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*The Approach of the Caribbean Agricultural Extension Project*

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INTRODUCTION

Diversification is a topic that has been discussed in the Caribbean for a very long time. The Caribbean has had a history of export crop production which has meant the specialisation in a limited number of crops. The main specialised crop has been sugar cane which was produced in virtually every Caribbean island where the topography allowed.

Gradually with a depressed sugar market in the Nineteenth century, individual islands, started going out of sugar cane production, a process that has continued to the present day. We shall consider the case of the members of the Organization of Eastern Caribbean states. In the Windward islands, specialisation in sugar cane was replaced by specialisation in other export crops. For Dominica and Saint Lucia, the dominant replacement crop has been bananas and large scale production of this crop in these islands started after the second World War. Many farms in St. Vincent and Grenada did get into specialised banana production, but generally these two countries became more diversified - Grenada producing in addition, nutmeg, cocoa as well as root crops and fruits and St. Vincent root crops, arrowroot and fruits.

In the Leeward islands, sugar cane production has continued after the Windward islands and St. Kitts and Nevis remains the only major sugar cane producer in the OECS. The other major sugar cane producer in the recent past has been Antigua. In Antigua's case, sugar cane was not replaced by

any other major crop activity and the former sugar cane lands have largely been left fallow where they provide fodder for a large herd of livestock of peasant farmers.

The current situation in the OECS is therefore strong specialisation - in sugar in St. Kitts and Nevis and in bananas in Saint Lucia and Dominica; moderate and growing specialisation in banana in St. Vincent, and a more diversified pattern in Grenada with bananas, cocoa and nutmegs being of relatively similar importance in the agricultural sector.

There has been a growing concern in the OECS about this dependence on export crop production and there has been a clamour for diversification of resource use in the agricultural sector. Most of the activity has centered on the identification of enterprises to replace the current export crops which have similar capacities to earn foreign exchange, provide employment and to utilise the land resource.

One important consideration which has not received its due attention however is the process that is necessary to bring about orderly farm level diversification. This is an important issue since in the absence of a clear understanding of such a process there will be confusion about the diversification among the farm population which will be expressed in the form of increased and undue risk and uncertainty in the farm environment.

It is the contention of this paper that diversification efforts must be market led. A process of farm level diversification would thus involve both a macro and micro pers-

pective. The macro perspective would consist of:

1. The identification of market opportunities and
2. The development of market mixes in terms of product, price, distribution and promotional strategies for the sector as a whole.

At the micro level, farmers have to become responsive to diversification stimuli coming from the macro perspective. The major and most orderly stimulus is price and pricing strategies could establish price relatives which favour a range at diversification alternatives for farmers. Farmers could then organise their product mixes to include a more diversified pattern in concert with the price relatives, individual resource constraints and personal preferences.

This paper focuses on the steps of the micro perspective and the issue of how farmers could be assisted to become responsive to price and other stimuli to bring about a process of farm level diversification. This is largely achieved by an examination of the approach of CAEP.

#### THE CARIBBEAN AGRICULTURAL EXTENSION PROJECT

The CAEP Farm and Home Management approach is aimed at improving the performance of farm management on farms through increasing the capacity of extension.

The aim of the approach is therefore to train the extension staff in the participating territories of CAEP in the area of farm and home management extension, using the officers to assist farmers in their farm management. Thus the basic philosophy of the approach is that to increase the level of welfare of farmers, it is necessary to equip them to better carry out the management of their farming activities. One way to improve the level of farm management is to utilise the techniques of training and communication well established in the field of agricultural extension. However helping farmers to improve their farm management, the officers

have themselves to be fully knowledgeable and confident in the subject.

The aim of the approach is therefore to train the extension staff in the participating territories of CAEP in the area of farm and home management extension, using the farmers as the vehicle for the training.

Recently, there has been some concern for the survival of agricultural economics extension and agricultural extension in general (Knutson, 1986; Eidman, 1986). One of the essential changes suggested by Knutson for the survival of the extension system in the United States is for extension to devise new, timely educational programmes targeted to specific clientele. The same arguments apply in the Caribbean context, and the aim of the Farm and Home Management Programme is to increase the relevance and sustainability of the extension staff by their involvement in an area of definite educational need on the part of farmers.

The logic behind the approach is the logic of the Farming System Research and Extension (FSR/E) approach (Pemberton, 1987). This approach holds that the farming system is a complex functioning of a number of interrelated elements. Thus to understand and solve problems in the farming system requires a knowledge of the elements and their interrelationships. Modelling is one way in which the complexity of the farming system may be reduced to allow for facility in comprehension.

A model of a farming system is presented in Figure 1 on page 115.

In Figure 1, it can be seen that there are several elements in the farming system. The major element is the farm or the farm subsystem. This consists of the resources under the control of the farmer which enable him/her to carry out farm activities. The farm resources are generally classified as land, labour and capital.

The enterprises form the next subsystem. These are the production and marketing activities that utilise the farm resources to produce output and income in the farming system. Since the farming system is a production (factory) system, much of the management of the farming system consists of the management of the enterprise subsystem, including the important issue of the choice of individual enterprise units within this subsystem.

However, not all elements or subsystems are under the control of the farmer. In particular, there are a number of important elements in the farming system which have a direct bearing on the level of achievement in the farming system which are not under the control of the farmer. These elements consist of the exogenous subsystem and include the weather, prices of commodities, and government policy. This subsystem has the important effect of introducing the majority of the risk into the farming system.

The home or household subsystem is an important subsystem especially on smaller farms. In fact it may be true to say, that the smaller the farm, the more important is the home subsystem in the farming system. Important inter-relationships exist between the farm, enterprise and the home subsystems including the supply of food for the home by the farm and the competition between the farm and the home for the income generated in the farming system.

The service subsystem forms the last major subsystem given in Figure 1. This subsystem consists of the firms and institutions which the farming system depends upon to supply elements which are more effectively produced off the farm. It is the fact that within the farming system most if not all of these services can be generated. However to the extent that these services can be produced more efficiently and cost effectively off the farm, farmers as managers may opt to purchase these services from off-farm sources. In other cases, the services are provided by the state at minimal direct cost to the farmers making use of them, as is the case with the extension services in the Eastern Caribbean.

The important issue concerning the system approach in this CAEP Programme is the recognition that only a thorough understanding of the farming systems in the target area will allow the development of a programme which will have a high likelihood of success.

## THE FARM AND HOME MANAGEMENT PROGRAMME

An outline of the approach to the

CAEP Farm and Home Management programme is now given.

In line with the FSR/E approach, the first step in this Programme is to understand the target farming systems - which is called 'Defining the Situation.' The situation is defined in the target areas by an informal survey technique called the Sondeo (Hilderbrand, 1981). The sondeo allows the definition of farming systems, problems associated with these farming systems as well as opportunities and recommendations for the solution of the problems.

In 1986/1987, sondeos were held in all eight territories in which the Project is taking place. These sondeos have proven invaluable not only in understanding the systems for the work in the Farm and Home Management Programme, but in all other aspects of the Work Plan of CAEP.

The focus of the Programme is however on the management process. The Programme therefore revolves around achieving a thorough familiarity of this process among extension staff. Managerial functions are stressed - Goal setting, Planning, Organising, Implementing, and Controlling and techniques are developed to enable the efficient execution of these functions on the farm.

To achieve the training of the extension officers, regional and territorial training sessions were held for staff. This training as much as possible involved the use of actual farm data, case studies and field visits to observe the management process in action in the OECS.

It has always been borne in mind in the Programme, that the stress on management is not an end in itself, but it is a means to the achievement of better farm activities. Thus, attention has been placed also, on the nature of farm activities and the role of management to improve these activities. Three types of farm activities are given prominence. The first is production activity in view of the paramount importance of production on farms. It is recognised that even in a Caribbean context, farmers are going more and more into marketing and financial activities as agriculture develops. Therefore, marketing and financial activities form the next two activities stressed in the Programme.

In the Programme, contributions to

farm activity are seen to come in two main directions. The first main direction is from the resources on the farm. It is assumed in the Programme that success in the performance of farm activity depends on two major contributions. The first contribution is from the management functions performed. The second main contribution comes from technical and economic information received in the farming system.

The Programme sees the extension service as a principal agency to supply such information to farmers as obtained from research and development activity. The Programme thus places emphasis on improving the capability of the extension service to perform such support activity.

However, it is also recognised, that farmers can provide themselves with valuable information through the availability of records of activity on the individual farm. The development of a record-keeping system suitable for the environment of the farming systems in the Eastern Caribbean has therefore been an integral part of the CAEP Farm and Home Management Programme.

#### FARM LEVEL DIVERSIFICATION AND THE CAEP PROGRAMME

The paper now focuses on the way in which the Farm and Home Management Programme can assist in the achievement of farm level diversification.

In the first place, this Programme attempts to improve the level of management within the farming community. This process starts with the farmers and extension officers establishing clear goals for the farming system, which goals then guide the activities of the farming system. This act of goal setting serves to motivate or drive the entire management process.

In this Programme, the extension officers are the catalyst to the achievement of the diversification at the farm level. It is the extension officers who would bring the new micro-perspective to the farming community which would then motivate the farmers to strive for higher attainment.

The CAEP Programme with its emphasis on training and its orientation on management and its hands on experiences with farmers provides the extension officers with a good laboratory to experiment with the management process. Once this management

process has been established with the officers, the next step is to give them the facility to use techniques that would lead to better farming than is currently being pursued. The major techniques that have been adopted so far are whole farm and enterprise budgeting.

Utilising these techniques the extension officers can work with farmers to develop farm plans which have a greater chance of achieving the goals of the farmers. One important aspect of farm planning that has been brought to the appreciation of the extension officers is that of the role of risk in enterprise choice. Planning to take account of the environment of risk will invariably lead to the optimal diversification of the enterprise mix on the farms.

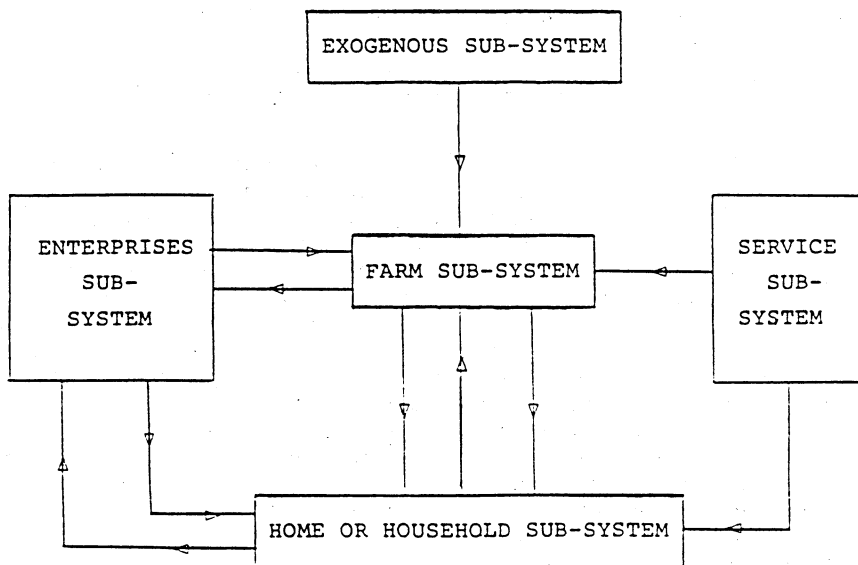
With a fully trained extension staff, farmers will derive considerable benefits in their desire for improved welfare. First, they will have access to the store of knowledge on farm management possessed by the extension officers. Then, the farmers will have the confidence of good backup or support in their managerial activities by the extension officers. This confidence of a good backup, can inspire farmers to be more novel and enterprising which would be very desirable for farmers to adopt any diversification farm plans that may result from the application in farm planning of budgeting techniques.

Also, when the extension officers have passed on the knowledge of farm management to farmers, they will then be capable of utilising the techniques themselves, so that a self-sustaining and permanent process will be in place.

In summary, therefore, the CAEP Farm and Home Management Programme can benefit the diversification process by establishing with the farmers whether there is a need for diversification by carrying out a planning process on the individual farms using farm generated data to meet their goals. This farm planning in the first instance has involved the use of simple budgeting techniques. This has been combined with a stress on a management orientation by farmers.

By training the extension officers to be capable of dealing with these farm management issues, the programme helps farmers'

Figure 1: Model of a Farming System



diversification efforts in three major ways. First, the extension officers are able to bring the managerial and business orientation to the farmers at the farm and village levels where farmers are most apt to respond to such extension activities.

Secondly, the extension officers are able to provide backup or support to the farmers' efforts at diversification. This may increase the confidence of the farmers to try new enterprises, as they will realise that the choices are based on sound economic and financial analysis.

Thirdly, as the extension officers pass on their knowledge to farmers, they will be able to better appreciate the need for effective farm management. This will result in farmers who will appreciate the need for enterprise combinations to reflect the current and future economic reality which is the major requirement for effective farm level diversification.

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