

FARM AND HOME MANAGEMENT EXTENSION AS AN AGRI-BUSINESS
APPROACH? LESSONS FROM THE CARIBBEAN

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ABSTRACT

This paper reviews the experience of the Farm and Home Management Programme (F&HMP) of the University of the West Indies and Midwestern University Consortium for International Activities (UWI–MUCIA) Caribbean Agricultural Extension Project (CAEP) and the Caribbean Agricultural Research and Development Institute and UWI (CARDI–UWI) Agricultural Research and Development Project (AREP), funded by USAID, in the eastern Caribbean, to equip extension officers to bring business principles to farmers.

The paper reviews the initial stages of the programme based on farming systems research. It discusses the training activities for the extension officers in farm and home management and the elaboration of an extension programme for farmers

in the eastern Caribbean, to position them to diversify farm enterprises to meet the challenges of the reduction in market protection in the EU. The paper assesses the success of this agri-business extension approach, via the success of these countries in maintaining viable agricultural sectors, especially after the drastic reductions in preferential access to the EU banana market.

Based on the performance of the banana industry and the agricultural sector as a whole, it may be concluded that this extension approach had limited success in fostering an agri-business orientation on the part of the farmers and hence in achieving its diversification goals. Some of the reasons for this limited success were: the nature of the project interventions, the lack of funds to continue project activities, the lack of commitment

to the approach, and the loss of trained extension officers from the F&HMP.

KEY WORDS: CARIBBEAN AGRICULTURAL EXTENSION, BANANA.

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INTRODUCTION AND OBJECTIVES

As the winds of economic change blew over the eastern Caribbean in the mid-1980s, it became clear that there was a need to diversify the agricultural sector. There was 'a growing concern about the dependence (of agriculture) on export crop production and there was a clamour for diversification of resource use in the agricultural sector' (Pemberton and Erickson, 1990). This was particularly true for banana production, where market dependence on the UK was extreme and the preferential access accorded by the Banana Protocol under the Lomé Convention was being threatened by lower cost and higher quality products from Central and South America (Muthama and Semple, 1990). Also, according to Henderson (1990), there was the traditional 'marginalisation' of small-scale farmers and rural dwellers 'so that they felt they played little role in the decision making process in their own country'. This was manifested in a weak extension service to small-scale farmers and general neglect of rural dwellers.

The Caribbean Agricultural Extension Project (CAEP) and its successor, the Agricultural Research and Extension Project (AREP), were designed to strengthen the agricultural extension services of the eastern Caribbean. The projects were funded by the United States Agency for International Development (USAID). CAEP was conducted jointly by the University of the West Indies (UWI) and the

Midwestern University Consortium for International Activities (MUCIA). Extension specialists from several mid-western universities (the Universities of Minnesota, Illinois and Michigan State) joined with the extension faculty at UWI to execute the Farm and Home Management Programme (F&HMP) of CAEP. F&HMP continued under AREP, which was a joint project of the Caribbean Agricultural Research and Development Institute (CARDI) and UWI. The projects were conducted in the Windward Island states of St Lucia, Dominica, St Vincent and the Grenadines, and Grenada, and the Leeward Island states of Antigua and Barbuda, St Kitts and Nevis, and Montserrat.

F&HMP has been well described in the literature (Pemberton and Erickson, 1990; Barker, 1994). The objectives of this paper are:

- to provide a brief overview of the CAEP/AREP F&HMP project
- to assess the success of this extension approach, via the success of the major Windward Island banana producing countries in maintaining viable agricultural sectors, especially after the dramatic reductions in preferential access to the European Union (EU) banana market.

MATERIALS, METHODS AND DATA SOURCES

The paper outlines a brief history of the development of agricultural extension in the Caribbean, leading to the establishment of F&HMP. It then assesses how successful F&HMP was in

contributing to the diversification of agriculture, especially in the major banana-producing countries of the Windward Islands. This assessment is carried out by analysing recent developments since 1990 in:

- the banana industry in those states
- the contributions of agriculture to their economies
- the economy of Dominica (case-study).

It is argued that success in diversification in major banana-producing states should have led to more diversified markets for bananas, the development of value-added products from bananas, as well as enterprise diversification into alternative farming enterprises, all of which should have allowed the banana industry in particular, and the agricultural sector in general, to remain vibrant, even with the changes in the EU's trade policy (Harris *et al.*, 2010).

The assessment was undertaken by analysing the trends in the time series, and in some cases estimating quadratic time trends, to illustrate the changes in the movement of banana production and prices, and agriculture's contribution to national GDP, since 1987.

Data for banana production and export prices were obtained from FAOSTAT (FAO, 2011a), while data for the GDP and agriculture's value added for the major banana producing Windward Islands were obtained from United Nations Statistics (2011). Data for the growth rate of the economy of Dominica were obtained from the Eastern Caribbean Central Bank (ECCB, 2008) and the



Central Statistical Office (CSO, 1988, 1995, 2008), Dominica.

RESULTS AND DISCUSSION

Historical context of Caribbean agricultural extension

Agricultural extension in the English-speaking Caribbean had its origin in the British colonial government system, which sought to improve the region's agriculture through botanic gardens. These gardens, the first of which was established in St Vincent in 1765, were the repository of important 'exotic' tropical plant materials, which eventually contributed to the regional agricultural economy (Pemberton, 2006). Coincident activities were the establishment of plant nurseries, plant distribution to farmers and experimentation with production technologies. The gardens were also 'centres from which teachers were sent to give practical lessons in the cultivation of tropical plants and the selection of suitable locations for growing them' (Pemberton, 1999).

By the middle to late 20th century, extension activities were institutionalised in the English-speaking Caribbean, similar to the typical extension system of developing countries. The states were divided into geographic divisions and agricultural extension offices were strategically placed throughout the countries, to extend technologies, provide services to farmers, and demonstrate livestock and plant husbandry to

farmers. Various levels of field staff operated from the extension offices, with a chief agricultural officer at the pinnacle of the extension organisation (Seepersad and Gomes, 1992).

Despite being organised along typical lines, the extension system in the Caribbean has also been influenced by the training-and-visit system, the commodity extension approach, extension provided by non-governmental and faith-based organisations, contract farming advisory systems and the university-based cooperative extension system. However, farmers have also tended to rely on agri-input suppliers, who can readily deliver a range of technological interventions, embedded in the products they sell. A recent approach started in 1989 has been the farmer field school (FFS) (van den Berg, 2004). In this approach farmers have the opportunity to 'learn for themselves about particular crop production problems, and ways to address them, through their own observation, discussion and participation in practical learning-by-doing field exercises' (FAO, 2011b). However, this approach has not spread as rapidly as anticipated.

The Farm and Home Management Programme of CAEP/AREP

The aim of the CAEP was to assist participating governments to improve the overall effectiveness of their agricultural extension services and to increase efficiency in agricultural production among small-scale farmers, to enable increases in

their farm incomes and standards of living (Henderson, 1990). Therefore, early in Phase 1 of CAEP (1980 to 1982), it was recognised that it was necessary to adopt an improved approach to extension, which would provide small-scale farmers with a sense of ownership of the project and allow them and their families to benefit from agricultural development programmes. The first major activity of CAEP led to consensual regional views on an approach to improving the functionality of the extension services, especially in terms of their training needs and the incorporation of farmers' inputs (Henderson, 1990). Thus, Phase 1 of CAEP was devoted to institutional analysis of national extension systems in the eastern Caribbean and the formation of District Farmer Committees and a Regional Agricultural Extension Coordination Committee (RAECC).

The F&HMP arose from RAECC's 1984 request (to CAEP) to demonstrate an effective extension programme in each state using 'a farm management approach' (UWI, nd). The approach that was eventually adopted was farming systems research (FSR) (Pemberton, 1987). In line with FSR, the programme started by selecting a demonstration district in each state and conducting a rapid reconnaissance survey there. Each survey documented the farming systems in the district and uncovered the problems facing farmers; solutions were proposed by technical experts and by farmers who participated in these exercises.



Extension work-plans were devised for each demonstration district, based on survey results which proposed intensive interaction with 15–30 farm families on farm and home management. The first stage of implementation was the training of officers in farm management extension, which began in January 1987. Officers were trained in basic principles of budgeting and marketing and in planning and controlling. The trained officers, under the guidance of project specialists, then worked with selected farmers in the demonstration district to improve the management and marketing of two or three major enterprises on their farms. They obtained relevant data on the enterprises, such as costs of production, marketing arrangements and enterprise revenues and net returns.

Once extension officers and farmers were familiar with enterprise analysis, extension officers were introduced to whole farm analysis. They were trained to consider the farm as a business unit, which involved preparing farm net income and net worth statements and whole farm plans. Officers were also trained in farm record-keeping using the CAEP Farm and Home Management Business Record Book.

The officers then trained farmers in farm business management, using the record book as the chief instrument to help them appreciate the contribution of all enterprises to the farm business and assess the expected profitability of introducing new enterprises on their farms. The project then

introduced a computerised farm-record analysis system to provide farmers with a report on their farm performance, with a comparison of their performance with other farmers in their district. This allowed the farmers, with the assistance of extension officers, to devise recommendations for improving their farm businesses. CAEP encouraged the extension officers to advise farmers on diversification into alternative enterprises that yielded products with good consumer demand. Farmers were also encouraged to expand their marketing activities and to link their production to the expanding tourist and restaurant sectors.

Home economists on the project also trained extension officers in home management and one officer in each state was encouraged to specialise in home management. Home management emphasised the roles of women in farm and home management, including family resource management. The Farm and Home Management Business Record Book also provided a means for the farm family to monitor its home expenditure and income, and plan the major expenditure activities for the home.

AREP aimed to institutionalise the F&HMP by extending the programme beyond the demonstration districts and establishing a position of farm management officer in the Ministry of Agriculture of each state, to help move the programme from the project to the national

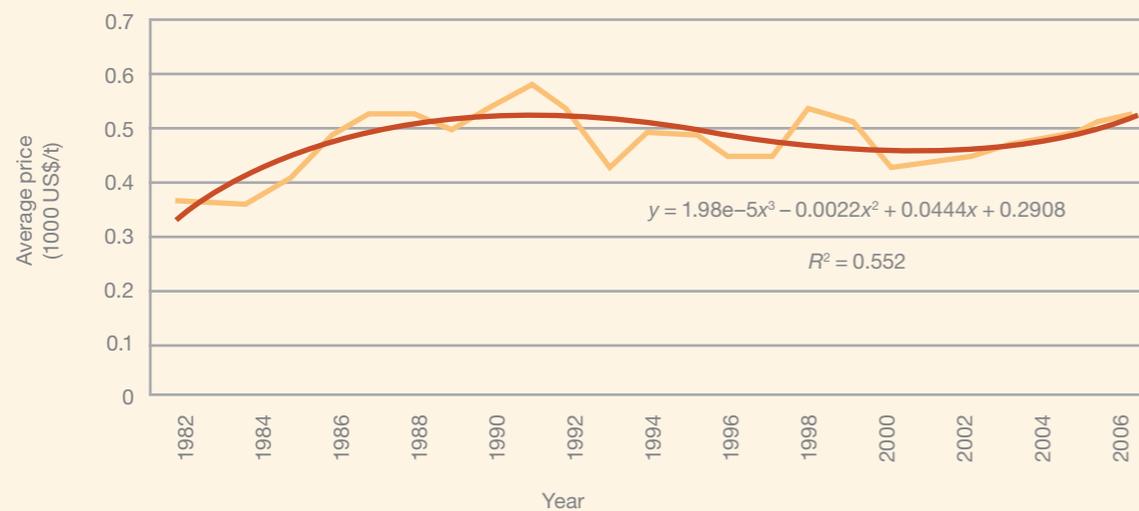
extension service. Record-keeping and the CAEP Record Book were important: 600 books were distributed under CAEP and over 3,000 books were distributed under AREP and, by the end of the AREP, 529 farmers were reported to be using the record book in project states.

Evaluation of success of the Farm and Home Management Programme

The success of the F&HMP as an agri-business extension approach was assessed by an analysis of the success of the major Windward Island banana producing states to diversify their agricultural sectors, after the change in preferential access for Caribbean bananas in the European market.

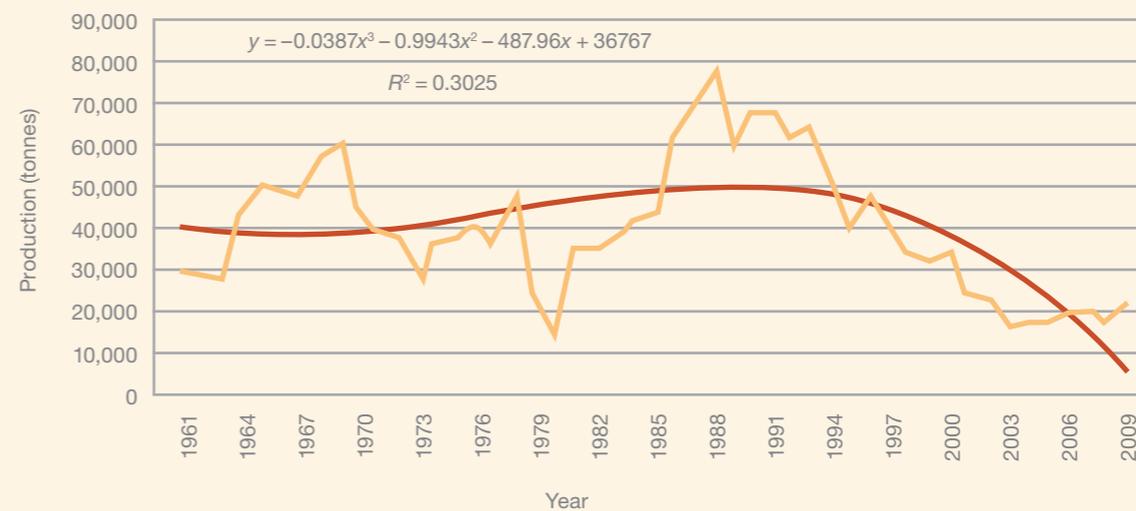
The average export price of bananas from the Windward Islands demonstrated a pronounced polynomial trend from 1982 to 2006 (Figure 1). Prices rose fairly steadily from 1981, but there was a sharp drop after the implementation of the EU Banana Trade Regime in 1993. There was another serious drop in price in 2000, after the EU modified its banana regime. The slight price recovery since 2000 has been due to the increased sale of Fairtrade bananas to the UK.

Figures 2, 3 and 4 illustrate the trends in banana production in the major banana exporting Windward Islands. They illustrate a general polynomial pattern. Production generally increased from 1980, peaking between 1986 and 1993, after which there have been rather dramatic declines in



Source: FAO (2009).

FIGURE 1: AVERAGE EXPORT PRICE FOR BANANAS FOR DOMINICA, ST LUCIA AND ST VINCENT, 1982 TO 2006



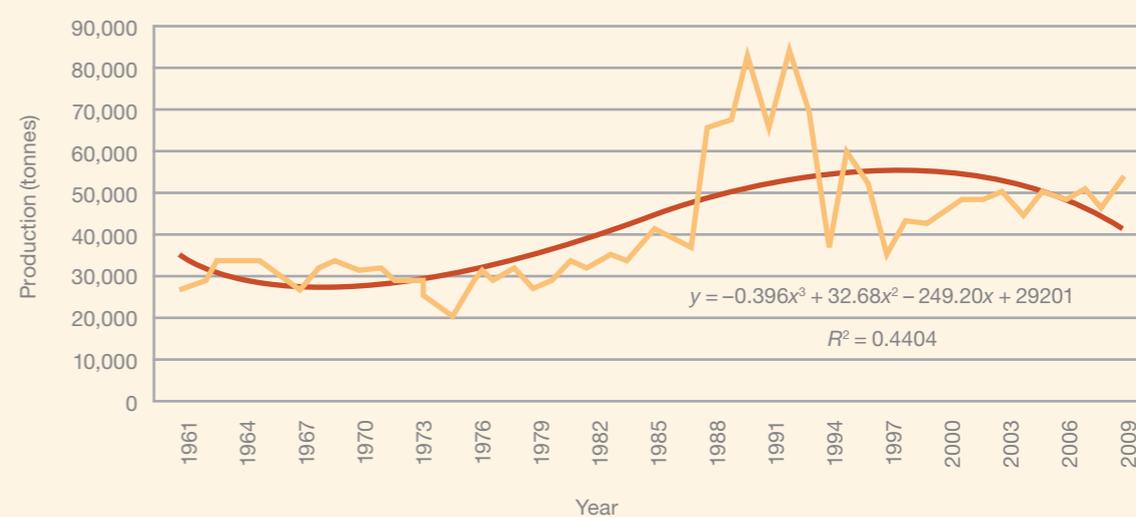
Source: FAO (2011a).

FIGURE 2: TRENDS IN BANANA PRODUCTION FOR DOMINICA, 1961 TO 2009



Source: FAO (2011a).

FIGURE 3: TRENDS IN BANANA PRODUCTION FOR ST LUCIA, 1961 TO 2009



Source: FAO (2011a).

FIGURE 4: TRENDS IN BANANA PRODUCTION FOR ST VINCENT AND THE GRENADINES, 1961 TO 2009



production in all three countries.

The percentage contributions of agriculture to GDP for Dominica, St Lucia and St Vincent for the period 1970 to 2009 are shown in Figure 5. These contributions remained fairly steady over the period 1970 to 1977, but there were decreases in 1978 to 1980. The contributions remained fairly steady thereafter until 1993. Since 1994, there have been sustained declines in the contribution of agriculture to GDP, associated with the declining level of banana production and the failure of diversification efforts to provide alternatives to the sale of bananas to the European market. The fall in

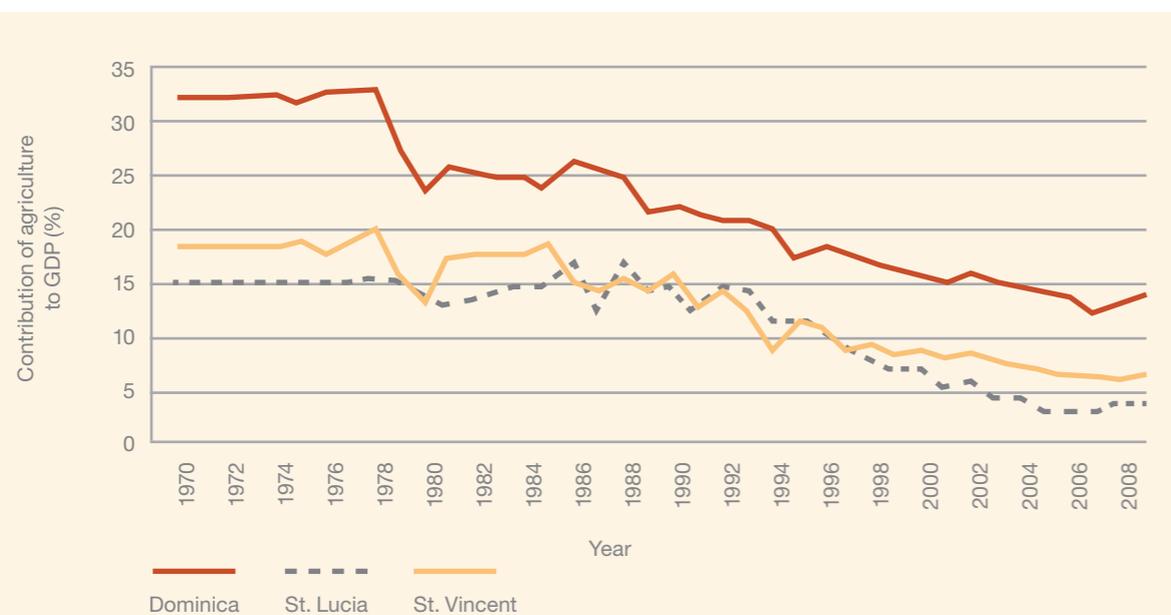
banana production has had a dramatic impact on the economy of Dominica, the country with the heaviest dependence on the banana industry, especially after the fall in prices in 2000, when the economy went into serious recession, with the growth rate falling to negative 5.1% (Figure 6).

CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

The analysis performed shows that CAEP/AREP did not seem to make any significant impact on agricultural diversification in the major banana producing countries of the Windward Islands. The

fall in banana production in those countries as a result of changes in preferential access to European markets resulted in a rapid decline in the agricultural sectors and this had a serious impact on the national economies, especially in Dominica.

Several reasons have been advanced for the limited success of the F&HMP in the achievement of its diversification goals (Chapman *et al.*, 1994; Pemberton *et al.*, 1998). Chapman *et al.* (1994) suggest that the 'impact of the F&HMP both from an institutional level and farm level was very limited compared to the resources invested'. The first reason suggested for this situation was the



Source: United Nations Statistics (2011).

FIGURE 5: PERCENTAGE CONTRIBUTIONS OF AGRICULTURE TO GDP IN DOMINICA, ST LUCIA AND ST VINCENT, 1970 TO 2008



Source: CSO (1988, 1995, 2008); ECCB (2008).

FIGURE 6: RATE OF GROWTH OF GROSS DOMESTIC PRODUCT IN CONSTANT PRICES, DOMINICA, 1981 TO 2008



continual movement of staff within the national extension services, so that the experienced farm-management extension officers trained under CAEP were not available to continue implementing the programme under AREP. The second reason advanced was the lack of leadership and programme guidance at the national level, which resulted in 'a change in focus, from extension officers providing appropriate farm management advice', to a focus on farm record-keeping (Chapman *et al.*, 1994). Thus, record-keeping was not seen as a tool for farm management, but as an exercise in itself. However, it was argued that it was difficult to convince the majority of the farmers to keep records, because of the level of detail required and that this had a negative impact on the programme. Also a computerised data analysis system, intended to provide necessary feedback information (to the farmer) from the farm records analysis, was not operational to any significant extent, even at the end of the project (Chapman *et al.*, 1994).

Another reason for the limited impact of the F&HMP, especially post-AREP, was a lack of sustained funding. CAEP and AREP had been funded by USAID, but funding under AREP was substantially less than that under CAEP. Even though UWI and participating governments had made commitments to maintain staff and resources post-AREP, once USAID funding ceased, resources for the F&HMP were drastically

curtailed and it became difficult to continue the initiatives. Though well positioned to continue its regional extension function, through its two outreach offices and lecturers in St Lucia and Antigua and its Regional Extension Communication Unit (RECU) in Trinidad, UWI did not create a permanent institutional strategy to accommodate this regional function. Thus, RECU rapidly dissipated post-AREP and the outreach offices were under-funded until they were eventually closed and the outreach lecturers were reassigned to the St Augustine campus. As AREP closed, the era of laptops had emerged and there were attempts to introduce this technology into the F&HMP through new funding sources. However, these initiatives were limited in scope and success.

Another reason for the limited impact of the F&HMP, especially post-AREP, was the minimal farmer empowerment (mobilisation and advocacy) achieved in the project. Although Henderson (1990) viewed farmer empowerment as an essential objective of CAEP, farmers were unable to maintain the required group dynamics that provided strategic group alliances and advocacy. Thus, as AREP ended, farmers became bogged down by the usual elements of theft of agricultural produce, labour shortages and the trade-liberalisation imperatives of countries joining the World Trade Organization (WTO), and did not display the vibrancy necessary to direct actions for their own benefit. Thus, the organisational

framework of district farmer committees and RAEECC quickly faded post-AREP and farmers were unable to protect the benefits they may have accrued in the F&HMP, as the national extension sources moved on to other imperatives.

In conclusion, Chapman *et al.* (1994) endorsed the F&HMP focus on farm management, as they note that a farm management approach:

'is a basic requirement in all adaptive research and extension systems, since appropriate technology and the subsequent transfer cannot occur with consideration for farm management aspects (economic and resource availability and utilisation) of the target group'.

The F&HMP also provided enriched integration of university staff, other research scientists, state extension officers and farmers. The programme provided UWI with a range of curricula on gender in agriculture, through support and participation from a growing feminist movement in the Caribbean. The programme also contributed to expanded programmes at UWI in human ecology and nutrition and dietetics.

However, alternative approaches to agri-business extension may have been more successful in the agricultural diversification efforts in the project countries. One example of a useful agri-business extension approach from British Columbia provides a step-by-step procedure for fulfilling the requirements for a successful and profitable farm or business enterprise (British



Columbia, nd). This procedure involves self-assessment by the farmer on the level of active personal involvement envisaged, and the identification of market opportunities. Having identified the product to be produced, a farm enterprise plan is developed. The components of such a plan include the goals of the enterprise, the marketing plan, the production plan and a financial plan. Another useful agri-business extension approach is the value-chain approach made up of the identification of the different activities that add value, in moving a product from the point of production to the point of sale (Webber, 2000). There is also tremendous merit in farmer-to-farmer empowerment and the FFS approach has much to recommend it. However, according to Dolly (2009), the quantitative outcomes of FFS approach in the Caribbean still need to be assessed, in line with what has been attempted here for the F&HMP.

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