.

3.4 Factors Affecting Usage of Foodstuffs and Drinks

3.4.1 Origin of Patrons

In the second part of the survey analysis for St. Vincent and the Grenadines, we turn to questions relating to factors influencing the usage of foodstuffs and drinks. Appendix 3.9 presents data concerning the proportion of different types of customers consuming foodstuffs and beverages (by cost). Extra-regional tourists accounted for between 20% and 70% of all food consumed in the hotel sector (average 57%) and from 0-100% of drink (average 58%). This contrasts sharply with the restaurants where the averages were 17.5% for both categories. This difference is a major element in explaining the relatively high seasonality of hotel food consumption (see Appendix 3.4) and the almost complete lack of seasonality displayed by restaurants. For business travellers and CARICOM customers, no difference existed between the hotels and restaurants in terms of share of food costs - the average for both groups was 20%. For beverages, however, business travellers and CARICOM customers were more important to the hotels - 29% of business compared with 17.5% for the restaurants. The position is dramatically reversed when local custom is examined. Here hotels received only an average of 7% of their food sales, compared with 60% for the restaurants. Less difference occurred with beverages but the gap was still considerable.

Approximately 21% of drinks sales are made to local customers by hotels compared with 65% for restaurants. Finally staff meals accounted for an average of 15% of hotel food costs compared with only 2.5% for the restaurants.

3.4.2 Supply Sources and Problems

In Table 3.5, data concerning sources of supply for foodstuffs and problems associated with obtaining foods is summarised. In St. Vincent and the Grenadines, tourist sector meat is primarily purchased from the

TABLE 3.5

SOURCES OF SUPPLY AND PROBLEMS ASSOCIATED WITH VARIOUS FOODSTUFFS,
ST.VINCENT AND THE GRENADINES - SURVEY 1983

<u>MEAT</u> (13 responses)					
Source of supply	Local Butcher 6	Supermarket 9	Farmer 2	Wholesaler 2	Own Producer 1
Problems in obtaining meat	No Problems 9	Unreliable Supply -	Poor Quality 1		
<u>FISH</u> (13 responses)					
Source of supply	Fisherman 11	Cooperative 1	Vendor 1	Supermarket 1	Own Fishing 1
Problems in obtaining fish	No Problems 7	Unreliable Supply 2	Seasonality 4	Poor Quality -	Cost 3
<u>FRUIT & VEGETABLES</u> (13 responses)					
Problems in obtaining fruit & vegetables	No Problems 8	Unreliable Supply 3	Seasonality 3	Poor Quality 1	Cost 3

supermarket (70% of respondents) or, to a lesser extent, the local butcher (46%). This reliance on retail rather than wholesale outlets is unusual and may be a reflection of the responses received on the Grenadines where no wholesalers and producers are available. Less than a quarter purchased from source (the producer) and even fewer from full wholesale outlets. Despite this pattern, the vast majority (70% of respondents) found no problems in obtaining their meat and not a single complaint about price was received. Where problems did occur (for 30% of respondents) they concerned unreliable supply, with two responses for beef and one each for pork, lamb/goat, and poultry. The meat is simply not always available when needed. In one case (that of pork) while the meat was available, the required cuts were not present.

Sources of supply for fish were almost universally direct from the fishermen (85%). Of the two who did not use fishermen, one caught his own fish. All other categories of supply were used on occasion by a single respondent (8%). Of those who experienced problems in obtaining fish (46%), the main complaints were seasonal supply (30%) or price (22%). This latter category included one accusation of crooked weighing of fish. Unreliable supply (15%), generally as a result of bad weather, was also mentioned.

Sixty two percent of respondents experienced no problems with fruit and vegetable supply while 22% complained about seasonality - particularly for cabbage, tomatoes and fruit in general (all by 22% of respondents). Lettuce was also identified by a single respondent (8%). Price was a problem again for 22% of respondents (especially for cabbage and tomatoes) as was unreliable supply. The latter affected a wide range of vegetables and fruit, with onions being singled out by 15% of respondents, and cabbage, fruit, cauliflower, beets, broccoli, and potatoes by a single respondent each (8%). Poor quality was only mentioned once, in connection with pawpaw where the blight has resulted in reduced quality.

3.4.3 Factors Influencing Menus

Questions were also included in the survey with regard to the factors influencing the choice of menu. Results are summarised in Table 3.6 below.

Table 3.6
Factors Taken Into Account By The Tourist Sector
When Preparing Menus, St. Vincent & The Grenadines - Survey 1983

<u>Cost of Food</u> 9	<u>Availability</u> 12	<u>Storage Facilities</u> 2	<u>Customer Demand</u> 11
<u>Chef's Specialties</u> 6	<u>Local & Caribbean Dishes</u> 11	<u>Other</u> 2	

15 respondents

Availability was the most important factor - given by 80% of respondents - and its popularity suggests that seasonality of production (see Table 10) is a problem to only a minority of restaurateurs and hoteliers because they plan menus accordingly. Also very popular as factors in the choice of menu, were customer demand and a bias towards local and Caribbean dishes (73% for both). Cost of foodstuffs was cited by a majority of respondents also (60%). Storage facilities were a factor only for two respondents (13%) - an unsurprising result as all possessed at least one freezer and fridge. Several of the hotels in addition, possessed cold or cool store rooms. Among other factors cited by respondents in their choice of menus was attractiveness, preparation time and class of clientele (a single nomination each).

3.5 Summary

In summary, therefore, the tourist sector of St. Vincent and the Grenadines is characterised by an extremely limited independent restaurant sector (the few restaurants not attached to hotels cater primarily to local customers) and a high degree of seasonality - approximately 2.5 meals are served per day in the high season for each meal per day served in the low season (assuming meals costs to be constant). Total food costs of the tourist sector per annum are approximately EC\$2.8 million, of which roughly 74% (EC\$2.075 million) is accounted for directly by non-residents (i.e. other than locals and staff).

Local production contributes 70% by weight, but only about 45% by volume of total food consumption. This arises from the relatively high value of imported foodstuffs. Only for fruits, vegetables and especially sea-food, does local production dominate the sector. Dairy goods and meats are major leakage areas to imported goods. Available statistics from St. Vincent and the Grenadines tend to be poor and several years in arrears but it would appear that even where local produce is extensively used, the tourist sector accounts for only a very small proportion of national consumption. Tomatoes, cabbage, cucumbers and oranges are the only commodities for which the tourist sector may account for 5% or more of production according to 1979 production data. It is also possible that the sector is a significant factor in the consumption of lobster and conch (lambi) although no figures are available. For imports, the tourist sector is likely to be a major purchaser of the better cuts of meat, shrimps and canned juices (possibly also processed meats), although import figures are generally not disaggregated sufficiently for this to be confirmed.

Most restaurateurs and hoteliers appear to have adapted themselves to local supply conditions, although seasonality and unreliability of supply are still significant problems.

Beverages present an even more import-dependent picture than does the food sector, with 78% by value (approximately 67% by volume) of beverages being imported. Beer, non-rum spirits, and wine, all exclusively imported, are major sources of leakage in this sector. Even rum, however, which is produced locally, is nearly 40% imported.

4.0 ST.LUCIA

4.1 The Tourist Sector

4.1.1 Physical Facilities

St. Lucia possesses a medium sized tourist plant with a fairly good mix of accommodation. Six facilities - all with over 60 rooms - account for nearly half of the available rooms in the country. The largest facility has 256 rooms and the average number of rooms per facility is about 35. There are four marina companies operating in the island and there are about 25 restaurants catering to tourists. Results of a recent CTRC accommodation survey places the total number of rooms at 1706 for 1983. This was a 23.3% increase on the 1982 figure. Results of the survey are as follows:

973 rooms at 11 hotels;
 308 rooms at 11 apartments;
 75 rooms at 13 guest houses; and
 350 rooms at 2 villas.

It should be noted here that apartment hotels have been included with hotels and that two of the hotels also have villas as part of their establishments.

The survey also revealed that in 1961, 42% of properties were either owned or managed by nationals. This figure increased to 70% in 1983. Local and joint ownership in terms of rooms, amounted to 66.6% of total capacity in 1983.

There are two airports on the island, one in the north west of the island, Vigie, and the other, Hewanora, (International) in the south. St. Lucia is therefore able to benefit from some landed flights out of North America and Europe without having to use Barbados as a gateway. Visitors landing at Hewanora, except for those remaining in the south, have in the past, had to travel about 40 miles overland to the tourist centre which is situated on the north western coast. It is hoped that with the introduction of services by WINLINK, some of these difficulties will be resolved. A study on air transportation conducted in late 1982 and early 1983 revealed that there were 186 scheduled weekly flights to the island in Summer and 118 in Winter. These account for 4 333 and 6 092 passenger seats (non-stop) respectively, the majority of which originate from other Caribbean territories. Since then Pan American Airlines have introduced a twice weekly scheduled service out of New York providing an additional 600 seats approximately. The airline has introduced an additional flight from the end of October, 1983.

Tourism administration is handled by the St. Lucia Board of Tourism which falls under the auspices of the Ministry of Trade, Industry and Tourism. Twenty five persons are employed by the Board, with 4 at overseas offices in North America. The country's tourism budget was in the region of US\$300 000 in 1981 and US\$280 000 in 1980. This increased to some US\$885 790 in 1983. Of this amount, US\$683 615 was spent on Marketing and Promotion. Joint promotion ventures with the St. Lucia Hotel Association are undertaken from time to time.

Tourist incentive legislation, contained in Hotel Aids Ordinance No.25, 1959, is mainly for the purchase of construction material and hotel equipment. Tax holidays are also granted as an incentive.

4.1.2 Tourist Arrivals

Tourist arrivals to St. Lucia have more than doubled since 1970, growing at an annual rate of about 8%. There was fairly high growth (11% per annum) during the period 1970-1976 but this declined to just about 4% between 1976-1982 (see Table 4.1). Unavailability of comparable data for several years have made it impossible to do a similar analysis by major markets. The US market, however, recorded negative growth (-2.9%) over the period 1976-1982 and between 1979-1982 (-17.5%) but grew by 14.8% per annum between 1976 and 1979. The Canadian, European and Caribbean markets all registered growth between 1976 and 1982 and 1976-1979 but declined over the period 1979-1982.

With the exception of 1976 when there were more arrivals from the US, the European market has been the islands' major supplier of tourists. Based on information for 1979, 1980 and 1982, Europe, the Caribbean, the US and Canada are the major markets. Within the European grouping, the UK and Germany account for the bulk of arrivals.

The Winter months - December to March - provide the island peaks in visitor arrivals, while May and September are the months with the weakest flows (see Table 4.1b). Average length of stay in the country is estimated at 6.8 nights.

4.1.3 Economic Aspects

An economic impact study conducted in 1979 revealed that the value added due to tourism was US\$13.6m in 1978 or 18.6% of the Gross Domestic Product (GDP) for the respective years. Since then tourism's share of the GDP has been on the decline. Efforts are in progress to rectify this situation. World Bank sources have estimated the contribution of the Hotel and Restaurant sector to GDP at US\$6.7m or 7% in 1980 and US\$5.7m or 5% in 1981.

Table 4.1

Tourist Arrival Data: ST.LUCIA

4 - 3

4.1a Tourist Arrivals by Country of Origin

Country of Origin	1977 (1)	1978 (1)	1979 (1)	1980 (2)	% of 1980 Total
U.S.A.	16,345	n.a.	20,967	14,111	17.7
Canada	13,232	n.a.	17,784	13,018	16.3
United Kingdom	n.a.	n.a.	n.a.	15,158	19.0
Europe	20,102	n.a.	27,963	15,752	19.8
Other	2,232	n.a.	2,748	2,352	2.9
Caribbean	14,469	n.a.	18,444	19,303	24.2
TOTAL	66,380	105,473	87,906	79,694	100.0

(1) Revised figures supplied to CTCRC by Ministry of Trade Tourism and Foreign Affairs. Air and sea arrivals but excluding cruise passengers. By country of residence.

(2) New series, air only. Stayover visitors arriving by sea numbered 1,525 in 1980.

4.1b Monthly Tourist Arrivals

Months	1976	1977	1978	1979	1980 (1)	% of 1980 Total
January	6,761	n.a.	9,191	n.a.	8,621	10.8
February	7,295	-	9,306	-	8,696	10.9
March	7,425	-	10,541	-	8,400	10.5
April	801	-	8,250	-	7,566	9.5
May	4,101	-	7,066	-	6,562	8.2
June	4,350	-	5,963	-	5,979	7.5
July	5,659	-	9,602	-	7,243	9.1
August	6,853	-	11,216	-	3,868	4.9
September	4,788	-	6,611	-	4,022	5.0
October	5,591	-	7,962	-	3,970	5.0
November	6,124	-	9,419	-	6,008	7.5
December	8,927	-	10,341	-	8,759	11.0
TOTAL	75,885	66,380	105,473	87,906	79,694	100.0

Source: St. Lucia Tourist Board and Government Statistical Office.

(1) 1980 by air only.

4.1c Cruise Passenger Arrivals

Months	1977	1978	1979	1980	% of 1980 Total
January	12,366	10,368	14,304	11,346	19.7
February	10,259	10,226	10,256	9,328	15.8
March	8,365	8,685	8,046	9,627	16.3
April	6,807	6,861	6,914	6,344	10.7
May	1,827	2,868	786	2,949	5.0
June	1,810	3,621	105	2,615	4.4
July	3,189	3,100	3,279	3,349	5.7
August	3,125	3,815	2,435	1,843	3.1
September	1,323	2,647	-	2,781	4.7
October	2,273	2,941	1,606	3,110	5.3
November	1,529	2,316	743	2,781	4.7
December	8,214	10,554	5,875	2,969	5.0
TOTAL	53,287	68,038	54,349	59,042	100.0

Employment in the tourism sector was estimated at 5 805 in 1981 of which 1 731 were accounted for by the accommodation sector. Direct employment stood at 2 250. Visitor spending accounted for the equivalent of some US\$28.8m in 1981 as estimated by CTRC. In 1980 this figure was US\$33.6m. In comparison merchandise exports realised US\$46.0m. Visitor expenditure estimates provided by the Tourist Board placed expenditure at US\$24.9m in 1981 and US\$27.6m in 1982.

4.1.4 Future Development Plans

A tourism development plan is at present being drawn up for the country. This is not expected to be completed before the middle of 1984. While no details of budget expenditure for 1982 or 1983 are available, it is expected that increased funds will be allocated to tourist promotion in the North American market, as marketing thrusts will be increased there.

Overall product development is being planned, particularly in the upkeep of historical sites and monuments, and long-term plans for a resort at the foot of the Pitons (one of the country's major attractions) have been approved.

With an increase in non-stop passenger seats out of New York from the end of October, the country should be more accessible to the North American Market. In the meantime, negotiations with other carriers are continuing, particularly BWIA and BA. Should these bear fruit, tourism in St. Lucia should continue its present renewed growth pattern.

4.2 The Agricultural Sector

Although still the major economic sector within St. Lucia's economy, agriculture is not as important as is the case for St. Vincent or Grenada. In 1980 agriculture and fisheries accounted for 12% of GDP and 57% of all domestic exports. Manufactured goods (chiefly clothing and electrical goods) accounted for a further 41% of domestic exports.

Of the island's approximately 150 000 acres, less than 50% (72 290 acres at the time of the 1973 agricultural census) is usable for agricultural production - chiefly due to the rugged terrain. Twenty-four per cent of farmed acreage is held by 92% of farms while a further 40% is cultivated by just 19 plantations. This pattern has recently been breaking down, however, as some of the large plantations have been purchased by the government and turned over to small-scale farming.

The principal crops for export are bananas and coconuts, with mangoes being a major domestic product, due largely to the shortage of improved grafted varieties. Efforts are being made to rectify this situation however and considerable growth in mangoes as well as avocados, citrus and cocoa (once a major crop) are expected during this decade. Production estimates for major crops are presented in Table 4.2.

The seasonality of food crop production is shown in Table 4.3. Bananas and plantains are year-round rain-fed crops, as are eddoes, cucumbers and sweet peppers. Using irrigation, an all-year-round season can be established for string beans, carrots and aubergines/egg plant. Citrus are harvested largely in the first quarter of the year.

Livestock populations in St. Lucia were estimated at 11 000 head of cattle, 14 000 head of sheep, 11 000 head of goats, 10 000 head of pigs and 209 000 head of poultry in 1982. Slaughter numbers were similarly, 2 000 head of cattle, 2 000 head of sheep, 400 goats, 1 600 head of pigs and 12 000 head of poultry for the same year. No carcass weights are available.

Total fish catch for St. Lucia in 1981 equalled nearly 2 000 000 lbs at a value of nearly EC\$5 million. Chief species caught include tuna, dolphin, flying fish and king fish.

Potential for the expansion of domestic production to meet the needs of the tourist sector is limited by the somewhat disorganised nature of agricultural production in St. Lucia (apart from bananas). Surpluses already exist in such crops as bananas (export rejects but perfectly acceptable for local consumption), plantains, mangoes and citrus.

Few organised farmers' groups exist but among the possible participants in any tourism-oriented production scheme could be:

- Black Bay Farmers' Group;
- Morne Repos Co-operative;
- Babbaneau Pig & Poultry Co-operative;
- Roseau Model Farm Scheme;
- Dennery Farm Company;
- Balembouch Estate;
- Marquis Estate;
- Ford Estate.

Table 4.2

Production of Selected Food Crops in St. Lucia
1976, 1978, 1980

	1976 (Tonnes)	1978 (Tonnes)	1980 (Tonnes)
Cabbage	137	140	295
Lettuce			5
Carrot	31	33	114
Beans	14	45	14
Tomato	42	45	363
Egg Plant	100	10	136
Pumpkin	314	350	295
Banana	56 772	55 518	32 954
Yams	3 431	3 800	1 136
Coconuts	5 263	6 538	7 395
Cocoa	101	100	88
Sweet Potato	1 029	1 060	1 181
Ginger	338	360	114
Plantain	420	445	4 500
Pigeon Peas	45	45	
Eddoes	4 114	4 200	
Grapefruit	300	326	
Mangoes	17 307	17 750	
Oranges	100	100	
Limes	110	112	96
Pineapple	41	30	

Sources: Ministry of Agriculture and Estimates extracted from
CARICOM Agricultural Sector Studies.

Table 4.3

Seasonality of Horticultural Produce

Commodity	J	F	M	A	M	J	J	A	S	O	N	D
Avocados								—————				
Bananas	—————											
Grapefruit	—————											
Limes	—————											
Mangoes				—————								
Oranges	—————											
Pineapple							—————					
Plantains	—————											
Eddoes	—————											
Sweet Potatoes	—————	—————										
Yams		—————										
Aubergines	—————											
Cabbages	—————											
Carrots	—————											
Cucumbers	—————											
Okras	—————											
Onions		—————										
Pumpkin	—————											
String beans	—————											
Sweet peppers		—————										
Tomatoes	—————											
Peanuts		—————										
Pigeon Peas	—————											
Ginger		—————										

- Key: 1. Solid lines: harvest period for rainfed produce.
 2. Broken lines: extension of harvest period likely attainable with irrigation.
 3. Double lines: periods of highest production when gluts are possible.

Major imported fresh produce items are summarised in Table 4.4, together with the source of supply. Irish potatoes and onions are the major imported items with tomatoes and carrots also of significance. Imports of fruit and vegetable juice are given in Table 4.5. In 1980 these juices cost St. Lucia nearly EC\$2.6m, primarily to the U.S.A.

Imports of beef totalled 666 000 lbs in 1981 at a cost of just over EC\$2m. Pork totalled 571 000 lbs (EC\$674 000) and chicken 7.24 million lbs (EC\$8.17 million). Little of this was in the form of whole chicken, however.

Due to the relatively large tourist sector in St. Lucia, the wholesaling sector is well established, at least for imported goods (see Table 4.6). Two major frozen food dealers exist; St. Lucia Cold Storage and Peters & Co. Ltd. Dry goods and other imported foods are handled by a range of companies including:

- Lafayette Ltd., Castries
- Linmore's International House, Castries
- International Foods & Trading Co., Castries
- Frank Armstrong (St. Lucia) Ltd., Castries
- Caribbean Enterprises Ltd., Castries

In addition, the St. Lucia Marketing Board handles imports and wholesaling of commodities such as eggs, as well as wholesaling local produce in limited quantities to the tourist sector. Finally, the Ministry of Trade (Procurement Division) imports and wholesales a range of basic goods.

The processing sector in St. Lucia is also relatively well developed. Uniquely among the three islands, St. Lucia possesses a modern, well equipped meat processing facility (Six Prime Butchers, Dennerly) which produces hams, bacon, sausages, salami and a variety of smoked meats and fish. Six Prime is also the main wholesaler of the better fresh meat cuts to the tourist sector.

Agro-Industries, operated by the Atkinson family, was founded in 1980 to process local fruits. Following a series of unforeseen disasters, including Hurricane Allen, which deprived the factory of raw material for a lengthy period, the company is now heavily in debt and attempting a

Table 4.4

Selected Imports of Fresh Produce into St. Lucia - 1980

Commodity	Source	Quantity(Kg)	\$C.I.F.	Unit Value \$C.I.F.(Kg)
Sweet Oranges	Extra-regional	926	1 648	1.78
	TOTAL	926	1 648	1.66
Grapefruit	Dominica	1 961	3 252	1.66
	St. Vincent	45	32	0.71
	Extra-regional	16	51	3.10
	TOTAL	2 022	3 335	
Limes	Dominica	160	456	2.85
	St. Vincent	9	20	2.22
	TOTAL	169	476	
Bananas	Grenada	11 tonnes	8 339	
	TOTAL	11 tonnes	8 339	
Pineapples	Martinique	167	400	1.12
	Extra-regional	899	3 522	3.92
	TOTAL	1 066	3 922	
Potatoes (not including Sweet)	St. Vincent	363	400	1.12
	Barbados	45	30	0.67
	Martinique	1 323	1 898	1.43
	Extra-regional	616 012	653 162	1.06
	TOTAL	617 743	655 490	
Tomatoes	Martinique	30	108	3.60
	Extra-regional	54 323	209 281	3.85
	TOTAL	54 353	209 389	
Onions	Barbados	23	30	1.30
	Martinique	45	50	1.11
	Extra-regional	492 132	602 048	1.22
	TOTAL	492 200	602 128	
Carrots	Martinique	10	20	2.00
	Extra-regional	64 276	143 635	2.23
	TOTAL	64 286	143 655	
Cabbages	Extra-regional	5 000	7 632	1.53
	TOTAL	5 000	7 632	
Sweet Peppers	Extra-regional	1 038	6 807	6.56
	TOTAL	1 038	6 807	
Dasheen/Eddoes	St. Vincent	5 277	7 937	1.50
	TOTAL	5 277	7 937	
Sweet Potatoes	St. Vincent	14 744	11 918	0.81
	Barbados	1 406	1 638	1.17
	TOTAL	16 150	13 556	
Yams	Barbados	196	312	1.59
	TOTAL	196	312	

Source: Statistical Unit, Ministry of Finance & Economic Planning,
Castries, St. Lucia.

Table 4.5

Imports of Fruit and Vegetable Juices into St. Lucia
in 1980 (Tonnes - EC\$)

	Tonnes	\$'000	\$/Kg
<u>Grapefruit Juice</u>			
From Trinidad & Tobago	3.3	11	3.35
U.S.A.	148	306	2.06
Total	164	347	2.12
<u>Orange Juice</u>			
From Trinidad & Tobago	20.6	71	3.43
U.S.A.	555.5	1 290	2.32
Total	628.4	1 501	2.39
<u>Other Fruit Juices</u>			
From U.S.A.	183	573	3.13
Total	224	719	3.22
<u>Vegetable Juice</u>			
Total	15.8	32	2.02
Total	1 032.2	2 599	

Source: Statistical Unit, Ministry of Finance & Economic Planning,
Castries, St. Lucia.

restructuring. The only major product line at present is green mangoes in brine for further processing in California. If restructuring is successful, Agro-Industries will move into the processing of imported citrus and tomato concentrates for local sale.

As is the case for the other islands, a small government owned Agro-Lab exists, equipped with primarily research scale machinery, which produces a limited selection of local jams, jellies and sauces.

Other active processors include:

Risa St. Lucia Ltd., Castries; producing a range of curries, sauces, spices and coffees.

Viking Traders; packaging and processing of spices and other dry goods, primarily for export.

Universal Flavours Caribbean Ltd.; specialising in food additives including beverage and ice cream flavourings, chocolates, meat condiments, etc.

Ferrands Dairy, Castries; ice-cream production.

Beau Sejour; an EDF supported dairy project at Vieux Fort producing ice-creams and other dairy items. The project faces severe problems, however, in production, planning and marketing.

Cana Weekes Ltd., Canaries; producing packaged snack foods and with facilities for possible additional portion controlled food packaging in the future.

4.3 Tourist Sector Consumption - Survey Results

4.3.1 Scope of Survey

Although not as large as the major destinations such as Barbados or the Bahamas, St. Lucia possesses a tourist sector that is considerably bigger than those in the other Windward Islands. Moreover in St. Lucia this sector encompasses active enterprises in all three sub-sectors; hotels, restaurants and marinas.

Approximately twenty-one full service hotels with a total of 1 430 rooms are in operation on the island. The eight largest, containing 1 034

rooms, were surveyed providing a sample of around 72% of capacity. Forty restaurants are listed in the island of which approximately 29 can be considered to serve full meals (as opposed to snacks and rotis). Nineteen of these, serving a total of approximately 1 200 high season meals and 600 low season meals per day, were interviewed. Accurate servings figures for the remainder of the establishments was difficult to obtain but it is estimated that those surveyed account for roughly 80% of all servings - the survey having included virtually all of the major restaurants.

A more complex situation exists for the marinas. Four provisioning marinas operate in St. Lucia but their figures typically include both beverages and food as both are supplied as a package. These marinas handling more one day or short-period Charters (including the two surveyed) have a considerably greater proportion of beverages than those provisioning for 7-10 day trips. In light of this and discussions with marina operators it was decided to assume the sample surveyed as comprising 25% of the food business and 45% of the beverage business handled by St. Lucia marinas. This represents, obviously, a somewhat arbitrary decision but one that is felt by the survey team to represent a fair estimate of the marine provisioning sub-sector on St. Lucia.

The results of the survey of food consumption are summarised in Appendices 4.1 - 4.8. Sample results have been extrapolated upwards, as for the other countries in the study, to provide an estimate of national tourist sector consumption.

4.3.2 Meat and Sea-Food

Appendices 4.1A, B and C provide estimates of meat consumption by the hotel, restaurant and marina sub-sectors respectively. In all cases chicken is the most popular single meat item by weight, with a combined total for the sector of nearly 185 000 lbs. This equates to a 25% share of the total meat consumption and is fairly constant for all sub-sectors although restaurants (29%) are relatively heavier users than hotels (23%) Marinas fall on the average. Due to its relatively low unit cost, however, its share of value is only 9% of the total (\$530 000 EC). Steak is second in popularity by weight with a combined total for all sub-sectors of 151 000 lbs (20%). Again, restaurants are relatively larger users (26%) than hotels (18%) or marinas (17%). The high cost of steak places it as the largest item of expenditure though, at slightly

over EC\$2 million (40%). When combined with 'other beef' (primarily ground and boneless beef) to provide a total for all beef, these figures rise to nearly 260 000 lbs (35%) and EC\$2.6 million (50%).

Pork is the only other single item with a major share of total meat consumption. It accounts for a total of 163 000 lbs or 12% of all meat consumption by weight. For pork it is the marinas which are relatively the largest consumers (17%) followed by the restaurants (14%) and the hotels (11%). Pork's share of total expenditures is also 12%. Lamb and goat are minor items for all three sub-sectors accounting for 5-6% of consumption by weight in all cases for a total of only 42 000 lbs. As a relatively expensive meat its value, at EC\$390 000 for all sub-sectors combined, is a slightly higher proportion (7.5%).

Finally, processed meats including ham, bacon and sausage, account for 22% by weight and 20% by value of all meat usage (163 000 lbs and EC\$1.0 million). Here, however, discrepancies between the various sub-sectors are large. Hotels consume 31% of their meat in a processed form, marinas 23% and restaurants only 6%. This is likely to be a reflection of the level of breakfasts provided by each of the categories of tourist sector food users. Bacon is the largest single item used by both hotels and marinas compared with ham by the restaurants.

Total meat consumption by all sectors amounts to nearly 740 000 lbs at a cost of EC\$5.2 million. Of this, the hotel sub-sector accounts for approximately 59%, restaurants 34% and marinas 7.5%.

Turning to seasonality it can be seen that for meat, hotels follow a similar pattern to that seen in St. Vincent and the Grenadines with 55% of all food usage occurring during the 17 week high season. Slightly less seasonality is apparent for the marinas (51%) and less still for the restaurants (43%).

All sub-sectors are heavy users of imports in the meat category, led by hotels with 89% of all meat imported and restaurants and marinas at 78% and 77% respectively. Almost all processed meats and steak are presently imported, as is most chicken. Significant quantities of local chicken are used by the hotels, however (28%). Of all meats, only pork is predominantly local in origin (60 000 lbs or 68% local for all

sub-sectors). In total, meat imports amount to EC\$4.4 million or an overall average of 85% of costs.

In Appendices 4.2A, B and C estimates of seafood consumption by each of the tourist sub-sectors are presented. In both hotels and restaurants, fish is the primary seafood by weight (55% and 50% respectively) although it is much less important in boat provisioning by the marinas (only 18%). In total, for all sub-sectors it accounts for 184 000 lbs (52% of all seafood by weight). As for chicken, however, its low value results in fish accounting for only EC\$616 000 or 21% of total expenditures. Lobster and shrimp are the major items by cost utilised in hotels and restaurants. Marinas use no lobster at all but some frozen shrimp is consumed. Eighty-five thousand pounds of lobster is eaten annually (24% by weight of total consumption of all sub-sectors) at a cost of just over EC\$1 million (37%). Both hotels and restaurants use roughly proportional shares. Shrimp is less common in weight terms (42 500 lbs) but its extremely high price results in a value only slightly less than that for lobster (EC\$916 000 or 32%). Here hotels (15%) are proportionately much bigger users than restaurants (8%) but less than marinas (18%). Canned fish, which account for only a very small share of hotel (3% by weight) or restaurant (1%) consumption, are the major item of seafood used in boat provisioning (65%). Nevertheless, because of the marinas' small share of the market, total canned fish use amounts to only 14 000 lbs (2%) for a value of EC\$125 000 (2%). 'Other' seafood (including crayfish, conch and crabs) are used fairly extensively by restaurants (17% or 27 000 lbs) but not at all by hotels or marinas sampled. Their total market share is therefore low (4%).

Total seafood consumption by all sectors amounted to over 350 000 lbs at a cost of EC\$2.9 million. Of this the hotels accounted for 56%, the restaurants 41% and the marinas only 3%.

Seasonality follows much the same pattern as before for hotels (56% in high season) but is more pronounced than for meat in restaurants (49%) - particularly for lobster, and very pronounced in the marinas (74% of seafood consumed in the high season). These results are readily explained by the heavy use of lobster and other expensive seafoods for tourist rather than local consumption and the poor returns for marinas from using perishable rather than tinned goods at the slack time of the year.

Fish, lobster and 'other' seafood were generally local in origin with canned fish and shrimp being imported. Hotels and restaurants procured 59% and 76% of their seafood (by value) from local sources respectively. marinas used exclusively imported produce.

4.3.3 Estimates of national tourist sector consumption of dairy products are presented in Appendices 4.3A, B and C. For hotels and marinas, eggs are the largest expenditure within this category - accounting for as much as 48% of all dairy costs for hotels and 40% for marinas. Restaurants appear to use relatively few eggs (7% by value), again probably a result of providing few breakfast (see processed meats, Appendices 4.1A, B and C).

Total consumption of dairy products amounted to 513 000 lbs (plus 281 000 dozen eggs) at a cost of EC\$3.26 million. After eggs (at 43% of total expenditure or EC\$1.4 million for all sub-sectors) butter, at \$810 000 (25% of all dairy expenditures) is the next most important item. Cheese accounts for 17% of all dairy expenditures and milk - 13% (although marinas are particularly heavy users of the latter at 28% of expenditure). Ice cream is the major item under 'other' dairy products.

Seasonality on average appears stronger for dairy products than most other food categories especially for marinas (60% of consumption by weight in the high season), although eggs are more evenly used. Hotels consume 54% and restaurants 49% of dairy products in the high season.

With the exception of the majority of eggs and all ice-cream (derived from imported milk) most dairy produce is imported. Due to the high value and usage of eggs, however, only 59% of expenditure on dairy products are for imports across the three sub-sectors.

Appendices 4.4A, B and C summarise the data on consumption of staples by the tourist sector in St. Lucia. Hotels are major users of bread (131 000 lbs and 48% of expenditure on staples) but it is much less important for restaurants (16 000 lbs and 20% of expenditure) and marinas (4 000 lbs and 17%). Restaurants use mainly ground provisions (75 000 lbs and 39% of expenditures), which are also important in hotels (nearly 200 000 lbs and 29%). Marinas do not use any ground provisions, concentrating primarily on rice (48% of expenditures) and potatoes (34%). These commodities account for about 12% of hotel expenditures on staples each but restaurants use twice as much rice as potatoes (20% and 10%).

'Other' staples consist primarily of plantain which is used extensively by restaurants.

Total staple usage amounts to approximately 670 000 lbs at a cost of EC\$892 000. Hotels account for 73% of this trade, restaurants 21% and marinas the remaining 6%.

Seasonality in the use of staples is only relatively moderate for hotels and marinas (52% and 53% of annual consumption occurring in the high season respectively) but it is higher than for meat or fish in the restaurant sub-sector. The difference is small however and may not be of significance.

Rice and potatoes are exclusively imported while bread and ground provisions are local (the bread is baked from imported wheat however). Direct imports account on average for only 28% of expenditure across the three sub-sectors.

4.3.4 Vegetables

Appendices 4.5A, B and C summarise survey data concerning vegetable consumption in the St. Lucia tourist sector. As can be seen in the tables, vegetable use is characterised by the consumption of a wide range of fresh produce with the importance of individual items varying from sub-sector to sub-sector. Most important overall, both in terms of weight and value, are tomatoes, with a total consumption of 135 000 lbs per annum at a cost of nearly EC\$405 000. The largest user is the hotel sector at 97 000 lbs (19% of vegetable usage by weight, 17% by value) but the share of tomatoes by weight is fairly constant for the other sectors too (restaurants, 17%, marinas, 18%). Cucumber is the most important fresh vegetable in the hotel sector by weight (20%) although due to its low unit value it accounts for only 10% by value. Cucumber is less important in restaurants and marinas.

Onions are the most heavily used fresh vegetable in restaurants (27 000 lbs or 19% by weight) but are less important to the other sectors.

Canned or frozen vegetables are also a significant item within the vegetable section accounting for \$260 000 EC overall or 16% of total vegetable expenditures. In restaurants they account for 33% of total vegetable costs.

In total 716 000 lbs of vegetables are consumed by the tourist sector in St. Lucia at a cost of over EC\$1.6 million, with 68% of the market (by value) bought by the hotel sector, 21% by restaurants and the remaining 11% by marinas.

Seasonality in the hotel sector is very pronounced with 61% of vegetables being consumed in 4 months. Only canned and frozen vegetables display little seasonality. Neither the restaurants nor the marinas show greater than usual seasonality in vegetable consumption.

With the exception of onions and canned and frozen vegetables, which are virtually 100% imported, vegetables are predominantly local in origin. The hotels, however, use significant quantities of imported cabbage, tomatoes and carrots. Total vegetable imports for the sector equal EC\$579 000 or 35% of expenditures on vegetables. Restaurants are the heaviest users of imported vegetables in proportion to their turn over (40%) due mainly to their heavy reliance on canned and frozen vegetables (33% of restaurant expenditures on vegetables go on this category alone). Hotels are also heavy users of imported vegetables with an average of 37% of expenditure on vegetables in this category. Marinas use relatively few imported vegetables - only 15% by value.

4.3.5 Fruit

Data on fruit consumption by the tourist sector is given in Appendices 4.6A, B and C. Largely because of consumption by the hotels, grapefruit is the dominant fruit by weight within the tourist sector, totalling 262 000 lbs (20%) at a cost of EC\$210 000. Oranges follow closely at 223 000 lbs (17%) at a cost of EC\$196 000. Bananas are also a major fruit in weight terms, with an annual consumption of 215 000 lbs (16%) at a cost of EC\$75 000. All of the above fruits are relatively low cost items, however, and canned juice (92 000 lbs or 7%) is by far the most important single item at a cost of EC\$440 000 or 27% of all expenditure on fruit. Pineapple (108 000 lbs) is also a major cost item at EC\$230 000 or 14% of expenditures. Restaurants are particularly heavy users of canned fruit juice with 64% of their fruit costs accounted for by this single item.

In total, tourist sector fruit consumption equals 1.3 million lbs at a cost of EC\$1.7 million. Seventy-five percent of this amount by value is accounted for by the hotel sub-sector, with 18% attributable to restaurants and the remaining 7% to the marinas.

Seasonality of fruit usage is typical of earlier patterns within hotels with 56% of fruit (by weight) being consumed in the high season. Seasonality is higher than normal, however, for restaurants with 53% of consumption in the high season. Canned fruit is particularly commonly used by restaurants during this period. Seasonality of fruit use is, by contrast, lower than normal for the marinas (49%) - in large part a reflection of the high consumption of bananas and mangoes during the low season.

Canned juice, fruit and fresh pineapple (in part) are the only imported items of fruit. Due to the high unit cost of the above items, however, the cost of imports at EC\$568 000 represents 34% of total expenditures on fruits - most of it resulting from purchases of the canned juice.

4.3.6 Miscellaneous Food Items

Appendices 4.7A, B and C present data on miscellaneous items - those not fitting into other categories. Total consumption of miscellaneous foods by the tourist sector in St. Lucia equals just over 400 000 lbs at a cost of EC\$691 000. Of this total, oil and fats account for the largest share of expenditure at EC\$226 000 (108 000 lbs). Two hundred and forty three thousand pounds of flour are consumed annually but the low value results in a cost of only EC\$158 000. Jams and jellies are also important in the hotels while the marinas use large quantities of cereals. In total, hotels account for 75% of expenditures, restaurants 15% and marinas 10%.

Seasonality of use of miscellaneous items is weak in all three sub-sectors. All items tend to be those used on a regular basis and will be affected less by shifts in demand than, say, seafood or other specially prepared items.

The majority of the products listed under the miscellaneous category are imported. Only the restaurant sector uses predominantly local oils for cooking and jams and jellies. In total, imports account for EC\$639 000 or 92% by value of the miscellaneous foods.

4.3.7 Total Food Consumption

Total food consumption by the St. Lucia tourist sector is summarised in Appendices 4.8A, B and C and Appendix 4.9. The hotel sector accounts for nearly 3.3 million lbs of produce per annum (excluding eggs) at a cost of EC\$11.0 million. This represents 67% of total tourist sector food expenditure in St. Lucia. Meat is by far the most important single category, comprising just over EC\$3 million or 28% of all hotel food expenditures. Dairy products are next in importance (25%) then fish (14%). Seasonality is similar to that seen for St. Vincent with 56% of consumption (by weight) occurring during the high season. Greatest seasonality is seen in the vegetables. Imported produce accounts for over EC\$6.5 million or 57% of all food expenditure, primarily in the meat (EC\$2.63 million) and dairy (EC\$1.5 million) categories.

Restaurants used just over 1 million lbs of foodstuffs (excluding eggs) per annum at a total cost of EC\$4.2 million (or 25% of total St. Lucian tourist sector food expenditures). As for the hotel sub-sector, meat is the most important single category at EC\$1.75 million by value or 42% of expenditure. Unlike hotels, however, the dairy category is of only minor importance with seafoods taking its place (EC\$1.18 million or 28%). Seasonality is higher than was the case for St. Vincent but, at 48%, still lower than for the hotel sub-sector. Staples, seafoods and dairy products are the most sensitive to peak season demand.

Imports total nearly EC\$2.4 million or 57% of all foodstuffs by value, an identical figure to the hotel sub-sector. Again meat is the major import category accounting for 55% of all imports alone. Seafood (primarily shrimp) and dairy are also significant imports (approximately 12% of imports each).

Total marina usage of foodstuffs equals 385 000 lbs at a cost of EC\$1.1 million - equivalent to 7% of total St. Lucian tourist sector food expenditure. As for the other sub-sectors, meat is the dominant category, accounting for EC\$392 500 or 34% of all expenditures. Dairy (EC\$221 500 or 19%) and vegetables (EC\$179 000 or 16%) are also significant. Seasonability is less than for hotels but still quite high at 53% of consumption (by weight) occurring during the high season. Imports, at EC\$692 000 EC account for approximately 61% of all food expenditures, with meat and dairy again being the leading categories

for imports. Seafoods are also heavily imported by the marinas, partially as a result of the extensive use of canned fish.

Foodstuffs usage for the entire tourist sector in St. Lucia totals over 4.7 million lbs per annum (plus 272 000 dozen eggs) for a total cost of EC\$16.3 million (see Appendix 4.9). Of this total, meat accounts for almost one-third by value (EC\$5.2 million) and seafood and dairy products another one-fifth each (\$2.9 million and \$3.3 million respectively). Vegetables and fruit together account for a further 20%. Fruits are the largest categories of foodstuffs by weight accounting for 1.3 million lbs per annum (595 long tons).

Seasonality overall reflects the large market share of the hotels with 54% of consumption occurring during the high season. Vegetables are the most seasonal category of food with 58% of consumption occurring during the peak period while miscellaneous products (flour, cooking oils etc) are, not surprisingly, least seasonal (50%).

Overall, imports account for 45% by weight and 58% by value of all foodstuffs used. The higher proportion by value reflects the generally greater unit cost of imported items. Particularly heavy usage of imports occurs in the meat (85% imported) and staples (92%) categories although dairy products are also mostly imported (eggs being the only major local item). Staples and vegetables exhibit the least leakage to imported goods (28% and 32% respectively).

4.3.8 Beverages

Finally, we summarise beverage usage by the three sub-sectors in the St. Lucian tourist industry (see Appendices 4.10A, B, and C). Total beverage consumption across all three sub-sectors equals EC\$5.7 million or 837 000 litres (183 000 gallons). Hotels and marinas account for an almost equal share of beverage consumption by volume (nearly 40%) but the value of drinks served at the hotels is higher resulting in a 43% share by value to that sub-sector. Marinas account for 37% of value and restaurants the remaining 20%. Comparing this with proportionate expenditure on foodstuffs, it is apparent that restaurants use relatively less beverages (or value of beverages) than food - 20% of total drink value to 25% of total food - while hotels are down even further. Tourists in hotels spend 68% of all food dollars but only 43% of drink dollars. The real gainers in the beverage section are marinas which increase their share substantially (7% to 37%) from foods to drinks. Interestingly, wine, the dominant item for the other sub-sectors is relatively unimportant while spirits are a major share of business. This suggests that considerable

provisioning of boats from Martinique and Guadeloupe, where wine is relatively inexpensive, may occur - primarily with beverages.

Overall, and for the hotel and restaurant sub-section, wine is the highest cost item of beverage expenditure, totalling EC\$1.6 million or 28% of expenditures across the three sub-sectors. It is relatively unimportant for marinas, however, accounting for only 18% of costs (compared with 34% for hotels and 36% for restaurants). 'Other spirits' are the dominant item for marinas, accounting for 27% of expenditures. Across all sub-sectors 'other spirits' have a 24% share of expenditures, approximately equal to that of beer (25%). Beer and bar mixes are, not surprisingly, the dominant items in terms of volume, accounting for approximately 40% each.

Seasonality of beverage consumption is higher than for foodstuffs in all sub-sectors at 59% high season usage in hotels, 52% in restaurants and 56% in marinas. Hotels and restaurants experience heavy seasonal demand for non-rum spirits (67% and 59% respectively) but this is not repeated in marinas where high season demand for non-rum liquors is below the overall average.

Imported beverages account for EC\$3.5 million or 62% of all expenditures on drink. Hotels use the highest proportion of imported beverages at 67%. Both marinas and restaurants use approximately 57% imported beverages. Only beer and bar mixes are predominantly local in origin although some local spirits are also used.

4.4 Factors Affecting Usage of Foodstuffs and Drinks

4.4.1 Origin of Patrons

In the second part of this survey for St. Lucia, we turn to factors influencing the usage of foods and beverages within the tourist sector. Appendix 4.11 presents results concerning the proportion of different types of customers using the hotels and restaurants (the marinas handle almost exclusively extra-regional tourists). Six of the seven hotels responding to the question received at least 70% of their dining custom from European and North American tourists (average 77%) including one which responded at the 100% level. The remaining hotel received only 40% of its trade from extra-regional customers. A similar, but greater dominance occurred in bar-sales, with no hotel reporting less than 65% of sales to extra-regional tourists (average 86%). A greater diversity was apparent among the restaurants. Four restaurants reported less than 10%

of their custom as originating from extra-regional tourists while 9 reported 75% or more (average 56%). A similar but higher spread (as for the hotels) occurred for beverage sales with a reported average of 60%. Business and Caricom travellers contributed very little to the sales of the hotel or restaurant sector in St. Lucia. They accounted for only 7% of food and 9% of beverage sales on average within the hotel sector and 9% of both food and beverage sales for restaurants. Local customers were also unimportant for all hotels with an average of 5% of food and 6% of beverage sales. Restaurants, however, received varying amounts of local custom according to their intended market. Four of the restaurants interviewed received more than 75% of their custom from local diners with three receiving less than 5% (average 29%). Beverages presented a similar picture with an average of 31% of all beverage sales by restaurants going to local customers. Staff meals accounted for 12% of hotel food costs and 6% of restaurant food costs on average.

4.4.2 Supply Sources and Problems

In Tables 4.6 and 4.7 responses to questions concerning sources of supply and problems of procurement are summarised. In Table 4.6 it can be seen that hotels deal mainly with wholesalers and importers (83% and 50% of hotels used these supply sources respectively). Supermarkets, cooperatives and vendors were used by only a single respondent each. No hotel purchased meat directly from a farmer. By contrast the restaurants, although also strong users of the importers (81%) tended to have more diverse supply sources and only a single respondent purchased from a wholesaler. Butchers (32%), farmers (16%), supermarkets (16%) and cooperative (16%) were all used by more than one restaurant. The single marina which answered the question relied on wholesalers and a cooperative for its meat supply. In the case of fish the choice was overwhelmingly directly from the fishermen for all categories. Only for the restaurants was any other supply source used. These included fishmongers or hucksters (16%), wholesalers (11%) and a cooperative (5%).

Forty-five percent of catering establishments experience problems in obtaining desired meat supplies, with the greatest problems being with regard to pork. Sixty-nine per cent of these experiencing problems with meat were dissatisfied with their pork supply - a meat that is generally local in origin. Although a variety of reasons were quoted, poor quality was the dominant complaint (78% of people experiencing problems with pork complained about quality). Unreliable supply (44%), high price (33%) and

TABLE 4.6

Sources of Supply & Problems Associated with Various FoodstuffsSt. Lucia - Survey 1983

<u>Source of Supply</u>	Farmer/ Fisherman	Super- market	Wholesaler	Co-operative	Butcher/ Fishmonger/ Huckster	Importer	Sample Size
Meat: Hotels	-	1	5	1	1	3	6
Restaurant	3	3	1	3	6	16	19
Marinas	-	-	1	1	-	-	1
Fish: Hotels	6	-	-	-	-	-	6
Restaurants	16	-	2	1	3	-	19
Marinas	1	-	-	-	-	-	1

<u>Problems Associated</u>	All Problems		Unreliable Supply		Seasonal Supply		Poor Quality		High Price		Other	
	#	%	#	%	#	%	#	%	#	%	#	%
Meat: Beef	6	46	2	33	-	-	5	83	2	33	-	-
Pork	9	69	4	44	-	-	7	78	3	33	2	15
Lamb/goat	3	23	2	67	-	-	2	67	1	33	-	-
Chicken	7	54	6	86	-	-	3	43	4	57	-	-
Total	13	45										
Fish:	13	45	3	23	2	15	1	8	8	62	1	8
Fruits & Vegetables:	13	45	8	NA	26	NA	14	NA	13	NA	-	-

TABLE 4.7

Problems Associated with Obtaining Specific Fruits and Vegetables

for the Tourist Sector, St. Lucia Survey, 1983

Item	All Problems		Seasonal Supply		Poor Quality		High Price		Unreliable Supply	
	#	%	#	%	#	%	#	%	#	%
All fresh fruits 1	4	31	4	100	-	-	1	25	1	25
Water melons	2	15	2	100	1	50	-	-	-	-
Pineapples	3	23	3	100	1	33	1	33	-	-
Oranges	1	8	1	100	1	100	-	-	-	-
Avocados	1	8	1	100	-	-	-	-	-	-
All fresh vegetables 1	3	23	2	67	1	33	1	33	1	33
Cabbage	2	15	2	100	-	-	1	50	-	-
Carrots	4	31	2	50	2	50	2	50	1	25
Celery	1	8	-	-	-	-	1	100	-	-
Christophene	1	8	1	100	-	-	-	-	-	-
Cucumbers	1	8	-	-	1	100	-	-	1	100
Eggplant	1	8	1	100	-	-	-	-	-	-
Lettuce	1	8	1	100	-	-	-	-	-	-
Onions	1	8	-	-	-	-	-	-	1	100
Potatoes	1	8	-	-	-	-	-	-	1	100
Salad beans	1	8	1	100	1	100	-	-	-	-
Tomatoes	7	54	5	71	6	86	5	79	2	29

1 - Some respondents claimed difficulties applied to all fresh fruit or vegetables.

other (15%) were also given as replies in respect to problems with pork. 'Other' included lack of choice cuts and import restrictions while quality and unreliable supply focused on poor packing and grading, lack of certain cuts (e.g.ham) and chronic shortages of good quality meat. Chicken supplies were also a frequent source of complaints with 54% of these experiencing problems with meat, dissatisfied with the situation for chicken. Most complaints centred on unreliable supply (86% of problems with chicken) particularly for the imported part (e.g. chicken legs). Poor quality (43%) and high price (47%) were also noted. Complaints with regard to beef (46% of these experiencing problems with meat complained about beef) centred on quality (83%) with comments such as tough, chewy or poorly cut, common. Unreliable supply and high price were also mentioned, but less often. Lamb and goat were complained about least (only 23% of these experiencing problems with meat) with unreliable supply and poor quality the most frequent grumbles.

The same proportion of establishments that complained about meat problems also complained about fish (45%). Here however, the dissatisfaction was largely centred on price (62% of these complaining about fish). Unreliable supply (due to poor weather or holidays) was specified by 23% of those having problems as well as independently under 'other'. The single instance of poor quality concerned improper freezing of the fish.

Again, 45% of respondents experienced problems with fruit and vegetables with by far the largest number of complaints concerning seasonal supply (percentages cannot be given overall as one respondent may have quoted a category more than once for different items). Poor quality and high price were also frequent complaints, however. A detailed breakdown of problems by item is given in Table 4.7. Some respondents refused to identify individual items and stated merely that all fruit or all vegetables caused difficulties. The largest number of complaints concerning a single fruit or vegetable, however, occurred with tomatoes. Seven of those respondents facing problems with fresh fruit and vegetables complained about tomatoes (54%), primarily with regard to seasonality of supply and poor quality (71% and 86% respectively). Comments such as too small, blemished, poorly graded, over-ripe and pest ridden were typical with sheer lack of ability to meet demand at most times of the year being an overwhelming complaint. Carrots were identified by 31% of those experiencing problems, with complaints in all

areas of supply, quality and price. Again, poor grading and quality control and lack of supply at most times of the year were dominant problems.

Among the fruits, pineapples and melons were identified particularly with regard to seasonality of supply and, to a lesser extent, quality (not properly ripe).

Overall, the hotels, perhaps because of their size, experienced proportionately more problems than the restaurants for all areas of foodstuff supply (see Table 4.8 below).

Table 4.8
Problems in Obtaining Foodstuffs by
Type of Catering Establishment

Category	All Establishments		Hotels		Restaurants	
	#	%	#	%	#	%
Meat	13	45	6	75	7	37
Fish	13	45	7	88	6	32
Fruit & Vegetables	13	45	5	63	8	42

Finally, in Table 4.9 below are summarised the factors given by the respondents as influencing their choice of menus.

Table 4.9
Factors Influencing Choice of Menu by Type
of Establishment, St. Lucia - Survey 1983

Category	Total		Hotels		Restaurants		Marina
	#	%	#	%	#	%	#
Cost of Foods	14	48	7	100	7	37	-
Availability of Foods	16	55	6	86	10	53	1
Storage Availability	3	10	1	14	1	5	1
Customer Demand	19	66	5	71	13	68	1
Chef's Specialities	7	24	-	-	7	37	-
Local & Caribbean Dishes	22	76	6	86	16	84	-
Other	4	14	-	-	4	21	-
Total Sample -	29						

4.5 Summary

St. Lucia's tourist sector is dominated by large scale hotels - six facilities account for nearly half the 1 706 rooms in 1983. These major package holiday destinations have contributed to a rapid 8% per annum growth in tourism since 1970. Growth has slowed in recent years, however, largely as a result of the world-wide recession. The majority of visitors originate in North America, England and Germany.

In 1981, 5 805 people were employed in the tourist sector from a total population of around 120 000. Visitors' spending accounted for an estimated US\$28.8 million in 1981, compared with US\$46.0 million for merchandise exports for the same year.

Of the three countries surveyed fully in this study, St. Lucia predominates as a tourist destination. In 1983, the St. Lucia tourist sector accounted for an estimated EC\$16.26 million of foodstuffs and a further EC\$5.7 million of beverages for a total of \$21.8 million. Imports comprised 58% by value of all foods (EC\$9.44 million) and 62% by value of all beverages (EC\$3.5 million) sold in the sector.

Turning to individual categories of food and drink, meat is by far the most dominant single item, accounting for nearly one-third of all food expenditures. Seafood and dairy contributed approximately one-fifth of total food value each. Seafood, however, is primarily local in origin (with the exclusion of frozen shrimp) whereas meat and dairy are 82% and 96% imported (by weight) respectively. Among the beverages, wine, at a value of EC\$1.6 million or 28% of all beverage expenditures is the most important. Only beer is generally local in origin although some non-rum spirits are brewed on the island.

Other high value imports outside the meat and dairy categories (within which only eggs are local) include rice, potatoes, onions, frozen vegetables, oils and fats (most restaurants and hotels will not use coconut oil for cooking), jams and jellies, flour, cereals and, in particular, canned juices. This latter category is totally imported and accounts for EC\$0.44 million/annum or nearly 3% of all food expenditures. Seasonality of consumption is strong, reflecting the relatively short but intense tourist season that prevails throughout much of the Caribbean. In a period of 4 months the tourist sector consumes 54% of its annual food purchases and 57% of beverages. This seasonality is a reflection of the

predominance of the extra-regional, primarily North American and English visitor within the St. Lucia tourist sector - 77% of hotel business in dining derived from such visitors, and an even higher percentage of bar sales. Restaurants were slightly less dependent upon extra-regional customers while marinas catered to them almost exclusively.

Despite a well developed distributive sector for imported produce - primarily through wholesalers - many St. Lucia catering establishments were dissatisfied with the supply position for a wide range of foodstuffs. Among meats, pork, a mostly locally produced item, attracted the most complaints - 69% of all respondents (generally poor quality). Chicken, with 54% of respondents unhappy (unreliable supply of imported parts) and beef (46%, poor quality) were also major causes of complaint. A sizeable percentage (45%) of respondents, complained about fish but principally with regard to price. Fruits and vegetables were criticised on the grounds of seasonality, quality and price.

Almost all catering establishments attempt to impart a local or Caribbean flavour to their menus but customer demand and availability are also of major importance.

Poor production statistics make estimation difficult, but it is probable that the tourist sector accounts for a significant proportion of local lettuce, pineapple, citrus and lobster output. Among imported items, the better cuts of meat, frozen shrimp and canned juices will all be consumed in large quantities by the tourist sector.

5.0 GRENADA

5.1 The Tourist Sector

Grenada's tourism plant is characterised by a number of small owner-managed guest houses and hotels, one marina and about 11 restaurants, receiving tourists. A survey conducted by CTCRC in 1983, revealed that there were 476 rooms operational at the time at 37 facilities, for an average of 13 rooms per facility. These were distributed in the following way:

275 rooms at 17 hotels
80 rooms at 9 guest houses; and
112 rooms at apartments and cottages.

In 1976, 15 properties or 31% of the total, accounting for 270 rooms (28% of total) were either owned or managed by nationals. In 1983 the figure increased to 31 properties (84%) for 388 rooms (83%).

The former Holiday Inn, damaged by fire in 1981, reopened under new management in mid-August 1983 and added a further 128 rooms. The loss of the Spice Island Inn and other facilities, as a result of the American led intervention in October 1983, has, however, once again reduced available tourist accommodation. Most of the tourist facilities in the island are located in the area of the famous Grand Anse beach. This area is expected to be further developed on completion of the airport facility at Point Saline - a few miles to the South.

At present, Grenada depends to a large extent on the inter-island services of LIAT (Leeward Islands Air Transport) for the delivery of most of its tourist population from the main gateways of Barbados and Trinidad. Air Martinique also operates a small service and there are charters from TTAS (Trinidad and Tobago Air Services). The Government owns an 18 seater 'Bandeiranti' which is leased out to LIAT. In all, there are 70 flights per week in the Winter with 2345 non-stop passenger seats and 46 in the Summer, with 1802 passenger seats. With the hopeful establishment of links with Martinique and the opening of the Point Saline runway, scheduled for late 1984, the number of flights is expected to increase substantially.

Tourism administration is handled by the Grenada Tourist Board, which formerly fell under the auspices of the Ministry of Agriculture, Fisheries and Tourism. In an effort to provide tourism with greater thrust, a separate Ministry of Tourism and Civil Aviation has recently been established. The Board operates on a fairly moderate budget. There are 15 persons employed by the Board, of which 2 are at overseas offices. In addition to the Board's promotional efforts, the Grenada Hotel Association is also actively engaged in marketing the country.

The Grenadian tourism sector benefits from two incentive laws, the Hotels Aid Ordinance Cap. 139, 1954 and subsequent amendments, and the Fiscal Incentives Act No. 41 of 1974. The laws provided tax holidays for periods up to 15 years and may be renewed at the discretion of the authorities concerned. There is also an exemption from Customs duties on building material and hotel equipment meant exclusively for the construction and operation of the hotel.

5.1.1 Tourist Arrivals

Grenada stands unique among the Caribbean territories in that it is the only one to register negative growth of tourist arrivals over the periods, 1970-1976, 1976-1982, and 1970-1982 (see Table 5.1). A number of political upheavals, 'bad press' and deterioration of the plant are perhaps the major factors accounting for this fact. Cruise arrivals, while showing positive growth over the periods 1970-1976 and 1970-1982, recorded negative growth over the period 1976-1982 (Table 5.1c).

Grenada's tourist share of the OECS grouping has also been declining and in 1982 stood at 7.6% or at 0.3% of the overall Caribbean Group.

In the last three years, the Caribbean has taken over from the US as the major supplier of tourists to Grenada. Over the period 1980-1982 the Caribbean accounted for 33%, Europe 22% and the US 22%. This compares with 26%, 23% and 27% respectively over the period 1978-1980. The average length of stay for visitors to Grenada was estimated at 8.6 nights from a recently concluded visitor expenditure and motivational survey conducted by the CTRC. The average stay by market is as follows:

U.S.	-	8.4 nights
Canada	-	11.1 nights
Europe	-	10.0 nights
Caribbean	-	3.2 nights

Table 5.1
Tourist Arrival Data: GRENADA

5.1a Tourist Arrivals by Country of Origin

Country of Origin (1)	1977	1978	1979	1980	1981	% of 1981 Total	% Change 81/80
U.S.A.	7,982	9,191	9,081	6,767	5,124	20.4	-24.3
Canada	2,803	2,977	2,926	1,991	1,910	7.6	-4.1
Europe/ U.K.	3,032	6,998	11,371	6,774 ⁽²⁾	5,618	22.4	-17.1
Venezuela	518	498	287	472	438	1.8	+4.8
Caribbean	8,071	8,773	7,981	7,655	8,509	33.9	+11.2
Rest of World	6,130	3,899	657	5,813	3,473	13.9	-40.3
TOTAL	28,536	32,336	32,303	29,418	25,072	100.0	-14.8

(1) By country of nationality. Excursionists and cruise ship passengers excluded.

(2) U.K. and Germany only.

5.1b Monthly Tourist Arrivals

Monthly	1977	1978	1979	1980	1981	% of 1981 Total	% Change 81/80
January	2,583	3,432	4,234	3,225	3,050	12.2	-5.4
February	3,062	3,242	3,639	3,165	2,281	9.1	-27.1
March	2,672	4,064	2,989	3,210	2,415	9.6	-24.3
April	3,317	2,476	3,012	2,438	2,534	10.1	+3.9
May	1,596	2,115	1,606	1,874	1,812	7.2	-3.3
June	1,329	1,596	1,526	1,355	1,610	6.4	+18.8
July	2,550	2,594	2,838	2,135	2,096	8.4	-1.8
August	3,095	3,530	3,641	2,956	2,776	11.1	-6.1
September	1,450	1,687	1,648	2,873	1,178	4.7	-59.0
October	1,895	2,070	1,914	1,881	1,447	5.8	-23.1
November	2,158	2,412	2,237	2,154	1,833	7.3	-14.9
December	2,829	3,118	3,019	2,152	2,040	8.1	-5.2
TOTAL	28,536	32,336	32,303	29,418	25,072	100.0	-14.8

5.1c Cruise Passenger Arrivals

Months	1977	1978	1979	1980	1981	% of 1981 Total	% Change 81/80
January	16,677	16,175	16,346	24,809	5,294	6.8	-78.7
February	14,720	13,371	15,909	22,880	8,101	10.4	-64.6
March	16,976	13,417	23,528	22,932	9,243	11.9	-59.7
April	10,453	7,244	14,591	17,684	9,235	11.9	-47.8
May	3,170	6,292	10,418	8,488	4,916	6.3	-42.1
June	2,610	5,867	5,239	7,792	6,539	8.4	-16.1
July	n.a.	11,275	9,415	9,015	8,245	10.6	-8.6
August	n.a.	10,494	7,112	10,911	3,453	4.5	-68.4
September	n.a.	5,242	1,395	6,952	3,804	4.9	-45.3
October	n.a.	9,182	8,707	3,871	3,850	5.0	-0.6
November	n.a.	7,953	8,794	4,900	6,168	8.0	+25.9
December	n.a.	9,819	17,200	5,410	8,748	11.3	+61.7
TOTAL	108,465	116,331	138,654	145,594	77,596	100.0	-46.3

Source: Grenada Tourist Board.

Peak months for tourism in Grenada are January, March and August and trough months are May, June, September and October. This is more or less the pattern of the region as a whole, except that there are higher peaks and lower troughs in Grenada. The August peak is attributed to Carnival celebrations and medical students coming in to start the school year; while the January and March peaks to Winter traffic.

5.1.2 Economic Aspects

Tourism accounted for 4.5% of the GDP for 1979. This figure was based on estimates of the contribution of the Hotel and Restaurant sector, made by the IBRD and contained in Report No. 2949 GRD and assuming that the Hotel and Restaurant sector accounted for just about half of the tourist sector's contribution. The sector employed 1738 persons. Visitor spending was estimated by CTRC to be US\$12.4M in 1981 as compared to US\$18.6M for domestic exports and US\$19.0M for total exports. Most of the US\$12.4M spent was attributed to tourists arriving by air.

5.1.3 Future Development Plans

The construction of the airport at Point Saline is perhaps one of the major boosts for tourism on the island. In recognition of this, the country's most recent tourism development plan has made provision for expanding existing tourism plant. This is to be achieved in two phases. The first and more immediate is for two hotels in the Grand Anse/Morne Rouge area (close to the new airport) which will add an additional 320 rooms. These are expected to be a mixture of apartments and full service hotels. Phase 2 will be geared to developing the previously untouched north coast and will be of a more long term nature. The plan has also highlighted a number of areas for the development of natural and historic attractions. Five of these have been selected by the authorities, and target date for their completion is March 13 (the new airport is also officially due to be opened on that date).

Increased promotional activities are being planned for all major markets. The Caribbean market, particularly Trinidad, which at present provides Grenada with the majority of its tourists is earmarked for expansion and an office is to be set up in Trinidad. Negotiations with the major airlines operating in the region are taking place with a view to increasing seat capacity to the island.

5.2 The Agricultural Sector

Agriculture is overwhelmingly the major economic activity in the Grenadian economy, accounting for nearly 30% of GDP in 1975 (most recent figure available).¹ In 1979 agricultural products accounted for over 97% of all domestic exports with clothing (1.7%) being the only other significant domestic output for export.

Results from the 1981 agricultural census show that 11 442 farmers in Grenada farmed a total of 34 243 acres in that year for an average farm size of 4.2 acres. Thus approximately 44% of the country's 77 000 acres are under agriculture.

Despite changes made in the wake of the establishment of the People's Revolutionary Government, the census found that 5% of farmers still controlled 57% of the total farm acreage.

Three tree crops dominate the agricultural scene in Grenada. Cocoa, grown by 54% of all farmers accounted for 5.7 million lbs of exports in 1981 worth approximately EC\$19 million. Nutmeg/mace and bananas contributed a further EC\$9.3 million each, with the higher valued crop, nutmeg/mace contributing only 4.2 million lbs (grown by 51% of farmers) against banana's 32.4 million lbs (grown by 27% of farmers). Other major crops (see Table 5.2) include citrus fruits (especially grapefruit), breadfruit and avocado. Coconut is also of major importance. As for all the islands, production estimates for non-export crops must be regarded as approximations only.

Although Grenada is the driest of the Windward Islands, bananas, plantains, cinnamon, pumpkin and cucumber are crops that are harvested year-round. With irrigation, string beans, egg plant, cabbages and eddoes can have a year-round harvesting season. Grapefruit are available from August to March, and oranges from August to December (Table 5.3).

No recent estimates of livestock numbers exist but in 1975 Grenada had an estimated cattle population of nearly 4 000 head (2 500 of which were cows); over 8 000 sheep; more than 6 000 goats; nearly 6 500 pigs; and nearly 150 000 poultry. An estimated 1 200 cattle, 240 sheep, 130 goats and 2 000 pigs were slaughtered in the same year (estimate includes unofficial slaughtering). No weights are given for the carcasses.

¹Central Statistical Office, Ministry of Finance & Economic Planning, St. Georges, Grenada.

Table 5.2

Production and Acreage of Selected Agricultural Items
in Grenada, 1979 and 1980

Products	1979 (000 lbs.)	1980 (000 lbs.)	1980 (Acreage)
Bananas	41 868	36 000	3 200
Cocoa	6 178	4 700	16 000*
Nutmeg (incl. mace)	6 219	5 486	10 000
Oranges	2 224	2 065	340
Grapefruit	4 649	4 614	324
Limes	1 078	1 094	165
Avocado	2 726	2 990	380
Mangoes	3 344	1 094	565
Breadfruit	3 606	3 606	-
Corn	1 212	987	2 000
Pigeon Peas	1 852	1 988	2 000
Yams	1 115	1 012	2 000
Sweet Potatoes	818	609	2 000
Tannias	598	319	2 000
Dasheen	363	624	2 000
Carrots	77	65	2 000
Tomatoes	92	106	2 000
Cabbages	88	70	2 000
Cassava	366	-	2 000
Coconut (copra & fresh)	4 368	5 241	3 400

*includes intercropped acreage.

Source: Agricultural Statistic Unit, Ministry of Agriculture,
St. Georges, Grenada.

Table 5.3

Seasonality of Horticultural Produce

Commodity	J	F	M	A	M	J	J	A	S	O	N	D
Avocadoes		_____					_____					
Bananas/bluggoes												
Grapefruit				_____				_____				
Limes						_____						
Mangoes				_____								
Oranges								_____				
Pineapple							_____					
Plantains												
Eddoes										_____		
Sweet Potatoes		_____							_____			
Yams		_____										
Aubergines												
Cabbages												
Carrots				_____								
Cucumbers										_____		
Okras		_____										
Onions				_____								
Pumpkin		_____										
String beans												
Sweet peppers		_____										
Tomatoes						_____						
Peanuts												
Pigeon Peas												_____
Cinnamon												

- Key: 1. Solid lines: harvest period for rainfed produce.
 2. Broken lines: extension of harvest period likely attainable with irrigation.
 3. Double lines: periods of highest production when gluts are possible.

Again, for 1979, nearly 9 million lbs. of fish were landed in Grenada, the biggest catches being for flying fish (2.4 million lbs.) followed by jack and yellow fin tuna. Estimated lobster landings were 23.6 thousand lbs and for lambie (conch) 69.2 thousand lbs.

Key imported agricultural commodities for 1981 are summarised in Table 5.4. Wheat, sugar, milk (both powdered and tinned) and rice are of greatest importance in terms of value, although meats are also significant.

The wholesaling and distributive sectors in Grenada are primarily occupied by several large importers/wholesalers and the government owned Marketing & National Importing Board which, although insignificant as a handler of local produce, retains a monopoly in several imported food items (e.g. rice).

Among the dominant private sector firms operating are:

Renwick Thompson
Distributors Supermarket
Hubbard Jonas Browne Ltd.

Additionally, the Minor Spices Marketing Association controls all local and export sales of non nutmeg and mace sales. Fresh produce supply to the tourist sector, as for fish, is generally through private agreements between hotels, etc. and local producers.

In the processing sector, canning and bottling facilities are available at:

Grenada Foods Limited - reported capacity 15 000 10-oz. bottles/cans per day. Severely underutilised. Primarily tomato ketchup but also sauces, chutneys and juices. Grenada Foods Limited obtains supplies privately from large growers. Processes under the Sunkist and Top Value labels.

Agro-Industries Ltd. - Government owned, small scale canning and bottling of products including nectars, jams, jellies and sauces. In 1981, the facility was processing approximately 1 ton of fruits, etc. per day, purchased by its own field agents at the farm gate.

Grenada Breweries Ltd. (Carib Beer) and Grenada Lime Factory (lime juice) also possess processing and bottling facilities.

Table 5.4

Volume and Value of Selected Imported Commodities - 1981

Commodity	Quantity (lbs)	Value (EC\$)
Wheat*	13 135 006	3 846 757
Rice	3 783 093	2 340 028
Flour	308 035	162 164
Sugar	6 989 934	3 312 251
Powdered milk	1 267 699	3 190 562
Condensed and Evaporated Milk	2 023 516	2 280 483
Bacon	44 022	160 084
Margarine	747 021	1 550 426
Ham	79 787	455 896
Meat prepared or preserved	224 407	1 622 825
Cheese	494 364	1 387 987

*Processed locally for domestic consumption and export to Regional Markets.

Source: Central Statistical Office, St. George's, Grenada.

Little other processing capacity exists on the island. No major meat processor exists, although a certain degree of cottage-scale ham, bacon and smoked meat production occurs. Finally, a small ice-cream production facility (Franklyn Variety) exists in St. Georges, offering a possible user for local fruit extracts, albeit in very limited quantities.

5.3 Tourist Sector Consumption - Survey Results

5.3.1 Introduction

The tourist sector in Grenada appears to be passing through an uncertain period, particularly with respect to catering operations. While estimates place the number of hotel rooms on the island as being in the region of 500, 141 of these rooms (7 hotels) fell within the self-contained apartments category (providing no meals) and a further 72 rooms (3 hotels) had closed their restaurants completely. Thus almost half of all tourist rooms had no associated meal facilities. Several of the independent restaurants were also closed. Of the remaining establishments, many were reluctant to answer the questions despite the fact that the study had received prior approval from the Government of Grenada.

Six establishments in total were surveyed, of which four completed all questions. The remaining two answered only selected areas of the questionnaire. The sample represented 58 rooms at 2 full-service hotels, 2 apartment hotels (no food or beverage figures), 1 guest house and 1 restaurant. The restaurant served approximately 150 meals/day in high season and 20 meals/day in low season. No overall estimate of servings/day for the entire tourist or restaurant sector was available. In the light of these figures and the ratio of visitors compared with St. Vincent (slightly less) and St. Lucia (approximately 29%) it was decided to treat the sample as 10% of the total tourist sector. This estimate is an approximation at best, however, and considerably less confidence can be placed in the figures for Grenada than for the other two islands.

Appendices 5.1 - 5.9 contain estimates of total foodstuffs consumption by the Grenada tourist sector based upon the assumption that the sample represents 10% of the sector.

5.3.2 Meat

Chicken is the largest single item consumed by weight (44 000 lbs or 26%) but, due to the low cost per pound for chicken, it accounts for only

11% of expenditures. Steak is next in importance in weight terms (34 000 lbs or 21%) and at an average cost of \$16.60/lb, also accounts for 44% of expenditures (EC\$568 000). Total beef consumption, including 'other' beef amounts to over 60 000 lbs (36%) at a cost of nearly \$700 000 (55% of total expenditures on meat). (See Appendix 5.1).

Processed meats (including ham, bacon and sausage) comprise a further EC\$285 000 of meat costs. Interestingly, among the less used meats, lamb and goat account for a greater percentage of expenditures than does pork (8% compared to 4%) - a reversal of the situation in the other islands.

This occurs because all lamb and goat used by hotels and restaurants surveyed was imported. Its resulting higher price (most pork is locally produced) more than outweighs its slightly lower consumption.

Total meat usage in the tourist sector of Grenada amounted to 167 000 lbs at a cost of EC\$1.2 million.

Seasonality of consumption fits the pattern observed in St. Vincent and St. Lucia with 52% of demand occurring during the high season on average. Surprisingly however, peak seasonality occurs with pork (62% consumed in the high season) and lamb and goat (61%) while steak (46%) is only slightly seasonal in usage. This again is different from the St. Vincent and St. Lucia patterns. Chicken, normally the least seasonal of the meats, is close to pork and goat/lamb at 57%.

This reversal of trends continues when the market share of imports is examined. As was previously mentioned, lamb and goat, normally local in origin, is exclusively imported, while chicken, typically largely imported, is 66% local in Grenada. Other items are more as expected with steak and processed meats being entirely imported, 'other' beef being of mixed origin and pork largely local (71%). Altogether 71% by weight and 86% by value of meats are imported.

5.3.3 Seafood

The pattern for tourist sector consumption of seafood is much closer to what has been observed for the other Windward Islands. Fresh fish predominate by weight, accounting for 44% of all seafood (59 000 lbs) while their low unit value means that they constitute only 25% (EC\$205 000) of total seafood costs compared with lobster at nearly 50%

(EC\$400 000). Frozen shrimp, a major cost element in St. Vincent and St. Lucia are of little importance in Grenada (only 10% or \$82 570) while canned fish comprise less than 1% of costs. Total tourist sector seafood consumption equals 133 000 lbs for a cost of EC\$808 000. (See Appendix 5.2).

Seasonality is similar to that for meat (54% of consumption in the high season) with the exception of canned fish which is used only in the high season by those establishments sampled. Shrimp usage is also highly seasonal while demand for lobster in the high season increases no more than demand for fresh fish.

Imports are very straightforward with all fresh fish, lobster and 'other' seafood (primarily conch, crab and crayfish) being local while all canned fish and shrimp is imported. In total, imports account for only 3% of seafood by weight and 11% by value.

5.3.4 Dairy Products and Eggs

Total dairy product consumption in Grenada amounts to 110 000 lbs (plus 31 240 dozen eggs) at a cost of EC\$545 000. Eggs account for 32% of total expenditures (EC\$172 000) followed by butter at 26% (EC\$143 000) and cheese at 19% (EC\$101 000). Milk is the largest item by weight (45 000 lbs) but has only a 17% share by value. (See Appendix 5.3).

Seasonality follows the normal pattern with 54% of dairy produce consumption occurring in the high season. 'Other' dairy products (primarily ice cream) are the most highly seasonal, with butter and egg consumption responding least to peak demand.

Milk, butter and cheese are all totally imported, as are 50% of the (limited) 'other' dairy products. As eggs are not included in the weight totals, this results in 93% of dairy products by weight being imported, Eggs are totally local in origin, however and their influence on the value of dairy products is large. As a result 35% by value of dairy products are local. Total cost of imports equals EC\$191 000.

5.3.5 Staples

Tourist sector demand for staples appears to be strong with the sector accounting for 223 000 lbs and EC\$305 000 of produce. The most important

single item by value is bread with a 36% share of all staple costs. In weight terms, however, it lags behind potatoes (Irish type) at 60 000 lbs and ground provisions at 81 000 lbs (36% by weight). Ground provisions are also second in importance to bread in value at a cost of EC\$73 000 or 24%. Rice is also moderately important. 'Other' staples would include plantains and green bananas. (See Appendix 5.4).

Seasonality of consumption presents no surprises with the 54% high season average well within normal expectations. Only 'other' staples significantly deviates from this level (high season usage 42%) indicating that they are largely for local rather than tourist custom.

Imports, too, are as would be expected. Rice and potatoes are imported, all other items local (at least directly - again bread will be made from imported wheat). Thirty-eight per cent by weight and 36% by value of staples are imported. Total cost of imported staples equals EC\$111 000.

5.3.6 Vegetables

Of the vegetables consumed within the tourist sector of Grenada (Appendix 5.5), tomatoes are the most important both by weight (53 000 lbs or 23%) and by value (EC\$153 000 or 29%). Surprisingly, however, lettuce occupies second place in both categories as well (40 000 lbs and EC\$111 000) pushing carrots to third place. Cabbage and cucumbers are both of significance although with less than a 10% share by value each, while onions, normally an important vegetable, occupies a minor position. Canned and frozen vegetables also hold less than a 10% market share by value.

Seasonality of vegetable usage appears fairly low with only 51% of consumption occurring during the high season. No single vegetable is strongly seasonal and both cucumbers and frozen and canned vegetables experience greater demand in the low season than in the high season.

Grenada appears more self-sufficient in vegetables than the other Windward Islands with respect to the tourist sector. Only canned and frozen vegetables are exclusively imported and onions, normally a major vegetable import, is 60% local - at least partially because of the drier climate in Grenada. Altogether only 8% of weight and 11% by value of the tourist sector vegetable consumption is attributable to imports.

5.3.7 Fruits

Among the fresh fruits, bananas (60 000 lbs or 18% of total fruit consumption), oranges (57 000 lbs or 17%) and grapefruit (51 000 lbs or 15%) are the dominant items by weight, while canned juice adds another 18% (59 000 lbs). By value, pineapple is the dominant fresh item (EC\$55 000 or 11%) although it is dwarfed by canned juice which accounts for EC\$297 000 or 60% of all fruit expenditures. No other fresh fruit has more than a 5% share of the sector on a cost basis. In total annual tourist sector fruit consumption equals 333 000 lbs at a cost of EC\$497 000. (See Appendix 5.6).

Seasonality of fruit use, like that for vegetables, is surprisingly low. Fruit tends to be highly seasonal in relation to the tourist sector. Nevertheless, many of the fresh fruit (including banana, grapefruit, pineapple, mangoes and pawpaw) have less than a 45% share of annual usage during the high season. This indicates little change in weekly consumption during the year and, by extension, a drop in per capita fruit consumption during the high season. Only limes are heavily in demand during the peak period (74% of consumption during the high season).

With the exception of an estimated 2% of pineapples, all fresh fruit is locally produced. Even canned juice is 5% local in origin. Canned fruit is, however, entirely imported. Overall, imports account for 18% by weight but 62% by value of total fruit consumption. The high value for imports results almost entirely from the large canned juice cost.

5.3.8 Miscellaneous Items

Miscellaneous items, those not fitting into another category, are estimated in Appendix 5.7. Dominant by weight is flour (87 000 lbs or 56%) while oils and fats, with a 36% share by weight are by far the most important item in terms of cost (EC\$168 000 or 55%). Jams and jellies and cereals are both relatively minor items, both by weight and value. Total miscellaneous items usage is estimated at 156 000 lbs per annum, at a cost of EC\$303 000.

Seasonality is very weak but not unexpectedly so. Usage of cooking oils and flour tends often to be little influenced by volume of tourist trade and remains fairly constant throughout the year. Indeed, consumption of oils and fats is almost totally independent of season (38% of annual

consumption during the high season). Overall, 44% of miscellaneous consumption occurs during the peak period.

Owing to the milling of flour in Grenada, and its predominant position in terms of bulk, only 41% by weight of foodstuffs within the miscellaneous category are imported, despite the fact that all oils, fats and cereals are exclusively from abroad. In cost terms however, imports account for 73% of this category.

5.3.9 Total Tourist Sector Food Consumption

Total tourist sector food consumption in Grenada is estimated to be approximately 1.35 million lbs per annum (600 long tons) at a cost of roughly EC\$4.25 million. (See Appendix 5.8).

Meat and seafood occupy their normal predominant positions in terms of expenditure (meat 30%, seafood 19%), while dairy, vegetables and fruit all comprise approximately equal shares of total consumption (12-13% by value). Staples and miscellaneous hold a further 7% each. By weight, fruit is the most important category with a 25% share, while staples and vegetables follow with another 16-17% each.

Seasonality of consumption is apparent but less than might be expected from the results in St. Vincent and St. Lucia. Overall 51% of annual foodstuffs usage occurs during the high season. No single food category displays strong seasonality.

A reasonably high 66% of all foodstuffs by weight are locally produced with seafood, vegetables and fruit not surprisingly leading the field. In value terms, however, the leakage is much greater. Over EC\$2.0M is estimated to be spent annually by the Grenada tourist sector on imports. This amounts to 48% of all expenditure on food. Major areas of losses to imported goods occur in meats, miscellaneous goods (primarily oils and fats), dairy products (excluding eggs) and canned juices.

5.3.10 Beverages

Finally, in Appendix 5.9, estimates are presented of total tourist sector consumption of beverages. The largest single item of consumption is beer with nearly 80 000 litres consumed per annum. It is also the most important beverage by value at EC\$315 000 or 32% of total beverage costs. Bar mixes, second in volume, represent only a minor cost due to their low per unit value. Non-rum spirits are second to beer in value at

EC\$205 000 (21%) followed closely by rum (EC\$2000 000 or 20%). Wine, usually a major cost item within the tourist sector beverage market, is a relatively unimportant beverage in Grenada with sales (by volume) nearly one half that of rum and a share of costs amounting to only 15%. Total beverage consumption equals 160 000 litres (35 000 gallons) at a cost of almost EC\$1.0 million.

Seasonality of beverage consumption, 58% of demand in the high season, is higher than for foodstuffs. The average is boosted considerably, however, by the bar-mixes, which are 70% consumed during the peak period. The average for the remainder of the beverages would be 52% - much closer to that for foods (51%).

Only bar-mixes are exclusively local in origin although approximately one third of the rum consumed by the tourist sector is produced in Grenada. Beer, other spirits and wine are totally imported resulting in imports accounting for 82% of beverage costs (EC\$800 000).

5.4 Factors Affecting Usage of Foodstuffs and Drinks

5.4.1 Origin of Patrons

In the second part of the survey analysis for Grenada, attention is turned to the factors influencing the usage of foodstuffs and beverages by catering establishments within the tourist sector. Table 5.5 presents data concerning the proportion of different types of customers consuming foodstuffs and beverages (by cost). Unfortunately, an insufficiently large sample was obtained to permit the analysis of demand patterns by sub-sector and only a generalised tourist sector standard is available. Of the 4 respondents completing this question, none received less than 50% or more than 70% of their dining custom from extra-regional visitors. The average was 58%. Beverage sales were more widespread with one establishment estimating extra-regional tourists as accounting for 85% of bar costs while the remaining 3 respondents all fell in the 40 - 60% range. Business and Caricom travellers accounted for an average of a further 20% of foodstuffs and 24% of bar costs. None of the establishments interviewed relied heavily on local trade. For food costs, locals accounted for an average of only 13% of business, while in beverages the same group provided 18% of trade. Staff meals provided a further 18% averaged across the 4 establishments.

TABLE 5.5

PROPORTION OF FOOD AND BEVERAGE COSTS ALLOCATED TO TYPE OF CUSTOMER, GRENADA
SURVEY 1983

Category	Food Costs Frequency										Total
	0-9%	10-19%	20-29%	30-39%	40-49%	50-59%	60-69%	70-79%	80-89%	90% +	
Tourists from outside the region	-	-	-	-	-	2	2	-	-	-	4
Business and regional travellers	-	3	-	1	-	-	-	-	-	-	4
Locals	1	3	-	-	-	-	-	-	-	-	4
Staff	1	1	2	-	-	-	-	-	-	-	4
	Drinks Sales										
Tourists from outside the region	-	-	-	-	1	2	-	-	1	-	4
Business and regional travellers	-	1	-	1	2	-	-	-	-	-	4
Locals	-	3	1	-	-	-	-	-	-	-	4

5.4.2 Sources of Supply of Food/Beverages

In Table 5.6, data concerning the sources of supply of foodstuffs, and problems associated with that supply, are presented. Supermarkets are the dominant source for meat purchases with 5 of the 6 respondents (83%) obtaining meat there. Only 50% used wholesalers and 50% local butchers. One third (33%) obtained supplies directly from the producer. This response much more nearly parallels that found in St. Vincent than that for St. Lucia. The importers and wholesalers do not appear to be a major market force, with the supermarkets acting as their own importers and 'wholesaling' on the side to catering establishments. Seafood, as elsewhere, is overwhelmingly obtained directly from the fisherman, although some is purchased from the supermarkets as well (33%). This would probably be for imported frozen produce.

5.4.3 Problems of Supply

Under the category of problems associated with the various types of foodstuffs, strong dissatisfaction appears to exist with regard to meat (excluding chicken). All respondents voiced complaints over beef and pork and 75% over lamb/goat. Problems centred upon unreliable supply with poor quality a lesser, but still vociferous, complaint. Seafood attracted less disapproval with only one third (33%) of respondents dissatisfied in some way with the supply of seafood. Both replies, seasonality and unreliable supply, were concerned with availability rather than quality, however. Only a single complaint was registered with regard to fruits and vegetables - a situation strikingly different from the position in St. Lucia and even considerably less than in St. Vincent. The single respondent named only calaloo, citing supply problems associated with availability.

TABLE 5.6

SOURCES OF SUPPLY AND PROBLEMS ASSOCIATED WITH VARIOUS FOODSTUFFS, GRENADA
SURVEY 1983

Source of Supply	Farmer/ Fisherman		Supermkt.		Wholesaler		Cooperative		Butcher/ Fishmonger/ Huckster		Importer		Other	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Meat	2	33	5	83	3	50	-	-	3	50	-	-	-	-
Seafood (6 respondents)	6	100	2	33	-	-	-	-	-	-	-	-	-	-

Problems Associated	All Difficulties		Unreliable Supply		High Price		Poor Quality		Seasonality		Other	
	#	%	#	%	#	%	#	%	#	%	#	%
Meat:												
- Beef	4	100	3	75	-	-	2	50	-	-	-	-
- Pork	4	100	3	75	-	-	1	25	-	-	-	-
- Lamb/goat	3	75	2	67	-	-	1	33	-	-	-	-
- Chicken	-	-	-	-	-	-	-	-	-	-	-	-
(4 respondents)												
Seafood (6 respondents)	2	33	1	50	-	-	-	-	1	50	-	-
Fruit & vegetables (6 respondents)	1	17	-	-	-	-	-	-	-	-	-	-

5.4.4 Factors in Menu Preparation

Finally, respondents were asked to state those factors influencing them in the preparation of their menus. The results are summarised below:

Table 5.7

Factors Taken into Account by the Tourist Sector
When Preparing Menus, Grenada - Survey 1983

Cost of Food	Avail-ability		Storage Facili-ties		Customer Demand		Chef's Special-ities		Local & Carib Dishes		Other		
	#	%	#	%	#	%	#	%	#	%	#	%	
5	83	4	67	3	50	4	67	2	33	6	100	-	-

An effort to achieve a local or Caribbean flavour was predominant. All respondents in Grenada selected this option. Also important was cost of foods used (83%) and availability (67%). Chef's specialities was not a major choice (33%). Surprisingly storage availability was more of a factor in Grenada (50%) than elsewhere, despite the fact that all respondents possessed freezers and fridges.

5.5 Summary

In summary, therefore, Grenada's tourist industry appears to be characterised by a high proportion of self-catering accommodation and few independent restaurants. Seasonality is perhaps lower than for St. Vincent and St. Lucia, although it is still the case that 51% of consumption occurs during the high season (equal to approximately 2 meals/day served in the high season to every 1 meal/day served in the low season - assuming meal costs to be constant).

Total food costs of the tourist sector are estimated at just over EC\$4.25 million of which roughly 75% (EC\$3.19m) is accounted for by non-residents. Local production contributes 66% by weight, but this drops to 52% when estimated in terms of value. The highest level of leakages to imports occur in meats (86% imported by value), miscellaneous items - particularly oils and fats (73%), dairy products (65%) and fruits - primarily canned juice (63%).

As for all the islands agricultural production figures are only rough estimates and do not cover all commodities but it would appear that the tourist sector may be a significant consumer of locally produced onions (assuming respondents' estimates of source were correct), lettuce (no production figures available), cabbage and possibly carrots. Consumption of tomatoes (for which production is relatively well documented) may approach 5%. Within the fruits, tourist sector consumption of the citrus fruits is almost certainly insignificant (1-2%) as production levels are relatively high and large quantities are exported informally - particularly to Trinidad.

Tourist sector consumption of pineapple and paw paw may be significant but production estimates are sparse. As for the other islands, the tourist sector may also be a major user of lobster and conch. Figures for 1979 show total lobster landings in Grenada as only 23 600 lbs - considerably less than the estimated 46 890 lbs consumed in Grenadian hotels and restaurants in 1983.

Import tables are insufficiently disaggregated to permit assessment of individual imported items but it is likely that the tourist sector is a major user of imported oils and fats (coconut oil is heavily used by the local population), canned juices, and the better cuts of beef. Imported shrimp in Grenada is a minor item.

Beverages constitute a proportionately even greater source of leakage than foodstuffs, with 82% by value of tourist sector beverages being imported. Particularly heavy expenditures are made on beer (although it is unlikely that the tourist sector has much impact on this item) and non-rum spirits. Tourist sector demand may be significant for wine, however.

The wholesale/importing sector appears little developed in Grenada, with supermarkets remaining a major source of supply to those interviewed. Problems of supply reliability and quality were fairly widespread for meats. Vegetable and fruit supplies, by contrast, attracted few complaints.

6.0 CROSS ISLAND ANALYSIS OF TOURIST SECTOR FOOD-BEVERAGE CONSUMPTION

6.1 Relative Development of the Tourist Sectors

Despite differences in scale, the three islands surveyed in this study share more similarities than might be expected. Greater differences, in fact, appear to occur within islands (between restaurants and hotels) than between them. All share common patterns of food and beverage usage, seasonality and leakage to imports.

St. Lucia is by far the most important of the three countries, in terms of total food and beverage consumption, accounting for an estimated 70% of the group's tourist food expenditures and 78% of tourist beverage costs (see Table 6.1). This has been achieved through the attraction of large numbers of 'package' holiday-makers - a factor that is reflected in its higher than average seasonality of consumption and greater usage of imported foodstuffs. It has also developed a significant yacht provisioning sector and, as a by-product of these two areas, a large number of independent restaurants.

The heavy reliance of St. Lucia on extra-regional visitors as compared to the other islands can be seen clearly in those tables summarising food consumption by type of customer (see Appendices 3.9, 4.13 and 4.16). Seventy-seven percent of meal costs in St. Lucia hotels are attributable to tourists from outside the region. For St. Vincent, the equivalent figure is only 57%, while an average for all tourist sectors in Grenada is 61%. The difference is even more striking for restaurants. Here St. Lucia receives 56% of restaurant customers from extra-regional visitors compared with 17.5% for St. Vincent.

Perhaps partly as a result of the large tourist sector demand for imported produce, the importing and wholesaling functions are further developed in St. Lucia than in Grenada or St. Vincent. The fresh produce market does not appear to have adapted so rapidly, however, and greater dissatisfaction was expressed with regard to the availability and quality of fruits and vegetables in St. Lucia than elsewhere.

St. Vincent and Grenada, by contrast, are characterised by a greater dependence upon CARICOM and local trade and the predominance of supermarkets and other retail outlets as supply sources.

6.2 Commodity Usage

Turning to categories of foodstuffs, fewer differences are to be seen than in the structure and size of the industry as a whole (see Tables 6.1 and 6.3). In all cases meat is the dominant item of expenditure, accounting for between 30 and 38% of all food costs of which 72% (St. Vincent) to 86% (Grenada) is imported. Within the meat category, chicken is the major item by weight although Grenada is alone in using primarily local supplies. Steak constitutes the major expenditure for all islands (40-44% of costs) and is almost entirely imported in all cases. The usage of other meats varies from island to island. Pork is a significant (primarily local) item in St. Lucia at 12% of expenditure but is less important in St. Vincent and Grenada. Lamb and goat are more important in Grenada than is pork.

In sea-foods, the second most important category of foodstuffs for all islands with an 18% (St. Lucia) to 27% (St. Vincent) share of expenditures, a similar universality of the dominant items is also apparent. Fresh fish represents the chief item by weight for all countries, with Lobster the largest cost item - ranging from 50% of expenditures on sea-food in Grenada to 37% in St. Lucia. Shrimp also constitute a major sea-food cost in St. Lucia at 32% and in St. Vincent at 20%. They are not a major item in Grenada, however. Seasonality of trade in sea-foods is fairly constant at 50-56% for all islands, but leakage to imported items varies considerably from 11% in Grenada to 38% in St. Lucia. Much of this variation is directly related to the level of shrimp usage.

Eggs are the major item by value within the "dairy" section accounting for between 32% (Grenada) and 54% (St. Vincent) of total "dairy" expenditures. They also had a major effect on the size of leakage to imported goods as all other "dairy" products were generally imported. In St. Vincent, where eggs are also imported, there is no local content whatsoever, within the "dairy" category. In St. Lucia and Grenada, where eggs are locally produced, imports as a proportion of total expenditures on "dairy", drop to 59% and 65% respectively. Seasonality is once again in the mid-low 50s, with little variation between countries. In total, the "dairy" category accounts for a low 8% of all food expenditures in St. Vincent, climbing to 20% for St. Lucia.

Staples (including bread, ground provisions, rice, potatoes etc.) are minor items in terms of expenditures for all countries, accounting for only 3% (St. Vincent) to 7% (Grenada) of total food expenditures. Where information was collected on bread (Grenada & St. Lucia) it is the dominant item by value although ground provisions are major items by weight. Seasonality of staples usage falls in the normal 50-55% range for all islands but leakage varies according to whether bread (always locally produced) is included or not. For Grenada and St. Lucia, imports account for 36% and 28% of expenditure on staples respectively, whereas in St. Vincent, potatoes and rice pushed imports to 71%.

In the vegetable category tomatoes are dominant for all countries, both by weight and value with a 25-30% share of vegetable expenditures. In St. Vincent, cabbage is also a major item by value. Seasonality of vegetable usage is high in St. Lucia (61% occurring in the high season) but rather lower than normal for St. Vincent and Grenada (approximately 50%). St. Lucia also has the highest percentage of imported items with 35% of vegetable expenditures going to imported produce - particularly canned vegetables, cabbage, carrots and onions. Grenada and St. Vincent by contrast spend only 11% of vegetable outlays on imported items - mostly canned goods. In total, the vegetable category accounted for between 10-12% of total food expenditures.

Oranges, grapefruit and bananas all constituted major contributors by weight to fruit usage in the tourist sectors of the islands but due to their low unit cost, are not major items of expenditure. This position is held universally by canned fruit juice, ranging from 27% of costs in St. Lucia, through 38% in St. Vincent to a very high 60% in Grenada. Of the fresh fruits, pineapple is the major cost item in Grenada and St. Lucia, while oranges are significant for St. Vincent. As for vegetables, seasonality is distinctly higher in St. Lucia (55%) than in Grenada and St. Vincent (50%). Almost all fresh fruit is local but the high cost of canned juice ensures that imports account for a 34% (St. Lucia) to 62% (Grenada) share of fruit expenditures. Total fruit expenditures comprise 9-12% of all food costs.

Within the miscellaneous section, oils and fats are clearly the most important items where that information was collected. Seasonality is weak for all countries (45-50%) as usage of these items tends to be less responsive to demand than most categories of foodstuff. Most items are

TABLE 6.1

TOTAL TOURIST SECTOR FOOD CONSUMPTION IN
GRENADA, ST. VINCENT & THE GRENADINES AND ST. LUCIA - SURVEY 1983
 (\$000 E.C.)
000 lbs.

Country	Meat		Seafood		Dairy		Vegetable		Fruit		Staples & Other		Total	
	lbs	\$	lbs	\$	lbs ¹	\$	lbs	\$	lbs	\$	lbs	\$	lbs	\$
St. Lucia	739	5 208	353	2 905	513	3 263	716	1 648	1 333	1 654	1 075	1 583	4 728	16 260
St. Vincent & the Grenadines	191	1 079	130	759	18	231	167	325	392	255	169	163	1 067	2 811
Grenada	167	1 281	133	808	110	545	228	517	336	497	379	608	1 352	4 256
TOTAL	1 097	7 568	616	4 472	641	4 039	1 111	2 490	2 061	2 406	1 623	2 354	7 147	23 327

¹Excluding eggs

TABLE 6.2

TOTAL TOURIST SECTOR BEVERAGE CONSUMPTION IN
GRENADA, ST. VINCENT & THE GRENADINES AND ST. LUCIA - SURVEY, 1983
 (000 l)
 (\$000 E.C.)

ST. LUCIA		ST. VINCENT		GRENADA		TOTAL	
l	\$	l	\$	l	\$	l	\$
328	2 451	85	556	158	984	571	3 991

imported accounting for as much as 92% of miscellaneous costs in St. Lucia. This figure is dependent, however, upon the presence of flour milling facilities upon each island (St. Lucia has no flour mill).

Finally, beverages present a mixed picture in terms of usage of individual items (Tables 6.2 and 6.4). Beer and bar mixes are consumed in greatest volume with beer accounting for the greatest proportion of expenditure (except in St. Lucia where wine is of chief importance). Seasonality of consumption tends to be high (55-60%) as is the leakage to imported items. From 62% (St. Lucia) to 82% (Grenada) of beverage expenditure goes on imported drinks.

Overall, therefore, the following statements can be made for all islands:

1. Meat and sea-foods together account for at least 50% of expenditures.
2. At least 70% of all meats (by value) are imported, particularly steak, processed meats and (except Grenada) chicken.
3. Shrimp is a major import within the sea-food sector.
4. Dairy goods are entirely imported except eggs (eggs also in St. Vincent).
5. Fruit and vegetables account for 20-25% of food expenditures and are primarily local in origin. Canned juice forms a major import, however.
6. Oils and fats are significant imports.
7. The beverage sector constitutes a major area of leakage to imported goods, especially for wine and spirits.

TABLE 6.3

TOTAL IMPORTED TOURIST SECTOR FOOD CONSUMPTION IN GRENADA,
ST. VINCENT & THE GRENADINES AND ST. LUCIA - SURVEY, 1983
(\$'000E.C.)

Country	Meat		Seafood		Dairy		Vegetable		Fruit		Staples & Other		Total	
	lbs	\$EC	lbs	\$EC	lbs	\$EC	lbs	\$EC	lbs	\$EC	lbs	\$EC	lbs	\$EC
St. Lucia	605 375	4 270	58 926	494	492 638	3 133	230 872	429	126 752	165	606 549	952	2 121 113	9 443
St. Vincent & the Grenadines	145 155	812	13 380	74	17 874	231	25 887	50	66 889	50	66 442	61	335 577	1 278
Grenada	118 845	909	4 440	24	101 970	507	18 690	41	60 670	89	150 230	240	454 845	1 810
TOTAL	869 375	5 991	76 746	592	612 482	3 871	275 449	520	254 311	304	823 221	1 253	2 911 535	12 531

TABLE 6.4

TOTAL IMPORTED TOURIST SECTOR BEVERAGE CONSUMPTION IN
GRENADA, ST. VINCENT & THE GRENADINES AND ST. LUCIA - SURVEY, 1983
(000 l)
(\$000 E.C.)

ST. LUCIA		ST. VINCENT		GRENADA		TOTAL	
l	\$	l	\$	l	\$	l	\$
178	1 280	57	435	105	805	340	2 520

TABLE 6.5

PERCENTAGE SHARE OF TOURIST SECTOR FOOD & BEVERAGE CONSUMPTION AMONG
GRENADA, ST. VINCENT AND ST. LUCIA - SURVEY, 1983

Category	S T. L U C I A				S T. V I N C E N T				G R E N A D A			
	Total		Imports		Total		Imports		Total		Imports	
	WT	\$	WT	\$	WT	\$	WT	\$	WT	\$	WT	\$
Meat	67	69	70	71	17	14	17	14	16	17	13	15
Sea-food	57	65	77	83	21	17	17	12.5	22	18	6	4.5
Dairy	80	81	80.5	81	3	6	3	6	17	13	15.5	13
Vegetables	64	66	84	82.5	15	13	9	10	21	21	7	7.5
Fruit	65	69	50	54	19	11	26	16.5	16	20	24	29.5
Staples & Other	66	67	74	76	10	7	8	5	24	16	18	19
Total Food	66	70	73	75	15	12	11.5	10	19	18	25.5	25
Beverages	57	61	52	51	15	14	17	17	32	35	31	32

If total food and beverage consumption for all three islands is aggregated (see Table 6.1) consumption by the tourist sector for the period 1982/1983 totals 7.15 million lbs (3 190 long tons) and 571 000 l per annum. This is not a major amount by regional standards. By comparison, for example, estimated tourist sector (hotel and restaurant) consumption of fresh produce alone in Barbados (see Table 6.6) was estimated in 1981 at 9.4 million lbs. (4 191 long tons)¹. The fresh produce segment of tourist sector consumption for the three surveyed islands together amounts to only 3.2 million lbs per annum (1 416 long tons) or approximately 34% of the Barbados level. Of this 3.2 million lbs., only 530 000 lbs or 16.5% is imported (237 tons). When it is considered that a significant proportion of these imported items are not suited for production in the Windward Islands (potatoes; apples etc.) the potential market size, at a domestic level, for additional produce production can be seen to be quite small. Any major thrust to compete in production with imported goods, whether in fresh produce or any other category, would probably require the inclusion of markets beyond those of Grenada, St. Vincent and St. Lucia. Barbados is an obvious candidate for such import-substitution products.

Most of the problems which the second parts of the surveys identified are symptomatic of poorly-functioning or even missing modules in the tourism/agriculture linkages model as set out in Chapter 2.

Firstly, many fruits are out of season during the peak months of tourist traffic to the islands. In St. Vincent, for example, avocados, grapefruit, limes, oranges and pineapples are out of season during the peak tourist months. In St. Lucia, the situation is even worse and a higher proportion of canned fruits and juices are used, even though St. Lucia produces quite large amounts of fresh produce. It appears that the greater the size of the tourist sector, the less the countries are able to meet the tourist demand for food. Farmers, it seems, need to get help from financiers and extension agriculturalists to extend the season for many of these fruits.

¹'A survey of the Hotel, Restaurant, Supermarket and Institutional Markets for Fresh Produce in Barbados'. Inter-American Institute for Co-operation in Agriculture, Bridgetown.

TABLE 6.6

Estimated Size of the Market for Fruits, Vegetables and Roots
in the Hotel, Restaurant and Institutional Sectors, In-Season
and Out-of-Season, in Barbados, 1981

Sector	Type of Produce	lbs and (Metric Tonnes)		
		In-Season (4 months)	Out-of-Season (8 months)	Total In-and Out-of-Season
Hotel	Fruits	732 887	895 080	1 627 967
	Vegetables	735 447	984 520	1 719 967
		344 160	448 200	792 360
Restaurant	Fruits - Tourist	153 420	441 312	594 732)
	- Business	115 065	165 49	280 557) 875 289
	Vegetables- Tourist	866 514	1 226 424	2 092 938)
	- Business	433 257	715 414	1 148 671) 3 241 609
	Roots - Tourist	396 120	573 120	969 240)
	- Business	66 020	95 520	161 540) 1 130 780
Supermarkets	Fruits	1 650 456	2 838 768	4 489 224
	Vegetables	2 702 008	5 083 088	7 785 096
	Roots	4 593 424	7 872 000	12 465 424
Institutions	Fruits	358 138	727 129	1 085 267
	Vegetables	487 551	989 876	1 477 427
	Roots	104 540	212 247	316 787
Total Fruit Purchases All Four Sectors		3 194 461 (1 449)	4 883 286 (2 216)	8 077 747 (3 665)
Total Vegetable Purchases All Four Sectors		5 475 940 (2 485)	8 748 159 (3 969)	14 224 099 ¹ (6 454) ¹
Total Root Purchases All Four Sectors		5 558 117 (2 522)	9 147 234 (4 150)	14 705 351 (6 672)

^{1/} Does not include onion purchases.

Source: 'A Survey of the Hotel, Restaurant, Supermarket and Institutional Markets for Fresh Produce in Barbados'. Inter-American Institute for Co-operation in Agriculture, Bridgetown, Barbados.

Secondly, the complaints about poor quality and poor reliability of meat supply are very likely related to the absence of a really functioning wholesale section supplying local produce to the visitor trade. The absence of wholesaling units is however not the only reason for the poor supply of meat; other parts of the system are clearly not functioning adequately. For example, the agricultural extension component probably needs to pay more attention to livestock husbandry. The training component needs to place more emphasis on curing meats and on cutting meats. The wholesale component needs to use trained butchers and to provide the appropriate cuts of meat for the trade.

Part of the problem of unreliable meat supply, as indeed the supply of all produce, may be the poor state of market information. Reliable, regular, and timely information on produce requirements - quantity, quality, unit sizes, and timing - in the tourist sector does not exist. Thus planning for production becomes a much harder task and the ensuing situation is one of irregular supply.

While menus are planned to make use of available local produce and to offer some local dishes, one does not get the feeling that a great deal of effort is made to promote local cuisine or to improve that cuisine as offered to the tourist trade. Certainly, no particular glamour or professionalism surrounds the local cuisine to attract tourists to such foods.

No one knows how well tourists would like local cuisine when served such food on other than the rare occasion. With this lack of information, it is no wonder then, that hoteliers and restaurateurs generally, react fairly cautiously to supplying local dishes to the tourist trade.

7.0 THE COMMONWEALTH OF THE BAHAMAS

7.1 Summary of Existing Studies

In October 1981, CTRDC and the World Tourism Organisation published the results of a study entitled 'Tourism Linkage Project - Commonwealth of the Bahamas'. The conclusions of this study are presented, in full, in Appendix 1. The salient points identified were that:

- About 15 per cent of total food consumption in the Bahamas is by the tourist sector.
- Locally-produced foodstuffs account for less than 20 per cent of the total food market in the Bahamas.
- The tourist sector has stable demand patterns for high quality, graded food products of high unit value and purchased in relatively large quantities.
- Tourist eating trends are moving towards greater consumption of such items as chicken, seafood, fish, and fresh produce - items that are all produced in the Bahamas.
- Relative to most imported items, local fresh foodstuffs are of low and inconsistent quality, lack continuity of supply, are not graded or packed in standardised packages.
- There is very little communication between the major buyers of foodstuffs for the tourist trade and participants within the agricultural sector (including Ministry of Agriculture officials, farmers, wholesalers of local produce); as a result, the local food trade has limited perception of the food needs of the hotels and restaurants.
- Local produce is used frequently, as a source of supplementary supply for the tourist trade, when imported food products are not immediately available - as a result, demand for local produce is highly unpredictable.
- The food production and market system in the Bahamas is characterised by, inter alia: small-scale growers scattered

among many islands of the Commonwealth; an inadequate production and marketing intelligence system that serves to obfuscate producers' attempts to plan production to meet firm market requirements; compounded by a government marketing policy (total subsidisation of sea transportation costs from major producing islands, and regulated prices that may be set according to market, social or political priorities, or both) that serves further to confuse the market signals; and an inadequate marketing infra-structure.

- Produce grown in the Bahamas competes with produce grown, harvested, graded, packed and shipped from one of the most efficient producers of food in the world - the USA. Further, the sea and air links between the major population centres of the Bahamas and the USA are substantially better than those that exist within the Bahamas island group. Irrespective of the tariff support given to local produce (which, at times, is considerable), the combination of a relatively low cost, easily accessible supply source of US produce, and an inefficient food production and marketing system in the Bahamas serve to constrain harshly developmental efforts to increase the market share for Bahamas foodstuffs within its own national boundaries.

7.2 Qualitative Reappraisal

During mid-1983, a follow-up field visit was undertaken to the Commonwealth of the Bahamas:

- to provide a qualitative update of the 1981 study and discern if the conclusions drawn in 1981 were still valid;
- to select specific recommended areas for amplification and further development.

The findings of the 1981 study were confirmed after undertaking a series of qualitative market surveys and discussions with Ministry of Agriculture staff, personnel from the Nassau Produce Exchange, a wide range of chefs and food buyers from the major hotels and restaurants, farmers, importers, wholesalers, and retailers of fresh produce in New Providence, and staff from the Ministry of Tourism.

The Bahamian food trade is criticised by agricultural interest groups for selecting US produce over locally-produced food-stuffs - in part, their purchase performance reflects entrenched buying practices built up over the years, but, to a large degree, it reflects that imported produce is readily available, in the preferred quality and quantity, whereas domestic produce is not.

The present production and marketing system for fresh produce in the Bahamas is not geared to provide high quality, consistent supplies of portion-controlled foodstuffs to the large-scale hotels and restaurants - there are no programmes in place or planned that will substantially alter this situation in the short-to-medium-term.

Irrespective, the close proximity to a major US wholesale point (Miami), and the strong transportation links between Miami and major Bahamian population centres, will ensure that the Bahamian agricultural sector will be hard-pressed to compete with relatively low cost, high quality supplies of fresh produce from the US, without substantial and sustained tariff and non-tariff barriers to entry on imported food products.

In discussions with officials from the Ministry of Agriculture (MOA), it was made clear to the consultants that:

- MOA believes that the small-scale farm sector has only very limited potential for agricultural development, particularly with regard to servicing the needs of the tourist sector; rather, the large-scale farm sector - possibly comprising joint ventures between Bahamian and developed country investment groups - is perceived to offer greater potential for national agricultural development;
- MOA is satisfied with the present national production and marketing strategy for fresh produce;
- MOA did not perceive that the CTRDC could play a significant role in developing projects that would encourage the increased usage of local food by the tourist sector;

7.3 Directions for Development

The consultants have identified four areas for potential project development for the consideration of the MOA, assuming that perceptions

and priorities with regard to increasing local usage of local foods in the tourist sector may change over time:

- (i) The development and implementation of a national production and marketing strategy for local food products.

Much can be accomplished within the Bahamian food production and marketing sector to increase the level of market orientation of farmers and intermediaries in the marketing chain. However, this cannot be achieved overnight. The marketing system is in need of a complete overhaul, inter alia, farmers need access to market intelligence that they can utilise to plan production to meet market requirements; prices offered for fresh produce by the Produce Exchanges should reflect market requirements and not be influenced arbitrarily by third parties; the subsidy elements that are both implicit (whereby Produce Exchanges may hold producer prices at levels above which the Exchanges can expect to make a commercial return), and explicit (whereby transportation costs are covered by the Government from outlying production areas to major demand centres) in the marketing system, should be specifically quantified such that the Government can determine how cost-effective its policies are; the management and operation of the Exchanges should be assessed to seek means of increasing marketing efficiency.

- (ii) A commodity specific marketing programme could be initiated for a selected commodity that would specifically address the needs of the local tourist market. The rationale for such a project emphasis rests on the belief that "blunderbuss" approaches to agricultural market development in the Caribbean have a history of failure; a more realistic, pragmatic approach is to concentrate resources in one commodity area, start on a pilot project basis, and then, build up to full-scale implementation. Bananas and tomatoes are two commodities that offer prima facie strong market potential as they are both relatively high value food inputs into the tourist sector, and both commodities can be grown successfully within the Commonwealth of the Bahamas. At least fifteen steps would have to be taken in undertaking a successful production and marketing programme for either commodity, viz:

- Identify market opportunity(ies).
- Check supply potential and initial profitability calculation.
- Contact potential buyer(s) to determine specific requirements - quality, volume, price, etc.
- Contact potential supplier(s) to determine production capabilities and price aspirations.
- Undertake feasibility study to confirm profitability of proposed venture (may include sample shipment).
- Agree with buyer(s) and supplier(s) on details of a production and marketing programme (including product price, grades, packaging and delivery requirements, etc.).
- Plan production and marketing activities to meet price, quality, quantity requirements of the final buyer.
- Discuss and refine plan with participating parties.
- Implement production and marketing programme for pilot shipments.
- Monitor progress and adjust programme as necessary.
- Meet with final buyer and other production and marketing system participants to determine reaction to pilot programme.
- Establish firm targets (price, quantity, quality, etc.) for full-scale production and marketing programme.
- Repeat planning procedure outlined above (6. - 8.).
- Implement production and marketing programme for full-scale shipments.
- Monitor progress and adjust programme as necessary.

(iii) Establish a committee on local food usage in the tourist sector with major food buyers and chefs from the tourist sector, MOA officials, farmer representatives, food trade members. The rationale for establishing such a committee is, inter alia, to show MOA and farmers what foodstuffs are required and why (i.e. why only a certain quality, in specified quantities, in standardised packaging will do). One major task for such a Committee could be the development of produce standards that will satisfy hotel and restaurant requirements.

It should be emphasised that the tourist trade express strong enthusaism for increasing the communication between tourist and agricultural sector participants.

(iv) This potential project is in the general category of tourist inter-face projects, and is focussed specifically at the tourist market in and around Nassau. Its rationale is based on the belief that:

- most tourists confine their meal-eating experiences to the "tourist-type" hotel and restaurant outlets within or close to Nassau;
- most tourists are unaware of "local restaurants" where they could rub shoulders with Bahamians, and eat good quality meals at prices substantially lower than in the up-market outlets;
- there are "local" restaurants that can offer a local meal-eating experience and, concomitantly, satisfy the quality requirements (in terms of food quality and presentation, service, decor, etc.) of the tourist;
- such local restaurants are proportionately much higher users of local produce than are the larger-scale outlets; typically, buying small units of freshproduce from local vendors.

The project idea is to introduce the tourist to local restaurants, currently, off the tourist beat (e.g. open-up the "over-the-hill" restaurant market to tourists visiting Nassau).

A simple one-page "flyer" enclosed within the standard tourist information pack, advertising 10 to 12 alternative outlets might suffice. In addition, a representative of participating local restaurants could coordinate both bookings and transportation, to minimise cost of reaching the outlets and maximise the convenience.

8.0 TOURISM-AGRICULTURE LINKAGE PROJECTS

8.1 Introduction

To meet the requirements and problems of the integrated system as it has been modelled and evaluated earlier in the report, this chapter sets down some project profiles.

Essentially, these profiles consist of very brief descriptions, products/services, market target segments and project requirements. Many of the projects do not have large investment costs and can be implemented within the existing institutional structures available in the region. This feature is not an insignificant benefit; it economises on the use of managerial resources - a very scarce factor in this area.

None of the projects identified should be implemented without further study. The smaller ones however should be amenable to early and quick implementation. Many of these are in the nature of "superstructural" projects which provide information services to aid the success of the larger projects and the system as a whole.

The 'Tourist Interface Projects' which have been outlined below will not of themselves initiate dramatic developments in the agricultural sector; but implementation of some or all of them will significantly improve the present usage of local produce by the tourist sector. Sustained agricultural development will spring from the implementation of national production and marketing strategies that take account of national agricultural capabilities and the realities of local, regional and extra-regional market opportunities for Windward Island produce.

We have assumed that the strategy which will be used in the development of these linkages relies on the notion that the countries concerned must start the linkage process immediately with whatever production is available. This approach is however only an initial one, since the volume of available production is not great enough to permit any economies of scale in many of the projects or even to meet any significant increase in demand in the tourist and domestic markets for fresh local produce. Later in the programme of developing linkages, therefore, major supply projects are identified as requirements for successful expansion of tourism/agriculture linkages.

Along with these supply projects, there must also be support projects such as veterinary services, farm extension services, artificial insemination and herd registration etc.,

Both the supply and supply support projects have been identified.

However, efforts to increase agricultural production have usually been frustrated because of poor marketing. Such marketing ranges from conceptualizing what form the final purchaser wishes to receive the product, through the techniques for adequate product promotion to the packaging and distribution of the product. Any initial impetus given to these tourism-agriculture linkages will only be maintained or increased through dynamic marketing. For this reason, many of the projects identified are not supply projects but are, projects to induce demand for local produce, in the expectation that clearly defined demand for local produce will call forth increased local supply of the required commodities in the desired forms.

8.2 Project Profiles

8.2.1 Project: Establishment of a Local Food and Beverage Promotion Programme.

Service:

- Creating positive awareness of local foods and beverages.
- Attracting potential consumers to local foods and beverages.
- Stimulating sales of local food products.

Market:

- Hoteliers/Restauranteurs and their staff.
- Wholesalers and retailers.
- Tourists.

Project Description:

(a) Creating Awareness

- Preparing and publishing of newspapers, magazine articles, radio and television programmes on nutrient value and ways of preparing local food dishes and beverages.
- Preparing and distributing recipe books geared to commercial food establishments - to hotels, restaurants.
- Preparing and distributing small recipe books and leaflets to apartment hotels, tourist cottages, and retail outlets catering to tourists.
- Coordinating and sponsoring local food shows and competitions.

(b) Attracting Potential Customers

- Create air of the exotic and exquisite around local food products.
- Careful television, magazine advertising.
- Attractive naming and descriptions of local meals.

- Tasting events for local meals.
- Sponsoring welcoming parties at hotels, and serving local foods and beverages rather than imported ones.
- Creating attractive product designs.

(c) Stimulating Sales of Local Produce

- Lobbying for tax rebates to hoteliers, restaurants etc. which use local foods in proportion to percentage of total food and beverage bill which is local.
- Arranging discounts for bulk purchase of local foods and beverages.
- Providing non-cash awards to hotels, restaurants, who purchase and serve a great amount of local food and beverage.
- Providing prizes in retail shops catering to tourists for visitors buying local produce.
- Ensuring local produce is well displayed in retail outlets and is brought to attention of hotels, restaurants.

This list of possible promotional activities to increase tourist demand for local food is not by any means exhaustive, but merely illustrates the large number of promotional activities which might be staged.

Skills:

- Marketing Officer (from Tourism Food and Beverage Market Research Unit).
- Market Promotions Specialist.
- Support staff.
- Art skills in various mass media areas (to be contracted out).

Cost:

- Approximately \$500 000 per year including:
 - salaries
 - office expenses
 - promotion materials and programmes

Implementation:

- Coordinated by CTRDC, Caribbean Hotel Association (CHA).
- Using private sector service which are available in various areas whenever it is cost effective to provide these services in this way.
- With initial funding from USAID, CIDA, BDD, EDF on grants for about four years.

Further Action:

- Prepare detailed costing of staffing and office expenses.
- Arrange funding for the expenses and for initial programs.
- Implement project.
- Review, evaluate and arrange further funds.

Territory:

Located in Barbados but operating throughout the five islands.

Benefits:

- Increased tourist and local consumption of locally grown foods.
- Increased production of local produce.
- Increased employment in food production, distribution of local foods.
- Foreign exchange savings.

- Contribution to system strengthening in areas of:

- getting local dishes on menu
- well prepared/presented local dishes
- comprehensive/successful promotion of local foods
- effective distribution of local foods
- convenient packaging of local foods
- dynamic new products.

8.2.2 Project: Establishment of a Tourism Food and Beverage Market
Research and Development Unit

Service:

- Research information on availability and location of produce supplies.
- Research information on Tourism eating preference and habits.
- New product concepts for local products.

Market:

- Farmers, wholesalers, retailers, hoteliers, restaurateurs, promotion agencies.

Project Description:

(a) Skills:

- 2 professionals - 1 in marketing, 1 in statistics and survey work.
- 2 support staff.

(b) Equipment:

- Office furniture and equipment.
- Access to computer facilities.

(c) Work:

- On-going surveys would be conducted, in association with organizations doing similar work on sales, plantings, availability of various local produce.
- Specialised surveys to test determinants of tourist demand for various foods and beverages would be conducted.
- Marketing advice on:
 - promotion
 - product mix
 - product quality

packaging
new product concepts

(d) Cost:

- \$ 300 000 per year for salaries, travelling, surveys, and data processing.

Implementation:

- Unit within CTRC
- Using CTRC and other private survey staff
- Processing data by computer
- Covering all the islands
- Funding could be provided by EDF, CIDA, USAID, BDB

Further Action:

- Prepare outlines of survey studies needed
- Arrange funding
- Implement project

Territory:

- Located in Barbados but operating in all five islands.

Benefits:

- Better planning and coordination of production of local produce.
- Avoidance of gluts and shortages of local produce.
- Increased use of local produce.
- Increased employment in agriculture, survey services.
- Foreign exchange savings.

- Contribution to system strengthening in areas of:
 - comprehensive/successful promotion of local foods
 - effective distribution of local foods
 - consistent/adequate supplies of local foods
 - convenient packaging of local foods
 - dynamic new products
 - adequate/timely information.

8.2.3 Project: Developing Local Cuisine.

Service:

- Creating new recipes for local produce.
- Training local chefs to a high standard, especially in respect of preparing dishes from local foods.

Market:

- Local chefs, particularly those in hotels and restaurants.

Project Description:

- Research into old local recipes; refinement of these recipes.
- Application of techniques of food preparation, and combinations to create totally new dishes.
- Training local chefs to a high standard of cooking.
- Training local chefs in preparing new recipes with local food.
- Showing local chefs how to apply this training to form new dishes.

(a) Equipment:

- existing equipment at Hospitality Division of Barbados Community College, and at various home economics laboratories in all the islands.

(b) Materials:

- Various local produce.

(c) Skills:

- Two, good, trained and experienced chefs.

Investment Cost:

- \$100 000 per year for:
 - salaries
 - accommodation
 - travelling
 - office expenses

Implementation:

- By Hospitality Division of Barbados Community College and polytechnics in each island.
- Materials to be supplied by local association of farmers.
- Chefs recruited from U.K., say Montreal or Quebec in Canada, and paid for by BDD, CIDA.

Further Action:

- Prepare detailed costing.
- Discuss with aid donors, farmers, and implementing institutions.
- Funding agencies might be CIDA, BDD, OAS.
- Implement.

Territories:

- All territories.

Benefits:

- Increased consumption of local foods.
- Improved level of culinary skills in territories.
- Foreign exchange savings.
- Increased production and employment in food production areas.

8.2.4 Project: Slaughtering and Processing Facilities.

Service:

- Provide adequate services for inspection, collection, slaughtering, aging and cutting meat.

Market:

- Hotels, restaurants, retail outlets catering to tourists; fast food outlets; retail outlets catering to local population.

Description:

- (a) Build new abattoirs or improve existing ones.
- (b) Provide cool and cold storage, including hanging rooms at the abattoir.
- (c) Provide collection services for farmers.
- (d) Provide acceptable veterinary preparation of animals before slaughtering.
- (e) Provide acceptable meat inspection services.
- (f) Produce standard cuts, particularly chops.

Proposed Territories:

- Barbados, St. Vincent, St. Lucia, Grenada, Dominica.

Cost

- \$300 000 for each island.

Funding

- Funds could be available from, say, CDB, CIDA, EDF.

Benefits

- Increased consumption of local meats
- Increased employment in meat growing industry
- Foreign exchange savings
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - effective distribution of local foods
 - consistent adequate supplies of local foods
 - convenient packaging of local foods.

8.2.5 Project: Training of Butchers.

Service:

- To train local butchers to:
 - . handle and tenderise meat
 - . prepare meat in cuts and styles desired by hotels and restaurants.

Market:

- Local butchers.

Description:

- Local meat raised in low technology conditions must be scientifically tenderised before it can even begin to compare with imported meats. Hanging is the process for achieving such tenderisation.
- Local butchers are not conversant with the finer cuts of meat, or how to achieve them efficiently. Training would teach these butchers how to present meat in the way that customers want it.
- Many hotels and restaurants would like their meat pre-seasoned with basic seasoning so as to improve the flavour of the cooked meat, and to save hotel staff time. Butchers must be taught to do this task properly.
- These three steps, particularly the first two, are critical to gaining top hotel/restaurant acceptance of local meat.

Skills

- Two experienced and highly trained butchers from the USA or Canada, say, would spend two one-month trips in each island training the local butchers in slaughtering and processing meat. Much of the training would be by demonstration and the second trip to each island would be, say, six months after the first trip.

- Equipment needs would be minimal since the training would use the meat cutting facilities of local wholesalers of meat or local abattoirs.
- Total project costs would be around \$75 000 in the first year of the project.

Costs:

- \$135 000 over 3 years.

Implementation:

- Funding for this project could be sought from CIDA or USAID for the first year, in the form of a grant. Thereafter, these sessions could take place once per year for the next two years, for the purpose of ensuring that skill levels were remaining acceptably good.
- After Year 3 of the programme, local butchers who had gone through 3 years of training with the foreign butchers, would be able to train the newer entrants to the trade.
- CIDA or USAID might be persuaded to continue to support the scheme at the rate of \$40 000 per year during years 2 and 3. After this, employers of butchers ~~would~~ take the costs of training through permitting time off to senior cutters to train junior prospective butchers.
- The implementing agency for such a project in each island could be the local produce marketing association, with advice from the local hotel association and the aid donors.

Further Action:

- Prepare detailed implementation plan
- Arrange funding, probably from say DIDA, OAS
- Implement programme

Territories:

- All five islands.

Benefits:

- Increased consumption of local meats
- Foreign exchange savings
- Increased employment in meat growing industry
- Contribution to system strengthening in the areas of:
 - finest quality local foods
 - effective distribution of local foods
 - convenient packaging of local foods.

8.2.6 Project: Improvement of Wholesaling Facilities for Local Produce.

Service:

- To provide a reliable set of distribution outlets in each country, so as to facilitate:
 - . collection of produce from farmers
 - . delivery of produce to processors
 - . distribution of quality fresh and processed produce to hotels, independent restaurants and bars

Market:

- Farmers, fishermen supplying produce.
- Hotels, restaurants, bars, purchasing produce.

Project Description:

(a) Processes:

- collecting
- grading
- storing
- delivering produce.

(b) Equipment:

- inter-island vessels with chilled space
- chilled and cold storage warehousing facilities
- grading facilities

Investment Costs:

- Capital requirements in each territory of around Bds\$500 000.
- Working capital requirements in each territory of around Bds\$250 000.

- Cost of one or two specially equipped vessels.
- Funding from local Development Finance Corporations and commercial banks.

Support Projects:

- expansion of production of meats, fruits and vegetables.
- intensive market promotion.
- efficient agricultural extension service
- timely market research information
- development of Caribbean Agricultural Trading Co (CATCO).

Location:

- Each country.

Benefits:

- Use of currently wasted production
- Foreign exchange savings
- Foreign exchange earnings
- Increased income and employment
- Contribution to system strengthening in areas of:
 - comprehensive/successful promoting of local foods
 - finest quality local foods
 - effective distribution of local foods
 - consistent/adequate supplies of local foods
 - reasonably priced local foods
 - convenient packaging of local foods
 - adequate/timely information.

8.2.7 Project: Distribution of partially prepared local foods.

Product/Service:

(a) Fruit

- cleaned
- peeled where necessary
- deseeded where necessary
- diced/sliced/crushed
- chilled/frozen
- packaged in single person units

(b) Vegetables

- peeled as necessary
- cleaned
- sliced/diced/chunked where necessary

Market:

- Hotels, restaurants, fast food outlets, tourists in self-catering accommodation

- Market size is approximately 6 million pounds per year valued at around EC\$14.5 million for vegetables and staples. Fruits would further augment the market.

- Probably 1/3 of this market could be captured for this project.

Project Description:

(a) Processes:

- grading
- scrubbing
- peeling
- slicing, dicing, crushing
- chilling/freezing
- packaging

(b) Equipment:

- grading tables
- conveyor belt
- slicing equipment

- mechanical scrubbers
- chilling/freezing equipment

(c) Materials:

- packaging
- local fruits
- local vegetables
- local staples
- energy

Investment Costs:

- Bds\$1 million if a new plant is started.

Support Projects:

- agricultural extension
- produce collection
- produce shipping/air freighting in bulk
- promotion

Implementation:

- Costs may be saved by using an existing plant. One such plant is already located in Barbados. Additional equipment may be required, however. This plant is called "Poly Products". Some additional management may be required.

Further Action:

- Reach agreement with owners/management of Poly Products.
- Secure funding for the additional investment which may be needed from, say, CDB, USAID.
- Locate additional management and install them.
- Start "pilot project" to test market acceptance.
- Later, if market acceptance is good, expand to full commercial and wide range.

Location:

- Barbados, using CATCO to move fresh produce from the other islands to one large modern factory in Barbados.

Benefits:

- Foreign exchange savings
- Increased use of currently wasted produce
- Increased employment and incomes
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - effective distribution of local foods
 - consistent/adequate supplies of local foods
 - reasonably priced local foods
 - convenient packaging of local foods
 - adequate/timely information.

8.2.8 Project: Extraction of Fruit Essences/Purees

Product:

- Natural essences of nutmeg
- " " " coconut
- " " " ginger
- " " " banana
- " " " cherry
- " " " cocoa

Market:

- Flavourings for "home made" local ice creams, sundae syrups, "exotic" soft drinks (pops).

- To be sold in retail shops (pop), fast-food outlets, hotels, restaurants (in ice creams) and drinks.

Project Description:

(a) Process:

- Essences
 - chopping
 - distilling
 - bottling

- Purees
 - cleaning
 - pulping
 - deseeding
 - boiling
 - blanching
 - preservatives
 - sealing

(b) Materials:

- fruit
- energy
- bottles
- caps
- packaging material

(c) Equipment:

- choppers
- cutting surfaces
- distillation equipment
- bottling and capping equipment
- pulping equipment

(d) Scale:

- very small scale, to use existing surplus produce.

(e) Skills:

- Advice and testing service of a trained chemist.

Investment Cost:

- Excluding land and buildings: Bds \$50 000 per essence project
Bds \$20 000 per puree project

Support Projects:

(a) Heavy promotion to:

- chefs
- retail outlets
- manufacturers of syrups, soft drinks (pop) and ice cream.
- fast-food outlets who make their own ice cream.
- tourists, stressing the "nature way" of the product.

(b) Collection of the produce:

- probably a centre in each island

Implementation:

- An existing private sector organisation in the business of making syrups, e.g., Windmill in Barbados; or National Organisation of Women or similar group in each island.
- Small production centres in each island.

- Funding for the project to come from say, local Development Finance Corporations.
- An itinerant consultant chemist visiting all plants to test quality and ensure good quality control; to be funded by say, BDD, CIDA.

Further Action:

- Survey of market for drink, ice cream flavourings.
- Feasibility study.

Territories:

- Located in Dominica, Grenada, St. Vincent, St. Lucia.

Benefits:

- Reduced wastage of local fruits
- Foreign exchange saving
- Foreign exchange earnings
- Increased income, employment, production
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - dynamic new products.

8.2.9 Project: Production of Snack Foods.

Products:

- Crisps of: sweet potato, breadfruit, yam, pumpkin, mango, banana, golden apple, pineapple.
- Peanuts, cashew nuts, corn for popping, parched pumpkin seeds, parched whole peas.

Markets:

- Hotels, restaurants and independent bars, lounges and nightclubs.

Project Description:

- Collection of fruits, vegetables, nuts, grains.
- Slicing, shelling.
- Roasting, frying.
- Packaging.

(a) Materials:

- fruits, vegetables, nuts, grains
- cooking oils
- energy, i.e., fuel
- packaging materials

(b) Equipment:

- slicers, shellers
- ovens
- deep frying industrial equipment
- packing equipment
- solar dryers

(c) Skills:

- Food Technologist Consultant

Investment Costs:

- \$150 000 per island
- Funding from local Development Finance Corporations and commercial banks.

Support Projects:

- Expansion in production of fruit, vegetable, nut, grain crops.

Implementation:

- By existing factories which now produce similar products in Barbados, e.g., corn curls, potato chips, etc.
- By cottage industry under a national coordinating body similar to N.O.W. in Barbados or Industrial Development Corporations.
- Aid for food technologist for other islands by, say, BDD, CIDA, USAID.

Further Action:

- Perform detailed feasibility study and implementation plan.
- Locate funding.
- Implement project with a phase in of full production over 5 years, say, while crop production hurdles are overcome.

Location:

- In each island on a small scale.

Benefits:

- Foreign exchange savings
- Use of currently wasted production
- Increased employment incomes
- Contribution to system strengthening in areas of:
 - well prepared/presented local foods
 - comprehensive/successful promotion of local foods
 - convenient packaging of local foods
 - dynamic new products

8.2.10 Project: Production of "Exotic" and Other Fruit Juices and Drinks.

Product:

- Mango nectar
- Orange juice
- Grapefruit juice
- Pineapple juice

Market:

- The market for fruits and juices imported into the study area is of the order of 8 million pounds per year, valued at around EC\$8 million.

- The bulk of this market will be for juices rather than fruit, and so the juice market could be in the region of EC\$6 million per year.

- Market segments to which this project's output would aimed would be the hotels, restaurants, bars and fast food outlets.

Project Description:

(a) Process:

- washing fruit
- squeezing fruit to extract juice
- blending fruit into nectar base
- blending fruit juice with water
- adding and dissolving sugar into juice and juice derivative
- pasteurising
- packaging

(b) Equipment:

- mechanical washing and scrubbing equipment
- mechanical presses for squeezing
- mechanical and industrial blenders
- packaging line
- chill or frozen space

(c) Skills:

- Food Technologist consultant

(d) Materials:

- fruit
- energy
- packaging material
- sugar
- water

Investment Costs:

- In some cases, say in Barbados, the washing equipment and squeezing equipment would have to be purchased.
- Other costs would largely be increased working capital needs.
- Estimated \$500 000.

Support Projects:

- collection of fruit by wholesalers
- promotion
- distribution in local market

Implementation:

- By existing factories producing juice and drinks in St.Vincent, Barbados and St.Lucia (Agro-Industries).

Further Action:

- Discussions and agreements with the existing factories.
- Feasibility study.
- Securing financing from local Development Finance Corporations, local commercial banks.
- Implementation.

Location:

- St. Lucia, St. Vincent, or Dominica.

Benefits:

- Foreign exchange savings
- Greater variety of local foods and drinks
- Increased employment and income
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - effective distribution of local foods
 - consistent/adequate supplies of local foods
 - convenient packaging of local foods
 - dynamic new products

8.2.11 Project: Production of Jams/Jellies and Preserved Fruits.

Products:

- guava jelly
- cherry jam
- marmalade
- mango and other chutneys
- green mangoes in brine
- pickled cocktail onions
- sugar preserved fruits

Market:

- Jams, jellies, marmalade: hotel breakfast market.
- Chutneys, sugar preserved fruit: hotel and restaurant trade for flavouring and desserts.
- Pickled onions: hotel, restaurant and bar trade.

Project Description:

- The essential difference in this project from others will be the size of packages. Hotels and restaurants need to have small portion-controlled individually packed units of jams, jellies, chutneys for easy serving to guests. Thus the hotels can eliminate wastage and maintain elegant service.

(a) Materials:

- sugar
- various fruits
- bottles (for pickled onions)
- small box packets for other products
- preservatives as necessary

(b) Skills: Consultant Food Technologist, on occasion.

Costs:

- Largely working capital to cover costs of storage of packaging material, fruits etc., and finished product until sale.

Support Projects:

- Collection of fruit in good condition.
- Increased production of quality fruit, on a year-round basis.
- Intensive promotion to the hotel trade and the local resident population.
- Good wholesaling of finished product.

Implementation:

- By one of the existing manufacturing plants producing such products, Kaida Foods in Barbados, Miller Bros. in Barbados.

Location:

- One plant in each, of St. Vincent and St. Lucia.

Further Action:

- Conduct full feasibility study.
- Arrive at agreements with existing producers.
- Secure working capital funding.
- Implement the project.

Benefits:

- Foreign Exchange savings
- Reduction of current wastage of fruit
- Increased employment
- Contribution to system strengthening in areas of:
 - well prepared/presented local dishes
 - finest quality local foods
 - effective distribution of local foods
 - consistent/adequate supplies of local foods
 - convenient packaging of local foods

8.2.12 Project: Production of Exotic Fruit Liqueurs.

Product:

- Liqueurs with a natural Caribbean fruit base.

Market:

- Hotels, independent restaurants and bars, residents, retail outlets.

Project Description:

- Fermentation of West Indian fruit such as banana, cherry, cocoa, nutmeg, mango, golden apple.
- Double distillation of the alcoholic derivative.
- Curing of product.

(a) Equipment:

- fermentation vats
- distillation equipment
- curing barrels
- bottling line

(b) Materials:

- fruit
- yeast
- energy for distillation
- bottles

(c) Skills: Blender of liqueurs.

Costs:

- Increased working capital only.

Support Projects:

- Produce collection.
- Promotion.

Implementation:

- By existing producers of alcoholic beverages in the region.

Further Action:

- Conduct feasibility.

- Hold discussions with spirit refineries in the various territories.

- Secure working capital funding from local Development Finance Corporations, local commercial banks.

- Start project.

Location:

- Barbados, because of the existing rum-making industry.

Benefits:

- Reduction of current wastage of fruit
- Foreign exchange earnings/savings
- Increased employment in fruit collections
- Contribution to system strengthening in areas of:
 - comprehensive/successful promotion of local foods
 - finest quality local foods
 - convenient packaging of local foods
 - dynamic new products.

8.2.13 Project: Production of Fruit Based Candies.

Product:

- Candies.

Market:

- Hotels, restaurants, retail outlets.

Project Description:

(a) Materials:

- sugar
- fancy molasses
- cocoa
- fruit

(b) Skills:

- Food technology skills available from UWI, CARIRI, etc.

Costs:

- Increased working capital.

Support Projects:

- Expansion of fruit orchards.
- Collection and distribution of produce.
- Promotion.

Implementation:

- By an existing regional producer of chocolates, candies, other sweets, e.g., Charles Chocolates; Caribbean Confectionary Company.

Further Action:

- Full feasibility study
- Discussions with existing producers of similar products
- Secure funding from, say, CDB, local Development Finance Corporations, local commercial banks.
- Implementation

Location:

- Barbados, which is central and has the bulky sugar and molasses.

Benefits:

- Reduction in foreign exchange spending
- Use of fruit now going to waste
- Increased income, employment
- Contribution to system strengthening in areas of:
 - comprehensive/successful promotion of local foods
 - finest quality local foods
 - convenient packaging of local foods
 - dynamic new products.

8.2.14 Project: Production of Honey.

Product:

- Honey: beeswax as a by-product.

Market:

- Restaurants, hotels, retail outlets, confectionery plants, plants preserving fruits.

Description:

- Training beekeepers
- Constructing hives
- Selecting best strains of bee
- Expanding the population
- Collecting honey
- Processing honey

Costs/funding:

- For training from FAO, bees, hives
- \$350 000 per year over 4 years in each country
- Fundings from CDB, local Development Finance Corporations, local commercial banks.

Implementation:

- Ministry of Agriculture - training
- Farmers - actual bee keeping
- Dairies or "soft drink" plants - pasteurisation

Further Action:

- Conduct market feasibility study
- Prepare implementation plan
- Secure training aid and other funding
- Select and train farmers
- Implement project

Location:

- Each island to have a set of hives.
- Pasteurization to be done in those countries with pasteurizing equipment.

Benefits:

- Reduction in use of foreign exchange
- Increased employment
- Foreign exchange earnings
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - consistent/adequate supplies of local food
 - dynamic new products.

8.2.15 Project: Production of Local Hot Beverage Mixes

Products:

- Coffee, teas, cocoa, chocolate beverages.

Markets:

- Hotels, independent restaurants, retail outlets.

Description:

- Establish more coffee, cocoa estates with right varieties and right amounts for both
 - blending purposes and
 - providing enough basic product
- Partially process (clean, grind coffee/cocoa beans)
- Package/can products
- Establish farms of local tea bushes, selected by, say, a pharmacist, knowledgeable in herbal teas.
- Collect and partially process tea leaves.
- Package tea leaves.

(a) Materials:

- plant propagation material
- some imported basic coffee/cocoa stock
- packaging material

Support Projects:

- Agricultural extension services
- Plant propagation services
- Collection of produce

Implementation:

- By farmers, growing
- Ministry of Agriculture - plant propagation
- Firms which now vacuum pack say, peanuts, crisps, etc.

Further Action:

- Conduct full feasibility
- Secure funding - probably from CDB, local Development Finance Corporations
- Start project: land preparation; propagation.

Location:

- Grenada, St. Lucia, Dominica.

Benefits:

- Savings of foreign exchange
- Use of idle land
- Increased employment
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - consistent/adequate supplies of local foods
 - convenient packaging of local foods
 - dynamic new products

8.2.16 Project: Production of Processed Meats and Fish.

Products:

- Smoked meats
- Spiced meats
- Pates
- Pickled flying fish

Market:

- Hotels, restaurants, bars (snacks).

Project Description:

- This project would produce specialised flavours of processed pork products because existing producers in the area could easily satisfy the entire market for standard ham, bacon and sausages. Specialty flavoured products are however not yet produced in very great amounts.
- In addition, flying fish would be delivered pickled and bottled in small and large jars (for individual and party servings).
- Skills: Consultant Food Technologist.

Investment Cost:

- No significant extra capital costs are expected.

Support Projects:

- promotion of specialty meats, pickled fish.
- expansion of fishing industry's output.

Implementation:

- Already one or two manufacturers have entered the market, producing specialty meats. One such is Hojeg Meat Processing Limited in Barbados. A new plant has also been started in St. Lucia (Mangroo Processors Ltd.). These two plants could concentrate on producing the specialty lines for the tourist and local market.

Further Action:

- Market survey of the specialty lines.
- Agreement with the existing producers.
- Implementation of project.

Benefits:

- Foreign exchange savings
- Increased use of local meats
- Increased employment in meat growing sector
- Contribution to system strengthening in areas of:
 - well prepared/presented local dishes
 - comprehensive/successful promotion of local foods
 - finest quality local foods
 - effective distribution of local foods
 - consistent/adequate supplies of local foods
 - convenient packaging of local foods
 - dynamic new products

8.2.17 Project: Expansion of Fruit Orchards.

Product: Wide range of tropical fruits.

Market:

- Processors of juice, jams, preserved fruits, essence extractors, liqueur makers, packaged fruit slices - for the hotels, independent restaurants and independent bars.

Project Description:

- With the aid of the plant propagation services in each island, and under the guidance of the agricultural extension officers, farmers would be encouraged to increase their plantings of fruit tree crops. Additionally, the farmers would be helped and encouraged to provide better care for their tree crops. In particular, greater care will be encouraged for non-citrus fruit trees.

Costs:

- Around \$4 000 per acre of orchard over 4 years on average.

Support Projects:

- promotion of products to hotels, tourists, etc
- much improved wholesaling capacity for local fruits
- production of jams, jellies, juices, etc
- transportation of produce between islands.

Implementation:

- Private farmers, probably on contract to wholesalers.

Further Action:

- Begin better wholesaling effort for fruit.
- Select interested farmers.
- Cost expansion.
- Secure funding on adequate terms, probably from CDB, BDD, local Development Finance Corporations.
- Implement project.

Location:

- All islands

Benefits:

- Reduction in use of foreign exchange for fruits
- Use of land now lying idle
- Increased employment and incomes
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - consistent/adequate supplies of local foods
 - reasonably priced local foods.

8.2.18 Project: Expansion of Shrimp Production.

Product:

- Fresh water shrimp

Market:

- Hotels and independent restaurants.
- Over EC\$1 million worth of shrimps imported into the E.C. area alone.

Project Description:

- damming of waterway
- introduction of shrimps
- provision of feedstock for shrimps
- controlled extraction of shrimps

Support Projects:

- Improvement in wholesaling capability for local produce.

Implementation:

- by the local branch firm of Caribbean Food Corporation in, say, St.Lucia and Dominica.

Further Action:

- Await results of trials now being conducted elsewhere in region, in Dominica.
- Prepare costings and feasibility.
- Agree funding, probably from CDB, USAID.
- Implement project.

Location:

- Dominica, St. Lucia

Benefits:

- Reduction in foreign exchange usage for fish products
- Increased earnings of foreign exchange from exports
- Increased employment incomes
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - consistent/adequate supplies of local foods
 - reasonably priced local foods.

8.2.19 Project: Expansion of Meat and Milk Production.

Product:

- High quality beef, lamb, goat's meat, and milk.

Market:

- Local expanded/improved abattoirs, dairies for sale to hotels, restaurants, retail outlets via wholesalers.
- Approximately 1.6 million lbs. of beef and 250 000 pounds of lamb/goat meat per annum.

Description:

- Selecting best indigenous breeds (e.g Jamaica Hope dairy Cattle, Jamaica Red Beef Cattle, Barbados Black Belly Sheep) to form herds.
- Expanding these herds rapidly.
- Cultivating high quality feed grasses.
- Using feed lot system to produce required development in animals.
- Using stock feed produced from local products including fish and meat offal, molasses, reject produce etc.

Land:

- Throughout the four islands approximately 2 000 acres to provide 4 000 head of cattle per year and 8 000 head of smaller animals per year.

Materials:

- Planting material for grasses
- Artificial insemination services
- Stock feed concentrate
- Medicines

Facilities:

- Pen facilities, feed lots
- Feed storage facilities
- Milking pen facilities
- Cattle washing facilities

Skills:

- High farm management skills
- Veterinary services

Investment Costs:

- Facilities, equipment, stock - approximately Bds. \$15 million.

Support Projects:

- Improved and expanded artificial insemination services
- Expanded and improved agricultural extension services
- Local stock feed from local products
- Improved abattoir facilities
- Improved meat handling processes
- Dairy processing plants

Implementation:

- Phased over 7-10 years.

- Coordinated by a special executing agency appointed by ministries of finance and agriculture.

- Production by large farms or cooperative farms with central technical and project management services.

- Veterinary and project management services provided by say BDD, CIDA, USAID, in the first instance.

Further Action:

- Preparation of full project plan and feasibility

- Preparation of implementation plan

- Find funding from say, CDB, BDD, CIDA, local development finance Corporations

- Implement project

Territories:

- Barbados, St. Lucia, Dominica, St. Vincent, Grenada.

Benefits:

- Use of idle land
- Foreign exchange savings
- Increased agricultural employment
- Increased agro-industry employment
- Increased consumption of local meat
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - consistent/adequate supplies of local foods
 - reasonably priced local foods

8.2.20 Project: Provision of Production Coordinating Services.

Services:

- Assist farmers in scheduling production/harvesting activities.
- Assist farmers in following the prepared schedules as necessary.
- Assist farmers in planning level of production for each period.
- Assist farmers in solving production problems on a timely basis.

Market:

- Farmers

Project Description:

- Officers would be provided in each island in sufficient numbers such that they could effectively liaise with the farmers producing for the tourist market.

The quality of produce required for the tourist market would be similar to that required for the export markets, from which the tourists come in any case. Thus, these extension officers would help to coordinate and control the production for both the export and the local fruit market.

(a) Equipment:

- Vehicles for use in transporting coordinating officers to the sites of their visits.

(b) Skills:

- Persons trained in:
 - farm management
 - crop cultivation
 - livestock production
 - veterinary science
 - produce handling in the field

Costs:

For each island:

- Capital costs - Bds\$150 000
- Operating costs - Bds\$400 000 per year.

Support Projects:

- Marketing Research Unit.
- Artificial Insemination Unit.

Implementation:

- Eight officers for each island.
- Included in the staff of a regional private sector wholesaler, e.g., CATCO, where better control over performance is likely to result.

Further Action:

- Prepare detailed study of requirements.
- Seek and secure funding, probably, CIDA, USAID, BDD.
- Implement project.

Location:

- All territories.

Benefits:

- Better planned production
- More realized yield from land
- Better quality of local production
- Contribution to system strengthening in areas of:
 - finest quality local foods
 - consistent/adequate supplies of local foods
 - reasonably priced local foods
 - adequate/timely information

8.2.21 Project: Artificial Insemination Unit for Cattle

Service:

- Artificial insemination services for cattle.

Market:

- Farmers growing cattle.

Description:

- This project would provide to farmers a means for rapid increase in quality herds of cattle. The service would be a timely response service to maximise the benefit of having the operation. It is very likely that the scheme for agricultural extension officers considered as part of this set of programmes could administer and deliver these services.

(a) Equipment:

- chilled storage space
- chilled carrying space

(b) Materials:

- supplies of quality cattle semen
- syringes

Costs:

In each territory:

- capital costs \$50 000
- operating costs \$50 000 per year

Implementation:

- by the extension officers involved in this scheme
- farmers would pay for costs of the service

Further Action:

- Cost project in detail.
- Secure commitment for working capital and equipment needs from say, CIDA, BDD, USAID.
- Get cattle project started.
- Get agricultural extension officers project started.
- Start this project.

Benefits:

- Contribution to system strengthening in areas of:
 - finest quality local foods
 - consistent/adequate supplies of local foods
 - reasonably priced local foods

8.2.22 Project: Herd registration.

Service:

- Creating and maintaining a record of stock farmers and their stock.

Market:

- Agricultural extension officers
- Abattoirs

Project Description:

- This project would provide the means for keeping track of the various animals in each herd in order to:
 - . keep track of the quality of the herd lines.
 - . provide information on appropriate sources of animals for slaughter.

Implementation:

- By the agricultural extension officers of this scheme.

Further Action:

- Implement extension scheme.
- Implement the project.

Skills:

In each island:

- one officer trained in animal husbandry.

Equipment and Facilities:

- office space and furniture
- access to computer facilities

Cost:

In each territory:

- \$50 000 per year recurrent
- \$35 000 initial costs

Funding:

- Probably from CIDA, BDD, USAID, EDF.

Territories:

- Barbados, St. Lucia, St. Vincent, Grenada, Dominica.

Benefits:

- Contribution to system strengthening in areas of:
 - finest quality local foods
 - consistent/adequate supplies of local foods
 - reasonably priced local foods

8.2.23 Project: Institutional Development Team

Product:

- Services of (i) analysing existing entrepreneurs and their abilities to implement, manage linkage projects identified;
- (ii) identifying the skills and activities required to enable existing institutions to implement/manage the linkage projects;
- (iii) design and locate staff for new institutions, as needed to implement linkage projects;
- (iv) locate funding for much institutional strengthening;
- (v) locate funding for linkage projects.

Skills:

- The overall skills of the team would include skills in organizational structure and development, personnel management, management training, corporate finance, financial management and various other technical skills depending on the project where implementation is being considered.

Members of this team would probably have to be selected from various companies/organizations in the region and formed into a short term consultant team for each project.

Costs:

- In the vicinity of \$750 000, to cover the 22 other projects identified, over 4 years.

Implementation:

- Co-ordinated by CDB in association with CTRDC.

Location:

- In each country as the projects dictate.

Funding Source:

- CDB, CIDA, EDF, USAID.

Benefits:

- To ensure that sufficient management inputs are made to projects in their implementation stage that those projects realize the benefits which they promise.

8.3 Summary of Economic/System Benefits of Projects

8.3.1 Direct Benefits

Benefits from the projects identified may be classified into direct economic benefits and "system" benefits. The "system" benefits do not give rise immediately to economic benefits but provide the circumstances within which such direct economic benefits are reaped.

Four basic direct economic benefits and ten "system" benefits have been identified from these projects. These are:

Direct Economic Benefits

- Foreign exchange savings/earnings
- Use of currently wasted produce
- Use of currently idle land
- Increased employment, income

System Benefits

- Local dishes on menus
- Well prepared/presented local dishes
- Comprehensive/successful promotion of local foods
- Finest quality local foods
- Effective distribution of local foods
- Consistent/adequate supplies of local foods
- Reasonably priced local foods
- Convenient packaging of local foods
- Dynamic new products
- Adequate/timely information

The ways in which each project contributes to these benefits are summarized in Tables 8.3.1 and 8.3.2 below. The presence of an 'X' in a benefit column and a project row indicates that the project contributes to that benefit.

8.3.4 Indirect Benefits

Significant benefits would be reaped from the projects which have been identified. In particular, the expansion of dairy and beef herds with appropriate extension of adequate abattoir facilities will provide a great deal of raw material to be used in other projects. Such projects would make use of hides and skins, offal, cream and curd to provide non edible, animal feed, and edible products respectively.

Table 8.3.1
Summary of Macroeconomic Benefits

Projects	Foreign exchange earnings	Foreign exchange savings	Use of waste resources	Increased incomes	Increased employment
1 Local food and beverage promotion programmes	X	X	X	X	X
2 Tourism food and beverage research & development unit		X	X	X	X
3 Developing local cuisine		X			
4 Slaughtering/processing facilities		X		X	X
5 Training of butchers		X		X	X
6 Improving wholesaling facilities	X	X	X	X	X
7 Distribution of partially prepared local foods		X	X	X	X
8 Extraction of fruit essences/purees		X	X		
9 Production of snack foods		X	X	X	X
10 Production of exotic juices/drinks		X	X	X	X
11 Production of jams/jellies/ preserved fruit		X	X	X	X
12 Production of exotic fruit liqueurs	X	X	X	X	X
13 Production of fruit based candies		X		X	X
14 Production of honey	X	X	X	X	X
15 Production of local hot beverage mixes		X	X	X	X
16 Production of processed meats/fish		X	X	X	X
17 Expansion of fruit orchards		X	X	X	X
18 Expansion of shrimp production	X	X		X	X
19 Expansion of meat/milk production		X	X	X	X

Table 8.3.1 (continued)

Summary of Macroeconomic Benefits

Macroeconomic Benefits Projects	Foreign exchange earnings	Foreign exchange savings	Use of waste resources	Increased incomes	Increased employment
20 Provision of production coordinating services			X	X	X
21 Artificial insemination unit for cattle				X	X
22 Herd registration				X	X
23 Institutional development	X	X	X	X	X

Table 8.3.2

Summary of System Benefits

System Benefits	Local dishes on menu	Well prepared/presented local dishes	Comprehensive/successful promotion of local foods	Finest quality local foods	Effective distribution of local foods	Consistent/adequate supplies of local foods	Reasonably priced local foods	Convenience packaging of local foods	Dynamic new products	Adequate/timely information
1 Local food and beverage promotion programmes	X	X	X		X			X	X	
2 Tourism food and beverage research & development unit			X		X	X		X	X	X
3 Developing local cuisine	X	X	X						X	
4 Slaughtering/processing facilities				X	X	X		X		
5 Training of butchers				X	X			X		
6 Improving wholesaling facilities			X	X	X	X	X	X		X
7 Distribution of partially prepared local foods				X	X	X	X	X		X
8 Extraction of fruit essences/purees				X					X	
9 Production of snack foods		X	X	X				X	X	
10 Production of exotic juices/drinks				X	X	X		X	X	
11 Production of jams/jellies/ preserved fruit		X		X	X	X		X	X	
12 Production of exotic fruit liqueurs			X	X				X	X	
13 Production of fruit based candies			X	X				X	X	

Table 8.3.2 (continued)

Summary of System Benefits

System Benefits	Local dishes on menu	Well prepared/presented local dishes	Comprehensive/successful promotion of local foods	Finest quality local foods	Effective distribution of local foods	Consistent/adequate supplies of local foods	Reasonably priced local foods	Convenience packaging of local foods	Dynamic new products	Adequate/timely information
Projects										
14 Production of honey				X		X			X	
15 Production of local hot beverage mixes				X		X		X	X	
16 Production of processed meats/fish		X	X	X	X	X		X	X	
17 Expansion of fruit orchards				X		X	X			
18 Expansion of shrimp production				X		X	X			
19 Expansion of meat/milk production				X		X	X			
20 Provision of production coordinating services				X		X	X			X
21 Artificial insemination unit for cattle				X		X	X			
22 Herd registration				X		X	X			
23 Institutional development	X	X	X	X	X	X	X	X	X	X

Similar indirect benefit would be obtained from bee-keeping for honey. The beeswax produced could be used in the batik industries developing in all the territories, or exported.

8.4 Project Priorities

8.4.1 Criteria

The projects identified and profiled above may be implemented with significantly differing degrees of difficulty. In respect of each project, the The difficulty stems from the:

- size
- complexity
- financial needs
- requirement for key support services
- degree to which feasibility analyses and operational plans may already exist.

Additionally, the right conditions must exist if some of the larger and riskier projects are to succeed. Many of the smaller projects are designed to create just such conditions. Advantageously, these projects can generally succeed even in the current state and size of the tourism and agricultural sectors of the economies of the territories being considered. Very often, these smaller and earlier projects will use the existing agricultural production now going to waste. By so doing, these projects will generate the confidence in, and enthusiasm for effecting the linkages between tourism and agriculture.

These considerations condition the level of priority placed on the various projects which have been profiled.

8.4.2 Rankings

Three broad implementation levels have been identified. They are:

- Implementation Level A - for projects which could be implemented within 1-1/2 to 2-1/2 years from now.

- Implementation Level B - those projects which could be implemented within 2-1/2 to 4 years from the present.
- Implementation Level C - those projects which could be implemented within 4-5 years from now.

These projects, by priority rating are:

<u>Priority</u>	<u>Project</u>
A1	Production of processed meats and fish.
A2	Establishment of a local food and beverage promotion programme.
A3	Establishment of a tourism food and beverage research and development unit.
A4	Developing local cuisine.
A5	Slaughtering and processing facilities.
A6	Training of butchers.
A7	Improvement of local wholesaling facilities for local produce.
A8	Distribution of partially prepared local foods.
A9	Production of "exotic" and other fruit juices and drinks.
A10	Production of snack foods from local produce.
A11	Artificial insemination unit for cattle.
A12	Expansion of shrimp production.
A13	Extraction of essence concentrates.
B1	Provision of production coordinating series.
B2	Production of jams/jellies and processed fruits.
B3	Herd registration.
B4	Institutional strengthening/building.
B5	Production of honey.
B6	Expansion of meat and milk production.
B7	Expansion of fruit orchards.
C1	Production of exotic fruit liqueurs.
C2	Production of fruit-based candies.
	Production of local hot beverage mixes.

Some of the projects in the different priority groupings may really be seen as phases of one large project. Examples of these are:

I. Slaughtering and processing facilities

Training of butchers

Production of processed meats

Herd Registration

Artificial insemination unit for cattle

Expansion of meat and milk production

II. Production of "exotic" and other fruit juices and drinks

Production of jams/jellies, processed fruits

Expansion of orchards

Extraction of essence

Concentrates, purees

Production of fruit liquors

Production of fruit candies

The project priorities, of course, reflect only the consultants' views of:

1. the ease of implementing various projects;
2. the need for quick results in the marketing of local foods in order to provide stimulus for increased local production;
3. the relative weakness of the different parts of the model postulated earlier.

Even now, however, priorities of the final decision makers on the order in which projects should be implemented, may diverge from those of the consultant team. By the time the projects come to be implemented, priorities of the various decision makers may not themselves be convergent. Because of the likely differences in project implementation rankings then, an institutional mechanism must be recommended to bring order to the process of project implementation.

8.4.3 Institutional Mechanism

The Ministers of Tourism who are the governors of the CTRDC should appoint from among CTRDC staff and officials of the various ministries of tourism, a small advisory team called the Tourism-Agriculture Linkage Priorities Advisory Sub-committee, to present proposals to a Tourism-Agriculture Linkage Priorities Committee, consisting of (a subsection of) Ministers of Tourism. This Ministerial Committee would then make the final decision on the order of implementation of projects to which the governments and their agencies would give support.

APPENDIX 1

CARIBBEAN TOURISM RESEARCH & DEVELOPMENT CENTRE

SURVEY OF THE DEMAND FOR FOOD AND BEVERAGES

BY HOTELS & RESTAURANTS

(INTERVIEWER: PLEASE COMPLETE ALL QUESTIONS. WHERE QUESTION IS NOT APPLICABLE TO RESPONDENT WRITE 'N.A.' WHERE ANSWER IS NEGATIVE WRITE 'NO' OR 'NONE'. DO NOT LEAVE QUESTIONS BLANK.)

FOLLOW INSTRUCTIONS CAREFULLY. THESE WILL BE CONTAINED WITHIN () BRACKETS.

WHERE QUOTATION MARKS " " APPEAR, PLEASE FOLLOW EXACT WORDING.)

DATE: _____ INTERVIEWER: _____

NAME OF RESPONDENT: _____ POSITION _____

NAME OF ESTABLISHMENT: _____ ADDRESS: _____

1. A. Type of Establishment:

- Full Service Hotel ()
- Apartment Hotel ()
- Guest House ()
- Restaurant ()
- Other (SPECIFY) _____ ()

B. (FOR HOTELS & GUEST HOUSES ONLY)

- Number of Rooms or Units _____
- Total Number of Beds _____
- Bed Occupancy Rate: High Season _____
- Low Season _____

C. (FOR RESTAURANTS & OTHERS)

- Number of meals/day (Lunch & Dinner) High Season: _____
- Low Season: _____

D. (ALL RESPONDENTS WITH ACCOMMODATION)

(i) "Do you provide self-catering facilities for your guests? Yes _____ No _____"

(IF ANSWER IS NO, GO TO PART E.
IF ANSWER IS YES, ASK THE FOLLOWING)

(ii) "When self-catering, where do your guests buy most of their food?"

NAME OF ESTABLISHMENT	ADDRESS	TYPE OF STORE
_____	_____	_____
_____	_____	_____
_____	_____	_____

7/11 x100.

(iii) "What proportion of your guests (%) in your opinion, self-cater (rather than use restaurants, etc.)

100% 75% 50% 25% 0%

E. (FOR ALL RESPONDENTS WITH ACCOMMODATION)

"Do you provide restaurant facilities for your guests?"

Yes _____ No _____

(IF ANSWER IS NO, GO TO QUESTION 1.
IF ANSWER IS YES, GO TO QUESTION 2.)

2. (FOR ALL ESTABLISHMENTS SERVING FOOD)

A. "Are you responsible for making the main decisions as to the food purchased for serving in the establishment?"

Yes _____ No _____

(IF YES, GO TO PART B., IF NO, ASK)

"Who is responsible for making those decisions?"

Name: _____

(LOCATE PERSON NAMED ABOVE, AFTER THANKING INITIAL RESPONDENT FOR HIS HELP, AND CONTINUE INTERVIEW WITH NEW RESPONDENT)

B. (FOR EACH OF THE FOOD CATEGORIES LISTED BELOW, ASK FOR: APPROX. QUANTITY USED PER WEEK IN LOW AND IN HIGH SEASON; APPROX. PROPORTION OF QUANTITY USED THAT IS LOCAL OR IMPORTED; AND APPROX. UNIT COST.

Food Category	Quantity		Approx. Local %	Proportion Imported %	Cost/Unit (lbs./case etc.) \$
	High Season (specify units)	Low Season (specify units)			
Meats:					
Steak					
Other beef					
Pork					
Lamb/goat					
Chicken					
Ham					
Bacon					
Sausage					
Other Processed					
Fish:					
Fresh					
Canned (Tuna, etc.)					
Lobster					
Shrimp					
Other					

Food Category	Quantity		Approx. Proportion		Cost/Unit (lbs/case etc.) \$
	High Season (specify units)	Low Season (specify units)	Local %	Imported	
<u>Dairy:</u>					
Milk					
Butter					
Cheese					
Eggs					
Other					
<u>Staples:</u>					
Bread					
Potatoes (Eng.)					
Rice					
Ground provisions					
Other					
<u>Vegetables:</u>					
Cabbage					
Carrots					
Cucumber					
Lettuce					
Tomatoes					
Onions					
Other fresh					
Canned/Frozen Veg.					
<u>Fruit:</u>					
Bananas					
Grapefruit					
Oranges					
Limes					
Pineapple					
Mangoes					
Pawpaw					
Other fresh					
Canned juice					
Canned fruit					
<u>Other:</u>					
Jams/Jellies					
Oils/Fats					
Cereals					
Flour					
Sauces, etc.					

(ASK AT END OF LIST)

Total Food costs Per Annum E.C.\$ _____/annum

B. i) "Do you have any major problems in obtaining the fresh fruits and vegetables which you require for your establishment?"

Yes _____ No _____

(IF ANSWER IS 'NO', GO TO PART C. IF ANSWER IS 'YES', ASK THE FOLLOWING QUESTION).

ii) "With which fresh produce items do you have major problems when obtaining them for your establishment?"
(LIST BELOW)

"Any others?"

(FOR EACH ITEM LISTED, ASK)

iii) "What particular problems do you have in obtaining _____ for your establishment?"

(REPEAT B.iii) FOR EACH ITEM LISTED BELOW)

(TICK AS APPROPRIATE)

ITEM	UNRELIABLE SUPPLY	SEASONAL SUPPLY	POOR QUALITY	HIGH PRICE	OTHER (SPECIFY)

iv) (IF 'QUALITY' OR 'UNRELIABLE SUPPLY' (OR SIMILAR REPLY) GIVEN AS A PROBLEM ABOVE, ASK THE FOLLOWING. OTHERWISE GO TO PART C.)

"For _____, could you explain in more detail what the problem is?"

ITEM	NATURE OF PROBLEM
_____	_____
_____	_____
_____	_____
_____	_____

C. "From whom do you buy most of the local meat that you use in your establishment each week?"

Supermarket	()	Local Butcher	()
Direct from farmer	()	Wholesaler	()
Pig/Poultry Co-op.	()	Importer	()
Other (SPECIFY)	_____		

D. i) "Do you have any major problems in obtaining the local meat which you require for your establishment?"

Yes _____ No _____

(IF ANSWER IS 'NO', GO TO PART E; IF ANSWER IS 'YES', ASK THE FOLLOWING QUESTION).

ii) "Could you name those local meat items with which you have problems and describe the types of problem you face for each?"

(DO NOT READ LIST. TICK AS APPROPRIATE)

ITEM	UNRELIABLE SUPPLY	POOR QUALITY	HIGH PRICE	OTHER (SPECIFY)
Beef				
Pork				
Lamb/goat				
Poultry				

iii) (IF 'QUALITY' OR 'SUPPLY' GIVEN AS A PROBLEM ABOVE, ASK THE FOLLOWING. OTHERWISE GO TO PART E)

"For these local meats you mention as having problems with QUALITY or SUPPLY, could you explain in more detail what sort of problems these are?"

E. i) "From whom do you buy most of the fish that you use in your establishment each week?"

- | | | | |
|-----------------|-----|-----------------|-------|
| Fishermen | () | Importer | () |
| Fishery Co-op | () | Wholesaler | () |
| Supermarket | () | Other (SPECIFY) | _____ |
| Huckster/Vendor | () | | |

ii) "What major problems, if any, do you encounter in getting locally caught fish?"

(DO NOT READ LIST. TICK AS APPROPRIATE).

- | | | | |
|-------------------|-----|-----------------|-------|
| Unreliable Supply | () | Other (SPECIFY) | _____ |
| Poor Quality | () | | |
| Seasonality | () | | |

4. (ALL RESPONDENTS WHO SERVE FOOD).

"What cool and/or cold storage space do you have available for holding fresh and frozen produce in your establishment?"

- (READ LIST)
- | | |
|-----------------|-------|
| Refrigerator | () |
| Freezer(s) | () |
| Cool Store Room | () |
| Cold Store Room | () |
| None | () |
| Other (SPECIFY) | _____ |

5. (ALL RESPONDENTS WHO SERVE FOOD)

"What factors do you take into account in preparing a menu?"

(DO NOT READ LIST. TICK AS APPROPRIATE)

- Cost of foods used ()
- Availability of foods ()
- Storage availability ()
- Customer likes ()
- Chef's specialties ()
- Local and Caribbean dishes ()
- Other (SPECIFY) _____

6. (ALL RESPONDENTS WHO SERVE FOOD)

"Thinking back over the last 12 month period, what proportion of your food costs would have been spent on the following 4 categories of people?"

(READ LIST)

- Tourists from outside the region % _____
 - Business travellers & regional tourists _____
 - Local Customers _____
 - Staff meals _____
- 100%

7. A. (FOR ALL RESPONDENTS)

"Do you provide bar facilities for your guests and customers?"

Yes _____ No _____

(IF ANSWER IS NO, GO TO QUESTION 8, IF ANSWER IS YES, ASK THE FOLLOWING)

"Do you make the decisions as to the purchasing of drinks for the bar?"

Yes _____ No _____

(IF YES, GO TO PART B. IF NO, ASK THE FOLLOWING)

"Who is responsible for making those decisions?"

Name _____

(LOCATE PERSON NAMED ABOVE, AFTER THANKING PREVIOUS RESPONDENT FOR THEIR HELP, AND CONTINUE INTERVIEW WITH NEW RESPONDENT)

B. (FOR EACH DRINK CATEGORY LISTED BELOW, ASK FOR: APPROX. QUANTITY PURCHASED PER WEEK IN LOW AND HIGH SEASONS; APPROX. PROPORTION IMPORTED OR LOCAL; APPROX. UNIT COST (SPECIFY UNIT))

Food Category	Quantity		Approx. Local %	Proportion Imported %	Cost/unit (lbs/case etc.) \$
	High Season (specify units)	Low Season (specify units)			
Rum					
Other Spirits					
Beer					
Wine					
Bar Mixes					

C. i) "What are the two drinks most requested by tourists over the year?"

(LIST) _____

D. "Thinking back over the last 12 months, what proportion of your drink sales would have been to the following categories of customers?"

(READ LIST)

	%
Tourists from outside the region	_____
Business travellers/regional tourists	_____
Local customers	_____
	100%

8. (PART A FOR THOSE SERVING FOOD, PART B FOR THOSE SERVING DRINK).

"To finish, two final questions."

A. "For your last annual accounting period, what is the total value of food sales for the year in your establishment

_____ \$ E.C.

B. "For your last annual accounting period, what is the total value of drink sales for the year in your establishment?"

_____ \$ E.C.

(THANK THE RESPONDENT AND TERMINATE THE INTERVIEW)

APPENDIX 2

TOURISM LINKAGE PROJECT - Commonwealth of the Bahamas
Study Conclusions

Food consumption patterns of tourists do not cover a separate range of foods not eaten by residents, indeed, the high level of incomes in the Bahamas, and the heavy dependence on imports means that Bahamians and tourists alike show a rather similar pattern of food consumption.

We cannot therefore arbitrarily distinguish in the case of the Bahamas between the requirements of the tourist and the resident - they are in broad terms the same. Therefore it is evident that what limits consumption of local products by residents also tends to limit the consumption of locally-produced food by tourists. This common limitation is production: Bahamian agriculture at present cannot meet more than 20% of the demand from residents and tourists.

However, there are specific areas of difference between tourist and resident consumption patterns, the most important clearly being in the marketing stage. Residents tend to purchase food in small quantities and to prepare it at home, while tourists tend to purchase prepared meals at restaurants. Clearly the fundamental difference lies not in the food, but in the marketing, distribution and processing activities that take place between production and consumption. This report, while concerned necessarily with the general question of increasing local production, addresses itself specifically to that area covering about 15% of all food consumption in the Bahamas which relates to final consumption by tourists.

The term 'local food' itself, is something of a misnomer, in that all food available in the Bahamas is available elsewhere, although the culinary treatment may vary.

From a producer's point of view, therefore, the essential factor about the tourist market is not the type of food consumed, but the quality, quantity, and marketing and distribution mechanisms, characterised essentially by:

- a requirement for high quality graded material meeting pre-determined specifications;

- a demand pattern which, while showing seasonal demand variations, is known with some precision in advance;
- relatively high value and high volume orders placed at regular intervals;

The Benefits of Expanded Use of Local Food by the Tourist Industry

The economic and employment benefits are self-evident. Other advantages include:

- The Bahamas is at present reliant on other economies for its food supply, subject to the problems of other countries' economic and production fluctuations.
- This reliance on imports tends to lead to a situation where Bahamas' production is treated as a supplementary source to be used when imported supplies fail or are insufficient. Demand is unpredictable, highly price-responsive, and, when these fluctuations are transmitted to the primary producer, make production planning unresponsive to demand.
- Tourism, both worldwide and in the Caribbean, is increasingly competitive as more destinations enter the market. Food quality and price is a major determinant in choice of tourist destination, and serves to give identity to a destination.

Market Demand from the Tourist Industry

Market demand from the tourist industry indicates that:

- The Bahamas' proximity to the USA means that cost of food and meals is judged against the price levels, range and variety found in America.
- Hoteliers wish to see action to increase the availability of produce and reduction in the costs of time in locating produce. There is a need to act now since the lack of action produces hardening of attitudes.
- Eating out trends are moving in favour of seafood, chicken, fresh fruit and vegetables, all of which can be provided locally.

- There is unsatisfied demand from the hotel industry. However, food purchasing is dominated by large hotel operators using fixed menus and strict price/quality specifications. An assured supply of products and ability to control costs and quality are essential requirements.
- Overall the tourism industry purchased some \$27 million of food products and \$8.9 million of beverage products in 1980/81, most of which is imported.

The Production Possibilities

These may be summarised as follows:

- Climate should allow all-round production, if not of all fruits and vegetables, of a number of varieties.
- Cultivated land currently includes only a small fraction of available acreage identified as being of good agricultural potential.
- Proximity to USA means agricultural inputs are readily available - fertilisers, sprays, different varieties of seeds and trees.
- Bahamian farms produce good quality fruit, vegetables, chicken and pork. This is acknowledged by purchasers in both local and tourist markets, and during a test market of selected Bahamian produce in Europe, buyers were surprised by the quality levels.
- The government has set up mechanisms for research, input supply, transport and distribution of produce and an extension service. Some of these services are at the development stage
- Import duties and transport give a measure of protection to the local production.
- However, absence of irrigation means production is reliant on rainfall.
- Also, land ownership and holdings lead to difficulties in encouraging long-term investment. Production is concentrated on short-term crops.

- In addition, policies of the main lending institution, the Bahamas Development Bank, may deter new entrants to agriculture.
- The Bahamas' fishing industry has a potential of some 9 000 metric tonnes for annual fish landings. Crawfish is available.
- The hotel industry has demonstrated willingness to purchase local produce where these can satisfy cost/quality needs. In certain cases, the industry has also demonstrated a willingness to compromise, adjusting as far as possible their specifications to the realities of local production.

Problems Impeding Purchases of Local Food Products

- Agriculture is production-oriented rather than market-oriented. Farmers and co-operatives are not willing to enter into long-term marketing arrangements.
- The pricing system does not provide incentives for seasonal supply and quality. Food standards including packaging, labelling, appearance requirements are written, not visual and not well understood.
- Increases in the market cost of food - caused by increased production costs, poor or inconsistent quality, deviations from standards, additional mark-ups at each stage of handling, wastage, transport costs, or increases in import duty - have a magnified impact on the price of eating out. The market cost of the food to the hotelier is passed on to the tourist, plus a percentage mark-up ranging from 55% - 70% plus 15% service charge.
- Lack of communication between the market and the producers. Examples - hotel Food and Beverage Managers are not aware of possible food supplies; Packing Houses are unaware of local hotel food requirements.
- Sufficient supplies of some items are not available to the market; switching supply from one market to another would cause further problems.

- Produce does not arrive at the market in the required form - packaging, labelling, appearance, do not reflect the logistics of hotel preparation.
- Lack of storage and ripening facilities, together with stock control procedures, make it difficult to match supply and demand.
- The fundamental limitation, however, to greater use of locally-produced food by the tourist industry (and by the resident population) is local production levels which are too low

Recommendations

The recommendations for specific projects and detailed feasibility studies are aimed at correcting weaknesses, taking advantage of strengths and opportunities posed by the tourist market

These recommendations have been framed against the background of policy decisions and recommendations made by agricultural and fish marketing consultants.

- Agricultural development will be based on small-scale commercial farms.
- A four-year agricultural development programme will incorporate the clearance of 2 900 acres of new ground for small farmers, provision of irrigation on 1 500 acres, and agricultural extension services on nine islands, offering machinery services and other inputs and credit facilities.
- A fisheries development programme will open holding facilities for fish in the more distant Family Islands and will examine marketing problems.
- Recommendations have been made to improve the procedures of the Produce Exchange, the grading, transport and packing of produce and the implementation of a pricing policy to offer incentives for quality and seasonal production.
- A recommendation has been made to set up a produce marketing corporation.

Attempts to increase the supply of local crop and livestock produce to the hotels and the tourist market must be in parallel with an increase of supply to the market. Any switching of produce from one market to another would add to inflationary pressures already evident where demand outstrips supply, e.g., fish, certain seasonal fruits.

A ten-year Tourism Development Programme is now in the final stages of preparation. In November 1980, 1 035 new hotel bedrooms were under construction: 392 were extensions to existing hotels. Further developments approved by Cabinet envisaged the construction of 855 hotel rooms, and there are applications pending under the Hotels Encouragement Act, for 1 562 rooms. 321 Time Sharing units are in operation, with a further 515 approved and/or under construction and 174 rooms planned.

The hotel market should be used as a development centre for the agricultural and fishery industries, taking advantage of the detailed specifications, expertise and demand predictions. Satisfaction of this market would be an excellent base for increased penetration of the local market and development of export marketing.

Specific areas recommended for further action are set out below:

(a) Improve communications between Hotel and Agricultural Sectors, e.g.,

(i) Develop visual specifications/standards.

(ii) New product development jointly by the two sectors.

(iii) New recipe development supported by specifications and standards.

(b) Develop:

(i) Seasonal fruit basket.

(ii) Seasonal vegetable basket.

(c) Operation of Produce Exchange:

(i) Formalise selling procedures, particularly in Family Islands Packing Houses.

- (ii) Assessment of Packing House managers.
- (iii) Record requests for produce not available.
- (d) Encourage improvements in food and drink merchandising; in particular, develop delivery system of local eating establishments.
- (e) Special promotions - careful planning and monitoring of supply.
- (f) Set targets which can be measured in reduction of imports, e.g., potential for supply of fruit, vegetables, fish, chicken, pork.
- (g) Investigate potential for food packaging and processing of products to satisfy tourist demand and hotel specifications.
- (h) Improve information about location of retail outlets for local produce in order to encourage development of small-scale suppliers, and direct tourist purchases.
- (i) Provide tourists with recipe and cooking instructions for unfamiliar produce.
- (j) Identify hotel operations and food suppliers willing to finance agricultural production.
- (k) Examine effects of Bahamas Development Bank stated policy not to finance agricultural production which will be marketed through Produce Exchange, in view of practical realities of small-scale agricultural marketing in the Family Islands.
- (l) Consider problems of manufacturers interested in exporting in light of difficulties in overseas marketing and information, experienced both selling in the Family Islands and overseas.
- (m) If an Action Plan is to be implemented in the Bahamas with the aim of increasing local supplies to the hotel industry, target should be set against which to judge progress and setbacks. These could be expressed in terms of:

- reduction in imports,
- increase in agricultural production of certain crops,
- increase in usage of home processed fish,
- increase in tourist satisfaction ratings,
- reduction of costs of food to the hotel trade.

APPENDIX 3

APPENDIX 3.1

MEAT CONSUMPTION BY THE TOURIST SECTOR IN ST. VINCENT AND THE GRENADINES - SURVEY 1983

ITEM	HOTELS (INCL. MARINA)										RESTAURANTS										TOTAL TOURIST SECTOR		UNIT PRICE (EC\$/lb)
	High Season		Low Season		Annual				Total Value		High Season		Low Season		Annual				Total Value				
	Qty	%	Qty	%	Qty	%	Qty	%	Qty	Value	Qty	%	Qty	%	Qty	%	Qty	%	Qty	Value	Qty	Value	
	(lbs)		(lbs)		(lbs)		(lbs)		(lbs)	(EC\$)	(lbs)		(lbs)		(lbs)		(lbs)		(lbs)	(EC\$)	(lbs)	(EC\$)	
Steak	25 897	60	17 442	40	4 334	10	39 005	90	43 339	411 721	2 040	39	3 150	61	-	-	5 190	100	5 190	49 305	48 529	461 026	9.50
Other Beef	15 414	52	14 175	48	15 091	57	14 498	49	29 589	162 740	2 805	31	6 300	69	9 105	100	-	-	9 105	50 078	38 694	212 818	5.50
Pork	6 092	50	6 125	50	7 331	61	4 886	39	12 217	33 597	-	-	-	-	-	-	-	-	-	-	12 217	33 597	2.75
Lamb/Goat	5 044	57	3 850	43	7 649	86	1 245	14	8 894	35 576	255	50	255	50	510	100	-	-	510	2 040	9 404	37 616	4.00
Chicken	25 698	56	20 369	44	1 843	4	44 214	96	46 057	149 685	1 275	38	2 100	62	-	-	3 375	100	3 375	10 969	49 432	160 654	3.25
Ham	5 710	54	5 017	46	-	-	10 797	100	10 797	59 384	1 275	55	1 050	45	-	-	2 325	100	2 325	12 788	13 122	72 172	5.50
Bacon	5 865	60	3 909	40	-	-	9 774	100	9 774	48 870	255	49	525	57	-	-	780	100	780	3 900	10 554	52 770	5.00
Sausage	3 429	57	2 655	43	-	-	6 054	100	6 054	35 113	-	-	-	-	-	-	-	-	-	-	6 054	35 113	5.80
Other Proc.	1 445	49	1 517	51	-	-	2 962	100	2 962	13 329	-	-	-	-	-	-	-	-	-	-	2 962	13 329	4.50
Total	94 664	56	75 019	44	36 248	22	133 435	78	169 683	950 014	7 905	37	13 380	63	9 615	45	11 670	55	21 285	129 078	190 968	1 079 095	-

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APPENDIX 3.2

SEAFOOD CONSUMPTION BY THE TOURIST SECTOR IN ST. VINCENT & THE GRENADINES - SURVEY 1983

	HOTELS (INCL. MARINA)										RESTAURANTS										TOTAL TOURIST SECTOR		UNIT PRICE (EC\$/lb)
	High Season		Low Season		Annual				Total Value	High Season		Low Season		Annual				Total Value					
	Qty (lbs)	%	Qty (lbs)	%	Local		Imported			Qty (lbs)	(\$EC)	Qty (lbs)	%	Qty (lbs)	%	Local			Imported		Qty (lbs)	(\$EC)	
					Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)							%	Qty (lbs)	%	Qty (lbs)	%			
Fresh fish	29 750	52	27 592	48	57 342	100	-	-	57 342	172 026	2 806	43	3 675	57	6 480	100	-	-	6 480	19 440	63 822	191 466	3.00
Canned fish	2 437	43	3 267	57	-	-	5 704	100	5 704	42 780	-	-	-	-	-	-	-	-	-	-	5 704	42 780	7.50
Lobster	23 857	59	16 334	41	40 191	100	-	-	40 191	341 624	1 020	100	-	-	1 020	100	-	-	1 020	8 670	41 211	360 294	8.50
Shrimp	4 307	60	2 859	39	-	-	7 166	100	7 166	136 154	255	50	255	50	-	-	510	100	510	9 690	7 676	146 844	19.00
Other	6 234	58	4 500	42	10 784	100	-	-	10 784	26 960	255	50	255	50	510	100	-	-	510	1 275	11 294	28 236	2.50
TOTAL	66 586	56	54 602	46	108 317	90	12 870	10	121 187	719 544	4 336	51	4 186	49	8 010	94	510	6	8 520	39 075	129 707	758 619	

1/ Lobster weights include carapace.

2/ Primarily conch (1lb) but also includes crab and crayfish.

APPENDIX 3.3

DAIRY PRODUCTS CONSUMPTION BY THE TOURIST SECTOR IN ST. VINCENT & THE GRENADINES - SURVEY 1983

	HOTELS (INCL. MARINA)										RESTAURANTS										TOTAL TOURIST SECTOR		UNIT PRICE (ECS/lb)
	High Season		Low Season		Annual				Total Value	High Season		Low Season		Annual				Total Value	Qty (lbs)	Value (\$)			
	Qty (lbs)	%	Qty (lbs)	%	Local		Imported			Qty (lbs)	%	Qty (lbs)	%	Local		Imported					Qty (lbs)	(\$EC)	
					Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)					%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Butter	2 927	51	2 877	49	-	-	5 804	100	5 804	34 824	1 938	61	1 260	39	-	-	3 198	100	3 198	17 589	9 002	52 413	6.00
Cheese	2 560	55	2 100	45	-	-	4 660	100	4 660	27 960	1 377	33	2 835	67	-	-	4 212	100	4 212	25 270	8 872	53 230	6.00
Eggs ^{1/}	12 533	65	6 804	35	-	-	19 337	100	19 337	116 022	510	33	1 050	67	-	-	1 560	100	1 560	9 360	20 897	125 362	6.00
TOTAL ^{2/}										178 806										52 219		231 025	

1/ Eggs in dozens.

2/ Totals by weight not given as eggs not measured by weight.

APPENDIX 3.4

CONSUMPTION OF STAPLES BY THE TOURIST SECTOR IN ST. VINCENT & THE GRENADINES - SURVEY 1983

	HOTELS (INCL. MARINA)										RESTAURANTS										TOTAL TOURIST SECTOR		UNIT PRICE (EC\$/lb)
	High Season		Low Season		Annual				Total Value	High Season		Low Season		Annual				Total Value					
	Qty (lbs)	%	Qty (lbs)	%	Local		Imported			Qty (lbs)	(\$EC)	Qty (lbs)	%	Qty (lbs)	%	Local			Imported		Qty (lbs)	(\$EC)	
					Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)							%	Qty (lbs)	%	Qty (lbs)	%			
Potatoes	17 822	55	14 525	45	-	-	32 347	100	32 347	29 112	5 610	37	9 460	63	-	-	15 060	100	15 060	13 554	47 407	42 666	0.90
Rice	7 593	54	6 358	46	-	-	13 951	100	13 951	16 741	663	33	1 365	67	-	-	2 028	100	2 028	2 434	15 979	19 175	1.20
Ground Provisions	16 292	54	14 058	46	30 350	100	-	-	30 350	24 280	255	34	525	66	780	100	-	-	780	600	30 950	25 050	0.80
TOTAL	41 707	55	34 941	45	30 350	40	46 298	60	76 648	70 134	6 528	37	1 340	63	780	4	17 088	96	17 868	16 588	94 336	86 901	

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APPENDIX 3.5

VEGETABLE CONSUMPTION BY THE TOURIST SECTOR IN ST. VINCENT & THE GRENADINES - SURVEY 1983

	HOTELS (INCL. MARINA)										RESTAURANTS										TOTAL TOURIST SECTOR		UNIT PRICE (EC\$/lb)
	High Season		Low Season		Annual				Total Value		High Season		Low Season		Annual				Total Value				
	Qty (lbs)	%	Qty (lbs)	%	Local		Imported		Qty (lbs)	(\$EC)	Qty (lbs)	%	Qty (lbs)	%	Local		Imported		Qty (lbs)	(\$EC)	Qty (lbs)	Value (\$)	
					Qty (lbs)	%	Qty (lbs)	%							Qty (lbs)	%	Qty (lbs)	%					
Cabbage	11 418	53	10 082	47	21 510	100	-	-	21 510	75 285	867	41	1 260	99	2 127	100	-	-	2 127	7 445	23 637	82 730	3.50
Carrots	10 993	53	9 975	47	20 968	100	-	-	20 968	26 210	510	33	1 050	67	1 560	100	-	-	1 560	1 950	22 528	28 160	1.25
Cucumber	10 285	52	9 392	48	19 677	100	-	-	19 677	19 677	408	33	840	67	1 248	100	-	-	1 248	1 248	20 925	20 925	1.00
Lettuce ✓	7 692	51	7 503	49	15 195	100	-	-	15 195	40 521	478	33	984	67	1 463	100	-	-	1 463	3 900	16 658	44 421	1.00
Tomatoes	15 952	55	12 950	45	28 902	100	-	-	28 902	72 255	1 224	38	1 995	62	3 219	100	-	-	3 219	8 048	212	80 303	2.50
Onions	9 917	54	8 517	46	554	3	17 880	97	18 434	12 904	255	38	420	62	-	-	675	100	675	473	19 108	13 377	0.70
Other fresh	13 912	55	11 200	45	25 112	100	-	-	25 112	31 390	-	-	-	-	-	-	-	-	-	-	25 112	31 390	1.25
Canned/frozen	4 590	63	2 742	37	-	-	7 332	100	7 332	23 829	-	-	-	-	-	-	-	-	-	-	7 332	23 829	3.25
TOTAL	84 759	54	72 371	46	131 918	84	25 212	16	157 124	302 071	3 742	36	6 549	36	10 292	94	675	6	10 967	23 053	167 422	325 136	

1/ Converted from heads at 6 oz/head.

APPENDIX 3.6

FRUIT CONSUMPTION BY THE TOURIST SECTOR IN ST. VINCENT & THE GRENADINES - SURVEY 1983

	HOTELS (INCL. MARINA)										RESTAURANTS										TOTAL TOURIST SECTOR		UNIT PRICE (EC\$/lb)
	High Season		Low Season		Annual				Total Value		High Season		Low Season		Annual				Total Value				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	(\$EC)	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	(\$EC)	Qty (lbs)	Value (\$)	
Bananas	34 822	51	33 833	49	68 655	100	-	-	68 655	10 298	-	-	-	-	-	-	-	-	-	-	68 655	10 298	0.15
Grapefruit	25 897	52	24 003	48	49 930	100	-	-	49 930	9 986	-	-	-	-	-	-	-	-	-	-	49 930	9 986	0.20
Oranges	53 777	52	49 233	48	80 347	87	22 663	13	103 010	51 505	-	-	-	-	-	-	-	-	-	-	103 010	51 505	0.50
Limes	18 530	54	15 808	46	34 338	100	-	-	34 338	12 018	1 530	37	2 625	63	4 155	100	-	-	4 155	1 464	38 493	13 472	0.35
Pineapples	5 553	47	6 067	53	8 250	71	3 370	29	11 620	29 050	-	-	-	-	-	-	-	-	-	-	11 620	29 050	2.50
Mangoes	23 347	53	21 000	47	44 347	100	-	-	47	17 739	-	-	-	-	-	-	-	-	-	-	44 347	17 731	0.40
Pawpaw	11 588	51	11 142	49	22 730	100	-	-	22 730	7 956	-	-	-	-	-	-	-	-	-	-	22 730	7 956	0.35
Other fresh	6 403	50	6 417	50	12 820	100	-	-	12 820	5 128	-	-	-	-	-	-	-	-	-	-	12 820	5 128	0.40
Canned juice	12 652	46	15 785	55	-	-	28 437	100	28 437	77 556	2 431	39	3 773	61	-	-	6 204	100	6 204	18 612	34 641	96 168	2.73
Canned fruit	2 890	47	3 325	53	-	-	6 215	100	6 215	13 673	-	-	-	-	-	-	-	-	-	-	6 215	13 673	2.20
TOTAL	195 459	51	186 643	49	321 417	84	60 685	16	382 102	234 909	2 961	38	6 398	62	4 155	40	6 204	60	10 359	20 056	392 461	254 975	

APPENDIX 3.7

CONSUMPTION OF ALL FOODSTUFFS BY THE TOURIST SECTOR OF ST. VINCENT & THE GRENADINES - SURVEY 1983

	HOTELS (INCL. MARINA)										RESTAURANTS										TOTAL TOURIST SECTOR		UNIT PRICE (EC\$/lb)
	High Season		Low Season		Annual				Total Value		High Season		Low Season		Annual				Total Value				
					Local		Imported								Local		Imported						
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	(\$EC)	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	(\$EC)	Qty (lbs)	Value (\$)	
Meats	94 664	56	75 019	44	36 248	22	133 435	78	169 683	950 014	7 905	37	13 380	63	9 615	46	11 670	55	21 285	129 078	190 968	1 079 095	75.
Seafood	66 585	55	54 602	45	108 317	90	12 870	10	121 187	719 544	4 335	51	4 185	49	8 010	94	510	6	8 520	39 075	129 707	758 619	10.0
Dairy products	5 487	52	4 977	48	-	-	10 464	100	10 464	178 806	3 315	46	4 095	55	-	-	7 410	100	7 410	52 219	17 874	231 025	100.0
Staples	41 707	55	34 941	46	30 350	40	46 298	60	76 648	70 134	6 528	37	11 340	63	780	4	17 088	96	17 868	16 588	94 336	85 901	67.0
Vegetables	84 759	54	72 371	46	131 918	84	25 212	16	157 124	302 071	3 742	36	6 540	64	10 292	94	675	6	10 967	23 053	167 422	325 125	15.0
Fruit	195 459	51	186 643	49	321 417	84	60 685	16	382 102	234 909	3 961	38	6 398	62	4 155	40	6 204	60	10 359	20 066	392 461	254 975	19.0
Miscellaneous	28 475	49	29 808	51	55 277	95	3 056	5	58 283	66 817	5 253	32	10 977	68	16 230	100	-	-	16 230	8 805	74 513	75 652	4.0
TOTAL	517 136	53	458 361	47	683 527	70	292 020	30	975 677	2 522 295	35 039	38	56 924	62	49 082	53	43 557	47	92 639	288 924	1 057 281	2 811 382	45.0

1/ Eggs not included: See Table 3.7

APPENDIX 3.8

CONSUMPTION OF BEVERAGES BY THE TOURIST SECTOR IN ST. VINCENT & THE GRENADINES - SURVEY 1983

	HOTELS (INCL. MARINA)										RESTAURANTS										TOTAL TOURIST SECTOR		UNIT PRICE (EC\$/l.)
	High Season		Low Season		Annual				Total Value		High Season		Low Season		Annual				Total Value				
	Qty (1)	%	Qty (1)	%	Local		Imported		Qty (1)	(\$EC)	Qty (1)	%	Qty (1)	%	Local		Imported		Qty (1)	(\$EC)			
					Qty (1)	%	Qty (1)	%	Qty (1)		Qty (1)		Qty (1)		Qty (1)	%	Qty (1)	%	Qty (1)				
Beer	9 933	60	6 771	40	-	-	16 704	100	16 704	92 530	5 945	37	10 084	63	-	-	16 032	100	16 032	88 806	32 736	181 336	100.0
Rum	2 371	51	246	49	2 994	65	1 622	35	4 616	67 340	379	38	624	62	401	40	601	60	1 003	14 625	5 619	81 965	39.0
Other spirits	1 186	51	1 123	49	-	-	2 308	100	2 308	62 160	-	-	-	-	-	-	-	-	-	-	2 308	62 160	100.0
Wine	1 729	51	1 686	49	-	-	3 413	100	3 413	76 600	765	42	1 050	58	-	-	1 815	100	1 815	40 333	5 228	116 933	100.0
Bar mixes	6 860	56	5 330	46	10 976	90	1 214	10	12 190	35 540	8 747	33	18 008	67	13 377	50	13 377	50	26 754	78 000	38 944	113 540	37.0
TOTAL	22 079	56	17 155	44	13 970	36	25 261	64	39 231	334 170	15 836	35	29 766	65	13 778	30	31 825	70	54 604	221 764	84 835	555 934	78.0

1/ Converted from cases at 12 pints (606 l.) per case (24 bottles).

2/ Where given in cases, converted at the rate of 12 x 26oz. bottles/case (= 8.91 l.)

APPENDIX 3.9

PROPORTION OF FOOD AND BEVERAGE COSTS ALLOCATED
TO TYPE OF CUSTOMER, ST. VINCENT AND THE GRENADINES

SURVEY 1983

	Percentage of Food and Beverage Cost									
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
Extra-regional tourists:										
Food - hotels	-	-	2	1	-	3	2	-	-	-
Food - restaurants	-	1	1	-	-	-	-	-	-	-
Drink - hotels	1	-	-	1	3	-	3	1	-	2
Drink - restaurants	-	1	1	-	-	-	-	-	-	-
Business travellers & Caricom:										
Food - hotels	3	2	3	-	1	-	-	1	-	-
Food - restaurants	-	-	2	-	-	-	-	-	-	-
Drink - hotels	4	1	-	2	2	1	1	-	-	-
Drink - restaurants	-	1	1	-	-	-	-	-	-	-
Locals:										
Food - hotels	6	2	2	-	-	-	-	-	-	-
Food - restaurants	-	-	-	-	-	-	2	-	-	-
Drink - hotels	3	4	2	1	-	-	-	-	-	1
Drink - restaurants	-	-	-	-	-	-	1	1	-	-
Staff:										
Food - hotels	3	4	2	-	-	-	1	-	-	-
Food - restaurants	2	-	-	-	-	-	-	-	-	-

APPENDIX 4

APPENDIX 4.1A

QUANTITY OF LOCAL AND IMPORTED MEATS CONSUMED BY HOTELS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Steak	42 574	54	35 729	46	2 349	3	75 954	97	78 303	13.77	1 078 232
Other beef	32 315	57	24 026	43	2 214	4	53 137	96	55 351	5.00	276 755
Pork	23 308	50	23 221	50	30 244	65	16 285	35	46 529	6.91	321 515
Lamb/goat	13 472	54	11 472	46	-	-	24 944	100	24 944	9.31	232 229
Chicken	49 319	49	50 840	51	28 044	28	72 115	72	100 159	2.87	287 456
Ham	20 221	58	14 644	42	-	-	34 865	100	34 865	6.86	239 174
Bacon	32 972	54	28 035	46	-	-	61 007	100	61 007	6.55	399 596
Sausage	25 125	77	7 479	23	-	-	32 604	100	32 604	5.37	175 083
Other processed	3 471	47	3 986	53	522	7	6 935	93	7 457	7.16	53 392
TOTAL	241 787	55	199 432	45	63 373	14	377 846	86	441 219		3 063 432

APPENDIX 4.1B

QUANTITY OF LOCAL AND IMPORTED MEATS CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Steak	24 948	39	38 413	61	2 534	4	60 827	96	63 361		872 481
Other beef	18 148	40	27 125	60	15 846	35	29 427	65	45 273		226 365
Pork	15 513	47	17 500	53	21 789	66	11 224	34	33 013		228 120
Lamb/goat	5 631	40	8 575	60	10 655	75	3 551	25	14 206		132 258
Chicken	32 831	47	37 363	53	5 616	8	64 578	92	70 194		201 457
Ham	2 890	41	4 200	59	-	-	7 090	100	7 090		48 637
Bacon	850	44	1 094	56	-	-	1 944	100	1 944		12 733
Sausage	978	49	1 006	51	-	-	1 984	100	1 984		10 654
Other processed	1 339	50	1 313	50	-	-	2 652	100	2 652		18 988
TOTAL	103 128	43	136 589	57	56 440	24	183 277	76	239 717		1 751 693

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APPENDIX 4.1C

QUANTITY OF LOCAL AND IMPORTED MEATS CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Steak	3 400	35	6 300	65	583	6	9 117	94	9 700	133 569	
Other beef	4 251	55	3 500	45	4 651	60	3 100	40	7 571	38 753	
Pork	3 400	35	6 300	65	8 244	85	1 456	15	9 700	67 027	
Lamb/goat	1 564	58	1 120	42	-	-	2 684	100	2 684	24 988	
Chicken	8 160	57	6 300	43	-	-	14 460	100	14 460	41 500	
Ham	1 836	52	1 680	48	-	-	3 516	100	3 516	24 120	
Bacon	4 284	64	2 380	36	-	-	6 664	100	6 664	43 649	
Sausage	1 360	55	1 120	45	-	-	2 480	100	2 480	13 317	
Other processed	424	55	351	45	-	-	775	100	775	5 547	
TOTAL	28 679	49	29 051	51	13 478	23	44 252	77	57 729	392 471	

APPENDIX 4.2A

QUANTITY OF LOCAL AND IMPORTED SEAFOOD CONSUMED BY HOTELS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Fresh	54 690	53	48 046	47	102 736	100	-	-	102 736	3.35	344 166
Canned	2 604	44	3 272	56	-	-	5 876	100	5 876	8.80	51 709
Lobster	29 971	62	18 519	38	48 490	100	-	-	48 490	12.75	615 248
Shrimp	17 396	61	11 126	39	-	-	28 522	100	28 522	21.49	612 938
Other	-	-	-	-	-	-	-	-	-	-	-
TOTAL	104 661	56	80 963	44	151 226	81	34 398	19	185 624		1 627 061

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APPENDIX 4.2B

QUANTITY OF LOCAL AND IMPORTED SEAFOOD CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Fresh	37 549	47	41 869	53	79 418	100	-	-	79 418		266 050
Canned	786	37	1 313	63	-	-	2 099	100	2 099		18 471
Lobster	20 804	56	16 188	44	36 992	100	-	-	36 992		471 648
Shrimp	5 334	43	6 956	57	-	-	12 290	100	12 290		264 112
Other	12 516	47	14 263	53	26 243	98	536	2	26 779	6.00	160 674
TOTAL	76 989	49	80 589	51	142 653	91	14 925	9	157 578		1 180 955

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APPENDIX 4.2C

QUANTITY OF LOCAL AND IMPORTED SEAFOOD CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Fresh	1700	100	-	-	-	-	1 700	100	1 700		5 695
Canned	3 752	61	2 451	39	-	-	6 203	100	6 203		54 584
Lobster	-	-	-	-	-	-	-	-	-		-
Shrimp	1 700	100	-	-	-	-	1 700	100	1 700		36 533
Other	-	-	-	-	-	-	-	-	-		-
TOTAL	7 152	74	2 451	26	-	-	9 603	100	9 603		96 812

APPENDIX 4.3A

QUANTITY OF LOCAL AND IMPORTED DAIRY PRODUCTS CONSUMED BY HOTELS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Milk	68 445	58	48 892	42	4 693	4	112 644	96	117 337	2.54	298 036
Butter	90 549	54	76 903	46	-	-	167 452	100	167 452	4.32	723 388
Cheese	36 550	47	41 854	53	-	-	78 404	100	78 404	4.64	363 795
Eggs (doz.)	116 639	45	142 042	55	235 400	91	23 281	9	258 681	5.00	1 293 405
Other	9444	56	7 292	44	-	-	16 736	100	16 736	2.00	33 472
TOTAL*	204 988*	54	174 941*	46	4 693*	1	375 236*	99	379 929*		2 712 096

* excluding eggs.

APPENDIX 4.3B

QUANTITY OF LOCAL AND IMPORTED DAIRY PRODUCTS CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Milk	19 529	58	14 263	42	5 069	15	28 723	85	33 792	2.00	67 584
Butter	5 568	42	7 656	58	-	-	13 224	100	13 224		57 128
Cheese	15 343	44	19 775	56	-	-	35 118	100	35 118		162 948
Eggs (doz.)	2 465	52	2 319	48	3 732	78	1 052	22	4 784		23 920
Other (ice cream)	(5100 lb 425 gal)	49	(5256 lb 438 gal)	51	10356 lb 863 gal	100	-	-	10356 lb 863 gal	21.0/gal	18 123
TOTAL	45 540*	49	46 950*	51	15 425*	17	77 065*	83	92 490*		329 703

* excluding eggs.

APPENDIX 4.3C

QUANTITY OF LOCAL AND IMPORTED DAIRY PRODUCTS CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Milk	14 621	60	9 856	40	-	-	24 517	100	24 517		62 275
Butter	4 080	59	2 800	41	-	-	6 880	100	6 880		29 721
Cheese	5 440	61	3 500	39	-	-	8 940	100	8 940		41 481
Eggs (doz.)	8 500	48	9 100	52	16 896	96	704	4	17 600		88 000
Other	-	-	-	-	-	-	-	-	-		-
TOTAL	24 181*	60	16 156*	40	-	-	40 337*	100	40 337*		221 477

* excluding eggs.

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APPENDIX 4.4A

QUANTITY OF LOCAL AND IMPORTED STAPLES CONSUMED BY HOTELS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Bread	60 917	47	69 903	53	130 820	100	-	-	130 820	2.40	313 968
Potatoes	53 882	55	44 076	45	-	-	97 958	100	97 958	0.74	72 489
Rice	24 097	60	16 239	40	-	-	40 336	100	40 336	1.85	74 622
Ground Provisions	105 542	54	91 722	46	197 264	100	-	-	197 264	0.95	187 401
Other	-	-	-	-	-	-	-	-	-	-	-
TOTAL	244 438	52	221 940	48	328 084	70	138 294	30	466 378		648 480

APPENDIX 4.4B

QUANTITY OF LOCAL AND IMPORTED STAPLES CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Bread	9 564	54	7 263	46	15 827	100	-	-	15 827		37 985
Potatoes	12 453	49	12 775	51	-	-	25 228	100	25 228		18 669
Rice	10 434	50	10 281	50	-	-	20 715	100	20 715		38 323
Ground Provisions	37 060	49	37 975	51	75 035	100	-	-	75 035		71 283
Other	11 178	48	11 988	52	23 166	100	-	-	23 166	0.75	17 375
TOTAL	79 689	50	80 282	50	114 028	71	45 943	29	159 971		184 910

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APPENDIX 4.4C

QUANTITY OF LOCAL AND IMPORTED STAPLES CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Bread	2 124	50	2 100	50	4 224	100	-	-	4 224		10 137
Potatoes	15 300	56	11 900	44	-	-	27 200	100	27 200		20 127
Rice	7 480	49	7 840	51	-	-	15 320	100	15 320		28 342
Ground Provisions	-	-	-	-	-	-	-	-	-		-
Other	-	-	-	-	-	-	-	-	-		-
TOTAL	24 904	53	21 840	47	4 224	9	42 520	91	46 744		58 607

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APPENDIX 4.5A

QUANTITY OF LOCAL AND IMPORTED VEGETABLES CONSUMED BY HOTELS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Cabbage	50 299	67	24 477	33	44 118	59	30 658	41	74 776	2.47	184 698
Carrots	32 992	62	20 483	38	27 272	51	26 203	49	53 475	2.35	125 666
Cucumber	57 972	59	40 860	41	98 832	100	-	-	98 832	1.11	109 703
Lettuce*	42 343	61	27 072	39	69 414	100	-	-	69 414	2.75	190 889
Tomatoes	58 133	60	38 831	40	67 875	70	29 089	30	96 964	3.00	290 892
Onions	39 618	59	27 993	41	676	1	66 935	99	67 611	0.87	58 822
Other fresh	10 861	60	7 292	40	18 153	100	-	-	18 153	1.70	30 860
Canned/frozen veg.	9 550	48	10 458	52	-	-	20 008	100	20 008	6.42	128 453
TOTAL	301 767	61	197 466	39	326 340	74	172 893	26	499 233		1 119 983

* Converted from heads at 6oz. per head.

APPENDIX 4.5B

QUANTITY OF LOCAL AND IMPORTED VEGETABLES CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Cabbage	5 971	52	5 513	48	11 254	98	230	2	11 484		28 365
Carrots	9 733	49	10 106	51	19 244	97	595	3	19 839		46 622
Cucumber	9 201	52	8 488	48	17 689	100	-	-	17 689		19 635
Lettuce*	4 356	47	4 944	53	9 300	100	-	-	9 300		25 575
Tomatoes	11 390	48	12 556	52	23 946	100	-	-	23 946		71 838
Onions	9 839	36	17 281	64	-	-	27 120	100	27 120		23 594
Other fresh	5 568	49	5 863	51	11 088	97	343	3	11 431		19 433
Canned/frozen veg.	8 543	48	9 231	52	-	-	17 774	100	17 774		114 109
TOTAL	64 601	47	73 982	53	92 521	67	46 062	33	138 583		349 171

* Converted from heads at 6oz. per head.

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APPENDIX 4.5C

QUANTITY OF LOCAL AND IMPORTED VEGETABLES CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Cabbage	5 440	53	4 900	47	10 135	98	205	2	10 340		25 540
Carrots	4 760	53	4 200	47	8 750	98	180	2	8 960		21 056
Cucumber	4 080	54	3 500	46	7 580	100	-	-	7 580		8 413
Lettuce*	7 480	57	5 600	43	13 080	100	-	-	13 080		35 971
Tomatoes	8 160	59	5 600	41	13 348	97	412	3	13 760		41 280
Onions	3 740	45	4 620	55	-	-	8 360	100	8 360		7 273
Other fresh	8 500	34	4 375	66	12 875	100	-	-	12 875		21 887
Canned/frozen veg.	1 360	49	1 400	51	-	-	2 760	100	2 760		17 719
TOTAL	43 520	56	34 195	44	65 797	85	11 917	15	77 714		179 139

* Converted from heads at 6oz. per head.

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APPENDIX 4.6A

QUANTITY OF LOCAL AND IMPORTED FRUITS CONSUMED BY HOTELS IN ST.LUCIA

SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Bananas	89 204	56	69 025	44	158 229	100	-	-	158 229	0.35	55 380
Grapefruit	125 257	55	100 492	45	225 749	100	-	-	225 749	0.80	180 599
Oranges	107 757	56	85 772	44	193 529	100	-	-	193 529	0.88	170 306
Limes	37 692	65	20 622	35	58 314	100	-	-	58 314	1.55	90 386
Pineapple	58 804	59	40 778	41	86 636	87	12 946	13	99 582	2.12	211 134
Mangoes	57 140	60	38 544	40	95 684	100	-	-	95 684	0.90	86 116
Pawpaw	47 790	54	40 418	46	88 208	100	-	-	88 208	0.80	70 567
Other fresh	37 117	57	28 583	43	65 700	100	-	-	65 700	0.85	55 845
Canned Juice (tins)	21 037	45	25 056	55	-	-	46 093	100	46 093	4.73	222 750
Canned Fruit (tins)	10 011	52	9 333	48	-	-	19 344	100	19 344	4.81	93 046
TOTAL	591 809	56	458 623	44	972 049	93	78 383	7	1 050 432		1 236 129

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APPENDIX 4.6B

QUANTITY OF LOCAL AND IMPORTED FRUITS CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Bananas	12 665	47	14 350	53	27 015	100	-	-	27 015		9 455
Grapefruit	8 798	62	5 381	38	14 179	100	-	-	14 179		11 343
Oranges	10 476	58	7 481	42	17 957	100	-	-	17 957		15 802
Limes	7 204	51	6 913	49	14 117	100	-	-	14 117		21 881
Pineapple	2 189	58	1 575	42	3 689	98	75	2	3 764		7 980
Mangoes	7 884	56	6 300	44	14 184	100	-	-	14 184		12 766
Pawpaw	1 743	60	1 181	40	2 924	100	-	-	2 924		2 339
Other fresh	10 136	45	12 513	55	22 649	100	-	-	22 649		19 252
Canned Juice	21 441	53	18 725	47	-	-	40 166	100	40 166		189 985
Canned Fruit	638	68	306	32	-	-	944	100	944		4 541
TOTAL	83 174	53	74 725	47	116 714	74	41 185	26	157 899		295 344

9350

APPENDIX 4.6C

QUANTITY OF LOCAL AND IMPORTED FRUITS CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Bananas	11 220	37	18 900	63	30 120	100	-	-	30 120		10 543
Grapefruit	10 800	49	11 200	51	22 000	100	-	-	22 000		17 600
Oranges	8 840	76	2 800	24	11 640	100	-	-	11 640		10 243
Limes	2 380	52	2 240	48	4 620	100	-	-	4 620		7 161
Pineapple	2 380	47	2 684	53	3 628	72	1 412	28	5 064		10 685
Mangoes	5 440	25	16 100	75	21 540	100	-	-	21 540		19 387
Pawpaw	8 840	63	5 200	37	14 040	100	-	-	14 040		11 232
Other fresh	6 840	71	2 800	29	9 640	100	-	-	9 640		8 195
Canned Juice	3 672	64	2 100	36	-	-	5 772	100	5 772		27 301
Canned Fruit	-	-	-	-	-	-	-	-	-		-
TOTAL	60 412	49	64 000	51	117 228	94	7 184	6	124 412		122 347

287

APPENDIX 4.7A

QUANTITY OF LOCAL AND IMPORTED MISC. PRODUCTS CONSUMED BY HOTELS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Jams/jellies	15 536	60	10 500	40	781	3	25 255	97	26 036	4.40	114 558
Oils/fats	39 545	48	43 185	52	6 618	8	76 112	92	82 730	2.10	173 733
Cereals	8 807	53	7 700	47	-	-	16 507	100	16 507	8.15	134 532
Flour	78 767	53	70 000	47	-	-	148 767	100	148 767	0.65	96 699
TOTAL	142 655	52	131 385	48	7 399	3	266 641	97	274 040		519 522

252

APPENDIX 4.7B

QUANTITY OF LOCAL AND IMPORTED MISC. PRODUCTS CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Jams/jellies	616	47	700	53	1 105	84	211	16	1 316		5 790
Oils/fats	9 265	49	9 538	51	13 914	74	4 889	26	18 803		39 486
Cereals	276	39	438	61	-	-	714	100	714		5 819
Flour	34 234	88	44 538	12	-	-	78 772	100	78 772		51 202
TOTAL	44 391	45	55 214	55	15 019	15	84 586	85	99 605		102 297

APPENDIX 4.7C

QUANTITY OF LOCAL AND IMPORTED MISC. PRODUCTS CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Jams/jellies	1 700	45	1 820	55	71	2	3 449	98	3 520		15 488
Oils/fats	3 128	50	3 080	50	-	-	6 208	100	6 208		13 037
Cereals	1 768	47	1 960	53	-	-	3 728	100	3 728		30 383
Flour	7 480	49	7 700	51	-	-	15 180	100	15 180		9 876
TOTAL	14 076	49	14 560	51	71	2	28 565	100	28 636		68 775

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APPENDIX 4.8A

TOTAL QUANTITY OF LOCAL AND IMPORTED FOODSTUFFS CONSUMED BY HOTELS IN ST.LUCIA
SURVEY 1983

Category	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Meats	241 787	65	199 432	45	63 373	14	377 846	86	441 219		3 063 432
Sea-food	104 661	56	80 963	44	151 226	81	34 398	19	185 624		1 627 061
Dairy	204 988*	54	174 941*	46	4 693*	1	375 236*	99	379 929*		2 712 096
Staples	244 438	52	221 940	48	328 084	70	138 294	30	466 378		648 480
Vegetables	301 767	61	197 466	39	326 340	65	172 893	35	499 233		1 119 983
Fruits	591 809	56	458 623	44	972 049	93	78 383	7	1 050 432		1 236 129
Other	142 655	52	131 385	48	7 399	3	266 641	97	274 040		519 522
TOTAL	1 832 105*	56	1 464 750*	44	1 853 164*	56	1 443 691*	44	3 296 855*		10 926 703

* excluding eggs

255

APPENDIX 4.8B

TOTAL QUANTITY OF LOCAL AND IMPORTED FOODSTUFFS CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

Category	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Meats	103 128	43	136 589	57	56 440	24	183 277	76	239 717		1 751 693
Sea-food	76 989	49	80 589	51	142 653	91	14 925	9	157 578		1 180 955
Dairy	45 540*	49	46 950*	51	15 425*	17	77 065*	83	92 490*		329 703
Staples	79 689	50	80 282	50	114 028	71	45 943	29	159 971		184 910
Vegetables	64 601	47	73 982	53	92 521	67	46 062	33	138 583		349 171
Fruits	83 174	53	74 725	47	116 714	74	41 185	26	157 899		295 344
Other	44 391	45	55 214	55	15 019	15	84 586	85	99 605		102 297
TOTAL	497 512	48	548 331	52	552 800	53	493 043	47	1 045 843		4 194 073

APPENDIX 4.8C

TOTAL QUANTITY OF LOCAL AND IMPORTED FOODSTUFFS CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

Category	Seasonal				Annual				Total	Value EC\$
	High Season		Low Season		Local		Imported			
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%		
Meats	28 679	49	39 051	51	13 478	23	44 252	77	57 729	392 471
Sea-food	7 152	74	2 451	26	-	-	9 603	100	9 603	96 812
Dairy	24 181*	60	16 156*	40	-	-	40 337*	100	40 337*	221 477
Staples	24 904	53	21 840	47	4 224	9	42 520	91	46 744	58 607
Vegetables	43 520	56	34 195	44	65 797	85	11 917	15	77 714	179 139
Fruits	60 412	49	64 000	51	117 228	94	7 184	6	124 412	122 347
Other	14 076	49	14 560	51	71	-	28 565	100	28 636	68 775
TOTAL	202 924	53	182 253	47	200 798	52	184 379	48	385 177	1 139 628

* excluding eggs

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APPENDIX 4.9

TOTAL TOURIST SECTOR FOOD CONSUMPTION, ST.LUCIA
SURVEY 1983

Category	Seasonal				Annual				Total		Imports as a % of total value
	High Season		Low Season		Local		Imported		Qty (lbs)	Value (E.C.\$)	
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Meats	373 594	51	365 072	49	133 291	18	605 375	82	738 666	5 207 596	82
Sea-food	188 802	54	164 003	46	293 879	83	58 926	17	352 805	2 904 828	36
Dairy	274 709*	54	238 047*	46	20 118*	4	492 638*	96	512 756*	3 263 276	59
Staples	349 031	52	324 062	48	446 336	66	226 757	34	673 093	891 997	28
Vegetables	409 888	58	305 643	42	484 658	74	230 872	26	715 530	1 648 293	32
Fruits	735 395	55	597 348	45	1 205 991	90	126 752	10	1 332 743	1 653 820	34
Miscellaneous	201 122	50	201 159	50	22 489	6	379 792	94	402 281	690 594	92
TOTAL	2 532 541	54	2 195 344	46	2 606 762	55	2 121 113	45	4 727 875	16 260 404	58

* excludes eggs.

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APPENDIX 4.10A

QUANTITY OF LOCAL AND IMPORTED BEVERAGES CONSUMED BY HOTELS IN ST.LUCIA
SURVEY 1983

ITEM	Seasonal				Annual				Total Qty. (1.)	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (1.)	%	Qty (1.)	%	Qty (1.)	%	Qty (1.)	%			
Rum	10 947	60	7 316	40	2 189	12	16 073	88	18 263	132.00/c	270 864
Other spirits	12 335	67	6 061	33	917	5	17 480	95	18 396	292.00/c	603 564
Beer	68 806	58	50 421	42	119 227	100	-	-	119 227	30.00/c	521 400
Wine	25 365	58	18 432	42	-	-	43 797	100	43 797	169.00/c	831 649
Bar Mixes	76 777	60	51 224	40	125 442	98	2 559	2	128 001	12.00/c	223 908
TOTAL	194 230	59	133 454	41	247 775	76	79 909	24	327 684		2 451 385

APPENDIX 4.10B

QUANTITY OF LOCAL AND IMPORTED BEVERAGES CONSUMED BY RESTAURANTS IN ST.LUCIA
SURVEY 1983

ITEM	Seasonal				Annual				Total Qty. (1.)	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (1.)	%	Qty (1.)	%	Qty (1.)	%	Qty (1.)	%			
Rum	3 409	59	2 341	41	1 442	25	4 308	75	5 749		85 272
Other spirits	3 213	58	2 341	42	-	-	5 554	100	5 554		182 208
Beer	44 899	53	39 918	47	84 817	100	-	-	84 817		370 920
Wine	11 534	52	10 511	48	-	-	22 045	100	22 045		418 613
Bar Mixes	31 343	50	31 213	50	62 556	100	-	-	62 556		109 428
TOTAL	94 398	52	86 234	48	148 815	72	31 907	18	180 722		1 166 441

APPENDIX 4.10C

QUANTITY OF LOCAL AND IMPORTED BEVERAGES CONSUMED BY MARINAS IN ST.LUCIA
SURVEY 1983

ITEM	Seasonal				Annual				Total Qty. (1.)	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (1.)	%	Qty (1.)	%	Qty (1.)	%	Qty (1.)	%			
Rum	12 407	51	11 837	49	1 940	8	22 303	92	24 244		359 564
Other spirits	8 473	49	8 722	51	-	-	17 195	100	17 195		564 138
Beer	67 640	54	58 104	46	125 744	100	-	-	125 744		549 895
Wine	10 288	52	9 345	48	-	-	19 633	100	19 633		372 810
Bar Mixes	83 966	59	57 624	41	134 511	95	7 080	5	141 590		247 678
TOTAL	182 774	56	145 632	44	262 195	80	66 211	20	328 406		2 094 085

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APPENDIX 4.11

Proportion of Food & Beverage Costs Allocated to
Type of Customer, St. Lucia - Survey 1983

Percentage of Food & Beverage Cost

Customer	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
Extra-Regional Tourists										
Food - Hotels	-	-	-	-	-	-	-	1	4	2
Food - Restaurants	1	3	-	-	1	3	-	4	5	2
Drink - Hotels	-	-	-	-	-	-	1	1	2	3
Drink - Restaurants	3	-	1	-	-	4	-	4	5	2
Business Travellers and Caricom.										
Food - Hotels	7	-	-	-	-	-	-	-	-	-
Food - Restaurants	10	7	2	-	-	-	-	-	-	-
Drink - Hotels	4	2	1	-	-	-	-	-	-	-
Drink - Restaurants	12	3	4	-	-	-	-	-	-	-
Local Customers:										
Food - Hotels	5	2	-	-	-	-	-	-	-	-
Food - Restaurants	4	6	3	2	-	-	-	2	1	1
Drink - Hotels	4	3	-	-	-	-	-	-	-	-
Drink - Restaurants	4	5	4	-	2	-	-	1	1	2
Staff:										
Food - Hotels	3	3	1	-	-	-	-	-	-	-
Food - Restaurants	14	5	-	-	-	-	-	-	-	-

Responses: 7 hotels and 19 restaurants responded to this question.

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APPENDIX 5

APPENDIX 5.1

QUANTITY OF LOCAL AND IMPORTED MEATS CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Steak	15 640	46	18 550	54	-	-	34 190	100	34 190	16.60	567 554
Other beef	12 750	48	13 650	52	10 560	40	15 840	60	26 400	5.00	132 000
Pork	7 310	62	4 550	38	8 421	71	3 439	29	11 860	4.00	47 440
Lamb/goat	5 950	61	3 850	39	-	-	9 800	100	9 800	10.90	106 820
Chicken	25 000	57	18 725	43	28 859	66	14 866	34	43 725	3.25	142 106
Ham	10 700	47	11 900	53	-	-	22 600	100	22 600	6.25	141 250
Bacon	6 290	49	6 650	51	-	-	12 940	100	12 940	8.80	113 872
Sausage	2 720	53	2 450	47	-	-	5 170	100	5 170	5.75	29 728
Other processed	-	-	-	-	-	-	-	-	-	-	-
TOTAL	86 360	52	80 325	48	47 840	29	118 845	71	166 685		1 280 770

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APPENDIX 5.2

QUANTITY OF LOCAL AND IMPORTED SEAFOOD CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Fresh	30 000	51	28 500	49	58 700	100	-	-	58 700	3.50	205 450
Canned	850	100	-	-	-	-	850	100	850	8.00	6 800
Lobster	24 140	51	22 750	49	46 890	100	-	-	46 890	8.50	398 565
Shrimp	2 890	81	700	19	-	-	3 590	100	3 590	23.00	82 570
Other	13 430	59	9 400	41	22 880	100	-	-	22 880		114 400
TOTAL	71 510	54	61 400	46	128 470	97	4 440	3	132 910		807 785

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APPENDIX 5.3

QUANTITY OF LOCAL AND IMPORTED DAIRY PRODUCTS CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Milk	25 160	56	19 950	44	-	-	45 110	100	45 110	2.00	90 220
Butter	11 560	49	12 250	51	-	-	23 810	100	23 810	6.00	142 860
Cheese	14 450	57	10 850	43	-	-	25 300	100	25 300	4.00	101 200
Eggs (per doz.)	14 790	47	16 450	53	31 240	100	-	-	31 240	5.50	171 820
Other	8 500	55	7 000	45	7 750	50	7 750	50	15 500	2.50	38 750
TOTAL	59 670*	54	50 050*	46	7 750*	7	101 970*	93	109 720*		544 850

*excludes eggs

APPENDIX 5.4

QUANTITY OF LOCAL AND IMPORTED STAPLES CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Bread	26 350	57	19 950	43	46 300	100	-	-	46 300	2.40	111 120
Potatoes	34 000	57	25 660	43	-	-	59 660	100	59 660	0.90	53 694
Rice	12 750	49	13 300	51	-	-	26 050	100	26 050	2.20	57 310
Ground Provisions	43 550	54	37 625	46	81 175	100	-	-	81 175	0.90	73 058
Other	4 250	42	5 950	58	10 200	100	-	-	10 200	0.95	9 690
TOTAL	120 900	54	102 485	46	137 675	62	85 710	38	223 385		304 872

APPENDIX 5.5

QUANTITY OF LOCAL AND IMPORTED VEGETABLES CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Cabbage	11 390	52	10 500	48	21 890	100	-	-	21 890	2.10	45 969
Carrots	11 900	50	11 900	50	23 324	98	476	2	23 800	3.00	71 400
Cucumber	15 300	48	10 450	52	31 750	100	-	-	31 750	1.20	38 100
Lettuce*	19 720	50	19 950	50	39 670	100	-	-	39 670	2.80	111 076
Tomatoes	26 350	50	26 350	50	52 600	100	-	-	52 600	2.90	152 540
Onions	11 985	55	9 800	45	13 071	60	8 714	40	21 785	0.80	17 428
Other fresh	14 450	54	12 250	46	26 700	100	-	-	26 700	1.25	33 375
Canned/frozen veg.	4 250	45	5 250	55	-	-	9 500	100	9 500	5.00	47 500
TOTAL	115 345	51	112 350	49	209 005	92	18 690	8	227 695		517 388

* Converted from heads at 6oz. per head.

APPENDIX 5.6

QUANTITY OF LOCAL AND IMPORTED FRUITS CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA
SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Bananas	26 350	44	33 950	56	60 300	100	-	-	60 300	0.40	24 120
Grapefruit	21 420	42	29 400	58	50 820	100	-	-	50 820	0.50	25 410
Oranges	29 750	52	26 950	48	56 700	100	-	-	56 700	0.30	17 010
Limes	22 100	74	7 700	26	29 800	100	-	-	29 800	0.90	26 820
Pineapple	9 690	40	14 700	60	23 902	98	488	2	24 390	2.25	54 878
Mangoes	7 480	42	10 150	58	17 630	100	-	-	17 630	0.60	10 578
Pawpaw	11 200	42	15 750	58	26 950	100	-	-	26 950	0.50	13 475
Other fresh	3 400	55	2 800	45	6 200	100	-	-	6 200	0.80	4 960
Canned Juice	34 510	58	24 850	42	2 968	5	56 392	95	59 360	5.00	296 800
Canned Fruit	2 040	54	1 750	46	-	-	3 790	100	3 790	3.00	22 740
TOTAL	167 940	50	168 000	50	275 270	82	60 670	18	335 940		496 791

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APPENDIX 5.7

QUANTITY OF LOCAL AND IMPORTED MISC. PRODUCTS CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA

SURVEY 1983

	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Jams/jellies	5 100	55	4 200	45	4 650	50	4 650	50	9 300	4.50	41 850
Oils/fats	21 080	38	35 000	62	-	-	56 080	100	56 080	3.00	168 240
Cereals	2 040	54	1 750	46	-	-	3 790	100	3 790	8.60	32 594
Flour	40 290	46	46 550	54	86 840	100	-	-	86 840	0.70	60 788
TOTAL	68 510	44	87 500	56	91 490	59	64 520	41	156 010		303 472

APPENDIX 5.8

TOTAL QUANTITY OF LOCAL AND IMPORTED FOODSTUFFS CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA
SURVEY 1983

Category	Seasonal				Annual				Total	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%	Qty (lbs)	%			
Meats	86 360	52	80 325	48	47 840	29	118 845	72	166 685	1 280 770	
Sea-food	71 510	54	61 400	46	128 470	97	4 440	3	132 910	807 785	
Dairy	59 670	54	50 050	46	7 750	7	101 970	93	109 720	544 850	
Staples	120 900	54	102 485	46	137 675	62	85 710	38	223 385	304 872	
Vegetables	115 345	51	112 350	49	209 005	92	18 690	8	227 695	517 388	
Fruits	167 940	50	168 000	50	275 270	82	60 670	18	335 940	496 791	
Other	68 510	44	87 500	56	91 490	59	64 520	41	156 010	303 472	
TOTAL	690 235	51	662 110	49	897 500	66	454 845	34	1 352 345	4 255 928	

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APPENDIX 5.9

QUANTITY OF LOCAL AND IMPORTED BEVERAGES CONSUMED BY CATERING ESTABLISHMENTS IN GRENADA
SURVEY 1983

ITEM	Seasonal				Annual				Total Qty. (1.)	Average Unit Price	Value EC\$
	High Season		Low Season		Local		Imported				
	Qty (1.)	%	Qty (1.)	%	Qty (1.)	%	Qty (1.)	%			
Rum	7 271	54	6 237	46	4 455	33	9 053	67	13 508	132.00	200 112
Other spirits	4 847	51	4 678	49	-	-	9 525	100	9 525	192.00	205 248
Beer	41 517	52	38 416	48	-	-	79 933	100	79 933	27.00	314 604
Wine	3 635	54	3 119	46	-	-	6 754	100	6 754	200.00	151 600
Bar Mixes	33 820	70	14 406	30	48 226	100	-	-	48 226	16.00	112 480
TOTAL	91 090	58	68 656	42	52 681	34	105 265	66	157 946		984 044

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