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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

WOMEN FOOD PRODUCERS IN JAMAICA

ASSESSMENT AND POLICIES

Faith Innerarity

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

AREA OF CONCENTRATION IV
SUSTAINABLE RURAL DEVELOPMENT

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ABRREVIATIONS AND ACRONYMS

AC BOARD	Agricultural Credit Board
ACB	Agricultural Credit Bank of Jamaica Ltd.
ADA	Association Development Agencies
AMC	Agricultural Marketing Corporation
ASAL	Agricultural Sector Adjustment Loan
BWA	Bureau of Women's Affairs
CARDI	Caribbean Agricultural Research and Development Institute
CARICOM	Caribbean Community
COA	College of Agriculture
CIDA	Canadian International Development Agency
ESSJ	Economic and Social Survey of Jamaica
FAO	United Nations Food and Agriculture Organization
GDP	Gross Domestic Product
GOJ	Government of Jamaica
HAP	Hillside Agriculture Project
HEART	Human Employment and Resources Training
HFSP	Hillside Farmers' Support Project
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IICA	Inter-American Institute for Cooperation on Agriculture
IMF	International Monetary Fund
IPCBN	Integrated People's Cooperative Bank Network

IRDB	International Bank for Reconstruction and Development
ISER	Institute of Social and Economic Research
JAS	Jamaica Agricultural Society
JCTC	Jamaica Commodity Trading Corporation
JLP	Jamaica Labour Party
MIDA	Micro-Enterprise Development Agency
MINAG	Ministry of Agriculture
NGO	Non-Governmental Organization
PCB	People's Cooperative Bank
PIOJ	Planning Institute of Jamaica
PLL	Project Land Lease
PNP	People's National Party
SAL	Structural Adjustment Loan
SAP	Structural Adjustment Programme
SLC	Survey of Living Conditions
SRC	Scientific Research Council
STATIN	Statistical Institute of Jamaica
RADA	Rural Authority Development Agency
R & D	Research and Development
USAID	United States Agency for International Development
UWI	University of the West Indies
UWI/FA	University of the West Indies Faculty of Agriculture

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.

CHAPTER I

INTRODUCTION

A. Background

The role and status of rural women in the development process has in recent years been a major issue on the agenda of developing nations and international development agencies alike. This is reflected in increased efforts to recognize and document women's contribution to the rural economy through agricultural production, which is still the principal economic activity in most rural areas. In Jamaica, women's participation in agricultural production has a long history dating back, to their activities as members of "work gangs" on sugar plantations during slavery.

Historical records from these plantations showed that women worked primarily as field labourers, engaging in every task from cutting cane to weeding. Research carried out by Joan French and Honor Ford-Smith on women's work in Jamaica indicates that by the 1830's the majority of the field labour force on the estates were women.[1]

This was related to the fact that at this time women out-numbered men in the slave population throughout the Caribbean, unlike the situation which existed in the mid 18th century when the ratio of male to female slaves was two to one.

It is further illustrated by Craton's earlier study of Worthy Park Estate, that women worked in the fields even when there were more male than female slaves. In his account,

> "As the overall percentage of women rose from 46-60% their numbers in the field increased proportionately, from around 58% of the field labour force in the 1790's to over 65% throughout the 1830's".[2]

Barry Higman's study of the Rose Hall Estate in Jamaica also found a predominance of women in field labour (Higman, 1976). The main sexual division of labour in the slave period was between male specialist workers, who served as boilermen, carpenters, coopers, masons and so on, and the female field labourers. Domestic slaves were few in numbers, and consisted mainly of "brown" (mullatoes) females who were often exempted from field labour (Patterson, 1973).

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1 This study was published in 1987 under the Title "Research from Women's work in Jamaica, 1900-1994".

2 Michael Craton, A Jamaican Plantation: The History of Worthy Park (1670 - 1970), W. H. Allen Publisher, London 1978.

The marketing of agricultural produce including small livestock from the "provision grounds" was also controlled by women from the early days of slavery.[3]

This activity formed part of an internal marketing system in which the higglers integrated with hucksters and hawkers.

The latter dealt with manufactured articles in contrast to the agricultural produce controlled by the higglers. Hawkers, mainly men, went from place to place selling these wares. Hucksters, either men or women, were more sedentary, operating from a small shop, stall or both set in a particular location.

While the official statistics indicate an "apparent decline" in the number of females involved in agricultural activities between the early 1900s to the present, women still constitute an important force in production and marketing of agricultural commodities in Jamaica.[4]

The last agricultural census conducted (1978/79) showed that of a total of 182,169 farms island-wide which were in the single-holders category, 35,185 or roughly nineteen percent (19%) were operated by women. Similarly, a sample survey carried out in 1979, in the Two Meetings and Pindars Watershed under the Second Integrated Rural Development Project showed that 22% of the holdings were managed principally by women.[5] It was also found that even where they are not the principal farm operators, women participate regularly in farm production activities at every level. This includes, planting, harvesting, animal husbandry and general farm management tasks. It was found that in as many as 27% of the households there are women who independently take decisions concerning changes in farming practices.[6]

The most recent Labour Force Statistics (1992) shows a total 65,000 women in Agriculture representing 23% of the total agricultural labour force. This reflects the official figures recorded over the last decade which have ranged between 23-32% females in agriculture.

In the light of the foregoing, the contribution of women to Agriculture has increasingly been recognized as an important part of overall plans for the development of the Agricultural Sector.

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3 These were small parcels of lands cultivated by slaves on their "free days" and on which food crops were grown which they could freely dispose of for their own consumption needs or sell.

4 This issue is discussed more fully in Chapter IV where it is illustrated that this apparent decline relates to a re-definition of "gainful employment".

5 The Two Meetings watershed is centered around the rural towns of Spauldings and Christiana covering 5,000 hectares in the parishes of Clarendon, Manchester, St. Ann and Trelawny. The Pindars River, the main town of which is Kellits covers 10,000 hectares in Clarendon and corner of St. Catherine.

6 The three selected areas were Northern St. Elizabeth, Mount Airy, St. Andrew, and Old Harbour St. Catherine.

For many years, the Rural Family Development Programme implemented through the Agricultural Extension Services, has placed special emphasis on the training of women farmers. In keeping with the policies and objectives of the current Five Year Plan (1990/91-1994/95) for Agriculture, consideration was also given to the needs of women farmers, but the impact to date has not been significant.

The increasing focus on women's role in the agricultural and rural development process has not only served to highlight the value of their contribution but also to identify the factors which limit their participation.

In Jamaica, underlying social and cultural values influencing attitude and behaviour, are much greater barriers to women than institutional factors. Agricultural programmes, for example are generally open to both women and men but in certain types of projects women tend to be under-represented.

One important example of this is the Small Farmers Development Programme (1983-1988) which had credit as one of its biggest components. An evaluation of the programme in 1987 showed that approximately 83% of the participating farm-holders were male whereas 16% were female, with Gender not stated for 1%. Of note is the fact that the percentage females in the programme was significantly lower than the overall percentage of females in the agricultural labour force as recorded in the official statistics.

This reflects the fact that while there are no legal or set institutional policies which limit women's access to agricultural credit, traditional land inheritance practices which favour male relatives, give women less access to landed security; which, in many instances largely determines one's capability to meet loan eligibility requirements. Evidence that women have less access to land is borne out in the fact that average farm size is generally lower for them than for men.

While recognizing the need for women to be given special consideration in the agricultural and rural development thrust it is sometimes difficult to isolate women's problems from those of the household, men or small farmers as a group. This difficulty is particularly evident in the case of analysis of factors accounting for low productivity, low level of income, and rural poverty in general.

The adverse socio-economic and ecological factors facing female farmers (e.g. farming on marginal hillside lands, and limitations to accessing credit) are very often the same ones experienced by their male counter-parts. However, in many instances it is a question of degree, so that while men and women face the same problems, the situation of women is generally worse. This is borne out in data on access to credit and land ownership. This study of Women Food Producers (WEP) in Jamaica should assist in providing further knowledge on women's role in agricultural production and the limitations which they face.

B. Objectives

This study intends to provide a basis upon which the policies and actions of Government can be oriented to improve the working conditions of women Food Producers and consequently food security and the efficiency of the Agricultural Sector.

The specific objective of this paper is two-fold.

1. Assessment: To determine the scope and assess the contribution of women to the production, processing and marketing of agricultural products, taking into account their reproductive and productive responsibilities including their contribution to family income.

2. Evaluation of Policies: To analyze Agriculture Sector policies and their effect on rural women and formulate policy recommendations on the basis of the findings. Focus will be placed on credit and land policies as well as training and agricultural extension programmes.

C. Methodology

The approach applied in this study is to analyze women's activities in agricultural production at the micro level within the context of the macro socio-economic and political system.

Analysis of the macro-economic factors is based on secondary data, mainly official statistics. At the micro-level use is made of both primary data collected in the farm level survey designed and implemented specifically for this study, as well as previous surveys conducted by others which contain relevant information. There is specific focus on how women are involved in the production systems of three major food crops.

D. Plan of Document

The presentation of the document is divided into six (6) major sections. It begins with introduction to the role of women in agriculture in Jamaica from a historical perspective and also outlines the understanding of their involvement and therefore enhancing their participation.

This is followed in the second Chapter by an analysis of national agricultural output and an assessment of the performance of the sector within the overall economy of the country. Specific emphasis is also placed on Government food production policies.

The third segment (Chapter III) of the presentation focuses on agricultural sector policies related to land use and ownership, credit, agricultural extension, education and training. Policies aimed

directly at women as food producers are also outlined and the general impact of agricultural policies on women farmers analysed in respect of benefits derived in comparison with men.

Chapter IV which is very critical to the central objective of this study, examines the contribution of women to the agricultural sector measured both in terms of official documented levels of participation in the agricultural labour force and a re-estimation of their actual involvement.

In Chapter V women food producers are placed within the context of the small farmer production system of which they are an integral part. This includes an outline of the socio-economic characteristics of small-scale production units based on the results of the surveys conducted for this study with supportive evidence drawn from other surveys. Considerable attention is given to the contribution of women to production as well as limitations and problems which they face.

The final Chapter contains conclusions and recommendations, implications of the trends observed in the participation of women in Agriculture and policy changes proposed. Specific proposals for projects which could be implemented are also included.

CHAPTER II

NATIONAL AGRICULTURAL OUTPUT

Jamaican women have historically played an important role in agricultural production and continue to do so. This Chapter provides an overall analysis of the Agricultural Sector and food production in Jamaica. It is demonstrated that in spite of the weaknesses with which the sector has been plagued over the past decades it occupies a central position in the Jamaican economy. Women farmers constitute a considerable force in food production and other agricultural activities and are therefore prime contributors to national development.

A. The Agricultural Sector in the Economy

In Jamaica as in many other developing countries, the Agricultural Sector plays a critical role in economic survival. One of the first indicators of the importance of this sector is the fact that roughly fifty percent (50%) of the island's population of 2.4 million resides in rural areas and rely heavily upon Agricultural activities as a means of livelihood. As shown in Table II.1, nearly half of the available land resource of roughly 1.1 million hectares (10,940 square kilometres) is devoted to agriculture. When Forestry which accounts for about a quarter of total land use is included the figure rises to more than two-thirds.

Table II.1

Land Use Distribution, Jamaica, 1978/1979

Type of Land	Hectares	Percentage
Forestry	267,102	24.3
Other Woodlands	217,729	19.8
Agriculture (Pasture included)	509,113	46.2
Natural Range and Greenland	41,684	3.8
Swamp	20,235	1.8
Mining	2,833	0.3
Urban	40,470	3.7
Barren	1,619	0.1
TOTAL	1,100,785	100.0

Source: Statistical Institute of Jamaica 1978/79 Agricultural Census.

1. Contribution to Gross Domestic Product (GDP)

An analysis of sectoral contribution to GDP shows Agriculture lagging behind the other sectors but it still occupies a central position in the macro economy.

Provisional estimates for 1992 (See Tables II.2 & II.3) put Jamaica's total GDP at J$73.0 billion in current prices, and J$17.7 billion in Constant Prices, using 1986 as the base year. The contribution of the Agricultural Sector was approximately J$5.8 billion at current prices and J$1.2 billion at Constant Prices, 1986.

The current status of the Agricultural Sector, particularly its declining share in GDP, must be understood within the historical context of the country's economic development dating back to the 1960's.

During the decade following the attainment of Independence in 1962, Jamaica enjoyed relatively high rates of economic growth, but this did not occur evenly across sectors. The Industrial and Service sectors grew at a much faster rate than the Agricultural sector. Growth in the Agricultural Sector was achieved largely through the performance of the Food Crops sub-sector, but this was not sustained. Considerable efforts were made under the post- Independence plans to increase agricultural production, but by 1972, the contribution of Agriculture to GDP had fallen to 7.5% compared with nearly 12% in 1962, and 13% in 1963. The contribution of Export Agriculture, after rising to a peak in the 1960's had also fallen by 1971. During the decade of the 1970's Agriculture's contribution to GDP fluctuated between 7-9% and this trend continued into the 1980's as shown in Table II.4. Between 1990 to the present Agriculture's share of the GDP has been in the region of 7-8%.

Table II: 2

Gross Domestic Product, Jamaica, 1988 to 1992
(Current Prices) ($JM)

	1987	1988	1989	1990	1991	1992
Gross Domestic Product						
1. Agriculture, Forestry and Fishing	992	1,392.6	1,622.6	1,973.1	3,072.9	5,777.4
1.1 Export Agriculture	189	201.6	192.8	257.4	366.2	781.9
1.2 Domestic Agriculture	510	896.4	1,098.7	1,251	2,013.0	3,748.9
1.3 Livestock and Hunting	197	195	215	336	527	959
1.4 Forrestry and Logging	33	35	36	28	42	50
1.5 Fishing	64	64	81	102	125	238
2. Mines and Quarries	1,147	1,727.3	2,199.3	2,831.3	4,816.6	6,845.0
3. Manufacturing	3,460	3,810.2	4,581.7	5,929.0	8,436.4	14,399.0
4. Construction and Installation	1,405	2,021.1	2,672.4	3,586.8	5,564.7	9,381.8
5. Transport, Communication and Public Utilities	2,088	2,342.8	2,607.9	3,450.6	4,360.8	7,418.6
6. Other Services	8,095	9,332.3	11,197.3	14,746.6	20,295.5	34,583.6
7. Less Imputed Service Charges	821	1,190.5	1,526.9	2,004.5	2,419.2	5,422.6
Total Gross Domestic Product	16,364.9	19,435.8	23,354.3	30,512.9	44,127.7	72,982.8

Source: Economic and Social Survey Jamaica 1991 and 1992
Planning Institute of Jamaica

Table II:3

Gross Domestic Product, Jamaica, 1988 to 1992
(Constant Prices) ($JM)

	1987	1988	1989	1990	1991	1992
1. Agriculture, Forestry and Fishing	889	1,065.3	988.5	1,080.2	1,078.3	1,217.0
1.1 Export Agriculture	151	162.9	149.5	159.4	158.5	158.8
1.2 Domestic Agriculture	447	650.6	572.9	647	651.9	796.3
1.3 Livestock and Hunting	204	168	170	206	201	195
1.4 Forrestry and Logging	32	35	28	14	15	15
1.5 Fishing	54	49	50	54	52	52
2. Mines and Quarries	956	913.0	1,238.1	1,520.5	1,606.7	1,566.0
3. Manufacturing	3,085	3,308.3	3,559.4	3,706.4	3,422.6	3,455.4
4. Construction and Installation	1,241	1,424.6	1,680.5	1,707.2	1,718.2	1,725.5
5. Transport, Communication and Public Utilities	1,986	2,149.3	2,277.9	2,379.8	2,464.2	2,581.1
6. Other Services	7,290	7,538.6	7,949.0	8,380.6	8,743.1	9,293.6
7. Less Imputed Service Charges	678	989.5	1,195.3	1,365.2	1,575.0	2,171.2
Total Gross Domestic Product	14,768.5	15,409.6	16,478.1	17,409.5	17,458.1	17,667.4

Source: Economic and Social Survey Jamaica 1991 and 1992
Planning Institute of Jamaica

Table II.4

Contribution of Agriculture to Gross Domestic Product 1969-1989 in Jamaica (1974 Prices)

Year	Agriculture GDP (J$M)	Total GDP (J$M)	Agriculture % of Total GDP
1969	141.4	1792.0	7.9
1970	149.8	2019.5	7.4
1971	167.5	2068.9	8.1
1972	170.6	2260.4	7.5
1973	159.4	2258.9	7.1
1974	162.6	2243.7	7.2
1975	156.6	2152.6	7.3
1976	157.7	2013.2	7.8
1977	162.3	1965.7	8.3
1978	177.9	1976.4	9.0
1979	159.5	1942.1	8.2
1980	152.7	1829.3	8.3
1981	156.1	1874.9	8.3
1982	143.8	1893.1	7.6
1983	154.2	1931.4	8.0
1984	169.6	1923.8	8.8
1985	163.9	1852.7	8.9
1986	160.3	1870.0	8.6
1987	164.3	1967.4	8.4
1988	157.1	1979.6	7.9
1989	152.7	2104.4	7.3

Source: Planning Institute of Jamaica Annual Econimic and Social Survey

The decline in the contribution of Agriculture to GDP reflects a higher degree of diversification of the Jamaican economy as mining, finance, public administration and distributive sectors increase in size and scope. However, it is also symptomatic of serious problems within the sector itself, and a steady reduction of the lands in farms as shown in Table II.5.

Table II.5

Land Area in Farms and Percentage of Total Land Area Jamaica 1958 - 1980

Years	Hectares	Percentage of Land in Farms
1958	737,687	67%
1961	692,616	63%
1968	602,679	55%
1978	537,055	46%
1980	477,628	43%

Source: Ministry of Agriculture, Rural Physical Planning Division.

2. Employment and foreign exchange earnings

In spite of the declining trend in terms of contribution to GDP, the Agricultural Sector continues to be the second largest employer of labour providing employment for just under one-third of the total labour force (Tables II.6 & II.7).

Table II.6

Agricultural Labour Force Trends, Jamaica, 1980 -1992

Year	Total Labour Force	No. in Agriculture Forestry and Fisheries	% Total Labour Force in Agriculture
1980	1,006,900	298,200	29.6
1981	1,022,900	285,000	27.9
1982	1,045,600	278,100	26.5
1983	1,026,300	258,000	25.1
1984	1,047,500	262,900	25.1
1985	1,049,800	287,800	27.4
1986	1,055,500	275,900	26.1
1987	1,079,200	278,500	25.8
1988	1,075,100	271,600	25.3
1989	1,058,500	250,000	23.6
1990	1,060,100	237,300	22.4
1991	1,076,600	258,400	24.8
1992	1,078,900	245,500	22.8

Source: Labour Force Statistics, Statistical Institute of Jamaica (STATIN).

Table II.7

Employed Labour Force By Sector 1982, 1992
JAMAICA

Activity	1982	1992
Agriculture, Forestry and Fishing	278,100	245,500
Mines and Quarries	8,500	4,600
Manufacturing	109,300	99,200
Construction & Installation	45,600	59,300
Transport, Communications & Public Utilities	40,900	41,900
Other Services	437,000	449,800
Industry not specified	6,400	7,100
Total Employed Labour force	925,800	907,400

Source: Labour Force, Statistics, Statistical Institute of Jamaica (STATIN)

Next to bauxite and alumina agricultural commodities constitute the principal exports for Jamaica, with sugar and bananas being the leading traditional export crops.

This sector also remains a major contributor to foreign exchange earnings (See Table II.8).

3. Agro-industry

In addition to Agriculture's contribution to employment of labour and foreign exchange earnings, linkages between the sector and industry also have a significant economic impact.

Up to the late 1960's the Agro-industrial sector consisted largely of about fifty (50) firms engaged in the processing and packaging of the traditional export crops; sugar cane, banana, coffee, cocoa, citrus and copra. However, significant expansion of the sector took place between the late 1960's and 1970's.

Table II:6

Exports of Traditional Commodities, Jamaica, 1988 - 1992
(US$'000)

Period	Total Traditional Exports	Bauxite	Alumina	Gypsum	Sugar	Bananas	Citrus and Citrus Products	Coffee and Coffee Products	Cocoa and Cocoa Products	Pimento	Rum
1988	570,400	104,850	312,322	586	91,853	15,734	8,600	10,698	6,915	5,138	13,704
1989	712,684	111,026	474,896	275	67,658	19,360	4,119	10,166	4,491	4,590	16,081
1990	899,574	102,973	625,295	425	85,767	37,591	8,953	9,529	6,342	5,504	17,195
1991	830,151	112,913	542,959	551	87,446	45,109	4,454	12,221	5,510	3,544	15,444
1992	735,040	88,759	471,070	704	82,535	39,560	8,117	16,684	5,939	3,714	17,958
Percentage Change											
1989/1988	24.90	5.90	52.10	-53.10	-26.30	23.00	-52.10	-5.00	-35.10	-10.70	17.30
1990/1989	26.20	-7.30	31.70	54.50	26.80	94.20	117.40	-6.30	41.20	19.90	6.90
1991/1990	-7.70	9.70	-13.20	29.60	2.00	20.00	-50.30	28.30	-13.10	-35.60	-10.20
1992/1991	-11.50	-21.40	-13.20	27.80	-5.60	-12.30	82.20	36.50	7.80	4.80	16.30

Source : Economic and Social Survey of Jamaica, 1992

Expansion was brought about mainly by import restrictions and licensing policies as well as by a deliberate Government strategy to diversify Jamaica's economic base through the aggressive development of non-traditional exports. By the mid 1970's therefore there were some 263 agro-industrial firms. Fifty-seven (57) of these firms including nine (9) sugar mills were engaged in the processing of non-traditional export crops. The remaining 206 firms were relatively small with full-time employees ranging from six (6) to fifty (50). They comprised meat, fish, poultry, dairy and fruit and vegetable processing plants.

This structure of the agro-industry did not change significantly during the decade of the 1980's. Currently there are about sixty (60) large-scale companies in Jamaica involved in the processing of agricultural raw materials. They process a wide variety of products ranging from meats, seafood, dairy, fruits, vegetables, spices, edible fats and oils, coffee, forest products, alcohol and tobacco.

The value of investments in the food processing industry is estimated at well over one billion Jamaican dollars. It is also one of the largest employers of labour in the area of manufacturing, accounting for 20% of the total employment in the manufacturing sector, and 50% of the total value of goods produced. Since 1984 output measured at 1974 constant prices has fluctuated between J$156.7 million and J$168.4 million. Export earnings ranged between US$52 million in 1984 and US$36.5 million in 1987. It is well recognised that the agro-industrial sector has the potential to play an even greater role in the Jamaican economy.

B. National Food Production

The Agricultural Sector in Jamaica, broadly defined, includes the following sub-sectors:

(a) Export Crops
(b) Domestic Crops
(c) Livestock
(d) Fisheries
(e) Forestry

Among these sub-sectors, domestic crops, livestock and fisheries are most critical in respect of meeting national food production requirements. Small farmers are principally responsible for national food production. Together they also constitute a high percentage of the Agricultural Sector's contribution to GDP. In 1992 for example, these three sub-sectors (Domestic crops, Livestock and Fisheries) accounted for approximately J$3.7 billion or 64% of Agriculture's share in GDP (current prices). Whereas the Export-Agriculture sub-sector accounted for an estimated J$781.9 million or 13.5% (current prices). In absolute terms, however, export crops generate much greater production value based on the significantly higher prices of these commodities as compared with agricultural commodities produced and consumed locally.

1. Crop production

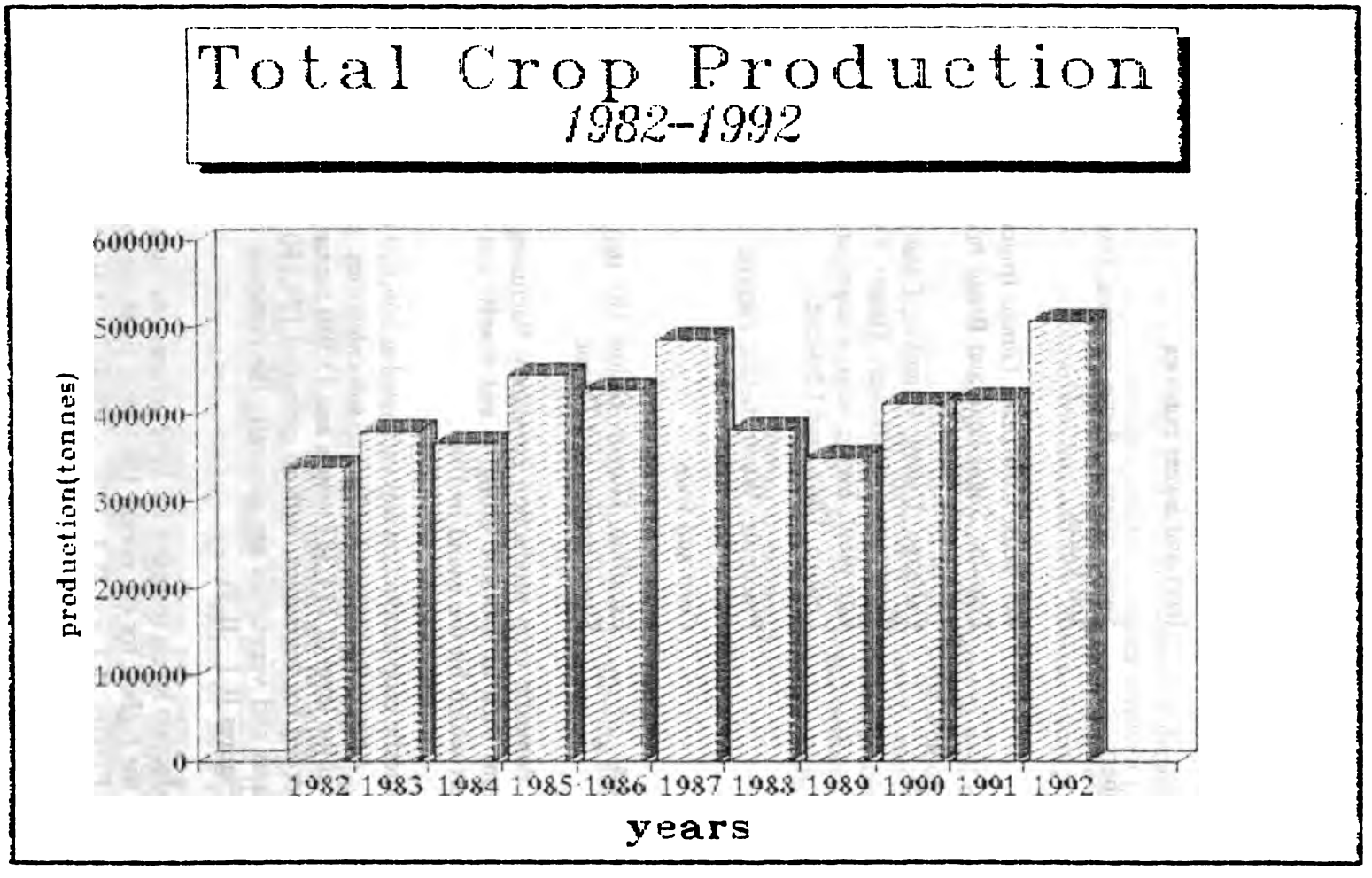
A range of over fifty (50) domestic food crops are grown in Jamaica. These are generally classified into food group sub-categories as follows:

Yams	:	Yellow, Negro, Renta, St. Vincent, Tau, Yampie, Sweet and White yam.
Potatoes	:	Irish and Sweet potatoes
Other Tubers	:	Sweet cassava, Bitter cassava, Dasheen and Coco.
Legumes	:	Red peas, Cow peas, Gungo (pigeon) peas, Peanuts, Sugar bean and Broad beans.
Vegetables	:	Cabbage, Carrot, Pumpkin, Calallo, Tomatoes, Cauliflower, Turnip, Celery, Egg plant, String bean, Cucumber, Lettuce, Okra, and Cho-cho.
Fruits	:	Pineapple, Water-melon, Papaya, etc.
Cereals	:	Corn and Rice
Condiments	:	Escallion, Ginger, Onion, Hot pepper, Sweet pepper and Thyme.

The volume of domestic crop production constantly fluctuates due to the impact of adverse weather conditions such as sporadic droughts and floods, and natural disasters, for example Hurricane Gilbert which hit the island in 1988.

In 1992 total domestic crop production was estimated at 506,899 tonnes and the total area reaped 49,026 hectares. Among the various food group sub-categories, yam was the largest contributor, with production at the level of 214,387 tonnes and 13,980 hectares reaped. The second highest volume was recorded for vegetables, with an estimated 124,180 tonnes produced. This pattern is typical, as yams and vegetables are generally the domestic crops produced in the greatest volume. (See Figures II.1 - II.3).

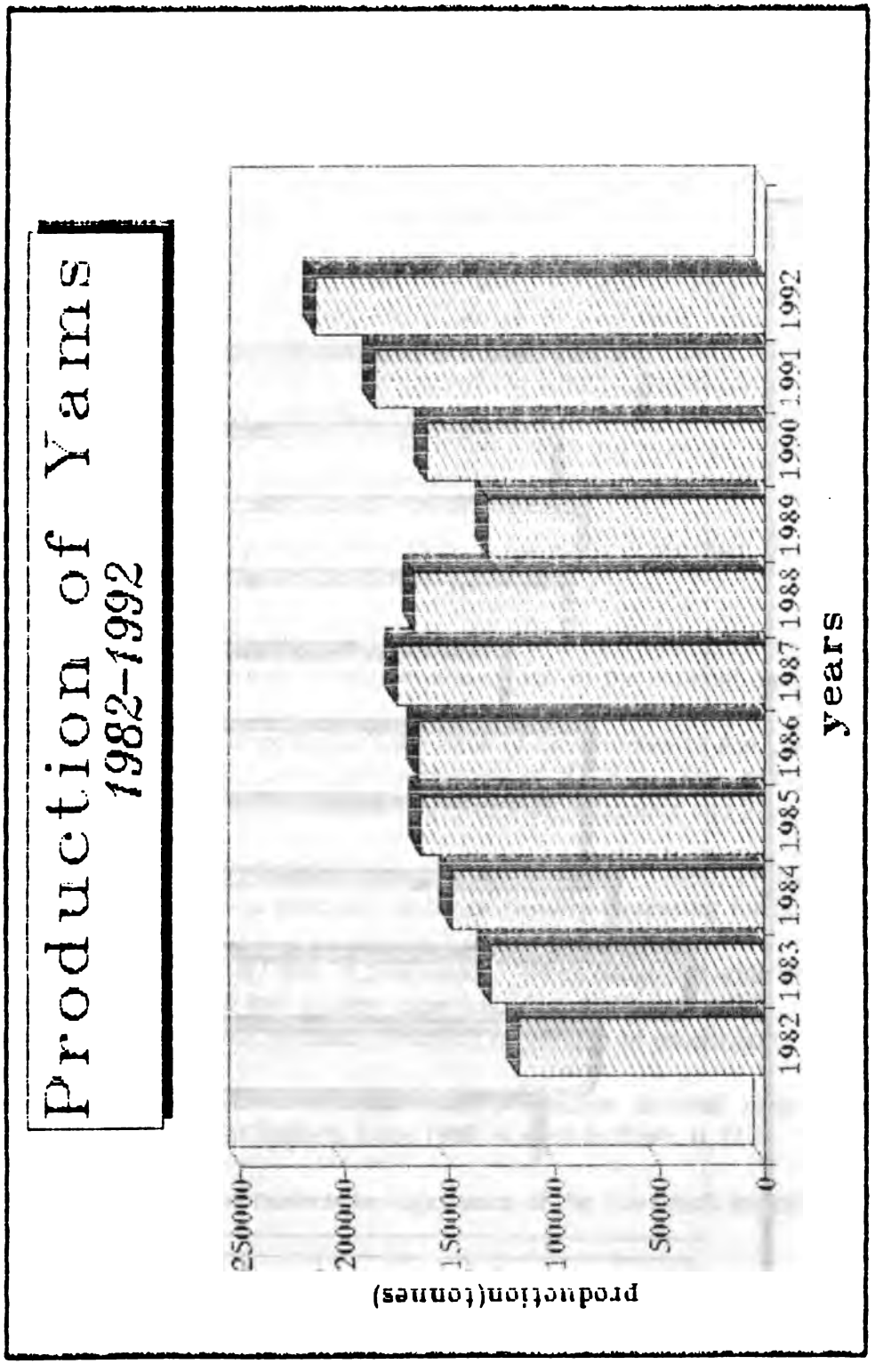
Overall, the production levels recorded for 1992 compare favourably with that of previous years. In fact they are the highest for the period 1982-1992 (with the exception of vegetables in 1984) as displayed in Figures II.1 and II.3. The occurrence of Hurricane Gilbert accounts for the marked decline in production for 1988 and 1989 as compared with 1987, which overall was a year of relatively outstanding performance for the domestic food crops sub-sector.



Source: Compiled from data supplied by Data Bank, Ministry of Agriculture

Figure II.1

Figure II.2



Source: Compiled from data supplied by Data Bank, Ministry of Agriculture

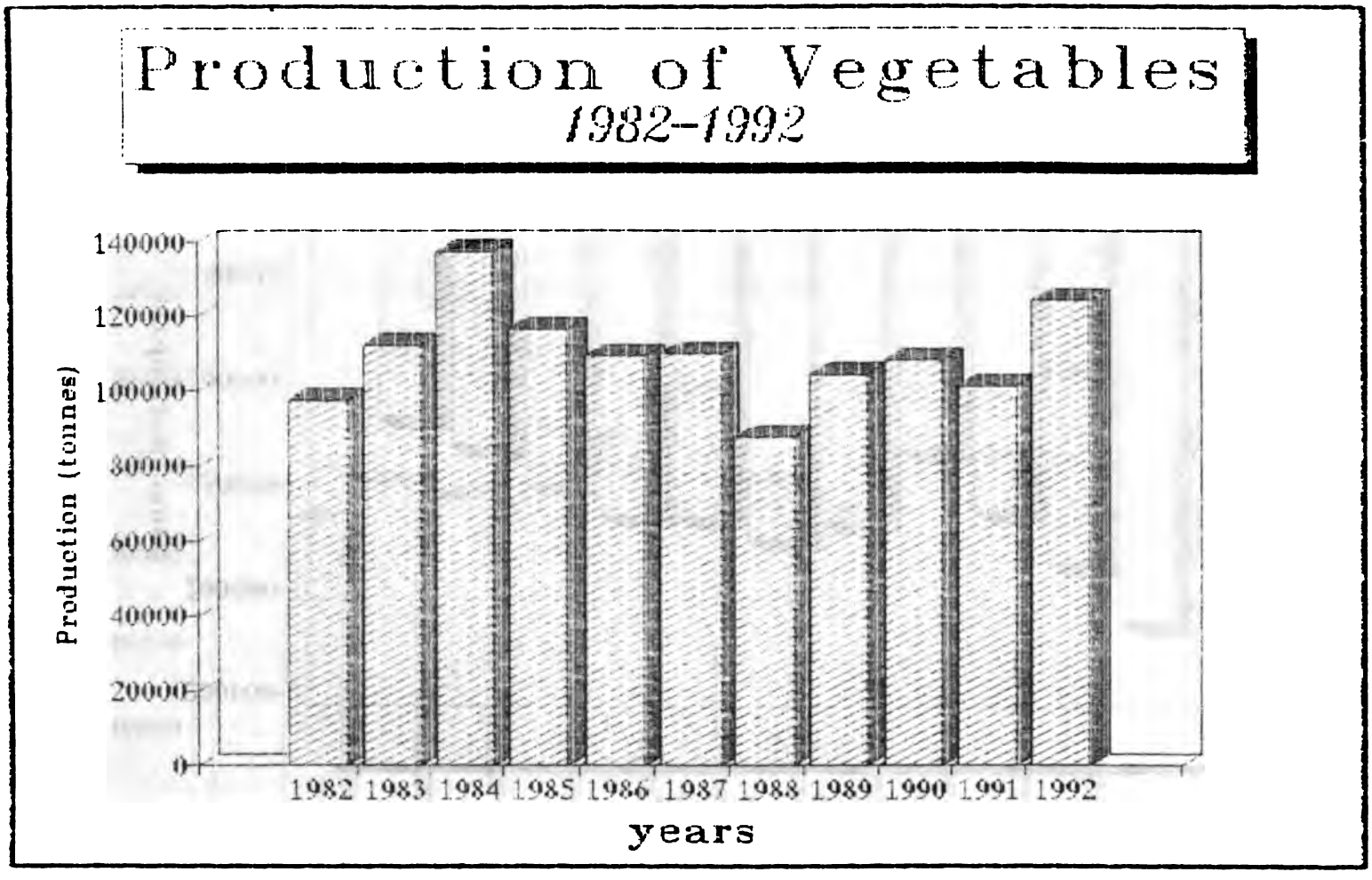


Figure II.3

Source: Compiled from data supplied by Data Bank, Ministry of Agriculture

2. Livestock and fisheries production

The main livestock and fish products produced for local consumption, include:

Meat: poultry, beef, pork and goat's flesh
Milk: Cow's milk and goat's milk
Fish: Salt water and fresh water or inland fish

The livestock industry has benefited from over seven decades of research in tropical livestock production and has the potential for development of profitable industries in other areas. Livestock assets, particularly those represented by beef and dairy cattle, beside being of lasting incremental value, provide a principal source of the animal protein consumed in the country. They provide employment for a significant portion of the rural population and also provide agro-industry linkages. Currently, poultry is the leading item in the meats category accounting for over sixty percent (60%) of total meat production.

Traditionally, beef and dairy cattle have provided a stable production base while pigs have experienced fluctuating fortunes.

Goat-rearing has not been exploited to the same extent as beef and dairy cattle and pigs, but is still important from an economic standpoint and as part of the national diet.

The Livestock Census conducted by the Data Bank of the Ministry of Agriculture in 1990 found a cattle population of 179,333 and a goat population of 202,825. The census also revealed that there was a total of 20,633 beef cattle farmers, 753 dairy farmers and 26,843 goat farmers.

The Livestock production statistics covering the period 1987 - 1992, (Table II.9) show some amount of fluctuation, but was generally stable or steadily increasing for most products.

Total meat production for 1992 was 75,576 tonnes. When compared with 1991, increases were recorded for beef and pork but poultry experienced a decline of 4.0%. However, poultry remained the leading livestock product in respect of volume of production. (See Table II.10).

The percentage contribution of domestic meat production to total meat consumption has consistently surpassed that of imports since 1983 as seen in Table II.11.

The trend observed here underscores the importance of the Livestock industry to national food production.

It should be noted that while Marine Fisheries has been on the decline due to a number of environmental factors, there has been a significant expansion of inland fish production since the mid- 1980's. This is borne out in the fact that inland fish production moved from a mere 32,332 Kilos in 1981 to 833,766 kilos by 1985 and has been at the level of approximately 3,000,000 kilos since 1989.

Table II:9

Domestic Food and Livestock Production, Jamaica, 1987 - 1992

PARTICULARS	UNIT	1987	1988	1989	1990	1991	1992
LIVESTOCK SLAUGHTER	Heads						
Cattle		67,257	63,151	62,090	68,461	75,652	80,605
Hogs		109,565	115,140	125,601	128,010	78,745	93,229
Goats		52,245	51,558	44,063	57,560	49,930	47,589
Sheep		426	410	290	362	610	273
MEAT, FISH AND DAIRY							
Beef and Veal	000 Kgs	13,894	14,450	13,426	15,024	16,053	18,097
Goats Flesh		625	648	536	652	613	652
Pork		6,459	7,331	7,504	7,394	4,740	5,518
Mutton		8	9	5	6	10	-5
Poultry		37,696	34,207	39,009	51,946	53,436	51,298
Fish (Inland)		2,117	2,797	3,049	3,364	3,000	-
Eggs	Million	115	97	99	125	110	114
Milk (Grade A)	Million Litres	22	24	25	27	27	-
DOMESTIC FOOD CROPS	Tonnes	437,603	387,989	351,600	411,160	415,416	503,015
Legumes	Tonnes	10,295	7,706	7,988	7,904	6,422	11,278
Gungo Peas		1,812	2,136	925	1,534	1,623	1,959
Red Peas		4,096	3,136	3,886	3,624	3,538	4,171
Peanut		2,870	1,597	2,431	1,860	2,366	4,109
Other Legumes		1,517	833	727	886	675	1,039
Vegetables	Tonnes	109,812	87,984	104,329	108,108	101,226	109,298
Cabbage		14,192	13,066	17,409	17,333	14,999	967
Callaloo		9,776	9,176	10,543	11,391	10,744	14,335
Carrot		15,269	11,595	14,176	15,527	15,256	18,819
Cho Cho		4,370	3,257	4,298	4,727	3,493	3,565
Cucumber		13,551	8,563	8,201	8,115	6,885	9,137
Lettuce		2,417	2,248	3,071	2,355	3,379	3,875
Okra		1,336	851	1,118	1,254	1,177	1,855
Pumpkin		26,942	21,758	23,691	26,243	26,237	34,187
Tomato		15,962	12,955	15,267	14,258	10,936	14,066
Other Vegetable		5,976	4,514	6,574	6,906	8,121	8,488
Condiments	Tonnes	15,161	10,167	10,499	13,155	10,224	21,274
Escallion		4,465	2,735	3,036	4,210	2,645	6,981
Onion		2,033	1,972	2,731	3,177	1,210	4,499
Hot Pepper		2,020	1,914	1,724	2,137	2,595	4,534
Sweet Pepper		5,575	2,703	2,077	2,414	2,551	3,663
Other Condiments		1,066	844	913	1,217	1,223	1,600
Fruits	Tonnes	14,136	15,795	16,909	19,269	19,320	29,360
Pawpaw		2,884	2,901	3,175	3,860	4,769	9,773
Pineapple		7,392	9,363	9,709	9,330	9,764	11,484
Watermelon		3,859	3,511	4,026	6,079	4,787	8,103
Cereals	Tonnes	6,239	3,799	3,430	2,366	3,491	4,357
Corn		3,963	2,066	2,914	2,167	2,929	3,850
Rice		2,257	1,731	516	219	562	507
Plaintain	Tonnes	26,161	26,167	9,914	27,562	26,692	39,499
Horse Plaintain		22,129	20,690	7,788	22,106	21,223	33,514
Other Plaintain		6,032	5,477	2,126	5,454	5,469	5,955
Yams	Tonnes	175,592	166,631	133,255	161,426	166,104	214,367
Lucea		14,809	13,866	12,963	13,230	12,962	17,369
Negro		22,994	18,785	15,716	16,639	19,476	24,799
Renta		26,500	26,525	13,024	17,626	19,366	20,697
St. Vincent		11,625	8,936	6,773	7,426	7,001	7,563
Tau		7,963	6,656	6,176	8,446	9,599	8,846
Yellow		75,626	75,654	66,990	84,589	102,113	114,320
Other		14,054	12,366	11,681	13,072	15,597	20,561
Other Tubers	Tonnes	43,781	39,437	32,236	35,049	34,336	42,029
Bitter Cassava		9,592	7,440	5,333	6,704	6,446	8,163
Sweet Cassava		7,425	6,130	4,793	5,096	5,663	7,137
Coco		10,319	10,622	9,053	10,246	10,320	10,250
Dasheen		16,445	15,246	13,052	13,003	11,906	16,479
Sorrel	Tonnes	666	420	431	540	624	666
Potatoes	Tonnes	33,758	29,664	32,629	35,750	25,007	30,727
Irish		9,441	9,891	10,816	14,293	7,548	6,936
Sweet		24,317	19,793	21,813	21,458	17,459	23,791

Source: Economic and Social Survey of Jamaica
Planning Institute of Jamaica, 1992

Table II.10

Summary of Meat, Fish and Dairy Production, Jamaica 1992

Product	Unit of Measurement	Volume	Percentage Contribution
All Meats & Fish	'000 Kgs	75,576	100.00
Beef & Veal	"	18,097	23.03
Chevron (Goat)	"	658	0.84
Pork	"	5,518	7.02
Mutton (Sheep)	"	5	negligible
Poultry	"	51,298	65.28
Fish (Inland)	"	3,000	3.82
Eggs	million	114	
Milk (Grade A)	million litre	-	-

Source: Data Bank, Ministry of Agriculture.

Table II.11

Percentage Contribution of Meat Production And Import To Total Meat Consumption, Jamaica, 1981 - 1992

Year	Total Available for Consumption	Production	Imports
1981	100	54	46
1982	100	50	50
1983	100	59	41
1984	100	63	37
1985	100	58	42
1986	100	53	47
1987	100	56	44
1988	100	54	46
1989	100	56	44
1990	100	64	36
1991	100	64	36
1992	100	na	na

Source: Data Bank, Ministry of Agriculture, Livestock Production Statistic.

3. Export agriculture

The principal commodities in this sub-sector are sugar, banana, coffee, cocoa, citrus, coconut, spices and tobacco which are collectively known as traditional export crops. With respect to citrus, banana, and coconuts a significant portion of the total production is also consumed locally. For citrus and banana, however, there is a distinct difference in the quality of the product exported as compared to that destined for the local market.

In recent years, export agriculture has been extended to include ornamental plants and flowers as well as a number of crops such as yam, dasheen, coco, peppers, pumpkin, plantain, mangoes, papayas and other fruits, which were previously produced exclusively for domestic consumption as well as products designated as fish, lobster, etc. These are referred to as non-traditional agricultural exports.

Production of agricultural exports has recorded mixed fortunes in recent times as demonstrated in Table II.12.

When the frame of analysis is extended to the 1960's it is clear that traditional export crops have recorded dramatic decline in production. For example, sugar production declined from a peak of 514,000 tonnes in 1965 to an annual average of below 200,000 tonnes over the last five years, the figure for 1992 being an estimated 139,362 tonnes. Similarly banana exports dropped from 205,000 tonnes in 1966 to a low of 28,000 tonnes in 1988. Since 1989 however, there has been a steady increase, with the 1992 export volume estimated at over 76,000 tonnes (See Figure II.4).

Fresh citrus exports also declined significantly, moving from an average of 1.3 million boxes over the period 1966/67 to 1970/71 to only 0.6 million boxes in 1984. Over the period 1985-1988 exports averaged 469,000 boxes on an annual basis. After a serious decline in 1989 due to hurricane damage the sector has recorded recovery, with 1992 level of exports being above that of 1988.

Export of coffee had increased significantly over the period 1981 to 1984 moving from 837 tonnes to 1,326 tonnes, but declined to the 1981 level in 1985. The period from 1985 to 1988 saw exports of this crop attaining an average annual volume of 937 tonnes. After another decline in 1989 and 1990 as a result of hurricane damage, exports rose to 912 tonnes in 1991 and an estimated 1,091 tonnes in 1992.

Table II.12
Volume Of Major Agricultural Exports, Jamaica, 1987-1992
(Tonnes)

Commodities	1987	1988	1989	1990	1991	1992
Sugar	133,549	153,024	132,332	146,359	157,181	139,362
Bananas	33,778	28,050	41,628	61,066	75,290	76,723
Citrus	8,307	10,870	5,676	11,918	9,985	12,628
Pimento	2,260	2,305	1,932	2,518	1,752	1,773
Cocoa	1,933	2,388	1,104	1,900	1,490	1,750
Coffee	911	946	827	771	912	1,091
Non-traditional	20,538	16,438	11,963	14,733	16,626	19,275

Source: Economic and Social Survey of Jamaica, Planning Institute of Jamaica.

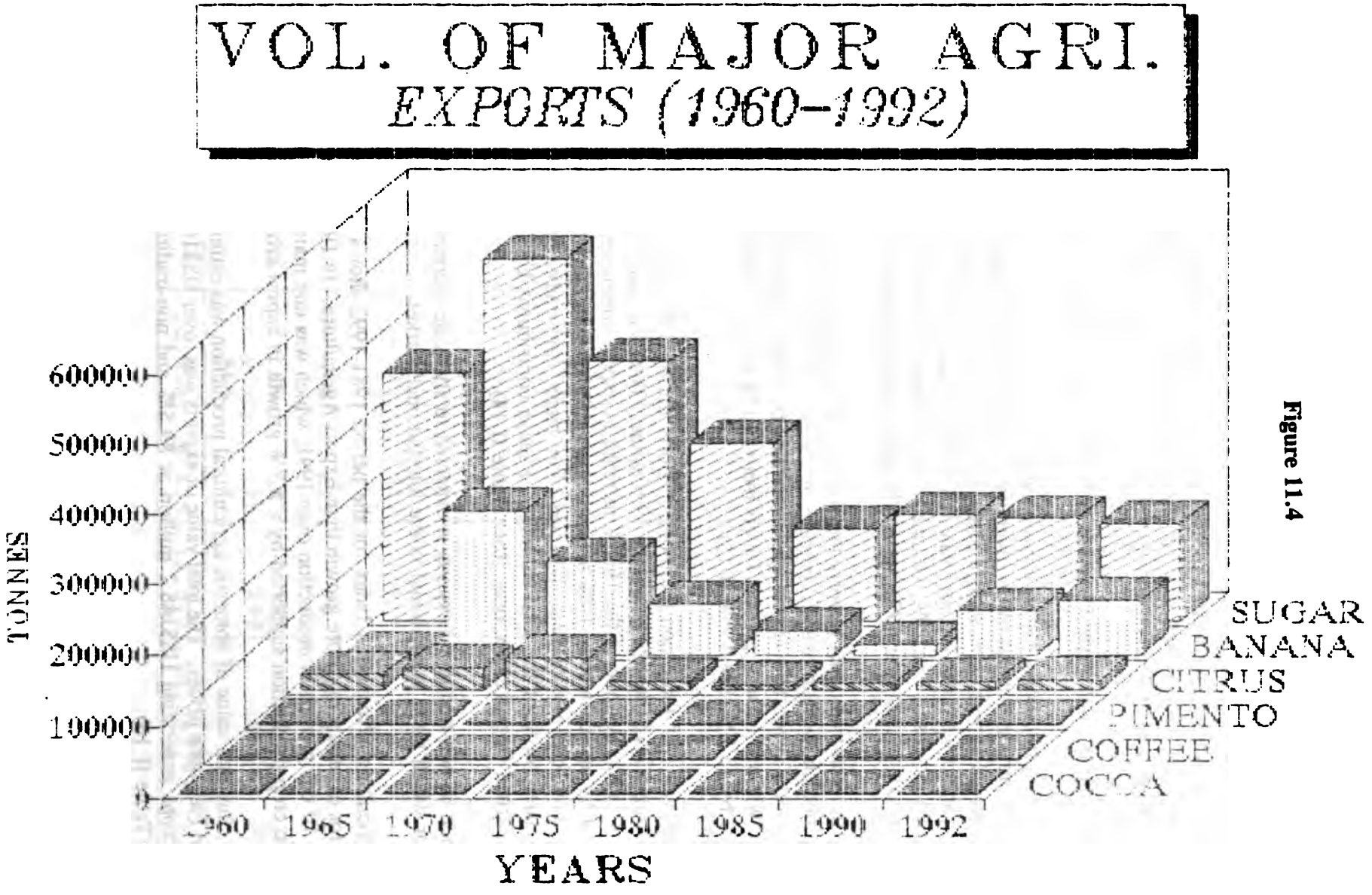


Figure 11.4

Source: Compiled from data supplied by Planning Institute of Jamaica

Cocoa showed marginal increase in export volume over the period 1981-1985 moving from 1,564 tonnes to 1,964 tonnes. Over the period 1985-1987 export of cocoa beans averaged 1,883 tonnes on an annual basis. After reaching a peak of 2,388 tonnes in 1988 it declined to 1,104 in 1989 this again being related to the impact of natural disaster. There was an increase to 1,900 tonnes in 1990 which was not sustained in 1991. The 1992 export volume however, which is estimated at 1,750 tonnes represents an increase over 1991.

Export of spices (mainly pimento) has generally been on the decline.

The decline in traditional export crops as well as a parallel rise in the prices of imports, forced Jamaica to introduce measures to diversify its economy. It is against this background that the non-traditional export crops gained prominence. After experiencing a boom in the mid-1980s however, there were declines in 1988 and 1989. Between 1990-1992 there has however been a sustained increase. The 1992 volume of 19,275 tonnes of non-traditional exports represents an increase of 15.9% over 1991 but is still below the 1987 level of 20,538 tonnes.

Among the non-traditional exports the largest volume increase during 1992 was recorded for fruits which showed an overall increase of 23.7%. Papaya production continued to increase because of the favourable export market for this fruit which accounted for 60% of the volume exported within the fruits' group. Tubers increased by 16.1% in export volume while vegetables increased by 13.2% (See Table II.13).

The total value of these non-traditional exports during 1992 amounted to US$17.4 million, representing a 2.1% decline below the 1991 value. Tubers accounted for 58% of the total NTE value for 1992. In spite of the 16.1% increase in export volume the value of export earnings decreased by approximately 14% below that for 1991 due to the fall in the price received for yams. This commodity was, however, the major non-traditional export, accounting for approximately 46% of the total earnings. Papaya contributed US$2.1 million of the US$3.3 million earned from fruit exports. (See Table II.14).

Expansion of non-traditional exports is expected to stimulate increased production of domestic crops for which there is a demand in the international market.

The Agricultural Production Index for the period 1981-1992 shows the Domestic Agriculture Sub-sector experiencing more growth than Export Agriculture. In 1992 for example, the Index showed 10.6% growth in production over 1991, which was due mainly to a 19.5% increase in domestic crop production supported by a 5.7% growth in export crops (Table II.15).

In 1992, the total value of domestic agricultural production was estimated at over J$600 million based on Farmgate prices. The total value of exports was over US$165 million, with traditional export crops generating US$148.2 million or 89.5% and non-traditionals US$17.4 million or 10.5% (Table II.16).

Table II.13

Volume Of Selected Non-Traditional Agricultural Exports, Jamaica, 1987-1992
('000 kg)

COMMODITY	1987	1988	1989	1990	1991	1992
TUBERS	11,818	11,174	8,931	11,236	11,520	13,374
Yams	9,118	8,567	6,207	8,286	9,130	10,431
Sweet Potato	826	730	878	758	709	1,124
Cassava	7	2	4	1	-	-
Dasheens & Eddoes	1,866	1,875	1,618	2,191	1,681	1,819
Other Tubers	1	-	224		-	-
VEGETABLES	5,959	3,024	1,592	1,781	2,052	2,323
Pumpkins	1,439	1,081	1,130	1,155	1,442	2,029
Sweet Pepper	1,108	1,040	-	-	-	-
Cucumber	2,769	124	90	120	102	154
Tomato	3	1	-	2	1	11
Okra	3	7	2	-	5	1
Other Vegetables	637	771	370	504	502	128
FRUITS	1,572	1,732	1,224	1,320	2,689	3,327
Avocadoes	110	27	16	50	73	128
Mangoes	575	882	416	599	1,382	1,031
Melon	29	1	-	30	47	52
Papaya	-	-	-	-	-	2,007
Other Fruits	858	822	792	641	1,187	109
ORNAMENTAL HORTICULTURE	1,189	508	326	396	365	251
Cut Flowers	644	435	295	359	270	194
Foliage	564	73	31	37	95	57
TOTAL	20,538	16,438	12,073	14,733	16,626	19,275

Source: Economic and Social Survey of Jamaica, PIOJ, 1992.

Table II.14

Value Of Non-Traditional Export Crops, Jamaica, 1987-1992

(US$'000)

COMMODITY	1987	1988	1989	1990	1991	1992
VEGETABLES	2,767	2,087	1,179	1,122	1,239	1,492
Tomatoes	3	1	-	3	1	13
Sweet Peppers	653	801	-	-	-	-
Okra	3	7	1	4	2	1
Pumpkin	611	600	578	598	708	1,156
Cucumber	640	124	72	96	73	123
Other Vegetables	857	554	528	421	455	199
TUBERS	9,389	9,997	11,195	10,581	11,754	10,087
Yams	7,463	7,947	8,834	8,023	9,914	7,964
Sweet Potatoes	599	602	744	677	618	795
Cassava	5	2	3	1	-	-
Dasheens & Eddoes	1,322	1,446	1,614	1,880	1,222	1,364
FRUITS	1,029	1,400	895	1,046	2,367	3,343
Avocadoes	51	20	14	46	47	105
Melon	11	1	-	5	42	17
Mangoes	425	715	382	582	1,202	958
Pawpaw	-	-	-	-	-	2,111
Other Fruits	533	664	499	413	1,076	152
ORNAMENTAL HORTICULTURE	5,749	2,983	2,479	2,891	2,427	2,495
Cut Flower	2,768	2,067	1,900	2,249	1,878	1,702
Foliage	2,981	916	579	642	549	793
TOTAL	18,934	16,467	15,748	15,640	17,787	17,417

Source: Economic and Social Survey of Jamaica (ESSJ), PIOJ, 1992.

Table II.15

Agriculture Production Index, Jamaica, 1981 -1992
1981=100

SUBSECTOR					
YEAR	EXPORT	DOMESTIC	MEATS & POULTRY	FISHERIES	TOTAL
1981	100.00	100.00	100.00	100.00	100.00
1982	97.59	85.21	97.73	103.73	91.10
1983	102.53	95.40	102.33	106.06	99.10
1984	91.10	115.54	110.52	107.69	110.30
1985	94.31	109.32	100.73	111.42	106.20
1986	96.05	103.04	96.27	126.81	102.60
1987	100.87	106.15	98.73	124.71	103.50
1988	80.86	93.75	105.64	123.31	95.40
1989	85.86	91.72	107.68	124.71	95.70
1990	94.13	102.01	124.51	135.67	107.20
1991	103.42	102.04	120.13	131.70	107.40
1992	109.36	121.98	119.97	131.70	118.80

Source: ESSJ, PIOJ, 1992.

Table II.16

Value of Selected Agricultural Exports Jamaica, 1987 - 1992
(US$'000)

Commodity	YEAR					
	1987	1988	1989	1990	1991	1992
Sugar	73,800	91,853	64,839	85,767	87,440	82,517
Bananas	18,909	15,735	19,260	37,591	45,100	39,600
Citrus (Fresh Fruit)	2,608	4,563	2,495	4,674	3,304	4,700
Pimento	4,919	5,138	4,590	5,660	3,543	3,700
Cocoa	4,634	3,352	1,822	3,348	2,234	2,500
Coffee	8,310	9,220	9,478	8,651	11,817	15,249
Traditional Export	113,180	129,861	102,484	149,691	153,438	148,266
Non-Traditional Export	18,934	16,467	15,748	15,640	17,486	17,417
TOTAL	132,114	146,328	118,232	161,331	170.924	165,683

Source: PIOJ, ESSJ, 1992.

4. Structure of production

Land usage in agriculture (excluding forestry) can be classified in three main categories:

i) Plantation crops, including sugar and bananas, grows in the coastal regions primarily for export.

ii) Mixed food and cash crops on the hillsides, which often includes coffee and cocoa for export; and

iii) Pasture for dairy and cattle.

Overall, approximately 70% of the cropped area is planted in traditional export crops and the remainder in domestic food crops. A detailed breakdown of land usage is shown in Table II.17.

Structurally the Agricultural Sector is characterised by the dichotomous relationship between the plantation system of mono-cropping geared toward exports and the small farm sector principally (though not exclusively) engaged in domestic agricultural production of a variety of food crops and some livestock. There is a marked difference between these two types of agricultural enterprises in the distribution and use of available land, labour and capital resources.

David T. Edwards in his analysis of small farm agriculture in Jamaica, outlined these differences as follows:[7]

(i) The small farmers rely largely on family labour while the large farmers use large quantities of hired labour.

(ii) Most of the small farms are to be found on Hillside land where the soils of moderate natural fertility have been badly eroded.

(iii) Little experimental work has been undertaken on crops produced for local consumption, which form an important part of small farm output and an unimportant part of large farm output. The large farmer is also favoured by his greater formal education and social contacts which makes it easier for him than for the small farmer to obtain and use what information is available.

(iv) The managerial function on a large farm is discharged by a person(s) engaged exclusively in this activity while the small farmer manages his farm in conjunction with his manual work on his farm and in employment outside.

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[7] David T. Edwards, An Economic Study of Small Farming in Jamaica, University of the West Indies, 1961, Page 27-28.

(v) The goals of the large farmer are very different from those of the small farmer. The small farmer is pre-occupied with the need to provide for himself and his family in later years.

(vi) The small farm produces a large number of products, some of which are exported, but the others constitute most of the food locally produced for consumption in Jamaica.

(vii) Hand-tool methods rather than mechanized cultivation are typical of the small farm.

Table II.17

Distribution of Land in Agriculture, by Major Use, Jamaica, 1982

TYPE OF USE	HECTARE	% OF TOTAL
Sugar Cane	63,489	11.7
Bananas	7,730	1.4
Orchards	39,,016	7.2
Coconut Pure & Coconuts Forest	16,895	3.1
Intensive Mixed Agriculture	60,302	11.1
Extensive Mixed Agriculture	48,093	8.8
Food Forest	43,601	8.0
Improved Pasture	92,018	16.9
Unimproved Pasture	69,664	12.8
Pimento	4,189	0.8
Pimento/Pasture	3,261	0.6
Miscellaneous*	7,216	1.3
Other Land suitable for Agri.	88,753	16.3
TOTAL	544,227	100.0

* Miscellaneous includes:-
Banana mixed with (a) Coconuts, + (b) Forest;
Tobacco;, Vegetable crops; Coconut + Improved Pasture
Coffee; Fish farming.

Source: Rural Physical Planning Unit, Ministry of Agriculture, 1982.

Central to the differences between large and small farmers just outlined, is the highly skewed pattern of land distribution in Jamaica. Available statistics show that a few large farms control the bulk of the prime land and the vast majority of farmers occupy marginal hillside lands. Individual ownership has also been shown to be the dominant pattern, with co-operatives and state farms being very limited in number (see Tables II.18 & II.19).

Livestock production operations have evolved in a similar manner to crops with the larger ones being specialized commercial farms (particularly in the area of beef and dairy), while the smaller ones utilize a wide cross section of species in a mixed farming system. This is brought out in the categorization of livestock producers in Table II.20. The livestock industry is multi-tiered consisting of three major components:

(i) The farming sector, which is involved with the production of human food and raw materials for processing;

(ii) The service sector which provides major inputs for the industry, such as feeds; and

(iii) The processing sector.

It is estimated that the industry (including inter-linkages of transport and packaging) provides income directly or indirectly to about 440,000 persons.

C. Government Food Production Policies

1. Colonial Era to 1962

The earliest initiative in Agricultural Planning in Jamaica, as in many other Caribbean countries came from the British Colonial Government. In 1938, a Royal Commission was appointed to investigate civil disturbances and other social and economic problems in the West Indies, which resulted mainly from the sharp decline in profitability of the principal agricultural commodities produced in the region. As a follow-up to the recommendations of the Commission, the British Government passed in 1940 the Colonial Development and Welfare Act, superseding the Colonial Act of 1929, which provided for the allocation of funds for colonial development.

Programmes funded under the 1940 Act changed the focus of the agricultural development and provided some experience in the implementation of projects. One of the first agricultural activities funded under the 1940 Act was the Food Production Campaign of 1930-1945. This represented a shift in agricultural policy away from the interest of the large export-oriented estates (mainly sugar plantations) which dominated the sector since slavery toward an emphasis on domestic food crop production by small-scale producers.

Table II.18

NUMBER OF FARMS BY SIZE GROUP BY LEGAL STATUS OF HOLDER
JAMAICA 1978/79

Legal Status	Total	Landless	Under .4 hectares	.4 hectares to under 2 hectares	2 hectares to under 4 hectares	4 hectares to under 10 hectares	10 hectares to under 20 hectares	20 hectares to under 40 hectares	40 hectares to under 80 hectares	80 hectares to under 202 hectares	202 hectares and over
TOTAL	179702	7621	50133	88490	21217	8695	1589	851	474	337	295
Single Holder	178007	7561	49992	87879	20992	8557	1536	782	408	262	122
Partnership	1229	50	151	513	200	103	36	57	36	29	14
Corporation	79					11	2	6	6	11	43
Cooperative	111		22	17	3	2	2	4	6	11	44
Government	136		12	39	7	10	6	2	2	14	44
Other	141	10	16	42	15	12	7	13	7	10	9

Source: Agricultural census 1978/79

Table II.19

AREA IN FARMS BY SIZE GROUP BY LEGAL STATUS OF HOLDER

Legal Status	Total	.4 hectares to under 2 hectares	2 hectares to under 4 hectares	4 hectares to under 10 hectares	10 hectares to under 20 hectares	20 hectares to under 40 hectares	40 hectares to under 80 hectares	80 hectares to under 202 hectares	202 hectares and over
TOTAL	533804.56	84058.62	53672.53	48706.86	21242.70	22827.91	25608.61	40682.87	237004.46
Single Holder	333913.52	83486.65	53037.96	47757.84	20379.48	20382.31	21831.95	30784.31	56333.03
Partnership	40273.72	520.04	562.53	686.78	581.96	1577.12	1944.58	3626.52	30774.23
Corporation	52508.21			74.87	30.76	156.62	421.29	1744.66	50080.31
Cooperative	41420.24	34.69	12.14	19.83	34.40	134.36	479.57	1527.74	39187.51
Government	49405.37	62.32	21.45	84.58	110.48	226.63	552.01	1875.38	46472.51
Other	16283.51	44.92	38.45	82.96	105.63	350.87	379.20	1124.26	14157.22

Table II.20
Livestock Producers By Category 1989
Jamaica

Class of Stock	No. Operators (Farmers)	No. Operators (Farmers) in Formal sector	Explanations
Dairy Cattle	15,000	224	Supplying GRADE A market Milk
Beef "	22,000	100	Pure-bred and large Commercial Breeders
Pigs	14,611	651	Supplying to processors
Sheep & Goat	51,702	1,071	Those with herd sizes 50 heads and over
Poultry	40,000	2,600 (contract)	Does not include independent poultry farmers, but only those producing on contract with large Broiler Companies

Source: Livestock Sub-Sector Five Year Development Plan 1990/91 - 1994/95.

A.J. Wakefield's Memorandum on Agricultural Development in Jamaica, prepared in 1941, was the first systematic analysis of the Jamaican Agricultural Sector. He made the observation that improvements in Agriculture and Agro-Industry would be contingent on sound planning for the future and sustained efforts to put these plans into effect. This report set the stage for the agricultural institutions developed in the Island in the post-war years and also had a far-reaching effect on the framework of agricultural policy.

The central purpose of this report was an elaboration of the argument to justify the expansion of the development of Agriculture and the provision of "additional facilities for concerted planning to deal with the manifold problems which affect the development and welfare of the Island". The small-farm sub-sector was one of the areas of focus.

Several proposals which emerged from Wakefield's report were later implemented with minor modifications and other recommendations made have been recurring themes in Jamaica's on going agricultural planning efforts.

The post-war period 1945-1950 witnessed the first attempts at structured planning, not just for Agriculture but for the entire economy.

The Agricultural Policy Committee of the West India Royal Commission builded on Wakefield's work, placing an even greater emphasis on the needs of the small farmer. Its report, published in 1945, highlighted the need for policies that ensured an appropriate balance between production of food and raw materials for domestic consumption and for exports. The report of the Economic Policy Committee on the general economy was also published in 1945 and reinforced the recommendation advanced for the Agricultural Sector by the Agricultural Policy Committee. Preparation of Jamaica's first Ten year Plan began in mid- 1945, considerable ground work having been already laid in agricultural policy formulation and analysis. A Development Committee was appointed to draw up a sketch plan of development which should form the framework of the whole development policy of Jamaica during the period 1946-1956. This Committee relied heavily on the reports of both the Agricultural Policy Committee and the Economic Policy Committee which were tabled in 1947.

In the Ten Year Plan the major emphasis was placed on Welfare needs. This was largely related to the fact that the main source of funding was grants under the Colonial Development and Welfare Act of 1945, which replaced the 1940 Act. The Colonial Office had stipulated that the Development and Welfare Funds were to be apportioned on the basis of the Ten Year Development Plans for 1945-1956. Enabling schemes for Agriculture were introduced in this period.

The decade of the 1950's saw massive diversification of the Jamaican economy with the introduction of the bauxite, tourism and manufacturing industries. Nevertheless, Agriculture remained the back-bone of the economy through the decades of the 1950's and 1960's. During this period the traditional export crops still dominated the Agricultural Sector with domestic agriculture playing a secondary role.

2. Post-Independence

Jamaica became an independent nation in 1962 and a Farm Production Programme (1963-1968) was introduced as part of the Five-year Independence Plan. The Farm Production Programme aimed to secure optimum land-use, increase agricultural production and improve the rural economy.

The Five Year Independence Plan was to a large extent a reflection of the earlier development plans in the colonial era and therefore failed to introduce wide-ranging structural changes to the existing food production system which was characterised by the export of primary agricultural produce and the importation of the bulk of the island's basic food requirements both for direct consumption and indirectly for animal feeds.

A note-worthy development in the food system however was the establishment of a new state trading organization, the Agricultural Marketing Corporation (AMC) in 1963. The main mandate of the AMC was to provide a guaranteed market for small farmers' produce. Small farmers' produce was then, as it is now, to a large extent synonymous with domestic agricultural production. Under the AMC there was increased output from this sub-sector due mainly to the guaranteed and in some instances minimum guaranteed prices which the Corporation offered to farmers.

3. Policies of the 1970's

A change of Government in Jamaica in 1972 brought fundamental institutional changes to the Jamaican economy. For most of the decade of the 1970's the new Government preached an ideology of Democratic Socialism and pursued policies which included state ownership and reform. Under a programme of nationalization, many productive and services enterprises fell totally or partially into Government ownership. In the productive sector, enterprises falling to Government control wholly or in part included cement, bauxite and a number of agricultural ventures.

The newly elected Government set as one of its priorities, the task of increasing agricultural production and lifting rural living standards. An Agricultural Sector Study was therefore commissioned, resulting in the publication of the 1973 policy document "Green Paper on Agricultural Development". Considerable resources were put into "Operation GROW" (Growing and Reaping our Wealth) which was implemented during 1973-1976 to boost food production. This was coupled with the Land Reform Programme (Project Land Lease) established to give small farmers greater access to land resources. Operation GROW did not attain the expected level of success, as by 1976 Jamaica was undergoing a severe economic crisis marked by lowered production not only in Agriculture, but also in other Productive Sectors.

After the general election of 1976 and the return of the incumbent Government to power, attempts were made to revive the economy by an immediate stimulus in the form of an "Emergency Production Plan" to complement the longer term National Five Year Development Plan.

Agricultural policies and programmes figured prominently both in the "Emergency Production Plan" (1977/78) and the Five Year Plan (1978-1983). A key element in the plan was re-vitalization of the Agricultural Sector through credit and re-organisation of the marketing system. The plan's ambitious target of 30% increase in domestic food crop production for the year 1977 was not realized, but more than 10% increase over 1976 was achieved. In 1978, however domestic food crop production reached a peak, showing a substantial increase over the 1977 index. This increase was largely achieved through drastic cut-backs in food imports and the stimulus of higher prices.

The international economic woes of the 1970's brought about mainly by the oil crisis forced the Government to adopt trade policies that had profound impact on the Jamaican food system. Among these were import restriction policies and the establishment of the Jamaica Community Trading Corporation, a state trading corporation. This organization had virtual monopoly on the importation of a number of basic food items previously in the hands of the private sector. Its major objective was to stabilize supplies and prices of basic food commodities. This it sought to achieve through bulk-purchasing and some diversification of supply sources. It was also the agent through which Government operated counter-trade transactions.

As the foreign exchange situation worsened toward the latter half of the 1970's the economy experienced an acute shortage of goods generally and basic food items in particular. The imbalance in food supply resulted in an increase in the incidence of a "black" market for many food items. The prevailing higher prices however, provided incentives to the Jamaican small farmers to produce those crops which were good substitutes for the imported foods. Consequently domestic agricultural production increased significantly.

4. Policies of the 1980's

A change of political administration in 1980 brought an end to many of the policies pursued in the 1970's and the new policies had a significant impact on the food system. The principal economic objectives established were (a) recovery aimed at reversing the negative social and economic trends which characterised the 1970's and (b) important structural adjustments aimed primarily at reducing the country's dependence upon bauxite/alumina as the single dominant earner of foreign exchange. In this regard funding agreements were entered into with the International Monetary Fund (IMF) and the World Bank.

The general objective of the Structural Adjustment Programme for the Agricultural Sector was stated as the transformation and modernisation of the sector to become a net foreign exchange earner through increased production and export of traditional and non-traditional export crops and the achievement of foreign exchange savings through import substitution. These objectives were later incorporated in the Five Year Food and Agricultural Policy and Production Plan for the period 1983/84 - 1987/88.

In the agricultural policies of the 1980's a sharp distinction was made between strategies for development of the small-scale farming sub-sector and the middle and large-scale commercial farms. The latter grouping (middle and large-scale producers) were targeted to spearhead developments in the Sector with the relationship between them and the small farms being constituted on the basis of a "Mother farm/Satellite farm" concept. The role of small farmers as an independent group was therefore marginalised from an official stand-point.

The thrust to increase agricultural production through the introduction of high technology and increasing commercialization largely failed. Large-scale commercial projects such as the Spring

Plains Development and the Grace Halse Hall Agricultural Projects aimed at the export markets recorded considerable losses.

The Mother-Farm/Satellite-Farm concept which was introduced did not succeed as the level of technology transfer between these large farms and the small farm sector was minimal. The failure of the modernisation policies in Agriculture led to a general feeling of neglect by Government among the small-farm sector.

5. Food security and self-sufficiency policies

A significant institutional change in support of agricultural policy objectives formulated in the 1980's was the establishment of a statutory body, Agro 21 Corporation Limited in 1983, to guide the modernisation and commercialization process in Agriculture. The Corporation was specifically responsible for promoting the production of new crops and the implementation of a food self-sufficiency programme. This programme was launched in 1984 with the main objective to develop and expand the production of basic food items for import substitution. The items included were rice, soya beans, cassava, corn, sorghum, beef, milk and fish. Cereals and grains were targeted because of the high level of importation both for human consumption and as input for animal feed. Rice for example is a staple diet for Jamaicans and corn is a major energy source in the local manufacture of livestock feed, but both traditionally being grown in only limited quantities locally.

The self-sufficiency programme was intended not only to reduce foreign exchange outflows but to generate employment in the rural economy and improve purchasing power. The programme however, was largely unsuccessful as the production of most of these crops proved financially unfeasible due mainly to low yields. Consequently in the 1990/91 - 1994/95 Five Year Agricultural Plan targeted levels of self-sufficiency in specific crop areas have been revised downwards and particular programmes de-emphasised.

The current production plan for the "Direct Import Substitution" or "Self-Sufficiency Crops" is formulated on the premise that at current levels of technology, Jamaica can best produce only a modest portion of the rice, soya, and sorghum which it needs. However, it is a matter of public policy that the country should maintain some measure of food security, and consequently, local production of these items is being encouraged where feasible. Furthermore, the recent devaluations of the Jamaican Dollar have improved the economic prospects for local production by making imports more expensive.

The strategies to rationalize production of these crops involve:

(i) periodic reviews of Government's policy of encouraging import substitution of these crops;

(ii) making high yielding varieties available to farmers, and supporting their culture with effective research and development and well- delivered extension programmes; and

(iii) monitoring imports by the Anti-Dumping Committee to safeguard the country against dumping and ensuring that the local market will be able to absorb local production of crops targeted for self-sufficiency.

CHAPTER III

AGRICULTURAL SECTOR POLICIES

It must be emphasised that Jamaica is now operating within the context of a liberalized economy and also the global free-trade movement. Domestic food production policies, therefore have to be implemented within this framework. Restrictive import policies are therefore no longer in place to protect local production. Greater efficiency in production and increased competitiveness in the market place therefore constitute a major challenge for agricultural producers both in the Domestic and Export Agriculture sub-sectors. In the manner that preferential market access of traditional exports such as banana and sugar are being eroded, protection for local producers is also virtually a strategy of the past. The attainment of self-sustaining growth and development in the Agricultural Sector, forms a critical part of Government's overall strategy for social and economic progress in Jamaica. Cognizance is however taken of the fact that there are a number of issues and constraints affecting Agriculture which must be overcome to enable the sector to fulfil the desired role in the process of economic and social transformation.

Low productivity has been a major problem of Jamaica's Agriculture. Whereas yields from some crops have improved, in general crop yields remain significantly lower than in several other countries. A number of factors have contributed to low productivity, including:-

- absence of a clearly defined research and development programme;
- inadequate extension services;
- aging farm population which does not easily adopt to improved technology;
- widespread lack of irrigation and a consequent dependence on rain-fed agriculture; and
- in-appropriate land-use, particularly in the watershed areas.

Other constraints in the sector which have impacted directly on production include problems experienced by small farmers in accessing credit (e.g. inability to meet collateral requirements); and inefficiency in the domestic marketing system due largely to inadequate market intelligence, and a poor distribution system.

In addition, agro-industrial linkages have not been sufficiently developed due to poor integration between the agro-industrial operations and the production of local raw materials to ensure a consistent flow of fresh produce to such enterprises.

Within the context of the issues and constraints just outlined, coupled with the established long-term national development goals, Government's objectives for the Agricultural sector are currently designed to:

(i) Increase and sustain its contribution to the general economic growth and development of the country; and

(ii) increase production and productivity in order to:

- make a substantial contribution toward meeting the food and nutritional requirements of the population;
- reduce reliance on food imports through greater domestic food production;
- expand exports of agricultural commodities to maximise foreign exchange earnings; and
- encourage agro-industrial development.

(iii) Improve the quality of rural life by means of higher farm incomes and by expanding rural infrastructure and services.

(iv) Reduce unemployment as well as under-employment and minimise rural-urban migration by creating increased opportunities in Agriculture and related activities.

(v) Foster the development of appropriate technology through research and development and ensure the transfer of this technology to farmers.

(vi) Stem environmental degradation in general, and in the critical watershed areas in particular and pursue sustainable development strategies through the promotion of efficient use of the natural resources.

A synopsis of the principal policy measures formulated and programmes implemented in Jamaica over the last decade to enhance agricultural productivity and improve rural development is provided in the following matrix (Table III:1). Details of these policies are out-lined in Section

A. The matrix also shows orientation in terms of farm size and Gender and from this it is clear that generally policies do not have an explicit Gender focus, but some programmes have been directed specifically at women.

A more detailed discussion of the impact of the agricultural policies on women is provided in sections B & C.

A. Policies on Land Use, Credit, Research, Extension

1. Structural adjustment policies

Since the early 1980's agricultural policy has largely been determined within the framework of the Structural Adjustment Programme, designed to effect the structural transformation of the Jamaican economy through tight fiscal management and the pursuit of an export-oriented development strategy. This programme was supported by three Structural Adjustment Loans (SAL) from the World Bank. These are known as SAL, I, II & III. Under the programme, a number of major reforms were instituted, some specific to the Agricultural Sector, and others targeted at the macro-economy. The macro-economic reforms included devaluation of the Jamaican currency, dismantling of the import licensing and tax system and institutional reforms.

Table III.1

Table III.1 Agricultural and Rural Development Policies and Programmes - Jamaica 1980 - 1995

POLICIES AND PORGRAMMES	DESCRIPTION	Orientations by Farm Size of Producer			Gender Orientation		COMMENTS
		Small	Medium	Large	Women Farmer	Other Women	
1. Land Policy							
a. Land Divestment Programme	In an effort to reduce land-idleness and increase production large tract of unutilized government lands are sub-divided and distributed to farmers on both freehold and lease-hold basis. This includes leasing/selling of government lands to private investors for large scale commercial agricultural projects.	*	*	*			There is no Gender focus in this programme, but the majority of beneficiaries are men. Young agricultural graduates have been targetted to be given special consideration. Charges of political favouritism are the most frequent problems associated with this programme.
b. Land Titling Project	Improvement in facilities and processes for issuance of registered titles to allotees on Government Land Settlement Properties. Target of issuing 12,000 titles was set.	*					Since inception (1969) this project has been fairly successful and reached its target by the scheduled end of project date (1994). There is no Gender focus.

Table III.1 Cont'd

Table III.1 Agricultural and Rural Development Policies and Programmes - Jamaica 1980 - 1993

POLICIES AND PROGRAMMES	DESCRIPTION	Orientations by Farm Size or Producer			Gender Orientation		COMMENTS
		Small	Medium	Large	Women Farmer	Other Women	
II. Credit Policy							
a. Rationalization of Agricultural Credit Institutional Framework	This was marked by the creation of the Agricultural Credit Bank (ACB) in 1981 to function as wholesaler of agricultural credit through network of People's Co-operative Banks (PCBs) Commercial Banks and other financial inter-mediaries.	*	*	*			This step was taken to improve the credit delivery system for agriculture with emphasis on supervised credit to eliminate high rates of arrears of agricultural loans, particularly among small farmers. The ACB has succesfully upgraded the operations of a number of PCBs and has drastically reduced arrears in the system.
b. Introduction of Market led interest rates under the Agricultural Sector Loan (ASAL)	Since 1990 this effectively brought interest rates in the Agricultural Sector to market rates by linking it with the yield of Treasury Bills.						This policy brought an end to subsidised lending in the Sector and drastically reduced effective demand for loans especially among small farmers.

Table III.1 Cont'd

Table III.1 Agricultural and Rural Development Policies and Programmes - Jamaica 1980 - 1995

POLICIES AND PROGRAMMES	DESCRIPTION	Orientations by Farm Size or Producer			Gender Orientation		COMMENTS
		Small	Medium	Large	Women Farmer	Other Women	
C. Small Farmers Development Programme (IDB/IFAD)	Implemeted 1983 - 1988. This programme provided credit and extension assistance to small farmers to increase production of a range of domestic food crops. Special emphasis was also placed on on-farm and community soil conservation techniques	*					This was the first major small farmer credit programme implemented der the rationalised system, and served as a testing ground for its procedures. It had a mixed outcome, successes in some areas and failures in others.
d. Hillside Farmers Support Project (IFAD/GOJ)	Six year project initiated in 1990 to provide credit for small farmers engaging in cultivation of tree crops (coffee & cocoa) and associated inter-crops.	*					This project has no Gender orientation and indications are that women have benefitted far less than men. The success of the project is also being hampered by the high interest rates.

Table III.1 cont'd

Table III.1 Agricultural and Rural Development Policies and Programmes - Jamaica 1986 - 1995

POLICIES AND PORGRAMMES	DESCRIPTION	Orientations by Farm Size or Producer			Gender Orientation		COMMENTS
		Small	Medium	Large	Women Farmer	Other Women	
III. Agricultural Extension and Rural Development - Creation of the Rural Agricultural Development Authority.	This is the most significant policy initiativ over the last decade. RADA, a statutory body is now responsible for extension functions previously undertaken by the Ministry of Agriculture. RADA's mandate is to provide a efficient and effective extension service to farmers resulting ultimately in an improved standard of living for the rural family.	*	*		*		Generally, effectiveness of RADA has been hindered by staff cuts at the field level with the "down-sizing" of the Public Sector. Men are reported to benefit more than women in general extension activities, but there is a distinctive focus on women in its Home Economics/Social Services Programmes.

The major elements of the Agricultural Sector's Reforms included:

(i) de-regulation of domestic and export marketing, improved farmgate pricing formula for certain agricultural export crops and divestment of the non-marketing activities of Commodity Boards;

(ii) divestment of a number of Government-controlled agricultural projects and assets;
(iii) re-organisation of the Ministry of Agriculture.

(iv) establishment of the Agro-21 Corporation Limited as the primary vehicle for the encouragement and development of commercial farming in Jamaica;

(v) initiation of the Land Titling Project to assist small farmers in the acquisition of land titles and so provide them with the collateral to obtain credit more readily.

A number of initiatives were pursued in the Sugar and Banana industries. They included the diversion of some sugar-cane lands to non-traditional export crops, in order to encourage greater efficiency in land-use and diversify the export base; and the re-structuring of the Banana Industry to concentrate on large, high-technology farms.

These institutional and policy reforms undertaken under the Structural Adjustment Programme, stimulated new investments in large-scale commercial production in certain traditional exports such as citrus, coffee and bananas.

The area of non-traditional exports (e.g. ornamental horticulture) also attracted a number of new investors and generated much interest among small and medium-scale farmers.

Efforts at structural adjustment of the economy have continued into the 1990's with financial support from the multi-lateral financial institutions. These include the Agricultural Sector Adjustment Loan (1990) and the Second Trade and Financial Sector Adjustment Loan (1991) from the World Bank. The policy reforms indicated below are conditions of both loans and are in line with Government's own goals for a liberalized economy.

(i) Agricultural Import Regime: Elimination of all quantitative import restrictions and reference pricing on agricultural products.

(ii) Jamaica Commodity Trading Company (JCTC) Pricing Policies: Abolition of the Generalized Food Subsidy Programme administered by the JCTC.

(iii) Agricultural Credit Policies: Reduction of the interest rate differential on loans to the Agricultural Sector vis-a-vis other Sectors of the economy. In operational terms this means that interest rates on agricultural loans are linked to Treasury Bill yields to reflect market interest rates.

(iv) Marketing of Cocoa and Citrus: Imposition of new policy measures to reduce the monopoly powers of the Cocoa Industry Board and the Citrus Growers Association in the marketing of related commodities.

(v) Public Divestment Programme: The divestment of Government-owned agricultural landsand agro-industrial enterprises on a programmed basis.

(vi) Anti-Dumping Regulation: Appointment of an Anti-Dumping Committee, charged with the responsibility among other things, to define the goals which the regulation is to achieve and set limits within which foreign firms will be expected to respond to anti-dumping action.

In keeping with its objective to improve the fiscal performance of the economy by establishing specific fiscal targets, the structural adjustment programme placed severe limits on Government's expenditure. Budgetary allocations, in real terms, were reduced in a number of Sectors including Agriculture, where the adjustment process had a generally negative impact.

During the period 1981/82 to 1985/86 the recurrent budget for Agriculture increased in nominal terms but its portion of the total recurrent budget was reduced from 2.3% to 1.6%. In real terms the trend in expenditure showed a strong decline between 1980/81 and 1985/86 - 1990/91. Reduction in expenditure was significant in areas such as agricultural extension, research, physical planning and soil conservation. This decline in expenditure led to a contraction of support services to small farmers who traditionally rely on, and are targeted by Government agencies for the provision of such services. In the area of credit, structural adjustment also created difficulties for the Agricultural Sector. With the introduction of market- determined interest rates on agricultural loans there has been a dramatic decline in loan applications. Up to December 1990, the interest rates on agricultural loans stood at 12% for small farmers (defined in that context as those with up to 10 hectares of land) and 15% for medium and large farmers (above 10 hectares) with maximum financing reduced from 80% to 60%. After December 1990, the rates for medium and large farmers were adjusted to equal market lending rates of commercial banks, while that for small farmers was equal to the 90 - day Treasury Bill yield.

Under the ASAL an agreement was reached in 1991 between the Government, the IBRD and the IDB on a new agricultural interest rate policy. The essence of this agreement was that after all loan conditionalities were implemented the interest rates for small farmers would be equal to seven (7) points below the average yield of Treasury Bills that existed in the twelve months prior to the date on which the new system became effective. Later, the IDB negotiated further reforms under one of its sector adjustment loans, which adjusted the rate for small-scale farmers to equal the Treasury Bills, thus eliminating the previous concession. Each small farmer was limited to a maximum loan of US$5,000, above which they could borrow additional funds but at summary rates applicable to medium and large-scale farmers. In sum many this resulted in interest rates to small farmers increasing sharply to 49% by April 1992 and for medium and

large farmers 49% plus the respective margins of the commercial banks. The movement in interest rates is shown in Table III.2.

These rates represented extremely high-risk borrowing for even large and medium-scale farmers because many of their enterprises were not profitable enough to service such loans. This therefore accounts for the significant fall in agricultural loan applications.

The period of structural adjustment covering the decade of the 1980's and up to the 1992 saw marked fluctuations in the Agricultural Production Index for both domestic and export crops, as already shown in Table II.15. However, with the exception of the Roots and Tubers group, the Domestic Crops sub-sector was adversely affected by the early structural adjustment policies which focused primarily on export crops. In addition to the reduction in delivery of support services to small farmers, the devaluations over the years increased the cost of imported inputs (eg fertilizers and chemicals) without any commensurate increase in output prices due to declining real income of consumers.

The overall performance of the Export Crops sub-sector during the period, was largely positive in respect of foreign exchange earnings. Following a decline of nearly 16% in 1985, export earnings grew by almost 25% in 1986, 22% in 1987 and 12% in 1988 (reduced growth rate in the latter years due to impact of hurricane Gilbert). Foreign exchange earnings from traditional exports had risen to US$160 million by 1982, an increase of over 100% above the 1981 level.

Of particular significance was the Private Sector's favourable response to the Government's programme of diversifying agricultural production and creating new export opportunities. This led to increased export of non-traditional crops. With the implementation of SAP there was however, increased reliance on food imports.

Over the period 1980 - 91 Jamaica depended on food imports to meet more than 50% of the total food needs. Overall the Agricultural Sector has experienced mixed fortunes under SAP with large-scale and medium-sized producers realizing more benefits than small farmers for whom many negative effects have been recorded. In addition, although specific data for Jamaica is not available, a study on the impact of structural adjustment programmes on women in developing countries has indicated that they "have generally been ill-served" and that as food-producers "women have gained less than proportionately from the better terms of trade for Agriculture".

Table III.2

Agricultural Credit Bank of Jamaica
Nominal Interest Rate for Agriculture, 1990 - 1992

Year	Small Farmers %	Medium and Large Farmers
Prior to Dec. 1990	12	15%
Dec. 15, 1990	23	30%
April 1, 1990	24	31%
Sept. 12, 1991	24	24% + Margin of Financial Institution
October 1, 1991	23	23% + Margin
January 1, 1992	36	36% + Margin
April 1, 1992	49	49% + Margin

Source: Agricultural Credit Bank of Jamaica.

2. Land policy

Government Land Policies in Jamaica must be understood within the historical context of land distribution and tenure in the island, hence an historical review is provided before the outline of existing policies. Land distribution is characterised by a few large farms controlling the bulk of the prime lands and the vast majority of farmers occupying marginal hillside lands. Over 80% of the total number of farms are less than two hectares, and control only 16% of the total area in farms, most of these small farms being located in the hillside areas. In contrast, farms of over 40 hectares, situated mainly in the plains or gently sloping areas, account for less than 1% of the total number of farms, but control more than half (approximately 57%) of the total area in farms.

The unfavourable topography and fragmentation of holdings operated by small farmers coupled with an enormous idle land capacity on medium-size and large farms have been the major problems associated with land use for agricultural purposes.

Land tenure patterns have also been identified as contributing to problems related to land utilization. Most of the land is owned and operated on a free-hold basis, although land is also leased or rented and squatting on Crown Lands is prevalent. Small farms normally consist of more than one parcel of land. Very often within different tenure categories, but the free-hold

system remains dominant, this dominance being linked to the traditional desire to own land as a status symbol and for the purpose of security. Free-hold tenure has been viewed as one of the contributory factors to land fragmentation both in terms of the number of component parcels and in relation to the sub-division of land into small parcels under the Inheritance Laws in place. Preference for the free-hold type tenancy has been traced to the Granting of Emancipation in 1838 when ex-slaves used whatever means that were available to them to acquire land, regardless of its marginality, as an indication of their new status.

Historically even before Emancipation slaves had begun occupying the hilly back-lands adjacent to the large plantations. When freedom was granted, the desire to be as far removed as possible from the plantations (a supreme symbol of oppression) led the former slaves to the hinterlands. Additionally, the plantocracy of the day was unwilling to make good cultivable land available to them, in order to prevent economic independence and thereby secure a continued source of labour for work on the plantations. The ex-slaves became dis-enchanted with arrangements developed for rental of lands, as this proved highly disadvantageous to them as tenants, the land laws of the day being made and interpreted by the plantocracy.

Lands possessed by the plantocracy had originally been acquired from the British Sovereign on the payment of quit rents and at the time of Emancipation were held and operated on a free-hold basis. The lands have over the years been passed on to the heirs and assignees of these original free-holders, many of whom have been absentee owners, accounting for the large acreage of idle lands and the development of squatting among landless and near-landless farmers.

Against this historical background of land distribution and ownership patterns in the island, land reform has been seen as a pre-requisite for agricultural development. One of the earliest initiatives in this regard is the Land Settlement Programme formally developed as a Land Reform Programme in 1929, but which dates back to as early as 1895 when a similar system was used to settle unemployed and landless persons on idle lands. Many settlement properties were at the time of acquisition already heavily tenanted or squatted-on. Major improvements in the Land Settlement Programme initiated in 1960 and the Five Year Independence Plan (1963 - 1968) incorporated further provisions for Land Reform.

Aggregate data stored by the Land Development and Utilization Commission indicate that approximately 235 Land Settlements were established between 1929 and 1968 covering a total area of nearly 100,000 hectares and approximately 38,000 farm units.

Under the political administration of the People's National Party in the 1970's, Project Land lease (PLL) launched in 1973, became the focal point of land reform strategies. The objective was to achieve a rapid increase in the production of food crops by providing more land for small farmers and others with a genuine interest in Agriculture. Under this system Government leased lands from large property-owners and sub-letted in small units to farmers. The major source of lands was the bauxite companies and lands declared idle, but some Government lands were also used. Properties over 20 hectares represented the main source of idle lands for the project.

The project consisted of three sub-programmes or phases: PLL I, PLL II, and PLL III. Under Phase I supplemental tenancy was provided for farmers within close proximity to their homes, for a period of five years in the first instance, with provision for extension based on the farmer's performance. Under Phase II of the project, lands were provided on a 49 years' lease-hold basis, in the first instance, with inheritance rights. Other provisions included limited infrastructure (mainly roads) and credit-in-kind. Under Phase III, lease-holds for a period of 49 years were provided with the inclusion of more extensive infrastructural facilities comprising roads, housing, water supply and in some cases electricity.

Large acreages of land were also acquired by Government for the establishment of Food Farms to be operated as Co-operatives. These were called Pioneer Farms and had professional managers, but were collectively operated by young adults between the age of 19 -25, both male and female. The sizes of these farms were typically between 50 and 100 hectares. This was part of an overall thrust for community enterprise organisation aimed at relieving unemployment and other debilitating social conditions among rural and urban youths. By mid 1978, nine (9) farms had been established under this programme representing about half of the target of 1,600 Pioneer Farmers on 2,000 hectares projected in the Five Year Plan for 1978 - 1983. These efforts greatly contributed to the increases in Domestic Food Crop Production recorded in 1977 and 1978.

With the return of the Jamaica Labour Party (JLP) to government in 1980, there was a reversal of the emphasis on lease-hold tenancies and free-hold occupancy became the major policy directive. In addition, a number of the sites previously used for the Pioneer Farms were converted into skills' training centres, aimed at the same age group as the Pioneer Farms. Increased provisions were made for the up-grading of facilities on land settlement properties and a major Land Titling Project was initiated with the assistance of the IDB to provide settlers with registered titles for their lots. This was expected to increase access to credit for capital development on farms.

The thrust of the current People's National Party (PNP) political administration (1989 to the present) is the continuation of the process of divestment of large tracts of Government lands which began under the Structural Adjustment Programme of the JLP in the 1980's.

In the Jamaica Five Year Agricultural Development Plan, 1990-1995, Government stated its commitment to ensuring that the major decisions concerning land-use are taken within the context of a long term plan aimed at achieving maximum efficiency in the use of land within a framework of sustainable development.

Policy objectives and strategies therefore include:

(i) substantial reduction in land-idleness;

(ii) ensuring that agricultural land-use satisfies broad environmental and conservation requirements and, in particular, that soil erosion is reduced and the productivity of land is preserved or improved;

(iii) discouraging the fragmentation of agricultural lands so that economies of scale are achieved and improved land-management practices put in place;

(iv) promoting the use of agricultural lands in a manner that will:

- increase income in the rural areas particularly among small farmers;
- improve access to resources and facilities for further income generation; and
- improve the social and economic infrastructure in rural areas.

Under the programmes of land divestment farmers are being provided access to prime agricultural lands on both a lease-hold and free-hold basis. Some land has been divested for the production of specific crops to meet export targets and others based on development plans presented by investors. Priority is also being given to traditional hillside and other marginal farmers in need of arable lands.

As part of the land-use strategy, in the critical watershed areas, alternative cropping patterns are being encouraged and emphasis placed on the growing of perennial crops to stem soil erosion and degradation. At the same time a carefully designed programme of domestic food crop rotation is being promoted to ensure a measure of food security and self-sufficiency for the farm households in the affected areas. Two major projects are currently being implemented based on this model, the Hillside Agriculture Sub-Project (HASP) funded by IFAD and the Hillside Agricultural Project (HAP) funded by USAID.

The continuation of the Jamaica Land Titling Project which has benefited from bilateral assistance from both the IDB and the EEC is also a central aspect of the current land policies.

In respect of land ownership and use under the law, men and women have equal access. Similarly, land policies are not articulated with any distribution being made on the basis of Gender. However, in practice there is evidence of unequal access between men and women in the ownership and use of land resources.

3. Credit policy

Since the early 1980's the agricultural credit system in Jamaica has been rationalized with the creation of the Agricultural Credit Bank (ACB) and its related organizational network . Before the establishment of the AC Bank in 1981, there were many different institutions disbursing

credit to the Agricultural Sector, with varying policies, management systems and interest rates in place. These included:

- The Commercial Banks
- The Agricultural Credit Board (ACB)
- The Jamaica Development Bank (JDB)
- The Self-Supporting Farmers Development Programme (SSFDP)
- The Commodity Boards

The oldest of these institutions is the Agricultural Credit Board which was created in 1960. This institution had two portfolios, one to serve larger farmers through direct loans and the other to serve small farmers, channelled through a network of small co-operatives, the People's Co-operative Banks (PC Banks). The PC Banks can best be described as indigenous agricultural loan banks which exist to provide financial services to their members in the form of loans, financial counselling and saving facilities.

From 1969 until the re-phasing of operations in 1981, the JDB made "development" loans to medium-scale and large-scale farmers. In 1969 the SSFDP was established to take care of the small-farming community and was affiliated to the JDB.

The Government established the Crop Lien Programme in 1977. This programme was administered by the Ministry of Agriculture through its own Extension Officers. Loans for the programme were available through the PC Banks. Crop Lien loans were limited to the production of domestic foodstuff and were therefore small, short-term and seasonal. The focus was on small farmers with little or no previous loan experience. The Government policy of rationalization of public sector agricultural credit crystallized in 1982 and began with phasing-out of the JDB and transfer of the executing agency functions of the SSFDP to the AC Bank which began its lending operations in August 1982.

The Agricultural Credit Bank of Jamaica is a private Limited Liability Company with Government as its sole share-holder. It functions as a wholesale credit institution, its major objective being to mobilize public sector financing for agricultural credit for on-lending through its affiliated participating financial institutions, the Peoples Co-operative Banks (PCBs), as well as Commercial Banks. The Bank has also been restructured and strengthened to improve the range of services being provided to the farming community.

The Field Operations Division of the ACB which overseas the small farmer programme, has been re-organized to include a number of developments. They have been given responsibility to provide credit services and give technical assistance to small farmers in preparing farm development plans and projects for loans through the ACB/People's Co-operative Bank System.

The Operations Division of the ACB also gives technical support to the PC Banks to improve their efficiency in the delivery of credit. The management of the PC Banks is currently being strengthened and personnel skills upgraded. The ACB's Projects Department is also being re-

organized and strengthened with the necessary expertise to appraise and process loans in a more efficient manner.

For the purpose of setting the terms of loans re-discounted by the ACB, recognition has been given to two designated categories of farmers:

- Small farmers, defined as those with up to 10 hectares of gross land; and
- Medium and large farmers, defined as those with more than 10 hectares of gross land.

Loans to small farmers re-discounted by the ACB are subject to the following terms and conditions:

(i) **Interest Rate**: As a result of conditionalities worked out with external agencies the interest rate must be equal to the weighted average yield of Treasury Bills over the preceding quarter or equal to the weighted Certificate of Deposit (CD) yield for the preceding quarter where no Treasury Bill auction was held during that quarter; and

(ii) **Loan limit**: A ceiling of US$5,000 at the terms applicable to small farmers. Above this limit small farmers may only borrow additional funds based on terms applicable to medium and large farmers; and

(iii) **Maximum Percentage of Financing by ACB**: The ACB can finance up to 80% of the total cost of viable investment projects by small farmers.

Loans to medium and large farmers re-discounted by the ACB, attract a rate of interest equal to the average yield of Treasury Bills or CDs, plus an additional margin determined by the approved financial institution; and the level of financing is limited to 60% of the total cost of viable projects.

As previously indicated, the application of market-lending rates for agricultural credit has resulted in diminished borrowing because of the high risk involved (See Figure III.1). Consequently, the Government has announced that for the fiscal year 1994/95 rebates will be granted to bring interest rates to a level of 30% in respect of loans up to US$50,000 for new investments. This should provide well-needed relief in view of the fact that nominal interest rates for loans to small farmers soared as high as 49% in April 1992.

In an attempt to widen the distributional channels for loans to small-farmers, the ACB has also changed its credit policy to allow any qualified financial intermediary to re-discount loans to these farmers. Therefore, institutions such as credit unions are now able to access funds from the ACB to on-lend to farmers.

The ACB/PCB system is based on supervised credit to avoid the low recovery rates of the past agricultural loan programmes. Collateral requirements have also been tightened, with landed

security being the most acceptable form. However, in view of the inherent difficulties faced by small-farmers who often do not have legal titles, crop lien as a form of collateral is still accepted for certain crops.

In addition to the formal sources there are also informal channels outside of Government policy jurisdiction. The most important in this regard is the "Partner" system. This is a traditional savings/loans system widely practiced in both rural and urban Jamaica. It provides a form of interest-free credit to the saver who gets the first "draw" of each member's' contribution called a "hand" - a pre-determined sum usually paid weekly. The member who collects the last "draw" could be considered as being involved in a no-interest saving activity. This person often gets first draw in the next round of the "Partner". There are usually several rounds of a partner sometimes extending over many months or even years.

A 1993 Baseline Survey covering over four thousand active and potential participants in the GOJ/IFAD Hillside Farmer Support Project (HFSP) indicated that the "Partner" was the second most important method of savings for farmers in the project area. This is illustrated in Table III:3 below.

Table III:3

Distribution of Farmers Who Save Money on a Regular Basis, by Savings Institution, HFSP- Jamaica, 1993.

Saving Insstitution	No. of Farmers	% of all Farmers (N = 4,283)
Commercial Banks	1,136	26.5
Insurance Company	53	1.2
Credit Union	199	4.6
Merchant Bank	32	0.7
Partner	708	16.5
Private	184	4.3
Other	58	1.4

Source: Baseline Survey Hillside Farmers' Support Project (HSFP), Data Bank, Ministry of Agriculture.

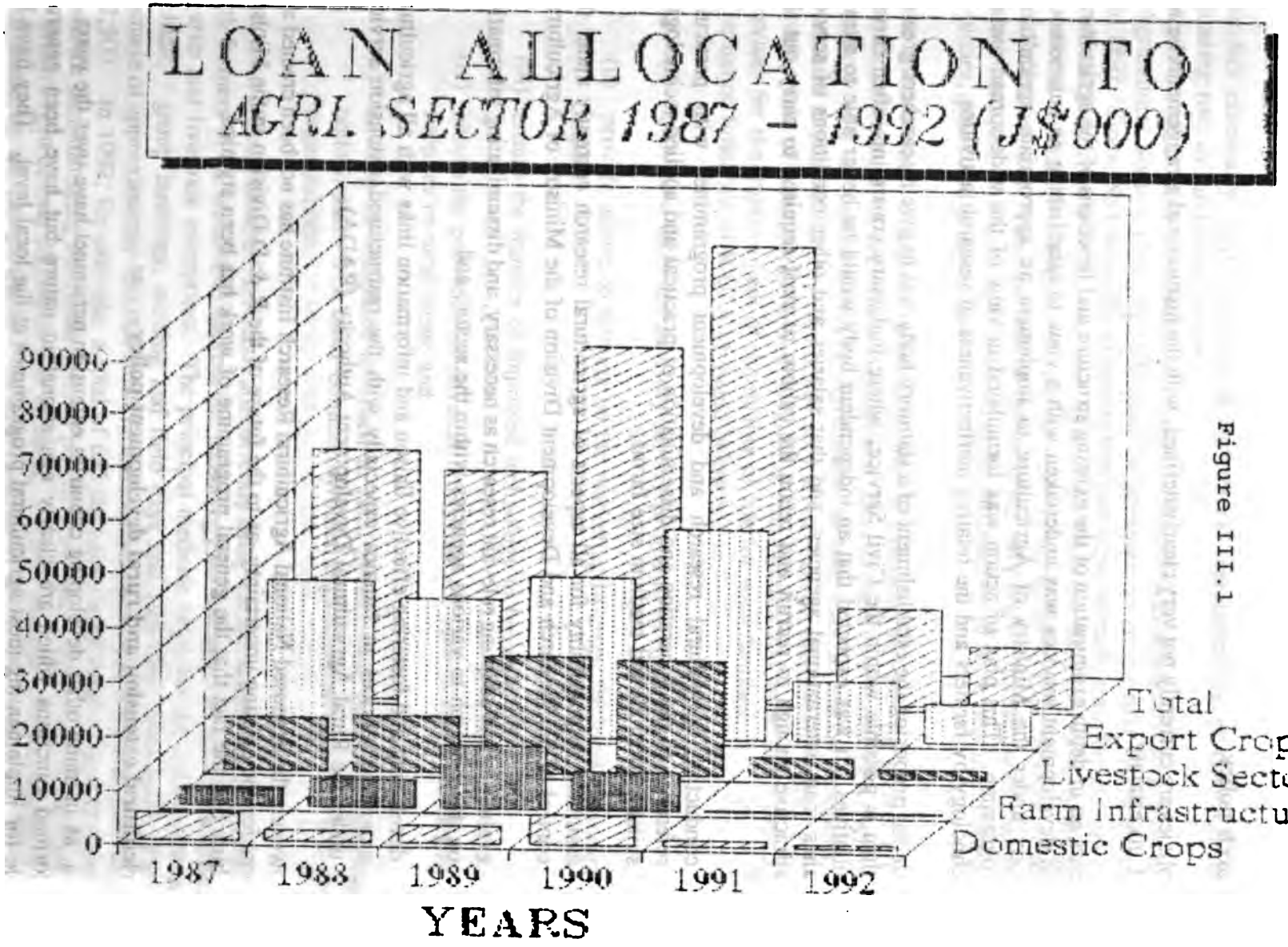

Figure III.1

Source: Compiled from data supplied by Agricultural Credit Bank

4. Research policy

Research policies are currently not very clearly defined, with the institutional arrangements being in a state of uncertainty.

In recent years an in-depth examination of the existing structure and functions of the agricultural research and development services was undertaken with a view to establishing an autonomous statutory body under the Ministry of Agriculture to implement an appropriate agricultural research programme. This plan of action was formulated in view of the wide-spread use of obsolete technology by farmers and the relative ineffectiveness of research activities.

The rationale for proposing the establishment of a statutory body was to give researchers greater autonomy than is possible within the Civil Service, where budgetary constraints often curtail research initiatives. It was expected that an independent body would be better able to attract research funds from international agencies, and that salaries and other conditions of service would be attractive enough to recruit and retain the calibre of staff required to carry out the mandate of:

(i) conducting agricultural research and development programmes with particular reference to the generation and dissemination of practical and applied technologies suitable to small and medium size farms;

(ii) assuming responsibility for all aspects of agricultural research currently under the control of the Research and Development Division of the Ministry of Agriculture;

(iii) evaluating and adapting relevant research as necessary, and disseminating information on this research to various agencies within the sector; and

(iv) developing and fostering effective liaison and information links with all agricultural extension services in Jamaica especially with the restructured extension services under the Rural Agricultural Development Authority (RADA).

To date however, the proposed National Agricultural Research Institute has not been created and this accounts for the existing uncertainty as to the future of the R & D Division in the Ministry of Agriculture and the fact that the general programme of work has been stymied.

5. Agricultural extension and rural development policy

In Jamaica, as in many other developing countries extension personnel have over the years not only performed functions which are clearly educational in nature but have been generally responsible for implementing most agricultural programmes at the local level. They have had to distribute farm inputs and handle other aspects of subsidy programmes, perform regulatory functions, arbitrate disputes and collect agricultural data. With these multi-responsibilities they

in fact essentially serve as the local agricultural representatives of Government and play a leading role in rural development.
Agricultural Extension activities in Jamaica had their origins with the formation of the Jamaica Agricultural Society (JAS) in 1895, and the appointment of the first "Agricultural Instructor" in 1897. Since 1951 when the extension services were formally transferred from the JAS to the colonial Department of Science and Agriculture (now the Ministry of Agriculture) the system has been constantly re-organized over the years in recognition of the need for greater efficiency and effectiveness. These periods of restructuring very often coincided with changes in political administration, which normally resulted in the introduction of some new initiatives in agricultural policies, plans and programmes.

The latest attempt in regards to restructuring the extension services for greater effectiveness is the establishment of the Rural Agricultural Development Authority (RADA) in 1990 as a statutory arm of the Ministry of Agriculture to take over extension functions. RADA is mandated to ensure the provision of advisory services on production and marketing; advance the development of rural infrastructure in farming communities and assist in the provision of social services for the improvement of the quality of life for rural families.
The major functions of RADA as stated below are to:-

(i) provide a technical advisory service primarily to rural farmers;

(ii) provide advice to farmers on the marketing of crops for local consumption and for export;

(iii) ensure the transfer of improved technology to farmers;

(iv) ensure the provision of physical infrastructure, such as roads, electricity and water supplies in rural areas; and

(v) develop an integrated approach to rural development involving co-ordination and collaboration with other community-based organizations including non-government organizations.

Extension officers attached to RADA are currently using various methods for continuous contact with farmers in the transfer of appropriate technology for increased production and productivity in crop and livestock enterprises. The principal methods employed by the Extension Officers include:- group meetings, training and field days and individual farm visits. They serve a clientele of approximately 180,000 small farmers with an extension officer/farmer ratio of about 1:2,500. In 1992, for example, a total of 655 field-days were conducted; 422 plots were laid down for demonstrating improved cultural practices of yams, proper use of fertilizer etc., with the involvement of over 29,000 farmer contacts. In addition, over 97,000 individual farm visits were made by all categories of extension personnel. Notwithstanding these achievements, coverage is not at the desired level due to the constraints associated with to the wide Extension Officer/farmer ratio.

Extension Officers and Plant Protection Specialists also provide much assistance to the farming community in crop care and the control/prevention of pest outbreaks and diseases.
In addition, extension activities have revolved around the implementation of the National Food Production Programme and the various sub-programmes such as Soil Conservation, Poultry Production and other enterprises under the Government's Social and Economic Support Programme (SESP).

These activities include both male and female farmers but the information source (RADA Annual Report, 1992), did not present the data on a sex-disaggregated basis. Discussions with field staff however, indicate that while some women participated the farmer contacts and field visits involved mainly male farmers.

The Social Services/Home Economic Division of RADA which has farm families and women as the principal target groups has been undertaking a number of activities complementary to the overall extension thrust. These include:

(i) Training sessions for community groups covering topics such as, Food and Nutrition, Home Management, Consumer and Population Education, Crop and Livestock Production, Income-Generating and Decision-making Skills. In 1992, 1,428 such sessions were conducted for 89 community groups, formed through the initiative of the Social Services Division and with 15,614 persons attending;

(ii) Home visits to deal specifically with problems relating to individual families (3,652 reported for 1992);

(iii) Assisting families with setting up home-gardens (776 in 1992) and distributing seeds and printed information on Home-Gardening;

(iv) Establishment of Agro-processing projects, and including provision of appropriate training. Examples being

- Bammy Project in Flower Hill St. James, producing 68,000 bammies annually; and

- Dasheen Chips Project in Lucea Hanover, started in February 1992 with ten thousand (10,000), 35 grams bags of chips produced to date to meet the growing demand for the product;

(v) Establishment of Group and Individual projects throughout the island in areas such as livestock rearing, craft and needlework; and

(vi) Hosting of public sessions promoting locally grown food. At these sessions, members of the public are allowed to sample the variety of dishes provided from local foods and are also given recipes for several other dishes. Topics discussed include water supply and safety rights of the consumer and small business management.

This Division of RADA consists almost exclusively of women (a Manager, thirteen (13) Parish and four (4) Senior officers, and twenty-six Assistants). Most of the participants in the wide range of activities implemented are women, though men are not barred.

RADA is also involved in marketing, development and extension activities, working closely with organizations such as the Jamaica Agricultural Society (JAS), Food Technology Institute, Research and Development Division of the Ministry of Agriculture and Commodity Associations. There is continuous liaison between the marketing extension officers, market intermediaries and various related agencies.

6. Agricultural education and training policies

It is increasingly being recognized in Jamaica, that greater emphasis on education and training is necessary in order to fully utilize the resources and opportunities available for agricultural development.

In Jamaica, the provision of Agricultural Education is focused at the secondary and tertiary level, coupled with attempts at revitalizing and expanding agricultural instruction in primary schools.

The principal institutions currently offering education and training in Agriculture are:

i) Technical High Schools, located in rural Jamaica, such as Holmwood in the Parish of Manchester; Dint Hill in St. Catherine and St Elizabeth Technical in St. Elizabeth; as well as Vocational Training Institutes, the main ones being the Elim and Knocklava Agricultural Schools and the HEART training programme at Ebony Park Clarendon, for practical agricultural training;

ii) The College of Agriculture (COA) located at Passley Gardens, Portland, which succeeded the Jamaica School of Agriculture (JSA) which was for many years the main source of trained Agriculturalists in Jamaica, with students also coming from other territories, in the Caribbean. College of Agriculture offers training to the Associate Degree level, and its graduates are expected to meet the requirements of Government's Agricultural extension and support (techincal) services and the country's need for farm managers; and

iii) The University of the West Indies, Faculty of Agriculture at the St. Augustine campus Trinidad, which provides training to the graduate (BSc) and post-graduate levels (MSc, MPhil, PhD).

Most students of Agriculture generally progress from the Technical and Vocational training schools to the College of Agriculture (COA), and a significant number go on to the Faculty of Agriculture (FA), UWI Trinidad.

Attendance at the technical and vocational schools permits students to meet matriculation requirements of the COA, whereas attainment of a grade-point average of 2 or above at the COA provides ASc graduates with credits to complete the BSc course at the St. Augustine campus in two (2) years rather than the normal three or four years, depending on qualification at entry.

In Jamaica ministerial portfolio responsibility for agricultural education rests with the Ministry of Education and not the Ministry of Agriculture and this creates some difficulties.

This became evident when certain crucial decisions related to the former JSA and its successor the COA were taken by the Ministry of Education, and were not considered by the Ministry of Agriculture to be in the best interests of agricultural development.

In spite of whatever difficulties may arise, in respect of the locus of control, however, the Ministry of Agriculture (MINAG) in Jamaica maintains an active interest and supports fully efforts towards improvements in agricultural education.

One of the most recent initiatives launched in collaboration with the Ministry of Education is the "Re-vitalization of the School Gardens' Programme". This forms part of the Government's "youth in agriculture" thrust to encourage more young people into farming.
The School Gardens' Programme aims to re-introduce and strengthen the teaching of agricultural science in primary schools as well as traditional high schools with inclusion of practical training.

At the regional level there have also been initiatives in agricultural education and training spearheaded by policy-makers in the Agricultural Sector. These mainly involve the Faculty of Agriculture, UWI, and include the following:

i) Technology-oriented option added to first degree programme in response to request and concern of the region's Ministers of Agriculture, that FA/UWI graduates were not being sufficiently exposed to practical training in agriculture.

ii) Continuing Education Programme in Agricultural Technology (CEPAT) was established in July 1990 as a programme of the Faculty of Agriculture, UWI. CEPAT is a self-financing programme whose main objective entails fulfilling the more short-term training needs of the region by providing a mechanism for the rapid introduction of new and improved technologies to Agriculture in the Tropics in general and the Caribbean region in particular. CEPAT has mounted courses in various subject areas including Agricultural Marketing, Agri-business Management, Crop Production Technologies, Post-harvest Technologies and Crop Utilization, Agro-Environmental Management, Nutrition Planning and Livestock production.

iii) A post-graduate programme of advanced training in Agricultural and Rural Development by Distance Teaching in collaboration with the University of London (WYE College) commenced in April 1994. This is intended to facilitate persons desirous of undertaking graduate studies who due to job and family commitments do not find it possible to pursue full-time courses.

In spite of the foregoing initiatives and improvements to agricultural education and training at the university level in the region, there is still a number of important policy changes which are necessary to move the Agricultural Sector forward to the 21st century. These have been outlined in two major studies commissioned by the region's Ministers of Agriculture through the CARICOM Community Secretariat. The central issues emanating from these studies are outlined below.[8]

It is often argued that within UWI there is largely an academic rather than developmental outlook stemming from the British Colonial background of the University.[9] One of the central focuses of the Working Group (WG) report (October 1991), is the appropriateness of training at the Faculty of Agriculture/UWI in terms of providing a balance between theoretical and practical training.

The related questions raised were:

- To what extent are the lecturers/teachers/professors of Agriculture sufficiently familiar with the agricultural environment so that they can train students for work in that same environment?

- To what extent is the graduate (after 3 years) really familiar with the agricultural environment in which he is expected to function?

- More specifically if the graduate entered into an advisory or extension/educational type role in the world of work (governmental or private enterprise) is his/her knowledge of real-life experience adequate to facilitate job performance within a short time?

The Working Group concluded that there is an inadequacy of accumulative "real world" exposure to Agriculture within the staff of the FA/UWI such as would enable many of them to design and execute effective practical learning experience for the students of the Faculty.

The Committee also examined the views of employers, both from Government and private enterprise, and the FA/UWI graduates themselves with respect to the comparative capabilities of graduates with and without training at the para-professional level. It was widely acknowledged that graduates afforded the opportunity to engage in practical agriculture at

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[8] The two studies referred to are:

a) Report of the Working Group on the Faculty of Agriculture, University of the West Indies (FA/UWI) and the FA/UWI - CARDI Relationship, October 1991 Caribbean Community Secretariat Georgetown Guyana.

b) D.T. Edwards and A.S. Wood. (Agricultural Training Needs Survey (Main Report) 1991.

[9] The University of the West Indies was first established in 1948 as a College in special relationship with the University of London. It achieved University status in 1962.

institutions such as the COA or former JSA in Jamaica have clear advantages when they enter the world of work after graduation.

Reference was also made to a survey of female FA/UWI graduates carried out in 1987 which found that only 43% felt that their training was adequate, indicating short-comings such as lack of training in management and insufficient practical content.

Similarly, 77% of the 146 respondents from the field survey associated with the Working Group study indicated agreement with the general criticism that the FA/UWI graduate is not generally suitable for direct employment in situations which require on-farm activity or responsibilities which demand some reasonable quantum of actual field experience in order to function effectively.

It is against this background that the FA/UWI has restructured the BSc programme with the introduction of a technology-oriented BSc degree programme in two major areas crop production and livestock production.

Another major issue of concern is the extent to which the Faculty of Agriculture is being utilized by the various contributing territories of the UWI.[10]

The evidence suggested that with respect to the training of nationals as professional agriculturalists, with the exception of Trinidad and Tobago, the FA/UWI is not serving the major function which was at the core of the decision to establish the institution.

Available data illustrates the non-representative nature of the student body on a country basis.

From Table III:4 it is clear that the number of Jamaicans pursuing agricultural degrees at the Faculty of Agriculture, UWI is on the decline. Data on the number of Jamaicans undertaking agricultural studies in foreign universities (mainly the USA) is not available but there is some indication that many choose this route because of the availability of part-time employment opportunities.

In examining the agricultural education and training delivery system the "Edwards and Wood, Caribbean Agricultural Training Need Survey (1991)", emphasizes that this system has to be reshaped and rationalized to meet the regions needs in the 1990's. The point is made that interventions should be made at all levels from primary to university. It was also stated that current trained manpower requirements indicate that the greatest need is at the level of vocational assistants, followed by junior technicians, senior technicians and professional, in that order. The needs, it was asserted, embrace not only natural science and technology, but also the applied social sciences, and a range of managerial and commercial skills.

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[10] There are fourteen countries served by the UWI Antigua, Bahamas, Barbados, Belize, British Virgin Islands, Cayman Island, Dominica, Grenada, Jamaica, Montserrat, St. Kitts, Navis, St. Lucia, St. Vincent, Trinidad and Tobago.

Table III:4

University of the West Indies Faculty of Agriculture Enrollment by Selected Territories 1977 - 1991 *

YEARS	TERRITORY	BSc Agriculture		Masters & Doctorate	
		No.	%	No.	%
1977-1983	Trinidad/Tobago	209	49.5	Not Avail-able	Not available
	Jamaica	124	29.4		
	Barbados	20	4.7		
1977-1989	OECS	68	8.5		
1984-1989	Trinidad/Tobago	267	69.4	123	75.0
	Jamaica	59	15.3	10	6.1
	Barbados	15	3.9	3	1.8
	OECS	-	-	9	5.5
1990-1991	Trinidad/Tobago	241	82.5	39	76.6
	Jamaica	31	10.2	6	12.2
	St. Lucia	5	1.7	-	-

Source: Compiled from "Report of the Working Group on the Faculty of the Agriculture, University of the West Indies (FA/UWI), October 1991.

* This data was not dis-aggregated by sex.

It is instructive to note that neither the report of the Working Group, nor the "Edwards and Wood Agricultural Training Needs Survey", took account of Gender as a factor, in putting forward policy recommendations for agricultural education and training for the Caribbean.

In Jamaica also there is currently no Gender-specific policy guidelines for agricultural education and training. It is noteworthy though that the Jamaica School of Agriculture (JSA) established in 1910 (which up to the time of its replacement by the College of Agriculture, was the most important training institution for agricultural para-professionals in Jamaica) did not admit female students until 1968.

Education statistics for the Caribbean as a whole and Jamaica in particular indicate that overall, females are out- performing males, however, this disguises the fact, that Gender-based specializations along traditional lines are still very evident in the educational system. Agricultural education is one area in which this obtains as indicated in Table III:5. While total female enrollment at UWI is more than that of male, it is noted that in traditionally male-dominated areas such as Engineering, Agriculture, Natural Sciences and Medical Science, there are still significantly more males than females. On the other hand areas such as Arts and Education continue to be female-dominated. One interesting trend is that women are now outnumbering men in the Law faculty.

During the academic years 1989/90 - 1991/92 female enrollment in Agriculture at the UWI ranged between 44.8 - 13.0% indicating a slight declining trend:

1989/90 - 44.8%
1990/91 - 43.5%
1991/92 - 43.0%

In the case of Jamaica as shown in Table III:6 the same trends are evident as in the case of the region, but the ratio of total female to total male enrollment is higher than for the region as a whole. In addition, the number of females exceeds males not only in Law but also in Medicine.

In respect of Agriculture female enrollment ranged between 23.3 - 46.6% for the period 89/90 - 90/92. Both the 89/90 and 91/92 figures, 23.3% and 30.8% respectively were lower than for the region but the 90/91 figure was higher (46.2%).

At the College of Agriculture, Jamaica, the male to female ratio is greater than at the UWI level. Out of a graduating class of 44 in 1993 only 10 were women (22.7%), However in 1994 with an increase in number of students there was a corresponding increase in the ratio of women to men with the graduating class consisting of 55 males and 21 females (38.1%).

B. Policies Directed Specifically at Rural Women

In 1987, a National Policy Statement on Women was drafted by the Women's Bureau in Jamaica, with the collaboration of a number of agencies. This statement represented a major step in recognizing the need for a Gender approach in policy formulation and was later formally adopted by Cabinet. Four principles were outlined as essential to policy development in all sectors:

Table III.5

Total Under-Graduates Registered in Degree Courses at the University of the West Indies by Course of Study 1989/90 - 1991/92

	1989/90			1990/91			1991/92		
	Total	Male	Female	Total	Male	Female	Total	Male	Fe
TOTAL	9,308	4,127	5,181	9,692	4,179	5,513	10,329	4,403	5,9
Degree Courses									
	288	159	129	260	147	113	256	146	1
Agriculture	2,362	623	1,739	2,469	619	1,850	2,513	590	1,9
Arts/General Study	185	48	137	159	40	119	146	38	1
Education	569	506	63	603	528	75	726	616	1
Engineering	8	-	8	6	-	6	13	1	
Nursing	680	408	272	788	438	350	888	486	4
Medical Sciences	2,227	1,147	1,080	2,176	1,107	1,069	2,267	1,147	1,1
Social Sciences	2,648	1,101	1,547	2,871	1,162	1,709	3,135	1,241	1,8
Law	341	1351	206	360	138	222	385	138	2

Sources: Statistical Year Book of Jamaica 1993.

Table III.6

Total Number of Jamaican Under-Graduate Students Registered in Degree Courses at the University of the West Indies By Courses of Study : 1989/90 - 1991/92

	1989/90			1990/91			1991/92		
	Total	Male	Female	Total	Male	Female	Total	Male	Fe
TOTAL	4,256	1,751	2,505	4,541	1,770	2,771	4,725	1,809	2,9
Degree Courses									
	30	23	7	26	14	12	39	27	
Agriculture	1,193	293	900	1,307	285	1,022	1,299	277	1,0
Arts/General Study	159	39	120	136	33	103	127	31	
Education	148	137	11	164	150	14	197	170	
Engineering	2	-	2	3	-	3	5	-	
Nursing	259	130	129	278	124	154	293	127	1
Medical Sciences	1,159	614	545	1,180	615	565	1,197	610	5
Social Sciences	1,189	477	712	1,328	516	812	1,438	534	9
Law	117	38	79	119	33	86	130	33	

i) All policies of the Government must reflect a full recognition of the equal and complementary partnership of women and men.

ii) Economic and social development policies and programmes must provide for equality of access to resources by both men and women.

iii) In policy planning, special consideration must be given to women's multiple responsibilities in the household. In particular, policies must take account of the high percentage of women of all ages who are single parent and sole supporters of their families.

iv) Special measures must be developed to compensate for historic and current disadvantages experienced by women.
Implementation of the policy statement was assigned to Permanent Secretaries in all

Government Ministries as it relates to their own areas of responsibility. A special mechanism in the form of an Inter-ministry Committee, was also created to support policy implementation. This Committee was specifically responsible for:

i) Finalization of an initial plan of action for the implementation of the Policy Statement, taking into consideration the proposals made by the National Parish Consultations organized by the Bureau of Women's Affairs.

ii) Monitoring and evaluation of the Plan of Action.

iii) Making an annual report and recommendations to Cabinet on progress in implementation.

iv) Developing the inter-ministry linkages necessary to address the issues outlined in the Policy Statement.

As part of the implementation strategy, intra-ministry committees were also established later to track progress within individual Ministries and report to the inter-ministry committee on problems or difficulties in the process of incorporating the Plan of Action in the particular ministry's activities. Certain immediate goals were identified for various sectors, including Agriculture. With specific regard to this sector, it was stated that:

"Recognizing the benefits to the economy and to women of increased opportunity, and income in entrepreneurial and agricultural activities, the Government will promote the identification and upgrading of women's existing skills and promote new opportunities, and with also take measures to address constraints such as access to credit, access to markets and the need for support services."

The preparation of the National Five Year Development Plan for 1990 - 1995 saw an elaboration of policies related to women. Women's potential contribution to rural development was addressed by the Women's Task Force, headed by the Bureau of Women's Affairs. Among the policy objectives and strategies outlined in the document produced by the Task Force (Five Year Development Plan for Women 1990-1995) the following are related to rural women:

(i) to devise appropriate systems of training for women in agriculture;

(ii) to upgrade women's limited access to credit, marketing and support services in agriculture, with particular emphasis on entrepreneurial and agricultural activities of women;
(iii) to mobilize farmers and unemployed women in the development of small community-based farm projects that will improve domestic food crop production.

Specific programme and project areas suggested include the promotion of teacher/training in all areas, with emphasis on Agricultural Science; the targeting of small farmers with special emphasis on giving women farmers access to land, credit, and co-operatives; the upgrading of training for extension officers and aides, and the development of training for para-professionals as agricultural "promoters"; collaboration with community councils and community organizers in devising training modules to enhance the development of micro-enterprises in Agriculture.

The plan under-scores the low incomes received by small farmers in general, and women in particular and the necessity for this to be supplemented by off-farm employment.

It is emphasised in the plan that Women's family role, should not detract from the fact that they are also engaged in farming. In this context, reference is made to the fact that many women are not counted as agricultural workers, even though they may work seasonally in Agriculture or establish home- gardens and keep livestock. The fact that women's enterprises in Agriculture are often seen as "outside the main-stream", was identified as contributing to a lack of clarity on women's need to have access to land, use of credit, technical information, specialization and expertise in Agriculture. Full recognition, therefore, it was emphasised should be given to the fact that women have major roles in the direct production of domestic food-crops and more recently in traditional and non-traditional export crops as well, both as independent farmers and as farmers' wives.

To ensure implementation of these policies a New Committee on Women in Agriculture, under the National Advisory Council on women was proposed. Through this committee, the Bureau of Women's Affairs was expected to bring together all persons in both public and private agencies who deal with the farm family and women in Agricultural production and rural development. The Committee was designed to serve as a medium for the exchange of information on successes and lessons learned; and to avoid duplication of efforts and promote collaboration on similar projects in such areas as training, extension, and technical assistance to achieve economies of scale.

To date, this Committee has not been established and generally, there has not been a focussed effort to implement the recommendations of the Five Year Development Plan for women. After completion of the "Women's Plan" a basic difficulty was identified by the Bureau of Women's Affairs, in that, the provisions of the Plan were not properly integrated into the respective sectoral plans which the various Government Ministries were expected to implement. Implementation was largely seen as the responsibility of the Bureau. However, based on its structure, functions and available resources the Bureau is intended to act as a catalyst rather than as an actual implementing agency for women's policies, programmes and projects. An effort was therefore made to re-work the "Women's Plan" by indicating how it would be linked with the activities of the various sectors and ministries. In fact it was felt that what was really needed was not a separate "Women's Plan" but the introduction of a Gender component in the respective sectoral plans.

The Bureau has made no significant advance in respect of this later thinking and progress in implementation of this plan has been extremely limited. It must be stated though that in respect of the Agricultural Sector, the Bureau prepared for the consideration of the Ministry of Agriculture (MINAG), a framework within which Gender could be accommodated within MINAG's policies and plans. In this regard specific strategies were proposed for increasing the participation of women in agricultural projects, as statistics indicated that there was a much higher participation rate for men. These strategies were presented in terms of a number of concerns and questions to be examined and dealt with at each phase of the project cycle as outlined in Appendix 1 of this report.

The issues highlighted by the Bureau have served as a useful check-list in preparing agricultural projects, but overall full cognizance is still not being taken of the importance of the inclusion of Gender in agricultural policies and programmes.

Table III.7 provides a summary of major Women's Programmes in Jamaica during the period 1980-1993.

C. The Effects and Benefits of Agricultural Policies on Women

From an official standpoint, Government policy initiatives for the Agricultural Sector are intended to be equally applicable to men and women. It follows therefore that participation in development projects and programmes is open to both (except where the target group has been specially identified to be a particular Gender, as in the case of Women's Projects).

In reality however, there is usually a marked differential in policy benefits accruing to men as compared with women. This is most pronounced in the areas of access to productive resources such as land and credit, and participation in extension and training programmes. This is borne out in the following illustrations.

Table III.7: Women's Programmes in Jamaica 1989 - 1993

Institutions Programmes & Projects	Descriptions	TYPES OF PROGRAMMES							Orientation		Results/Comments
		Welfare	Reproductive Activities	Productive Activities							
				Animal Husbandry	Agricultural		Marketing	Others	Rural Women	Urban Women	
					Pre-Harvest	Post-Harvest & Agro-ind.					
I. PUBLIC INSTITUTIONS											
a. Ministry of Labour Social Security and Welfare/Bureau of Women's Affairs	Established in 1975 and is responsible for policy and research on women, public education, project development & monitoring Full staff complement is ten.	Yes	Yes		*Yes*	Yes	Yes	Yes	Yes	Yes	Has generally been effective in creating public awareness of Women's issues. But is hampered by limited staff.
i) National Policy Statement on Women	The BWA serves as co-ordinator for Inter-Ministry Committee to monitor and review implementation of development policies and plans relating to women	Yes	Yes		*Yes*	Yes	Yes	Yes	Yes	Yes	Policy Statement and National Five Year Plan for women have not been effectively implemented due mainly to institutional weaknesses.
ii) Develop Plan for Women National Five Year Plan 1990 - 1995		Yes	Yes		*Yes*	Yes	Yes	Yes	Yes	Yes	

Table III.7: Women's Programmes in Jamaica 1980 - 1993

Institutions Programmes & Projects	Descriptions	TYPES OF PROGRAMMES							Orientation		Results/Comments
		Welfare	Reproductive Activities	Productive Activities							
				Animal Husbandry	Agricultural		Marketing	Others	Rural Women	Urban Women	
					Pre-Harvest	Post-Harvest & Agro-ind.					
iii) Parish Advisory Committees (PAC)	BWA has strong wide ranging rural focus through the PACs, which initiate, and implement projects and advocates on behalf of local women's groups. PACs are comprised of volunteer from varied professional and Socio-economic backgrounds.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		The PACs have been vibrant in the rural areas and have been exposed to significant amount of training on gender issues.

Table III.7: Women's Programmes in Jamaica 1980 - 1993

Institutions Programmes & Projects	Descriptions	TYPES OF PROGRAMMES							Orientation		Results/Comments
		Welfare	Reproductive Activities	Productive Activities					Rural Women	Urban Women	
				Animal Husbandry	Agricultural: Pre-harvest	Agricultural: Post-harvest & Agro-ind.	Marketing	Others			
b. Ministry of Health Primary Health Care Programme	Specific components for reduction of maternal and child mortality and promotion of better nutrition for pregnant and lactating mothers.	Yes	Yes						Yes	Yes	These programmes have been very successful because there has been significant reduction in maternal deaths and infant and child mortality in Jamaica.
c. Ministry of Agriculture/Rural Agricultural Dev. Authority (RADA)											
i) Rural Farm Family Dev. Programme.	Provides training for women in production processing family life education.	Yes	Yes	Yes	Yes	Yes	Yes		Yes		This programme has strong Home Economics orientation but is also very effective in increasing food production by women.
ii) Kitchen Gardens	Planting vegetables for Home Consumption and rearing of small stocks.	Yes			Yes	Yes	Yes		Yes	Yes	Generated much participation by both rural and urban women.

Table III.7: Women s Programmes in Jamaica 1980 - 1995

Institutions Programmes & Projects	Descriptions	TYPES OF PROGRAMMES							Orientation		Results/Comments
		Welfare	Reproductive Activities	Productive Activities							
				Animal Husbandry	Agricultural		Marketing	Others	Rural Women	Urban Women	
					Pre-Harvest	Post-Harvest & Agro-ind.					
11. Political Groups											
a. Peoples National Party (PNP) Women s Movement	These are the Women s arm of the two major political parties and are focused on a wide range of Social & economic issues affecting women.	Yes	Yes					Yes	Yes	Yes	These groups have been most effective in lobbying on Socio-economic issues affecting women. They have also assisted in bringing about legislative changes beneficial to women.
b. Women s Arm of the Jamaica Labour Party (JLP)		Yes	Yes					Yes	Yes	Yes	
c. Women s Political Caucus	Broad-based Group with no specific party affiliation, basic objective being to increase women s participation in the political process.	-	-	-	-	-	-	Yes	Yes	Yes	The political caucus has participation of many high profile women but its impact is not yet very effective.

Table III.7: Women s Programmes in Jamaica 1980 - 1995

Institutions Programmes & Projects	Descriptions	TYPES OF PROGRAMMES							Orientation		Results/Comments
		Welfare	Reproductive Activities	Productive Activities							
				Animal Husbandry	Agricultural		Marketing	Others	Rural Women	Urban Women	
					Pre-Harvest	Post-Harvest & Agro-Ind.					
III. Non-government Organization (NGO's)											
a. Association of Women s Organizations in Jamaica (AWOJA)	This is an umbrella organisation seeking to represent common interest of all Women s group for more effective action on, on behalf of women.							Yes	Yes	Yes	This organization has been involved in a wide range of activities such as worksnop newsletters, exhibitions as well as education and economic ventures. Significant impact in creating public awareness of women s issues.
b. Women s Centre of Jamaica Foundation	Main function is the operation of a programme for adolescent mothers. This involves education, training and Counselling.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Has been very effective in reducing repeat teenage pregnancies
c. Sistren Theatre	Dramatic presen- research on Women s issues							Yes	Yes	Yes	Has strong grassroots appeal.
d. U.W.I. Women s Study Group	Research and Seminars is the major focus							Yes	Yes	Yes	Significant research on women in the Caribbean has been undertaken.

Table III.7: Women's Programmes in Jamaica 1980 - 1995

IV. International Agencies											
a) UNICEF Debt Swap Funds implemented through BWA	The overall objective of this project is to organize women in all 14 Parishes in Jamaica to meet their basic needs such as health, education, housing employment and a safe environment for themselves and for their children	Yes	Yes					Yes	Yes	Yes	This programme has been effective in strengthening the operations of the Parish Advisory Committees of the Bureau of Women's Affairs.
b) Food and Agriculture Organization (FAO)											
i) Pilot Project for strengthening of the Rural Farm Family Dev. Programme.	Technical assistances training and credit.		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Very successful in Western region but funding was not available for expansion islandwide.
ii) Agro-Processing Project	Training for RADA field staff and Rural Women.		Yes			Yes	Yes		Yes		Effective in technology transfer for agro-processing.

Under the land divestment programme, based on Government policy to reduce land-idleness and provide small farmers with access to prime agricultural lands, a total of 4,583 acres was distributed (mainly on a free-hold basis) to farmers island-wide during the period January 1992 - July 1993. Only 10% of the beneficiaries were women, whereas Official statistics indicate that 19% of farmers are female and women constitute 24% of the Agricultural labour Force.

Similarly, under one of the major small-farmer credit programmes currently in operation, the IFAD Hillside Farmers Support Project, loans having a total value of J$15 million were approved during the period from inception of the project in 1989 to December 1992, with women receiving only a small share. The total number of loan recipients to date is 1,255 which includes only 182 women or 14% of all beneficiaries.

With the exception of the activities under the umbrella of the Social Services/Home Economics Division which accounts for approximately 2% of RADA's budget, the principal benefactors of extension advisory services and technical training have been men. Based on rough estimates obtained from RADA, there is supporting evidence that men constituted more than 70% of those farmers who have attended field-days organized to demonstrate agronomic practices and other farming technology.

Women's unequal access to resources and benefits of current policies and programmes within the Agricultural Sector, cannot be traced to outright discrimination from a legal, regulatory or institutional standpoint. The factors which account for this state of affairs are related largely to cultural traditions which are sometimes re-inforced by stereo-types held by certain officials involved in rural development, for example, the complaint by some women that male extension officers do not regard them as "serious farmers". The lack of awareness of policies and programmes on the part of women themselves has also been a contributory factor to their limited access to agricultural development benefits.

In respect of women's legal ownership and land inheritance rights in Jamaica, the legal statutes do not pose any barrier, but traditionally it is the practice to pass on land to male rather than female heirs. Many women also do not insist that their names appear on the titles of land for which they have contributed toward the purchase with their spouses.
Very relevant to the situation in Jamaica in respect of women's access to land is a statement from the Progress Report on WCARRD Programme of Action for the 1980's FAO conference that:

> "In most statutory codes, it is difficult to assess any discrimination within the laws per se. The constraints remain more in the interpretation and implementation of the laws, women's lack of empowerment in knowing the (land) legislation and utilization law as a development tool".

Access to land and proof of ownership in the form of a registered title, is inextricably bound up with access to credit where landed-security is the most commonly accepted form of collateral. Women's limited access to land therefore also restricts their ability to obtain agricultural loans.

Lack of knowledge of credit programmes and limited familiarity with loan application procedures, and in some instances fear of risk-taking also hinders women from utilizing formal credit sources. This is reflected by the PC Banks that women constitute a small percentage of their clients as shown in Table III.8.

Table III.8

Distribution of Female Clients in Selected People's Co-operative Banks, 1994, Jamaica

P.C Bank	No. Current Loans	Percentage Female Clients
Central Clarendon	400	15%
Maidstone, Manchester	200	<10%
Eastern St. Ann	280	1% (3)
Brown's Town, St. Ann	800	31% (250)
New Market, St. Elizabeth	700	7% (50)
Central St. Elizabeth	240	5%
Hanover		

Source: Interviews with PC Bank Personnel.

The PC Banks interviewed indicated that the small female clientele reflected the fact that very few women applied for credit but they also pointed out that many of those who applied did not qualify due mainly to a lack of collateral. According to the source at the New Market PC Bank which has a large loan portfolio but only a few women, three out of every five female applicants lack the collateral requirements. The Maidstone PC Bank indicated that most of its female clients used guarantors to secure loans, as they did not own land, or only their husband's name appears on the title of the land they operate. The Browns Town PC Bank which recorded the highest female clientele among the banks interviewed, stated that about 30% of the requests for loans from women were not granted because of the lack of collateral. Some of the banks put forward the view that more promotion needs to be done to make women aware of existing loan programmes. It was also stated that there is a growing interest among women to obtain loans for trading and other small businesses.

In addition to their lack of credit to undertake on-farm capital investments women's access to improved farming methods is further constrained by their inability to participate in extension

training activities such as field days, due to the multiple roles performed. Many women find it difficult for example, to put proper child-care arrangements in place, for the period of time they would be away from home attending training courses. This re-inforces the biases of some male extension personnel that women are simply wives or homemakers while their male partners are the "real" farmers. In many instances extension for women is simply thought of in terms of home improvement, nutrition and other so-called "female tasks" covered by the Social Services/Home Economics programme.

CHAPTER IV

THE CONTRIBUTION OF WOMEN TO NATIONAL AGRICULTURAL OUTPUT

On the surface agriculture may appear to be a male dominated activity in Jamaica. However, on close examination there is over-whelming evidence that women make a significant contribution to agricultural output. Today, as in the pre-emancipation period when they controlled the provision grounds, women are intimately involved in food production to feed their families and also in trading in the market-place. They are represented in the agricultural labour force as own-account farmers, unpaid family labourers, and also paid agricultural workers. Measurement of this involvement in statistical terms has been limited and generally grossly under-estimated. A re-assessment of this contribution based on the available secondary data reveals that a much higher percentage of women, than commonly acknowledged, is involved in agricultural production.

A. Women's Employment in the Agricultural Sector

Jamaica is dependent on farm families in the small-holder Agricultural Sector for a large percentage of its local food supply. Women in farm households play a critical role in the growing, processing, and marketing of domestic food. Taking into account women farm operators, wives and daughters who join in farming as unpaid family workers; female farm labourers; country higglers and women engaged in both community-based and commercial agro-processing, women in Jamaica make an impressive contribution to overall agricultural productivity.

When the employment of women in the total labour force is examined, it is clear that Agriculture is one of the principal areas in which they are represented. Data on employment by Sector and Gender for Jamaica in 1982 and 1992, show the Agricultural Sector as the second major employer of women next to the General Services Sector (See Table IV.1). Similarly when the top ten occupational groups and categories for females are ranked, Agriculture appears in the top three places (See Table IV.2). Based on official statistics over the last decade women have constituted between 23-32% of the total labour force in the Agricultural Sector in Jamaica as shown in Table IV.3 and Figure IV.I. Although the rate of participation has fluctuated over the period, a trend towards increasing representation of women in Agriculture was discernible in the mid-1980s.

The presence of women in Agriculture is also reflected in the fact that they account for approximately 19% of farmers in the single-holders category. It is instructive however, that average farm size for women is significantly lower than for men as shown in Table IV.4.

Table IV:1

Employment by Sector and Sex, Jamaica 1982 and 1992

	1982			1992		
	Total	Male	Female	Total	Male	Female
ACTIVITY						
1. Agriculture, Forestry and Fishing	278,100	210,700	67,400	245,500	185,000	60,500
2. Mines and Quarries	8,500	7,000	1,500	4,600	4,200	400
3. Manufacturing	109,300	78,600	30,700	99,200	57,600	41,600
4. Construction and Installation	45,600	44,000	1,600	59,300	57,700	1,600
5. Transport, Communication and Public Utilities	40,900	30,800	10,100	41,900	33,200	8,700
6. Other Services	437,000	149,500	287,500	449,800	176,400	273,400
7. Industry not Specified	6,400	3,600	2,800	7,100	3,400	3,700
TOTAL EMPLOYED LABOUR FORCE	925,800	524,200	401,600	907,400	517,500	389,900

Source: The Labour Force Statistics, Statistical Institute of Jamaica (STATIN)

Table IV.2

Top Ten Occupation Groups for Females 1977 and 1987

Occupations Group	1977		1987	
	Rank Order	Number Employed in '000	Rank/ Order	Number Employed in '000
Personal Service Occupations	1	53.3	1	74.8
Self-employed in Distributive Trades	2	36.7	2	50.8
Self-employed in Agriculture	3	33.5	3	39.9
Clerical Occupations	6	18.0	4	22.9
Workers in Garment Manufacturing	10	5.0	5	21.6
Unskilled Workers in Farming, Fishing, etc.	4	29.3	6	20.6
Teaching Occupations	5	21.1	7	18.4
Occupations in Sales	7	13.9	8	15.7
Self-employed Garment Manufacturers	8	7.9	9	12.3
Health Diagnosing and Treating Occupations	9	7.3	10	7.9

Source: People Vol. No. 3, 1990, A Newsletter of the Population Policy Co-ordinating Committee Feb. 1990.

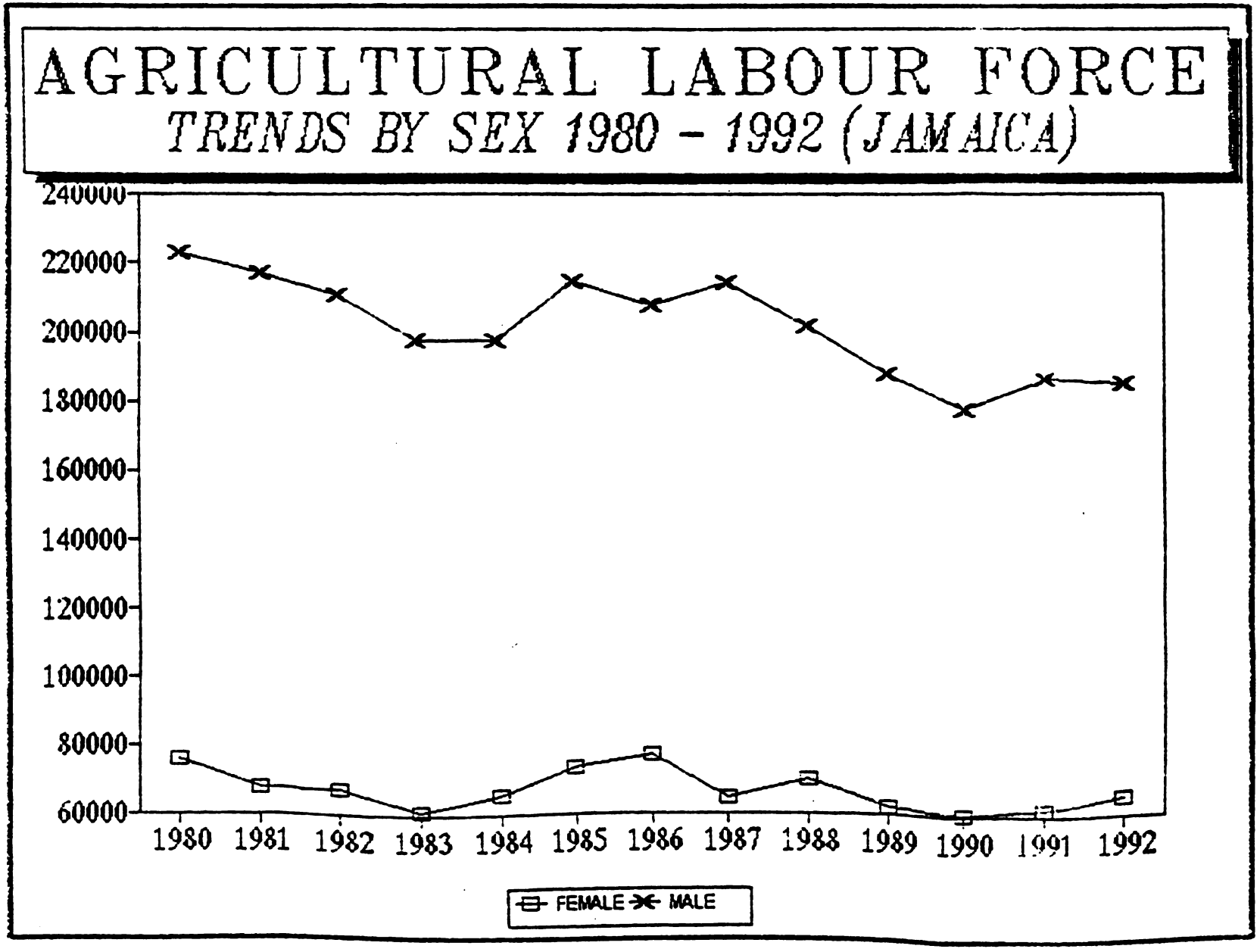
Table IV.3

Agricultural Labour Force By Sex, Jamaica, 1980 - 1992

Year	No. in Agriculture, Forestry & Fisheries			% Female in Agriculture Labour Force
	Both Sexes	Male	Female	
1980	298,200	222,600	75,600	25
1981	285,000	217,200	67,700	23
1982	278,100	210,700	67,400	24
1983	258,000	197,700	60,900	23
1984	262,900	197,700	65,200	24
1985	287,800	214,700	73,100	25
1986	275,900	208,100	76,800	27
1987	278,500	214,200	64,300	23
1988	217,600	201,800	69,800	32
1989	250,000	-	-	-
1990	237,300	177,200	60,100	25
1991	247,700	186,100	61,600	25
1992	245,500	185,000	65,000	25

Source: Labour Statistics, STATIN.

Figure IV.1


AGRICULTURAL LABOUR FORCE
TRENDS BY SEX 1980 - 1992 (JAMAICA)
240000
220000
200000
180000
160000
140000
120000
100000
80000
60000
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
FEMALE
MALE

Women in the Agricultural Sector participate in a wide range of farm, production, marketing and processing activities. In the 1981 study of Women in Agriculture, Forestry and Fisheries it was clearly shown that in farm households, women participate in agricultural activities at every level. This includes planting, harvesting, animal husbandry and general farm management tasks. It was found that in as many as 27% of the households there are women who independently take decisions concerning changes in farming practices. In addition, the well documented fact that the marketing of domestic agricultural produce is controlled by women was also confirmed. Another study undertaken in the early 1980's to assess the Women's component of a major rural development project in Jamaica (Second Integrated Rural Development Project - IRDP II) also had similar results. Approximately 52% of the women were engaged in vegetable production in the home gardens, 66% in animal husbandry and 26% undertook crop care for the total farm.

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

Censuses and surveys in Jamaica have methodological weaknesses in data collection which results in the underestimation of women's economic contribution. Economic activity is usually defined in ways that exclude a substantial proportion of women's agricultural work. An example of this being the unpaid labour contributed by women on the family farm not being accounted for as "economic activity". Similarly in most cases Population Censuses define a person's economic activity by his or her stated primary occupation. Thus, if women are classified as housewives, no information is recorded on their productive and income earning activities even though they may be very important.

Figures based on various censuses and surveys conducted since the early 1900's indicate a decline in female representation in the agricultural labour force. However, some sources indicate that this apparent decline resulted from changes in definition of "gainful employment". French (1988) points out, for example, that statistics compiled for female participation rate in the agriculture labour force for 1911 and 1921 were reported to be roughly 55%, but by the time of the 1943 census it had declined to approximately 20% due largely to a change in definition of "gainful employment", which totally excluded from the labour force, women working in their own homes without salary or wages. This pattern also applied to the figures on females in own-account occupations which drastically declined from 32,000 and 43,000 in 1911 and 1921 respectively to 14,000 in 1943.[11] The introduction to the 1953 census recognized the implications of the change in definition of "gainful employment" and stated that:

> "In 1943, women and children were thrown out of the labour force by the manner in which the definition of "gainful employment" was applied. The 1943 'gainfully occupied' concept was not closely comparable to the 'productive population' of earlier censuses."

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[11] Joan French, "Defining Productive Women in Agriculture: The case of Jamaica" in Caribbean Women in Agriculture Chapter V: case Studies, 1988.

Table IV.4

Single Holders, Number, Hectares and Average Size Of Farm By Sex, 1978/79 Jamaica

PARISH	No. of Single Holders		No. of Hectares		Average size of Farm (hectares)	
	Male	Female	Male	Female	Male	Female
ALL JAMAICA	146,981	35,188	291,487	38,790	1.98	1.10
St. Andrew	7,187	1,686	8,238	1,196	1.15	0.71
St. Thomas	9,206	2,289	16,085	1,941	1.75	0.85
Portland	7,031	1,390	18,382	1,534	2.61	1.10
St. Mary	10,195	2,225	20,392	2,676	2.00	1.20
St. Ann	12,640	2,297	28,116	3,241	2.22	1.41
Trelawny	8,524	2,094	19,489	1,767	2.29	0.84
St. James	7,115	1,447	16,480	2,082	2.32	1.44
Hanover	6,061	1,571	13,085	2,516	2.16	1.60
Westmoreland	14,053	3,439	30,560	4,839	2.18	1.41
St. Elizabeth	14,811	4,260	35,092	4,413	2.37	1.04
Manchester	14,070	4,043	23,354	3,965	1.66	0.98
Clarendon	19,172	4,627	33,167	4,681	1.73	1.01
St. Catherine	16,916	3,820	29,038	3,944	1.72	1.03

Source: Census of Agriculture 1978-1979, STATIN.

This bears out the frequent observation that, the manner in which official statistics are collected and compiled, disguises the real contribution of women in Agriculture and other economic activities.

Re-estimation of women's employment in the Sector, undertaken for this study, reveals that the actual number of women working in Agriculture is more than double the official figure.

Labour Force statistics for 1991 indicate that there were 61,600 women employed in agriculture which leaves 72% (207,283) of the rural female 14-64 years population not attending school unaccounted for in the Agricultural Labour Force.[12] This number would include those working in other sectors, those classified as unemployed, "keeping house" or otherwise economically "inactive". Although in the official statistics, the labour force is broken down by industry groups, it is not indicated what portion of industrial and service sector employees is in rural areas. However, based on the Statistical Institute's definition of "rural" there are very few non-agricultural activities or employment opportunities in rural areas.[13] In addition, rural unemployment rates are also not available. The approach used in this study to re-estimate the number of females working in Agriculture was therefore to establish a criterion to re-classify as 'active' those classified as 'inactive'.

Single-holders account for virtually all farms (over 99%) in Jamaica. As previously shown in Table IV.4, of the total number, 35,188 are operated by females, and they would have been correctly classified as employed. Of the remaining 146,981 male- operated single-holders farms, it is necessary to estimate how many would have at least one female family member working on the farm.

In Jamaica all women on small farms work in agricultural tasks, but the extent of their participation becomes less certain with increasing size of the farm. Therefore, to err on the conservative side, adjustment is made to the male-operated farm number to include only farms of less than 2 hectares, which is 117,585.[14]

Not all of these farms would have women, but male single- person households in Jamaica are less than 10% cent of all households. Assuming then that 10% do not have women, then the figure reduces to 105,826. If there is only one female family member working on these 'male'-operated farms, the total number of women working in Agriculture becomes 167,426 (61,600 + 105,826). This represents a tremendous increase of over 100% above the official figure for females in the agricultural labour force.

It should also be noted though, that the figure of 167,426 females involved in Agriculture leaves approximately 20% of the unaccounted (207,283) female 14 - 64 year rural population to work in other sectors as well as to become "economically inactive".

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[12] The estimate of the female 14 years plus population attending school is based on the percentages recorded in the 1982 Census for females 14 - 64 years island-wide as the 1991 figure was not available. The estimate is however on the high side as the 1991 Labour Force Statistics show only 14.5 percent of Jamaica's 14 years plus females attending schools.

[13] An indirect definition is used, in that, any place not classified as urban is rural. Urban is defined as any place with population of 2,000 or more which incorporates territory devoted to commercial, industrial, transportational, government, residential or other purposes.

[14] Census of Agriculture 1978/79.

Table IV.5

Distribution of Rural Female Population
Jamaica, 1991

Rural Pop. (1991 Census)	1,180,379	49.5% Total Pop.
Rural Female Pop.	602,234	51% Rural Pop.
Rural Female Pop. 14-64 year*	373,285	62% Rural F/M Pop.
Number in School	104,548	28% 14+* Females
Number not in School.	268,883	72% 14+ Females
Number in Agricultural Labour Force official Statistics	61,600	16.5% F/M 1464
Number not accounted for in Agricultural Labour Force.	207,283	83.5% F/M 14-64

* 14 + = 14 years etc.

Source: Basic data from:

STATIN - 1991 Population Census (Preliminary Results), and
- Statistical Year Book, 1993.

The male agricultural labour force, based on official figures ranged between 185,000 - 222,600 over the period 1980 -1992. Re-estimation indicates that women are participating in the agricultural labour force in numbers relatively close to that recorded for men. It also means that their rate of participation is just under 50% which is much greater than the 22% -32 % officially recorded over the last decade but fairly close to the 55% recorded before the change of definition of "gainful employment", in the National Census.

CHAPTER V

WOMEN FOOD PRODUCERS

In this Chapter the nature and participation of women farmers is examined in detail within the small farm family, and farming system. It incorporates information from the present IICA/IDB Women Food Producers' Survey as well as Agro-Socio-Economic surveys conducted by the Ministry of Agriculture in collaboration with other agencies.

The Women's Food Producers' Survey was conducted using a purposive sample of 150 women farmers, distributed among the major producing areas of the crops (yams, vegetables and cassava) selected for intensive investigations. The study areas include parts of the Parishes of St. Ann, Clarendon, Manchester, St. Elizabeth, Westmoreland, Hanover and Trelawny as shown in Figure V.1.

The sample was selected from names provided by Agricultural Extension Officers in the study areas. The selection of the areas was based on an analysis of Parish production statistics obtained from the Data Bank and Evaluation Division of the Ministry of Agriculture.

Interviews were conducted over the period November 20, 1993 to January 28, 1994 using a team of five data collection officers who were specifically trained for the exercise.

The Ministry of Agriculture and other Surveys to which reference is made were conducted mainly in the 1980's, and involved in-depth interviews with women in a number of Parishes throughout Jamaica located mainly in the central and western parts of the island which correspond to the geographical coverage of the Women's Food Producers' Survey and incorporate the major agro-ecological zones.

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

Jamaican small farmers share a number of the characteristics of traditional small farmers but there are also notable differences.

Small holders constitute the majority of Jamaica's farming population. Based on the 1978/79 Agricultural Census of 179,000 farms island-wide 146,000 or 81% were classified as "small", that is, two (2) hectares or below. Similarly, the 1982 Farmers' Register indicated that there was a total of 155,314 farms island-wide with 78% below two (2) hectares. However, due to the highly skewed pattern of land distribution in the island, these small farms accounted for only 16% and 20% respectively of the lands in farms in 1978/79 and 1982 (See Table V.1). Average farm size has also been consistently low and registered a decline over the period 1954-1978/79 moving from 3.90 hectares to 2.97 hectares (See Table V.2).

Figure V.1

LOCATION OF MAJOR PRODUCTION AREAS COVERED BY SURVEY.

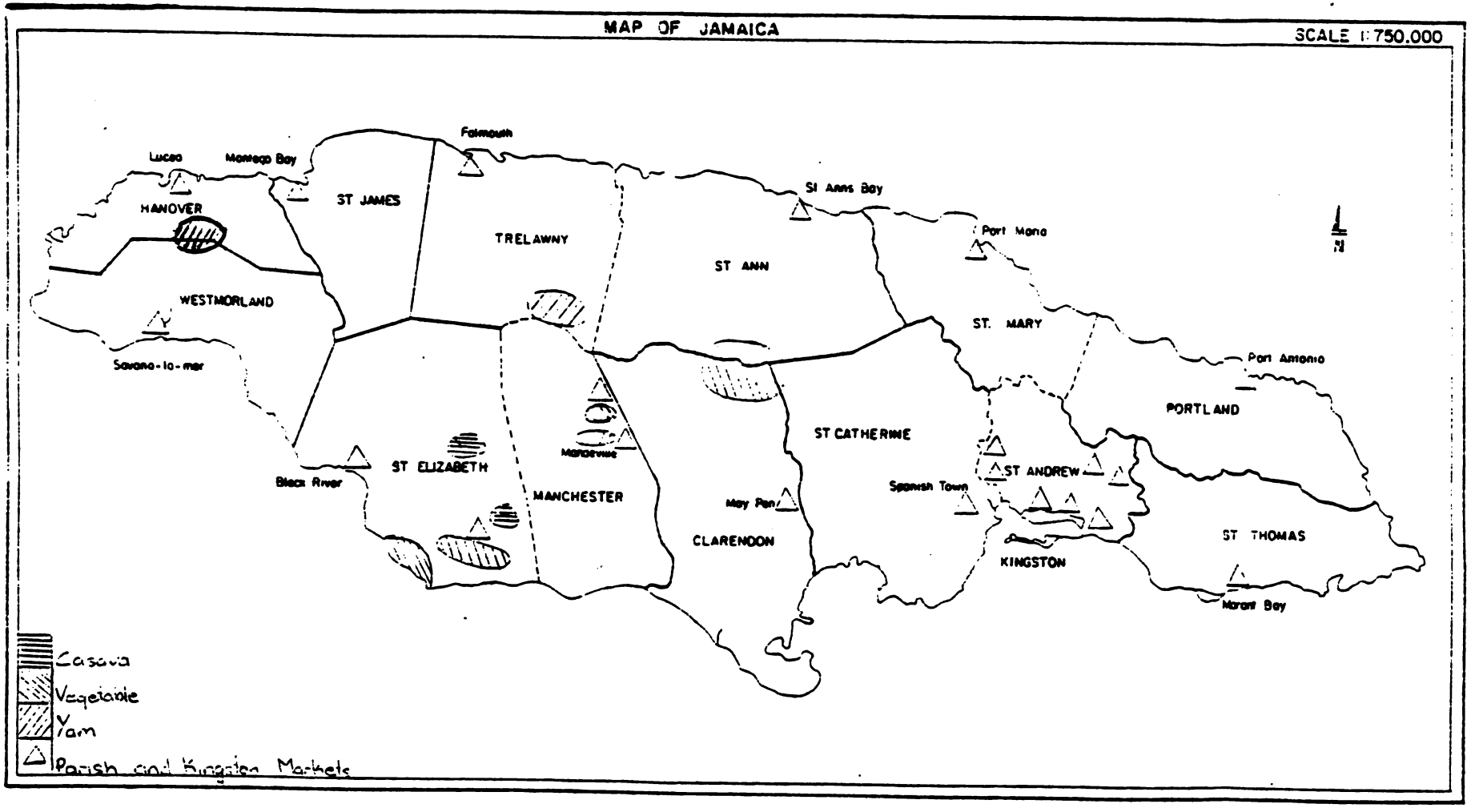

Table V :1

Number and Distribution of Agricultural Units by Size, Jamaica 1978 and 1982

Size Group of Farm in Hectares	No. Farms				Area			
	Number		Percentage		Hectares		Percentage	
	1978	1982	1982	1982	1978	1982	1982	1982
0 - < 2	146,200	120,017	81.4	78.0	84,059	76,781	15.7	20.0
2 - < 10	29,900	32,432	16.6	21.0	102,379	113,578	19.2	31.0
10 - < 40	2,500	2,365	1.4	1.0	44,071	38,810	8.3	10.0
40 and over	1,100	500	0.6	*	303,295	*	56.8	39.0
Total	179,700	155,314	100.0	100.0	533,805	373,753	100.0	100.0

* Insignificant

Source: Based on 1978/79 Agricultural Census and 1982 Farmers Register compiled by Data Bank Ministry of Agriculture.

Table V :2

AVERAGE SIZE OF FARM (IN HECTARES) BY SIZE GROUPS
JAMAICA 1954 - 1978/79

Years	All Farms	0 to Under 2 Hectares	2 Hectares to under 10 Hectares	10 hectares to under 40 hectares	40 hectares to under 202 hectares	202 hectares and over
1954	3.90	0.72	3.84	16.77	98.36	872.87
1958	3.70	0.78	4.15	17.81	82.96	899.36
1961	3.61	0.55	3.84	17.92	98.05	898.96
1968/69	3.12	0.61	3.67	16.35	85.72	889.45
1978/79	2.97	0.57	3.42	17.64	82.36	789.97

Source : Census of Agriculture

In Jamaica the majority of women farmers are found among small holders, with average farm size being significantly less than for men. Any limitations of small-scale agriculture, therefore affect women even more seriously than men.

Both male and female small-holders concentrate their efforts on domestic crops in their farming systems which normally include a mix of food crops, livestock (mainly small ruminants) and some export crops such as cocoa, coffee or pimento. In recent years a number of food crops such as yams and other tubers are also being produced for export under the label "non-traditional exports".

Like the typical small farm, size is a limiting factor. The technology applied is generally marked by the use of simple hand- tools. In addition there is heavy reliance on unpaid family labour and production and income levels are usually low.

However, the majority could not be classified as subsistence farmers because production is not merely for home consumption but also for trading in local and export markets.

The area in domestic food crops currently stands at about 51,600 hectares or just over 30% of the total area under crop cultivation, while the area in traditional exports accounts for 112,000 hectares or roughly 70% of the cultivated area. Whilst the area in domestic crops has been increasing, that in traditional exports has been on the decline. In 1970 there was a total of 44,000 hectares in domestic crops which had increased to 48,000 hectares by 1980 and 51,600 hectares by 1987.

In contrast, over the last two decades the area in traditional export crops has decreased significntly by 30% from 160,000 hectares in 1973 to 112,000 hectares currently. This resulted mainly from a reduction in the area planted in sugar cane.

Most of the land in Agriculture is owned and operated on a free-hold basis, although land is also leased or rented. Squatting on crown land is prevalent. The dominance of the free-hold system has been linked to the traditional desire among rural Jamaicans to own land as a status symbol or for economic security. Free-hold tenure has been identified as one of the main contributory factors to land fragmentation, both in terms of the number of component parcels and in relation to the sub-division of land into small parcels as allowed under the existing Inheritance Laws.

Whilst 80% of the agricultural land is held on a free-hold basis, a large percentage of the small holders are without registered titles, particularly on lands that have been acquired under Government land settlement programmes. This has posed severe problems in meeting requests for landed security as collateral for loans. Since the start of implementation of the Land Titling Project (1989), 8426 titles or about 70% of the projected target of 12,000, for 1994 have been issued to farmers on Land Settlement.

B. Characteristics of the Small-farm Production Unit

1. Farm size, tenure and production patterns

The farm households included in the Women Food Producers' Survey display features typical of small-farm production units in Jamaica. Approximately 80% of the farms were found to be under two (2) hectares and only roughly 5% of the farms were above four (4) hectares. Overall, Family Land constituted the single largest tenure category (32.7%) followed by lands rented (20%), leased (18.7%) and owned (17.3%). The importance of "Family Land" was most pronounced in the smallest farm size group (less than 0.4 hectares), where 58.3% of the lands operated fell in this tenure category as compared with only 12.5% in the size-group above four (4) hectares. On the other hand, individual and joint-ownership were more evident in the larger farm size groups (See Table V.3).

The concept of 'Family Land' in Jamaica is very important among small farmers as this generally connotes lands which have been passed down from one generation to another, very often with only "diagrams" or "common-law" titles being available to substantiate claim to ownership. Where registered titles do exist, these are generally in the names of the original owners and not the current operators, and may not reflect sub-divisions undertaken over-time to accommodate sharing of the property by various family members.

Fragmentation of holdings is very evident among small farmers in Jamaica. Land is often leased, rented or squatted-on to supplement family land or land owned which is insufficient or unsuitable to undertake the level of production desired.

As Table V.4 shows the average number of parcels is two (2) for the farms in the survey. The main parcel cultivated, however, appears to be fairly accessible as approximately 61% were less than two (2) kilometres from the farmhouse. The problem of landlessness or near-landlessness is also highlighted in Table V.3 where it shows that the highest incidence of squatting (12.5%) occurs in the <0.4 hectare size group, whereas none of the farms two (2) hectares and above were operating lands "squatted" on.

As previously indicated, the production system of small farmers is characterised by mixed cropping. This is demonstrated in the results of the survey as shown in Table V.5 which indicates that the farms included grew a range of 35 crops. Some of these farms were also producing coffee, and cocoa, export crops which small farmers have traditionally grown.

The major crops produced were vegetables, legumes, roots and tubers and condiments. Yam accounted for the single largest production volume (333,425.48 kilograms) reflecting the national level of production trends for domestic food crops (See Figures II.1 - II.3 Chapter II). It also reflects the specialization of the areas selected for the survey (Trelawny and Manchester in particular) where yam production is the principal activity. Approximately 52% of the farms produced at least one vegetable crop, with St. Elizabeth accounting for the largest number (See Table V.6).

Table V:5

Percentage Distribution of Farms
By Size and Tenure
Jamaica, 1993

SIZE OF FARM (ha)	TOTAL	TYPE OF TENURE						
		Own	Rent	Lease	Family Land	Squatting	Joint Ownership	Other
TOTAL	100%(150)	17.3	20	18.7	32.7	3.3	2.0	6.0
< 0.4	100%(24)	4.1	16.7	8.3	58.3	12.5	-	-
0.4 -< 2.0	100%(96)	13.5	22.9	25	26.1	2.1	1.0	7.3
2.0 -< 4.0	100%(22)	40.9	18.2	4.5	31.8	-	4.5	-
4.0 -< 10.0	100%(8)	37.5	-	12.5	12.5	-	12.5	25.0

Source : Women Food Producers' Survey, Jamaica, 1993

Table V:4

Holding Fragmentation, Jamaica, 1993

Size of Farm (ha)	Average No. of Parcels	Average Parcel Size (ha)	Avg. Dist. (km) Bet. House & Main Parcel				
			No. Response	< 2.0	2.0-< 4.0	4.0 -< 10.0	10.0 & over
Total	2	0.6	21	91	21	16	1
< 0.4	1	0.2	4	17	1	2	-
0.4 -< 2.0	2	0.4	9	56	18	13	-
2.0 -< 4.0	2	1.0	5	14	2	1	-
4.0 -< 10.0	2	3.1	3	4	-	-	1

Source: Women Food Producers Survey - Jamaica, 1993

Table V:5 (RURAL)

Family member activities by sex and age group

		PRINCIPAL ACTIVITIES				SECONDARY ACTIVITIES				
		NO RESPONSE	ON-FARM	OFF-FARM	STUDENT - OTHER	NO RESPONSE	ON-FARM	OFF-FARM	STUDENT - /OTHER	DOMESTIC ACTIVITIE
SEX	AGE GROUP									
MALE	AGE GROUP									
	NO RESPONSE	1	-	-	-	1	-	-	-	-
	< 15	63	1	-	100	164	-	-	-	-
	15 - < 20	9	11	9	31	58	1	1	-	-
	20 - < 30	5	23	12	11	39	6	4	1	1
	30 - < 40	-	26	6	1	15	3	6	1	8
	40 - < 50	-	23	2	1	7	3	4	1	11
	50 - < 60	1	21	3	1	8	1	2	3	12
	60 & OVER	-	26	2	2	16	1	1	1	1
	TOTAL	79	131	34	147	308	15	18	7	43
FEMALE	AGE GROUP									
	NO RESPONSE	2	-	-	-	2	-	-	-	1
	< 15	56	2	-	99	154	-	1	2	-
	15 - < 20	12	2	6	35	54	-	-	-	1
	20 - < 30	11	24	16	8	42	-	7	1	9
	30 - < 40	1	46	9	2	16	3	13	3	23
	40 - < 50	-	41	-	-	1	-	4	-	36
	50 - < 60	2	34	1	-	5	2	5	1	24
SEX	AGE GROUP									
FEMALE	60 & OVER	5	26	-	3	11	-	2	1	20
	TOTAL	89	175	32	147	285	5	32	8	113

Source: Women Food Producers Survey, Jamaica 1993

Table V.6

Number Of Farms Producing At Least One Vegetable Crop, By Parish, Jamaica, 1993

Parish	No. of Farms
Total	78
St. Ann	6
Trelawny	8
Hanover	1
St. Elizabeth	32
Manchester	16
Clarendon	15

Source: Women Food Producers' Survey - Jamaica 1993.

Some of the farms were also involved in livestock production, including small ruminants, cattle, and poultry as shown in Table V.7. There were far more goats, pigs and poultry being reared than cattle, as is typical on a small farm. Similarly the feeding system was largely indigenous using grass (usually cut and brought to the animal where land is too limited to permit grazing) and crop residues, rather than commercially prepared feed concentrates, being the main sources (See Table V.8).

The survey results show that agro-processing activities were undertaken on 53% (79/150) of the farms concentrated mainly in St. Elizabeth and Manchester, which together accounted for 66 (83.5%) of the 79 farms doing processing. Cassava is the crop most frequently processed (43% of the farms) with three (3) principal products, namely; "bammy" (Cassava bread), cassava flour, and starch. This is followed by the processing of juices which took place on 29 (23%) of the total number (125) of farms with agro-processing activities (See Table A.1 - Appendix).

It is evident that the production of these small farmers is not merely for subsistence as over 70% of the output for 27 of the 35 crops grown was sold. Thus, less than 30% of most of the crops produced was consumed by the farm family. Overall, 96% (144/150) of all the farms surveyed, marketed at least one crop.

Table V.7

Number of Farms with Livestock by Number and Type of Livestock

Type of Animals	No. of Farms	No. of Animals
Cattle	38	89
Chicken	21	744
Turkey	1	2
Pigs	79	190
Goats	54	223
Sheep	6	19
Rabbit	1	25
Other	2	2

Source: Women Food Producers' Survey - Jamaica 1993.

Table V.8

Distributions of Farms By Size and Source of Livestock Feed

Size of Farm Hactare	Source of Feed		
	Grass	Crop Residue	Feed Concentrate
Total	72	22	16
< 0.4	9	4	1
0.4 -< 2.0	42	16	12
2.0 -< 4.0	14	2	2
Rabbit	5	-	1
Other	2		

Source: Women Food Producers' Survey - Jamaica 1993.

2. Socio-demographic features

The average family size in the farm household ranged between 4-7 persons for the Parishes included in the survey as shown in Table V.9. The lowest average was recorded for the Parish of Westmoreland.

In the 15-55 age group, which corresponds fairly closely to the economically active population (EAP) for Jamaica there was an average of one male and two females in the farm households. Adults over 55 and children under 15 who account for a significant percentage of dependent family members overall averaged one (1) and two (2) persons respectively for all the Parishes. In the case of the over 55 age group the same average of one person was recorded in each Parish but the average for the under 15 age group varied between 1-3 persons. There was a total of 846 persons in the households surveyed broken down as follows:

Respondents (all female)	150
Male Companions	91
Male Children	194
Female Children	211
Other Men	119
Other Women	81

There were slightly more females than males in the households as females (442) accounted for 52% of all household members and males 48% (404).

More than half the number of households (55%) were also headed by women, this figure being higher than the national average of about 40% female-headed households.

Analysis of the principal and secondary activities of family members is constrained by a high rate of non-response in this regard. However, from the available data in Table V.10, working on the farm is the principal activity for both adult men and women with only a small number engaging in off-farm employment. As would normally be expected a large number of the under 15 age group household members were students. Also not surprising is the fact that domestic work in the household was the major secondary activity for females.

C. Contribution of Women to Production

1. Characteristics of the respondents

The average age of the women in the Food Producers' Survey was 45 years with over two-thirds (67%) having attained only primary level education. Only 28% had been to secondary schools and 3% to post secondary institutions (See Table V.11).

Table V:9

Family Characteristics - Average number of persons in the Farm household and percentage Head of Household by sex, Jamaica, 1993

PARISH	TOTAL	AVERAGE N OF PERSONS ON FARM				% OF FAMILY WHOSE HEAD OF HOUSE IS		
		BETWEEN 15 & 55		OVER 55 YEAR	UNDER 15 YE			
		MALE	FEMALE			MALE	FEMALE	NOT STATE
ALL PARISHES	6	1	2	1	2	42.00	55.33	2.67
ST. ANN	6	1	2	1	3	1.33	5.33	-
TRELAWNY	7	1	1	1	3	10.00	10.00	-
HANOVER	5	1	1	1	2	-	2.67	0.67
WESTMORELA	4	1	2	1	1	1.33	2.00	-
ST. ELIZABET	6	1	2	1	2	16.00	13.33	0.67
MANCHESTER	6	1	2	1	2	7.33	16.00	1.33
CLARENDON	7	1	2	1	2	6.00	4.00	-

Source : Women Food Producers Survey, Jamaica, 1993

WOMEN FOOD PRODUCERS SURVEY - JAMAICA 1993

Table V:10 (16LAND)
Family member activities by sex and age group

		PRINCIPAL ACTIVITIES				SECONDARY ACTIVITIES				
		NO RESPONSE	ON-FARM	OFF-FARM	STUDENT - OTHER	NO RESPONSE	ON-FARM	OFF-FARM	STUDENT - /OTHER	DOMESTIC ACTIVITIES
SEX	AGE GROUP									
NO RESPONSE	NO RESPONSE	1	-	-	-	1	-	-	-	-
	20 - < 30	-	1	-	-	-	-	1	-	-
	TOTAL	1	1	-	-	1	-	1	-	-
MALE		1	-	-	-	1	-	-	-	-
	< 15	68	1	-	100	164	-	-	-	-
	15 - < 20	9	11	9	31	58	1	1	-	-
	20 - < 30	5	23	12	11	39	6	4	1	1
	30 - < 40	-	26	6	1	15	3	6	1	8
	40 - < 50	-	23	2	1	7	3	4	1	11
	50 - < 60	1	21	3	1	8	1	2	3	12
	60 & OVER	-	26	2	2	16	1	1	1	1
	TOTAL	79	131	34	147	308	15	18	7	43
FEMALE		2	-	-	-	2	-	-	-	1
	< 15	56	2	-	99	154	-	1	2	-
	15 - < 20	12	2	6	35	54	-	-	-	1
	20 - < 30	11	24	16	8	42	-	7	1	9
	30 - < 40	1	48	9	2	16	3	13	3	23
	40 - < 50	-	41	-	-	1	-	4	-	36
	50 - < 60	2	34	1	-	5	2	5	1	24
	60 & OVER	5	26	-	3	11	-	2	1	20
	TOTAL	89	175	32	147	285	5	32	8	113

Source: Women Food Producers Survey, Jamaica 1993

Union (marital) status as well as education level varied with age. Respondents who were single or in common-law unions were generally younger than those married or widowed. Therefore, the average age for those who were single or had common-law status was 39 and 38 years respectively, while for those married it was 48 years and those widowed 61 years. This trend is in keeping with the findings of studies of the family structure in Jamaica which, show that age influences type of union, with average age at marriage being relatively high.

The younger women in the Survey tended to be more educated, with a higher percentage attaining secondary level education. For example, among those in common-law unions where the average age was 38 years, 48% had received secondary education, whereas only 14% of the widows with average age of 61 years had attained this level. This indicates that educational opportunities for women have improved over time and is confirmed in official statistics which show that over the last decade enrollment of female in secondary as well as tertiary institutions has increased significantly, to the point of surpassing that of males.

Forty-eight per cent (48%) of the respondents were household heads. This included all those who were widows, 62% of those single, 30% of those in common-law unions, and 40% of those married.

2. Division of labour on the farm

As shown in Tables V.12 to V.14 the respondents as well as other women and men in the farm household participated in the production of the three (3) major food crops selected for analysis. Overall there appears to be a higher level of participation in productive activities on the part of the respondents than that of men and other women in the household. This however reflects the fact that nearly half (48%) of the respondents were household heads. Out of the total of 150 respondents, 49% participated in at least one activity related to yam production and 73% in growing vegetables.

Women participated in a range of production activities from pre-harvest to post-harvest, including land preparation and the use of fertilizer and chemicals. It is noted that vegetable production recorded the highest level of participation by women in all the tasks. Interestingly, men appear to be undertaking most of the crop care for both yams and vegetables.

In livestock production (Table V.15) there was a discernible Gender specialization with more men being involved with cattle rearing and women predominating in the areas of small stock (pigs and goats mainly) and poultry. Approximately 67% of the respondents were involved in livestock rearing. There was also considerable involvement in marketing activities by respondents, especially for vegetables. Out of the total sample 86% (129/150) carried out marketing activities.

Table V:11

Characteristics of the Respondent, Jamaica, 1993

Union Status *	Average Age (Years)	Level of Education Percentage				Number of Household Heads	Percentage of Total Household Heads by Status	Responsible For Running Farm	
		Primary	Secondary	Post Secondary	Other			All Year %	1-6 Mths %
Total (N = 150)	45	67	28	3	2	72	48	100.00	2.03
Single (N = 37)	39	62	35	3	-	23	62	23.65	1.35
Married (N = 67)	48	76	18	3	3	22	33	45.27	-
Widowed (N = 14)	61	86	14	-	-	14	100	9.46	-
Common-Law (N = 25	38	44	48	8	-	10	40	16.89	-
Other (N = 7)									

Source: Women Food Producers Survey - Jamaica, 1993

* 1 Respondent was divorced, 2 separated, 2 in visiting (extra residential) unions and union status was not reported for 2 (total 7)

Table V.12

Family member participation in agricultural production by type of crop and type of activity

Jamaica 1993

Crop: Yam

ACTIVITIES	RESPONDEN	OTHER WOM	MEN
Purchasing/Preparation of Planting Material	51	1	26
Land Preparation	23	2	23
Planting	51	3	28
Crop Care	74	5	119
Purchase/Use of Fertilizer and Chemical	70	4	67
Harvesting	69	7	51
Post Harvest	32	6	22
Marketing	43	6	28

Source: Women Food Producers Survey, Jamaica 1993

From the data recorded in Table V.16 it is clear that reproductive activities remain the domain of women in spite of their high level of involvement in productive activities. There appears to be very minimal involvement of men in food preparation and house-keeping tasks such as washing, ironing and cleaning.[15]

Approximately 76% of the women from farm households were engaged in some farming activity and about 20% stated that farming was their main occupation. The women involved in farming did so at every level including field work, animal husbandry, marketing and general farm management-related tasks. Leaving the responsibility of marketing of farm produce mainly in the hands of the women is a fairly widespread practice in Jamaica, and evidence of this was shown in the study. Twice as many women as men in the farm household acted independently in the determination of prices at which farm produce was sold. The number of occasions on which there were consultations among both partners was equal to the number of times when the man alone took the decision.

A survey conducted in 1982 to evaluate the Home Economics Women in the Development component of the Second Integrated Rural Development Project (IRDP II) analysed ten (10)specific chores considered vital to the support of the farm family. (See the results in Table V.17).

In addition to performing the traditional domestic chores, women did most of the animal care, gardening, higglering and record keeping as well as 26% of the crop care. Women and girls in the household participated in every chore and men participated in seven and boys only 6.[16]

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[15] Ministry of Agriculture, Baseline Survey, pilot Project for Strengthening of the Rural Farm Family Development Programme Jamaica, 1988.

Ministry of Agriculture, FAO sponsored Study on the Situation of Rural Farm Families and Women in Agriculture, Forestry, and Fishery, 1981.

[16] Harriet E. Vosseler, Study of the Home Economics/Women in Development Component, Second Integrated Rural Development Project (IRDP II), Two Meeting and Pindars River Watershed, Jamaica, 1982.

Table V.15

Family member participation in livestock production
by type of livestock and type of activity
Jamaica, 1993

ACTIVITIES	RESPONDENTS	OTHER WOMEN	MEN
CATTLE			
Feeding	16	-	26
Clean/maintain house & equipment	1	-	2
Animal health	9	-	14
Breeding	2	-	9
Dressing & milking	3	-	4
SMALL STOCK			
Feeding	100	5	35
Clean/maintain house & equipment	23	1	15
Animal health	56	1	29
Breeding	6	1	7
Dressing & milking	3	-	1
POULTRY			
Feeding	15	-	-
Clean/maintain house & equipment	10	-	1
Animal health	10	-	-
Dressing & milking	13	1	3

Source: Women Food Producers Survey, 1993

Table V:16

Family Members'Participation in Reproductive Activities
Jamaica, 1993

Reproductive	Respondents	Other Women	Men
Prepare food	141	15	10
Gather firewood	48	7	55
Carry water	47	9	16
Wash clothes	132	22	5
Iron clothes	110	11	4
Clean house	93	16	2
Child care	42	4	1
Shopping	109	9	9
Repair house & furniture	11	3	16
Sew/mend clothes	34	1	2
Pay bills	54	2	18
Clean yard	41	5	22
Tend garden	26	2	11
Transport children/others	1	0	1

Source: Women Food Producers' Survey - Jamaica, 1993

Table V.17

Participation of Family Members in Productive and Reproductive Activities Jamaica 1982

Activities	Family Members				
	Women	Men	Girls	Boys	Other Relative
Cooking	90	0	13	0	6
Gardening	52	22	2	12	2
Cleaning	61	0	37	6	4
Carrying Water	31	4	52	51	13
Child Care	87	14	8	0	9
Washing	93	0	17	0	7
Animal Care	66	51	11	33	12
Crop Care	26	63	29	11	2
Higglering	42	20	2	1	2
Record Keeping	42	10	2	0	1

Source: Study on Home Economics Component of the Second Integrated Rural Development Project (IRDP II).

D. Contribution of Women to Family Incomes

The income levels of small hillside farmers in Jamaica are generally low with many falling below the poverty line. The Survey of Living Conditions (SLC) which examines living conditions throughout Jamaica developed a poverty line based on a least-cost basic needs basket defined as the money income necessary to purchase this basket. For 1989 it was estimated that rural Jamaicans need J$3,568/year (US$621) to purchase the basic needs basket. According to that measure nearly one-third of Jamaicans did not have that income in 1989 and approximately 70% of those falling below the poverty line lived in rural areas. Evidence of the high concentration of rural poverty is further supported by the fact that 82% of the poorest quintile of the population live in rural areas.

From an occupational standpoint, data from the 1989 SLC showed that households headed by self-employed agricultural workers were among the poorest group, with a mean per capita expenditure of US$690.43 which was just 71% of that of the typical Jamaican household. On the other hand households headed by professional, technical or administrative workers had a mean per capita expenditure of US$2,108.52.

Among the rural poor female-headed households are considered to be one of the most vulnerable groups. This includes women farmers and wage labourers. Using the national average of four persons per levels recorded fell below (See Figure V.2 for poverty line).

In the 1988 Rural Farm Family Development Study in Western Jamaica farm incomes varied on the eight sites studied but generally tended to be low. On "Pell River" gross value of production for 48% of the household-heads was less than Three Hundred Jamaican dollars ($J300) per year. On "Dromily/Bunkers Hill" 73% of household heads fell in this farm income bracket. On "Rock Spring" (80%) and "Montego Valley" (62%) a high percentage of the household heads had gross production values exceeding J$7,000). On "Burnt Ground" and "Flower Hill", 96% and 62% respectively of the household heads had earned less than J$2,500 in farm income on an annual basis.

Interestingly household heads in Jerusalem Mountain, (which had the highest percentage of female household heads) were among the relatively higher income earners. Approximately 73% had annual gross production valued between J$4,000 and J$7,000.[17] This is shown in Figure V.3.

Against this background of generally low income levels in farm households the labour contribution of all family members including women is very critical for increasing earnings from agricultural activities.

For the Women Food Producers' Survey it was not possible to accurately calculate the precise labour contribution of women on the farm or the level of income generated. However there are clear indications that:

(a) Agricultural activities constitute the main source of income as off-farm employment is limited and only about a third of the families (32%) received remittances from persons outside the household (See Table A.2 Appendix).

(b) The majority of the households surveyed were female-headed and the respondents and other women in the household participated just as much or more than men in most of the productive activities analysed.

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[17]See Appendix 2 for a more detailed description of the Survey.

ESTIMATE OF POVERTY LINE
1983-92 (CONSTANT 1989 I$)

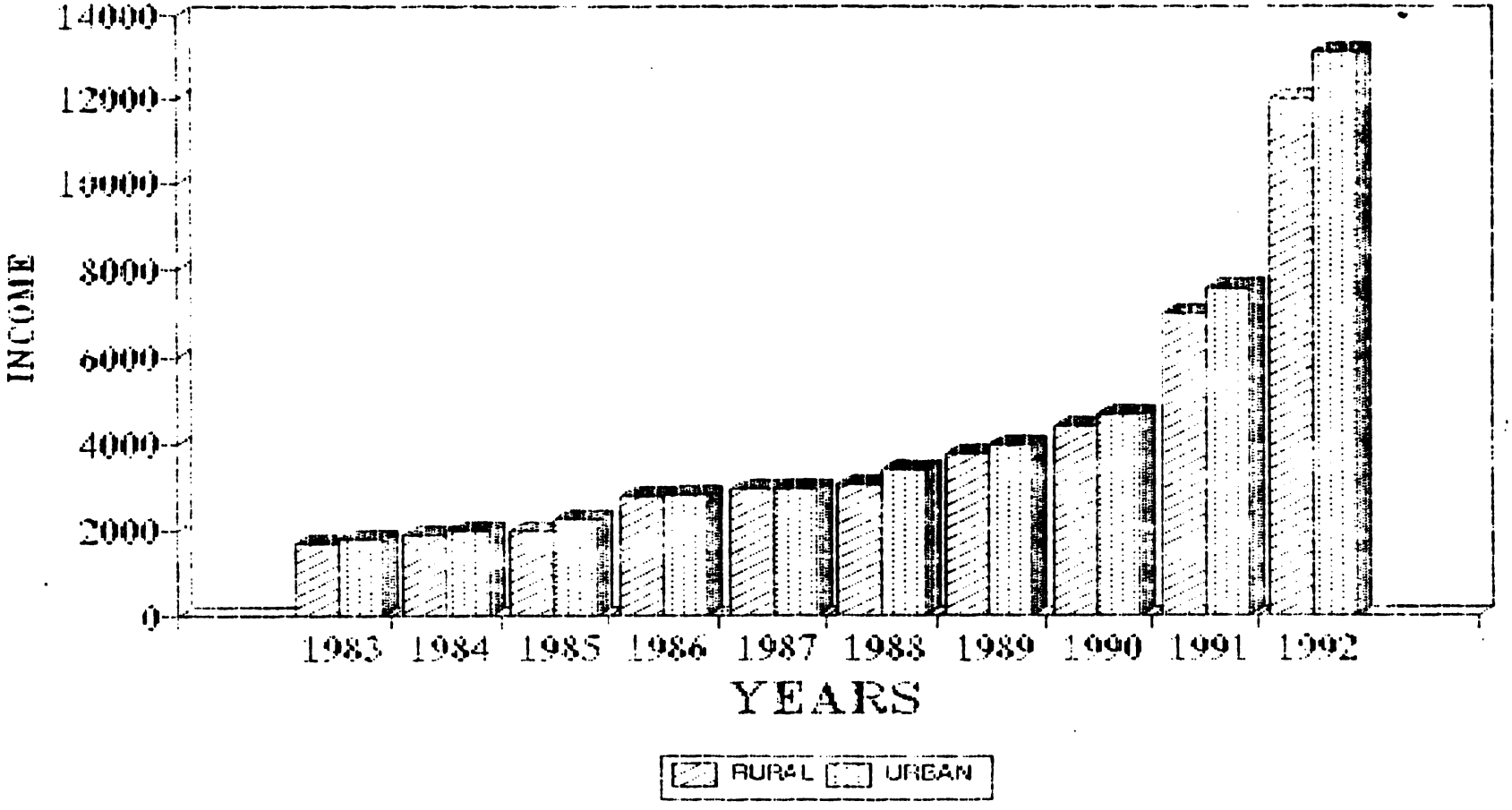
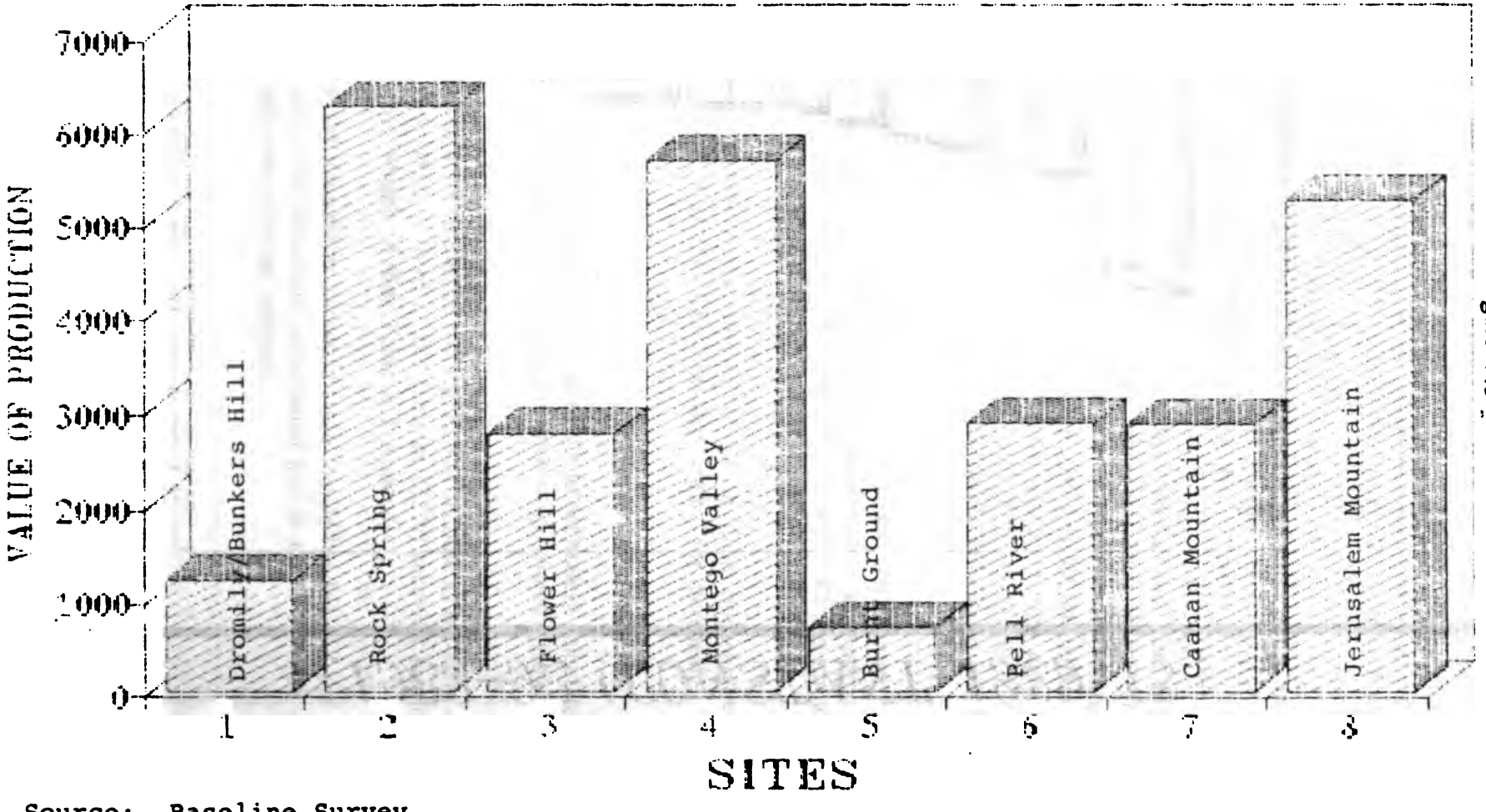


Figure V.2

Source: Survey of Living Conditions

HOUSEHOLD HEADS BY GROSS
VALUE OF PRODUCTION AND SITE



Source: Baseline Survey,
Strengthening of the Rural Farm Family Project,
Ministry of Agriculture
1988

Figure V.3

Assuming that the labour productivity ratio of women is no less than that of men it follows that they make an equally or more significant contribution to family income.

E. Women's Labour Allocation

In the 1981 study previously referred to, 72% of the women in the farm families surveyed in St. Elizabeth spent an average of 22 hours per week on farming activities. For the entire sample, which included one hundred women 100, 35% spent 15 or more hours each week on farming activities. Seventy-three percent (73%) of the women spent between 20 to under 40 hours on domestic activities each week.

Based on the assumption of a 40-hour work-week (though most women worked for much longer hours) the women's time was almost equally divided between productive and reproductive activities.

For the Women Food Producers' Survey it was not possible to calculate Women's use of time on productive activities. However Table V.18 shows child-care and food preparation as the main reproductive activities for which their time is allotted.

Considering their previously demonstrated high level of participation in production and marketing, the double burden which they carry is highlighted.

Small farm production units in general are constrained by limited access to productive resources, mainly land and capital. These farms have also been adversely affected by inadequacies of rural infrastructure in the form of roads, irrigation facilities (where this can be applied), and marketing distribution network.

Low level of technical knowledge and minimal technology transfer which result from poor extension and research linkage have also constituted a major hindrance to increased production and productivity.

However, women farmers have consistently been found to be at a greater disadvantage than their male counterparts in respect of access to land, credit training and technology. In addition, there is a number of socio-cultural barriers which hinder efforts to improve women's situation in Agriculture. Most pronounced in this regard is the tendency to identify women's activities with the domestic sphere and lack of recognition of the importance of their role in production.

The way in which women perceive themselves and their role in society also have important implications for their participation in development activities. A very positive trend is that a number of women have been making in-roads in previously male- dominated fields, and consider themselves capable of taking on responsibilities traditionally assigned to men.

Table V:18

Women's use of Time on Domestic Activities, Jamaica, 1993

Domestic Activities	Avg. Hrs-/Week
Prepare Food	24.69
Gather firewood	2.60
Carry water	5.34
Wash clothes	6.66
Iron clothes	2.46
Clean house	5.02
Child care	28.80
Shopping	4.18
Repair house & furniture	4.22
Sew/mend clothes	1.37
Pay bills	1.59
Clean yard	5.70
Tend garden	11.63
Transport children/o other	13.33

Source: Women Food Producers' Survey - Jamaica, 1993

F. Women's Participation in Decision-Making and Access to Productive Resources and Training, Problems, Limitations and Potential

1. Participation in decision-making

The respondents in the Women Food Producers' Survey showed a high level of participation in production and management decision-making on the farm.

Based on the data in Table V.19 their level of participation was highest in the areas relating to the marketing of produce with 77% (115/150) stating that they independently determined what products should be marketed, 71% (107/150) making the decision on market outlet and 67% (100/150) determining the sale price. Their level of participation was also significantly high in respect of decisions on: crops to be planted 71% (106/150) made such decisions independently); production inputs 63% (94/150) and hiring of labour 55% (83/150).

The areas in which they recorded the lowest level of involvement in decision-making included the use of loans and purchase of machinery and equipment, where only 23% (34/150) and 31% (46/150) respectively reported that they ever made such decisions independently. Of importance also, is the fact that over 70% indicated that they independently decided on the use of profits from the farming enterprise. This is reflected in the fact that in respect of decisions on household expenditure, for all categories included, at least two-thirds of the respondents indicated that they made independent decisions (See Table A.3 Appendix).

Participation in Farmer/Community Organizations was limited mainly to Church activities (See Table V.20 which in turn reflects the fact that Sunday was reported to be the day on which they had the most leisure time (See Table A.4 Appendix). A significant number also reported involvement in Parent Teachers' Association (PTA).

2. Access to land, credit and training

Among the respondents in the Women Food Producers' Survey average farm size was below 2 hectares as already stated. Only 17.3% (26/150) owned the land on which they farmed and the large majority, regardless of union status, did not have their names on the titles or contracts for the lands they operated and very few also inherited land as shown in (Tables V.21 and V.22). In terms of access to credit only a mere 5% (7/150) had received loans for farming operations over the last three years. Therefore, as Table V.23 shows revenue from previous sales was the main source of financing for farming operations. This is contrasted with the fact that as many as 67% of the farm households had applied for credit within the last three years.

The gap between the number applying for loans and the number receiving is startling. Most women who applied for loans appear to have approached the commercial banks or the credit unions, whereas more of the men submitted their applications to the agricultural lending agencies (Table V.24).

Table V.19

Women's Participation in Productive and Management Decisions on Farm

Resources	Decision Making			
	Respondent	Man Companion	Both	Other
Inputs-crop production	94	8	43	4
Purchase Mach./equip.	46	10	17	1
Crop to be Planted	106	4	37	3
Livestock to be raised	70	7	22	2
Products to be sold	115	2	24	1
What markets	107	2	15	3
Price of Goods	100	4	11	7
Use of Loans	34	4	12	1
General Farm Management	65	2	37	2
Use of Profit	103	3	35	2
Organisation of Production	51	3	27	2
Hiring Farm Labour	83	6	27	2
Other	2	-	1	-

Source: Women Food Producers' Survey - Jamaica 1993.

Table V:20

Women's Participation in Productive/Community Organization, Jamaica, 1993

Organization	Percentage of all* Respondents	Level of Participation %			
		Not Stated	Often	Occasionally	Seldom
Sports Club	2.6 (4)	100	-	-	-
Social Club	2.6 (4)	-	50.0	50.0	-
Church Club	62.0 (93)	-	63.4	26.8	9.2
Farmer Organ.	2.0 (3)	-	66.0	-	33.0
Community Group	8.0 (12)	8.3	83.3	-	8.3
Parent/Teachers Association	32.0 (48)	2	43.7	41.7	12.6
Other	1.0 (2)	-	-	100	-

Source: Women Food Producers' Survey, Jamaica 1993

* Categories are not mutually exclusive

TABLE V:21

Names on Contract by Type of Tenure
Jamaica, 1993

TYPE OF TENURE	Name on Contract																					
	Total		No Response		Single Response		Married Response		Common Law Resp.		Other U/Status Response		Man/ Companion		Both		Response Family Name		Man's Family Name		Other	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Own	26	100	3	11.5	1	3.8	1	3.8	-	-	3	11.5	12	46.2	3	11.5	3	11.5	-	-	-	-
Rent	30	100	14	46.7	3	10.0	2	6.7	-	-	-	-	6	20.0	-	-	1	3.3	1	3.3	3	10.0
Lease	28	100	5	17.9	4	14.3	7	25.0	3	10.7	2	7.1	5	17.9	2	7.1	-	-	-	-	-	-
Family Land	49	100	17	34.7	-	-	1	2.0	-	-	-	-	5	10.2	-	-	21	42.9	5	10.2	-	-
Share	7	100	3	42.9	-	-	-	-	-	-	-	-	-	-	-	-	1	14.3	-	-	3	42.9
Squatting	5	100	5	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Joint ownership	3	100	1	33.3	-	-	-	-	-	-	-	-	-	-	2	66.7	-	-	-	-	-	-
Other	2	100	2	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source : Women Food Producers' Survey - January, 1993

Table V.22

Type of Tenure by Method of Acquisition, Jamaica, 1993

Type of Tenure	Method of Acquistion								
	Total	Response		Inherit		Purchase		Other	
	No.	No.	%	No.	%	No.	%	No.	%
Total	150	65	100	26	100	32	100	27	100
Own	26	10	15.4	4	15.4	12	37.5	-	-
Rent	30	16	24.6	1	3.8	6	18.8	7	25.9
Lease	28	8	12.3	-	-	9	28.1	11	40.7
Family Land	49	22	33.8	20	76.9	2	6.2	5	18.5
Share	7	2	3.1	1	3.8	1	3.1	3	11.1
Squatting	5	4	-	-	-	-	-	1	3.7
Joint ownership	3	1	-	-	-	2	6.2	-	-
Other	2	2	3.1	-	-	-	-	-	-

Source : Women Food Producers' Survey, - January, 1993

Table V.23

Percentage of Farms by Size of Farm and Source of Financing
Jamaica, 1993

SIZE OF FARM (ha)	SOURCE OF FINANCING					
	Production/ previous sales	Family	Savings	Informal Arrangement	Other	Total
TOTAL	84.91	3.45	8.82	2.05	0.77	100.00
< 0.4	84.76	1.90	9.52	3.81	-	100.00
0.4 -< 2.0	83.43	4.59	9.58	2.40	-	100.00
2.0 -< 4.0	90.00	1.54	8.46	-	-	100.00
4.0 -< 10.0	86.96	-	-	-	13.04	100.00

Source: Women Food Producers' Survey - Jamaica, 1993

Table V.24

Distribution of Farms Requesting Loans
and Farms Recieving Loans by Applicant
Jamaica 1993

Source of Loan	Farms that Requested Loans		Farms that Received Loans		Applicant			
	No.	%	No.	%	Women	Men	Both	Not stated
TOTAL	100	67	7	5	-	-	-	10
A C Bank	15	15	2	2	-	100	-	-
Commercial Bank	5	5	1	1	100%	-	-	-
Credit Union	15	15	-	-	67%	33	-	-
P C Bank	15	15	3	3	33%	67	-	-
NGO	5	5	1	1	100%	-	-	-
Informal lender	10	10	2	2	100%	-	-	-
Other	20	20	-	-	90%	-	10%	-
Not Stated	15	15	-	-	33%	-	-	10

NGO: Non Government Organization
Source: Women Food Producers' Survey - Jamaica, 1993

Limited access to training is even more pronounced than access to productive resources. As Table V.25 shows, access to training was extremely limited for the respondents as well as for their male companions or other adult males in the household. It appears though, that in the area of Seed Selection and the use of Fertilizers and Pesticides, a higher percentage of women than men had received training, this again, could be reflective of the position of the respondents as household heads.

Table V.25

Areas of Training Received by Family Members

Subject Area	Women		Men		Both	
	No.	%	No.	%	No.	%
Seed Selection/Production	33	7	10	3	16	2
Use of Fertilizers/Pesticides	55	12	8	2	24	3
Post-Harvest Storage	13	3	2	<1	18	<3
Marketing	16	4	3	1	16	2
Feeding & Grazing	2	<1	3	1	4	<1
Farm Management	16	4	3	1	9	1
Packaging	13	3	2	<1	12	<2
Processing	11	2	1	<1	2	<1

Source: Women Food Producers Survey - Jamaica, 1993.

3. Problems identified and improvements required

The principal problems which respondents identified as hampering their operations were inadequate labour (61%) and lack of financing (57%) as demonstrated in Table V.26.

Although they had limited access to land this was not identified as a problem. Also, in spite of limited access to training and extension assistance as established earlier based on data from

RADA, and confirmed by the Food Producers' Survey, these factors were not identified as principal problems.

It seems, therefore, that from the standpoint of the women themselves, the multiple roles which they perform and the absence of substantial assistance from men in their household in undertaking domestic chores, pose the greatest limitation to their participation in agricultural development. Next to this, in their view, is limited access to financial resources. Table V.27 shows that financial assistance is the principal improvement for which the majority have a felt need. This was cited by 37%. It is interesting that many did not identify increased availability of labour as an area for improvement.

TABLE V:26

Principal Problems Which Female Face - Jamaica, 1993

Problems *	No. of Women	As % Of All Women
Theft	17	11.33
Insects/ pests/ animals	29	19.33
Drought	45	30.00
Expensive inputs	48	32.00
Labour Problems	92	61.33
Lack of financing	85	56.67
Lack of equipment	16	10.67
Spoilage	1	0.67
Lack of ext. assistance	3	2.00
Natural disaster	2	1.33
Lack of roads/ transportation	14	9.33
Lack of water	9	6.00
Low farmgate prices	24	16.00
Inadequate information	15	10.00
Lack of markets	6	4.00
Gender prejudices	10	6.67
Lack of technical assistance	1	0.67

* They are not mutually exclusive

Source: Women Food Producers' Survey - Jamaica, 1993

Table V.27

Principal Improvements Needed for Farming/Marketing/Processing, Jamaica, 1993

Improvements Needed	No. of Women	As % Of All Women
Availability of labour	12	8.00
Better & guaranteed markets	51	34.00
More storage facilities	1	0.67
Cheaper inputs	61	40.67
Better prices	61	40.67
Financial assistance	86	57.33
Improved extension services	24	16.00
Technical training	5	3.33
Proper irrigation	41	27.33
Provision for modern equipment	9	6.00
Better roads & transportation	33	22.00
Incentives for farmers	7	4.67
Import restrictions	1	0.67
Easier access to loans	1	0.67
More information	1	0.67
Better Pest etc. control measures	1	0.67

Source: Women Food Producers' Survey - Jamaica, 1993

Table V.28

Frequency Distribution of Respondents' Ambitions for Children
Jamaica, 1993

Ambitions	No. of Respondents	As Percentage of All Respondents
TOTAL	150	100.0
No. Response	11	7.3
Become Trades person	39	26.0
Become Business person	14	9.3
Become professional	76	50.7
Other	10	6.7

Source: Food Producers' Survey Jamaica, 1993

Table V.29

Frequency Distribution of Reasons Why Daughters Should Continue as Farmers
Jamaica 1993

Reasons	Number of Respondents	As Percentage of All Respondents
Farming Manageable	5	3.33
Profitable /gives independence	44	29.33
Child already a farmer	1	0.67
Freedom to work at own pace	1	0.67
Tradition	3	2.00
Supplies domestic food needs	1	0.67
No alternative	1	0.67
Loves farming	2	1.33
No real qualifications necessary	2	1.33
Necessary to supply nation's food	3	2.00

Source: Women Food Producers' Survey - Jamaica, 1993

On the other hand, although less than 1% identified the lack of technical assistance as a factor affecting their farming operations, as many as 16% identified the Extension Services as one of the main areas in which improvement was needed. Cheaper farm inputs and better market conditions, and other infrastructural services (e.g. irrigation and roads) were among the other main areas for improvement most frequently cited.

The majority of respondents in the survey saw farming as a business and though most had ambitions for their children to become "professionals" some did indicate that they would encourage their daughters to become farmers, the most frequent reason given being that it is profitable or gives economic independence (See Tables V.28 & V.29).

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

In light of the foregoing analysis of available secondary data and the results of the Women's Food Producers' Survey, the following are the conclusions and recommendations put forward to overcome existing constraints and enhance women's participation in developing the Agricultural Sector.

A. Conclusions

Government policy initiatives in the Agricultural Sector are generally intended to be equally applicable to men and women, rendering participation in development projects and programmes open to both. In reality however, there is usually a marked differential in policy benefits accruing to men as compared with women. This is most pronounced in the areas of access to productive resources such as land and credit and participation in extension and training programmes. In these areas women are represented to a much smaller degree than men, not only in absolute terms but also relative to their level of participation in Agriculture as reflected in official statistics which grossly under-estimate their contribution.

Women's unequal access to resources and benefits of current policies and programmes within the Agricultural Sector usually cannot be traced to outright discrimination from a legal, regulatory or institutional standpoint. The factors which account for this state of affairs are largely related to cultural traditions which are sometimes re-inforced by stereotypes held by certain officials involved in rural development, for example, the complaint by some women that male extension officers do not regard them as "serious" farmers.

The lack of awareness of policies and programmes, on the part of women themselves, has also been a contributory factor to their limited access to agricultural development benefits.

The mere introduction of a "Women's Plan" or the implementation of "Women's Projects" is not sufficient to overcome the constraints faced by female farmers.

Agricultural Planning must be undertaken within a Gender- sensitive framework which will allow specific focus on the needs of women, and also men where this is warranted.

B. Recommendations

1. Gender focus in policy formulation and resource allocation

The actions being proposed in this regard are:

(i) improving the data base on women's and men's specific activities in food production, processing and marketing for use in policy formulation;

(ii) incorporating specific references to women, where appropriate, in the technical sections of the Five Year National Development Plan, and in particular in the Agricultural Sector Plan, and not only in the separate "Women's Plan" which leads to the overlooking of these issues by technical ministries; and

(iii) re-orienting, where necessary, the allocation of resources between men and women in mixed projects.

2. Increasing access to productive resources and credit

In order to increase women's access to land and capital for investment purposes and to raise productivity and income, the measures proposed are:

(i) ensuring that women and men have equal opportunities to secure land under the divestment programme, and registered titles under the Land Titling Project;

(ii) ensuring the implementation of inheritance laws by educating women as to their legal rights, so they can inherit a fair share of land and other assets;

(iii) promoting local informal savings' groups and co-operatives with full participation by women to facilitate the financing of investments beyond the capability of individual small farmers; and

(iv) training and assistance, in financial management, savings and investment.

3. Access to training and extension

Extension services and training programmes could make a more effective contribution to improving women's food production by adopting the following measures:

(i) emphasizing the role of women in food production in the curriculum of agricultural training institutions, particularly in the subject areas of Extension and Farm Management;

(ii) re-structuring training programmes carried out by farmer-training centres, to take into account the technical needs, time and cultural constraints on women farmers;

(iii) developing appropriate teaching/learning aids which can be used by the extension staff at field demonstrations and as reference material for farmers, bearing in mind literacy levels; and

(iv) providing training to women's groups on basic agricultural practices, so that they may be used as agricultural para-professionals in the absence of extension services

directly to women involved in crop production, animal husbandry, fisheries and food processing.

4. Improving agricultural practices and technologies

The introduction of improved agronomic practices could be enhanced by fully involving women in such programmes as listed below:

(i) introducing new crops and improved varieties or expanding the area under specific crops that are higher yielding, more drought and disease resistant, or have lower labour requirements;

(ii) introducing rotations and inter-cropping systems which maximize total output and returns to male and female labour;

(iii) encouraging the use of low-cost techniques to improve soil fertility; and

(iv) controlling erosion with a variety of conservation methods.

a. Livestock

Greater attention should be given to livestock through:

(i) involving women in feed improvement programmes, fodder and pasture management;

(ii) making available to women appropriate technologies for milking, processing and storage of dairy products; and

(iii) promoting fish farming among women, since it often complements their other productive and domestic activities.

b. Food processing

Women's productivity in the production and processing of food products could be improved by the introduction of appropriate technologies. The design and diffusion of such technologies may be facilitated by:

(i) carrying out socio-economic surveys to identify women's constraints and potentials and to ensure that new technologies will not disrupt the balance in male and female labour inputs;

(ii) improving methods of food processing, preservation and preparation which enhance nutrient uptake, remove toxin, and ensure hygiene of foods;

(iii) manufacturing appropriate technologies locally, using, where possible, local materials and cheap energy sources and involving women in their design and testing;

(iv) training men and women at the local level in the maintenance and repair of locally produced or imported equipment; and

(v) combining research and extension efforts directed at raw material production for agro-processing with the objectives of reducing cost through increased productivity.

Women's participation in and benefits from commercialized food processing could also be improved by providing them with employment and income in the following ways:

(i) locating commercial processing plants in rural areas and employing women where possible on flexible time-schedules and also purchasing women's home-processed produce for more refined industrialized processing; and

(ii) promoting women's co-operative groups to operate larger-scale and more commercially viable enterprises.

5. Improving access to inputs and markets

Improvements in women's productivity is contingent on farmers their increased access to production inputs services, marketing and storage facilities. This could be done by:

(i) de-centralizing delivery systems for inputs and enabling women to obtain these, where required, on credit;

(ii) improving marketing networks and facilities, particularly for fresh or processed food products which are produced in relatively small quantities but which may have high economic or nutritional value; and

(iii) promoting small-traders' associations.

6. Increased participation in farm/community organizations

Women's participation in farm/community organizations which would enhance their involvement in agricultural development projects and programmes could be promoted by:

(i) encouraging their increased registration as members of the Jamaica Agricultural Society (JAS), producer marketing groups, and service co-

(ii) training women in administration and community leadership.

7. Project proposals

In keeping with the conclusions and recommendations the following four projects are being proposed:

1. Development of comprehensive sex-dis-aggregated data base on Agriculture.

2. Establishment of informal credit system for small-scale agricultural producers, with full involvement of women.

3. Research and development programme for labour-saving mechanical tools.

4. Education programme for women on laws relating to land ownership, and related matters.

Any projects or programmes involving rural women and men, must be placed within the context of overall rural development goals. These programmes must be designed with a view to anticipating the effects of gender-related socio-cultural factors and the institutional environment.

The inter-actions among policies, institutions, people, physical resources and technology are diverse and complex. Consequently no single programme-package will be applicable universally.[18] The specific local context must in the end be the most decisive factor.

C. Project Profiles

1. First Project Profile

Title: Improvement of Statistics and Data Bases on Gender in Agricultural Development in Jamaica

Problem/justification

Over the last decade there has been a growing number of studies on the role of women in agricultural production and rural development. Not withstanding, there is still a considerable data gap particularly in respect of comparative analysis of the nature and scope of the respective participation of men and women in the production process. This poses a limit on the extent to which a gender framework can be applied in agricultural planning and policy formulation.

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[18] Uma Lele - The Design of Rural Development: Lessons From Africa, 1978.

Gender - specific information is not only important for an accurate measurement of the contribution of women to agriculture, but is also necessary to provide indicators of the extent of equality or inequalities between men and women. In addition gender differentials are most critical when establishing poverty lines in order to distinguish the relative situation of women and men who are living in absolute poverty and to assess the extent to which sex biases contribute to such conditions.

The production, analysis and dissemination of meaningful gender - based data will also assist in dispelling misconceptions that have developed concerning women's role in the agricultural and rural development thrust. This should result in greater consideration being given to women's need at both social and economic levels and also serve to increase their visibility as they Participate in and benefit from the economic and social life of the country.

Goal

The goal of the project is to provide a comprehensive gender disaggregated data base to improve planning and policy formulation for agricultural development, thereby enhancing the full participation of both men and women in the process.

Specific objetives

The specific objectives are:

1. To collect, analyse, retrieve and disseminate gender - specific data on agricultural production, processing and marketing in rural areas.

2. To use the data base established to develop a framework for the effective incorporation of gender in agricultural planning, including policy formulation and the design of projects and programmes.

Expected outputs

The expected outputs include:

1. Established data bank of accurate gender base data and information covering the economic, social, decision - making and all other relevant spheres in the rural agricultural sector.

2. Acceptance and practice of gender planning at all levels of the agricultural planning system.

3. Increased recognition of the contribution of women relative to that of men in agricultural development.

4. Availability of more valid and reliable data on the role of gender in development.

Activities

1. Revision of definitions and concepts used in determination of the Economically active population by the Statistical Institute.

2. Disaggregation by gender of all standard data items collected by STATIN.

3. Undertake rural/urban disaggregation of official statistics.

4. Through national censuses and surveys, as well as special studies collect gender disaggregated data on the rural population in the following subject area classification:

   (a) Economic Sphere

   - Economic activity of population
   - Income
   - Production and Distribution
   - Access to means of production
   - Participation in agricultural rural production.

   (b) Social Sphere

   - Demographic features of the population
   - Household type and composition
   - Time use
   - Education
   - Nutrition and food Consumption
   - Housing and facilities

   (c) Decision Making Sphere

Expected duration

It is expected that at least four years would be required to implement this system.

Estimated cost

- Administration $192,625
- Development of survey Instruments $89,328
- Training $104,405
- Enumeration $973,538
- Data Processing $12,682

- Dissemination	$61,843
- TOTAL	$1,434,421

Executing agency

The Statistical Institute of Jamaica in collaboration with the Data Bank and Evaluation Division of the Ministry of Agriculture.

B. Second Project Profile

Title: Informal Credit System for Agricultural Producers

Problem/justification

Small farmers as a group and women in particular experience difficulties in accessing credit from formal banking institutions due mainly to lack of collateral and high interest rates. Within the context of a liberalized, market driven economy this problem becomes more acute.

In Asia and Africa a number of innovative credit systems have been successfully utilized by mainly female small scale producers. These include the Grameen Bank in Bangladesh and the informal savings collectors in Ghana known as "Susu".

The traditional partner system in Jamaica is very similar in nature to the West African "Susu" and can be successfully promoted to mobilize funds to be used by both men and women for small farm development.

Goal

To increase the access of female and male small-scale producers to credit for agricultural production through the development of informal system of savings and loans groups using co-operative principles.

Specific objetives

1. To develop informal rural financial services network which could serve as intermediaries to formal system.
2. To promote rural savings.
3. To expand scope and potential of traditional "partner" system.
4. To create locally based pool of funds for lending to small-scale producers.

Expected outputs

1. Network of small farmers savings groups island-wide with full participation by women.
2. Availability of low-cost credit with equal access by men and women to these resources.

Activities

1. Review and analysis of the functions of the traditional "partner" system as it relates to rural areas.
2. Promotion and organisation of small farmers savings group, with special efforts to incorporate the participation of women.
3. Conducting training in use of financial management and co-operative development among small farmers ensuring equal participation of men and women.
4. Design of rural informal credit network with mechanism for linkage with formal financial services sector.

Expected duration

A period of three years would be required to organize and establish this informal credit system.

Estimated costs (US$)

1.	Administration Expenses	
	Project Management	180,000
	Administrative Support	30,000
2.	Technical Assistance	
	Institutional Dev. Specialist	100,000
	Credit Specialist	100,000
3.	Training Courses	50,000
4.	Equipment	
	Vehicles	40,000
	Training Equipment	15,000
5.	Study of Informal Credit System	90,000
TOTAL		605,000

Executing agency

The Association of Development Agencies (ADA), in close collaboration with the Rural Agricultural Development Authority (RADA) and the Agricultural Credit Bank of Jamaica (ACB).

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APPENDICES

Appendix I

Bureau of Women's Affairs Guidelines to Incorporate Gender Concerns in Project Planning and Implementation

Identification

- What is the role of women in each phase of the agricultural production cycle?
- Are most women paid agricultural workers or subsistence farmers? What is their role in decision making?
- What obstacles do women face in performing their daily agricultural tasks and seasonal work?
- Do women face problems obtaining and maintaining access to land or control over the food produced and the income received?
- Are there legal, economic, social or cultural obstacles to the participation of women in agricultural development projects:
- Is there a national policy promoting the involvement of women in agriculture?
- Have there been legislative reforms respecting property rights for women? Is such legislation being planned.

Collection of data

- Does the study or research framework provide for systematic processing of data relating to the role and contribution of women in this sector?
- Do techniques exist for the collection and processing of data in accordance with specific criteria: sex, social status and the work situation of women in agriculture? What type of agricultural production are women most interested in (in terms of variety of crops, yield, etc.). Are the human and financial resources available to develop these techniques?
- Are there trained women available for collecting, compiling and processing data?
- Will there be co-operation of national government bodies to involve them in the collection of data or to fill any gaps in data on the situation of women in question?
- Have mechanisms been planned for forwarding the data to the community?

Project development

- Will the expertise and opinion of women from rural areas be called upon in the development of agricultural projects?
- How will the project affect the overall economic situation of local women and their access to control over resources?
- Will the project result in an increase in the time spent on agriculture and related activities? Given their other obligations, do women have the time to perform these activities?
- Will the site of the project be too far away for women who do not have transportation? Will women be able to afford the cost of transportation if such exists?

- Where the introduction of new cash crops is anticipated, will women be required to grow them in addition to food crops? What cash crops could be grown and sold by women? Will the cash
  crops interfere with the production of food crops required for family health and nutrition?
- Will women's traditional markets be affected if they alter their crop varieties?
- Will the project affect the location of food processing and storage facilities? How will this affect the women in the community?

Selection of technology

- Will the introduction of new techniques displace women from their current positions in the sector? Will it improve their status?
- To what extent will the new technologies be accessible to women?

Access to credit

- Is access to credit required to increase the participation of women in this sector? Do women have equal access to credit? Should specific mechanisms to ensure access to credit be implemented?
- Do current practices and guidelines governing access to regular credit discriminate against women? Do the criteria for receiving credit correspond to the resources of women?
- Do collateral requirements, transaction cost and repayment schedules promote women's access to credit?
- Will women be involved in establishing the terms of credit and the allocation, management and repayment of credit?
- What percentage of the budget for equipment and credit goes to women?

Communications

- Do women have access to information on activities in the agricultural sector? Are the channels used to disseminate this information likely to reach women?
- What information networks exists or should be developed to reach women? How do they plan to reach women in isolated areas?
- Are women well informed of the opportunities for training and access to material and financial resources in this sector?
- Will local women's groups or other organizations be called upon to inform or motivate women in the communities in questions?

Training

- Will women receive training in agricultural production, marketing or processing?
- Will women receive information on agricultural production and marketing?
- Will women receive training in the operation and maintenance of equipment?
- Will women receive training on information on supplies, the network of specialized technical resources and suppliers of equipment and parts?
- Will women receive instruction on legal matters, such as property or company ownership, and on marketing or processing operations?
- Will women have access to the licenses required for marketing and/or operating equipment?
- Will women receive training in applying for credit? Is training in management, administration and accounting techniques necessary and can it be adapted to the knowledge of women?
- Given the socio-cultural context in question, would women be given special training in addition to that designed for the entire community?
- Is the training programme compatible with the hours and availability of the women in the country or region?
- Are there recognized specialists in the field of women's training in the country or region?
- Are qualified women available for conducting a training programme in the areas of organization, technology and management?
- Do training methods and/or instruments exist in this sector? If not would they be developed? How?
- Has a specific budget been planned for training activities?

Implementation

- Are the communities involved in the establishment of infrastructure? If so, what will be the role and extent of participation of women?
- In what capacity will women be active participants and beneficiaries?
- Will regional or local women be involved through their work in order to encourage women from the region to participate?
- Will women's work be recognized and paid on an equal basis with that of men?

Operation and maintenance

- What will be the roles of women in the project cycle?
- How will women be involved?
- Have organizational mechanisms been planned for equitable access to and control over material and technical resources by men and women in the community?
- How will women participate in and contribute to the maintenance of equipment? Through what organizations will women be involved?

Management and administration

- What techniques will be used to involve women in the management and administration of the project?
- How will benefits for women be ensured?
- Will women be involved in the control of financial resources?
- Will the management process ensure women control of the income?

Follow-up and evaluation

- What follow-up mechanisms will be used to support the participation of women?
- What will be the role of women in follow-up activities?
- What indicators will exist to measure the degree and rate of participation of women in the agricultural production cycle and in each phase of the project?
- What instruments for measuring access and control of material, technical and financial resources will be implemented by women in the project?
- How will women be research during the evaluation?
- Will women be represented in the management and implementation of the project evaluation?

Appendix II

Agro-Socio Economic Baseline Survey
Western Jamaica
FAO/GOJ Pilot Project for the Strengthening
Of the Rural Farm Family Development Programme

In 1988 an agro-socio-economic Baseline Study was conducted in the Western region of Jamaica to assess the situation of farm families and women in particular. These were targetted beneficiaries of a FAO sponsored pilot project to strengthen the Rural Farm Family Development Programme implemented by the Home Economics Division of the Extension Service in place at the time.

A sample size of 300 persons was chosen for the study representing 18% of the farm population on the eight pilot sites. Four of the sites chosen had received infrastructural development under the First Rural Development Project (FRDP) in the 1970's to early 1980's. These were Canaan Mountain, Pell River, Burnt Ground and Montego Valley. The other four, Dromily/Bunkers Hill, Rock Spring, Jerusalem Mountain and Flower Hill, were regular village areas. A total of 256 persons were eventually interviewed in the study due to non-response factors.

The region surveyed was mainly hilly to mountainous with a relatively small percentage of flat land. Only 27% of the total land area is on slopes of less than ten degrees and this is reflected in the fact that only approximately one-third of its total acreage is cultivated.

At the time of 1982 census, the region's population stood at 388,884 representing about 24% of the island's total population. Montego Bay in the parish of St. James - the island's centre of tourism - is the major town (Jamaica's second city) in the region as well as the main industrial site. The population is predominantly rural in parishes other than St. James. Rural-Urban migration takes place on a large scale as in other rural areas of Jamaica. Total population in the region grew by approximately 1% per year between 1970 and 1982.

The agricultural sector is the dominant source of employment in the region. In 1985 the agricultural sector accounted for thirty-six percent (36%) of the employed labour force. The tourist industry is a major source of employment in the coastal areas but the numbers fluctuate on a seasonal basis.

According to the 1982 Farmer's Register there were 37,340 farmers in the region operating a total area of 109,656 hectares. The pattern of land distribution is highly skewed as in other parts of Jamaica opportunities for off-farm employment are limited and farm incomes tend to be low due to the size and type of farming operations.

Sugar cane, banana, coconut and cocoa together occupy 14,087 hectares and food crops grown in mixed stand occupy 7,168 hectares, yam being the most important of the food crops.

Livestock farming is also important in the region, with beef, dairy and dual purpose cattle numbering approximately 6,000, 900, and 4,450 respectively. There are nearly 6,000 pig

farmers with a total herd of roughly 25,000 pigs; and well over 12,000 goat/sheep farmers with an estimated total herd of 62,000. Broilers and layers are also important livestock types for the farmers in the region.

Among the 256 farm families included in the agro-socio-economic survey in the region over 70% of the households were headed by men. The one exception to this was at Jerusalem Mountain which consisted of fifty-five percent (55%) male and forty-five percent (45%) female respectively. A significant proportion of households were small on average; on about five sites those with 4-5 persons constituted the single largest group.

The data on levels of education showed a distinct similarity from site to site. The majority of household heads had been educated at the primary level only. However, some persons had benefitted from secondary and vocational training.

The majority of household heads had security of tenure; most of them owned the land they were farming. Approximately ten percent (10%) of the total site residents were leasing or renting the farms they operated.

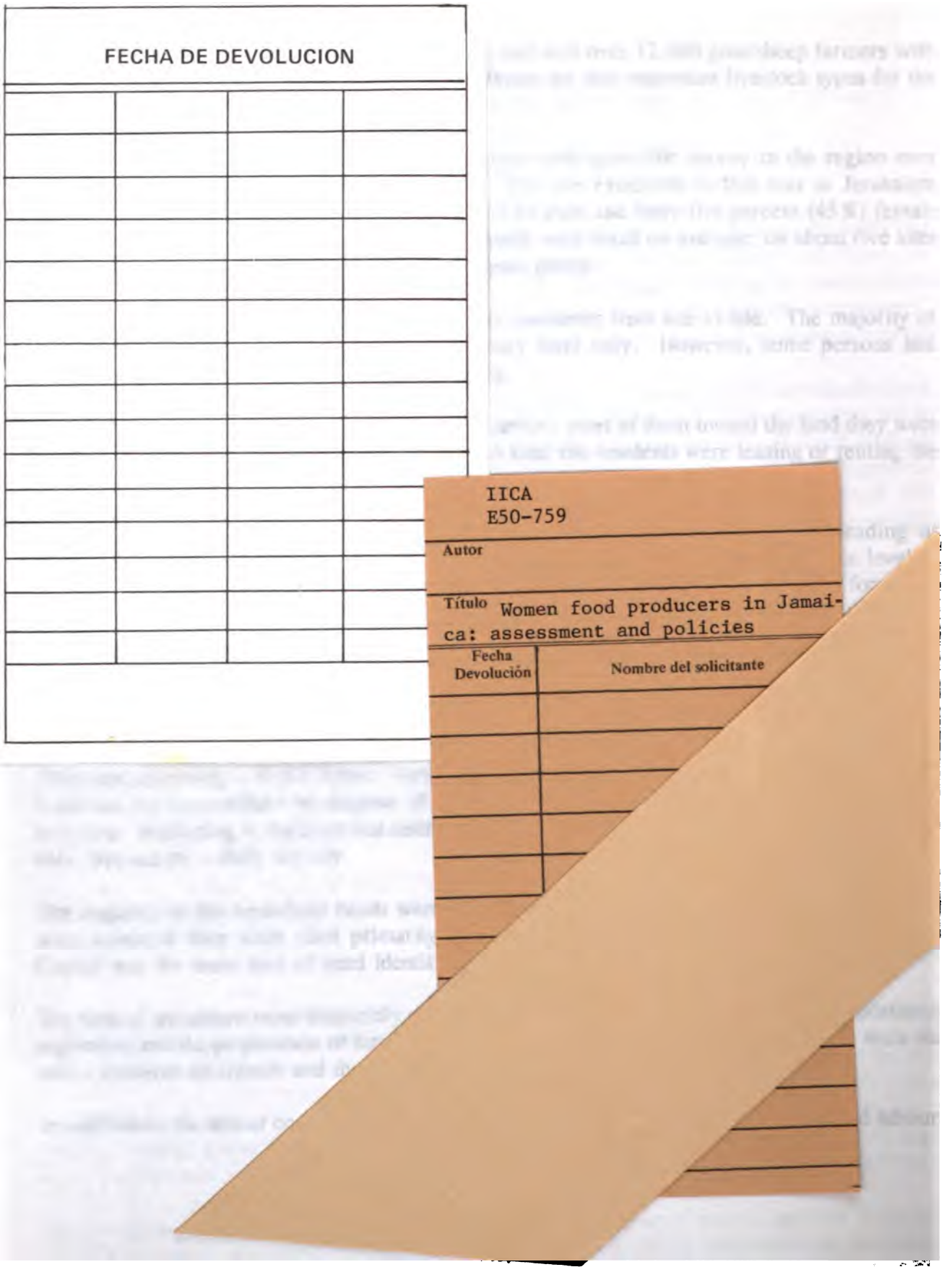
A wide variety of crops was grown, these were subsumed under the broad, heading of vegetable, fruits, legumes, food and permanent crops. An indication of the subsistence level of farming activity can be obtained from the portion of farm produce which is used for home consumption. It was observed that over 75% of all types of produce was sold and there was minimal amount of spoilage or damage. The livestock being maintained was mostly goats or chicken.

In general, farmers had no problems in marketing their produce. Higglers, commodity boards and the local market were the principal market outlets. A new source - the stall at the farmgate - was fast becoming a major outlet. This is quite an innovative way of disposing of produce; it allows the householder to dispose of produce while allowing him/her to attend to other activities. Marketing is therefore not confined to the parochial or other market on the week-ends only, but can be a daily activity.

The majority of the household heads were farming without the use of loan funds; where these were accessed they were used primarily for the purchase of seeds and planting materials. Capital was the main area of need identified by all farmers in the project area.

The type of assistance most frequently obtained from extension officers was advice on planting, marketing and the preparation of farm plans. Other sources of agricultural information were the radio, relatives or friends and the "McDonalds Almanac".

In addition to the labour contribution of family members, some of the farmers also hired labour.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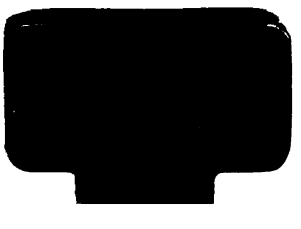

PROGRAM FOR THE ANALYSIS OF AGRICULTURAL POLICIES VIS-A-VIS WOMEN FOOD PRODUCERS IN THE ANDEAN REGION, THE SOUTHERN CONE AND THE CARIBBEAN

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 Maíz* (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.

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