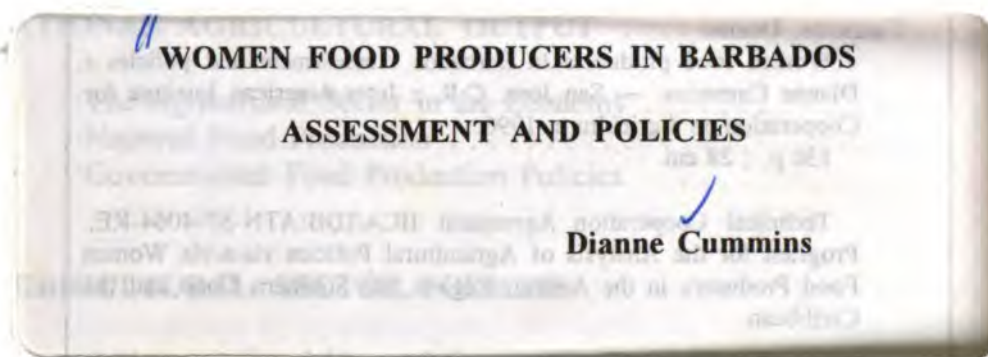


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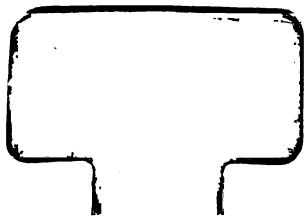
INTER-AMERICAN DEVELOPMENT BANK

Program for the Analysis of Agricultural Policies
vis-a-vis Women Food Producers
in the Andean Region, the Southern Cone
and the Caribbean



TECHNICAL COOPERATION AGREEMENT IICA/IDB/ATN-SF-4064-RE

AREA OF CONCENTRATION IV
SUSTAINABLE RURAL DEVELOPMENT



TECHNICAL COOPERATION AGREEMENT IICA/BID/ATN-SF-4064-RE

**PROGRAM FOR THE ANALYSIS OF AGRICULTURAL POLICIES
VIS-A-VIS WOMEN FOOD PRODUCERS IN THE
ANDEAN REGION, THE SOUTHERN CONE AND THE CARIBBEAN**

// **WOMEN FOOD PRODUCERS IN BARBADOS
ASSESSMENT AND POLICIES**

✓
Dianne Cummins

**AREA OF CONCENTRATION IV
SUSTAINABLE RURAL DEVELOPMENT**

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ACRONYMS

BACT	Barbados Agricultural Credit Trust
BADC	Barbados Agricultural Development Corporation
BADMC	Barbados Agricultural Development and Marketing Corporation
BAMC	Barbados Agricultural Management Company Ltd.
BAS	Barbados Agricultural Society
BDB	Barbados Development Bank
BIMAP	Barbados Institute of Management and Productivity
BMC	Barbados Marketing Corporation
BNB	Barbados National Bank
BSIL	Barbados Sugar Industries Ltd.
CDB	Caribbean Development Bank
DLP	Democratic Labour Party
EAP	Economically Active Population
EEC	European Economic Community
EPU	Export Packaging Unit
EPZ	Export Processing Zone
GDP	Gross Domestic Product
IDB	Inter-American Development Bank
IICA	Inter-American Institute for Cooperation on Agriculture
ILO	International Labour Organisation
IMF	International Monetary Fund
IRDP	Integrated Rural Development Project
MAFF	Ministry of Agriculture, Food and Fisheries
NDFB	National Development Foundation of Barbados
NGO	Non-Governmental Organisation
NOW	National Organisation of Women
NTB	National Training Board
PAREDOS	Parent Education for Development in Barbados
RDP	Rural Development Project
SJPP	Samuel Jackman Prescod Polytechnic
UNDP	United Nations Development Programme
UNIFEM	United Nations Development Fund for Women
WAND	Women and Development Unit
WID	Women in Development Ltd.

Currency Equivalent: US dollars are used throughout the report.
US\$1.00 = BDS\$2.00



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PREFACE

The Program for the Analysis of Agricultural Policies vis-a-vis Women Food Producers in the Andean Region, the Southern Cone and the Caribbean, executed by the Inter-American Institute for Cooperation on Agriculture (IICA) and financed by the Inter-American Development Bank (IDB) under Technical Cooperation Agreement ATN/SF-4064-RE, is the second phase of a program which included 18 countries in Latin American and the Caribbean: Barbados, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay and Venezuela.

The first phase of the Program was implemented in 1992-1993 in six countries in Central America, under the auspices of the Council of Central American Ministers of Agriculture. The second phase was carried out by request of the First Ladies during their Summit Meeting on the Economic Advancement of Rural Women, held in Geneva, Switzerland, in February 1992.

This document is one of three reports per country which present the technical results from the four areas of Program research, as well as the recommendations and preliminary action proposals related to women food producers. The three documents are:

***Assessment and Policies.** Assesses the participation of women in the agricultural sector and their contribution as food producers on small-scale farms, and presents an analysis of the agricultural policy and program environment and its effects on rural women.*

***Technology and Marketing.** Analyses the technology utilized on small farms and by women in food production processes, and the role of women in the processing and marketing of farm food production; agricultural technology and marketing policies and programs and their effects on rural women are also examined.*

***National Summary.** Drawing from the above two reports, this document synthesizes the major findings and research results, and presents the principal policy, program, and project proposals.*

Other activities carried out under this Program included the elaboration of regional comparative documents; the formulation of policy proposals and other actions in conjunction with the ministries of agriculture, the Offices of the First Ladies, and other public and private organizations involved in agricultural and rural development; national and regional seminars to present and discuss Program recommendations; and the publishing and distribution of the final results.

I. INTRODUCTION

This study is on women food producers in Barbados, a small island state located in the Southeastern Caribbean. Barbados is 166 square miles, made up largely of coral and limestone with its highest point being 1 100 feet in the central hills. It has a population of approximately 260 000 people and a very high population density of over 1500 people per square mile. The population is made up as follows: Black 92%; White 3%; East Indian .7%; Mixed 2%. The island became independent in 1966.

A. Background

The contribution of women to the economic development of the Caribbean is slowly being recognised, as various women, women's organisations and in a few instances men have been researching, analysing and documenting their contributions at various levels. Examples of this are the work published as part of the University of the West Indies (UWI) Women in the Caribbean Project, the Caribbean Association for Feminist Research and Action (CAFRA), the UWI's Women's Studies Group, and the Women and Development Unit (WAND). Prior to these, most studies analysed women from the standpoint of the family (Smith 1956; Clarke 1957).

The studies have shown, *inter alia*, that the failure to recognise and count women's work is partially due to the failure to recognise the importance of women's work inside the home as well as the relationship between reproductive¹ and productive work. Official statistics therefore do not indicate the extent to which women contribute to the economy. This is relevant to the agricultural sector where the farmer is often considered to be a man and the woman in the farm family is seen as helping the male farmer rather than being a farmer in her own right.. Much of women's productive work takes place at home, to a large extent depending on the life cycle of the household. Women themselves often devalue their own contribution, seeing their farm labour as an extension of their domestic duties, resulting in their inability to consider themselves as farmers.

Women in Barbados as in other parts of the Caribbean have played a critically important role in the agricultural sector since from the days of slavery when, as Beckles (1989) contends, the field gangs mainly comprised women for most of that period. In addition, he asserts that they represented the primary source of labour and reproduction for the plantations from the eighteenth century. Their role in the sector has continued until the present, now involved not only as farmers, but also as labourers, technicians, managers, and researchers, among others. In terms of national food production, their involvement is strongest in the area of livestock and foodcrops, and they also play important roles in the processing and marketing of food commodities. Women are crucial to the nutritional well-being of their families and the community in general.

¹ This refers to the caring and maintenance of the family, including children and other members, cooking, cleaning, washing and participating in community and social activities.

Agriculture is not the most important employer of women in Barbados, and they are continually withdrawing their labour from the sector as more attractive opportunities open up in other sectors such as tourism and the service sector as a whole. This has occurred alongside the decreasing importance of agriculture to the economy. However, agriculture continues to be an important, although relatively small source of employment to women. Indications are that as the country's economic problems continue, an increasing number of women are using agriculture as a source of food and income to support their families.

The slave plantation system which started from the 17th century and through which the plantation sector virtually had a monopoly over land ownership and its utilisation, is largely responsible for the present structure of the Barbadian agricultural system. During slavery, the vast majority of the land was devoted to sugar cultivation for export; as a result, much of the food was imported. The larger plantations also controlled the best agricultural land.

Slaves in Barbados were restricted to small house sites because of the small size of the island and the desire of the plantation owners to make maximum use of any available land for sugar production. Despite this, many made use of these small plots to cultivate vegetables, fruit and root crops and to raise poultry and animals (Beckles 1989). Surplus food was marketed primarily by women at the Sunday markets, despite many attempts to eradicate the markets by law. In 1826, Sunday markets were banned and Saturday became the big market day. Trading continued to be an important activity for women after emancipation in 1838.

Unlike some of the other countries in the region, there was little or no land for the freed slaves to move to after emancipation. As a result, most were forced to rent small plots of marginal land at nominal rates from the plantations as part of an exchange for all their family's guaranteed labour. In addition, the planters refused to sell land to any black ex-slaves who could have afforded it. This was done in an effort to be guaranteed a supply of labour.

During the late nineteenth and early twentieth century, the plantation owners and the merchants merged to form an agro-commercial elite which, by the 1930s, controlled the then dominant sugar industry and the distributive and service sectors of the economy. Unlike other countries in the Caribbean, this merger preempted domination by international monopolies (Thomas 1989). Another unique feature of Barbados is the relatively high ratio of whites in the population, which can be traced historically to a low absenteeism rate among plantation owners during the slave era.

Some of the legacies of the plantation system are the monocultural nature of Barbados' agricultural sector; over 70 per cent of agricultural land committed to sugar; high levels of food imports; skewed distribution of land; and a tenantry system with blacks living on marginal plantation lands (Barrow 1986; Brathwaite n.d.; Nurse 1992). The large plantations continue to be owned and controlled primarily by white Barbadians who also dominate many of the agricultural organisations or commodity groups. At the same time, men dominate in the areas of land ownership and leadership of the agricultural organisations. It can be argued therefore that "both male and female small farmers are subject to the subordination of the bigger people,

those who control the most resources and have the most say" (French 1990). These "bigger people" also tend to be men, indicating how the issues of race, class and gender are intertwined.

Foodcrops are primarily produced by small farmers, many of whom have attained a modern and highly productive system. This derives from a well-developed infrastructure and access to modern technological inputs. They have also benefited both directly and indirectly from policy support, although this is mostly directed to the sugar sub-sector. Nevertheless, small farmers face a number of problems which negatively affect the capacity to satisfy the local demand for food. This is particularly applicable to women food producers who have remained virtually invisible despite their important contribution to agriculture over the years.

An understanding and a critical analysis of these issues are necessary if useful policy and programme recommendations are to result from this project. If improvements are to be made in agriculture, improvements in women's productivity and well-being are crucial. The issue of women's empowerment is also critical if they are to make full use of any policy changes designed to assist them, and if they are to have ongoing input into policy development.

B. Objectives

The **general objective** of the project was to draw up the bases for orienting the policies and actions of participating governments, with a view to improving the living and working conditions of women food producers in the region and, consequently, food security and the efficiency of the agricultural sector.

The Assessment component **specific objective** was to assess and determine the scope of the contribution of women to the production, processing and marketing of agricultural products, taking into consideration their domestic and production responsibilities, including their contribution to family income through non-agricultural activities. Policy recommendations were formulated on the role of women in the agricultural sector.

The Policies **specific objective** was to analyze sectoral policies and their effect on rural women and policy recommendations were formulated on the basis of the findings. Policies on credit and on land ownership and use, as well as training, research and agricultural extension programmes, were studied.

C. Methodology

The project sought to combine a micro-perspective on the participation of women in production units with a macro-perspective, examining the socio-economic and political systems within which they operate. This enabled a more comprehensive understanding of women food

producers, the environment within which they operate and the ways in which they are constrained by the social manifestations of gender.

Secondary data sources such as reports, published works, population and agricultural censuses, and other statistical material were used primarily to develop the macro-perspective for the study. A number of key informants in the agricultural sector were also interviewed. A survey of 146 women food producers from across the island was conducted to supplement the data from secondary material. The respondents comprised women who had key responsibility for production on the farm and who spent at least 50 per cent of their time on agricultural-related activities on the farm. The principal crops produced had to be an integral part of Barbadian food production; sweet potatoes, vegetables and livestock (including small stock) were selected. Respondents were selected on the basis of a purposive sample. The sample frame was drawn up primarily from lists based on the 1989 Agricultural Census, names received from the Barbados Agricultural Society and from the extension officers of the Barbados Agricultural Development and Marketing Corporation. The interviewers experienced a number of difficulties: locating specific farmers, refusals, and finding farmers who met the criteria, as there is a high level of part-time farming in Barbados.

The survey enabled the collection of detailed information on a range of issues related to women food producers. The questionnaire contained the following sections: Farm Characteristics, Family Characteristics, Participation of Household and Respondent in Agricultural Activity, Marketing, Production Resources, Women's Use of Time, Source of Agricultural Information, and Problems and Aspirations. The results of other surveys on women farmers were incorporated into the report to supplement the findings.

D. Plan of Document

Chapter I recounts the historical background of women food producers, and also provides an outline of the project.

Chapter II analyses the importance of the agricultural sector in the economy and looks at employment, gross domestic product, national food production and the evolution of official food production policies.

In Chapter III, agricultural sector policies are examined specifically: policies on land use and ownership, credit, training, technology, extension and rural development. The impact of these policies on women farmers is analysed, and women's programmes are also discussed.

Chapter IV addresses the contribution of women to national agricultural output, specifically their employment in the sector. An attempt is made to re-estimate the number of women employed in the sector and to estimate their contribution to the family income.

The socio-economic characteristics of the small farm production systems and small farms in Barbados are described in Chapter V. In addition, the results of the survey are used to analyse issues such as women's contribution to production, their contribution to family income and their labour allocation. The problems and challenges they face are also given priority.

The final chapter suggests recommendations and proposals which could contribute to improving women's participation in the agricultural sector and, in the long-run, their contribution to the national economy.

II. NATIONAL AGRICULTURAL OUTPUT

This chapter presents an overview of the Barbadian economy, the agricultural sector's role therein and food production. Women play a crucial role in agriculture and can be found at various levels, including managers, technicians, extension workers, farmers, labourers and traders. They also make an important contribution to agriculture in the area of reproductive work, that is, caring for and maintaining the family. Female farmers therefore comprise an important component of national agricultural output and consequently of the national economy, but their contribution is usually undervalued. This chapter will examine the importance of the agricultural sector to the national economy as well as food production. The role of women in the sector is discussed later in the report.

A. The Agricultural Sector in the Economy

At one point, sugar was Barbados' major foreign exchange and revenue earner. However, the Barbadian economy has become increasingly service-oriented and the importance of sugar, hence the agricultural sector, has waned. The largest contributors to Gross Domestic Product (GDP) are presently wholesale/retail trade, tourism, and business and general services, together comprising 50 per cent of GDP in 1992. The agricultural sector is small, but nevertheless important, contributing some US\$30 million (8 per cent) to GDP in 1992.

Barbados' economic policies were relatively successful during the 1970s in particular, and also the 1980s. Problems began at the beginning of the 1990s when the economy started to decline and the Government decided to implement an International Monetary Fund structural adjustment programme.

1. Contribution to gross domestic product

The economic policies of successive Barbadian governments have been export-driven, based initially on sugar, and subsequently on manufacturing and tourism. The policies have generally relied heavily on and encouraged the inflow of foreign capital. As Worrell asserts:

In 1980, Barbados ranked among middle income developing countries, with a per capita income of US\$2900, and with standards of health, education, communications, and public utilities that bore comparison with those of industrialized countries (Worrell 1982:1).

The relative stability of the economy during the 1970s gave way to some imbalances during the 1980s (for example the 1981-83 recession), with the government entering into a stand-by arrangement with the International Monetary Fund (IMF). These problems were overcome, but the economy started to experience severe contractions at the beginning of the 1990s with a weakening of its balance of payments situation as exports of the major potential foreign exchange earners decreased. This, together with fiscal expansion by the government, resulted

in a rapid deterioration of the economy, with an IMF Structural Adjustment package being introduced in the last quarter of 1991. The package aimed to reduce expenditure and demand for imports by reducing the fiscal deficit and private sector credit; to increase government revenues and promote exports. The IMF package ended in 1993, but economic problems persisted with all the major sectors continuing to experience declines.

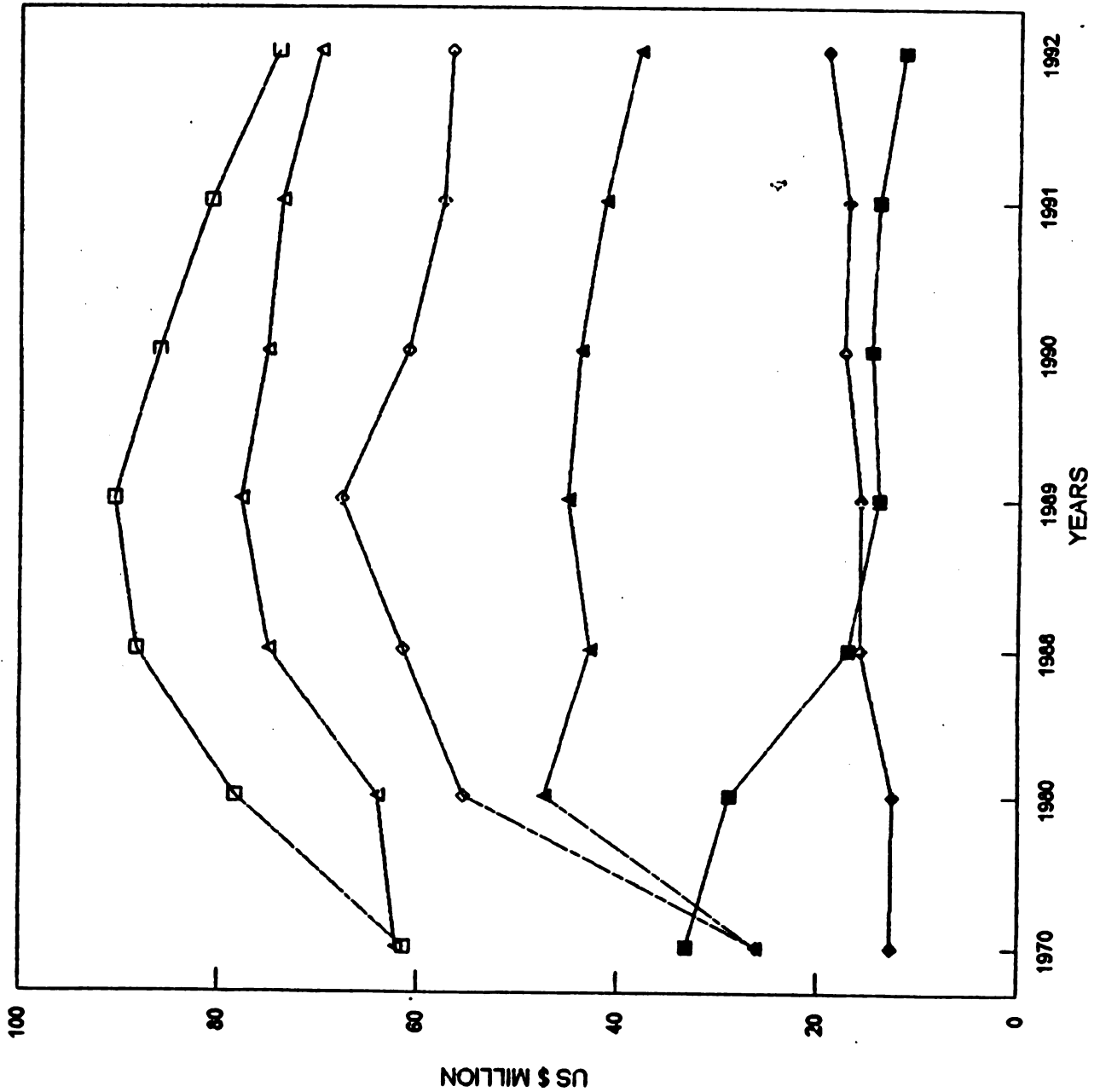
The importance of the agricultural sector in the Barbadian economy has declined over the years. The sector's importance was traditionally derived from the sugar industry, which was at one point the major foreign exchange and revenue earner. Sugar is recorded separately in the country's economic statistics. For example, during the 1960s, sugar accounted for one-third of GDP and over 70 per cent of Barbados' foreign exchange earnings. By the 1970s, it had started to decline, accounting for US\$33.1 million or 10.5 per cent of real GDP in 1970, dropping to US\$28.8 million or 7 per cent of real GDP by 1980 (Table II.1 and Graph I). The downward spiral continued, and by 1989 it was contributing US\$14.1 million (3 per cent) and US\$11.5 million (3 per cent) in 1992, with tourism and manufacturing accounting for greater shares - 14 per cent and 9.5 per cent respectively. Sugar presently earns less than 10 per cent of Barbados' foreign exchange.

Table II.1. Estimates of real gross domestic product in Barbados in 1970, 1980 and the 1988-1992 period (in US\$ millions and 1974 prices).

	1970	1980	1988	1989	1990	1991	1992
Sugar	33.1	28.8	17.1	14.1	14.8	14.0	11.5
Non-sugar agriculture and fishing	12.7	12.5	15.9	15.9	17.4	17.1	19.2
Mining and quarrying	0.5	2.2	3.4	3.1	3.3	3.2	2.9
Manufacturing	26.1	47.4	42.9	45.2	44.0	41.5	38.1
Electricity and water	3.9	8.4	12.7	13.1	13.2	13.6	13.8
Construction	23.0	28.2	31.0	33.5	30.1	27.8	25.2
Wholesale, retail trade	61.4	78.3	88.3	90.5	86.0	80.8	74.2
Tourism	26.0	55.5	61.6	67.8	61.1	57.6	56.8
Transport, storage and communication	22.3	24.9	32.4	34.5	34.5	33.8	32.6
Business and general services.	62.2	64.1	75.1	77.8	75.3	73.8	70.0
Government services	42.8	51.0	58.7	59.3	60.2	59.0	56.0
TOTAL	313.8	401.2	438.8	454.5	439.6	421.9	400.1

Source: 1970 Barbados Statistical Service; 1980-1992 Barbados Central Bank.

Graph 1. Estimates of Barbados Real Gross Domestic Product (1974 Prices).



- Sugar
- ◆ Non-sugar Agriculture and Fish
- ▲ Manufacturing
- ◻ Wholesale, Retail Trade
- ◇ Tourism
- △ Business and General Services

In contrast, and fishing non-sugar agriculture, comprising food crops, livestock and other types of cultivation, has been steadily increasing its share of real GDP, although its relative contribution remains small. From a contribution of US\$12.7 million in 1970 or 4 per cent of real GDP, by 1992 it was contributing US\$19.2 million, some 5 per cent of real GDP. It was actually the only productive sector to record real growth during 1992. It has been suggested that non-sugar agriculture in Barbados performs better during economic crises (Brathwaite 1994). This happened during the early 1980s when Barbados entered an agreement with the IMF. In 1980, non-sugar agriculture grew by 8 per cent, 1981 by 15 per cent and 10 per cent in 1985. Again in the first half of 1992 after the economic structural adjustment programme had started, non-sugar agriculture grew by an estimated 35 per cent. With the economy commencing some level of growth in 1993, there was a 5 per cent decline in the sector. Partial reasons are the increased entry of persons into farming during recessionary periods and the higher prices obtained, for example vegetables and foodcrops in 1992. The service sector is the largest contributor to GDP if tourism and business and general services are amalgamated. Together they accounted for US\$121 million (30 per cent) in 1980, increasing to US\$127 million (32 per cent) by 1992.

Table II.2 provides a breakdown of the agriculture (excluding sugar) and manufacturing sectors in terms of their contributions to GDP at current prices for the years 1988 to 1992². The food crop sub-sector was consistently the largest contributor in the agriculture sector during these years, accounting for over half (US\$29.3 million) of the sector's GDP in 1988, but declining to 39 per cent (US\$22.1 million) by 1992. The livestock rearing and fishing sub-sectors have been increasing their respective contributions, albeit with some fluctuations. The first accounted for 24 per cent (US\$12.7 million) in 1988 and 30 per cent or US\$16.7 million by 1992. The fishing sub-sector's increase was more substantial, moving from 19 per cent (US\$10.1 million) in 1988 to 31 per cent or US\$17.5 million in 1992.

The agro-industrial sector in Barbados is relatively small. Unfortunately, the amalgamation of food processing, beverages and tobacco in the statistics for the manufacturing sector does not make it possible for us to extract the actual contribution of food processing. However, an examination of the data can be useful. The food processing, beverages and tobacco sub-sector is the largest in the manufacturing sector and has increased its share of GDP in that sector, although the actual amount has decreased. In 1988, the sub-sector accounted for some 43 per cent (US\$51.4 million) of GDP and by 1992 it was accounting for half (US\$50.6 million). If the contribution of this sub-sector is added to that of the non-sugar agriculture sector, they accounted for some US\$107 million in 1992.

² A breakdown in real terms was not available.

Table II.2. Gross domestic product - current prices. Breakdown of selected sectors in Barbados for the 1988-1992 period (in US\$ millions).

US\$ Million					
Sector of origin	1988	1989	1990	1991	1992
	52.9	50.3	50.5	53.2	56.4
Total other agriculture					
Foodcrops	29.3	24.9	20.5	23.9	22.1
Livestock rearing	12.7	15.8	16.5	17.0	16.7
Miscellaneous cultivation	0.9	0.7	0.2	0.2	0.1
Fishing	10.1	8.8	13.4	12.2	17.5
Manufacturing	120.1	116.6	118.8	115.4	101.6
Food processing, beverages and tobacco	51.4	51.8	56.1	58.4	50.6
Textiles and wearing apparel	15.9	13.3	9.5	8.6	6.1
Wood and wood products	4.5	4.2	4.4	3.6	1.9
Paper, paper products, printing paper and publishing	12.9	15.2	15.9	15.0	14.4
Chemicals, petroleum refining and non-metallic products	14.5	13.4	13.2	13.1	11.8
Metal products and associated goods	15.9	12.9	14.6	12.4	12.6
Miscellaneous manufacturing	5.2	5.9	5.2	4.6	4.3
TOTAL SELECTED FACTORS	173.0	166.9	169.4	168.7	158.0
GDP at Factor Cost	1333.9	1454.8	1482.7	1446.3	1346.0

Source: Barbados Statistical Service.

2. Contribution to employment

This section analyses employment trends in the agriculture sector based on official statistics. Women's employment and the associated trends, including the under-counting of their work, will be examined in Chapter IV.

Employment in the agriculture and fishing sectors has been decreasing over the years. In the 1960s, the sugar industry alone employed approximately 25 000 persons. According to the official statistics (Table II.3), only 9 400 persons or 9 per cent of the economically active population (EAP) were employed in the entire sector by 1981. By 1991, this had dropped to

5 600 persons or 5.5 per cent of the EAP. There was a marginal increase in 1992 with 6 000 persons (6.2 per cent of the EAP) employed in the sector. It is unlikely that employment levels in the sector will increase in the shortterm.

After the government and other services sector, the distributive trades, restaurants and hotels sector accounts for most of the employed labour force, moving from some 23.4 per cent in 1981 to 21.1 per cent in 1986. The 1991 and 1992 data separate this sector into two: wholesale and retail trade (which accounted for 16.0 per cent and 14.3 per cent of the employed labour force in 1991 and 1992 respectively) and tourism (which accounted for 8.8 per cent and 9.5 per cent).

Table II.3. Employed labour force by industry group in Barbados in the 1981-1986 and 1991-1992 periods (in thousands).

Industry Group	1981	1982	1983	1984	1985	1986	1991	1992
Agriculture & Fishing	9.4	8.4	7.7	8.4	7.8	7.9	-	-
Sugar	-	-	-	-	-	-	2.2	2.5
Other Agriculture & Fishing	-	-	-	-	-	-	3.4	3.5
Manufacturing	14.1	13.8	12.7	12.5	12.0	11.0	10.2	10.0
Electricity, Gas, Water	1.2	1.6	1.9	1.9	2.3	2.2	1.7	1.6
Construction & Quarrying	6.3	7.6	7.8	6.8	7.1	8.2	8.5	7.3
Distributive Trades, Restaurants, Hotels	23.4	21.8	21.5	19.9	20.1	21.1	-	-
Wholesale/Retail Trade	-	-	-	-	-	-	16.0	14.3
Tourism	-	-	-	-	-	-	8.8	9.5
Transport & Communication	4.8	4.9	5.4	5.1	5.1	5.5	4.9	4.1
Financial Institutions, Insurance, etc.	3.9	3.7	3.5	3.3	3.1	3.1	-	-
Finance, Insurance, Business Services	-	-	-	-	-	-	3.9	4.2
Services (Government, Other)	37.1	35.5	35.2	35.2	34.6	37.2	-	-
General Services	-	-	-	-	-	-	18.6	18.0
Government Services	-	-	-	-	-	-	23.2	21.0
Not Stated	-	-	-	-	-	-	0.1	0.0
TOTAL	100.2	97.3	95.7	93.1	92.1	96.2	101.5	96.0

Source: Barbados Statistical Service.

The movement away from agriculture is due to a number of factors, including declines in sugar production and in the area of land in commercial agriculture; poor returns for farmers; increased mechanisation; a general anti-agricultural bias and a dislike of plantation labour; and the relative attractiveness of employment in other sectors, particularly the service-related sectors and in manufacturing. Increased access to educational opportunities was also a contributing factor, as a system of free education was introduced during the 1960s.

The dislike of plantation labour is a phenomenon of the young. Haynes (1982) states that by 1980, more than half of the plantations' permanent work force was over 50 years old, while less than 10 per cent was under the age of 30. During 1967-1975 and in 1980, workers had to be brought in from the neighbouring islands of St. Vincent and St. Lucia to work in the sugar crop.

B. National Food Production

The agricultural sector generally comprises four activities:

- Domestic food crops
- Sugar cane
- Livestock rearing
- Other export crops

The Barbados government has traditionally placed priority on the sugar industry to the detriment of domestic food production, despite its diversification policy over the last two decades. Over 70 per cent of agricultural land is committed to the production of sugar cane whether or not this land is presently under cultivation. Food production for the domestic market is carried out primarily by small farmers and the government's stated policy is to encourage them to continue and upgrade this while encouraging the plantation sector and other large farms to produce sugar and other crops for the export market. Women farmers are the ones who tend to concentrate on food crops both for their families and for sale locally whereas one is more likely to find men involved in the area of cash crops for sale locally and for export. An examination of food production is therefore critical to women farmers.

The level of food imports in Barbados is very high, totalling over US\$90 million in 1992. This reflects the large amounts of imported and processed food in the diet of Barbadians and has resulted in high prices of fresh fruit and vegetables. In some cases, persons have found it more economical to purchase imported tinned items rather than fresh produce. There is also a significant level of imports of fresh produce from other Caribbean islands, much of which is controlled by female traders who operate between the different territories.

The above characteristics of food production and consumption in Barbados will be explored in the following sections.

1. Agrarian structure

The agricultural sector in Barbados is presently relatively small. It is difficult to differentiate between the rural and urban sectors as they are generally understood. Due to the size and physical characteristics of the island (flat, small size) and its well-developed communication system, it is not easy to define the rural sector. In addition, the present housing patterns for

both low- and middle- income people are further eroding the lines separating rural and urban. All of the post-independence (1966) governments have emphasised the provision and upgrading of basic services to all parts of the island. This included public utilities, transportation, and roads. Other facilities such as polyclinics, schools and industrial sites are also located throughout the island. As a result, people living in "rural" areas have as much access to goods and services as those in urban areas.

Barbados' land distribution is very skewed and generally derives from the plantation system developed during the period of slavery. Land is usually divided into small farms operating on less than 5 hectares and plantations or estates operating on farms over 5 hectares. The 1989 Agricultural Census revealed that small farms operate on some 15.6 per cent of the arable land or just over 3 300 hectares (Table II.4). These include "landless holdings"³. The plantation sector controls 84 per cent of agricultural land, representing approximately 18 000 hectares.

Table 11.4. Land distribution in Barbados in 1961, 1971 and 1989.

Year	Small (Less Than 5 Hectares)			Estates (5 hectares and over)		
	Number	Hectares	% of Total Area	Number	Hectares	% of Total Area
1961	27 626	5 704	15	286	32 686	85
1971	25 788	3 611	14	264	21 294	86
1989	16 990	3 358	16	188	18 202	84

Source: Nurse (1992) derived from 1961 and 1971 Barbados Agricultural Censuses; 1989 Barbados Agricultural Census.

Agricultural production in Barbados has been described as having a dual character, with the large plantations owning and controlling the best lands and producing mainly for the export market, that is, cane and cotton. On the other side is the small farm sector, with limited access to land and concentrating on food crops and livestock for the domestic market and home consumption. However, the "dual" nature is not as clear-cut as this suggests since there is some overlap between the two. It is estimated that smallholders cultivate sugar cane on 809 hectares, representing some 7 per cent of national production. It should be noted that Barbadian small farmers, unlike those in other territories, originally chose to cultivate sugar cane on the

³ "Landless holdings" is a category used in the Census and is defined as those comprising less than 0.025 hectares on which were kept or which had associated with them livestock and/or other agricultural enterprises of certain minimum specifications, even though they might have had no significant area of land.

greater part of their land. Only a relatively small portion of their land was devoted to food crop production (Francis 1975). They opted for sugar cane for the following reasons, according to Francis: they had acquired some measure of skill in sugar cultivation; it assured them an income over time; unavailability of credit for food crop production; and competition from imported food commodities. The plantation sector also diversified into producing foodcrops for sale. During the 1960s, the government established the Barbados Marketing Corporation (BMC) to provide a market for the small farmers as a result of the marketing problems they were experiencing when forced to compete with the plantations. Other dimensions such as race and gender make the "dual" nature even more complex. However, after the profitability of the sugar industry started to decline, both small farmers and the plantation sector moved away from sugar cultivation in varying degrees.

At present, there is pressure on the island's limited land space. Barbados has a very high population density of over 1500 people per square mile. Some 21 560 hectares representing approximately 51 per cent of the total land area is reported as agricultural land. Nurse, in his study on rural development in Barbados in 1992, notes that this provides for a population density per hectare of 10 persons and an average agricultural holding of 1.3 hectares. This is based on the results of the 1989 Agricultural Census' statistics on farm holdings. This limited availability of land, soil erosion in some areas, and a demand for land from other sectors such as housing, tourism, roads and industries has increased land prices.

2. Domestic food crops

Domestic food production includes:

- **Root crops** - yams, sweet potatoes, eddoes, cassava, onions, peanuts;
- **Vegetables** - string beans, beet, cabbage, carrot, corn, cucumber, eggplant, watermelon, okra, peas, hot pepper, lettuce, sweet pepper, pumpkin, tomato; etc.
- **Fruits** - bananas, plantains, figs, golden apples, breadfruit, avocados, mangoes, cherries, ackees (guinep), soursop, pawpaw, etc.

Agricultural diversification as a government policy commenced in the 1960s with a view to decreasing the dependence on sugar for foreign exchange and revenue, reducing the dependence on imported food through import substitution, as well as satisfying local demand. However, sugar continues to be seen as the major commodity, around which diversification takes place. The diversification policy includes food crops for the export market as well as other commodities such as cotton and cut flowers for export.

The period 1980 to 1992 saw a general decline in both root crop and vegetable production (Table II.5). This decline was most significant in yams, cabbage, carrots, cucumbers, pumpkins

and tomatoes. The production of root crops peaked in the 1970s and then declined to 4 350 tonnes in 1991, approximately 39 per cent of production (Beckles 1993).

The total production for 1992 was not available at the time of writing. Sweet potato and yam, two major commodities, recorded a significant decline over the period as a result of disease problems, lower exports and reduced consumption. There were, however, some recent significant improvements in root crop production. In 1992 there was a 16.8 per cent increase in the area harvested during 1991 - from 616 hectares to 720 hectares. Cassava production had the most marked increase of 69.9 per cent in 1992; sweet potato also expanded by some 25.2 per cent over 1991.

Table II.5. Production of agricultural food commodities by volume (tonnes) in Barbados for selected years.

Commodity	1960	1966	1970	1975	1980	1984	1990	1991	1992
Sugar	153 700	200 600	153 900	96 900	136 600	100 200	69 300	65 700	54 000
Root Crops	13 860	16 870	22 300	11 960	12 800	5 610	4 810	5 350	
Sweet Potato	6 400	7 140	5 710	4 450	4 705	2 066	2 646	1 932	2 419
Yams	6 520	8 700	15 400	6 600	7 817	2 943	1 755	1 989	1 566
Vegetables	1 750	1 890	3 570	5 830	9 700	5 210	5 500	6 840	
Tomato	227	173	313	445	1 636	372	335	403	440
Onion	—	—	545	818	473	776	799	726	745
Beans	263	343	327	423	521	384	446	413	1 029
Carrot	420	545	864	1 193	2 394	844	1 447	1 340	1 045
Livestock	5 941	6 768	8 981	11 198	15 618	18 259	28 616	28 775	
Poultry	219	532	568	2 903	5 248	6 437	10 233	10 072	8 825
Pork	716	958	1 706	655	918	938	1 449	1 871	2 018
Milk	4 090	4 319	5 161	5 757	7 500	9 330	14 199	14 253	14 814
Eggs	465	536	841	1 664	1 476	1 287	1 634	1 391	1 268

Source: Ministry of Agriculture, Food and Fisheries.

Despite the government's stated policy of agricultural diversification, production has failed to either satisfy local demand or to maintain any guaranteed regional or international markets. There are various reasons for the difficulties experienced in getting agricultural diversification on a firm footing. These, according to Brathwaite (1993), are primarily concerned with the anti-agricultural bias existing in the society; low productivity; inadequate use of technology and inefficient marketing practices. He also notes other contributing factors such as the high costs

of production and distribution, and poorly integrated production and marketing systems, particularly in relation to access to information.

3. Livestock rearing/livestock food products⁴

Livestock rearing consists primarily of dairy and beef cattle, sheep, pigs and poultry. Goat production for meat is done on a limited scale and rabbit production is expanding. Much livestock rearing is done on a part-time basis, with small farmers predominating. Reports indicate that a relatively high proportion of pig and sheep farmers are women, whereas men predominate in dairy farming. According to the extension officers, many families are involved in livestock rearing. Livestock production has been performing well and, in contrast to food crops, grew significantly over the period 1960 - 1992. The volume increased approximately five-fold from 5 941 tonnes to 28 775 tonnes in 1991 (Beckles 1993). All of the products recorded increases (Table II.5) as a result of rising demands and market protection.

a. Dairy and beef cattle

The 1989 Agricultural Census recorded approximately 17 000 head of cattle, mainly dairy breeds. Registered dairy farms account for approximately 2 500 of the number recorded, suggesting that the remaining 14 500 are kept by medium and small producers who own one to fifteen head. Registered dairy farms range in size from 12 to 245 adult animals. There are 33 registered dairy farmers who are suppliers of milk to the Pine Hill Dairy. In addition, there are a few dairy farmers, classified as small-scale, who own less than 10 head and who sell bottled (raw) milk at the farm gate and around the districts (Benn 1993).

b. Sheep

Estimates indicate that there are 37 000 sheep in Barbados, with the Barbados Blackbelly Sheep dominating. These sheep have been in Barbados for well over 300 years and are known for their hardiness and ability to survive in locations with sparse vegetation. The characteristic which makes them one of the most valuable sheep breeds is their fecundity. They breed at any time of the year and usually produce litters of two or three lambs. Blackbelly sheep have short, smooth hair with little wool, if any.

Sheep are primarily reared by small or landless farmers, with the 1989 Agricultural Census showing nearly 60 per cent by landless farmers and the remaining 40 per cent by farmers with holdings of less than 12 hectares. There has also been an increase in the number of sheep on individual farms owned by commercial producers, coinciding with a decline in the number of commercial producers. Presently fewer than 10 producers own more than 100 ewes.

⁴ Much of the information in this section was taken from Beckles (1993), Emmerson (1993) and Benn (1993).

Many sheep producers are part-time who keep sheep as a hobby or as a source of quick cash. Indications are that there is no strong long-term profit motive in rearing sheep (Benn 1993). Only approximately 10 per cent of the lamb and beef consumed is produced locally.

c. Pigs

The pig industry has traditionally been dominated by small producers with less than 10 sows. However, since the first major pork processing plant was established in 1975, there has been an increase in the number of commercial producers. The pig population is estimated at approximately 30 000, with approximately 60 per cent reared by small farmers. There is a National Association of Pig Farmers which has a membership of over 400 pig farmers, fewer than five of whom keep between ten to a hundred sows (Benn 1993).

Barbados can be described as being self-sufficient in fresh pork production.

d. Poultry

The poultry industry recorded significant growth during the 1980s. According to Benn, between 1980 and 1989 there was an increase of over 60 per cent in the number of broiler chickens produced. Since 1990, there has been a decline of 17 per cent, but the 1993 figures indicate that production has increased by 15 per cent over 1992. Approximately 45 per cent of the broiler meat produced is processed by two large processors, while the remaining 55 per cent is produced by small and medium producers. These rear between 20 and 1 200 chickens. Estimates are that there are 100 large producers with between 1 500 and 40 000 chickens and over 2 000 small producers (Benn 1993).

Barbados is self-sufficient in broiler meat and egg production.

4. Sugar cane production

Sugar cane is of such importance in Barbados' agricultural sector that its production needs to be examined in some detail, as it has implications for agri-food crops. Research and experience has shown that sugar and non-sugar agriculture go hand in hand, and that sugar cane helps to control soil erosion and to promote soil renewal.

Sugar cane cultivation was introduced in the seventeenth century during slavery and since then it has been an important part of the Barbadian economy, being at one point the largest government revenue and foreign exchange earner. At that time, Barbados' economy was virtually mono-crop. During the 1960s, the government became actively involved in the sugar industry, having acquired some plantations which were experiencing financial problems. These were managed through the BADC.

Production peaked in 1957 and 1967 at 208 000 and 204 000 tons respectively. It was 159 923 tons in 1970, declining to 136 600 tons in 1980. After reaching 111 100 tons in 1986, production fell to 54 000 tons in 1992 and 48 000 tons in 1993, the lowest since 1921, when approximately 43 000 tons were produced (Nurse 1992; Ministry of Agriculture, Food and Fisheries). Also for the first time in 1992, the area under sugar cane production fell below 10 000 hectares, from nearly 25 000 hectares in 1970. Projections for 1994 are 49 000 tons. Sugar had to be imported to meet domestic demand in 1992 and 1993 since the amount produced was only adequate to fill export quotas.

There are a number of reasons for the decline in sugar production. Codrington (1992), in an examination of the sugar industry, states that the most important factor is competition from other sectors such as housing, as well as tourist-related activities including golf, with the resultant movement of arable lands out of agricultural production. Secondly, sugar production has become unprofitable. Sugar prices have failed to keep up with either the costs of production per ton of sugar, which rose during the 1980s. The third cause is inefficiency in the industry and the failure to make any significant technological advances.

The low yields of sugar cane at the farm level, and the consequent high costs of production at the factory level, have resulted in low profits and low cash flows (Codrington 1992:28).

According to Sparks, the cost of sugar production in Barbados is one of the highest in the world. Unseasonable rainfall and cane fires have also adversely affected sugar cane yields.

Unlike the small farmers in other territories, those in Barbados originally opted to cultivate sugarcane on most of their land with only marginal consideration given to foodcrops for subsistence purposes (Francis 1975). However, both small farmers and plantations have been shifting either to non-sugar crops or to other kinds of economic activities, including speculation, with much arable agricultural land presently lying idle. In an attempt to control the loss of arable land to non-agricultural usage, the government started a land use policy. The most recent land use policy is to reserve 18 200 hectares of land for agricultural production, of which over 13 153 (70 per cent) will continue to be available for sugar cane cultivation⁵.

5. Other export crops

The government's present emphasis is towards an export thrust in an effort to earn much needed foreign exchange. To this end, an Export Revolving Fund was set up at the Barbados National Bank to assist persons interested in exporting agricultural products. In terms of official policy, after sugar cane, the most important export crops are cotton, cut flowers and foliage. The cultivation of cut flowers (including ginger lilies, heliconia, anthurium lilies, and

⁵ This land use policy will be discussed in detail in Chapter III.

orchids) and foliage is presently being encouraged since they seem to offer the greatest scope for earning foreign exchange through export to North American and European markets. Vegetables, root crops, fruits and livestock are also exported to regional and extra-regional markets.

This section will focus on cotton and cut flowers, whereas the next section will comprise a general examination of imports and exports in the agricultural sector.

Cotton production was re-introduced as an export crop during 1983 after a break of several years. However, numerous management difficulties were experienced with the specialised cotton company, which was eventually closed. Production has fluctuated since the revival of the industry: after increasing from 7 000 kgs of lint in 1984 to 173 000 by 1987, production dropped to 43 000 kgs in 1990 and to 35 000 kgs in the following year. In 1992, although there were decreases in the areas planted and harvested, there was an increase to 46 000 kgs of lint. There has been some level of renewed interest by farmers in cotton after a period of low response. However, the Barbados Agricultural Development and Management Company (BADMC), a statutory corporation, continues to account for a significant area of the cotton produced.

Cut flowers and foliage are planted mainly in very small plots and interest has been increasing. The Ministry of Agriculture, Food and Fisheries (MAFF) encourages the production by supplying plant material to farmers and propagates new varieties with commercial potential. A total of 200 hectares has been proposed for cut flower cultivation by the MAFF.

Ellis (1993) argues that this policy of shifting emphasis away from food crops will have a direct negative effect on women. She suggests that "...female farmers could be displaced, women could lose income and be unable to feed their families." There is also an initial high investment cost attached to the cultivation of these kinds of crops. Based on women farmers' limited access to and limited use of credit, it is unlikely that a significant number of them will be involved in this area. It also removes land from the production of food, thus potentially increasing the level of food imports and reducing food security.

6. Agricultural trade

The high level of food imports has been a continuing problem for Barbados, a situation likely to worsen with the increasing moves towards trade liberalisation. There is also an ongoing deficit between agricultural exports and food imports. The high level of imports can be attributed to a number of factors, including the Barbadian consumer's taste for processed foods and the failure of the domestic market to meet the demand for some items. Some locally produced food is also more expensive than imports.

As Table II.6 shows, the level of food imports has been consistently high during the ten years since 1982. In 1989 and 1991, food imports accounted for over US\$100 million, with 1991 representing the highest level ever recorded (US\$107.9 million). They also account for a

significant, increasing portion of Barbados' total import bill, moving from 14.1 per cent in 1982 to 17.8 per cent in 1992. A significant decrease of 13.4 per cent in food imports was recorded in 1992. However, at the same time the percentage vis-à-vis total imports was the highest ever since the level of overall imports decreased in conjunction with reduction in the demand for foreign goods when credit controls were applied.

In contrast, agricultural exports have been generally low, failing to keep up with the level of food imports. For example, exports of major commodities were US\$30 million in 1991, resulting in a deficit of some US\$78 million. In 1992, a 12.6 per cent increase was recorded, with exports reaching US\$36 million. Figures available to date suggest that there was a falloff in the amount exported in 1993. The Export Processing Unit (EPU) of the BADMC facilitates and coordinates exports of agricultural produce. Although it is not the only exporting body, it accounts for a significant portion of the produce exported and its experience can point to trends. For example, the EPU reported that the overseas demand for sweet potatoes and hot peppers in 1993 could not be met. This was partly related to a decrease in the acreage of land cultivated during that year, due to the frustration of some farmers with increasing praedial larceny and attacks on crops by monkeys and rats.

Raw sugar continued to account for the greater part of agricultural export earnings, despite the ongoing decline of the sugar industry. For example, in 1991 sugar and molasses accounted for US\$29 million or 97.5 per cent of total agricultural exports; in 1992 raw sugar alone totalled US\$32 million or 88.2 per cent of agricultural exports. Other important exports in 1992 were sausages (US\$0.6 million); cotton lint (US\$0.45 million); chicks for rearing (US\$0.35 million); and capsicum (sweet pepper) US\$0.25 million. As Table II.7 shows, overseas buyers generally preferred sweet potatoes, breadfruit and hot and sweet peppers.

The primary foods imported are animal products, including beef, mutton, pork and poultry as well as vegetables, fruits and maize for use in animal feeds. Processed food also accounts for a significant portion of imports. In 1992, for example, mutton represented US\$4 million and beef US\$3 million in imports (Table II.8). Over US\$3.7 million were spent on fresh fruits and approximately US\$1 million on fruit juices. US\$5.4 million in raw sugar was imported for the first time in 1992, as local production was only adequate to fill export quotas.

Table II.6. Food imports and total imports in Barbados in 1982-1992.

Years	Food imports (US\$M)	% Change	Total imports (US\$M)	Food imports as % of total imports
1982	76.5	--	553.7	14.1
1983	74.3	-2.8	629.0	11.8
1984	79.8	7.4	662.3	12.1
1985	73.9	-7.4	610.8	12.1
1986	74.8	1.2	590.5	12.7
1987	83.5	11.6	517.9	16.1
1988	90.9	8.9	581.9	15.6
1989	102.6	12.8	677.1	15.2
1990	97.9	-4.5	703.9	13.9
1991	107.9	10.2	698.8	15.4
1992	93.4	-13.4	524.2	17.8

Source: Agriview 1992, derived from Statistical Department.

Table II.7. Exports of selected agricultural commodities in Barbados in 1991 and 1992.

Commodity	1991		1992	
	Quantity (kg)	Value (US\$)	Quantity (kg)	Value (US\$)
Live sheep (no.)	52	15 221	-	14 886
Sweet peppers	1 589	2 195	2 207	4 398
Okra	5 781	4 832	50 721	34 594
Other vegetables	34 130	37 848	11 964	12 979
Dasheen/eddoes	313	287	-	-
Sweet potatoes	235 117	213 400	605 465	512 441
Yams	75 703	63 410	30 841	33 294
Golden apples	-	-	36 708	42 287
Avocadoes	1 776	2 323	12 785	15 552
Mangoes	4 522	6 131	5 675	6 139
Capsicum/pimento	-	-	185 536	258 756
Breadfruit	147 255	124 913	177 472	163 775
Cut flowers	29 780	99 197	33 300	129 114
Foliage	11 454	22 295	6 874	21 843

Source: Agriview 1991 and 1992, derived from Statistical Department.

Much of the fresh agricultural produce originates from other regional countries. Women traders⁶ primarily from Dominica supply a significant portion of this inter-island trade, concentrating on grapefruit, plantains and oranges (Mondesire 1990). They travel by boat and usually remain on the island for a number of days to sell their produce, often facing considerable hardships in the process.

7. Summary

According to Nurse, the government, through the BADMC, produces crops and livestock on approximately 1 100 hectares of land. Over 60 per cent of the land has been harvested of sugar cane annually. The following crops are produced: vegetables (37 hectares); yams (8 hectares); sweet potatoes (32 hectares); and bananas (1½ hectares). Fruits, primarily bajan cherry and guava, are cultivated in the Scotland District in the northeast of the island. The government also runs a dairy farm on 124 hectares. From 1985 to 1989, when sea island cotton, was being revived, approximately 325 hectares were devoted to cotton, but this has been reduced after the problems experienced.

Small- and medium-scale farmers generate a significant portion of the food produced in the island. It is estimated that they account for⁷:

- over 60 per cent of vegetable production
- 55 per cent of poultry production
- 40 per cent of egg production
- 40 - 50 per cent of milk production
- 85 per cent of dairy/beef cattle production
- 100 per cent of sheep production
- 60 per cent of pig production

The sugar plantations cultivate significant amounts of vegetables and root crops after the cane season, often flooding the market and causing price problems for the smaller producers.

⁶ These traders are called hucksters, traffickers or speculators.

⁷ These estimations were derived from Benn (1993) and discussions with an official of one of the animal feed producers, a company that works closely with farmers.

Table II.8. Imports of selected agricultural commodities in Barbados in 1992.

Commodity	Quantity (kg)	Value (US\$)
Beef (fr., ch., froz.)	1 146 441	3 166 996
Mutton (fr., ch., froz.)	2 805 681	4 004 760
Pork (fr., ch., froz.)	399 050	739 708
Chicken wings (fr., ch., froz.)	1 024 526	1 147 891
Pork (salted, in brine)	678 259	926 216
Sausages	125 498	343 282
Corned beef (canned)	384 319	1 867 363
Milk (cream, powder, solid)	1 733 354	1 243 876
Milk (condensed)	585 942	1 389 663
Cod (dried)	313 380	1 173 367
Shrimps, prawns	227 423	1 123 135
Sardines	244 994	513 226
Other wheat and meslin	18 846 165	3 010 396
Rice (all forms)	8 928 345	3 565 931
Other maize	46 212 761	6 767 160
Flour of wheat and meslin	1 562 648	642 185
Other potatoes (white)	8 642 536	3 081 311
Onions (fr., ch.)	1 155 642	421 923
Oranges (fr., ch.)	1 560 564	1 204 125
Ortaniques (fr., ch.)	311 641	261 192
Bananas (fr., ch.)	1 615 175	382 320
Plantains (fr., ch.)	1 082 118	244 549
Apples (fr.)	480 668	531 319
Grapes (fr.)	241 233	327 529
Mangoes (fr.)	631 061	330 904
Pineapples (fr.)	1 603 957	250 807
Orange juice (conc., not conc.)	593 908	967 795
Sugar (raw)	12 985 247	5 414 153
Oils, fats, lard, tallow	2 731 557	2 530 415
Tomato ketchup	1 035 442	1 153 454
Chocolate confectionery/preparations	885 500	2 209 530
Cereal preparations (not cocoa)	290 976	1 170 519

Source: Agriview 1992, derived from Statistical Department.

Graph 2. Estimated Production by Small- and Medium Scale Farmers in Barbados

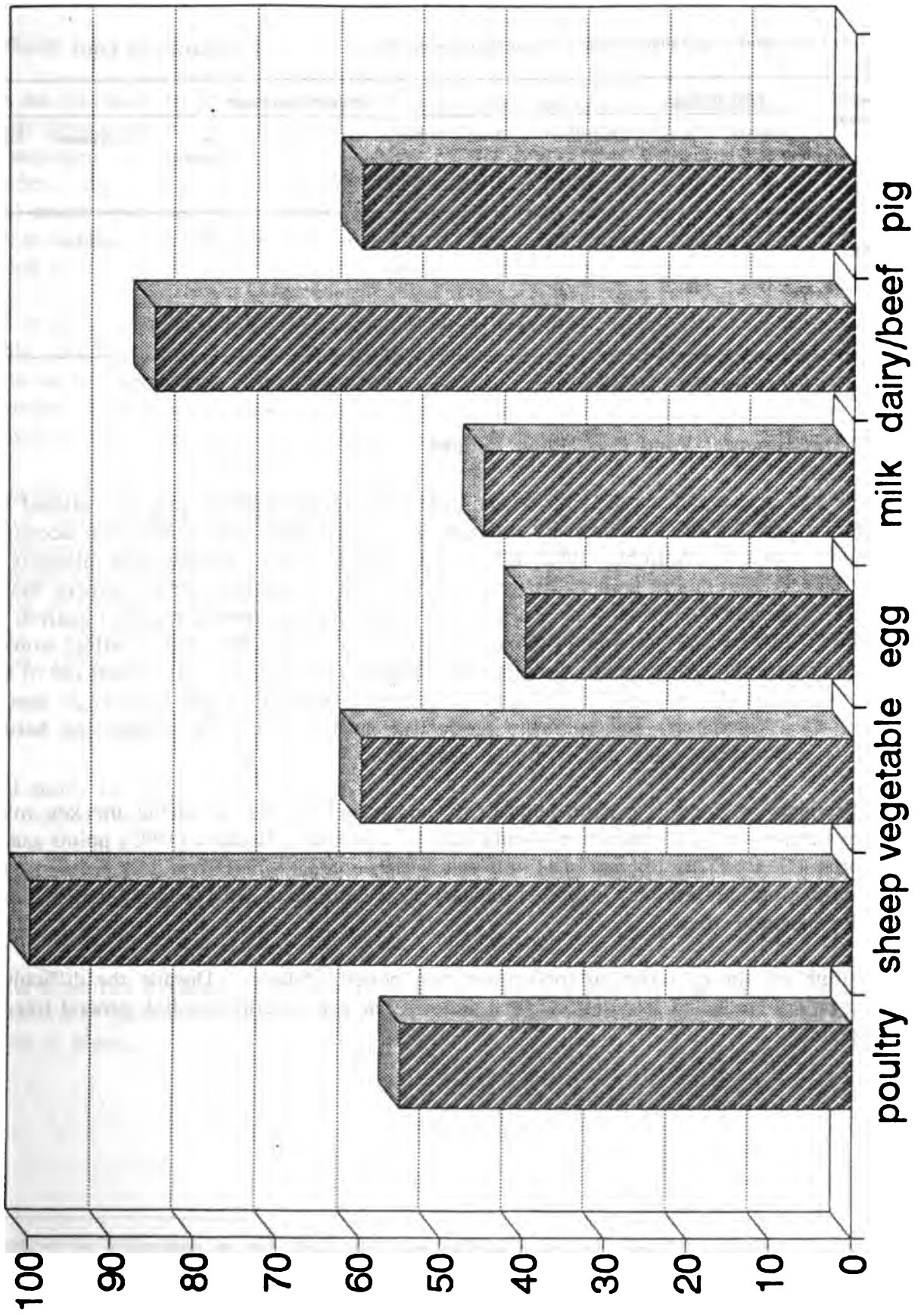


Table II.9. Legal status of agricultural holder by size in Barbados in 1989.

Size of holding	Total holdings		Holder's legal status						
	Number	Area	Individual	Household	Two or more households	Company	Co-operative	Government	Other
Less than 5 ha	16 975	3 357	16 465	375	100	16	2	7	10
5 ha and over	188	18 201	84	6	9	87	-	2	-
Total	17 163	21 558	16 549	381	109	103	2	9	10

Source: 1989 Barbados Agricultural Census.

C. Governmental Food Production Policies

Several studies have discussed the crucial role that women farmers play in national food production and the need to take the differences between men and women into account in developing policies (Antrobus 1992; Ellis 1993; French 1988). Despite this, planners and policy makers continue to ignore their role and assert that planning is for all farmers, male or female. These and other studies have argued for the need to incorporate a gender analysis into planning. Such an analysis would indicate, for example, that gender relations affect women's access to resources such as credit, training, and extension services, as well as their use of these resources. It would indicate the linkages between the household's life cycle (age, size and number of its members) and women's productive activities, and the relationship between women's reproductive work and economic production.

If self-reliance in food is a national priority, understanding and enhancing the key role of women farmers in food production should also be a priority. Beckles (1993) points out that food production policies operate in a multi-policy environment where food policies in one area, for example, agriculture, may be complimentary to or conflicting with food policies in another area, for example, trade.

An outline of the evolution of food production policies follows. Despite the difficulty in putting policy emphases into discrete time periods, one can nevertheless link general trends to time periods.

1. Early food production policies^a

After the introduction of sugar between 1640 and 1660, according to Brathwaite (1993), the planters devoted as much land space as possible to sugar cane production. Food production was accorded low priority, with the result that by the 1660s, Barbados became heavily dependent on imported food from England, Ireland and North America. However, Hudson (1988) asserts that cane occupied less than half of the arable land. He cites records from the 1800s to indicate that at that time "well over half of the arable acreage was in non-cane crops" for food production for labour and stock which produced the sugar cane.

Later in the 1800s, improved transportation meant that food could be imported relatively cheaply. Improvements in the technology of sugar production also made sugar more profitable relative to food production. The result was an increase in the ratio of sugar cane to non-sugar cultivation. Emancipation in 1838 and the possible increases in food production on the small holdings of the former slaves may also have contributed to this.

During the Second World War, all cane farms were required by the Local Production (Defence) Control Order to devote no less than 12 per cent of their arable acreage to non-cane crops and to maintain a certain number of animals. This was done in response to the threat of a submarine blockade. After the war ended in 1945, the law continued to be enforced with reduced percentages and with fair and controlled prices being met, as well as a guaranteed market. Systems to ensure the percentages were successfully expanded and developed. Hudson (1988) does a useful comparison of production in 1950 and in 1986:

	1950	1986
Total arable hectares actively farmed		
Cane reaped from	26 700	17 800
Food crops in catch-cropping or rotational-cropping on	16 670	13 720
Cotton reaped from	6 800	1 370
Young canes, fallow and other non-specified	160	320
	3 070	2 390

Hudson describes the food production achievements of those years as "agricultural wonders." The pattern of production developed during those years declined and although the legislation was left in place,

^a Much of the information on early food production policies is derived from Colin Hudson's paper "The Diversification Story."

...the disciplined protection⁹ was not, and suggestions that the local production should be protected against cheap imported starch...were not implemented. Eventually the Sugar Producers' Association had to appeal to the government to drastically reduce the legal requirements for non-cane... since they could sell more sugar at a remunerative price whilst food crops were remaining unharvested in the fields (Hudson 1988:16).

Hudson argues that in Barbados agricultural production has always been successful when it operated within a framework of "disciplined protection."

Francis (1975) suggests that the local demand for fresh vegetables was relatively low at that time (1945) and as a result all extension and research work was devoted to the sugar industry. During the early post-war years, any increased demand had to be met through imports since little official attention was given to the domestic agricultural sugar sector. Both the plantation sector and the smallholders concentrated on the cultivation of sugar cane.

2. 1960s and 1970s

Although Hudson asserts that diversification in agricultural production was a reality since the island was settled, it has been given stronger policy emphasis since the 1960s. Successive governments realised the need to reduce the economic dependence on sugar and the high import bill, and made diversification a main aim of agricultural development policy for the following reasons:

- To overcome the structural rigidity of the agricultural sector due to over dependency on sugar, and particularly of recurring uncertainties relating to sugar markets.
- To overcome a growing deficit in the balance of payments on current account due in part to increased costs of food imports (Brathwaite 1993).

The 1962 Development Plan put forward policies aimed at bringing unused land into the production of non-sugar crops and in some cases moving land out of sugar production into other agricultural cultivation, as well as into non-agricultural enterprises. The main thrust was on import substitution to satisfy the domestic market for food crops. Some organisations and services which had been set up to provide support to farmers were strengthened. These included the Agricultural Credit bank and the extension services of the Ministry of Agriculture. In addition, the Barbados Agricultural Development Corporation (BADC) and the Barbados Marketing Corporation (BMC) were established.

⁹ Hudson defines "disciplined protection" as a guaranteed quantity of the product at a guaranteed fair price.

a. The Barbados Agricultural Development Corporation (BADC)

The BADC¹⁰ was set up in 1965 with the following objectives:

- To stimulate, facilitate and undertake the development of agriculture and to carry out, operate and participate in such agricultural projects as the Cabinet may approve.
- To develop and manage on a commercial basis such plantations and other agricultural land as may from time to time be vested in it, according to the terms of Government's agricultural policy so as to stimulate and encourage the private sector.

The land to be managed by the Corporation comprised marginal plantations which government had taken over during periods when sugar production was unprofitable.

The BADC's functions were widened to include developmental research (especially in terms of diversification at the plantation level), the provision of services to the farming community and the implementation of rural development projects. It has produced crops such as cotton, peanuts, onions, vegetables and fruits, as well as livestock. It also introduced programmes for irrigation development and the mechanisation of non-sugar agriculture.

b. The Barbados Marketing Corporation (BMC)

The BMC was established in 1961 as government's marketing agency for agricultural products in Barbados. Its objectives included:

- To stimulate, facilitate and improve the production, marketing and processing of produce in the island, particularly for the benefit of the producers.
- To secure the most favourable arrangements for the purchase, handling, transportation, storage, importation, shipping, marketing and sale of produce, whether in or out of the island, and in particular to assist agriculturalists and fishing co-operative societies to dispose of their produce to the best advantage.

It was set up to help small farmers at a time when they were experiencing marketing problems as a result of having to compete with the plantation sector in terms of non-sugar production.

In the late 1960s, the area of land under vegetable production increased from 120 hectares in 1969 to over 500 hectares in 1973 (Francis 1975). During the 1970s, a government policy to restrict competing imports of poultry by excluding certain quantities of wings and backs, place

¹⁰ Information on the BADC and the BMC was extracted from Nurse (1992) and Porter and La Gra (1992).

price controls on feed "balanced with a fair consumer price for whole chicken and chicken quarters..." helped in the achievement of a very successful poultry industry (Hudson 1988). Barbados can now be described as being self-sufficient in the poultry industry.

3. 1980s

During the 1980s, policy emphasis continued to be placed on diversification. Implementation of the policy was accelerated from 1983 with the start of the World Bank Agricultural Development Project a major diversification programme. Its aims included the reduction of the dependence on sugar cane and the reduction of food import levels. New high-value crops and varieties were introduced and support services to farmers and related systems were strengthened and upgraded. During this period, with the increasing balance of payments problems and the continuing decline of the sugar industry, more emphasis was placed on developing the non-sugar agricultural sector in terms of its export potential, as opposed to import substitution.

From 1984, there were changes in the organisation of the extension services of the ministry of agriculture which had implications for small farmers as well as food production. Prior to this, there had been a specialised extension department that delivered traditional extension services to farmers. These included tractor services, soil conservation, ploughing and irrigation services. The change comprised a linking of extension and research activities so that researchers and technicians were expected to extend the results of their research directly to farmers. In addition, extension efforts were concentrated on those farmers with the greatest export potential, as since it was argued that this approach would have a greater impact. However, it shifted services away from the smaller farmer, including women farmers, and therefore impacted adversely on food production for the domestic market, where small farmers tend to be located. Nevertheless, the BADC continued to provide extension services to small farmers, but did not cover the whole island, nor did it work with livestock.

Several incentives were introduced over the years to encourage increased agricultural production, including food production. Those relating to food production included grants towards the costs of certain equipment such as spray cans; grants for installing an approved irrigation system; grants for orchard development; assistance to registered agricultural co-operatives; rebates on the purchase price of agricultural machinery; land cultivation rebates for small farmers; live breeding services; subsidised prices on some livestock; planting material for orchards and subsidised services for fruit tree owners; and relief for duties and taxes on basic agricultural imports and agricultural imports for use in manufacturing. Annual grants were also instituted to farmers' organisations such as the Barbados Agricultural Society (BAS).

4. Structural adjustment phase¹¹

Barbados' economy started to experience severe problems in the early 1990s with the continuing decline in the productive sectors such as sugar and manufacturing and a decline in tourism, particularly since 1989. As a result, the demand for imports surpassed the foreign earnings. In addition, fiscal expansion in 1990 and 1991 aggravated the decline in foreign exchange reserves. The economic downturn coincided with a peak in external debt servicing obligations between 1990 and 1992. The ensuing balance of payments problems resulted in the government instituting an eighteen-month International Monetary Fund stabilisation programme during the last quarter of 1991. The programme sought to reduce spending on imports in the short term through reductions in the fiscal deficit and in private sector credit. The fiscal measures comprised a decrease in the wages bill of all public sector entities, cut-backs in spending on capital projects, a decrease in transfers to statutory corporations and increased taxation. Protection for firms producing import substitutes for the local market were also reduced.

As part of the IMF programme, there were massive layoffs in the public sector, an 8 per cent salary cut in the public sector and the removal of duty free concessions on certain inputs such as raw materials, machinery and packaging. Job losses in the private sector were also experienced. The average unemployment rate moved from 15.2 per cent in 1990 to 17.2 per cent in 1991 with higher levels among women. Initiatives to divest some public enterprises commenced as the IMF's policy of reducing government involvement in the economy, encouraging increased private sector involvement and allowing market forces to move the economy were given emphasis. To reinforce the short-term stabilisation programme, there was a reform of the direct tax system during 1992 and ongoing efforts to restructure some public enterprises to make them more efficient.

The IMF package ended in April 1993, but the international institutions have continued to put pressure on the government to enter into another stabilisation programme. They also disagreed with the government's decision to remove the 8 per cent salary cut for public servants. Another area of contention was the government's refusal to devalue the Barbadian dollar. The IMF subsequently delayed conducting a scheduled review of the balance of payments programme and both the World Bank and the Inter American Development Bank (IDB) refused to disburse further loans. Despite the restoration of the 8 per cent, the policy of freezing salary increments in the public sector was continued for a further 12-month period. In August 1993, the government, private sector employees and trade unions signed an accord relating to a prices and incomes policy. Under the accord, there would be a freeze of basic wages and wage increases would be tied to productivity gains for a two-year period. Monopoly pricing would also be monitored by a committee comprising the three parties to the accord. This accord is being described as the centre-piece of the government's economic policy (Minister of Finance 1994).

¹¹ Central Bank Annual Reports were a major source of information for this section.

The economy experienced real growth of one per cent in 1993 primarily because of increased output in the tourism sector, which recorded its first growth in three years. However, unemployment remained high with the average 1993 rate being 24.7 per cent, up from 23 per cent in the previous year. With the continuing economic problems and the difficulties in accessing international funds, the government has agreed to enter into an enhanced surveillance programme with the IMF so that it can have access to funds from the World Bank and the IDB.

The economic problems and the structural adjustment programme have had implications for the government's food production policy. One area is the increasing emphasis being placed by both government and funding agencies on export crops. For example, US\$570 000 was approved for food crop research, development and extension in the 1992-93 government's annual estimates of expenditure. This represented a reduction of US\$332 000 from the amount approved for 1991-92, and a reduction of US\$260 000 from the actual expenditure in 1990-91. In contrast, US\$824 000 was approved for non-food crop research, development and extension in 1992-93, representing an increase of US\$20 000 over 1991-92 and US\$452 000 over the actual expenditure in 1990-91. The two priority agricultural enterprises served in the latter area were relatively new programmes, the Cotton Research and Development Project and the Flower Crops Research and Development Programme. These programmes were designed to "rapidly develop crops which have the potential to be significant foreign earners..." Livestock development, however, was accorded significant increases during the same period, with some US\$1 657 being approved for 1992-93 representing an increase of US\$25 000 over 1991-92 and US\$1 634 million over actual expenditure in 1990-91.

As stated above, the structural adjustment measures included reductions in the transfers to public corporations and in the grants to private agencies. The annual subvention to the BADC, which has been described as the government's small farmer arm, were reduced. In addition, as part of the process to improve the efficiency of public corporations, the BADC and the BMC were amalgamated in 1993 into the Barbados Agricultural Development and Marketing Corporation (BADMC). This is part of the effort to streamline the operations of public sector enterprises. The functions of the BADMC reflect government's privatization policy; it will therefore be minimally involved in commercial activities giving priority to developmental functions (Sector Plan 1993-2000:27). One proposed function which should have a positive effect on food production if done on an effective scale is the development of lands into viable agricultural enterprises for passing on to interested farmers on a leasehold basis. This would form part of the policy of providing landless farmers with land.

Another example is the BAS, which had previously received an annual grant of US\$125 000. The BAS provides, among other things, extension, credit and marketing services to farmers in the areas of livestock and crop production. The subvention was completely removed in 1994, causing the retrenchment of extension staff and the end of its livestock programme.

The 1993-2000 Agricultural Sector Plan places a definite focus on exports and states that,

The sector will be expected to play a key role in the process of structural adjustment of the economy. In this regard policy will provide encouragement for entrepreneurs to engage in projects designed to earn foreign exchange. Consequently, there will be less emphasis on projects which promote import substitution... (p. 12).

In terms of national food production, the plan goes on to state that emphasis must also be placed on the business aspect of farming.

In this regard, the promotion of a viable agricultural sector, capable of meeting as much of the national food requirements as may be practicable and capable of contributing positively to the improvement of farm incomes, will be given high priority (p 12).

There have been policy statements over the years about the promotion of non-sugar agriculture for national consumption and food self-sufficiency, import substitution and increasingly for export purposes. However, these statements have never been matched by resource allocation. Most of the available resources have continued to be diverted into the sugar industry. According to one review of the sector,

At this time, sugar concerns so completely consume most agricultural resources that the administrative focus (both the government and the economy) virtually excludes other problems and issues. This properly reflects the sub-sector's current importance (and the severity of its problems) but does not reflect the nation's need to more fully utilize its non-sugar resources (Sparks Companies Inc. 1992:17).

Women as major food producers and as consumers are adversely affected by the limited resources allocated to food production. Trade liberalisation will also result in a decline in domestic food production since some food items both raw and processed can be imported at cheaper prices than locally produced food. This could have the effect of an increased reliance on imported food as happened in Jamaica in the 1980s (Deere *et al.* 1990:56). In this case, the primary beneficiaries will be the US market which itself offers protection to its farmers. The challenge is to find ways of ensuring that locally produced food is offered at reasonable prices to the consumer and that farmers have a guaranteed market for their produce and can earn a decent living. Strategies to achieve these need to be devised with farmers: small- and large scale, female and male.



III. AGRICULTURAL SECTOR POLICIES

This section comprises an examination of the major recent policies in the agricultural sector in areas such as those in the area of land, credit and training. Policies specifically directed at women are also analysed. The effect of both of these kinds of policies on women and small farmers are then discussed.

A. Policies on Land Use and Ownership, Rural Development, Credit, Technology, Extension, and Education and Training

Despite the agricultural sector's decreasing importance in the Barbadian economy over the years, it continues to play a crucial role in terms of employment generation, contribution to GDP and as a foreign exchange earner. The government's agricultural policies have generally focused on the sugar industry which is still the largest foreign exchange earner in the sector. The necessity of diversification has been part of the policies for a number of years. The government has also sought to deal with other problems in the sector such as unequal land distribution, landless farmers and limited access to credit and training by small farmers. However, larger farmers and the plantations continue to control most of the land, to have easier access to credit and to benefit most from the government's extension services.

There has been little or no acknowledgement of the need to incorporate a gender analysis into agricultural sector planning. Some of the manifestations of this are: limited data on women farmers, the failure to routinely disaggregate data by sex, and ignoring or undervaluing women's contribution to agricultural development. Further, planners have failed to acknowledge the relationship between women's work both within and outside the household, the contribution that reproductive activities make to economic production and to the adverse effects that the structural adjustment policies have on women in particular. As a result, women have remained virtually invisible with little attention being paid to their unique ways of doing things and, consequently, their unique needs.

As Table III.1 shows, none of the sector-related programmes that have been implemented have a specific focus on women. Despite this, women have participated in and benefited from some of the programmes. The Women's Bureau and some of the Non-governmental Organisations (NGOs) involved in the provision of services to the agricultural sector have included a focus on women in their programming as will be discussed in Section B. However, because of the existence of gender relations women continue to be at an disadvantage to men in terms of their access to resources and their control over these resources.

An examination of the relevant agricultural and women-oriented policies of both government and NGOs follows, as well as an analysis of their impact on women and small farmers.

Table III.1. Agricultural and rural development policies and programmes in Barbados in the 1975-1994 period.

Policies and Programmes	Description	Orientation by size of producer			Gender Orientation	Comments
		Small	Large	Women farmers		
I. LAND TITLING						
a. Succession Act	1975 Court can grant spouse & children share of estate if deemed worthy. Common law unions to be treated like marriages.				X	Protected both women and men from unfair disinheritance in both married and common law unions.
b. Property Act	1979 Both husband and wife to be treated equally and as separate persons re acquiring interest in property.				X	Previously treated as one person. Married women now enjoy same rights as single person re disposing of and holding property.
c. Family Law Act	1981 Court can alter parties' existing property interests.				X	Regularised property distribution among family members. Expected positive impact on women.
d. Children Born Out of Wedlock (Removal of Discrimination) Act	Out-of-wedlock children inherit with in-wedlock children from both parents					Legal recognition of paternity necessary for father.
e. Tenancies Freehold Purchase Act	1980 Tenants of rented tenantry land with houses protected from eviction & given option to purchase land.		X			Enabled large number of persons to hold land titles. More women have purchased lots.
f. Agricultural Holdings Options to Purchase Act	1982 Renters of agricultural land given option to purchase.		X			As in (d), majority of sites are very small. Viability becomes issue.
II. CREDIT						
a. Establishment of Barbados National Bank - Statutory Corporation	1978 Agricultural Banking Division to ensure agricultural sector access to credit. Some loans on concessional terms.		X	X		Majority of funds disbursed to large sugar estates. Little to non-sugar sector or to small farmers.

Policies and Programmes	Description	Orientation by size of producer			Gender Orientation			Comments
		Small	Large	Women farmers	Other women			
b.	Barbados Development Bank - Statutory Corporation	X	X				Agro-industry accounts for less than one per cent of portfolio.	
c.	Barbados Agricultural Society	X					Enabled small farmers access to funds. Few women have benefited to date.	
d.	National Development Foundation of Barbados	X					Small-farmers and women enabled increased access to credit.	
e.	Barclays Bank PLC		X					
III. RESEARCH & TECHNOLOGY								
a.	Ministry of Agriculture, Food & Fisheries		X				Focus is on farmers demonstrating potential for growth, particularly in export crops, i.e., large farmers. Small farmers and women might be adversely affected.	
b.	Barbados Agricultural Development and Marketing Corporation	X	X				Small farmers have benefited from technological development and related services.	
IV. TRAINING & EXTENSION								
a.	Ministry of Agriculture, Food & Fisheries	X	X				Similar to III.a above.	
b.	Barbados Agricultural Development & Marketing Corporation - Statutory Corporation	X					Does not provide livestock services and does not cover the entire island. Small farmers have generally benefited.	
c.	Barbados Agricultural Society	X	X				Have recently had to lay off extension officers because of government's removal of annual stipend.	

Policies and Programmes	Description	Orientation by size of producer			Gender Orientation			Comments
		Small	Large	Women farmers	Other women			
e. National Training Board - Statutory Corporation	1979 - Skills Training Programme; Retrenched Workers' Programme; New Opportunities Programme introduced since economic crisis.	X					Unemployed and retrenched persons given access to retraining.	
f. Samuel Jackman Prescod Polytechnic- Statutory Corporation	1976 Diploma of Agriculture, 2-year programme - crops, livestock, farm courses, apiculture and general studies.							
V. RURAL DEVELOPMENT								
a. Rural Development Project	1980-1986 Comprised infrastructure, services and credit to increase diversification and food production; and to raise small farmers' incomes and productivity.	X					Increased use of services offered to participating farmers. Participation (including women's) negatively affected by tenure requirements.	
b. Springhall Land Lease Project	1982 Aimed to help small farmers gain access to arable land through long-term leases. Infrastructural activities and credit.	X					Farmers not involved in project design. No attempt to incorporate women.	
c. World Bank Agricultural Development Project	1983 New high-value crops and varieties were introduced; systems and services strengthened.	X	X				Minimal impact on women and small farmers expected because of focus on export crops.	
d. BADMC's Mechanical Cultivation Services	Low-cost tractor cultivation and mechanisation services for farmers on 10 has or less.	X					High demand for services but smaller farms may be excluded - uneconomical and results in less time available for larger farms.	

1. Land policies

This section will consider land policies which in Barbados refer to land use and control policies as well as land titling and distribution. Through its land use and control policies, the MAFF seeks to ensure that a reasonable level of arable land is maintained for agricultural purposes. This has become particularly critical in a situation of a significant decline in the area of land used for agricultural purposes as well as relatively large areas of idle land. Women and small farmers in general are affected by land control and land distribution policies since they are responsible for a significant portion of the agricultural production taking place on the island. Of particular relevance are the land distribution policies.

As discussed earlier, slavery and the plantation system have molded the structure of Barbadian agriculture. Originally, cotton and tobacco were the primary crops, but during the mid-seventeenth century, the profitable sugar industry began. In addition, an abundant supply of black slaves from Africa replaced the white indentured labourers who had been brought from England. Large plantations eventually controlled the best lands for sugar cultivation, with small proprietors being bought out and forced to exist on small, marginal lands.

A tenantry system whereby the former slaves rented land and housing from the plantations emerged after emancipation in 1838 through a located labourers system. The ex-slaves were required by law to pay the plantations (their employers) rent for any plantation-owned buildings and land used. There were virtually no other options for the ex-slaves whose ability to own land was inhibited, according to Beckles (1990), by various factors, including: the plantations' control over land and its use; the refusal of the planters to sell land to their workers; the unavailability of Crown lands for squatting; and the high prices of arable land. In addition, "both local and imperial governments were committed to a policy of creating from the slave population a landless proletariat rather than a peasantry" (Beckles 1990). The tenantry system therefore virtually tied the ex-slaves to and ensured their virtual dependence on the plantations. Furthermore, tenants who did not work on the plantations on a regular basis were penalised through wage deductions.

Over time, a few ex-slaves were able to purchase land while others became leasehold users of land (not being forced to work on the plantations). Unlike some other territories in the Caribbean, there was therefore only a very small independent peasantry in Barbados. Eventually, an increasing number of the black population acquired land through increased access to resources with the opening of emigration outlets, particularly to Panama from the early 1900s to work on the canal. In 1897, according to existing records, 8 500 small proprietors owned approximately 4 000 hectares of land. By 1929, the number of small proprietors had virtually doubled to 17 731 (Beckles 1990). Males were the ones taking advantage of the emigration opportunities with the result that women were employed in their places in the fields at wages below what had been offered to men, thus keeping wage levels down.

As Nurse (1992) states, the plantation system was therefore responsible for the skewed distribution of land ownership, the concentration of cheap mass labour in the cane fields and the establishment of tenant communities out of rented lots to labourers. In addition, according to Brathwaite (n.d.), it gave rise to the export-oriented sugar agriculture and the mono-cultural nature of the sector as well as the dependency on food imports.

In seeking to address the problem of skewed land distribution which has persisted over time, the government permitted the sub-division of agricultural land into small farms in the early 1970s. The aim was to encourage the development of a commercial small farmer. Unfortunately, much of this land was used for speculative purposes. During the early 1980s, another attempt was made to increase land ownership by small persons through a rural development project, one element of which involved the transfer of rented land to tenants and the development of infrastructural and irrigation facilities. This project also included credit, training and extension services.

a. Land use and control

The Barbadian government has, over the years, attempted to put in place land use and control measures to protect arable land, bring idle land back into production and to promote the process of diversification. With the decline in sugar production, a number of large plantations and small farmers have moved into other activities. In addition, the Government has pursued a policy from the 1960s of giving permission to some plantation owners to sub-divide their land to sell as residential lots. From the 1970s, some areas were designated as agricultural land and sold in smaller lots.

Concern has been expressed over the years that persons were buying these lots, erecting houses and satisfying the agricultural stipulation by planting a few fruit trees. As a result, the area of land under agricultural production has been steadily decreasing with large tracts of idle land apparently being held for speculative purposes. There are also large tracts of abandoned and overgrown land. According to the MAFF, current estimates are that over 4 000 hectares of land are currently lying idle. Arable agricultural land has declined over the years to 22 000 hectares in 1989/90. The Government owns less than 10 per cent of this land, over 90 per cent being privately owned (Nurse 1992).

The land use regulations that have been put into place have been described in a study commissioned by the Inter-American Development Bank (IDB) and conducted by Sparks Companies Inc. (1992) as being extensive with a highly complex planning process. However, it seems that the necessary coordinating mechanisms to ensure the effective implementation of the regulations are not in place nor are there adequate linkages between the various relevant ministries and departments of government. These would include the MAFF, the Ministry of Housing and Lands and the Town and Country Planning Department.

The 1993-2000 Agricultural Sector Plan outlines a new land use policy whereby agricultural land would be placed in two categories. The arable land in Category One would be retained in its present lot sizes with no subdivision nor change of use. The non-arable land in this zone would be allowed non-agricultural uses, with provision for sub-divisions once the necessary physical planning requirements were met.

Category Two would include farms previously subdivided into smaller holdings, which would not be allowed further subdivisions nor change of use. Also included in this category would be estates which have not yet been subdivided but which would be allowed subdivision for agricultural purposes. The lot sizes to be allowed would be a minimum of five hectares for land which could be irrigated and ten hectares for lots which could not be irrigated.

Barbados has a total land area of just under 43 000 hectares. According to the land use policy, some 18 200 hectares would be retained for agricultural purposes during the period 1993 - 2000 as shown in Table III.2 below.

Table III.2. Proposed use of agricultural land in Barbados for the 1993-2000 period.

Purpose	Hectares
Sugar cane cultivation	13 153
Cotton	809
Cutflowers	202
Fruits	809
Vegetables	607
Pasture for Livestock	2 630
Total	18 210

Source: Ministry of Agriculture, Food and Fisheries.

The decision was taken to allow five golf courses to be developed in the agricultural belt to encourage investment, to earn foreign exchange and generate employment. This decision has been met with some opposition especially in light of the country's high food import bill, the need to feed the population and the unavailability of land in a situation of high and increasing unemployment (14.7 per cent in 1990 to 25 per cent in 1993). The decision also seems to run counter to the government's stated policy of stimulating increased agricultural production. Land devoted to golf courses cannot be easily reconverted into agricultural production and is dependent on the country's ability to attract an up-market tourist and increases the dependence

on a fragile industry. In addition, the present crisis in the island's water resources and the massive levels of water needed to maintain golf courses are major causes of concern.

The land use and control policies outlined above do not address the problems of access to land of small farmers nor women farmers who, according to the Census, are the smallest farmers. As one person in the sector (Rudder 1993) asked: "...What is the size of the small farmer plots in this [reserved] acreage, and can they really support meaningful agriculture?"

b. Land distribution

The desire to own land cuts across sex, race and class divisions in Barbados and has been a powerful motivating factor. According to the 1989 Agricultural Census, over half (53 per cent) of the persons classified as farmers own the land on which they operate. Barbados' legal system has undergone significant reform, thus enabling easier access to land titles through both purchases and inheritance by females and small farmers. In addition, some rural development programmes have attempted to broaden this access through leasehold arrangements. The most significant related legal reforms have been in relation to the tenantry system and inheritance. However, there has been no attempt to bring about fundamental land reform with the result that the skewed nature of land ownership continues to be a feature of the agricultural sector.

The legal reforms will be discussed first, followed by the changes in the tenantry system. Land distribution associated with rural development programmes is discussed in Section 2.

i. Inheritance and related legal reforms¹²

There has been fairly extensive legal reform in Barbados over the years covering areas such as property distribution, property inheritance and succession. Areas of property distribution among family members have been regularised through the reforms. These are examined below.

The Property Act 1979 enables husband and wife to be treated equally and as separate persons in terms of the acquisition of any interest in property, whereas previously they were treated as one person. Married women's rights are the same as a single person in relation to holding, enjoying and disposing of property.

The Family Law Act 1981 gives the court the right to alter the existing property interests of parties based on certain listed factors such as financial contributions, property improvement and the contribution made by either party as homemaker or parent. Common law unions which have lasted for a continuous period of five years are given legal recognition under this act, to be treated like legal marriages.

¹² The information in this section was derived from Norma Forde's work: namely "The Legal Issues" (1988) and "Where Are We Now? An Assessment of the Status of Women in Barbados" commissioned by the Bureau of Women's Affairs.

The Succession Act 1975 allowed the court to grant a testator's spouse and children a share of the estate if they are deemed worthy. The spouse has a right to one-quarter of the estate if there is a child; where there is no child, one half is taken. In cases where a person dies intestate, children born outside of marriage can inherit with the in-wedlock children from both parents. In the case of the father, however, there has to be legal recognition of paternity. A woman in a common law union also has succession rights to her spouse's estate if she is not named as a beneficiary.

As Fords (n.d.) contends, women are the main beneficiaries under some of the new laws since they were at a greater disadvantage under the old laws. In addition, given women's present reproductive responsibilities, any assistance given to children and young people must be of real benefit to women in a society with a large number of single parent households which are often headed by women. These benefits would naturally extend to female farmers.

ii. Tenancies

A tenantry system whereby house sites were rented from the plantations had developed after emancipation in 1838. Although small, backyard farming both for home consumption and for sale was carried out on these house spots, small agricultural lots were also rented to farmers. In 1986, a Rural Development Project (RDP) commenced with one of its elements being the provision of a legal and institutional mechanism to permit tenantry families to acquire the lands on which they were living. Two related legislative acts were passed by the government which helped in the implementation of this element of the RDP - the Tenantry Freehold Purchase Act of 1980 and the Agricultural Holdings Options to Purchase Act in 1982.

The Tenancies Freehold Purchase Act 1980 sought to end the tenantry system through the transfer of titles for rented land with houses. Tenants who had lived continuously on the same rented spots for at least 5 years were protected from eviction and were given the option to purchase the land. This also applied to those cases where the tenant's spouse, child, brother, sister and/or parent had been living on the lot for the specified period of time. The Act encompassed both plantation and non-plantation tenancies.

The Tenancies Development Act covered the provision of essential services to the plots. A Housing Credit Fund was set up to help tenants buy lots under the Act as well as to help other low-income earners purchase land and for home improvement. The Agricultural Holdings Option to Purchase Act 1982 was passed to give those persons renting agricultural land (that is, not house spots) the option to purchase this land.

These reforms are commendable and represented the end to a system that had resulted in insecurity and that was closely linked to the immediate post-slavery era. They enabled a significant number of persons to move from this situation of insecurity to one of having access to land titles. To date, nearly 3 000 persons have purchased tenantry lots. The purchase of agricultural lots has proceeded at a much slower pace with only 150 purchases completed by 1992 out of a possible 1000 (Nurse 1992). As will be discussed in more detail, the majority

of the purchasers of the tenantry lots have been women. However, the lots are generally small in size and it can be argued that the reforms were insufficient to alter the extreme inequality in land distribution and that they could further entrench it. The small size of both the lots again brings to the forefront their potential lack of viability.

2. Rural development programmes¹³

Barbados does not have a clearly defined division between rural and urban areas. This is due in part to its small size, its relatively flat landscape, the fact that services are generally available throughout the island and a well developed physical infrastructure. In addition, as Nurse (1992) in his study of rural development in Barbados points out, local government ended in the early 1960s and the central government adopted a national approach in its policies and programmes. He continues,

On the other hand, projects and programmes in the agricultural sector naturally were concentrated in the rural areas. Hence, agricultural projects have become synonymous with rural development projects in Barbados. Although there have been efforts to implement integrated rural development projects... in most cases the agricultural component was the major one, given the nature of the rural environment (Nurse 1992:13).

The Barbados government has concentrated much effort on the development of infrastructure and the provision of basic services such as electricity, water and telephones across the island. Schools and public medical care in the form of polyclinics and a public hospital are easily accessible from every parish. There is also available a comprehensive public transportation system which has increasingly been supplemented by private concessionaires. Despite the cutbacks in social services because of the economic problems and the process of structural adjustment, these services continue to be available at an adequate level.

An examination of the major recent rural development projects in Barbados follows. As indicated above, in most of these the agricultural element is the strongest one, unlike other countries. Most of the programmes discussed comprised part of the government's diversification policies by seeking to reduce the mono-crop nature of the sector. They also formed part of the land distribution policies in terms of both legal access to land as well as long lease possibilities. The programmes are important for women both as residents of rural communities and as farmers in their own right.

¹³ James Nurse's comprehensive study on rural development in Barbados was particularly useful in compiling this section. The study was commissioned by IICA and the Ministry of Agriculture, Food and Fisheries.

a. Rural Development Project (RDP)

The Rural Development Project, which ran from 1980 until 1986 with IDB support, aimed to:

- Increase agricultural diversification and increase food production in Barbados to supply the domestic and tourism demand for foodstuffs.
- Raise the productivity and incomes of those small farmers, both tenantry and smallholder families participating in the project; and moreover, in the case of tenantry families, to provide a legal and institutional mechanism to permit them to acquire the lands on which they reside.

The RDP was administered by the then Barbados Agricultural Development Corporation (BADC), a statutory corporation, and comprised part of the government's diversification and land distribution policies. It was carried out through two major sub-programmes namely infrastructure and agricultural services and credit. The infrastructure and agricultural services sub-programme had the following elements: irrigation infrastructure; improvements to the potable water supply; construction of internal feeder roads; buildings, workshop and other improvements; machinery and equipment; and extension services. The credit sub-programme provided credit for both short-term crop production and longer-term agricultural investments to participating farmers. Nearly 1000 small farmers participated in the programme - 303 in rain-fed areas and 691 in irrigated areas. These figures were not disaggregated by sex.

Two related legislative acts were passed by the Government which helped in the implementation of the RDP - the Tenantry Freehold Purchase Act 1980 and the Agricultural Holdings to Purchase Act 1982. These acts gave persons renting house spots and land for a stipulated period of time the right to purchase these and they are discussed in the section above on land distribution.

The legal aspects of the RDP have already been analysed above. An evaluation survey indicated that the small farmers significantly increased their use of agricultural services in the project such as extension, tractor services, etc. The project, however, experienced time and cost overruns, and it is felt that these could have been reduced if a comprehensive feasibility study had been undertaken to identify and select specific farm units for the project (Nurse 1992). Participation was adversely affected because, for example, the idea that there should be security of tenure on the agricultural lots, suggesting a failure to take into full account the high level of rented lots among small farmers in Barbados.

b. Spring Hall Land Lease Project

The 1989 Agricultural Census highlights the extremely skewed distribution of land, with 99 per cent of the agricultural holdings operating on 10 or less hectares. The government has never attempted to bring about fundamental land reform but one of the programmes

implemented in 1982 to help small farmers gain access to arable land was the Spring Hall Land Lease Project. The project also sought to respond to the crop diversification policy by aiming to have the settled farmers develop non-sugar crops both for domestic and export markets. The Caribbean Development Bank assisted with the funding of the project which was administered by the BADC.

The project was aimed at developing 163 hectares of land at Spring Hall in the northern part of the island for settling 22 farmers who would produce sugar cane, food crops, other economic crops and livestock produce for local and export markets. Its components included: infrastructural activities such as on-farm road improvement and installation of electricity; provision of farm vehicles, field and dairy equipment; and credit to facilitate the purchase of agricultural inputs by farmers. A sub-component resulted in the installation of irrigation equipment for 20 farms with additional mains for rental.

The lots ranged in size from 3 hectares to over 12 hectares. The leases on the units would be for 30 years with an option to renew. Two were to be provided with dairy buildings and equipment; these were subsequently amalgamated into one farm. Some of the spots were eventually rented on a tenancy basis.

Various problems were experienced in administering the project. They have been identified by Nurse as a significant cost overrun, inappropriate design of tenant housing, plots too large, plots, the non-acceptance of sugar cane as a preferred crop by tenants, the inability to recruit suitably qualified tenants, inappropriate and inadequate irrigation technology, lack of adequate marketing outlets and insufficient technical staff in management. The failure to involve the participating farmers in the design of the project was seen as one of the primary contributing factors as well as the failure to take into account socio-cultural aspects to enable interaction of the community.

c. World Bank Agricultural Development Project

This was a major diversification programme implemented from 1983 with initial assistance from the World Bank. It was part of the government's overall diversification policy and sought to respond to the excessive dependence on sugar cane and its declining profitability. Additional concerns were the high and increasing level of food imports and weak institutional coordination and linkages in the sector.

The project's major objectives were:

- To reduce payments made for agricultural imports and to increase the agricultural export earnings.

- To improve farm incomes as a means of raising the standard of living of the agricultural community.
- To ensure a fair return for the farming community; and
- To stabilise the agricultural employment trend.

Its main components included the introduction of new high-value crops and varieties; and strengthening and upgrading systems and services such as extension, research, training and marketing. Sub-projects designed to provide new technology and needed equipment were also identified. These included the establishment of a central demonstration plot for peanut production; upgrading agricultural marketing facilities; and irrigation and fertilisation field trials and demonstrations.

Agricultural extension and training were key components of this project. Nurse asserts that the project was able to increase the awareness of the farming sector to the possibilities of diversification and reduce resistance to change. Measuring the project's impact by the volume and value of non-sugar production exports and increased yields, he suggests that it had a positive impact. This could be seen in the increase in the exports of non-sugar crops, the increase in non-sugar GDP and increased yields in crops such as peanuts, tomato and cotton.

Small farmers and women are unlikely to be involved in export crops, so their involvement in the project or its impact on them is likely to have been minimal.

d. BADMC's Mechanical Cultivation Services

The BADMC's mechanical cultivation services were started before the amalgamation of BADC and BMC to assist in the promotion of agricultural diversification. Low-cost services are available to farmers operating on 10 hectares or less. In addition to those provided through the RDP and the Spring Hall Land Lease Project, two services were offered: the Motor Tractor Cultivation Scheme providing cultivation (ploughing, rotovating, harrowing, etc.) and the Pilot Smallholders' Mechanisation Scheme providing mechanical cutting, loading and transportation to small sugar cane growers as well as mechanised tillage services to small farmers. These two services have been amalgamated for increased efficiency.

According to Nurse (1992), the services have had a positive impact on both full-time and small part-time farmers. The demand for the tractor cultivation services is so great that all requests cannot be met. Analysis of the services reveals that the total number of farmers benefiting from them by 1991 were over 5 000, primarily smaller farmers. It has been argued, however, that servicing very small plots has become un-economical and that the time allocated to them has adversely affected larger full-time farms (Nurse 1992). If it is decided to exclude very small farms, although based on the economics and reality of the situation, this would further reduce the services available to these farmers.

The discussion on the major rural development projects in Barbados confirm that emphasis has been given to the agricultural components. There have been no integrated rural development projects as such. The impact of these projects on women and small farmers has been varied and will be discussed in more detail in Section C.

3. Credit policy

The government implements its agricultural credit policy primarily through the Agricultural Banking Division of the Barbados National Bank, a statutory corporation. The national agricultural credit policy is not formally outlined but elements of it can be extracted as follows¹⁴:

- The major aspect of credit policy is the Barbados National Bank (BNB), Agricultural Banking Division which acts as an intermediary through which the government's financial resources are disbursed. Its purpose is to ensure the agricultural sector's access to credit. However, the larger part of the funds has gone into the sugar industry, i.e., large estates that are obstacles to the detriment of the non-sugar sector, where most of the small farmers can be found. Still, some of the funds of the sugar estates have been utilised for non-sugar cultivation.

- Provision of at least some agricultural credit on concessional terms to encourage agricultural expansion and development. The more business-oriented sugar plantation owners have benefited most from this, whereas little funding has reached smaller farmers or the non-sugar sector.

- Agricultural credit disbursed by the BNB is to be equally available for all agricultural activities. However, relatively little has been accessed by the non-sugar sector.

As a result of the elements of the agricultural credit policy outlined, most of the credit channeled towards the agricultural sector through the BNB has gone into the estate category towards the sugar industry. By 1992, the debt amassed by the industry to the BNB over the years was approximately US\$136 million, a situation which has threatened the BNB's existence. The government is taking steps to restructure this debt and to have it certified and extracted from the BNB's portfolio. The assets of the bankrupt part of the industry are being managed by the Barbados Agricultural Management Company (BAMC), a wholly owned subsidiary of the Barbados Agricultural Credit Trust (BACT), a parastatal company. The BAMC's management is through the employment of Booker Tate Limited, an international firm of sugar consultants. Eventually, the industry would be returned to the private sector.

¹⁴ These have been taken in part from the Sparks Companies Inc.'s review of the Barbados agricultural sector.

The Barbados Development Bank (BDB) was established by the government to provide financing for businesses, including those involved in agro-processing, although they represent only a small percentage of the BDB's loan portfolio.

There is only one private commercial bank offering credit specifically for agriculture. Table III.3 indicates that the agricultural sector accounted for only 2.5 per cent (US\$15.8 million) of total outstanding credit from commercial banks at the end of 1991. This represented the lowest level of outstanding credit. Most of this credit (44 per cent) was to the livestock sub-sector with food crops accounting for some 7 per cent. The credit policies of the commercial institutions are not generally geared towards the small farmer since emphasis is placed on collateral unlikely to be easily available to the average person.

There are a few private institutions specifically geared towards providing financial assistance to those unable to qualify for loans from the commercial sector. These include the Barbados Agricultural Society (BAS); the National Development Foundation of Barbados (NDFB); and Women in Development Ltd (WID). Both the statutory corporations and private institutions referred to are discussed in more detail in the following section except for WID Ltd., included under the women's programmes section.

Other sources of credit for women include credit unions, credit from suppliers of agricultural goods and services, friends or family and the informal credit system, popularly known in Barbados as a "meeting turn" or "sou sou."

It has been suggested that women do not have the same level of access to formal sources of credit because of their non-ownership of resources including land, which could be used for collateral. There are other factors in operation which also might operate against women and small-scale farmers receiving credit (Knudson and Yates 1981). This could include their reluctance to approach formal institutions as well as the effect of past or existing official policy towards them. An unwillingness to take economic risks, especially in situations of vulnerability, low returns and the scant possibility of covering losses through, for example, insurance are also other possible factors. As a result, many women prefer to make use of the informal means available to them and over which they have a greater measure of control.

**Table III.3. Commercial banks' credit by sector and maturity in Barbados, December 1991
(in US\$ millions).**

Source	Overdrafts	Loans	Total loans and overdrafts
Agriculture	8.3	7.5	15.8
Sugar	3.2	1.5	4.6
Livestock	3.3	3.6	6.9
Food crops	0.4	0.7	1.1
Other	1.5	1.8	3.3
Fisheries	0.1	0.7	0.8
Manufacturing	57.0	31.1	88.1
Distribution	74.5	29.2	103.7
Tourism	17.3	22.1	39.4
Public utilities	7.3	8.8	16.1
Construction	12.4	14.4	26.8
Government	1.9	11.2	13.0
Prof. and other Services	19.6	26.8	46.4
Personal	10.5	129.4	139.9
Miscellaneous	53.8	87.7	141.5
Total	262.4	368.9	631.2

Source: Central Bank of Barbados.

a. Agricultural Banking Division of the Barbados National Bank

The Agricultural Banking Division was established as an arm of the Barbados National Bank in 1978 and is an amalgamation of the Sugar Industry Agricultural Bank and the Agricultural Credit Bank. The Division is the intermediary through which government's financial resources are disbursed to the agricultural sector. The Division's purpose is to ensure that this sector has access to credit and its primary objective is to increase farmers' income through the provision of credit. It also aims to contribute to the promotion, expansion and diversification of agricultural enterprises in order to stimulate growth in agricultural output, employment, foreign exchange earnings and/or savings for the Barbadian economy.

Initially, loans were provided primarily for production operations and for the purchase of agricultural equipment. The lending operations are now wider through special credit schemes established to provide support to non-traditional agricultural activities.

The Division has three categories of loans:

- **Estates**, both sugar and non-sugar. The funds for this category are drawn from the Central Bank of Barbados and the BNB's commercial funds.
- **Projects** in excess of US\$5 000. Funds are primarily from the Caribbean Development Bank and the Inter-American Development Bank for the Rural Development Project. BNB's commercial funds are also used.
- **Small Farm Lending Programme**. The loans in this category are drawn primarily from a government subvention of US\$750 000; it is organised on the basis of a revolving fund.

i. Loan policy

The Projects and the Small Farm Lending Programme are for farms of less than 10 hectares and the applicant should be the owner or renter/lessee. In the case of medium-term loans, the land must be leased. However, a farmer on government or tenantry lands may qualify. Loans are given for the following: the preparation of farm lands; erection of and/or repairs to livestock pens; purchase of input supplies, e.g., seeds, fertilizers, chemicals for crop protection, feeding materials, and medication for livestock; wages; purchase and installation of irrigation equipment; purchase of heavy duty and hand-held tractors provided that the equipment is deemed appropriate to the scale of the operation, soil type and terrain.

A financial analysis is carried out with the farmer to determine the viability of the project. The grace periods are flexible. The manager has the discretion to give unsecured loans up to a maximum of US\$5 000. The present policy is to secure all loans, but this could be waived for *bona fide* farmers with good credit ratings. Less collateral would be requested if the project appears to be a potentially good one. Acceptable security includes: mortgages on chattel houses; fixed deposits; hypothecate savings accounts; bills of sale on equipment; shares; bonds; and guarantees with backing.

The interest rates are generally concessional and below the market rates. The Projects category has a flexible rate, usually 2 per cent above the prime rate. However if the project cannot support this rate, the loan could be drawn from the Small Farm Lending Programme, which has lower interest rates. The prime interest rate is applied to estate loans. The repayment period for projects is up to 10 years. Under the Small Farm Lending Programme, loans for production purposes are usually given 1 to 2 years depending on the nature of the cropping programme and the returns. Two to five years are given for livestock and equipment.

Clients are requested to make an investment into the project based on the category within which the loan falls:

- Projects - approximately 20 per cent of total investment cost.
- Small Farmers - more flexibility is applied. After assessing the project's financial viability, a value is assigned to the borrower's proposed input, which may be "sweat equity" with the result that the loan might represent 100 per cent of the total cost in some cases.

ii. Special schemes

The Agricultural Division also administers funds provided by the government or external agencies for special schemes such as:

- The Small Farmer Mechanisation Fund - provides funds for the purchase of vehicles.
- The Export Revolving Fund - provides loans to individuals and institutions involved in the exportation of non-sugar agricultural commodities and fish. Loans are interest-free for the first 40 days. It is open to both small and large producers.
- The National Fruit Orchard Project is financed by the European Economic Community (EEC) through a US\$500 000 grant.

Loans under the Fruit Orchard Project are for a maximum of US\$15 000 to assist small farmers in the establishment or maintenance of commercial orchards of .20 hectares or over. A concessionary interest rate is applied with a grace period depending on the crop or crops being produced. However, the BNB feels that the risk period and the repayment periods are too short and have asked the EEC to modify them. The EEC has also been asked to extend the funds for financing a larger selection of fruits for export and for the purchase of equipment to assist small commercial fruit growers in extracting fruit juices to sell to the tourist industry.

During 1993, the Division approved US\$42.2 million in loans. The sugar sub-sector received 99.4 per cent of the loans or US\$41.9 million (Economic Report 1993). Loans to 11 women farmers were approved, representing US\$26 450 or .06 per cent of the amount approved (Barbados National Bank). Women farmers and small farmers have therefore had limited access to credit through the BNB.

b. Barbados Development Bank (BDB)

The Barbados Development Bank is a statutory corporation which provides financing for businesses in the areas of industry, tourism, small business, including agro-businesses, and

fisheries. One of its strengths over the years has been the provision of technical assistance to its projects.

i. Loan policy

Unlike the commercial banks, the BDB undertakes pre-feasibility studies for its clients as a free service. Loans are not offered for amounts under US\$10 000 since they are not usually economically feasible. The exception is the fisheries sector where loans are offered for less than US\$7 500. The moratorium period varies according to the particular business. The same interest rates applied by commercial banks on medium-term loans, are applied to BDB's loans which are generally long-term, i.e., 10 to 15 years.

Tourism is BDB's largest sector, accounting for 48 per cent of the credit disbursed; industry and manufacturing account for 34 per cent; small business 10 per cent (large in terms of number of clients); and fisheries 5 per cent. Agro-industry accounts for less than 1 per cent (US\$49 000) of the BDB's portfolio.

c. Barbados Agricultural Society

The Barbados Agricultural Society (BAS) is a non-profit, umbrella organisation which co-ordinates the activities of six producer or commodity groups and provides various subsidised services to these groups. It was established in 1890 and revamped in 1974. It is able to influence government policy on non-sugar agriculture through its participation on government-sponsored committees and boards such as the Barbados Marketing Corporation (BMC), the Dairy Development Committee, the Egg and Poultry Production and Marketing Committee and the Pig Production and Marketing Committee. This has also been done through the provision of advice and services, not only to its members but to all farmers. These services include accounting, secretarial, marketing, agricultural education, training and credit.

i. Loan Policy

In 1982, a savings and credit facility was started for the BAS' members, with the primary objective of reducing the hardships faced by small farmers in securing credit from the existing institutions. The facility's initial capital was US\$125 000. The maximum loan amount of US\$7 500 is available to both vegetable and livestock farmers. The terms and conditions are relatively lenient. A grant of US\$225 000 has been recently received specifically for livestock development through the provision of credit.

No collateral is required, but one of the stipulations is that the produce must be marketed through the BAS, which deducts the loan payments. Another stipulation is that the loan has

to be used for an aspect of production. Ninety per cent of BAS loans are disbursed for pig farming.

d. National Development Foundation of Barbados

The National Development Foundation of Barbados is a member of the Caribbean group of National Development Foundations. These foundations were created by the private sector to respond to the needs of technical assistance, training and credit of the small business sector, particularly those entrepreneurs who have been unable to secure credit through the normal commercial channels. The NDFB was established in 1982 as a non-profit organisation. It provides assistance to small business entrepreneurs in the areas of management, loan capital, financial monitoring and marketing.

i. Loan policy

The NDFB makes loans to its clients of not more than US\$10 000 per person. The policy is to aim for an equal distribution of its loan portfolio between men and women. A management training programme is tied to all loans covering various subjects and a fee for the programme is built into the loan. Collateral is required in the form of business or personal assets.

The present interest rate is 11.5 per cent and there is a maximum repayment period of 5 years. For agricultural projects there is a moratorium of 3 - 6 months, depending on the nature of the crop. There has been an increasing number of applications for loans for agricultural projects.

The NDFB has impacted positively on the development of small businesses in the Barbadian economy. However, the services sector has dominated their loans portfolio. Over the years, 52 per cent of its clients have been located in the services sector, as compared with 25 per cent in agriculture and 23 per cent in manufacturing. Between 1987-1990, US\$326 000 went into the services sector compared, with US\$76 000 for agriculture. A significant percentage (31 per cent) loan clients have been women; 46 per cent and 23 per cent being men and groups respectively.

4. Technology generation and transfer¹⁵

Technology generation and transfer in the agricultural sector is done primarily by the government. The Ministry of Agriculture, Food and Fisheries (MAFF) and the Barbados Agricultural Development and Marketing Corporation (BADMC) are the principal governmental agencies. Other agencies include the Barbados Agricultural Society (BAS), the

¹⁵ For a more in depth discussion on this area, please refer to the Technology and Marketing report of this project.

Bureau of Women's Affairs, the National Development Foundation of Barbados (NDFB), among others.

The MAFF no longer offers traditional extension services, but combines research and extension. Research is carried out on food crops, non-food crops and livestock development. Technical information thus generated is transferred to farmers through extension materials and other activities such as demonstration plots and field days. However, emphasis is presently placed on holding seminars on particular topics.

The BADMC undertakes applied research and demonstrations on crops with the MAFF for both large- and small-scale farmers. It has undertaken an irrigation development programme aimed at researching the appropriate technology for the development of export crops. Irrigation schemes are also provided under the Rural Development Programme and the Spring Hall Land Lease Project. Dairy research in the areas of sugar cane feeding trials, pasture improvement and management, forage conservation and herd management practice is conducted (Nurse 1993). Other agencies operate either through extension services or offer seminars, workshops or projects targeted at specific production groups.

Large farms tend to benefit more from the MAFF's present approach to technology transfer. Farmers who can have a greater impact on generating exports are targeted. Large farms have more and better lands, better machinery and equipment and are already more oriented towards the export sector. As a result, the access of smaller farmers, including women, is adversely affected. In addition, none of the agencies involved in technology generation and transfer except the Women's Bureau incorporate a gender approach in their activities. This, as in other areas, inhibits women's access to available resources.

5. Extension

The delivery of extension services to all sections of the farming community is seen as an important part of agricultural development by the government. In order to meet the needs, the MAFF provides extension services, supplemented by the former BADC which was the government's small farmer development arm. The government also gave an annual subvention of to the BAS to assist it in carrying out its programmes, including the provision of extension services. This subvention was drastically reduced from US\$125 000 to US\$20 000 in recent years, and removed altogether in 1994, causing the BAS to limit its extension workers. At the same time, the MAFF's and the BADC's budgets were also cut, effectively reducing the extension services to farmers.

a. The Ministry of Agriculture, Food and Fisheries (MAFF)

The Ministry has overall responsibility for the agricultural sector in Barbados. In terms of its services to farmers, the approach was changed during the 1980s from one of having specialist

extension officers to one of extension and research. All technical personnel presently have responsibility for extension and research linked to different commodities. Research is conducted on farmers' plots and there are field days and demonstration plots. The main strategy is to hold seminars on specific topics for selected farmers. There have been both support for and criticism of the extension/research approach. It is contended that communications between the specialist researchers and farmers will improve. On the other hand, it is suggested that it is a waste of limited human resources to have specialist researchers involved in extension and administration.

The government's export thrust has influenced its policy on extension to the extent that emphasis is placed on delivering support services to those with the most potential in this area, that is the large farms. It is felt that since the large farms control more land, they stand a better chance of increasing their output and making an impact in the area of earning foreign exchange. The most recent agricultural sector plan 1993-2000 states that there will be improved extension services to farmers producing export commodities. These policies would adversely affect small and women farmers' access to extension services since they tend to be more heavily involved in crops for the local market.

Another contributing factor is the limited number of agricultural officers and restrictions on travel alongside the large number of small farmers. This strengthens the arguments for focusing on the large farms for greater impact. It is also contended that information will trickle down to the small farms. Information is generally passed on to the small farmer through pamphlets, fact sheets, demonstration plots, field days and videos.

b. Barbados Agricultural Development and Marketing Corporation (BADMC)

The BADMC is a statutory corporation and an amalgamation of the Barbados Marketing Corporation (BMC) and the Barbados Agricultural Development Corporation (BADC). The latter was the Ministry's small farm development arm and also managed the government's estates. The amalgamation took place in 1993.

The extension services offered are done through traditional extension strategies where the extension officers are generalists and refer specific problems to the specialists. Formal training is not carried out, but information is passed to the farmers primarily through individual farm visits. There are also farmers/group meetings, field trips and field days, seminars and lectures. There are no restrictions by sex.

The BADMC's extension services are in great demand particularly since the Ministry of Agriculture's change in its approach to extension and its focus on larger farms. Although most of the demand is being satisfied, problems are experienced because of the large number of small farmers, financial constraints and the farmers' unwillingness or inability to invest in experiments and demonstrations. Difficulties are also being experienced in getting farmers to attend meetings or to attend field days and field trips. There is also increasing demand for

livestock services which fall outside of their responsibilities. In addition, the BADMC does not cover the parishes of St. Andrew and St. Joseph and parts of St. Thomas and St. Lucy.

The percentage of women farmers seen either as the main farmer or working on a family farm is relatively small. On an average, according to extension workers, work is done with one female farmer to every four or five male farmers. As in other agricultural organisations in Barbados, little or no recognition is given to gender relations and therefore little attempt is made to incorporate a gender perspective into the delivery of extension services.

c. Barbados Agricultural Society (BAS)

As part of the government's attempt to reduce expenditure, the annual grant to the BAS of US\$125 000 was withdrawn. Prior to this, extension services in the areas of livestock and food crops were provided. These services included production and management techniques. Strategies comprised individual visits, in-field demonstrations, seminars, technical bulletins and the use of radio programmes. There were no restrictions by sex, but again a gender perspective was not incorporated. According to the extension officers, approximately one-third of the farmers seen in field visits would be women. Further, it was noted that field visits reached more women who are unlikely to attend seminars and demonstrations. Since the withdrawal of the subvention, the two extension officers were laid off and the livestock programme was terminated.

6. Agricultural education and training

The Barbados government has committed itself as a matter of policy to training farmers as well as professionals and technicians. It considers its role to be the provision of a cadre of persons trained in the various disciplines of agriculture for employment both in the public and private sectors. In addition to the extension services more formal training programmes are available through the public sector with both academic and practical training being provided by the Samuel Jackman Prescod Polytechnic. Plans are on stream for training to the Associate Degree level at the Barbados Community College. The Skills Training Board also offers practical training in various aspects of agriculture. In keeping with the government's educational policy, the training provided is free to students. Agricultural education is offered in some schools. Agricultural training is also available through private sector organisations.

a. Samuel Jackman Prescod Polytechnic (SJPP)

The Samuel Jackman Prescod Polytechnic is a government-run agency which provides training in a number of areas. One of these is a two year Diploma in Agriculture awarded by the Polytechnic and introduced in 1976. Students are also entered for the City and Guild

Programme which is offered by Britain. The tutor indicated that the Diploma is of a higher standard than the City and Guild Programme.

The primary areas of study are as follows: Crops - Crop production; husbandry; soils; crop protection; horticulture; Livestock - Livestock production; animal husbandry; nutrition and health; Farm courses - Farm structure and management; machinery; and co-operatives; Apiculture; and General Studies - English; Civics; Accounts and Bookkeeping.

The programme also includes a term's attachment to a farm. There are approximately 30 students per year, half of whom graduate. The majority of past students are not working in the area of agriculture but this is not necessarily considered to be a loss since self-development is emphasised in the programme. Twenty per cent of the students in any one year are usually female. However, female participation has been rising over the years; in 1985 - 1986, 14.1 per cent of the students enrolled were female, whereas by 1992 - 1993, this had increased to 22.1 per cent.

b. National Development Foundation of Barbados (NDFB)

The NDFB ties a management training programme to all of its loans; a fee for the training is built into the loan. Topics include marketing, record keeping, business planning and self awareness. The NDFB also offers a business training programme for women for 3 hours on Saturday mornings. This is open to the public. On Saturday afternoons, there is training in agriculture. Subjects covered include What Agriculture Is, Techniques of Farming, and Post-harvest Handling, among others. This programme runs for 3 hours per session over 15 weeks and is funded by the European Economic Community. Most of the participants are young, part-time persons who have recently gone into farming. Women usually comprise only a quarter of the participants.

c. National Training Board (NTB)

The National Training Board is a statutory corporation which was established in 1979. It is an umbrella organisation comprising employers, government and workers and offers occupational training. Training includes a three months skills training programme, a retrenched workers programme and a new opportunities programme. The courses offered or planned through the retrenched workers programme include tractor operations and maintenance, general farming, and food processing. This programme is geared towards assisting laid-off workers become self-employed. The new opportunities programme aims to retrain laid off persons for employment in different areas and courses include Agriculture and Food Processing.

d. Other

The public and private agricultural agencies offer formal and semi-formal training such as seminars and lecture/discussions as part of and in addition to their extension services. There are also a number of other institutions and groups offering training in various areas to which farmers have access. For example, the Barbados Institute of Management and Productivity which offers a range of courses in management and small business development; WID Ltd. which offers a course in business training. An examination of the course offerings of both large and small agencies did not reveal any agricultural-related training. The Barbados Community College is expected to commence an advanced course in agriculture in September 1994.

B. Policies Directed at Rural Women or Women Food Producers

Table III.4 provides information on some of the women's programmes that have been or are being carried out in Barbados. An examination reveals that agriculture has not been given priority emphasis. Rural women have been involved in many of the programmes, but only two have had a specific focus on them. Since many of the programmes, are located in urban areas, this might limit the participation of rural women.

Most of the programmes fall into the "Other Productive Activities" category, which includes programmes designed to increase family income. These have been primarily skills training programmes in areas such as handicraft, cookery, dress-making, in other words skills which have been traditionally associated with women. This is in keeping with the traditional equation of women's projects with skills training projects. These programmes have tended to be organised and offered by NGOs, specifically women's groups and can generally be described as welfare-oriented. Generally, few of them have conducted market surveys or feasibility studies before launching their programmes. Despite this, these skills training programmes have been responding to an increasing need and demand by women to upgrade their skills or acquire new skills to generate employment and income.

There are few programmes aimed at women's empowerment and few integrated community-based programmes. In addition, none of the regional and international organisations which are based in Barbados are involved in sustained local activities. This is particularly striking in the case of the Women and Development Unit (WAND), one of the outreach arms of the University of the West Indies. WAND incorporates a community approach with women's empowerment and alternative development approaches as its key tenets. Barbados has proved to be a difficult place to carry out community-based, action-oriented programmes with activities offering greater potential for individual success.

Women's programmes or projects with a specific focus on rural women or agriculture will be described and analysed below.

Table III.4 Selected women's programmes and projects in Barbados for the 1980-1994 period.

Institutions	Description	Types of Programmes/Projects						Orientation		Results
		Welfare	Reproductive	Productive Activities			Rural	Urban		
				Agricultural	Marketing	Other				
1. PUBLIC Bureau of Women's Affairs Preserved Dried Fruit Project	1980-1984, 49 women and 1 man trained. Approx. US\$44 000			x			x	x	Encouraged import substitution through use of local fruit and solar drying Generated employment for women Inadequate attention to market research and marketing	
Operation and Management of Small Businesses	1988: 145 persons trained-over 75% women					x				
Use of Local Materials for Employment	1992, 57 women and 7 men trained in 3 workshops, each for duration of 2 weeks US\$64 000						x		Technical and financial assistance provided for setting up own businesses. Participants learnt technologies such as solar drying and use of local materials	
Welfare Department Welfare Maintenance Programme	To 1992, 3- months training programmes for mothers on welfare in budgeting, handicrafts, etc							x	Successful - at end of programmes, women came off welfare after earning money from handicraft.	
2. NGOs Soroptimists International of Barbados Self-development and skills Training Programme	1994 with 25-30 delinquent girls, 3 months duration							x	Helped girls in self-motivation as well as to develop skills for employment.	
St. Joseph Women's Institute Skills Training	Ongoing programmes - 21 women trained to date in dressmaking, flower arranging, etc.; 1 trainer, each class is 10 weeks							x	Training in traditional women's activities Personal development and interpersonal dynamics component with W/AND was not sustained.	

Institutions	Description	Types of Programmes/Projects					Orientation		Results
		Welfare	Reproductive	Productive Activities			Rural	Urban	
				Agricultural	Mar- keting	Other			
St. Michael South East Craft Guild Community Skills Programme	Ongoing programmes in basketry, cushion-making, embroidery, etc. and group development; 12-17 women in each class.					x	x		Training in traditional women's activities. Personal development and inter-personal dynamics component with WAND was not sustained.
Women in Development Ltd Credit and Small Business Training	1980 - present: Ongoing credit assistance. Training attached to loans					x	x		Has helped unemployed women to develop income-generating skill. Also has key component of group building.
National Development Foundation of Barbados Small Business Management Course for Women	Done in conjunction with NOW (see below)				x		x		Comprehensive programme but conducted on Saturday mornings - timing might be problematic for women.
Barbados Workers' Union Labor College Seminars for Women Workers	1979 - present: Ongoing seminars of 1 or 2 weeks duration; 15-25 women.					x	x		Comprehensive, covering wide range of topics leadership training, industrial relations, impact of SAPs; women and family, gender and society.
YWCA	Ongoing training in handicraft, cooking, child care, office procedures, building, drawing.		x			x	x		Many women have been trained over the years. Generally offers traditional women's courses.
DLP League of Women Chocolate Making, Cottage Industries, Effective Speaking, etc.						x		x	Primarily traditional courses offered. Chocolate making was slight departure since it is not a traditional Barbadian activity for neither women nor men. Courses on effective speaking are necessary steps towards increasing women's self-confidence.

Institutions	Description	Types of Programmes/Projects						Orientation		Results
		Welfare	Reproductive	Productive Activities			Rural	Urban		
				Agricultural	Marketing	Other				
National Organization of Women Small Business Management Course	1980s: Conducted through NDFB: 2 courses per year; 10 weeks duration; 25 participants, mainly women.				x		x		x	Comprehensive programme; no information collected on follow-up of participants.
PAREDOS Programme for Teenaged Mothers	2 year programme in handicraft, office procedures, parenting family planning, etc. including home visits. 1st. year - 45; 2nd year - 20. US\$22 500.	x	x				x		x	Comprehensive programme covering a range of topics, however, emphasis seemed to have been placed on family planning and child care.
3. UNTS AGENCIES Inter-American Development Bank Programme for Strengthening Women's Bureau - funding support	3 year programme starting 1994 for training, small business development, agro-processing, funding for groups, etc. US\$500 000.			x	x				x	Potentially high impact if managed effectively. Necessary support to Bureau, presently understaffed with limited resources.
Caribbean Development Bank Funding Support to WID	Ongoing									
Canada Fund for Local Initiatives Training for Unemployed Women; Women-run and targeted projects - funding support	Ongoing 1992/1993: approx. US\$108 000			x	x				x	
British Development Division Funding support to Women's Bureau re 1995 UN Women's Conference									x	

Institutions	Description	Types of Programmes/Projects						Orientations		Results
		Welfare	Reproductive	Productive Activities			Rural	Urban		
				Agricultural	Mar- keting	Other				
UNIFEM - Small Business Training - funding support to NDFB United States Agency for International Development - funding support to WID UNDP/ILO Promotion of Income Generating Activities through Self-employment	1990: 1 years duration; run through NDFB; US\$50 600 Ongoing	x		x			x	x	Helped poor women to increase their ability to earn income. Revolving loan fund set up. Enabled rural, unemployed women to gain income-generating skills and techniques of running a business. Group business set up, but not sustained.	

The Bureau of Women's Affairs was established in 1979 subsequent to the creation of the Department of Women's Affairs in 1976. The Bureau's primary function is to address all issues concerning women and in particular to ensure that the principle of equality between men and women is maintained.

The Bureau has reported on two projects with agricultural components and which involved rural as well as urban women. The Preserved Dried Fruit Project was started in 1980, lasting for four years with funding and for three as a private corporation. The project aimed to contribute to the reduction of unemployment among women; to encourage import substitution and to promote self-generating employment using local resources. These included fruit and solar energy. Participants came from rural and urban locations. The project comprised three training courses. After funding ended in 1984, eight of the female participants formed Bajanne Producers, which operated independently from 1985 to 1987 with technical support from the Bureau.

In 1992, three workshops were held to assist in the development of the employment-generation of local non-traditional materials and to offer women a new approach to self-employment creation. One of the workshops was held in a rural area. Technical and financial assistance was offered to assist participants in establishing their own businesses. Both of these projects stressed the use of local resources, the first including an import substitution element.

The Women in Development Ltd. Barbados Office was opened in 1979 as part of the Women Development Inc. based in Washington D.C. Its main objective is to assist low-income persons in creating income-generating opportunities. The original idea of providing assistance to women has been changed, with men also benefiting from WID's services. Specific objectives are to facilitate credit and technical assistance; to assist clients in obtaining job opportunities and to provide training in priority areas.

Small loans are given to a wide variety of businesses in the areas of agriculture, manufacturing, services and retail. The amount of the loan can range from a few hundred dollars to US\$10 000. However, there has been one loan for US\$15 000. Loan clients are given short- and long-term supervision and the attention of the field officers on a regular basis. Business training is offered both to clients and the general public.

Collateral is requested in the form of guarantors or equipment. Clients are also expected to have a personal financial stake in the project. The interest rate is 8.5 per cent add on - 15.5 per cent.

The total loans disbursed by WID between the years 1980 to 1992 were US\$1 075 346 as follows: services 39.0 per cent; manufacturing 31.1 per cent; distribution 23.1 per cent; and agriculture 6.8 per cent. In the agricultural sector, poultry was the leading category, accounting for 51 per cent of the loans disbursed. Livestock and vegetables each accounted for some 4.1 per cent of the loans and 14.3 per cent and 6.1 per cent went towards pig farm and farm

development respectively. Eighty-two per cent of WID's loans between 1980 - 1992 went to women.

The UNDP, in conjunction with the International Labour Organisation (ILO), funded a project in 1987 on the promotion of income-generating activities through self-employment. The project was based in a rural area (St. Joseph) and had a specific focus on rural, unemployed women. Twenty-four women were trained in handicraft production and business management. The project focused on the use of local resources available in the area. Seven of the women continued to operate as a business venture.

C. The Effects of Agricultural and Women-directed Policies on Small Farmers and Rural Women

Agricultural policies have generally not focused on gender and women's issues in attempting to solve the problems facing the sector. They play important roles in nutrition and in the production and marketing of food. Failure to incorporate a gender approach results in a failure to count women's unwaged work, to recognise the link between women's productive and reproductive work and to recognise the existence of gender-based hierarchies in the household, community and society (Antrobus 1992). Despite this, some policies have had a positive impact on women by assisting them in gaining titles to land, to access more credit and other resources. However, they continue to be at a disadvantage to male farmers.

The following section analyses the impact of the agricultural and women-directed policies and programmes on rural women and women farmers. Agricultural policies are discussed first.

1. Agricultural policies

The policies are analysed following the same order as previous sections. Agricultural organisations are also discussed.

a. Land use and control

There is no discrimination in the Barbados' laws with regards to women acquiring land. Depending on the way in which this land is passed on, the result might be "family land", that is, land inherited and owned by several family members. Law reform has simplified the issue of property distribution among family members with the court being able to alter the existing property interests of the various parties. The factors to be considered include financial contribution in addition to one's contribution as parent or homemaker. This is an important achievement for rural women and other women alike.

The Tenantry Freehold Purchase Act and the Agricultural Land Options to Purchase Act enabled smallholders, many of whom were farmers, to acquire titles to their land. As such,

there were important pieces of legislation virtually ending a system which had been in existence for over 100 years. A manual count of purchasers of lots in plantation tenancies under the first Act revealed that slightly more women than men have acquired titles to the land (Table III.5). A total of 1 457 women (52 per cent) took the opportunity to purchase land; the percentages of women were particularly high in the rural parishes of St. Thomas (59 per cent) and St. John (52 per cent).

These ownership patterns suggest a favourable situation, especially when national Census findings show that some 43 per cent of household heads are women. However, a different picture emerges if the situation is examined at a national level and the data on female- and male-controlled holdings are combined. Of 17 112 holdings, only 21 per cent are owned by women, whereas 32 per cent are male-owned.

Women tend to operate on smaller lots and experience difficulties when seeking to rent land for agricultural purposes. Anecdotal evidence suggests that landlords/ladies generally seem to prefer to rent agricultural land to men, based on the popular perception that women are not serious farmers.

b. Rural development programmes

There is generally no reference to women in the various rural development programmes, nor an acknowledgement of gender differentials and the need for an awareness of these in planning and implementing projects.

Seventeen of the 21 farms in the Spring Hall Land Lease Project are presently occupied, although no rent is paid and others are not actively in farm use. There are three agreements with females, two on a lease basis and one on a tenancy basis. However, the project manager noted that the project was geared towards farming families. As a consequence, there are other women actively involved on the farms as spouses/partners where the man's name is on the agreement. The plots range from 3 to 19½ hectares, excluding the dairy farm of approximately 27 hectares. Those with women's names on the agreements comprise the following sizes: 5½ hectares; 6 hectares; and 9 hectares.

Table III.5. Acquisition of plantation tenantry land as at October 1993 in Barbados.

Parish	Number of tenancies	Plans received (No)	Lots purchased (No)	Titles in female names	% Titles in female names
St. Andrew	11	196	43	20	48
Christ Church	27	563	328	174	53
St. George	53	1045	564	260	46
St. James	15	164	74	37	50
St. Joseph	24	410	121	55	45
St. Lucy	29	376	173	81	47
St. Michael	11	275	181	79	44
St. Peter	34	370	173	81	47
St. Philip	49	872	430	198	46
St. Thomas	37	631	339	201	59
St. John	34	945	450	271	60
TOTAL	324	5845	2876	1457	52

Source: Ministry of Housing and Lands.

The participation of women in the Springhall Land Lease Project has been at a relatively low level, partly because women were not specifically targeted. The same situation obtains with other rural development programmes. In addition, Peltier suggests that women were not considered to be appropriate tenants [nor as farmers in their own right] but rather as beneficiaries in so far as the scheme affected their domestic roles within the family. The major share of the budget has been allocated to field production activities whereas much of women's productive activities take place within the home. Based on this, he suggests that men might tend to benefit more from the project.

Peltier notes further that even when the project was evaluated, the recommendations called for the tenant selection committee to be more stringent in the selection of prospective tenants but did not suggest in any way that women be considered within the prospective tenant list. Another problematic area for women is the absence of houses on some of the farms; farmers would either have to erect temporary housing or work on a non-residential basis. The latter could prove to be burdensome for women because of their home production and reproductive activities and depending on the life cycle of the household.

c. Credit

Most of the public and private agencies offering credit to the agricultural sector report that women comprise a minority of their clients. The Agricultural Banking Division of the BNB reported that more men than women approach that institution for loans whereas women tend to be involved in joint arrangements with their spouses or partners. The NDFB aims for an equal ratio of men and women in the distribution of its loans, but few women are applying. The BAS presently has 58 loans outstanding for some US\$15 000; only one of these loans is to a female. Prior to 1991, there had been 10 to 15 women with loans.

Women account for almost half of the BDB's clients in its small business sector, particularly in the area of services. In the fisheries sector, female clients are primarily involved in marketing; only one woman in the sector owns an ice-boat and others assist in financing fishing boats. None are involved in fish processing.

Personnel from the various agencies made a number of observations about women farmers and clients. They suggested that women tended to apply for smaller loans and to utilise their savings rather than credit; were not risk takers; preferred to build up their businesses over time (in contrast to men); honoured their loan commitments better than men; were better managers but were hampered by their dislike of credit; and that young women were the ones coming forward with the most creative ideas.

d. Technology

Large farms tend to benefit more from the MAFF's present approach to technology transfer. They have more and better lands, better machinery and equipment and are already more oriented towards the export sector. As a result, the access of smaller farmers including women to new and improved technologies is adversely affected. In addition, none of the agencies involved in technology generation and transfer except the Women's Bureau incorporate a gender approach in their activities. This, as in other areas, inhibits women's access to available resources.

e. Extension

Although there are no restrictions by sex in the area of agricultural extension, officers noted that they make contact with more men than women. Although this was felt by some to occur because of the higher ratio of men farmers to women farmers, another factor mentioned was the tendency to work with male farmers in visits to family operations. One extension officer who worked as an interviewer on the survey for this project expressed surprise at the number of women involved in agriculture and the fact that in many cases even when males are present in the household, the women are the ones managing the farm. However, more women were reached through farm visits than through more formal training sessions since women generally

do not attend the latter. One determining factor, it was suggested, was women's lack of time because of home management responsibilities as well as the timing of training courses. The extension officers generally believe that women are potentially better farmers, are more responsive to advice, and place more trust in the extension officers than their male counterparts.

f. Education and training

Women are under-represented in the training programmes for which information is available. Approximately 25 per cent of the participants in the NDFB's agricultural training course for example are women. Similarly, the average female participation on the Diploma in Agriculture course offered by the SJPP is only 20 per cent. Contributing factors were felt to be women's reproductive responsibilities; the timing of the training; the teaching methods used and, for the younger woman, a lack of interest in agriculture as a viable career.

g. Agricultural organisations

Agricultural organisations are dominated by males both at the levels of leadership and membership. This reflects the situation in the wider society and reconfirms the need for women's empowerment. An analysis revealed only two female presidents of agricultural organisations, few board members and limited membership of organisations. The BAS, the largest organisation made up of various commodity groups, noted that its membership mainly comprises men and families. Its Food Crops Farmers' Association was the only one with a majority female membership and a female as president. The BAS' commodity groups also have a disproportionate number of whites and large-scale farmers in leadership positions confirming the continuing importance of race and class as factors in Barbadian society.

The three interrelated factors of gender, race and class in terms of organisational membership suggest a limited voice for and by women, small-scale and black farmers. Gains by one group do not necessarily translate into gains for other groups, so that each party needs have the opportunity to lobby in its own interest, but not excluding the interests, of others. The interests of some sectors are not being met. An understanding of the importance of gender relations and the intertwining of gender with race and class would be the first step towards an alternative model.

2. Women-directed policies

The women-directed policies outlined above would have had some impact on women farmers and rural women particularly in the area of skills training and credit through agencies such as WID and NDFB. The majority of WID's clients are female and over the years since its first loan was disbursed in 1980 until 1992, a total of 410 females and 52 males have received loans. Loans have also been disbursed to 15 female partnerships and 44 male/female

partnerships. However, agriculture has received only 6.8 per cent of WID funding, with poultry being the leading category accounting for 51 per cent of the disbursements. The training in small business management also had a positive impact.

The training in a variety of skills would also have enabled women to acquire skills for employment and income-generation. However, the main thrusts of the training programmes have been on skills traditional to women rather than attempting to branch into non-traditional areas, thus increasing the potential for job creation. This would also be one step towards challenging the status quo as it relates to women.

This chapter has explored the major agricultural and rural development policies and their impact on women and small farms in general. There has been a relatively high level of support to the small-farming sector from the government, NGOs and the private sector. Although women have generally benefited from this support, because there has been little or no acknowledgement of gender differentials, it has been argued that women have been adversely affected in some cases.

IV. THE CONTRIBUTION OF WOMEN TO NATIONAL AGRICULTURAL OUTPUT

Women's involvement in the labour force is an essential aspect of Caribbean life; they often are responsible for the survival of themselves and their families in the absence of a male breadwinner in the home. This extends to the agricultural sector where women are involved at all levels, including decision-makers, producers, unpaid family helpers, labourers, processors, and traders, as well as in the reproductive sphere. Their involvement in the agricultural sector as in other sectors is not static and tends to reflect changes in the wider economy. In any case, they make a significant contribution to national agricultural output, a contribution generally underestimated by official statistics that tend to focus on activities in the field and on the male as the farmer.

This section examines the official statistics on women in the agricultural sector and the types of activities in which they are involved. We then attempt to re-estimate their real situation in the sector and to calculate their estimate their contribution to the income of the farm..

A. Women's Employment in the Agricultural Sector

Women's involvement in the agricultural sector has been decreasing over the years as more attractive opportunities opened up in other sectors such as tourism and the service sector in general. Agriculture nevertheless remains an importance source of employment and income, both on full-time and part-time bases.

1. Employment and trends

During slavery, both men and women were forced to work side by side in the plantation fields and in many cases women outnumbered men since the latter were given the more élite positions such as artisans and watchmen. In addition, women worked in the planter households. On top of these duties, historical accounts suggest that they had to assume full responsibility for caring for their young children as well as other domestic duties.

After emancipation in 1838, according to Barrow (1986), this changed somewhat with the increased mechanisation of plantation work, which tended to exclude women, and the importation of indentured labour in some countries. There is also evidence that some women chose to work in their homes. Those who continued to work outside the home did so in an occupational structure which increasingly operated against them. They no longer had access to the services provided by the plantation and so fully shouldered the responsibility for social reproduction and production (Barrow 1986). Many women moved to the urban areas, but with access to a narrow range of jobs such as domestic workers and in retailing (Momsen 1986).

As emigration outlets started to open up in the early nineteenth century to work on the Panama Canal, males were the ones taking advantage of these opportunities. One of the results,

according to Beckles (1990) was that planters in Barbados employed women to do what had virtually become "men's work" at wages below what had been paid to men.

Black women, who took opportunities to remove themselves from some of the more physically arduous tasks on estates after the abolition of slavery, found that they were unable to refuse the wages which field labour offered and continued to be the dominant sex in field gangs, as well as in the factory (Beckles 1990:143).

Another result was a higher ratio of female employment. In the years leading up to 1921, the male/female ratio was at its highest: 679 males to every 1000 females (Barrow 1986). This has dropped over the years, with unemployment rates among women being steadily higher than those for men.

In terms of the agricultural sector, the number of women has been declining since the 1960s. The number of women employed in agriculture (including sugar and fisheries) dropped from 11 400 in 1946, representing 25 per cent of the female economically active population (EAP), to 9 200 in 1960. It dropped further to 5 100 by 1970 or 16 per cent of the female EAP; to 2 900 or 5 per cent in 1981 and 1 900 or 3 per cent in 1992 (Table IV.1). If sugar is excluded from the 1992 figures, only 2 per cent of the female EAP was employed in the agricultural sector, including fishing.

Males have also been withdrawing from agriculture - from one-third of the male EAP in 1946 to 18 per cent by 1970, 8 per cent in 1985 and 6 per cent in 1992 (Massiah 1984; Statistical Service). This withdrawal from agriculture applies to all age groups. However, anecdotal evidence suggests that the recession is forcing increasing numbers of women back into dependence on farming both for subsistence and for income to support their families.

The withdrawal of both men and women from agriculture reflects the sugar industry's declining importance in the economy. Since the 1960s, increasing importance has been placed on tourism and manufacturing as major income earners and employment generators, and in more recent times other aspects of the service sector. It also reflects a general anti-agricultural bias, especially among younger and more formally educated persons.

The trend for females moving into the service sector is as follows: 1946 - 15 200 or 38 per cent of the female EAP; 1960 - 13 200 or 38 per cent; 1970 - 15 000 or 38 per cent (Massiah 1984). Data from the Statistical Service Labour Force Survey for 1992, (Table IV.1) reveal a significant increase in the number of women employed in the service sector. This trend confirms the importance of the tourist and service sector and the continuing importance of the public sector as a source of employment even in the recessionary period. It also suggests the increasing importance of Export Processing Zones (EPZs) in the economy and as a source of employment for women. The low-paying jobs created in the EPZs are targeted towards women and often have poor and exploitative working conditions attached to them. Their encourage-

ment also often comprises part of the IMF's growth-promotion phase as a strategy to reduce unemployment.

Table IV.1. Employment by industry group and sex in Barbados in 1981, 1985, 1991 and 1992 (in thousands).

Industry Group	1981		1985		1991		1992	
	Female	Male	Female	Male	Female	Male	Female	Male
Agriculture and fishing	3.8	5.6	2.9	4.9	1.1	2.3	1.0	2.5
Sugar	-	-	-	-	0.9	1.3	0.9	1.6
Manufacturing	7.7	6.4	6.5	5.5	5.0	5.2	5.1	4.8
Electricity, gas and water	0.1	1.1	0.2	2.1	0.3	1.4	0.3	1.3
Construction and quarrying	0.2	6.1	0.2	6.9	0.5	8.0	0.2	7.2
Distributive trade, restaurants and hotels	10.8	12.6	10.7	9.4	-	-	-	-
Wholesale and retail trade	-	-	-	-	8.0	8.0	7.6	6.7
Tourism	-	-	-	-	4.6	4.2	4.8	4.7
Transport and communications	1.2	3.6	1.1	4.0	1.3	3.5	1.1	3.1
Finance, insurance and business services	2.2	1.7	1.8	1.3	2.4	1.5	2.5	1.7
Services (govt. and other)	16.8	20.3	16.7	17.9	-	-	-	-
General services	-	-	-	-	10.3	8.3	10.5	7.5
Government services	-	-	-	-	10.8	12.4	10.8	10.2
TOTAL	42.8	57.4	40.1	52.0	45.2	56.1	44.8	51.3

Source: Barbados Statistical Service.

2. Occupations

Women work in the agricultural sector in a wide range of occupations such as labourers, hawkers and traders, extension workers, farmers, food processors, agronomists, economists,

technicians, and administrators. Many women are employed as part-time or occasional labourers on both plantations and small farms.

Between 1981 to 1986, according to data from the Statistical Service, approximately 40 per cent of those employed in the agricultural sector were female, whereas some 60 per cent were males. By 1992, females accounted for only 31 per cent and males some 69 per cent. Provisional data on occupational groups from the 1990 Population Census indicate that 87 per cent of those classified as skilled agricultural and fisheries workers were male and only 13 per cent female. Seventy-eight per cent of the agricultural labourers were male with only 21 per cent women female. Shop assistants and market traders are classified together, with 28 per cent male and 72 per cent female.

According to the 1989 Agricultural Census, there were approximately 6 714 (39 per cent) holdings operated by women and 10 414 (61 per cent) by men. There were more paid permanent female workers on agricultural holdings than there were males - 42 per cent male and 58 per cent female. The difference was particularly marked in the under 15 age category with over 2000 females reported alongside just over 100 males. This ratio changes in relation to paid occasional workers: 81 per cent male and 19 per cent female, with over 300 under-15 males in contrast to less than 10 females. Forty-five per cent of the paid family members reported were female, as were 59 per cent of unpaid family workers.

The 1989 Agricultural Census found that only 4 per cent or 300 of the women farmers stated that they were full-time farmers. A similar situation obtains with male farmers, only 6 per cent of whom claimed to be full-time farmers. These data indicate a high level of part-time farming by both men and women.

3. Activities

Women tend to perform a range of activities in the agricultural sector, but nevertheless some level of sex role differentiation exists, although this seems to be becoming blurred. Some of these activities are not classified as part of the agricultural sector (hawking, huckstering or trading).

a. Farmers

Barrow's study found that although there is labour allocation according to sex on farms, there is considerable overlap. "Male" jobs include forking the ground and spraying crops and "female" jobs sowing seeds, but most of the other tasks such as reaping, weeding, and watering were done by both sexes. She found that roles are increasingly being reassigned. This was confirmed by extension officers. In the case of women operating on their own and with limited access to paid or unpaid male labour, they undertake a lot of the "male" tasks such as forking, ploughing and butchering livestock. Despite this, the respondents still tended to

consider butchering as "man's work". Role reassignment was also evident in the traditional female activity of marketing.

In terms of food crops, women tend to be involved in the post-planting field activities such as weeding, molding up, fertilising and harvesting. They also predominate in post-harvest activities such as the washing, grading and processing of the produce. Pest control is normally done by men. According to one informant, this could be because of the heavyweight equipment and the fact that the straps on the equipment are not designed for use by women.

More men are involved with large livestock such as cows. Women generally provide assistance by collecting fodder. Women tend to work with small stock, including poultry and rabbits, and are usually hired to work in poultry processing plants.

b. Higglers and hawkers

During slavery, women in Barbados started to dominate marketing across the island despite attempts by the planters to suppress these activities through legislation and other means. They sold a variety of merchandise, goods such as sweet potatoes, yams, eddoes, Guinea and Indian corn, fruits and berries, vegetables, nuts, cakes, bundles of firewood, and bundles of sugar cane (Thome and Kimball 1837 quoted in Beckles 1990). The Barbadian slave did not have access to provision grounds as in other territories such as Jamaica. These grounds enabled the slaves to enter into and subsequently control the internal marketing system. In Barbados, the planters tended to import food and slaves were given only a house spot. The slaves were nevertheless able to grow small amounts of food and to raise a few animals. Surpluses animals were sold as well as surpluses from their weekly allocations of food from the planters, women being the main sellers. Beckles lists five basic types of female slave hucksters:

- i. Plantation field women who sold food items raised in their gardens to individual customers in town and country, on their own account.
- ii. Field women who sold their produce, on their own account, directly to white, coloured or free black hucksters or retail shops in towns.
- iii. Specialists, often domestics, who sold on the streets, but on their owners' account.
- iv. Slave women who managed small retail shops on their owners' account.
- v. Petty hucksters who sold sweets and drink on the streets (Beckles 1990:79).

Sunday was the traditional market day until 1826 when The Sunday and Marriage Act banned the Sunday market. Saturday subsequently became market day.

After emancipation, female hucksters continued to participate in the marketing of food provisions, although plantations sometimes sold food directly to the public. ...Huckstering remained an attractive occupation - especially as a part-time supplementary activity. It was an economic outlet which they had protected and enhanced by struggle throughout the slavery period, and which...became the cornerstone of survival strategies for most households (Beckles 1990:87).

Marketing of agricultural crops has traditionally been an activity carried out by women who market approximately 70 per cent of the food produced in Barbados¹. They spend long hours at various market places and also sell from the farm gate. Women predominate as employees in the entire marketing chain ranging from handling and grading produce to processing, packaging and storage. It should be noted that an increasing number of young men are presently marketing agricultural produce, particularly in the streets of the main capital.

B. Re-estimation of the Number of Women Employed in the Agricultural Sector

There is a dearth of data on women in the productive sectors of the society and this seems particularly true of the agricultural sector. This invisibility of women's work means in effect that agricultural policy makers and planners are operating with incomplete information. Our research has shown so far that women play a key role in the sector, particularly in terms of food production for the local market and production for the home, thus suggesting a responsibility for the nutritional status of their households. They devote significant amounts of time to agriculture-related activities both at the home base and in the field; and they are responsible for the survival of the family and are constantly in search of ways to ensure this survival - one of them is through agricultural activities either on a part-time or full-time basis.

Data on women in the Agricultural Census are not normally presented according to sex and, in terms of the 1989 Agricultural Census, were available on this basis because of a request by a researcher from the University of the West Indies. The Census data revealed that there were 6 714 holdings operated by women. We assumed that this represents the approximate number of women who were involved in farming activities at the time of the Census. The data also showed that they were reported 4 411 paid permanent female workers on agricultural holdings over the year prior to the Census and 1 456 paid occasional female workers. In addition, there were 64 paid female family workers and 20 unpaid female family workers on agricultural holdings. The number of female workers at the time of the Census was therefore 5 951, which we add to the 6 714 female agricultural holders identified by the Census, resulting in a figure of **12 665 women involved in the agricultural sector either as paid or unpaid workers.** The official data from the Statistical Service Labour Force Survey for 1992, on the other hand, stated that there were 1 900 women in 1992 in the agricultural sector. It should be

¹ This statistic was taken from a paper received from the Bureau of Women's Affairs title "The Economic Role of Women in Agriculture with reference to Barbados". No source was given.

recognised, however, that our consideration of women involved in the sector is not constrained by the criteria used by the Statistical Department to define employment.

Another consideration is that, as stated earlier, many women who are actively involved in farming define themselves as housewives rather than farmers or unpaid family workers. This is particularly relevant where males are present. It is therefore likely that a number of women were inaccurately classified as housewives at the time of the Census. The Census data indicate that there were 10 414 agricultural holdings operated by males. In addition, that the average farm family size was 4.1. We can therefore explore the possibility that in that average family, there is likely to be one woman on at least half of these 10 414 agricultural holdings who works on a part-time basis on the farm but who was not classified as a worker. To our figure of 12 665, we therefore added 5 200 resulting in a new figure of approximately 17 865 **women involved in farming activities in Barbados.**

This re-estimation of the number of women involved in the agricultural sector confirms the importance of women to the sector, the crucial role that they play in the sector and reconfirms the need for policy makers and planners to employ a gender analysis in the development of policies and programmes in the sector.

V. WOMEN FOOD PRODUCERS

Section V focuses on micro-level activity by examining what is taking place on small farms in general and those operated by women food producers in particular. The section commences with an examination of the general characteristics of the small farm production systems. The results of the survey of 146 female farmers are then analysed in a discussion on various areas such as women food producers' contribution to production, family income, the types of work in which they are involved and the problems they face as they seek to meet their production needs.

A. Socio-economic Characteristics of Small-Scale Production and Small Farm Production Systems

Small-scale farming systems generally operate differently than larger farming systems and as such have unique experiences, challenges and problems. Small farming in Barbados generally takes place on marginal lands with very limited land space. As Nurse (1992) suggests, the small size of the majority of agricultural holdings would affect adversely factors such as the small farmers' capability and productivity in terms of the level of output and the number of crops that they can cultivate. Women farmers operate on the smallest land areas and therefore in addition to facing problems similar to those of their male counterparts, they also face those deriving from of gender relations.

1. Structure of production

As Table V.1 shows, small farms representing 99 per cent of all farms operate on only 15.6 per cent of the arable land or 3 358 hectares. Between them, they control 0.20 hectares each. On the other hand, those operating on 5 hectares or more represent 0.9 per cent of farming units and control some 84.4 per cent of the land or 18 202 hectares.

Most small-scale production takes place on holdings of less than 0.5 hectares, some 15 440 holdings. Included in this category are 4161 "landless holdings" operating on a total area of 19 hectares. Landless holdings are defined in the Agricultural Census as those comprising less than 0.025 hectares on which are kept or which have associated with them livestock and/or other agricultural enterprises of certain minimum specifications, even though they may have no significant area of land.

Production comprises a range of vegetables, particularly beans grown on 11 per cent of holdings according to the Census; and root crops with sweet potatoes in particular grown on 7 per cent of holdings. Sugar cane is cultivated on some 14 per cent of small holdings, representing 7 per cent of national production. The most popular fruits grown are avocados, bananas, coconuts, limes and mangoes. Sheep are primarily reared by small or landless farmers, with the 1989 Agricultural Census showing nearly 60 per cent by landless farmers and the remaining 40 per cent by farmers with holdings of less than 12 hectares. Many sheep producers are part-time and keep sheep as a hobby or as a source of quick cash.

Approximately 80 per cent (14 500) head of cattle are kept by medium and small producers who own one to fifteen head each. The pig population is estimated at approximately 30 000, with approximately 60 per cent of the pigs reared by small farmers.

Table V.1. Number and distribution of agricultural units by size in Barbados in 1989.

Size	Farms		Surface area (ha)	
	Number	Percentage	Area	Percentage
0-5 has	16 990	99.0	3358	15.6
5-10	44	0.2	294	1.4
10-20	27	0.1	366	1.7
20-50	23	0.1	669	3.1
50-100	26	0.1	1938	9.0
100-200	33	0.2	4680	21.7
200-500	34	0.2	9605	44.5
500-1000	1	0.0	650	3.0
TOTAL	17 178	99.9	21 560	100.0

Source: Barbados 1989 Agricultural Census.

The involvement of small farmers is somewhat lower in poultry production which needs capital injection, materials, and higher levels of labour, often paid labour. Small- and medium-scale farmers rearing between 20 to 1200 chickens account for approximately 55 per cent of broiler meat. Their contribution is nevertheless significant. Nationally, small farms are the main suppliers of fruits, animals and animal products, whereas the plantation sector is the major supplier of vegetables, root crops and other export crops.

Table V.2 shows that the principal sources of income for small farms are from mixed farming (36 per cent), livestock (26 per cent) and fruits (19 per cent). According to the census, 89 per cent of the small farms reported that production is primarily for sale, whereas 11 per cent stated that production is mainly for home consumption. In contrast, the large sector's total production is for sale.

The data from the census reveal that slightly more than half (59 per cent) of small holdings are owned either by individuals or as "family land", i.e., owned jointly by family members (Table V.3). The remaining 41 per cent is either rented, leased or under a mixed system of tenure. A minuscule portion of this is rented for a share of the produce or is on long-term lease. Most of the rented land would be under the tenantry system which started after emancipation in 1838

and through which the ex-slaves initially rented land from the plantations in exchange for their labour. In 1980, as discussed in Section III, the government sought to end this system by giving tenants the right to purchase the land on which they lived or which they rented. In contrast, 72 per cent of the parcels of land in the larger farming sector are owned.

Table V.2. Principal source of income for holdings of less than five hectares in Barbados in 1989.

TOTAL	Principal source of income								
	Sugar	Vegetables	Root crops	Fruits	Live-Stock	Poultry	Mixed	Other	
Number	16 834	665	744	120	3 242	4 353	1 654	6 008	48
%	100	4	4	.7	19	26	10	36	.3

Source: 1989 Barbados Agricultural Census.

Table V.3. Structure of land tenure on small holdings in Barbados in 1989 (%).

	Land Tenure						Total
	Owned	Family	Rent (cash)	Rent (share)	Lease	Other	
Number	9 833	1 208	4 073	160	252	2 885	18 411
%	53	6	22	.9	1.4	16	99.3

Source: 1989 Barbados Agricultural Census.

2. Family Structure

Family structure in the Caribbean takes various forms and connections are often made between the experience of slavery and the variations that exist. For example, the practice of giving female slaves full responsibility for raising the children and the discouragement of any kind of family relationships among slaves. As a result, as French (1988)¹⁶ asserts, the traditional definitions of household types and forms of unions "did not always fit neatly with the forms of household organisation encountered or the form of male-female relations [in the two islands under study]". One of the existing realities of the Caribbean family and households is a high level of households without a permanent male presence, usually referred to as female-headed households. Preliminary data from the 1990 National Census indicate that over 40 per cent (32 674) of household heads in Barbados are female. However, this does not preclude financial and other forms of assistance being received from a male, particularly in cases of "visiting

¹⁶ This statement was made in the Overall Report and Summary of Main Findings of the Caribbean Association for Feminist Research and Action's (CAFRA) research/action project on Women in Caribbean Agriculture carried out in the Commonwealth of Dominica and St. Vincent and the Grenadines.

unions" where partners do not cohabit but share a steady sexual relationship, often lasting over a number of years. Support could be forthcoming from a number of other sources outside of the household. Other characteristics of family include a relatively low incidence of legal marriage, high levels of common law marriages and extended families which spread across national boundaries (Andaiye and Antrobus 1991:3). This trans-national family is critical in various areas such as remittances and other forms of support and are potential markets for goods produced in the Caribbean.

A discussion of family and household structure is important in looking at female farmers since it enables us to examine the strategies used by women to carry out both their productive and reproductive responsibilities. It also enables us to confirm the need for extension workers and planners to take both of these existing roles into consideration when working with females, rather than seeing the home as a private and separate institution.

Studies have shown, for example, that the number of young children and older persons in the farm household (its life cycle) influences women farmers participation either on their own farms or those operated jointly with their partners. This happens because women often assume responsibility for the care of the young and elderly and in times of structural adjustment this becomes even more important since governments often tend to cut social services under the assumption that women will take up the slack. It is important to explore these aspects to understand and improve the world of women farmers. The following section will discuss family structure on Barbadian small farms from the available data.

In a survey of small-scale farming in Barbados, Aspinall and Momsen (1987) found that the average size of the farm family was 4.1 as was found in the Agricultural Census in 1989. The Census also revealed that the average size of female-headed farming households was slightly larger than male-headed ones. Approximately four-fifths of the households in the Aspinall and Momsen study had no children under 15 years, reflecting the advanced age of many farmers. This is confirmed by the Census. As can be seen in Table V.4, some 31 per cent of the small farmers are over 65 years, with only one per cent in the youngest age category of under 25 years, and 11 per cent between ages 25 to 35.

Table V.4. Age of small farmers in Barbados in 1989.

	Total holders	Age class of holders					
		Under 25 years	25-35 years	35-45 years	45-55 years	55-65 years	65 and over
Number	16 404	236	1 838	3 206	2 971	3 027	5 126
%	99.4	1.4	11	20	18	18	31

Source: 1989 Barbados Agricultural Census.

3. Problems experienced

Some of the problems faced by the small-scale production systems and their causes have been identified through various studies and interviews. These include:

- shortage of arable land;
- difficulty in accessing markets [this was seen as the major problem by a number of informants];
- difficulty in accessing credit;
- weaknesses in the supply of cultivation, planting and harvesting services;
- high prices of basic inputs;
- limited knowledge of modern technology;
- small size of holdings;
- limited water resources and high cost of water;
- relatively limited domestic demand (250 000 population) and the failure of the marketing system to cope with seasonal fluctuations;
- limited access to extension and other support services;
- lack of control over the market situation;
- limited access to information;
- praedial larceny.
- access to resources;
- poor management practices;
- poor planning of land area, i.e., matching size with available resources;
- damage by pests such as rats and monkeys;
- high labour costs and difficulty in getting labour.

Some other areas of concern posited by extension officers include the lack of a business approach and general business acumen; cutthroat behaviour in the battle for survival; and no market pressure to force the farmers to adopt a business approach to their operations.

Since the Census data show that women operate the smallest of the small farming units, the above problems would apply to them. In addition, they generally have additional reproductive responsibilities, making it imperative for ways to be devised to enable them to meet their dual or multiple responsibilities more effectively. Their perspectives on the problems facing them and the possible solutions will be explored in Section F below.

B. Characteristics of the Small-Scale Production Unit

This and the following sections will focus on the information gleaned from the survey and compare it with other studies on women food producers in Barbados. The purpose is to compose a picture of the female food producer. One hundred and forty-six female small farmers from across the island were interviewed on a range of topics. These were farm characteristics, family characteristics, participation in agricultural activity, marketing,

production, resources, use of time, source of agricultural information and problems and aspirations.

Only two other studies on small-scale agriculture in Barbados that took gender considerations into account were identified. Barrow (1992) carried out a study of small farm food production and gender in Barbados through a survey of 111 small farmers (56 males and 55 females). Another study was carried out by Aspinall and Momsen in 1987 as a follow-up to one done in 1963. One hundred and thirty-two main questionnaires were administered as well as 51 supplementary ones which focused on divisions of labour by time and sex. In addition, some of the data from the 1989 Agricultural Census had been disaggregated by sex.

1. Land distribution and ownership

The respondents in our survey were spread across the 11 parishes, most being located in Christ Church in the south of the island and St. Philip in the east. The rural parishes of St. Andrew, St. Thomas, St. Joseph and St. John had the fewest respondents. The results of the survey suggest the limited access to land of female farmers, a problem affecting small farmers of both sexes, but even greater for females. As Table V.5 indicates, the average size of the farms was .09 hectares, with 121 or 83 per cent operating on less than two hectares. Nine farms were between two and four hectares, five between four and ten and only one was over 10 hectares. Barrow found that 41 per cent of the farmers in her survey controlled less than half of a hectare and only 15 per cent over two hectares.

Table V.5. Characteristics of the small farm in Barbados in 1993-1994.

Average size (ha)	N/R (No)	Size of Farm				N/R	Land ownership			
		0 to > 2.0 ha	2.0 to < 4.0 ha	4.0 to < 10.0 ha	> 10.0 ha		Own	Rent/ Lease	Family land	Other
0.09	10	121	9	5	1	10	71	43	25	2

This limited access to land is confirmed by data from the Agricultural Census. Approximately 6 700 women farmers operating on farms of less than 10 hectares were identified nationally. The average farm size was .14 hectares. The majority (95 per cent) of these small farmers controlled less than half of a hectare and only .4 per cent over two hectares. Male small farmers operated under similar conditions with the Census indicating an average land size of .26 hectares for men. In terms of land ownership, nearly half (71 or 49 per cent) of the land on which the farming takes place is owned either by the respondent, partner or is family land.

Some 45 (29 per cent) rented or leased their land, whereas 25 or 17 per cent operated on family land.

2. Crop and livestock production

The farmers in the survey were asked to identify the crops grown on the farm during the last production cycle. Most of them produced vegetables primarily cucumber, which was cultivated on 50 farms, string beans on 47 farms, along with carrots, lettuce and cabbage (Table V.6). Sweet potato was the most popular root crop, produced by some 23 farmers as compared with 10 producing yams. In terms of amount produced, over 100 000 kgs of cucumber were produced. Only 3 farms cultivated sugar cane, producing over 60 000 kgs. These data are comparable with Barrow's findings, although her data are not confined to the last production cycle. She found that 60 per cent of the females grew vegetables, 46 per cent root crops and 36 per cent tree crops. Only 33 per cent were involved in sugar cane.

The results of the survey in Table V.6 suggest that production for home consumption is not a characteristic of Barbadian women farmers. All of the crops were cultivated primarily for sale -for example, 77 per cent, 76 per cent and 69 per cent in the cases of cucumber, string beans and sweet potatoes, respectively. Only approximately one per cent of most crops were consumed. Losses accounted for the differences between sale and consumption. The reports to the Census generally point to a similarly high level of produce sales -88 per cent of the women farmers reported that their agricultural produce was used mainly for sale, whereas the other 12 per cent used theirs mainly for home consumption.

The national data on cultivation were not disaggregated by sex for presentation, so no comparisons can be made. Extension officers, however, confirm that women are more heavily involved in vegetables and root crops and livestock, in particular pigs, sheep and small stock and do almost no cattle farming. Women tend to view the farm as an extension of their reproductive responsibilities, concentrating on small stock and food crops rather than the export crops and cattle preferred by men (Momsen 1986).

Table V.6. Agricultural production and destination in Barbados in 1993-1994.

Crops	No. of farms	Amount produced (kg)	Amount consumed (kg)	Amount lost (kg)	Amount sold (kg)	Amount sold as % of amount produced	Amount consumed as % of amount produced
Carrot	37	63 482	1 293	8 621	53 568	84	2
Cabbage	33	52 813	692	11 691	40 348	76	1
Lettuce	36	50 186	842	3 481	45 863	91	2
String bean	47	35 397	1 050	7 282	27 063	76	3
Tomato	30	68 589	755	11 211	56 664	83	1
Cucumber	50	106 302	1 510	22 553	82 357	77	1
Sweet pepper	26	43 081	431	7 968	34 682	80	1
Green banana	2	54 432	544	5 897	47 991	88	1
Melon	16	35 063	714	12 011	22 337	64	2
Sweet potato	23	22 314	1 615	5 246	15 436	69	7
Sugar cane	3	60 692	--	--	60 692	100	--

3. Family characteristics

The families of the female farmers in the survey comprised an average of five (5) persons. There was an average of one male and two females in the active age group of 15 to 55 years (Table V.7). There were slightly more women than men across all age groups in the households. According to the respondents' reports, most of the households were headed by men (51 per cent) as compared with 45 per cent headed by females. The Census reported that the average number of persons living in female-headed households was 4.2 nationally, a slightly smaller number than that of the households in our survey.

Table V.7. Family characteristics in Barbados in 1993-1994.

Total	Average no. of people on the farm			% of family whose head of household is			
	Adults between 15 & 55 years		Over 55 years	Under 15 years	Male	Female	N/R
	Males	Females					
5	1	2	1	1	51	45	4

4. Labour use

In terms of labour use, the female farmers in Barrow's survey had a higher level of dependence on unpaid family labour and found the acquisition of paid labour more problematic than their male counterparts. The major associated problems mentioned were scarcity (34 per cent) and high costs (49 per cent). Male labour for women was particularly expensive as well as difficult to obtain, since working for women farmers is considered to be a lower-status job (Henshall 1981, cited by Barrow). Even the labour of their children was not forthcoming for either males or females. For the females, only 43 per cent of their resident children and grandchildren assisted with farm work. Data from this project's survey indicate that women are more heavily involved than their male family members in all aspects of agricultural production except in the care of vegetables and fruit.

The farmers in the Barrow survey also expressed regret at the decline in the level of assistance from other neighbourhood farmers as contrasted to the informal cooperative arrangements which existed previously. Under these traditional arrangements, farmers would help each other in exchange for food and drink. This was an invaluable tradition which enabled farmers and others to develop their farms, build houses and other structures in situations of limited access to cash. The male farmers in the survey continued to have some access to assistance from other male farmers without payment in areas such as lending tools and giving advice rather than labour. Assistance among women was more difficult primarily, it was stated, because of their greater level of responsibilities and concomitantly less free time.

C. The Contribution of Women to Production: Activities and Types of Work

The following section presents profiles of the respondents and considers the kinds of contributions that women farmers make to the farm unit and compares these with those of other household members.

1. Characteristics of the respondents

Thirty-two per cent of the respondents fell into the oldest age category of 55 years and over, whereas only 14 per cent were less than 34 years of age. Eighteen per cent were in the 35 - 44 age group, with 35 per cent between 45 and 54. This is in keeping with other data which indicate the declining interest in agriculture by young people. For example, the Census reported that only 10 per cent of women farmers were less than 25 years, whereas more than half (53 per cent) were 55 years and over. Table V.8 further shows that the average age of the respondents was 50 years. However, 70 per cent were in the "active age group" of 15 - 55 years.

In terms of marital status, 20 per cent of the respondents were single, 49 per cent were married, 16 per cent were in a common-law union and only 1 per cent were in a visiting union (Table V.9). Some 12 per cent were categorised as being in an "other union status". This category includes those who were widowed, separated or divorced but did not indicate their actual present union status. Single and married women tended to be older, with average ages of 49 and 52 respectively (Table V.8). The average ages of those in common law and visiting relationships was somewhat younger - 39 and 31 respectively. Those categorised as being in an other union status had an average age of 56.

Nearly half of the respondents (42 per cent) reported that they were the heads of their households. The majority were either single (34 per cent) or in the other union status category (28 per cent). The lowest percentages of household heads were those women living with male partners, that is, those in married and common-law unions, 11 per cent each. Neither of the two respondents in visiting relationships considered themselves to be household heads. Forty-nine per cent of the respondents reported that they were responsible for running the household (Table V.8).

As shown in Table V.9, the majority (55 per cent) of the farmers in the survey had attained a primary level of education; 35 per cent had completed secondary school; 3 per cent had undergone vocational training and some 7 per cent had attended a tertiary institution. The Census recorded a higher national percentage (70) of female farmers with primary school as their highest level of education. Twenty-five per cent had reached a secondary level, and only one per cent university level.

Table V.8. Characteristics of the respondents, Barbados 1993-1994.

Union status	Average age	Head of household		Responsible for running farm	
		No.	%	All year (%)	From 1 to 6 months (%)
Single	49	21	85	20	-
Married	52	11	15	49	.70
Common Law	39	11	47	16	-
Visiting	31	-	-	1	-
Other Union Status	56	17	28	-	-
No Response	-	1	2	13	-
TOTAL	50	61	-	99	.70

Table V.9. Educational level of respondents by union status, Barbados 1993-1994.

Union Status	Total		No response	Level of education (%)			
	No	%		Primary	Secondary	Vocational	Tertiary
Total	146	100	-	55	35	3	7
Single	29	100	3	45	52	-	-
Married	72	100	-	61	25	6	8
Common law	23	100	-	44	52	-	4
Visiting	2	-	-	-	50	-	50
Other	18	100	-	72	17	-	6
No response	2	-	-	2	-	-	-

2. Participation in reproductive activities

Table V.10 indicates the overwhelming responsibility that the women farmers in the survey assume for reproductive activities and, in contrast, the virtual lack of involvement in these activities by the males in the household. These reproductive activities are carried out in conjunction with the women's farming activities. Over 90 per cent women respondents said that they were responsible for food preparation and clothes washing, whereas only two per cent of the males in the households helped in the preparation of food. None of the males was

responsible for washing clothes. Over 70 per cent of the respondents ironed clothes, cleaned the house and did the shopping. Again, the corresponding data for the men revealed that none of them ironed the clothes nor did housecleaning, and only 3 per cent did the shopping for the house. Somewhat surprisingly, only 34 per cent of the respondents were responsible for child care. The highest percentage of male involvement was in paying the household-related bills.

Table V.10. Family member participation in reproductive activities, Barbados 1993-1994.

Activity	Respondents	Other women	Men
Prepare food	92	23	3
Wash clothes	97	12	0
Iron clothes	77	9	0
Clean house	79	16	0
Child care	34	4	0
Shopping	79	8	3
Sew/mend clothes	12	1	0
Pay bills	58	7	15
Clean yard	65	9	8
Tend garden	22	3	2
Transport children/others	8	-	1
	N=146	N=73	N=171

D. The Contribution of Women to Family Income

This study has contended that women's contribution to and activities in agriculture have been grossly undervalued. As part of the movement towards valuing these, an attempt was made to estimate the relative contribution of women farmers to the family income.

No data were accessed on farm incomes in Barbados except for those available from the 1989 Agricultural Census, which provides an indication of the level of gross incomes of the farming units. Gross income was defined as total revenue from the holding before deductions of taxes and expenses. It included the sale of agricultural products, income from rentals of land and/or farming machinery. Most of the agricultural holdings (64 per cent) which reported on their gross income for 1989 reported a gross income of less than US\$500. Fourteen per cent reported a gross income of between US\$500 to \$1 000; 10 per cent between \$1 000 to \$2 500; only 4 per cent between US\$2 500 to \$5 000; and 6 per cent reported a gross income of over US\$5 000. Sixty-five per cent of the farms of less than 5 hectares reported receiving less than US\$500 whereas only 6 per cent of these farms reported a gross income of over US\$5 000.

Of the women small farmers reporting, 72 per cent indicated a gross income of less than US\$500; 14 per cent received US\$500 to US\$1000; 7 per cent grossed between US\$1000 - \$2 500; 4 per cent between US\$2 500 and \$5 000; and 3 per cent received a gross income of over US\$5 000.

Table V.11 indicates the level of dependence of the small farms on agriculture as a source of income. It indicates that agriculture is not the primary source of income for most of the small farms. Some 72 per cent reported that agriculture accounted for less than 25 per cent of gross income, whereas only 12 per cent reported that it accounted for 75 per cent or more of gross income. The data from the Census showed that only 7 per cent of the women small farmers' main occupation was farming, also a national trend.

Table V.11. Percentage of gross income derived from agriculture by holdings of less than five hectares in Barbados in 1989.

Percentage of gross income from agriculture			
Less than 25 %	25% to 50%	50% to 75%	75% and over
72	11	4	12

Source: Barbados Agricultural Census 1989.

The declared primary and secondary activities of family members between the ages of 15 and 50 in the households surveyed are presented in Table V.12. Activities are combined by income-producing and non-income producing activities and enable us to provide a general assessment of women's contribution to family income.

The table shows that income and production within the family is a shared responsibility of both men and women. Sixty-five per cent of female family members have an income-producing activity as their primary activity compared to 68 per cent of male family members. However, more women than men have a secondary income-producing activity (11 per cent as compared to 6 per cent of men). The survey indicates that secondary income-producing activities are rare for the small-farm household. In terms of those having a secondary income activity, there are more women than men: 10 per cent of the women that either have a primary income producing activity or dedicate themselves to non-income producing activities help on the farm as a secondary activity.

Table V.12. Family member activities in Barbados in 1993-1994.

	Primary activities ¹⁷			Secondary activities ¹⁸		
	Income producing		Non-income producing ¹⁹	Income producing		Non-income producing secondary activities
	On farm	Off farm		On farm	Off farm	
Men	24 14%	94 54%	56 32%	7 4%	3 2%	164 94%
Women	104 48%	37 17%	77 35%	3 1%	22 10%	193 88%

Within the family unit, there is a pronounced tendency for male members to work off-farm (almost 4 to 1). Women, on the other hand, tend to work on the farm: 48 per cent of the women work on-farm as their primary activity, or 3 to 1 compared to off-farm work. Farming is obviously a part-time activity from the perspective of the family unit, although within the unit there is high degree of specialisation. On those farms surveyed, there is a higher specialisation among women in farming than among men. These findings confirm the observations made by the interviewers that in cases of farm families with both partners or other males present, it is the women who tend to be the farmers. However, it is not corroborated by the Agricultural Census, which found that only 4 per cent of small women farmers stated that they were full-time farmers. Unfortunately, the Census data were not collected through a method that would allow for examination of factors such as union status. The other factor to take into account is that the survey focused on women farmers and the respondents were women for whom farming was a major responsibility. This differs from the Census' criteria, whose minimum specifications for "agricultural purposes" included a range of persons and holdings. The survey data do indicate, however, that on small farming units where women are known to be farmers and where they are males in the household, women are the farmers more so than the men.

The relative profitability of farming compared to off-farm sources of labour and the time dedicated by each of the family members to these activities are important considerations in any definitive statement regarding the contribution of women to family income. If it can be assumed that there is an equal dedication of time by sex to what they consider primary activities, and that the family will distribute its labour time so as to maximise the returns to

¹⁷ These refer to activities to which the person dedicates most of her or his time.

¹⁸ These are activities supplementary activities to those declared as primary.

¹⁹ This includes housewives, student, pensioners and other contributing family members in terms of income.

labour (both within the farm and between farm and non-farm sources of income), then Table V.13 provides a further indication of the relative importance of women in these activities.

Based on the participation in primary activities only, and given the assumptions stated above, it can be seen from Table V.13 that family income divides virtually half and half between off-farm and on-farm sources, with 49 per cent of family income being provided by the farm. As noted previously, women's participation in these income source is considerably greater than men's, with .40/.49 or 81 per cent of the farm income being provided by women. Taking into consideration both on- and off-farm participation in income activities, women produce 55 per cent of the family income, compared to 45 per cent provided by male family members. Reproductive activities are not included in this estimation since attempts are still ongoing by various persons and agencies to develop a way of calculating the value of this unwaged work.

Table V.13. Division of family income by on-farm and off-farm activities in Barbados in 1993-1994.

	On farm	Off farm	Total
Men	.09	.36	.45
Women	.40	.14	.54
TOTAL	.49	.50	1.00

E. Women's Labour Allocation

The project was interested in determining how women farmers allocate their time, particularly between productive and reproductive activities.

Although only 34 per cent of the respondents reported having primary responsibility for child care as shown in Table V.10 above, that activity took up a disproportionate amount of time when compared with other reproductive activities (Table V.14). According to the respondents, they spent an average of thirty-three hours per week on child care. The reproductive activities taking up the most time after child care were food preparation (14½ hours) and tending gardens (13 hours). The respondents generally did not spend as much time on activities such as washing and ironing clothes, house cleaning and shopping, for which most of them had primary responsibility (Table V.10).

Table V.14. Women's use of time in Barbados in 1993-1994.

Domestic activities	Average hrs per week
Prepare food	14.34
Carry water	8.00
Wash clothes	5.30
Iron clothes	3.02
Clean house	5.06
Child care	33.00
Shopping	3.00
Repair house and furniture	2.00
Sew/mend clothes	3.50
Pay bills	2.15
Clean yard	3.27
Tend garden	13.16
Transport children/others	8.42

F. Women's Participation in Decision-Making, Expectations, Potential and Problems Faced

Farmers' perspectives on a number of issues, including the kinds of problems they faced as female farmers, the improvements that they would like to see implemented, their expectations and aspirations for their children and their views of farming as a business enterprise, and the decision-making process on the farms are sought.

1. Women's participation in productive decisions on the farm

Table V.15 examines women farmers' participation in decision-making on the farm vis-a-vis her partner. The decisions appear on the table in order of importance from a business perspective. It can be seen that the woman has overwhelming responsibility for the operations of the farm. She is the major decision-maker for each type of decision, but more so in the areas of products to be sold, marketing, farm management, the use of profit and the organisation of production. However, it seems that both partners decide together many of the major or high-risk areas such as crop production, crops to be planted, and livestock to be raised. It is interesting to note that male participation increases in areas such as the use of profit, the products to be sold, farm management and the organisation of production. Overall, however, the woman takes on the

responsibility for running the farm and is also primarily responsible for the reproductive aspects of the farm household.

Table V.15. Women's participation in productive and management decisions on the farm in Barbados in 1993-1994 (%).

Decisions	Decision maker			
	Respondent	Man/companion	Both	Other
Inputs for crop production	76	7	38	1
Crops to be planted	75	5	37	-
Livestock to be raised	49	1	28	1
Marketing	92	3	39	2
Use of loans	24	-	13	-
Use of profit	86	3	50	1
Hiring farm labour	46	1	28	1
Purchase of machinery/equipment	46	2	27	1
Products to be sold	87	4	46	1
Price of goods	87	3	39	2
Farm management	94	1	47	1
Organisation of production	90	3	44	1
Other	1	-	1	-

2. Women's participation in productive and community organisations

The data in this section generally correspond to that from other surveys, which have found that women in the Caribbean are rarely members of or participate in clubs and organisations. The most popular organisation for women in this survey was a church-related club. As Table V.16 shows, some 40 per cent participated in such a club. Seventy-seven per cent of those involved in church clubs did so on a regular basis. Only 23 per cent participated in any kind of farmers' organisation, with 35 per cent doing so on a frequent basis. Few belonged to community groups or sports/social clubs. Barrow found that the decline in informal ways of cooperating among farmers "had not been replaced to any significant extent by increased membership in formal agricultural associations, as might be expected as farming becomes modernized"

(p. 187). Only 18 per cent of the farmers in her sample were members of a farmers' organisation - 12 per cent of males and 8 per cent of women. The majority of these belonged to the Barbados Agricultural Society, the largest agricultural organisation on Barbados.

In terms of programmes geared towards women, only four women stated that they were aware of such programmes and only one had taken part in a women's programme.

Table V.16. Women's participation in productive and community organisation in Barbados in 1993-1994.

Type of Organisation	Total participation		Participation (%)			
	No	%	Often	Occasionally	Seldom	Never
Farmer organisation	34	23	35	26	18	18
Sports/social club	6	4	100		-	-
Church club	58	40	77	15	7	-
Community group	3	2	67	-	33	-
Parent/Teachers Association	18	12	61	33	5	-
Other	6	4	17	67	-	16

3. Access to and ownership of resources

a. Land

Most of the land on which farming took place was owned by the women, the male partner or in both names. Ownership was higher among the married respondents (14 per cent), contrasted with 8 per cent of single farmers and 3 per cent of those in common law unions. Overall, 39 per cent of the male partners owned the land, in contrast with 18 per cent of the women. Rental and lease arrangements were the next most popular means of acquiring land for farming purposes - the land tended to be rented or leased by the male companions.

Ownership among the female farmers in Barrow's study was slightly higher (73 per cent) than that of the men (60 per cent). She notes that only 19 per cent of the rented plots in her study were covered by a rental agreement, all but one of these being farmed by men. She also suggests that women seemed to be at some disadvantage concerning the size of their holdings, but in a more favourable position in terms of security of tenure. According to the Census, 54 per cent of the land operated by women small farmers is owned by them or is family land. The other plots are rented, leased or under some form of mixed tenancy. Fifty-three per cent of the farms operated by men are owned by them. However, in terms of ownership at the

national level, only 21 per cent of the women farmers own land, compared with 32 per cent for males.

Table V.17. Names on contracts/titles by respondent's union status and type of tenure in Barbados in 1993-1994.

Type of tenure	Total (No)	Name on contract and titles (%)							
		N/R (%)	Respondent				Man/companion (%)	Respondent & male companion	Family name
			Single (%)	Married (%)	Common law (%)	Other union status (%)			
Total	146	32	5	9	1	7	27	9	9
N/R	5	100	-	-	-	-	-	-	-
Own	71	10	8	14	3	13	39	10	3
Rent/lease	43	53	2	7	-	5	21	5	7
Family land	25	48	-	-	-	-	4	16	32
Other	2	-	-	-	-	-	100	-	-

b. Finance

The respondents were asked how they obtained money for farm development and production. The use of income from sales was the primary source of financing for over 90 per cent of the farms under four hectares. It was used by all of those between four and ten hectares, whereas none of the farms of over ten hectares used their sales in this way (Table V.18). The latter either depended on their families (25 per cent) or on sources other than sales, savings or the commercial banking system (75 per cent).

Just over half (55 per cent) of the farms, according to the respondents, requested loans over the past three years; the majority of them (63 per cent) approached the Barbados National Bank's Agricultural Division. Twenty-five per cent sought assistance from NGOs, whereas only 12 per cent approached a commercial bank (Table V.19). Twenty per cent of all of the applications were approved by the institutions approached. Over half of the loans were applied for by women. All of the requests to NGOs were made by women, whereas both women and men approached commercial banks.

The preference of women small farmers in the survey to use their profits or other sources outside of the commercial sector has been identified in other surveys and by bank officers. Most of the women interviewed in Henshall's survey did not consider the lack of credit to be problematic. She argues that they were less motivated to expand and improve their farms and had therefore not found it necessary to apply for credit (cited in Barrow 188). Barrow asserts

that both small farmers of both sexes are deterred from applying for credit by reports of long delays and difficult repayment terms.

Table V.18. Source of financing by size of farm in Barbados in 1993-1994 (%).

Size of farm (Ha)	Source of financing				
	Production/previous sales	Family	Savings	Bank loans	Other
TOTAL	95	-	2	2	-
No response	95	-	-	5	-
<0.4	98	-	1	-	-
0.4-<2.0	91	-	5	3	-
2.0-<4.0	98	-	2	-	-
4.0-<10.0	100	-	-	-	-
10.0 & over	-	25	-	-	75

Table V.19. Number of farms requesting and receiving loans over the last three years by source and applicant.

Source of loans	Farms requesting credit		Farms receiving credit		Applicant (%)			
	No.	%	No.	%	Total	Women	Men	Both
Total	80	55	16	20	100	56	25	19
BNB Agricultural Division	50	63	10	20	100	50	40	10
Commercial banks	10	12	2	20	100	-	-	100
NGOs	20	25	4	20	100	100	-	-

c. Training

The respondents were asked to indicate the areas in which they had received agricultural training, as well as those in which they wanted to be trained. As Table V.20 shows, the level of training was relatively low. Only 10 per cent had been exposed to training in the following: the use of fertilisers and pesticides, marketing and farm management. Those receiving training in seed selection and production, postharvest storage, feeding and grazing and as packaging comprised less than 10 per cent in each case. None had been trained in processing. According to the Census, only 0.7 per cent of women farmers nationally had received specific training in agriculture. Despite the low level of training, the expressed desire for training by the farmers in the survey was also low - 27 per cent wanted to be trained in the use of fertilisers and pesticides and 25 per cent in marketing. Twenty per cent were interested in postharvest storage

and processing. Fewer than 20 per cent expressed an interest in seed selection, feeding and grazing, and packaging.

Table V.20. Respondents receiving training and area in which it is wanted in Barbados in 1993-1994.

Subject area	Received training		Want training	
	%	No	%	No
Seed selection/production	6	9	18	27
Use of fertilisers/pesticides	10	14	27	40
Postharvest storage	5	8	20	29
Marketing	10	14	25	37
Feeding and grazing	5	7	16	23
Farm management	10	15	27	39
Packaging	7	10	19	28
Processing	-	-	20	29
Other	1	2	-	1

d. Limitations and problems

Since women food producers generally operate in the small farming sector, it is expected that they would face similar problems to those listed earlier for small farmers generally. These would, however, be compounded by gender differences and gender relations such as women's multiple roles, the life cycle of her family and her control over and access to resources. The data from the survey indicate women farmers' perspectives about the problems they encounter and show that they face a wide range of problems. The most frequently mentioned problem was that they faced discrimination as a woman - identified by 14 per cent of the respondents.

Labour problems were mentioned by 9 per cent. Women farmers expressed difficulties in terms of finding men willing to work for them and in gaining respect and cooperation from male employees. Lack of financing was mentioned by only 12 per cent of the respondents.

The respondents were also asked to suggest the principal things needed to help in the improvement in the areas of farming, marketing and processing. The majority of the respondents felt that cheaper inputs would be one of the solutions to the problems faced by them to improve their operations. Better, guaranteed markets was suggested by nearly half (49 per cent) of the respondents. The other most frequently mentioned areas of improvements were

improved extension services (18 per cent) financial assistance (17 per cent) and proper irrigation (14 per cent).

Table V.21. Principal problems which women farmers face and principal improvements suggested.

Problems	No.	%	Improvements	No.	%
Labour	14	9	Better and guaranteed markets	71	49
Lack of financing	12	8	Cheaper inputs	82	56
Lack of equipment	10	7	Financial assistance	26	17
Discrimination against women	20	14	Extension services/information	27	18
Lack of assistance	10	7	Technical training	13	9
Insects/pests/animals	7	5	Proper irrigation	21	14
Lack of roads/transportation	7	5	Modern equipment	18	12
Expensive inputs	5	3	Labour	9	6
Lack of markets	5	3	Incentives for farmers	9	6

e. Expectations

The women farmers in the survey were asked whether they would like their sons and daughters to continue as farmers and the reasons for their responses. The project wanted to explore whether there were any sex-based differences in their attitudes towards their children entering farming. The most frequently mentioned reason for both daughters and sons to continue in farming was that it was profitable and provided a certain measure of independence - this was cited by 7 and 6 per cent of the respondents respectively (Table V.22). It was not possible from the responses to determine whether there were different aspirations and expectations for their daughters and sons insofar as farming was concerned. In terms of their hopes for their children's careers, 31 per cent wanted them to pursue a professional career, 24 per cent hoped that they would be trade-persons and 17 per cent that they would become business persons. It would seem, therefore, that the desire for children to become doctors, lawyers, economists, etc. continues to be maintained by a substantial number of persons despite the relative viability of other less prestigious careers.

Table V.22. Reasons for wanting daughters/sons to continue as farmers.

Reasons	Daughters		Sons	
	No	%	No	%
No response	14	10	17	12
Farming manageable	5	3	3	2
Profitable/ provides independence	10	7	9	6
Better standard of living if successful	4	3	1	1
Child already a farmer	1	1	5	3
Tradition	4	3	4	3
Supplies domestic food needs	-	-	1	1
Child loves farming	4	3	4	3

Contrary to the opinion put forward by a number of key persons, the farmers in the survey generally considered their farming activities to be a business. This was stated by 94 per cent of the respondents. However, it must be borne in mind that the farmers in this survey were selected because they spent the major part of their time on the farm and it was their principal source of income. More research is needed to explore the reasons why they considered farming to be a business and whether this is reflected in their operations. One of the key issues would be whether business records are kept.

VI. CONCLUSIONS AND RECOMMENDATIONS

This final section will pull out the major issues raised in the report as well as put forward recommendations on the agricultural sector and on women food producers. Proposals for projects based in the issues and problems raised will also be suggested.

A. Conclusions

The research on women food producers in Barbados has highlighted a number of important issues, including the paucity of data on women in the agricultural sector and the fact that women's contribution is not reflected in official statistics. It has pointed to the declining importance of agriculture as a means of employment, in particular full-time employment, for women. It has nevertheless suggested that increasing numbers are "going back to the land" as a survival strategy for themselves and their families. The crucial but often unacknowledged role that women play in food production was also discussed.

Women, like most small farmers, operate on very small plots of land. The whole issue of land reform has major importance if effective agricultural development is to take place. Small farmers, including women, are responsible for the majority of the island's produce consumed locally. Despite this, the government's extension policy is increasingly geared towards the large, male producer involved in export crops.

The study has shown that the government and the private sector have set in place a number of support services for small farmers. However, women farmers have limited access to some of these services, including credit, extension, improved technology, and training programmes. They also benefit little from the government's rural development programmes with their related services. However, in the area of land titling and law reform as it relates to property distribution among family members and related issues, women farmers and rural women have made important gains.

It has been argued that the failure to take cognisance of these issues and to approach agricultural planning and policy formulation from a gender perspective means that the full potential of all available resources is not being utilised. Increasing the productivity and viability of small farmers and women farmers can only have a positive effect on the local food supply, food security and the agricultural sector in general.

B. Recommendations

- That all data should be routinely disaggregated and presented by sex.
- That gender analysis be incorporated into planning and policy formulation.
- That agricultural organisations should be involved in national agricultural planning efforts and that all possible effort should be made to ensure the participation of beneficiaries and/or participants in the design and development of projects.
- That more female extension workers should be hired.

- That extension work should be focused on the individual female or male farmer rather than on households or the farm family.
- That the policy of focusing on large farmers be re-examined.
- That participatory research methods be used in terms of generating data on women.
- That ways be found of validating women farmers' way of operating rather than comparing them both favourably and unfavourably with male farmers.
- That the feasibility of implementing a comprehensive land reform programme be examined.
- That efforts be made to organise a series of workshops to disseminate relevant information to female farmers - for example, their rights under the law, duties and taxes to be paid, and technical information.

C. Proposals

Title: Gender Awareness Training Programmes

Definition of problem/justification

- The concept of "gender" is generally or misunderstood. Gender relations are socially constructed and are reinforced and sanctioned by societal institutions, and by widely accepted practices. Gender relations are based on male dominance and power. This has implications for the way in which women farmers operate.
- Policy makers and planners generally regard farmers as being a homogeneous group and "gender blind" with respect to the activities of women food producers.
- Available government resources and services have not adequately met the production-related needs of women working on small farms. The cost of this, in terms of economic growth, can be significant.
- Women carry much responsibility for production on small farms and are therefore the source of much of the food produced, processed and marketed in Barbados. In view of this, it is imperative that policies be oriented towards women food producers.
- Working hours of extension officers do not always coincide with the time that women have available, given women's heavy involvement in non-agricultural productive activities and reproductive activities.
- In cases where a farm is managed jointly by a man and a woman, it is often assumed that the man is the farmer, and the woman's productive activities are not taken into account. The data from the project survey have indicated that on many farms where there are male and female partners, it is the woman who is the farmer, more so than the man.

Specific objectives

- To develop an awareness of gender among targeted personnel (including policy makers, planners, credit officers, extension officers, trainers and technical personnel) in order to:
 - improve planning and policy formulation
 - improve access to and transfer of information, technology, credit and other services and resources to women food producers
 - assist personnel in recognising women's participation as farmers
- To validate the operations of women

Expected outputs

- Increased awareness of gender relations and their implications.
- An improvement in agricultural production, processing and marketing.
- An increase in women's access to agricultural services and credit.
- Optimisation of women's efficiency as producers.
- An understanding of the effect of male/female relationships on the lives of rural men and women and their families.
- An increase in the well-being of the farm family unit and the population as a whole.

Activities to be executed

- Identify relevant and appropriate agencies and personnel
- Conduct a series of gender training programmes, aimed at meeting the specific requirements of each target group. The training programmes will cover the following general areas:
 - The concept of gender, and how it impacts differentially on men and women (women's multiple roles, women's needs, social relations (male/female, female/female, male/male))
 - The characteristics of small-scale food production systems, with focus on the female farmer

For policy makers and planners, special attention will be given to

- The inter-relationship between women's reproductive activities and agricultural production
- The characteristics inherent to development programmes that contribute to maintaining women's secondary position in society
- The main resources which the woman, the family and the community must have in rural development programmes in order to change women's status
- Incorporation of women, family and community in project design

Credit personnel will also be exposed to the above areas. In addition, their training will focus on:

- Re-evaluation of negative perceptions of women as poor risk takers, and as poor candidates for large-scale loan funds
- Creative financing strategies for funding women's projects

For extension officers and technology transfer specialists, attention will be given to:

- Level of participation in farm activities vis-a-vis men and women, and power relations with respect to decision making and control of resources
- Special characteristics of women with respect to use of time, availability for activities such as training, field days, demonstrations, and others.
- Effects of technological innovation and application on women (for eg. use of heavy or unweildy tools and implements; the effect of cultural practices and use of agro-chemicals on women's health)

Possible implementing organisations or agencies: Bureau of Women's Affairs, Centre for Gender and Development Studies (UWI), IICA, WAND.

Title: Dissemination of Project Findings

Definition of problem/justification

- Involvement of participants is critical to the success of projects. Experience has shown that projects which seek to involve the target group or participants in designing, planning and execution have a greater impact and have a better chance of sustainability.
- As part of the ongoing search for alternative development models, the need exists to find ways of putting people at the centre of their own development. This is a necessary step towards their empowerment.
- The findings and project proposals developed in the project on women food producers need to be shared at the community level with women farmers for their verification of the findings, and their reactions to the proposals in terms of whether they respond to the issues and problems identified, their feasibility, and their possible levels of involvement.

Specific objectives

- To hold community workshops to disseminate the results of the project on women food producers and to the farming community in general
- To obtain feedback from the target group as to the relevance of proposals made
- To encourage farmers' involvement in the implementation of proposals, and to the sustainability of the work

Expected outputs

- Critical assessment and fine-tuning of project and proposals from the farmers' point of view
- Information and guidelines for follow-up action and future planning of projects
- Confidence building and trust between farmers and researchers, and facilitation of information flow
- Validation of people's knowledge and understanding of the situation within which they operate

Title: Credit for Agricultural Development and Land Lease Project

Definition of problem/justification

- Barbados' land distribution is extremely skewed, with the majority of small farmers operating on lots on which expansion is virtually impossible. Data from the 1989 Agricultural Census show that most small-scale production takes place on holdings of less than 0.5 hectares each. Included in this category are over 4 000 "landless" holdings. Women small farmers operate on approximately 0.14 hectares each.
- If policy-makers want to encourage agricultural production and development, they need to assist small farmers in expanding their operations to become viable entities.
- There are large tracts of government land presently lying idle.
- The Ministry of Agriculture, Food and Fisheries in its 1993-2000 Sector Plan has indicated its intention of making some of this idle land available to landless farmers.
- In addition to making land available to farmers, other support mechanisms such as credit facilities and technical support have to be in place to enable the successful development of agricultural enterprises.

Specific objectives

- To encourage and assist small farmers with potential loan security, to establish profitable enterprises through the provision of finance, training and technical assistance
- To assist in the sustainability of the farm family unit by increasing farm income
- To bring idle land back into production through the diversification of the agricultural production base

Expected outputs

- Increased productivity of the farming sector
- Increase in farm incomes
- Continued expansion of the government's current diversification programme
- Establishment of links between agricultural production, processing and export
- Expansion of financing agencies' loan portfolios through inclusion of small farmers previously outside of the banking system

Activities to be executed

- The establishment and management of a special credit fund for agricultural development
- Establishment of agreement between government and financing agencies to make available land on a leasehold basis to project participants
- Establishment of agreements with relevant training institutions (Ministry of Agriculture, NDFB) to provide technical assistance
- Selection of farmers with interest, commitment and potential
- Preparation of business plans
- Approval of loans

Possible implementing organisations or agencies: BADMC, Barbados National Bank (Agricultural Division), MAFF, NDFB, WID.

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PROGRAM FOR THE ANALYSIS OF AGRICULTURAL
POLICIES VIS-A-VIS WOMEN FOOD PRODUCERS
IN THE ANDEAN REGION, THE SOUTHERN CONE
AND THE CARIBBEAN

This Program, executed by the Inter-American Institute for Cooperation on Agriculture (IICA) and financed by the Inter-American Development Bank (IDB) under Technical Cooperation Agreement ATN/SF-4064-RE, covered 18 countries in Latin America and the Caribbean. The first phase was implemented in 1992-1993 in six countries in Central America, under the auspices of the Council of Central American Agricultural Ministers in its XII Ordinary Meeting in March 1992. Results were published in the book *Mujeres de Maiz* (IICA/IDB 1995).

The second phase was carried out in the Andean Region (Bolivia, Colombia, Ecuador, Peru and Venezuela), the Southern Cone (Brazil, Paraguay and Uruguay) and the Caribbean (Barbados, Guyana, Jamaica and Suriname), by request of the First Ladies during their Summit Meeting on the Economic Advancement of Rural Women held in Geneva, Switzerland in February 1992.

Three documents were prepared for each country presenting the technical results from the four areas of research of the Program: a) assessment of the participation of women in the agricultural sector and their contribution as food producers on small-scale farms; b) analysis of agricultural policies and programs and their effects on rural women as food producers; c) evaluation of the technology used on small farms by women in food production processes; and d) analysis of the role of women in processing and marketing farm food products.

Other Program activities included the elaboration of regional comparative documents, the formulation of policy proposals and related actions, national and regional seminars for discussion of Program recommendations, and the publishing and distribution of the final results.